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PROGRESS REPORT

JUNE 1978 to JUNE 1979

ZEEHAN PROJECT

EXPLORATION LICENCE 4/78

TASMANIA

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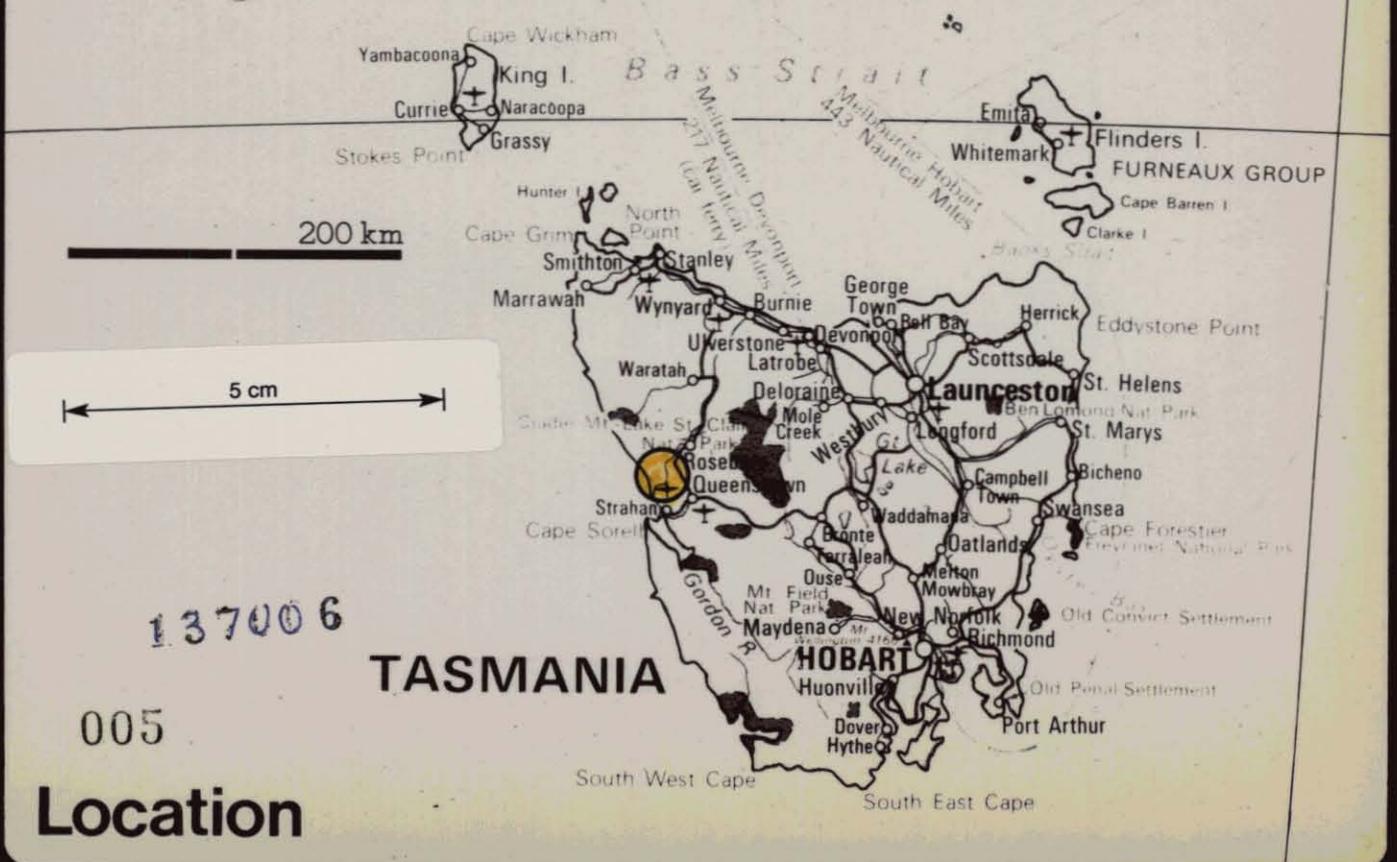
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Location

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TASMANIA

South West Cape South East Cape

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SUMMARY AND CONCLUSIONS

Exploration Licence 4/78 was granted to Amoco Minerals Australia Company for a period of 6 months from June 14, 1978 with further 6 month renewals subject to Mines Department approval. The tenement embraces potential shale or carbonate hosted, basemetal prospects.

Intensive, small scale, mining was undertaken around the turn of the century for silver-lead veins. The carbonate hosted mines within the Amoco tenement were relatively poorer in silver compared to the deposits in basement rocks resulting in lower production. More recent exploration by Zeehan Exploration and Tenneco has been restricted to isolated areas within the prospective zone.

Precambrian basement sediments are overlain by Cambrian sediments which are localized within graben structures. These are in turn overlain by Lower Ordovician conglomerate. Transgressive upon these units are Ordovician to Devonian basinal units including sandstones, dolomites, dolomitic shales and limestones.

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Amoco conducted an initial orientation program of soil sampling over the known mineralized areas. Scintrex was then contracted to run gradient array-magnetic surveys on four grids; the Maxim, Austral, Oceana and Grieve. These were subsequently soil sampled, geologically mapped, and a number of selected lines surveyed using Pulse Electromagnetics (PEM). Reconnaissance soil sampling was carried out over the prospective Gordon Limestone outside the grid areas. A lead-silver-mercury anomaly from this program was subsequently staked (Myrtle Grid) and soil sampled. Three helicopter borne Turair EM anomalies outlined previously by Tenneco were field checked and soil sampled.

RECOMMENDATIONS

It is recommended the proposed program be implemented.

DESCRIPTION OF PROPERTY

Exploration Licence 4/78 (EL 4/78) has an area of approximately 208 square kilometers, and was granted to Amoco Minerals for the period of 6 months from June 14, 1978. Renewal of the tenement for further periods of six months is dependent on Mines Department approval of previous exploration and proposed programs.

Seven pre-existing mining leases are present within the tenement. (Enclosure 2). Lease No. 60M/77 held by Electrolytic Zinc is designed to embrace the slag dump from the old Zeehan smelters. The two leases granted to Renison Ltd are for the purposes of extracting materials required for road surfacing and filling work within the mine environs situated to the north of EL 4/78. Two leases granted to Mr. Mooney (38M/77 & 39M77) are designed to embrace slag dumps from the Oonah Tin Mine. Two small leases held by Tasmanian Mineral Developments cover the mine environs at the Queensberry deposit, situated 1.5 kilometers north of the southern boundary of the tenement.

LOCATION AND ACCESS (Figure 1)

Exploration Licence No. 4/78 is located immediately south of the town of Zeehan which has a population of 600. The Emu Bay Railway and a sealed road connect Zeehan with the port of Burnie, located 140 kilometers to the north. Access within the tenement is relatively good for western Tasmania, as a number of tracks have been dozed along the dolomites which form topographic lows.

Zeehan is the service city for the Renison Tin Mine, and no difficulties would be anticipated with respect to power, water and transport should a mine be developed. The area has an annual rainfall of 250 centimeters.

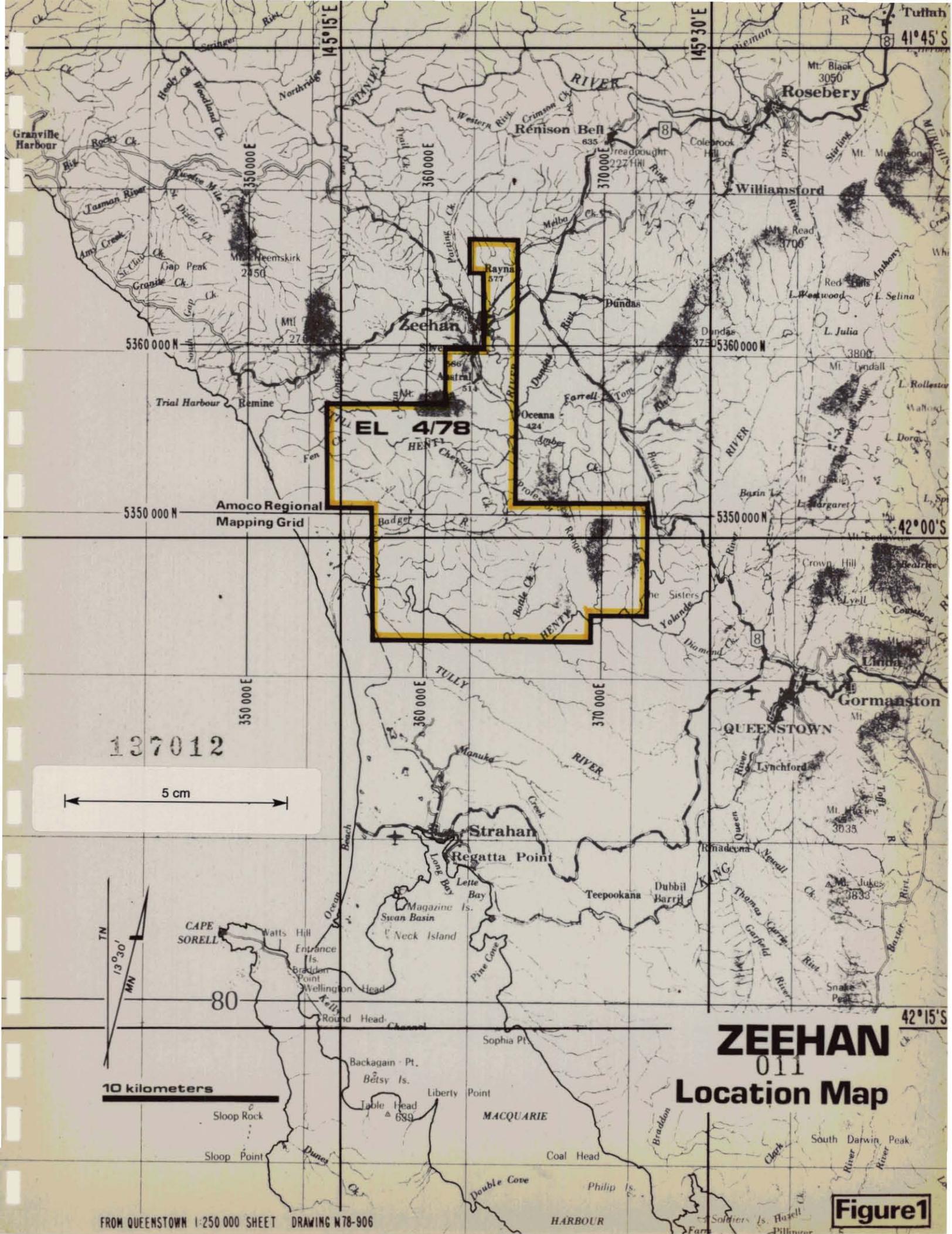


Figure 1

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HISTORY AND EXPLORATION TO DATE

Most of the major mines in the Zeehan area were operational prior to 1890. The Spray mine (Enclosure 1) which was discovered in 1898 is the only notable exception.

There is a direct relationship between the life of each mine and its silver content. The carbonate hosted mines within the Amoco tenement were relatively poorer in silver compared to the deposits in basement rocks resulting in lower production. A table listing the silver-lead production is enclosed (Table 1).

Recent exploration within the Amoco area was conducted by Zeehan Explorations (North Broken Hill & Broken Hill South joint venture) between 1946 and 1950. This included geophysical surveys (conducted by the Bureau of Mineral Resources at the Oceana Mine) and diamond drilling. All available data are outlined in Table 2 but no accurate drilling information is available. On the basis of this exploration, the Oceana Mine was re-opened in 1954. Average recovered grades were 11.63% lead and 136 g/t silver.

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TABLE 1 - LEAD-SILVER PRODUCTION FROM MINES WITHIN AND ADJACENT TO THE AMOCO TENEMENT

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MINE	AGE	LEAD (TONNES)	SILVER (KG)
SPRAY NUBEENA	Precambrian to Cambrian	450	1,850
MAXIM MONTAGUE WATT & MCAULIFFES AUSTRAL	Upper Cambrian to Lower Ordovician	60 117 254 812 + 52 zinc	283 42 1,417 935
OCEANA ZEEHAN BELL SOUTH KING	Upper Ordovician to Devonian	15,382 + 13 zinc 610 5,080 + 4 copper	17,433 780 9,922

TABLE 2 - PREVIOUS EXPLORATION

MINE	YEAR	RESULTS
Zeehan Bell	1947	6 inclined holes 100 - 157 meters in length. Best intersections being 13% Pb, 12.9% Zn, 130 g/t Ag over one meter. No other information.
South King	1947	Four boreholes. The best intersection being 0.5 meters 47.5% Pb, 5% Zn and 530 g/t Ag.
Austral Valley	1947 - 1950	3 vertical and inclined holes near the flux quarry. Best assay being 5 meters of 13% Pb in limestone.
Oceana	1947 - 1950	Diamond drilling conducted - 5 holes - no results available.
	1954 - 1960	128,000 tons ore produced (11% Pb cut-off used) - zone of 5.5% Pb outlined by further diamond drilling. Mine closed due to water inflow and falling lead prices.

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A further sub-economic zone grading 5.5% lead, having a width of approximately 11 meters, was outlined to the north. The mine was closed in 1960 due to falling metal prices and water inflow (11 million liters/day pumped from the mine).

A very limited helicopter borne electromagnetic survey (Turair) was conducted by Tenneco about 1970. This was followed up by reconnaissance IP surveys, SP surveys and occasionally by soil sampling.

There has been no recent systematic exploration within the Amoco tenement for a shale or carbonate hosted basemetal deposit.

REGIONAL GEOLOGY

Large blocks of Precambrian sediments form the basement complexes of both north-west and central Tasmania. These are overlain by Cambrian volcanics and marine sediments which host the Roseberry, Mt. Lyell and MacIntosh (Que River) orebodies.

Overlying these rocks is a sequence of Cambrian to Devonian basinal sediments. This sequence hosts the Renison, Cleveland and the Mt. Bishoff orebodies.

The above units were intruded by granites during the Devonian and Carboniferous times which introduced the tin mineralization. During the Jurassic and Tertiary periods, the sequence was blanketed by basic volcanics. Recent fluvial and Pleistocene glacial erosion have produced the present topography.

Major folding and block faulting is particularly evident in the Zeehan region. Uplift and folding accompanied accumulation of thick piles of sediment and volcanic material in various troughs during the Cambrian period. The Ordovician was marked

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by the onset of terrestrial and shallow marine sedimentation (the Owen Conglomerate, Moina Sandstone and Gordon Limestone).

The major deformation accompanied the Paleozoic Tabberaberan orogeny and large northwest trending fold structures were formed.

GEOLOGY OF THE TENEMENT (Enclosure 1)

The basement complex is comprised of Precambrian schists, quartzites, shales and also in the higher measures interbedded spillitic or keratophyric lavas and pyroclastics forming a stable craton to the northwest of the tenement. The Lower Cambrian units; such as the Crimson Creek Formation, are predominantly quartzitic, shallow water sediments including argillites, grits and tuffs. Cambrian sedimentation appears confined to fault bounded blocks or graben structures.

The Ordovician to Devonian strata of the Zeehan Basin occur within a series of synclinal structures with north, northwest axial trends. The Owen quartzose Conglomerate at Mt. Zeehan, was deposited within a graben structure in the Lower Ordovician and is transgressively overlain by grey micaceous siltstones and shales. These are equivalents of the Moina Sandstone. This is disconformably overlain by basinal

018

sediments including the Ordovician Gordon Limestone, the disconformity marked by a white sheared, well sorted conglomerate of varying thickness. The Siluro-Devonian sediments within the basin are fossiliferous marine quartzites and dolomitic to pyritic shales.

The western portion of the tenement has been blanketed by Permian glacials, lacustrine sediments and Jurassic dolerite flows.

Extensive Tertiary and Quaternary deposits blanket much of the prospective Gordon Limestone, Bell Shale and Cambrian Dolomitic sequences.

The Zeehan area has been intensely disturbed by the Paleozoic Tabberaberan orogeny which caused major northwest folding and faulting. East and northwest trending fault systems are considered to have been contemporaneous. North-northeast striking faults are thought to have developed in post Permian times and are not common within the Amoco area.

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WORK CONDUCTED BY AMOCO

Work conducted during the period October 1978 to June 1979 included an initial orientation program of soil sampling over the known mineralized area. Scintrex was then contracted to run gradient array-magnetic surveys on four grids; the Maxim, Austral, Oceana and Grieve grids. These were subsequently soil sampled, geologically mapped, and a number of selected lines surveyed using Pulse Electromagnetics (PEM). Reconnaissance soil sampling was carried out over the prospective Gordon Limestone outside the grid areas. A lead-silver-mercury anomaly from this program was subsequently staked (Myrtle Grid) and soil sampled. Three helicopter borne Turair EM anomalies outlined previously by Tenneco were field checked and soil sampled.

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Soil samples were taken from the 'B' and 'C' horizons at 50 meter intervals along grid lines. Samples were sent to Pilbara Laboratories in Perth where the -80 mesh fraction was analysed for copper, lead, zinc, silver and selected samples for tin. Analysis for basemetals was by AAS after hydrochloric acid digestion. Samples to be tested for mercury were sent to Lowder Geoscience in Sydney where the -80 mesh fraction was analysed using a technique of combusting the sample, collecting the mercury vapour on a wheatstone bridge which is then electrically released onto gold film and measured by a digital galvanometer. Geochemical analyses were computer contoured by Pittman Data Systems in Sydney.

Broad scale geological mapping was conducted at 1:5000 scale on the Maxim, Austral, Oceana, Myrtle and Grieve grids.
(Enclosures 3. to 7)

Reconnaissance Soil Sampling

This technique was used to sample large tracts of the prospective Gordon Limestone (Enclosure 1). Fifty seven soil samples, from depths of 20 centimeters to 1.80 meters, were taken at 400x400 meter intervals over four separate blocks of the Gordon Limestone. The samples were assayed for copper, lead, zinc, silver and mercury, the results of which were classed as having either anomalous basemetal and/or mercury values. These results are tabled (Appendix 3).

The southern most portion of the large Grieve Valley, showed both anomalous basemetal and mercury values with results of 131 ppm copper, 106 ppm lead, 660 ppm zinc and 890 ppb mercury being the highest obtained. This area requires follow-up in detail by gridding, soil sampling and geophysical surveys.

The southeastern small block of Cenozoic covered Gordon Limestone, has a number of mercury anomalies of four to six times background. Reconnaissance traverses widely spaced and oriented perpendicular to strike will be used to test this zone.

Both the northern block and the lower Oceana block have anomalous basemetal and mercury results. The lower Oceana

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Maxim Valley - looking northwest from the bridge over Austral Creek. The abandoned Maxim mine is right of center.



Looking northwest from Mt. Zeehan toward Trial Harbor and across the western limestone block.

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results may be contaminated from the Oceana Mine runoff and this will be investigated.

The northern part of the Grieve Valley has anomalous basemetal and mercury values, one of which was highly anomalous with lead 1100 ppm, silver 4.5 ppm and mercury 21000 ppb. The Myrtle prospect was gridded and sampled in this area.

Two blocks of Gordon Limestone in the far west of the tenement are covered by thick rainforest and will be sampled later this year.

Detailed Surveys

Five grids were staked and gradient array IP and ground magnetic surveys, geologic mapping and detailed soil sampling were conducted. The following are summaries of detailed work conducted and results obtained for each of the Maxim, Austral, Oceana, Myrtle and Grieve Prospects.

Maxim Prospect (Enclosure 3)

Nine lines 800 meters in length, were staked over the numerous workings in the Maxim Valley. Major silver-lead producers in the valley were the Maxim, Montague No. 1 and Watt and McAuliffes mines.

Geology:

Basal formation is the Precambrian Oonah Quartzite located in the southwest. Overlying this unconformably is the prospective Crimson Creek Formation containing argillites, dolomites, siltstone and tuffs, which form a marshy valley floor southwest of Zeehan. Silurian to Devonian quartzites, shales and siltstones of the Crotty and Florence Quartzite Formations form a fault bounded block to the northeast.

Geochemistry:

Soil sampling outlined an elongate zone of moderate to high tenor anomalies extending in excess of 800 meters and up to 250 meters wide. This zone is nebulous having limited areas of very high values (up to 4750 ppm lead, 5000 ppm zinc, 13.4 ppm silver and 6000 ppb mercury). Background values are all

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low, making results of twice background (100-150 ppm) appear very anomalous. One anomaly located between lines 5400N and 5600N at approximately 1250E is marked by moderate tenor lead-zinc-mercury and silver geochemistry. This is one of a few exceptions where high geochemistry is not coincident with mine dumps, workings or their drainage paths.

Geophysics:

Gradient Array IP and ground magnetic surveys were conducted and the values contoured. Chargeabilities of between 15 and 20 milliseconds, generally without coincident resistivity lows, were considered moderately anomalous. A number had associated shallow magnetic sources. These were also often associated with old workings such as on lines 5500N and 5900N.

Lines 5500N to 5900N inclusive were surveyed using Pulse Electromagnetics (PEM) to assist in screening geochemical anomalies and chargeability highs (Appendix 6). Strong responses were obtained on lower channels on lines 5600N to 5900N which were coincident with geochemical anomalies. A moderate tenor anomaly on lines 5800N and 5900N at 1400E is coincident with a moderately responsive chargeability high. Negative responses observed on the eastern margin of the grid seem to be related to fault zones.

Austral Prospect (Enclosure 4)

A grid was established to embrace a number of old workings including the Austral Valley silver-lead mine and the flux quarry. Five lines were staked at 100 meters x 50 meters intervals, the two northern most ones being 800 meters long and the remainder 400 meters in length.

Geology:

Basal formation is the Moina quartzose sandstone which is disconformably overlain by the Ordovician black, carbonaceous, mineralized dolomite to the east. The disconformity is marked by a sheared, white, well sorted conglomerate of varying thickness. Crotty Quartzite, composed mainly of

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friable quartzites, siltstones and minor shales, conformably overlies the dolomite east of Austral Creek.

A massive ironstone, lying within the dolomite and having approximate dimensions of 100 meters x 25 meters was exploited earlier this century for use as a flux in the Zeehan smelters. Records state that the lead content was 5%. Zeehan Explorations subsequently drilled near the flux quarry and intersected five meters of 13% lead within a silty limestone. An Amoco composite chip sample of the ironstone, ran 3.07% lead and 0.3% zinc, with minor silver (2ppm).

Geochemistry:

A 300 x 100 meter anomaly was defined by soil sampling coincident with both the flux quarry and other workings further south. The zone has highly anomalous basemetal and mercury geochemistry with values ranging up to 1.08% lead, 1.3% zinc, 18.1 ppm silver, 4460 ppm copper and 1500 ppb mercury. The zone consistently averages over 400 ppm lead, 300 ppm zinc, 2 ppm silver and 200 ppb mercury.

Other small anomalies appear to be related to the drainage basin of the Austral Creek and other to shales within the Crotty Quartzite.

Geophysics:

A 24 millisecond chargeability anomaly and a magnetic anomaly are located over the geochemically anomalous zone. A further chargeable zone of lesser magnitude, occurs some 50 meters further east in the black dolomites and is coincident with a weak to moderate tenor broad PEM response. (Appendix 6) A strong chargeability high, with associated shallow magnetic and eight channel PEM responses is located directly over a buried section of the Zeehan rubbish dump.

Oceana Prospect (Enclosure 5)

A grid was staked to cover the Oceana Mine and its possible northern and southern extensions.

Geology:

The basal unit in the western portion of the grid is the Moina Sandstone (mainly siltstones and shales). Marker beds of grey muddy cherts containing abundant worm burrows occur towards the top of the Moina Formation. This then passes disconformably into the black decomposed dolomites (Gordon limestones), the disconformity being marked by a sheared, white, well sorted conglomerate of varying thickness. Uppermost unit in the eastern portion of the grid is the Crotty Quartzite.

A major east-west fault located in the northern extremity of the grid displaces the prospective sequence some 500 meters to the east where it recurs in the Austral Valley. A number of smaller east-west faults occur in the southwestern corner of the grid.

Ferruginous dolomites and ironstone extend to the north of the Oceana Mine, and a second zone is located 150 meters northeast of the mine. A petrographic examination of mineralization was carried out by Whittle (Appendix 5).

Geochemistry:

Strongly anomalous geochemistry occurs over a 700 x 150 meter long zone along strike from the Oceana Mine. Maximum width of the anomaly is 225 meters. Average values outlining the zone are +200 ppm lead, +150 ppm zinc, +1 ppm silver and +200 ppb mercury. However, values ranged up to 2.95% lead, 2.5% zinc, 265 ppm silver and 65,000 ppb mercury.

A large section of the grid was covered by Cenozoic gravels in excess of five meters in thickness. Where possible the influence of mine runoff was minimized by deep augering (up to 1.8 meters).

Geophysics:

A number of moderately responsive 20-25 millisecond charge-ability anomalies, having semi-coincident resistivity lows, are associated with known mineralization. Further anomalies were outlined along strike to the south of the mine and have

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chargeability responses of up to 34 milliseconds. Shallow magnetic anomalies observed over the mine are possibly due to the head frame and to the large amounts of scrap iron in dumps to the east and west of the mine. However, weakly magnetic and possibly deeper responses to the north may be associated with the mineralization. Oceana ore was documented as having weakly magnetic minerals present, although these minerals were not identified.

Three lines 3300N, 3600N and 3700N were surveyed using PEM, the results of which are included (Appendix 6). A weak six channel response on line 3600N at 1300E was the only anomaly observed on the PEM traverses.

Myrtle Prospect (Enclosure 6)

A grid was staked to cover the highly anomalous reconnaissance soil geochemistry. Five 600 meter long lines, spaced 100 meters apart, were staked at 50 meter intervals. The lines were soil sampled every 50 meters and assayed for copper, lead, zinc, silver and mercury.

Geology:

The prospective zone lies within a northwest plunging anticlinal nose of Gordon Limestone. Shales are interbedded within the limestone sequence, however, due to lack of outcrop, these could not be separated out as individual units. Crotty Quartzite occurs in the far northwestern and northeastern corners of the grid. Minor Cenozoic cover occurs on the southern line, line 50200N.

Geochemistry

A major zinc-mercury-lead-silver anomaly occurs with a strike length of approximately 100 meters and a width of 150 meters. Zinc and mercury geochemistry were most anomalous with values ranging up to 8500 ppm and 76000 ppb respectively. Lead was moderately anomalous with values averaging between 200 and 400 ppm and silver values to 10 ppm.

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Geophysics:

No geophysical work has been conducted to date. In view of the highly anomalous basemetal and mercury results obtained, geophysical surveys are planned when field work is resumed.

Grieve Prospect (Enclosures 7,7A)

Seven lines, one kilometer in length were staked over the Gordon Limestone centered on the Grieve silver-lead-zinc occurrence. Lines were staked at 200 meters x 50 meter intervals with the exception of infill line 4500N.

Geology:

The basal unit is the Moiná Sandstone on the eastern portion of the grid. Overlying this is a thick sequence of black silty dolomites with interbedded shales of the Gordon Limestone occupying the swampy valley floor. The western portion of the grid is comprised of resistant quartzites, shales and siltstone of the Crotty Quartzite Formation.

Minor fossiliferous limestone is exposed along with black carbonaceous pyritic dolomites in the Grieve Mine area. Disseminated and vein galena and sphalerite are visible within both the limestone and the dolomite (Appendix 5). The limestone was not observed elsewhere on the grid due to the extensive alluvial-colluvial cover (up to 20 meters in thickness).

Geochemistry:

Two separate strong tenor lead-zinc anomalies occur on the northern and southern flanks of the grid. The southern anomaly is associated with the Grieve Mine where values ranged up to 2.1% lead, 0.8% zinc, 2.8 ppm silver and 2230 ppb mercury, over 200 meters of strike and having a width of 125 meters. The second anomaly of limited strike extent located on line 4400N has values ranging up to 1.80% lead, 1890 ppm zinc and

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195 ppb merucry. The masking effect of the surrounding Cenozoic gravels may be significant in this area.

Mercury sampling significantly enlarged the strike length and width of the basemetal anomaly at the Grieve Mine. A number of lower tenor basemetal anomalies occur near the Crotty Quartzite contact with the dolomites.

Geophysics:

Gradient array IP results suggest that the entire grid is made up of above normal chargeability highs, with values of 30 milliseconds quite common. The strongest anomaly was located on line 4200N at 1900E where a chargeability of 50 milliseconds and a resistivity low coincide. A line of PEM was surveyed over this zone without significant response. (Appendix 6) Soil sampling also showed no anomalism, however, frequently the Cenozoic cover was not penetrated. Numerous other chargeability highs of between 30-35 milliseconds were observed some with coincident resistivity lows.

Line 4500N was also surveyed with PEM to help screen a chargeability high with semi-coincident soil geochemistry. No anomalies were observed other than the possible contact effect of the Moina Sandstone with the dolomites of the Gordon Limestone. No significant anomalies were outlined.

Turair - Input Follow-up

A very limited helicopterborne electromagnetic survey was conducted by Tenneco about 1970. Amoco followed up three anomalies within the Grieve Valley area. (Appendix 3 & 4)

A 200 meter long reconnaissance line was staked over each of Turair anomalies No. 1,2 & 3. Soil sampling was conducted every 50 meters and samples analysed for copper, lead, zinc, silver and mercury. Turair No. 1 & 3 were located at the contact between Crotty Quartzite and ghe Gordon Limestone which No. 2 is located within the Gordon Limestone. Both Turair No. 1 & 2, gave anomalous geochemistry; up to 2100 ppm mercury and anomalous lead values up to 542 ppm and 3000 ppm zinc and further detailed exploration is warranted. Turair No. 3 had

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very low soil geochemistry and warrants no further work.

Amoco conducted two test Input EM traverses from which a strong six channel anomaly (line 1 NE, fiducial 223.95) was delineated having a coincident broad magnetic anomaly of 60 gammas. This was also gridded and soil sampled, and the geochemistry occurs over a Jurassic dolerite flow in contact with Devonian lacustrine sediments and this is thought to give the EM and magnetic response. No further work is recommended for this area.

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PROPOSED PROGRAM

The reconnaissance program will be extended to include broad sampling over further prospective blocks of Gordon Limestone. A stream sediment sampling program will be initiated over the Bell Shale Formation.

Gridding and geochemical/geophysical surveys will be conducted over anomalies outlined by the previous reconnaissance program.

Drilling will be carried out to test anomalies outlined on the Austral and Oceana grids.



SIGNED:

P. JONES

U31

AMOCO MINERALS AUSTRALIA COMPANY

EXPENDITURE FOR THE PERIOD 12 MONTHS ENDING AUGUST 31, 1979

EXPLORATION LICENCE 4/78

Salaries Wages	21,885.70
Supplies Office	1,840.15
Cookery	3,102.13
Field Office Rent	1,044.78
Field Supplies	268.72
Freight	653.42
Travel	4,262.49
Communication	5.00
Consultants/Contractors	3,247.89
Assays	3,355.32
Equipment Rental	1,800.32
Equipment Operating Maintenance	1,780.87
Property Payment & Acquisition	1,239.26
Geophysics	<u>17,517.99</u>
	62,004.04
Overheads	<u>18,426.08</u>
	<u>\$80,430.12</u>

T. J. Conquest
T. J. CONQUEST
ACCOUNTANT

032

137033

APPENDIX I

TEST INPUT ELECTROMAGNETIC SURVEY - TRAVERSES AND
PROFILES

034A

57.200

Amoco Minerals Australia Company 034B



137035

5 cm

GEOTHERREX LIMITED

No. 83-286 PLOT No. 1

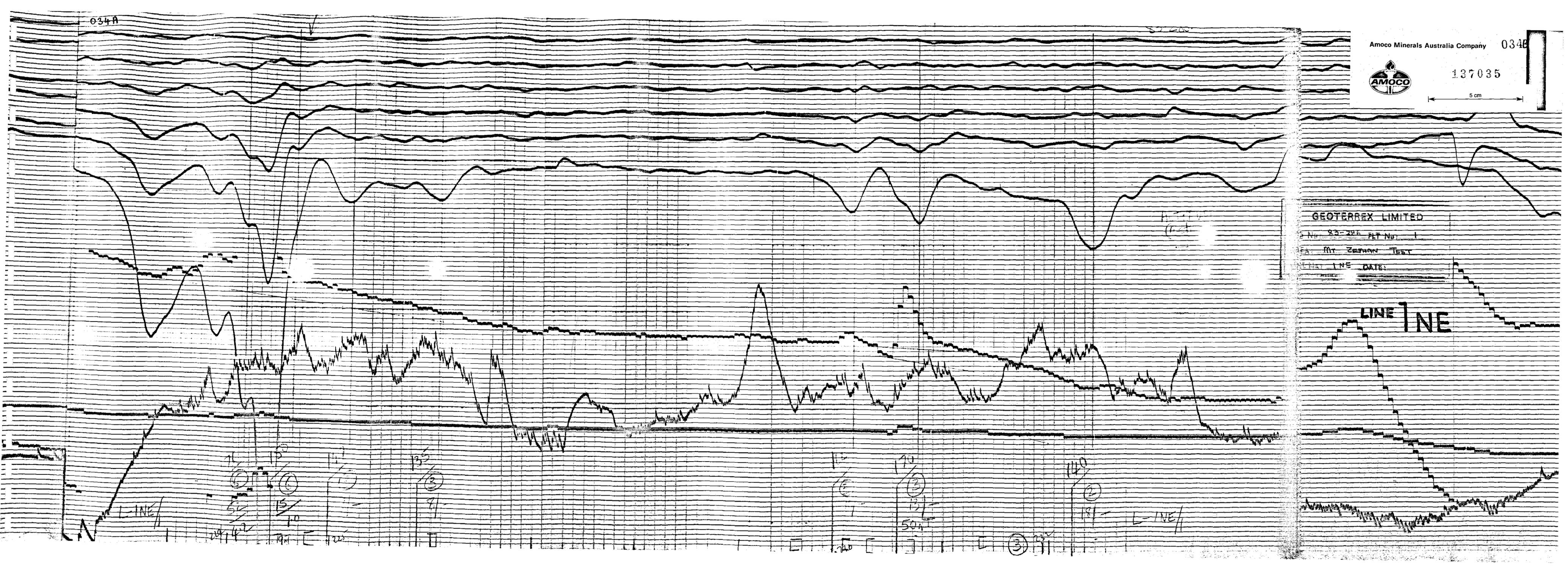
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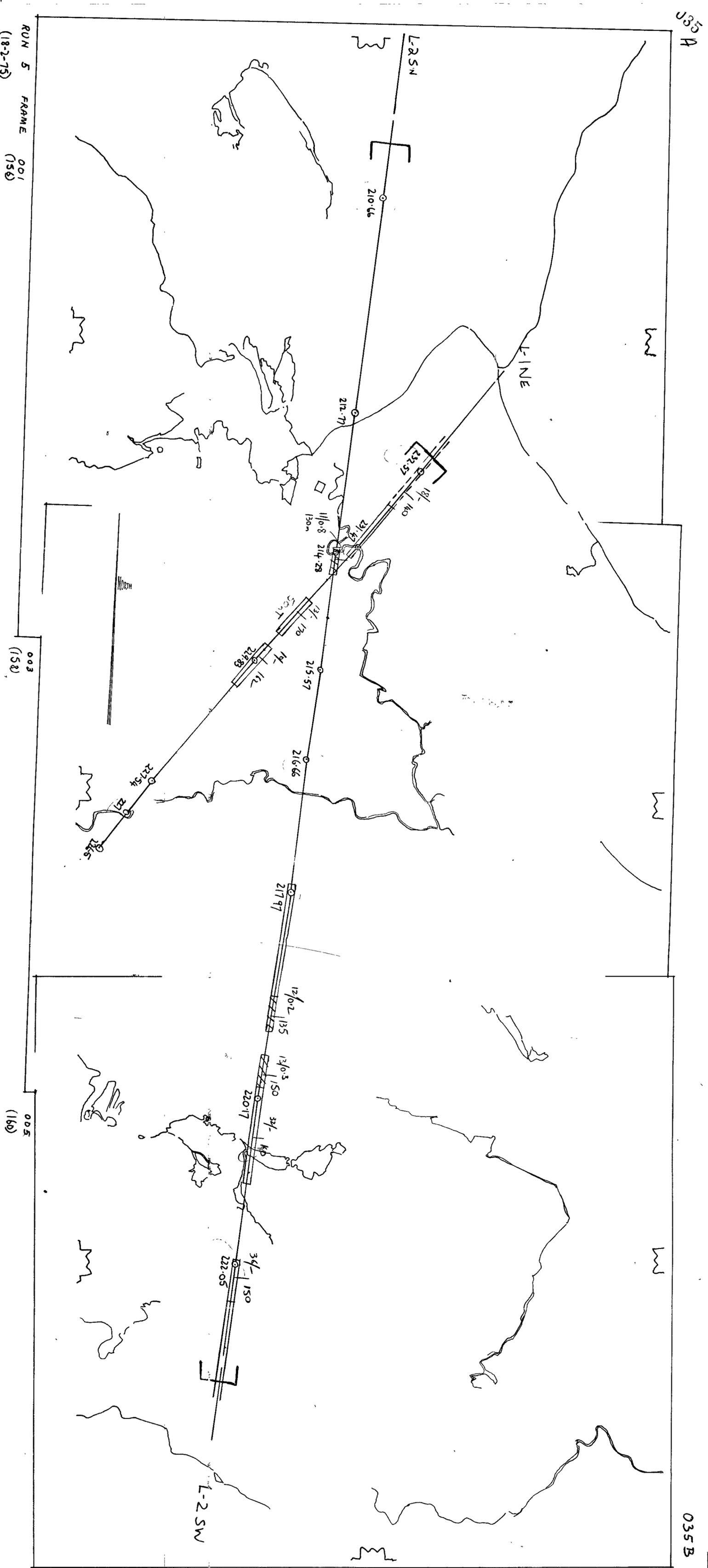
LINE DATE:

LINE | NE

11	10	10	10
50	15	10	81
20	14	19	11

12	170	120
50	131	181
50	50	11





RUN 5
(18-2-75)
FRAME
001
(158)

003
(158)

005
(160)

035 A

035 B

LEGEND

- 6 Channel Anomaly [Solid black bar]
- 5 channel Anomaly [Diagonal lines bar]
- 4 channel Anomaly [Horizontal lines bar]
- 3 channel Anomaly [Vertical lines bar]
- 2 channel Anomaly [Dashed bar]
- 1 channel Anomaly [Bracketed bar]

PEAK POSITION

1st. and 4th CHANNEL POSITION

ALTITUDE (FEET)

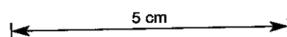
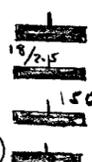
COINCIDENT MAGNETIC ANOMALY (nanoteslas)

JOB NO. 83-286

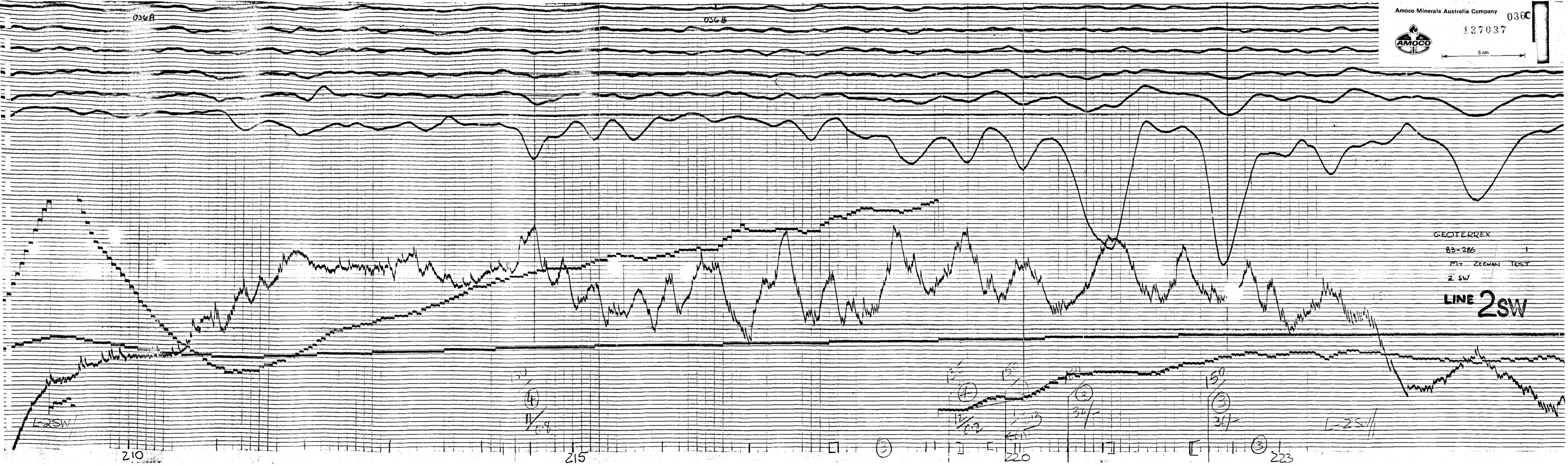
ZEEHAN: TASMANIA

FLOWN : MAY, 1978

SCALE : 1 : 40,000

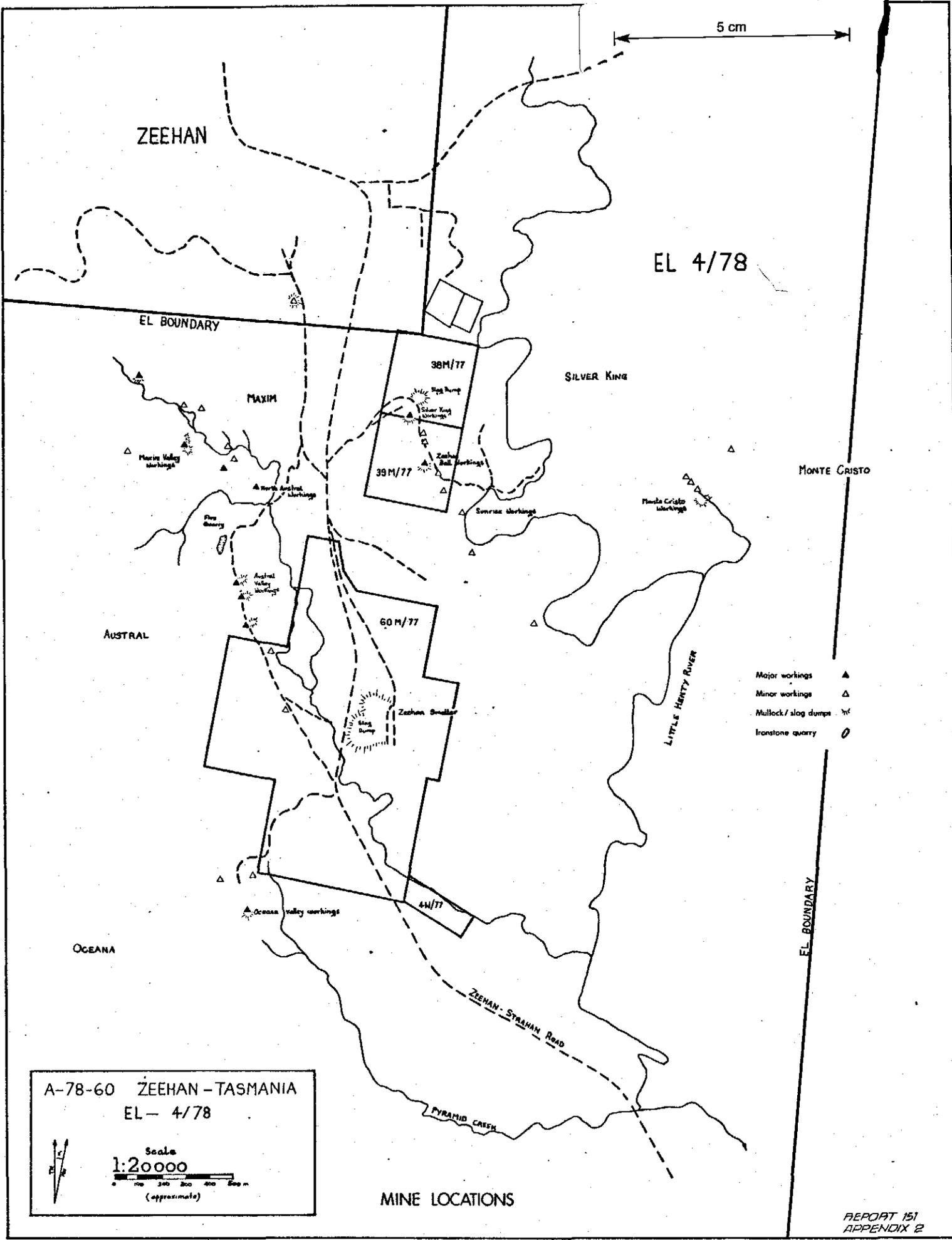


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APPENDIX 2

MINE LOCATIONS



A-78-60 ZEEHAN - TASMANIA
 EL - 4/78

Scale
 1:20000
 0 100 200 400 600 m
 (approximate)

MINE LOCATIONS

039

APPENDIX 3

RECONNAISSANCE SOIL SAMPLING OF THE GORDON LIMESTONE

040

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A-78-60 ZEEHAN - TASMANIA

EL 4/78

RECONNAISSANCE SOIL SAMPLING
Gordon Limestone



0 1 2 kilometers

SHOWING LOCATIONS OF
TURAIR AND INPUT ANOMALIES

scale 1:100000

5 cm

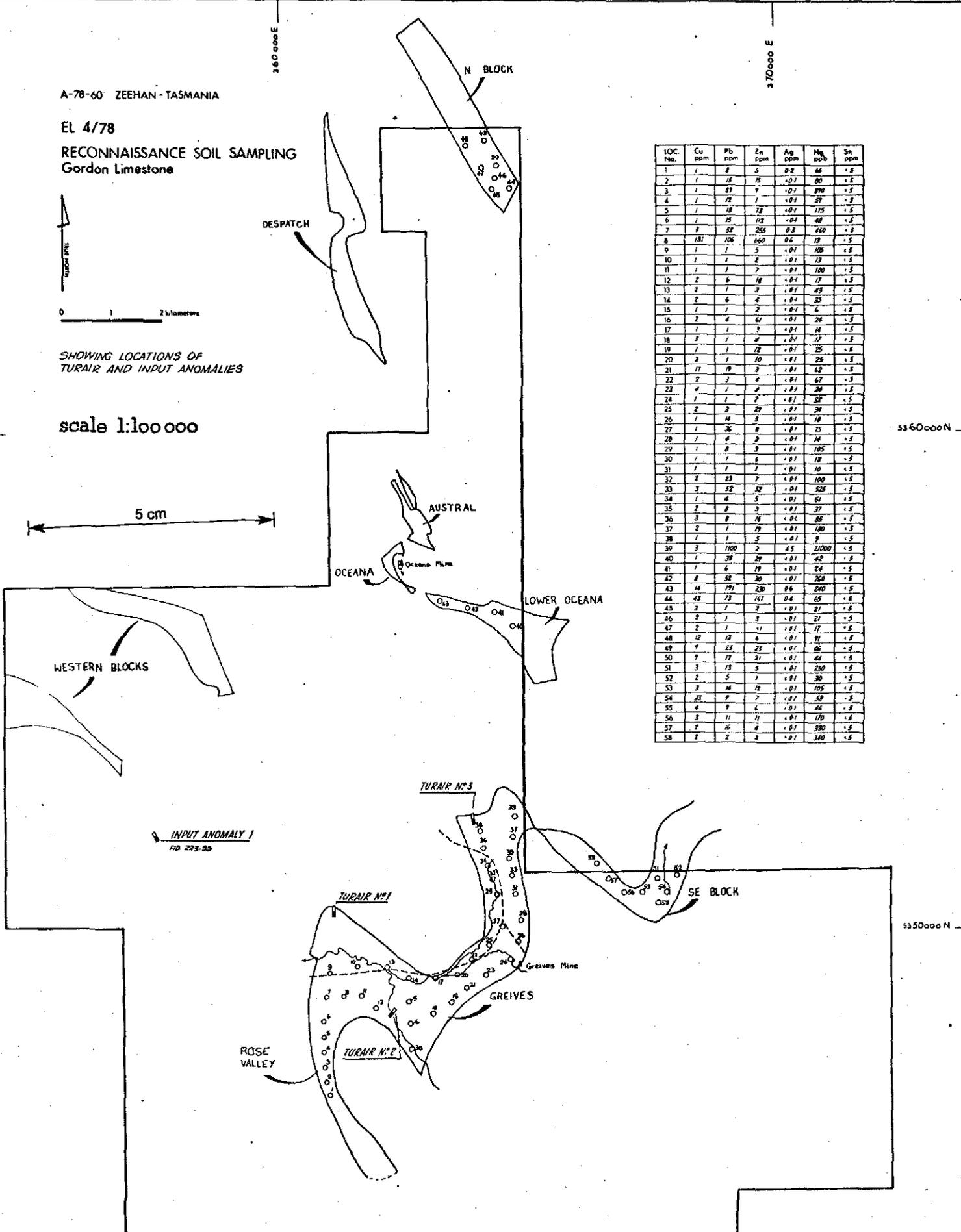
260000 E

270000 E

536000 N

535000 N

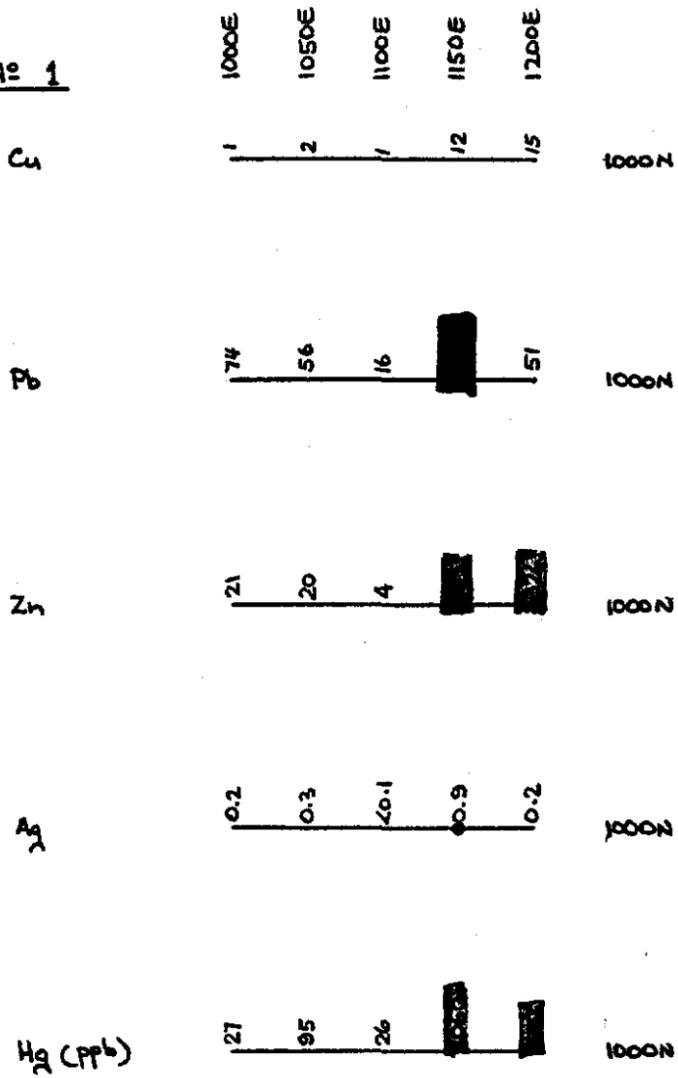
LOC. No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Hg ppb	Sn ppm
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2	1	15	15	0.1	80	1.5
3	1	27	9	0.1	89	1.5
4	1	22	7	0.1	37	1.5
5	1	18	12	0.1	115	1.5
6	1	15	13	0.1	48	1.5
7	2	52	255	0.3	140	1.5
8	181	106	160	0.2	19	1.5
9	1	1	5	0.1	105	1.5
10	1	1	2	0.1	12	1.5
11	1	1	7	0.1	100	1.5
12	2	6	16	0.1	17	1.5
13	2	1	3	0.1	48	1.5
14	2	6	6	0.1	35	1.5
15	1	1	2	0.1	6	1.5
16	2	4	67	0.1	26	1.5
17	1	1	2	0.1	14	1.5
18	2	1	4	0.1	17	1.5
19	1	1	12	0.1	25	1.5
20	2	1	10	0.1	25	1.5
21	11	19	3	0.1	62	1.5
22	2	3	6	0.1	67	1.5
23	4	1	4	0.1	24	1.5
24	1	1	2	0.1	51	1.5
25	2	3	21	0.1	24	1.5
26	1	14	3	0.1	18	1.5
27	1	26	8	0.1	25	1.5
28	1	4	2	0.1	14	1.5
29	1	2	2	0.1	105	1.5
30	1	1	4	0.1	12	1.5
31	1	1	1	0.1	10	1.5
32	2	23	7	0.1	100	1.5
33	3	22	12	0.1	525	1.5
34	1	4	5	0.1	61	1.5
35	2	2	3	0.1	37	1.5
36	2	8	16	0.1	85	1.5
37	2	1	19	0.1	180	1.5
38	1	1	3	0.1	9	1.5
39	3	1100	2	45	2100	1.5
40	1	38	29	0.1	42	1.5
41	1	6	19	0.1	24	1.5
42	2	52	20	0.1	20	1.5
43	14	191	230	0.6	240	1.5
44	43	73	157	0.4	65	1.5
45	2	1	2	0.1	21	1.5
46	2	1	3	0.1	21	1.5
47	2	1	1	0.1	17	1.5
48	12	12	4	0.1	11	1.5
49	1	23	25	0.1	65	1.5
50	1	17	21	0.1	44	1.5
51	3	13	5	0.1	210	1.5
52	2	5	1	0.1	30	1.5
53	2	14	10	0.1	105	1.5
54	23	9	7	0.1	52	1.5
55	4	2	6	0.1	44	1.5
56	2	11	11	0.1	170	1.5
57	2	16	4	0.1	380	1.5
58	2	2	3	0.1	340	1.5



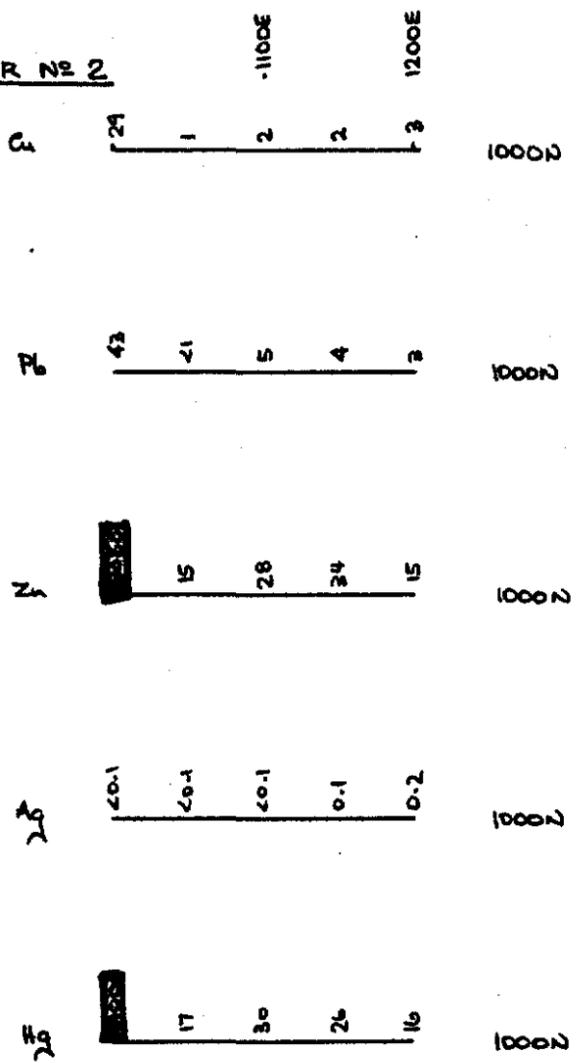
APPENDIX 4

TURAIR AND INPUT ANOMALIES - GEOCHEMISTRY

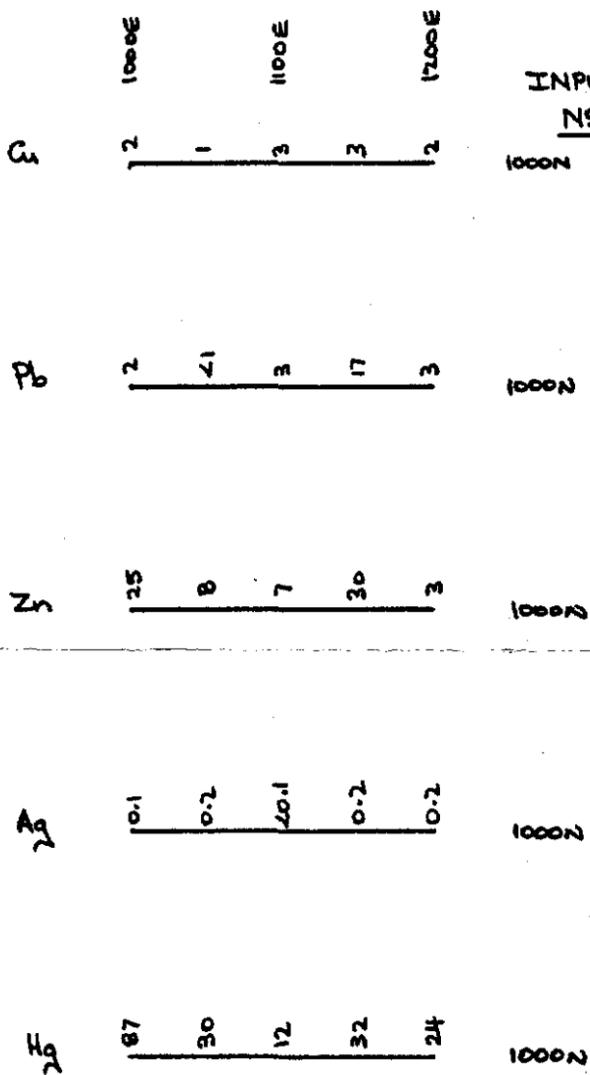
TURAIR No 1



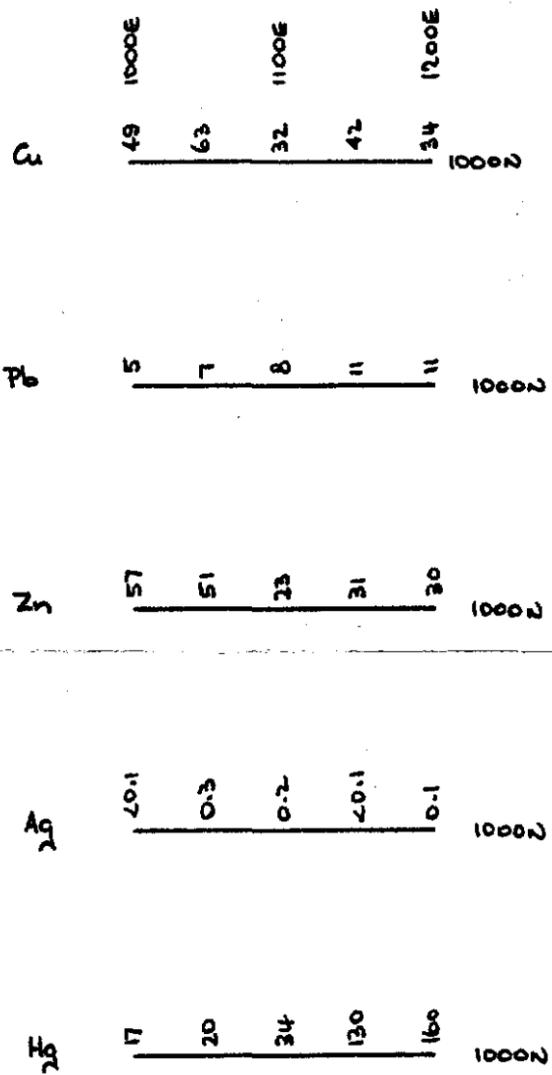
TURAIR No 2



TURAIR No 3



INPUT ANOM. No 1.



043

137044

APPENDIX 5

MINERALOGICAL REPORT

by A.W.G. Whittle

A.W.G. WHITTLE & ASSOCIATES.

MINERALOGICAL REPORT

Report ANCCO 3/78

SAMPLES 93810 - 813

J.E. James.

DISTRIBUTION:

Copies 1 & 2 - North Sydney.

April 16, 1978

SAMPLES 93810 - 813.

The report was prepared from the observations of thin and polished sections from each of four rock samples which were submitted by Mr. J.E. James.

SUMMARY

There is no quartzite in any of the samples: the siliceous facies is a sericitic or dolomitic chert which contained syngenetic sulphides; and was variably recrystallised and modified by dynamomorphic processes resulting from shearing.

The other facies is dolomite or ankeritic dolomite. This too, contained syngenetic sulphides. In some samples carbonaceous material exists as a component of these facies; but in view of the strictly dynamic metamorphic phenomenon, graphite was not produced from the carbonaceous material.

SOUTH KING

93810. Strongly sheared, brecciated and fractured sericitic slate and chert with dynamomorphic sphalerite-galena-siderite lenses.

The sections through the sample exhibit highly complex sheared patterns of structure in which systems of intersecting shear-induced fractures are prominent. The facies which are host to the sulphides include modified sericitic shale, sericitic chert and dolomitic chert. These facies were intermingled during the shearing; and all were extensively fractured. The silica and dolomite from the chert, in company with siderite and sulphides were mobilised into elongate masses along the shears; and also into the systems of fractures.

The sericitic shale was recrystallised to a highly fissile sericitic slate. This presently contains numerous recrystallised-silica-sulphide-filled fractures. The sericitic chert was not significantly modified except for both the cleavage developed in it by the oriented sericite; and the filling of fractures by mobilised quartz, carbonates and sulphides. The dolomitic chert was extensively

brecciated and in part recrystallised in respect to its quartz and dolomite components. This facies appears because of the extensive brecciation and fracturing to have accomodated the bulk of the sulphides and associated siderite gangue.

The main mass of sulphides and siderite was therefore preferentially dispersed as more or less continuous masses of several mm thicknesses through the chert horizon. Most of the siderite has oxidised to black goethite pseudomorphs.

Sphalerite is the dominant sulphide. Elongate 3-5 mm X 0.3 mm masses of galena, as well as small grains of galena are dispersed through the extensive (several cm) zones of the sphalerite; while marginal to these zones, and almost completely enclosing disconnected portions of these zones, there are brecciated and contorted intergrowths of the dark coloured carbonate, siderite.

Small bodies of sphalerite of 0.2-0.5 mm size, strings of 0.01 mm pyrite granules, sparsely disseminated 0.1 mm pyrites, and chalcopyrite, elongate masses of the siderite, and scattered fine galena, are dispersed through the sericitic slate and sericitic chert. In much of the slate and sericitic chert these components also form part of the quartz-dolomite open fracture fillings.

There is no positive evidence to indicate conclusively that the sphalerite, galena and minor chalcopyrite were indigenous, but remobilised and locally concentrated syngenetic components of these sediments; cf. samples which follow.

OCEANA

93811. Folded-brecciated carbonaceous chert and ankeritic dolomites with syngenetic and mobilised sulphides.

The rock sample embodies portions of tight folds in a black dolomitic-pyritic carbonaceous chert which has been in part recrystallised. The folded chert is contained in the more extensive mass of recrystallised medium grained ankeritic dolomite. This too, is dark in colour because of its content carbonaceous material, and the

3.

entrained portions of recrystallised chert. At irregular intervals within the ankeritic dolomite there are 1-3 mm recrystallised-segregated intergrowths and short thin veins of galena.

In the polished section the areas of chert exhibit no graphite; but they contain 10% amorphous carbonaceous material, 10% minutely granular and framboidal pyrites of less than 10 microns size, sparse minute sphalerites, several % somewhat coarser recrystallised galena of 0.05-0.1 mm size, and irregularly shaped recrystallised dolomite porphyroblasts of 0.3-0.5 mm size. These features suggest that galena, sphalerite and pyrite were syngenetic components of the carbonaceous-dolomitic chert.

Amorphous carbonaceous material, but no graphite exists in the recrystallised ankeritic dolomite. This too, contains 1-2% minute pyrites, sparse minute galena and sphalerite granules, as well as the larger segregations of galena noted above. These features indicate that the dolomite also contained syngenetic sulphides. Associated with the 1-3 mm masses of galena there are 0.3 mm tetrahedrites, smaller 0.1 mm sphalerites, traces of chalcopyrite and minute blebs of an isotropic sulphosalt. The grains of the latter are too fine for identification.

All of the galena darkens considerably upon exposure hence it would appear to contain silver sulphide in solid solution. A further source for silver is in the tetrahedrite, and possibly in the unidentified sulphosalt blebs.

AUSTRAL

93812. Sheared-brecciated-fractured sphalerite-galena-pyrite marcassite ore assemblage.

The whole sample exhibits a fractured-brecciated and distinctly sheared structure.

One half of the sample consists dominantly of linear-structured fine grained marcassite-pyrite intergrowths which incorporate numerous small 0.1 mm fragments of chert and carbonaceous material, as well as

048

larger 0.1-0.3 mm irregularly scattered galena and sphalerite segregations, and occasional mobilised thin quartz veins.

The other half of the sample consists mainly of much coarser grained, but extensively brecciated and fractured Fe-rich sphalerite, and subordinate but moderately abundant galena. The systems of fractures in both the sphalerite and galena aggregates were filled by mobilised pyrite-marcasite intergrowths. A detailed search revealed traces of chalcocopyrite, but no silver-bearing minerals.

GRIEVES SIDING

93812. Framboidal pyritic, minor sphaleritic dolomite breccia.

This rock is simply a moderately coarsely fragmental pyritic dolomite breccia. It contains very little carbonaceous material despite the dark colour which is a manifestation of the type of pyrite contained amongst the dolomite.

Some large fragments are made up of closely spaced 0.2 mm dolomite subhedra which are separated from each other by very much finer ferruginised carbonates, and by patches of very fine framboidal pyrite aggregates.

The other types of fragments consist of folded portions of highly pyritic finer grained dolomite. In these the pyrite is confined strictly to numbers of thin layers.

Throughout both varieties of the dolomite facies as represented by the fragments, all of the pyrite is framboidal. Where there are continuous stratiform pyrite-rich zones, the spherical clusters of pyrite fromboids of 0.02 mm size are continuously coalesced, except for selvages of sphalerite between contiguous fromboids. Each framboidal cluster is made up of scores of individual fromboids of 1 micron or smaller size.

The characteristic framboidal texture of the pyrite, and the minutely cusped habit of the interframboidal sphalerites, surely points to a syngenetic origin for these sulphides, either by bacterial or chemical depositional phenomena. Such phenomena were incident concurrently with the chemical deposition of the dolomite

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itself. Pyrite constitutes 30% and sphalerite 2-3% of the rock bulk; but no galena was observed.

A. W. G. Whittle
A. W. G. Whittle & Associates,
Mineralogical Consultants.

April 18, 1978.

APPENDIX 6

PULSE ELECTROMAGNETIC PROFILES

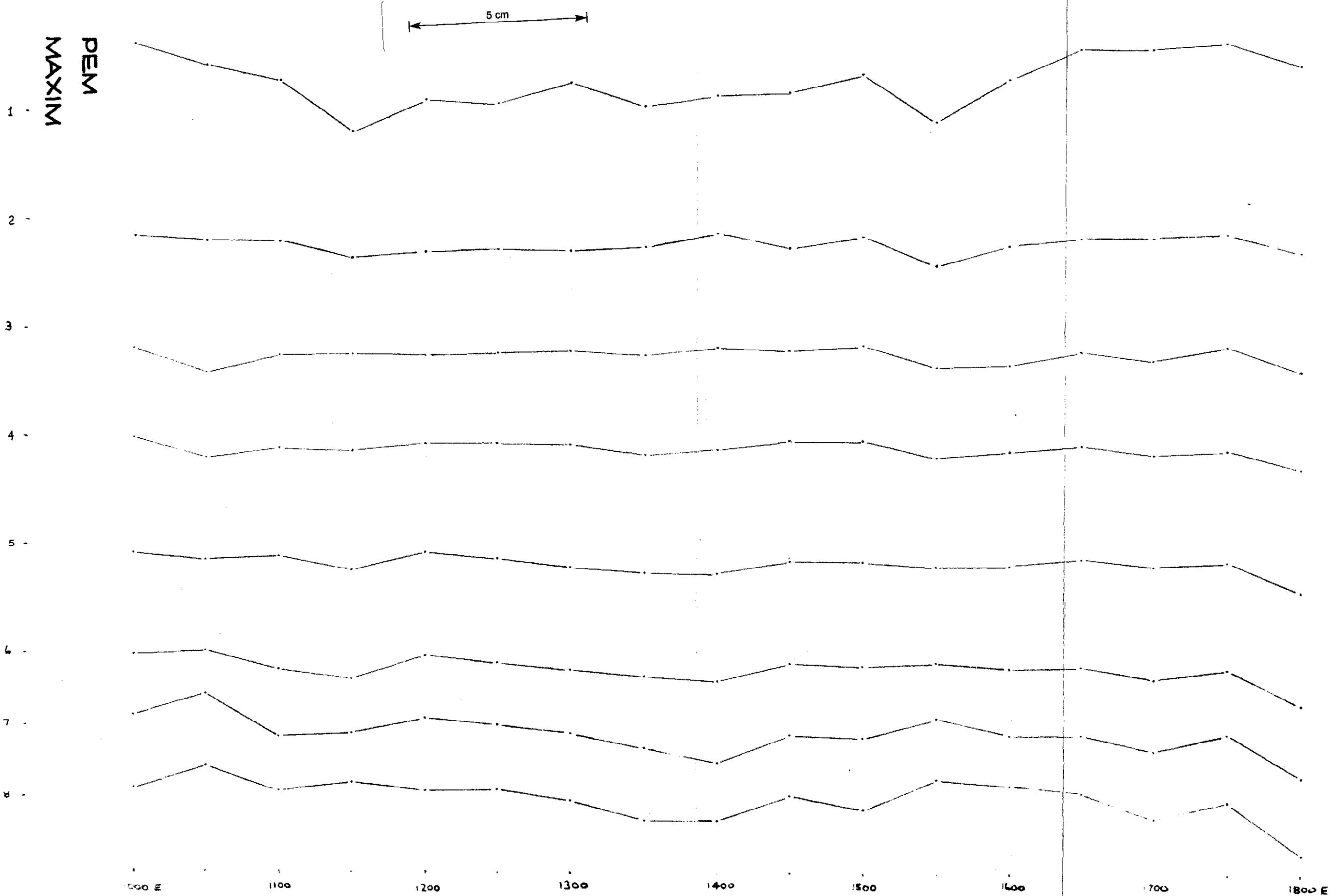
051

ZEEHAN MAXIM VALLEY PEM LINE 5500 N.

(7/5/79 S Collins
a' x 100 m 1:1,500
Tx WEST Rx

137052

PEM
MAXIM



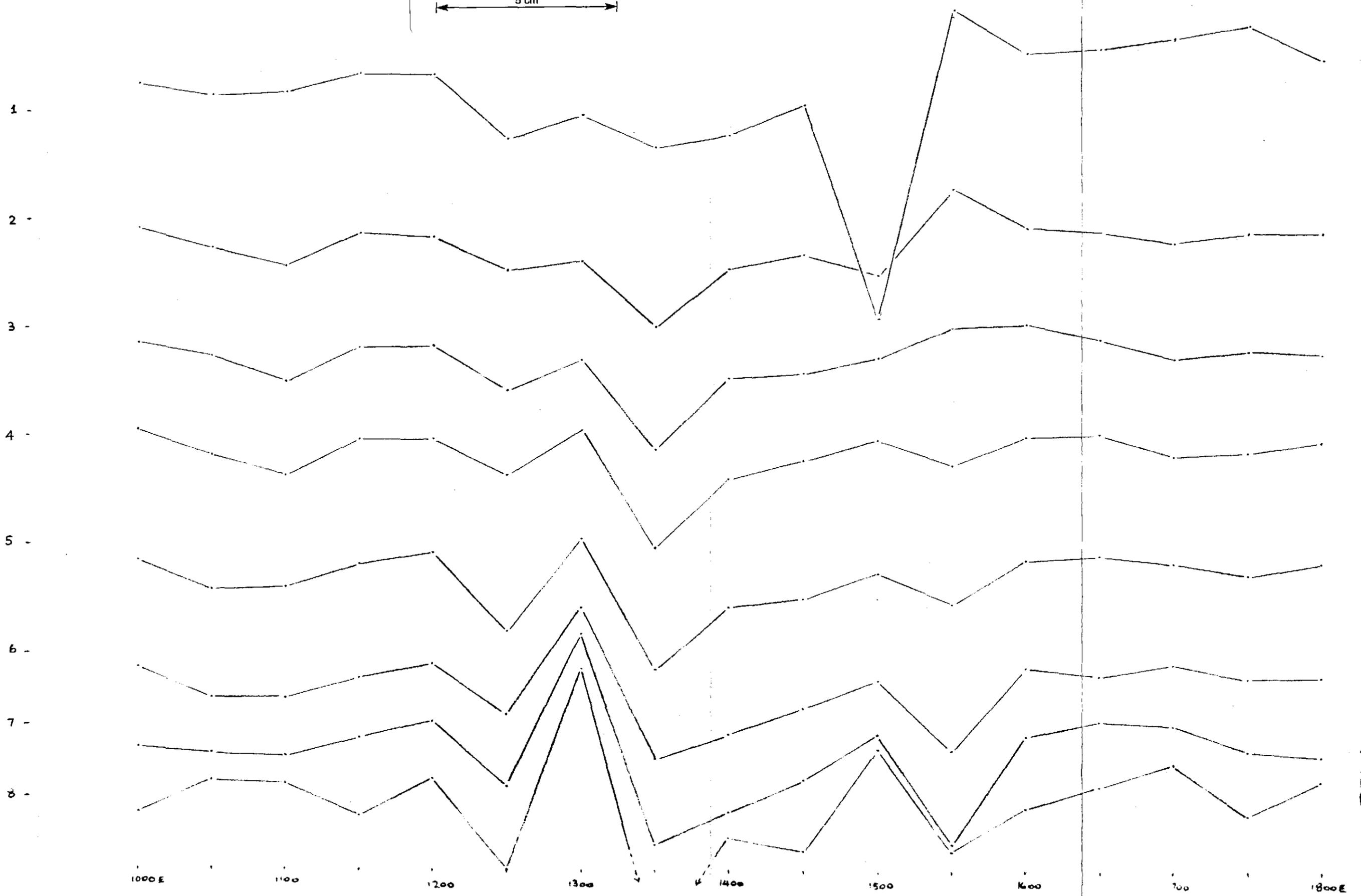
S. COLLINS 7/5/79 a' x 100 m Tx WEST Rx

PEM
MAXIM 5500 N

052
ZEEHAN MAXIM VALLEY PEM LINE 5600 N
(S Collins 8/5/79
'a' = 100 m 1:2,500
Tx WEST Rx)

137053

5 cm



PEM
MAXIM 5600N
S. COLLINS 8/5/79 'a'=100m Tx WEST Rx

053

ZEEHAN MAXIM VALLEY PEM LINE 5700N

S. COLLINS 7/5/79
'a' = 100 11,2500
Tx WEST Rx

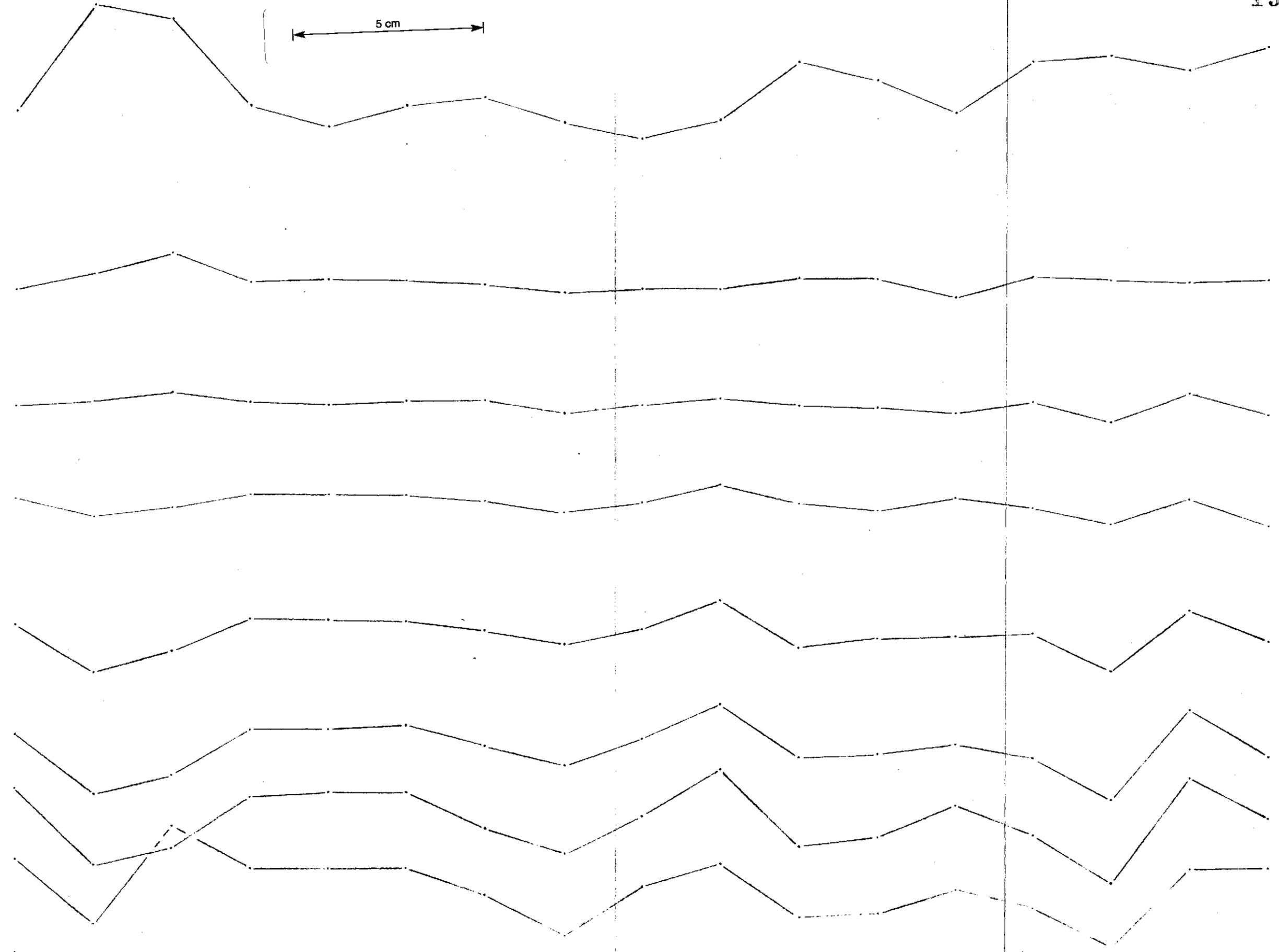
137054

5 cm

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1000 E 1100 1200 1300 1400 1500 1600 1700 1800 E

PEM
MAXIM 5700N
SCOLLINS 7/5/79 'a'=100m Tx WEST Rx

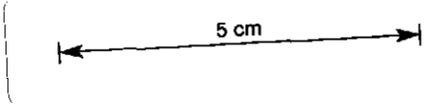


054

ZEEHAN MAXIM VALLEY LINE 5800N PEM

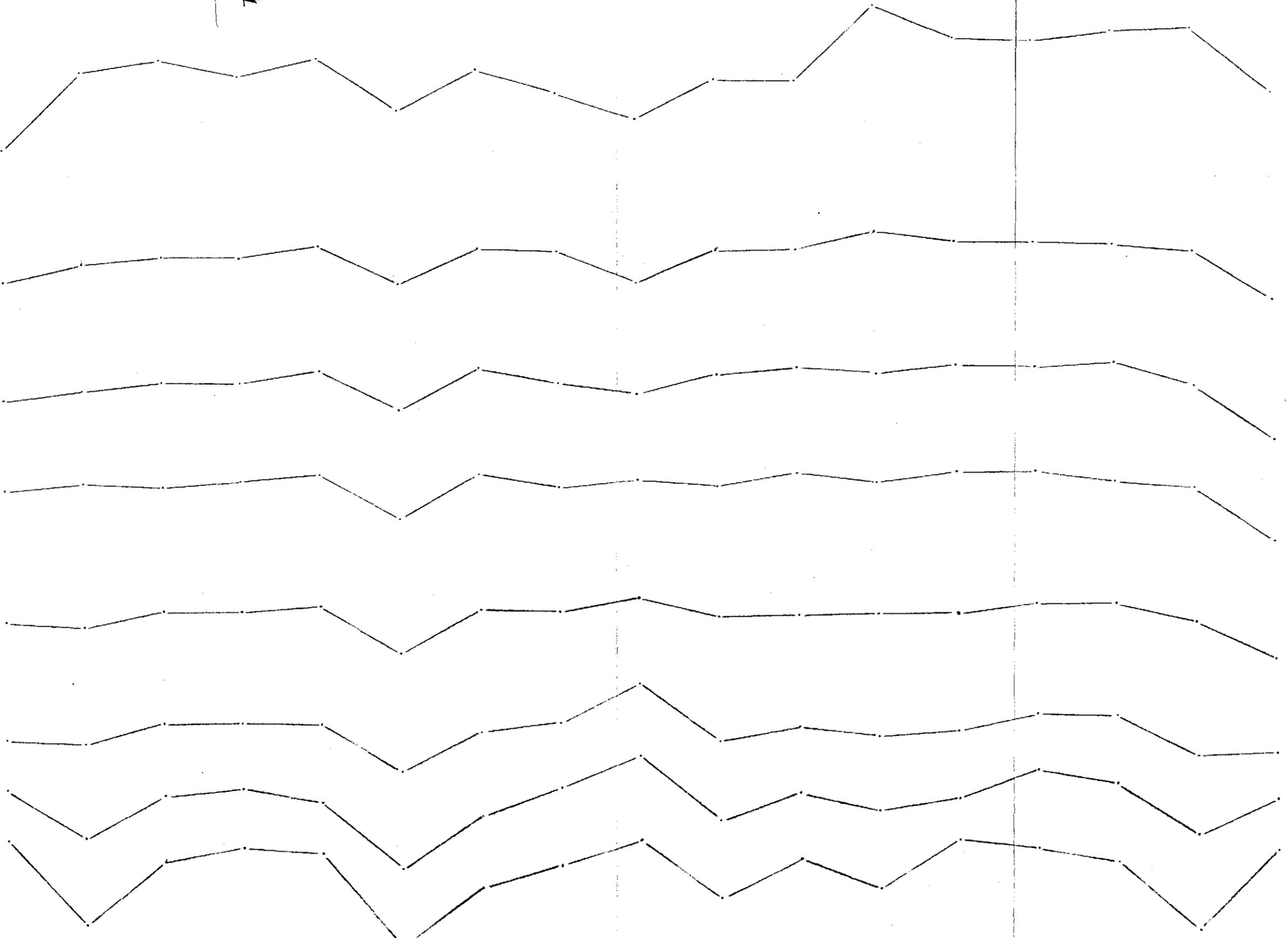
(S. Collins 8/5/79)
(a' = 100m 1:2,500)
Tx WEST Rx.

137055



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1000E 1100 1200 1300 1400 1500 1600 1700 1800E



PEM
MAXIM 5800N
S. COLLINS 8/5/79 a' = 100m Tx WEST Rx

MAXIM VALLEY PEM LINE 5900N

S. Collins 9/5/79
a' = 100m 112,500
Tx WEST Rx

137056

5 cm

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1400E

1400E

1400E

1300E

1400E

1400E

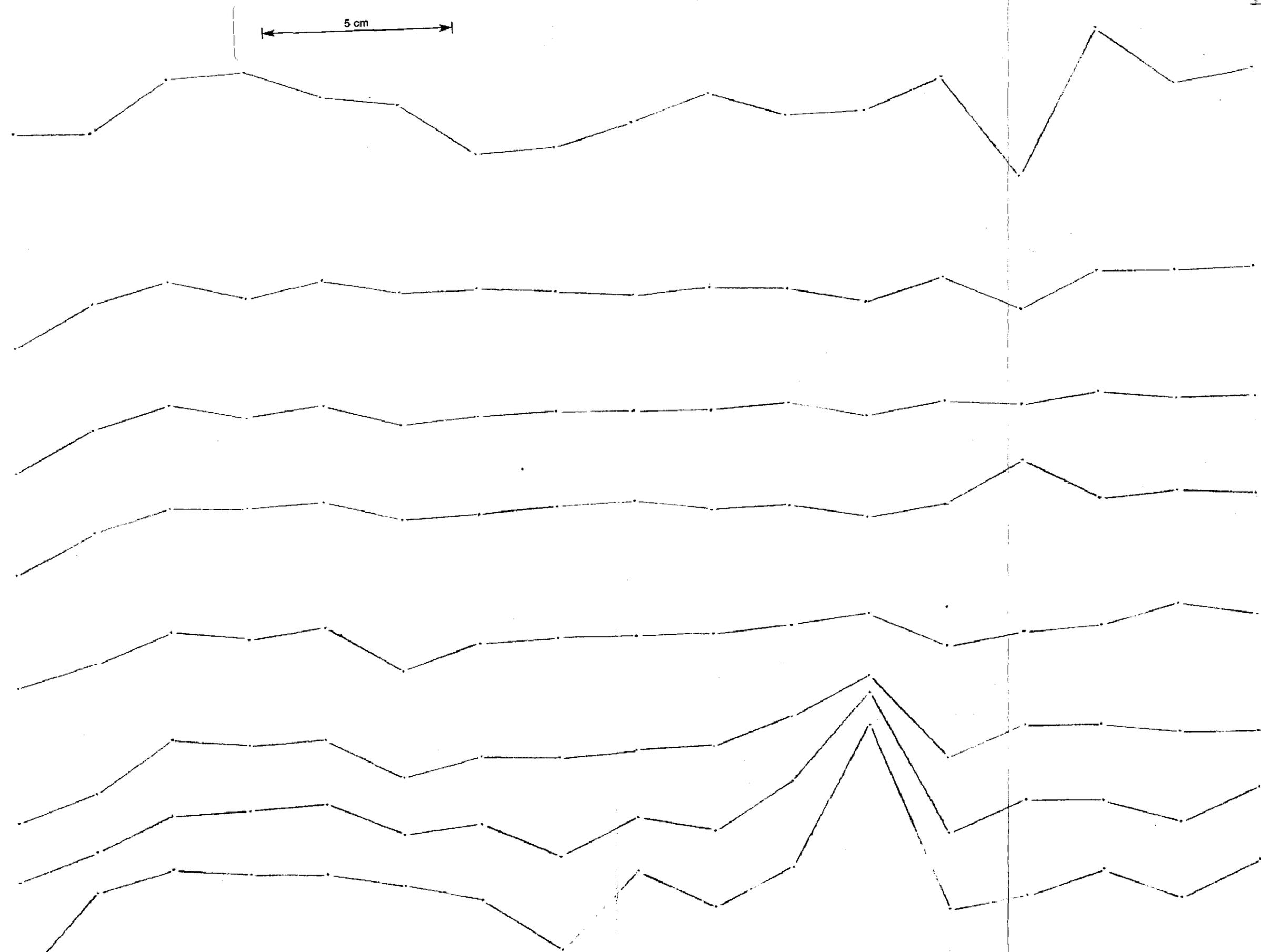
1400E

1400E

1300E

S. COLLINS 9/5/79 a' = 100m Tx WEST Rx

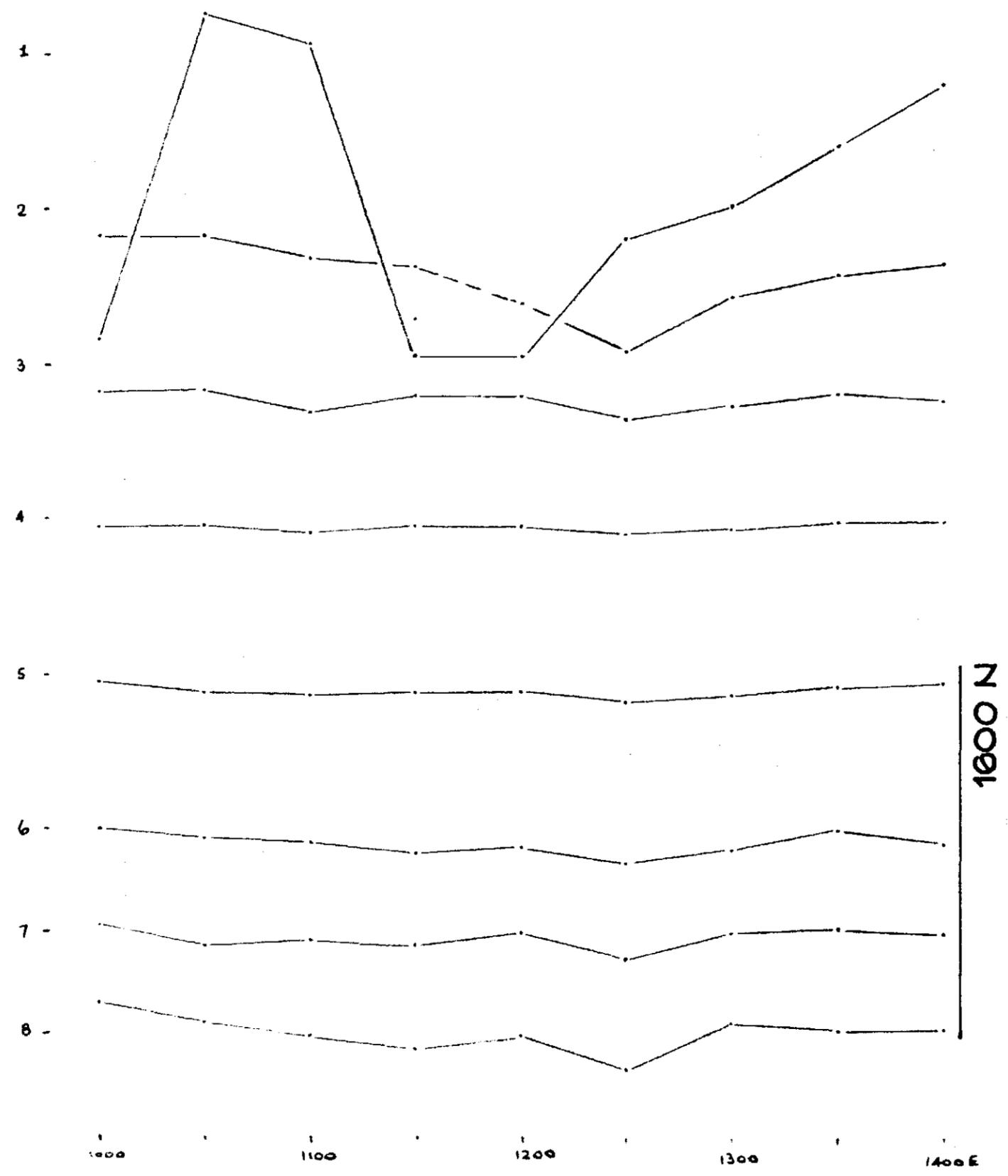
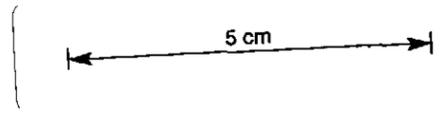
PEM
MAXIM 5900N



458

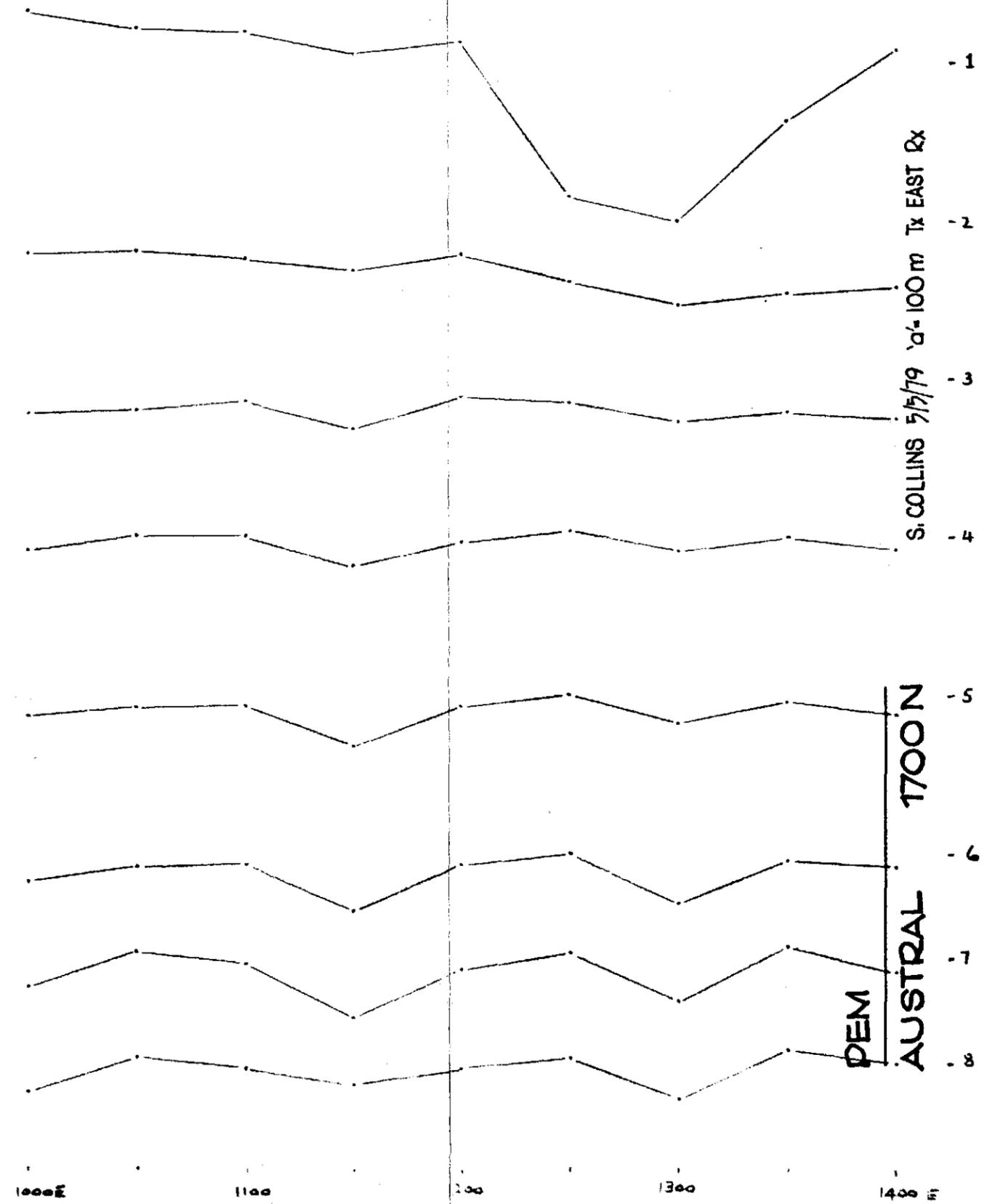
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(S COLLINS 2/13/79
a=100m l=2500
Tx EAST of Rx)



AUSTRAL VALLEY PEM LINE 1700 N.

137057

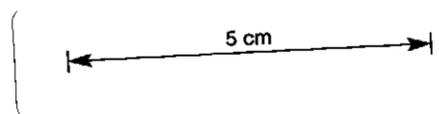


057

ZEEHAN

AUSTRAL VALLEY PEM LINE 1800N.

(S. Collins 5/5/79)
'a' = 100m 1:2,500m
Tx EAST Rx

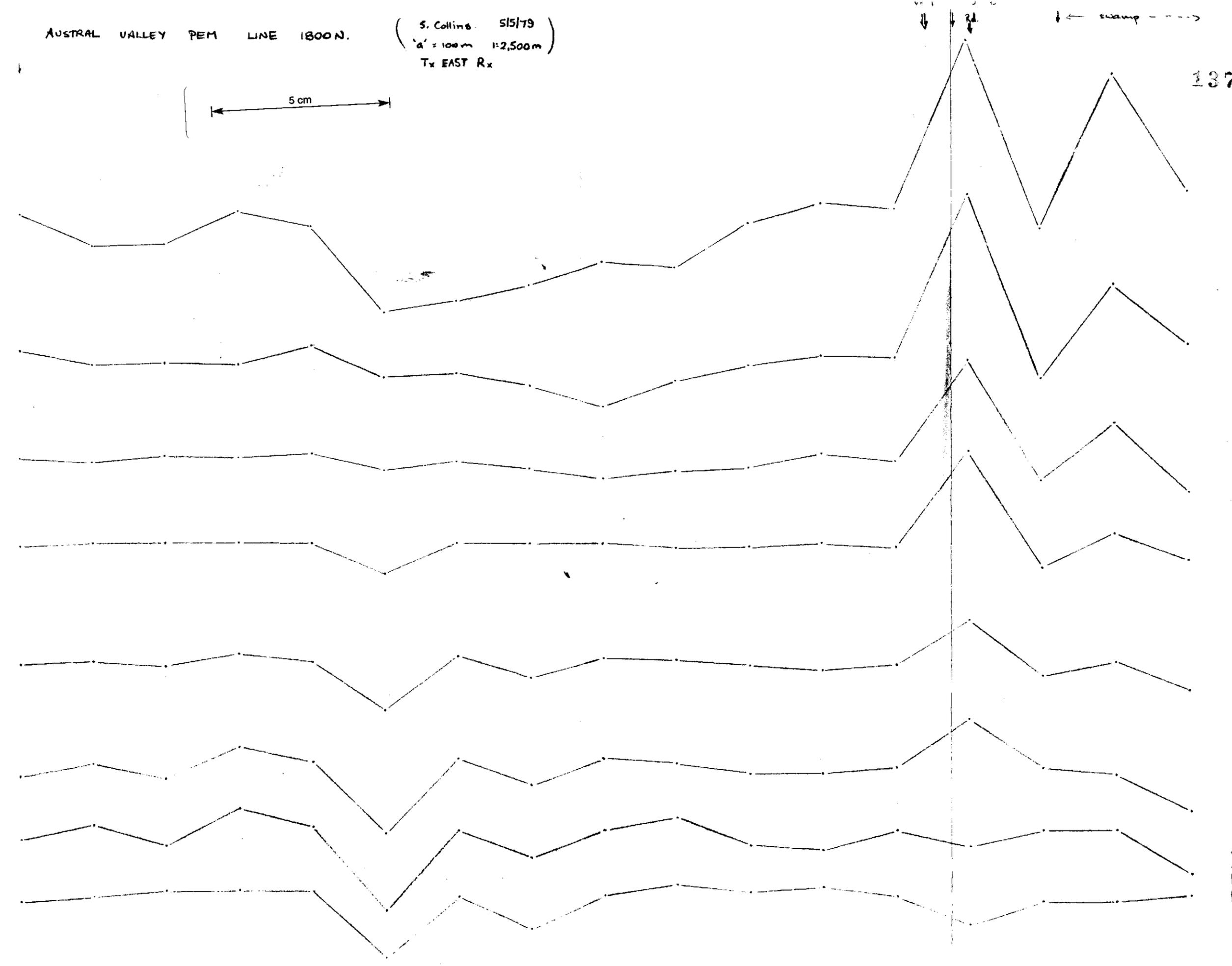


137058

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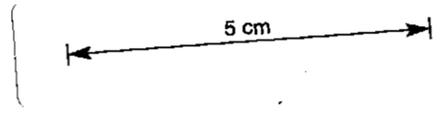
PEM
AUSTRAL 1800 N
S. COLLINS 5/5/79 'a'=100 Tx EAST Rx



058

ZEEHAN AUSTRAL VALLEY PEM LINE 1900N

S. COLLINS 5/5/79
'a' = 100m 1/2,500
Tx EAST Rx

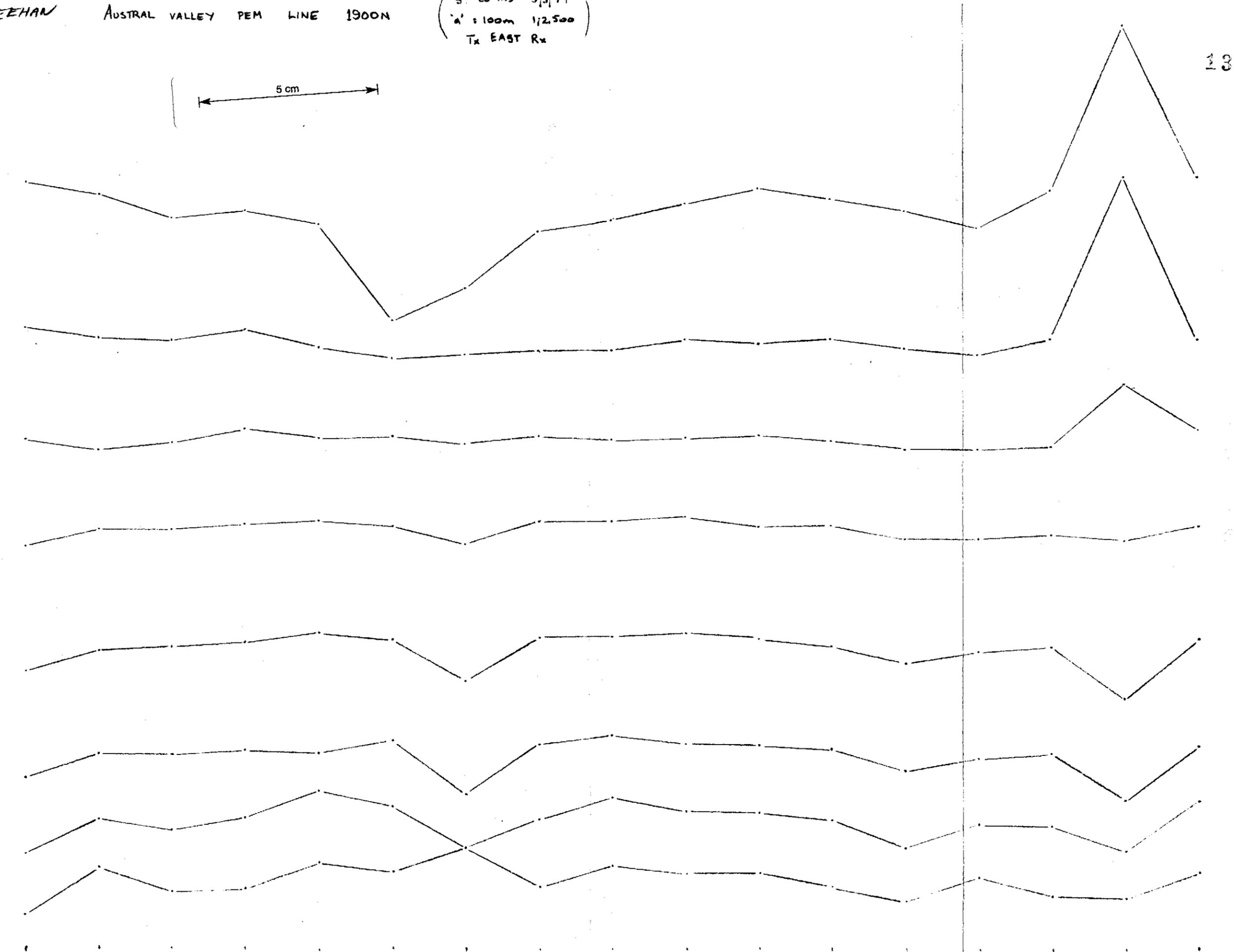


137059

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PEM
AUSTRAL 1900 N
S. COLLINS 5/5/79 'a'=100m Tx EAST Rx

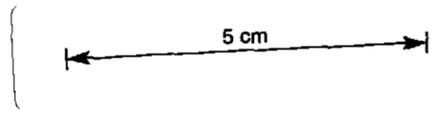


559

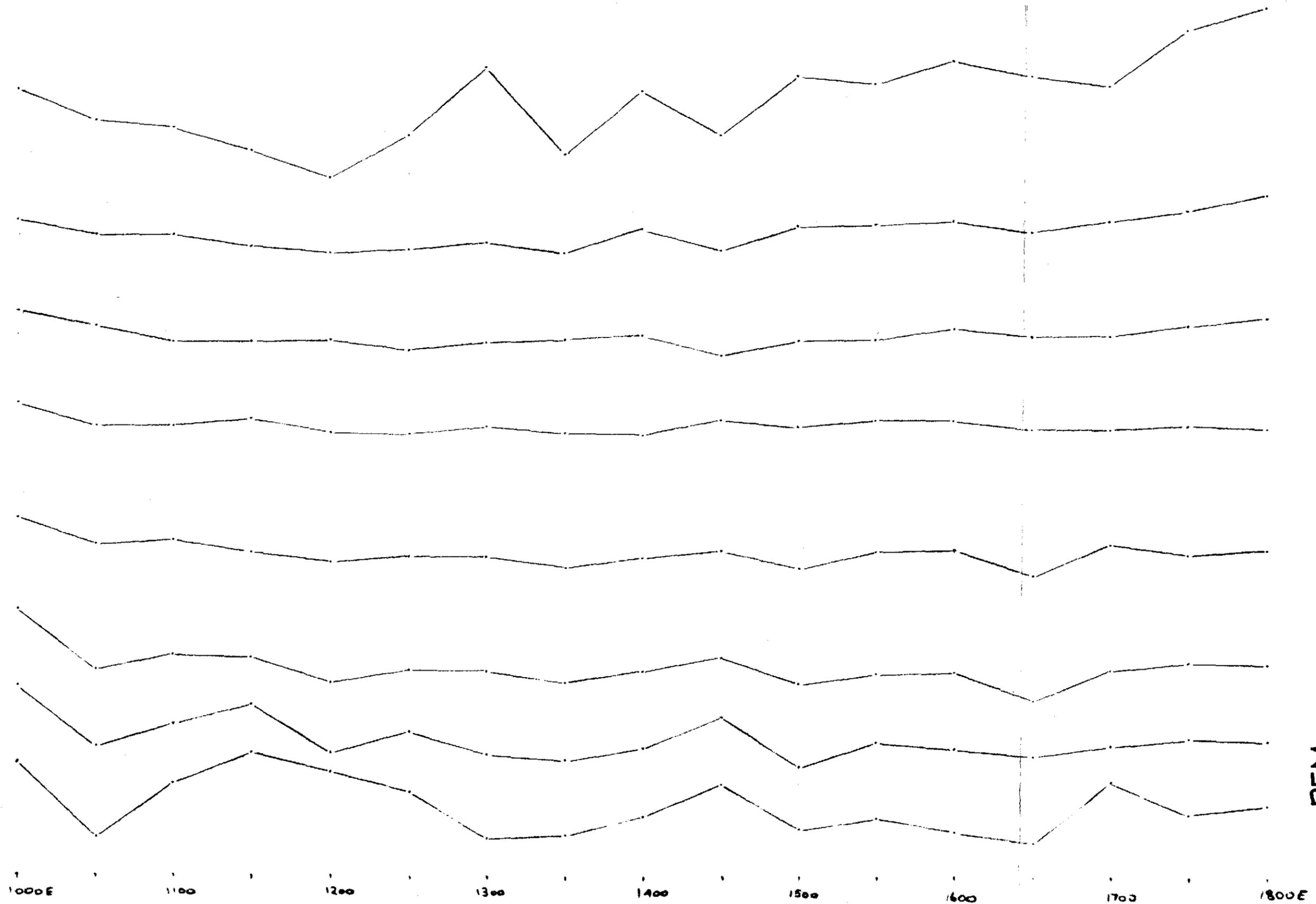
AUSTRAL VALLEY PEM LINE 2000N

S. Collins 9/5/79
'a' = 100m 1:2,500
Tx East Rx.

137060



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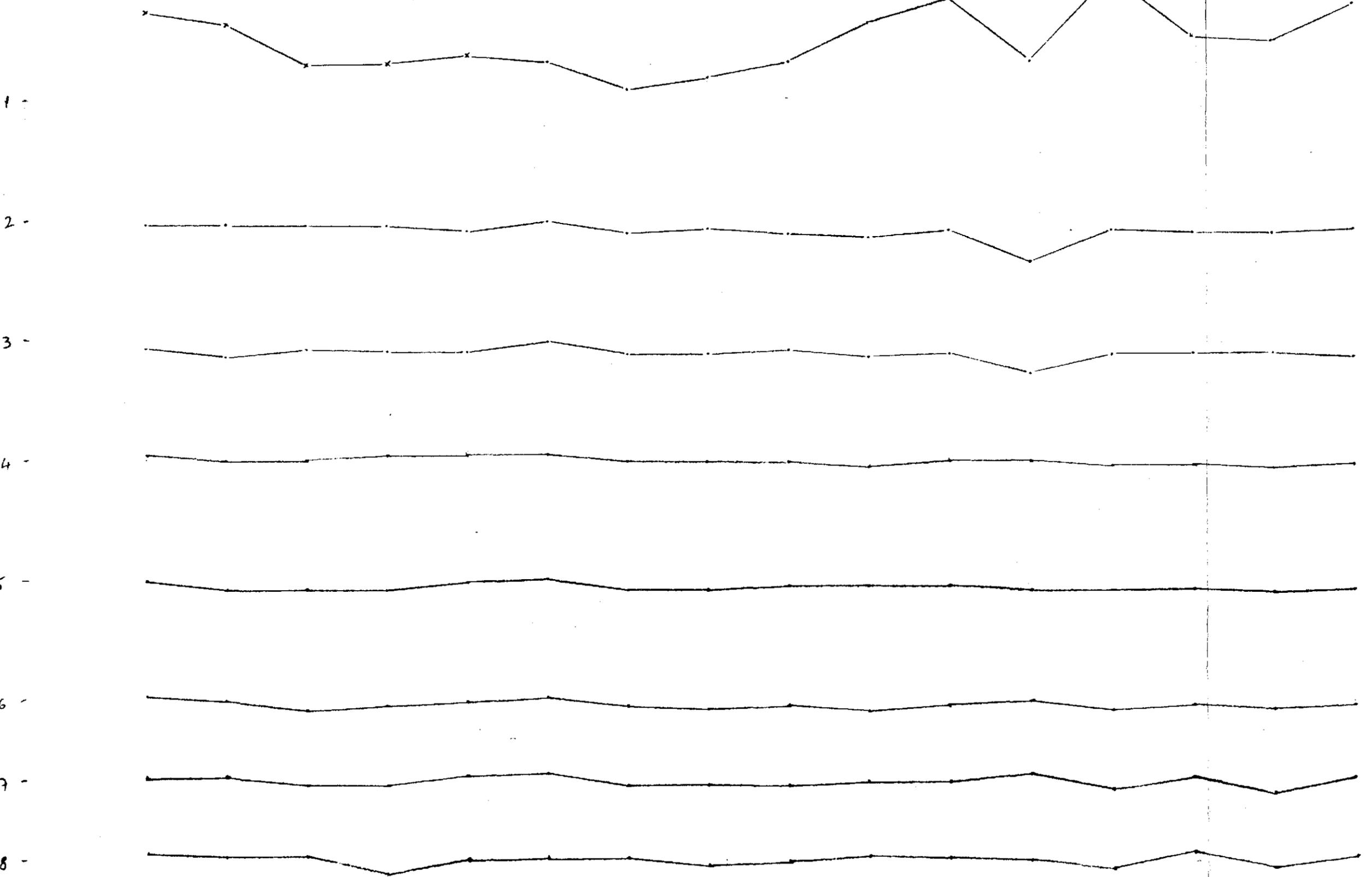
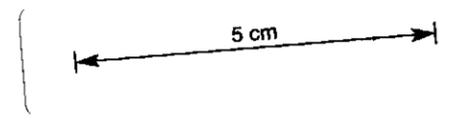


PEM
AUSTRAL 2000N
S. COLLINS 9/5/79 'a'=100 Tx EAST Rx

ZEEHAN OCEANA LINE 3300N. PEM

(S. Collins 3/5/79)
a=100m 1:2500
Tx West of Rx

137061



S. COLLINS 3/5/79 a=100 Tx WEST Rx

PEM
OCEANA 3300N

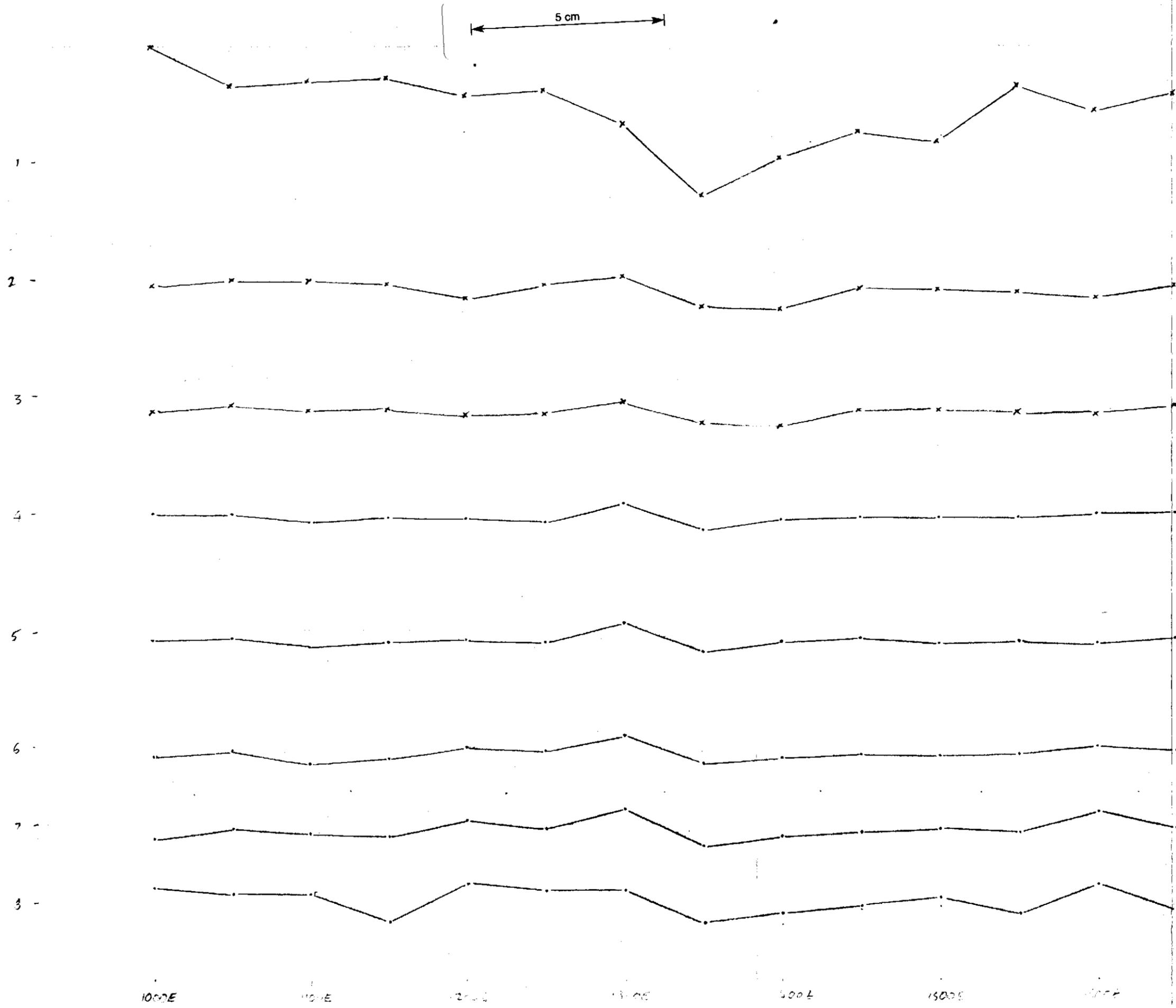
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061

ZEEHAN OCEANA PEM LINE 3600 N

(S. Collins 3/5/79
'a' = 100 m 1.2500
Tx west of Rx)

137062



S. COLLINS 3/5/79 'a' = 100 m Tx WEST Rx

PEM - OCEANA 3600 N

1300E

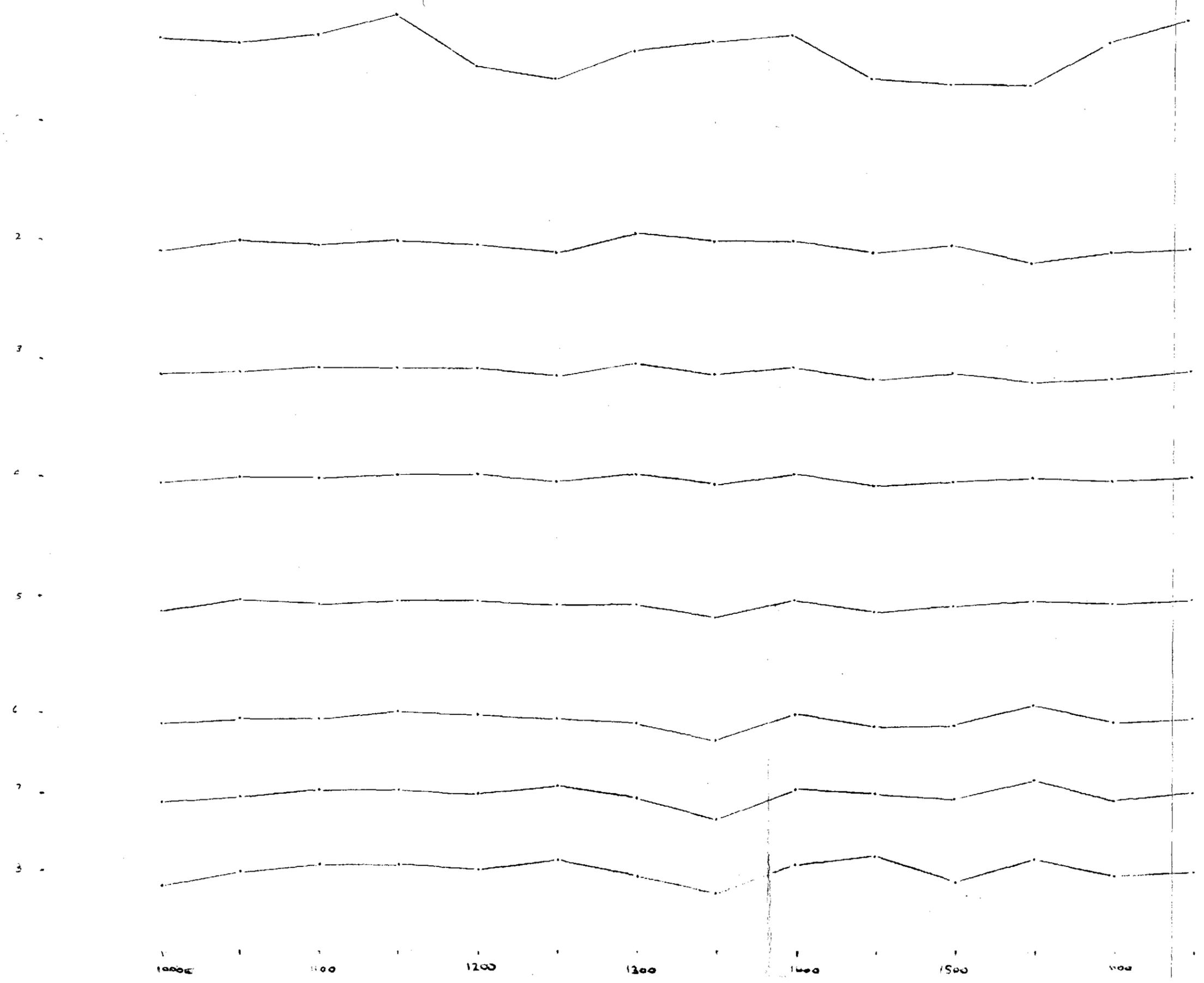
062

ZEEHAN OCEANA PEM LINE 3700N.

(S. Collins 3/5/79)
'd' = 100m 1:2500
Tx west of Rx

137063

5 cm



S. COLLINS 3/5/79 'd' = 100 m Tx WEST Rx

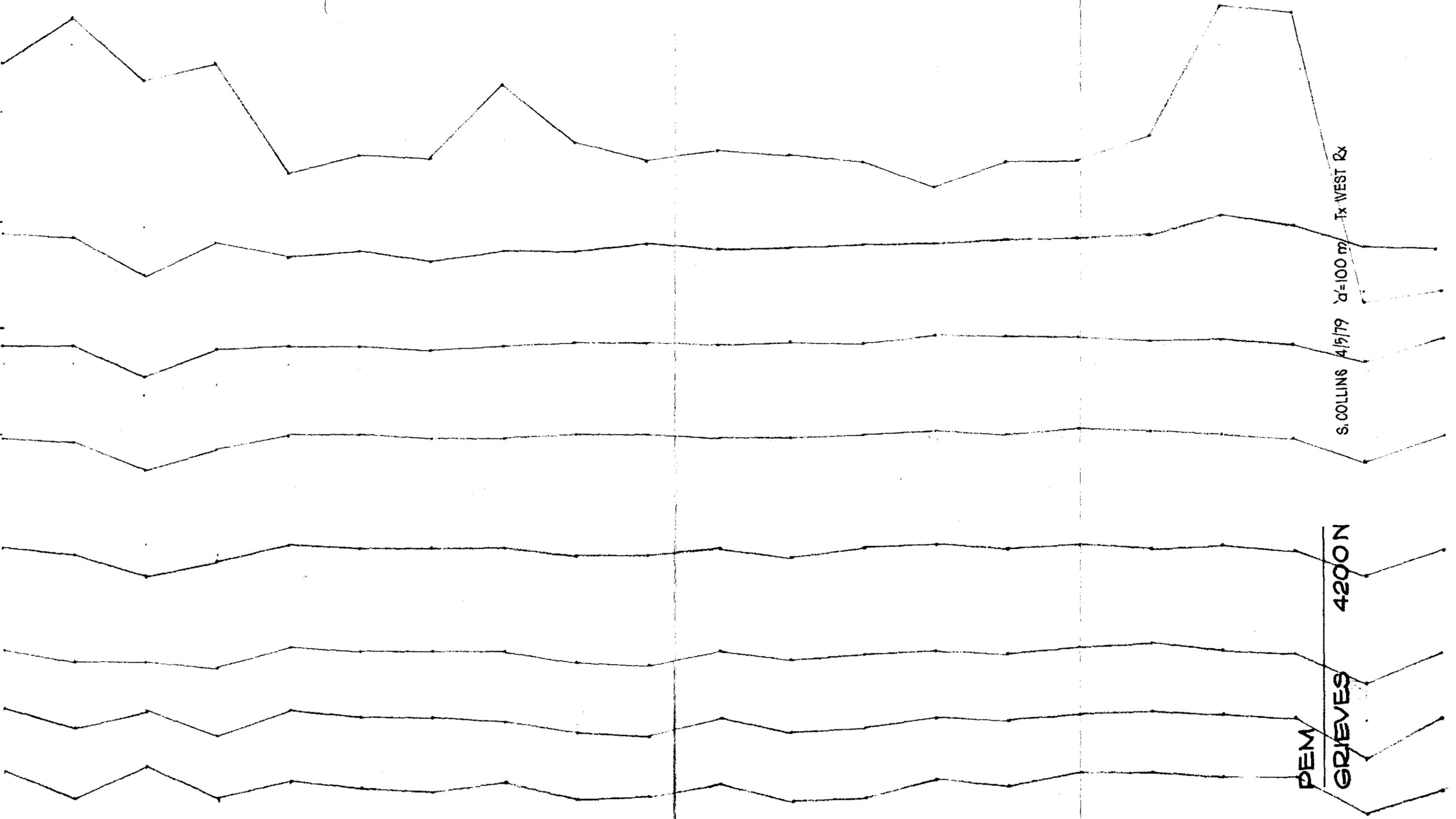
PEM
OCEANA 3700 N

ZEEHAN Greives grid Line 4200 N PEM

(Collins 4/5/79)
(1000 1200)
Tx west of Rx

137064

5 cm



PEM
GRIEVES
4200 N

S. COLLINS 4/5/79
d=100 m
Tx WEST Rx

100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950

ZEEHAN

GRIEVES

GRID

LINE

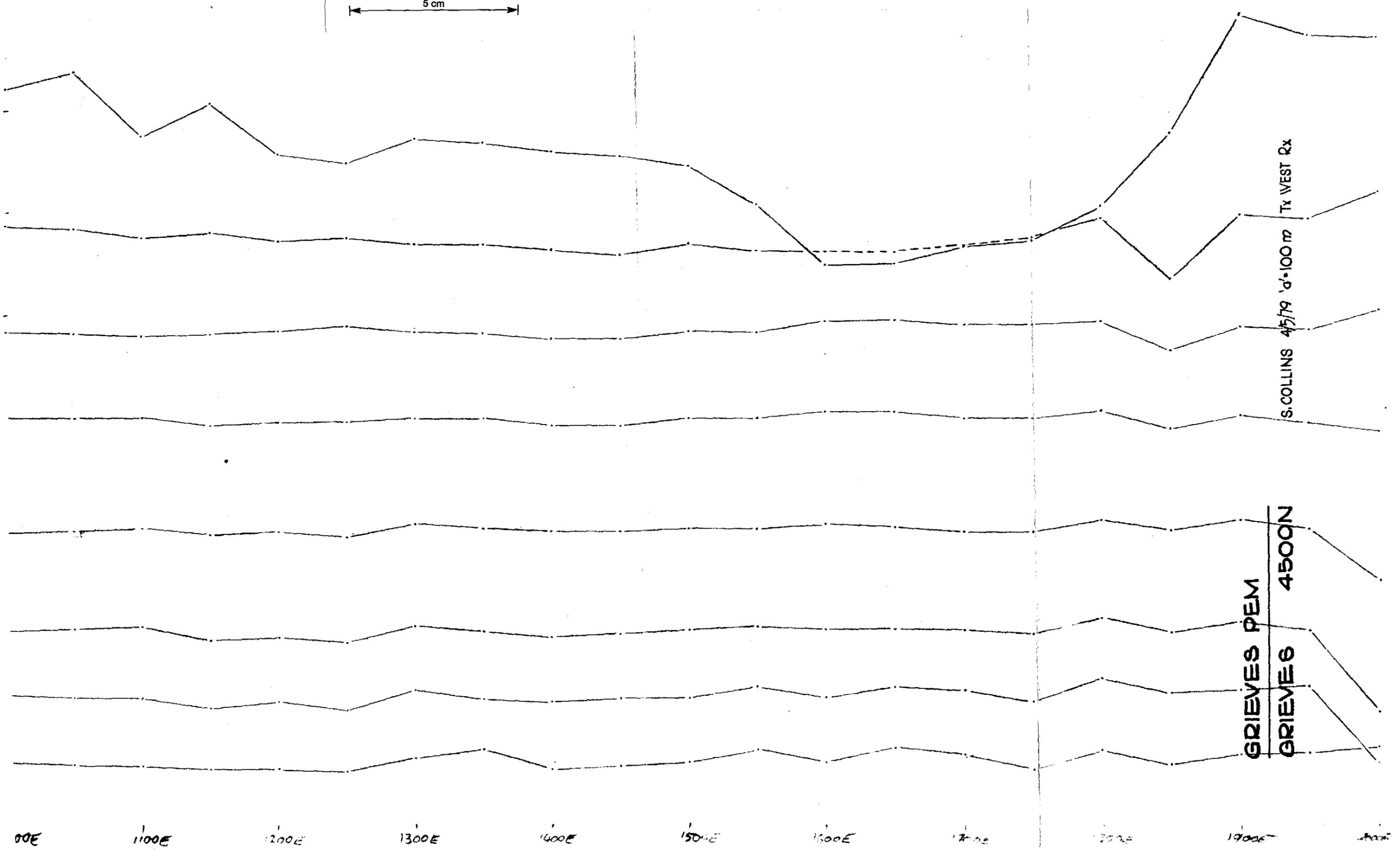
4500 N

PEM

(S Collins 4/5/79)
(1a) = 100m 1.2500
Tx west of Rx

137065

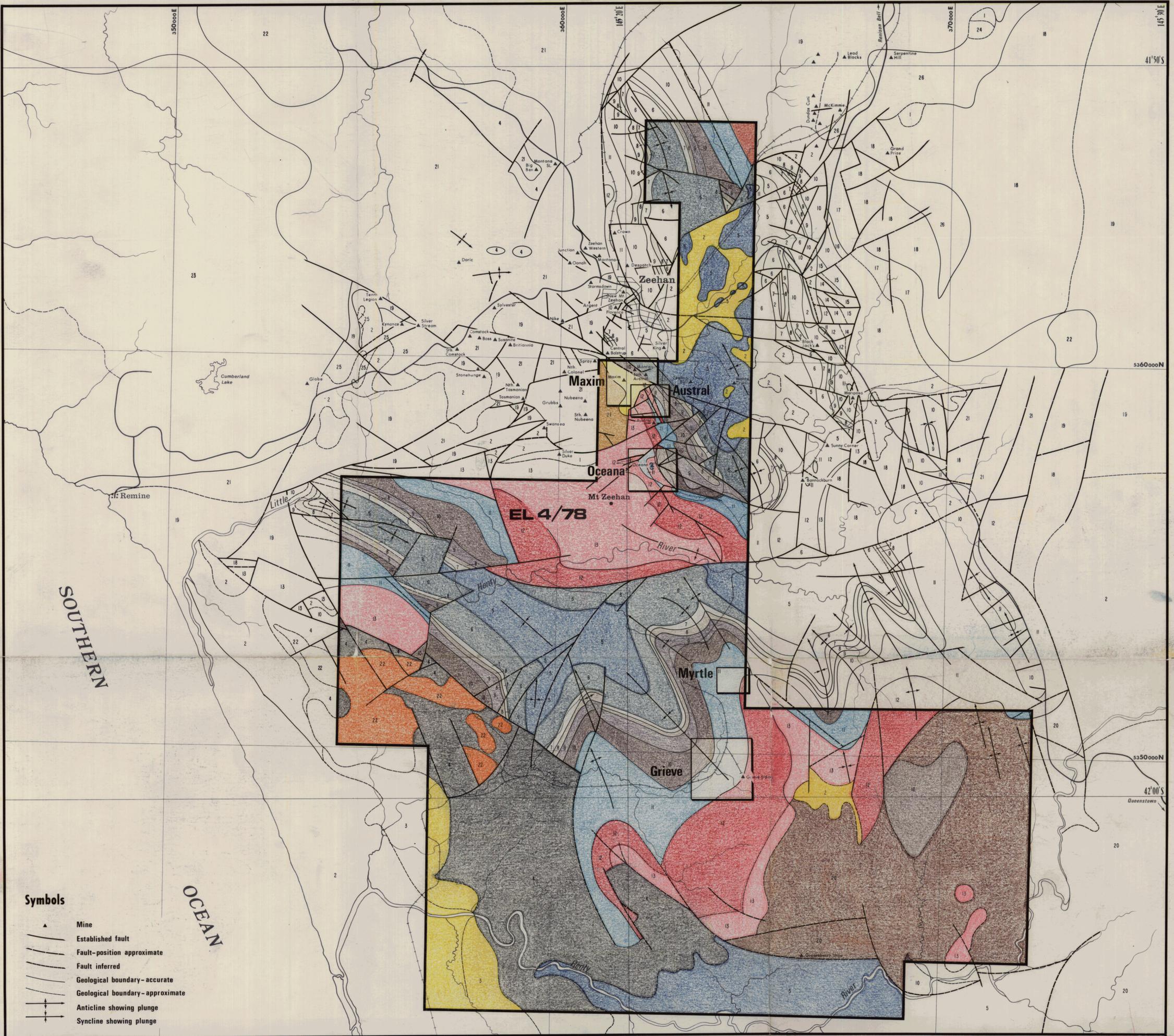
5 cm



00E 100E 200E 300E 400E 500E 600E 700E 800E 900E 1000E

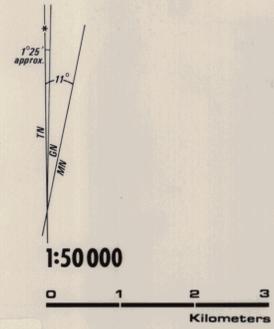
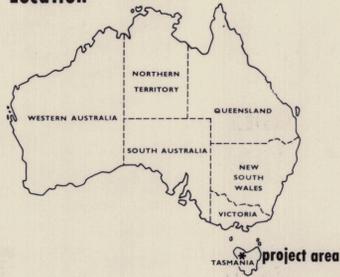
GRIEVES PEM 4500N
GRIEVES 6

S. COLLINS 4/5/79 100m Tx WEST Rx



- Symbols**
- ▲ Mine
 - Established fault
 - Fault—position approximate
 - Fault inferred
 - Geological boundary—accurate
 - Geological boundary—approximate
 - Anticline showing plunge
 - Syncline showing plunge

Location



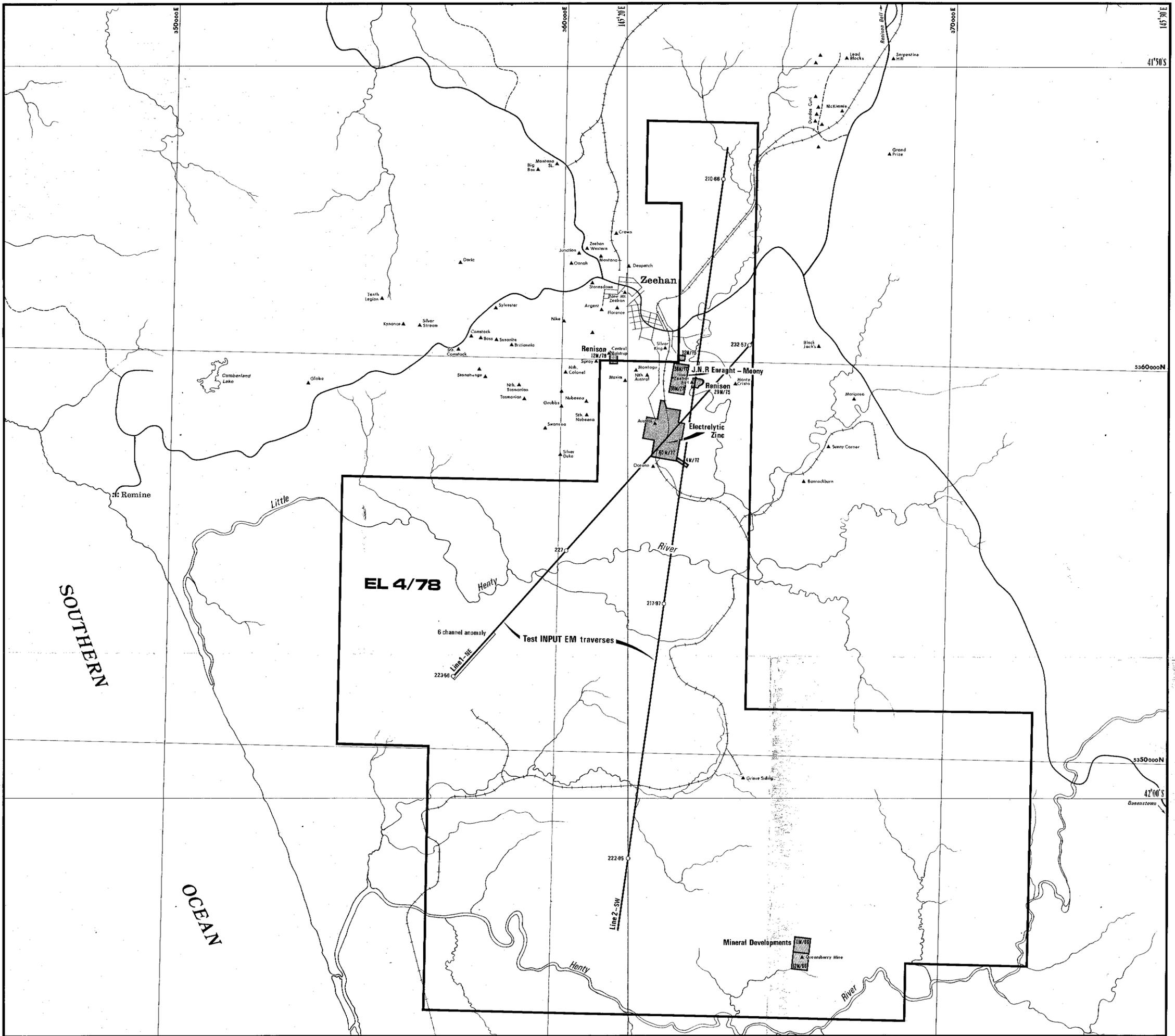
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	6	2	Older alluvium marsh deposits		65	15	Climie Formation
	6	3	Sand, silt and clay		60	16	Comet Formation
TERTIARY	67	4	Coal, lacustrine sediments	CAMBRIAN	62	17	Ferrields formation
PERMIAN	67	5	Bell Shale		57	18	Dundas Group Unassigned
DEVONIAN	35	6	Florence Quartzite		64	19	Crimson Creek Formation
	68	7	Austral Creek Siltstone		61	20	Cambrian Unassigned
	71	8	Keel Quartzite	PRECAMBRIAN	59	21	Oonah Quartzite and Slate
SILURIAN	70	9	Amber Slate		10	22	Jurassic Dolerite
	69	10	Crotty Quartzite	IGNEOUS ROCKS	14	23	Granite
	66	11	Gordon Limestone		12	24	Quartz porphyry
ORDOVICIAN	33	12	Moina Sandstone		48	25	Gabbro, norite and dolerite
	19	13	Mt. Zeehan Conglomerate		46	26	Serpentinite and pyroxenite

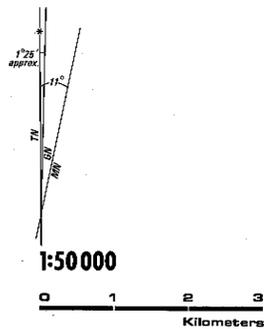
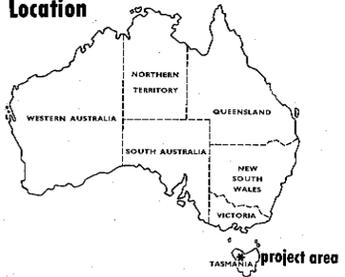
AMOCO 137066
Amoco Minerals Australia Company

Project	ZEEHAN	Nº	A-78-60
Project Partner	19-1385		
Zeehan EL4/78			
GEOLOGY AND PROSPECT LOCATION			
Map Ref. ANG	K-55-5	Latitude	42° 00' S
		Longitude	145° 20' E
Surveyed		Date	
		Scale	1:50000
Drawn	R. Smyth-King	Date	December 1978
Report 151		Drawing Nº	M79-1231

Compiled from enlargement of Zeehan 1:63360 scale and Strahan 1:50000 scale geologic maps. Transverse Mercator Projection



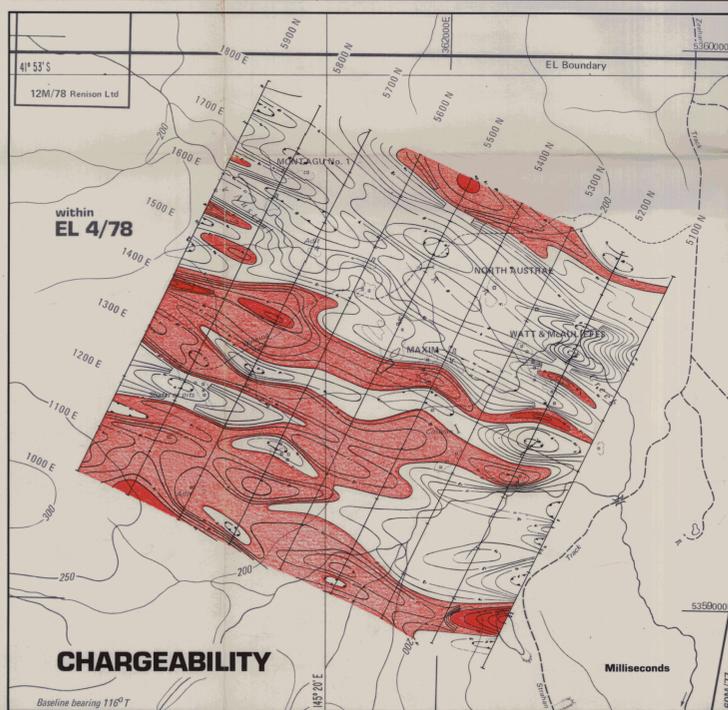
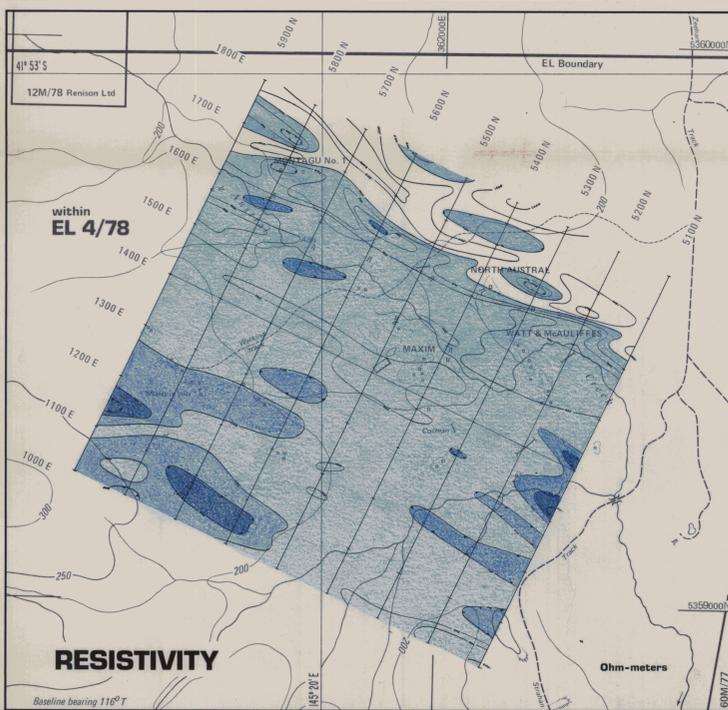
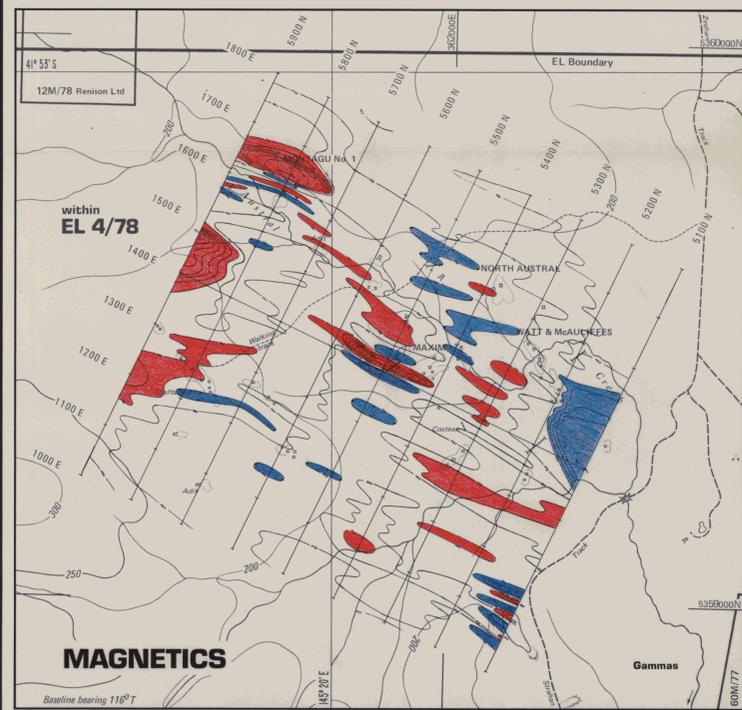
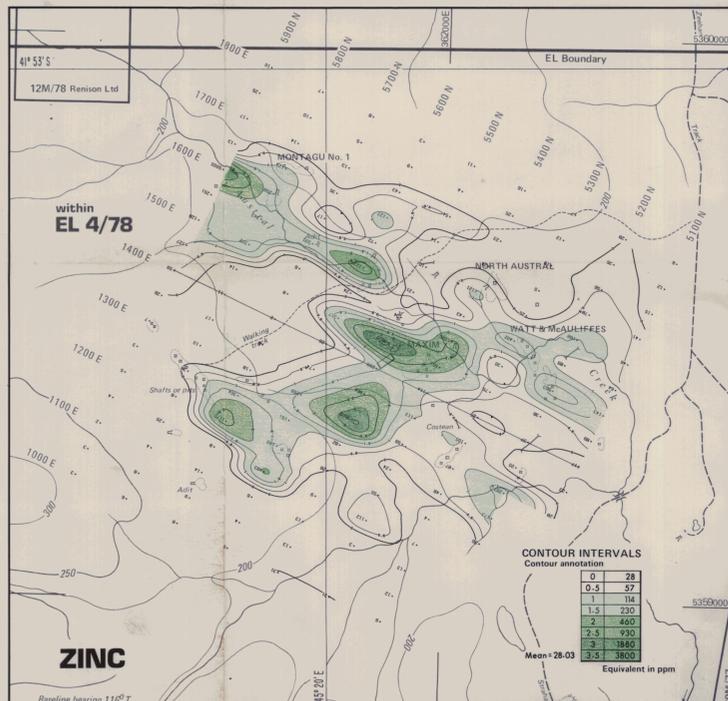
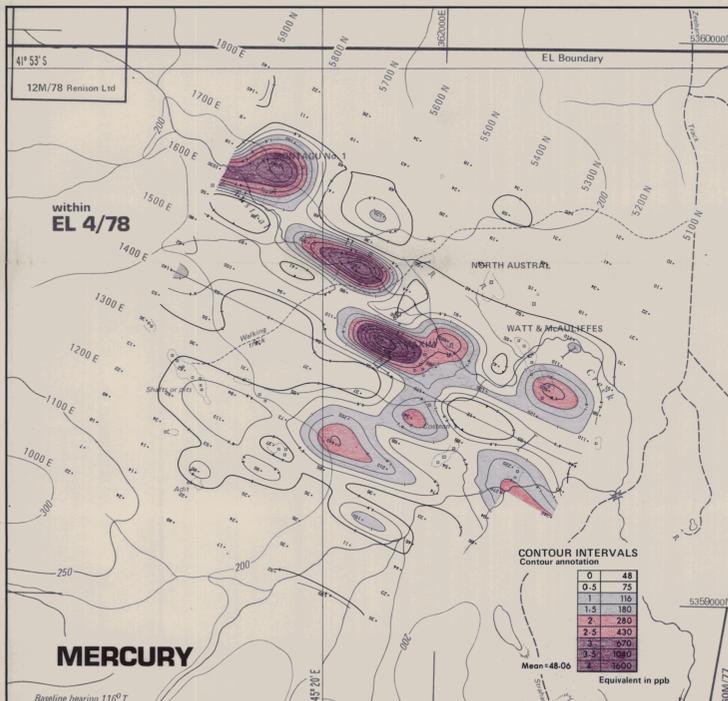
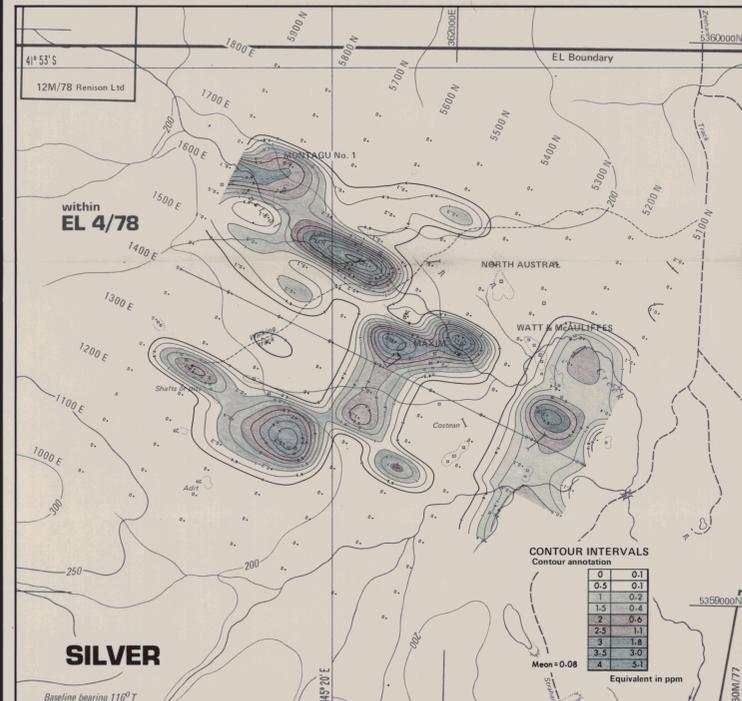
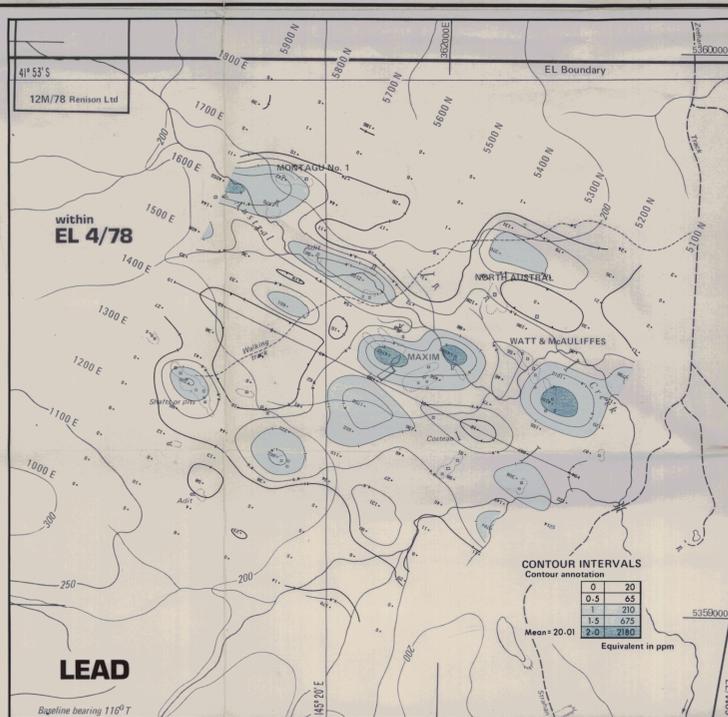
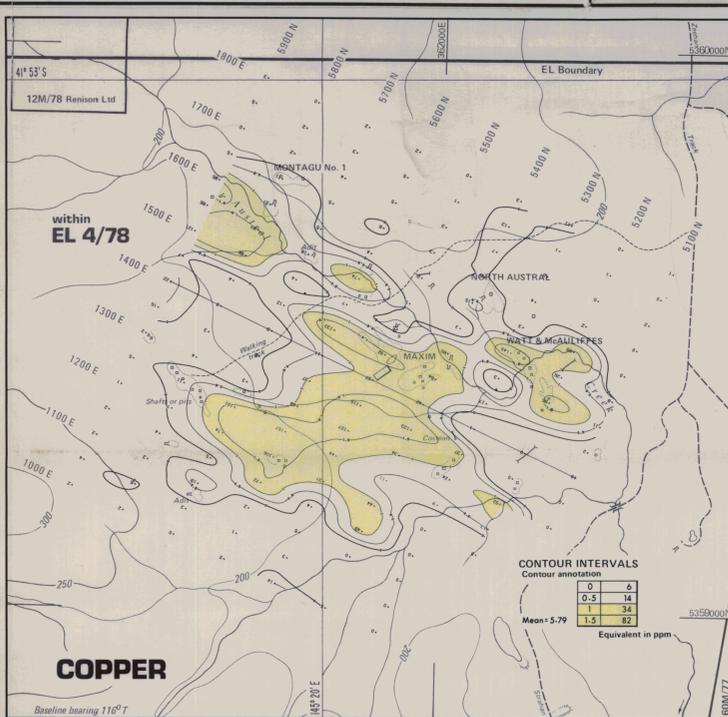
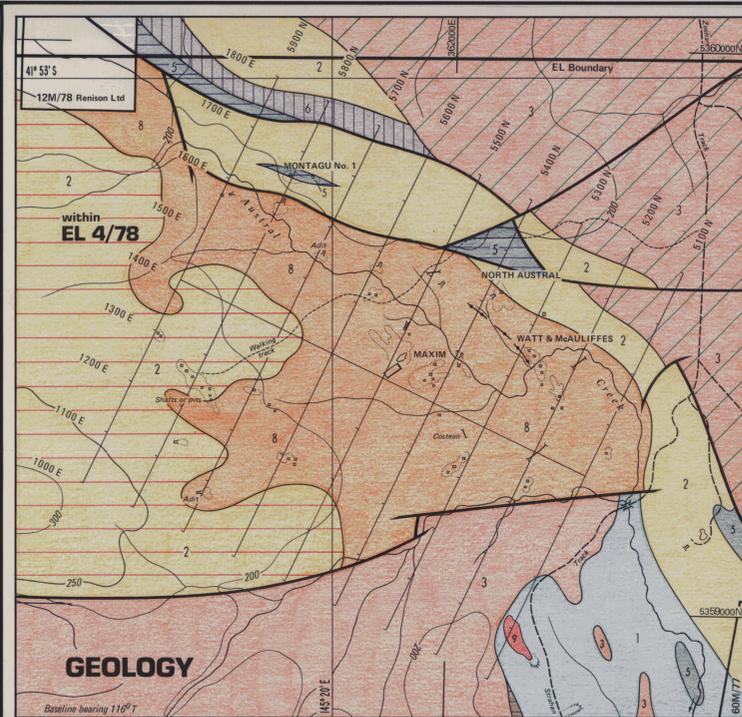
Location



137067
Amoco Minerals Australia Company
19-1385

Project	ZEEHAN	Nº	A-78-60
Project Partner			
Zeehan EL 4/78			
PRE-EXISTING TENEMENTS showing Locations of INPUT EM Traverses			
Map Ref. ANG	K-55-5	Latitude	42°00'S
		Longitude	145°20'E
Surveyed	Date	Scale	1:50000
Drawn	R. Smyth-King	Date	August 1978
		Drawing Nº	M78-939

Compiled from enlargement of Zeehan 1:63360 scale and Strahan 1:50000 scale geologic maps. Transverse Mercator Projection



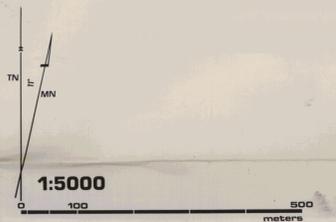
- Geology**
- DEVONIAN
Florence Quartzite . . . quartzite with siltstone interbeds
 - SILURIAN
Crotty Quartzite . . . quartzite (2) with minor black shales (5) and siltstones (5)
 - ORDOVICIAN
Gordon Limestone . . . dolomite (1) carbonaceous, pyritic with beds of dolomitic siltstones, shales (5) and limestones conglomerate (4)
 - DISCONFORMITY
 - Moine Sandstone . . . sandstone with minor conglomerate and grit beds
 - CAMBRIAN
Crimson Creek Formation . . . shale with minor tuff, black siltstone and argillite
 - PRECAMBRIAN
Onah Quartzite . . . quartzite, minor slates
 - Ironstone . . . massive concretionary ironstone
 - Fault; quartz veins

Notes

COMPILATION
Bases compiled from enlargements of 1:15840 scale maps of the area and field data. Topographic contour interval is 50 meters. Sheet edge coordinates relative to AMG, Zone 55

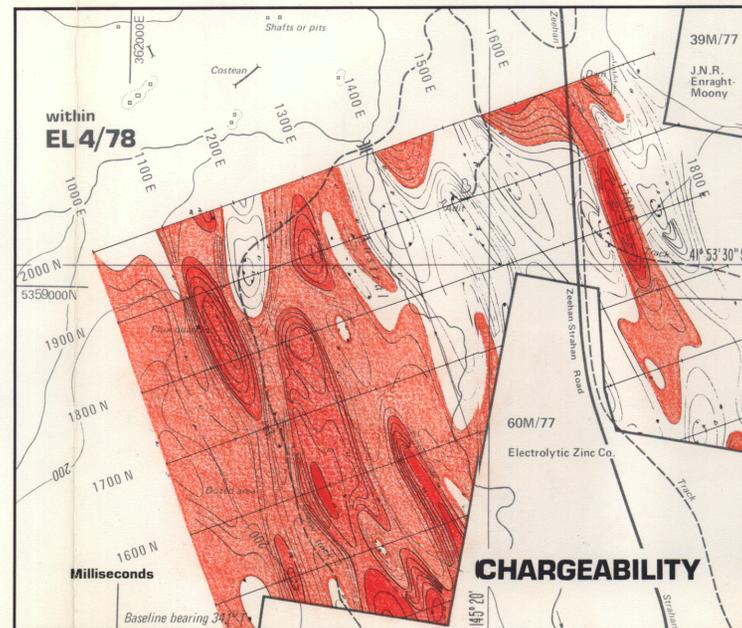
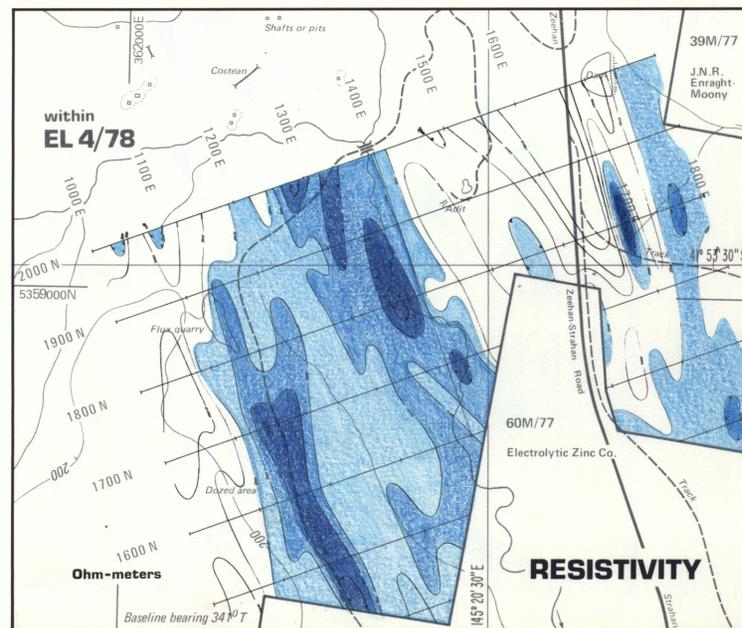
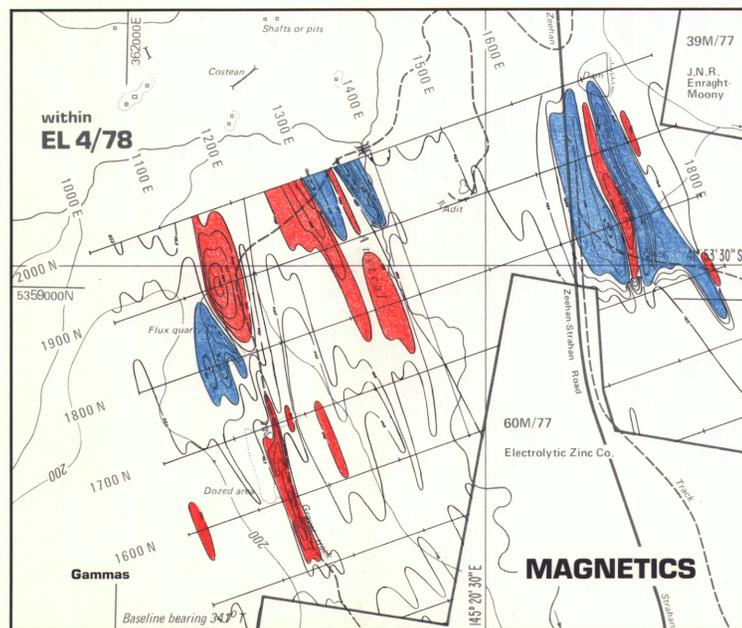
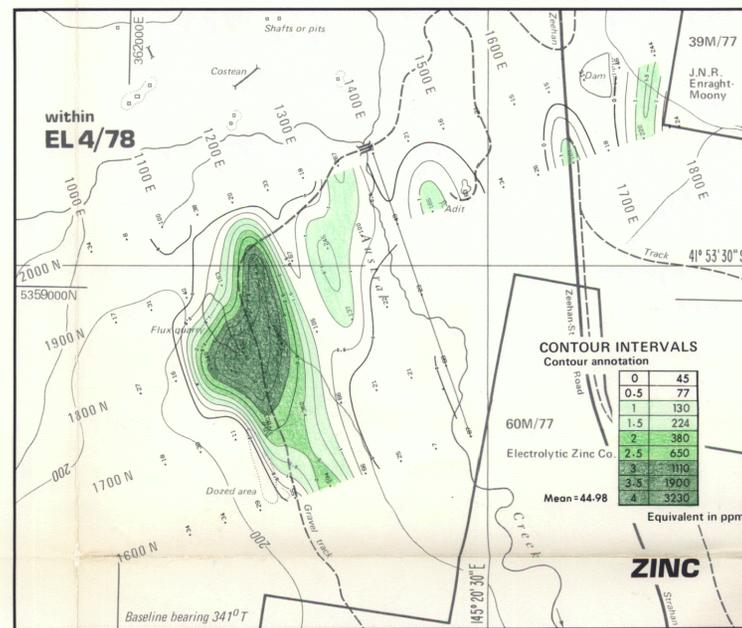
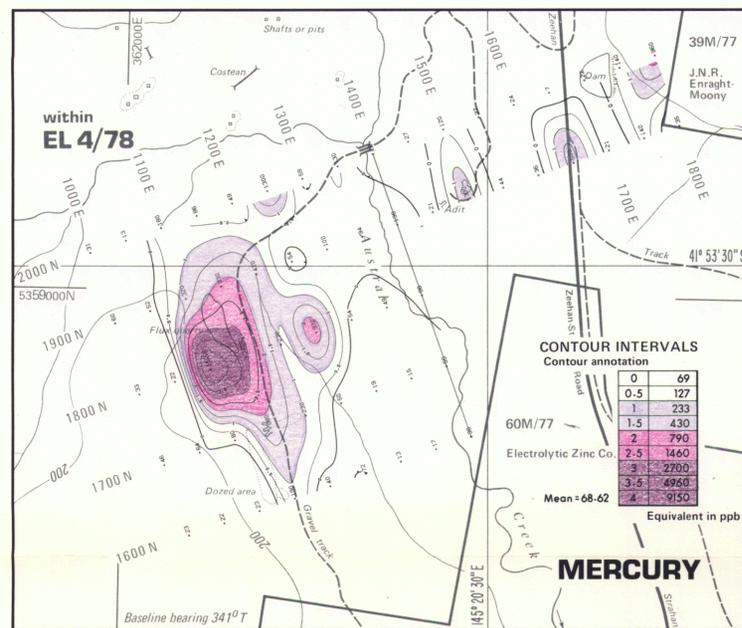
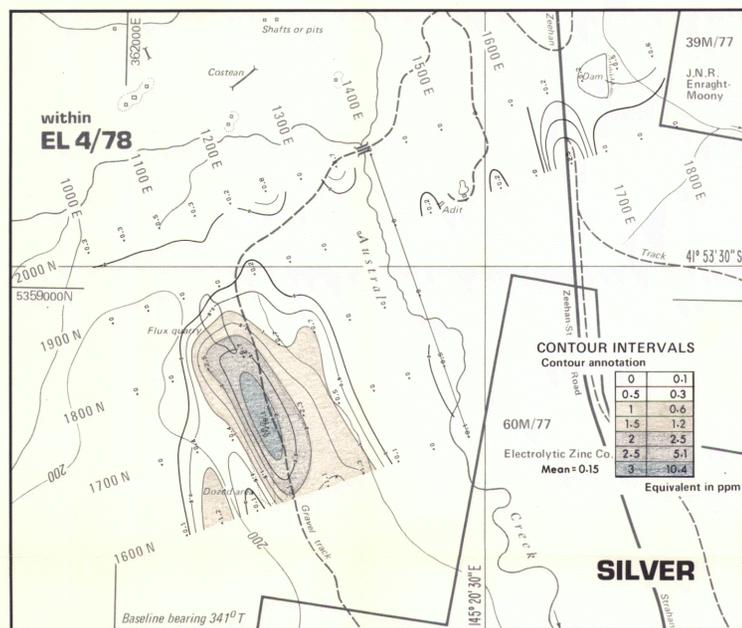
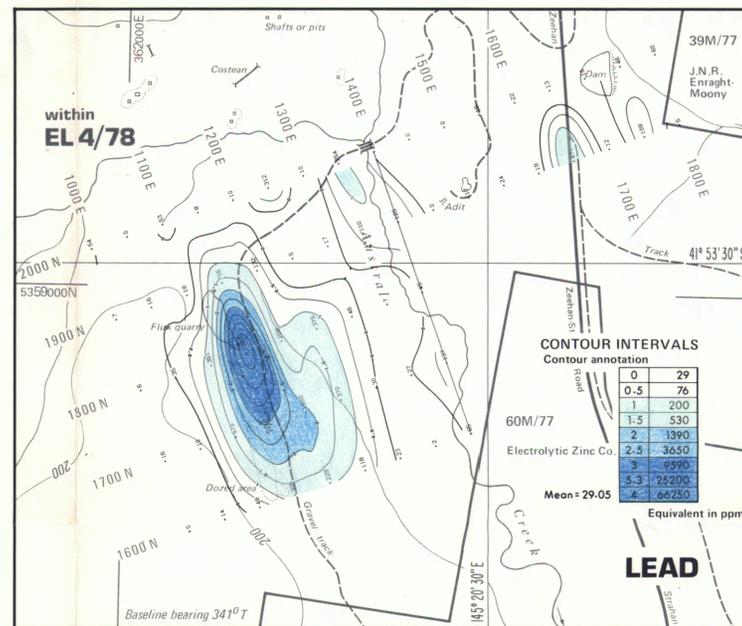
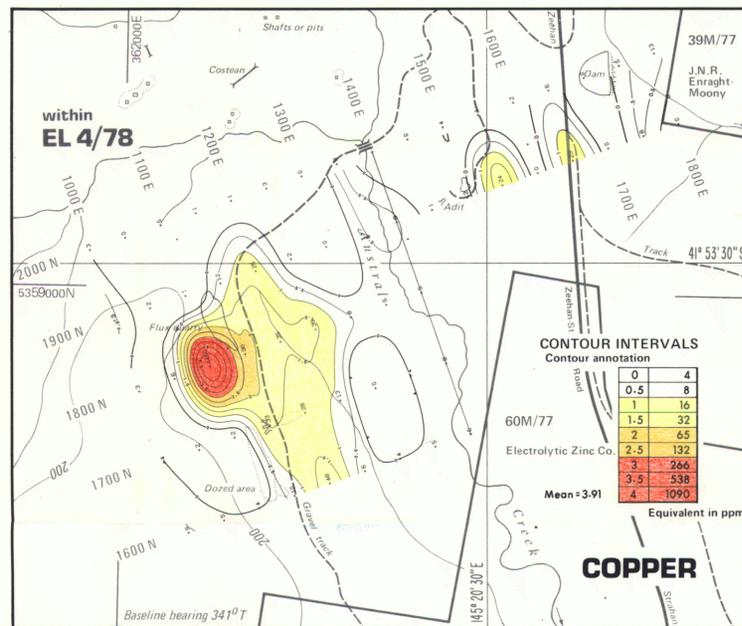
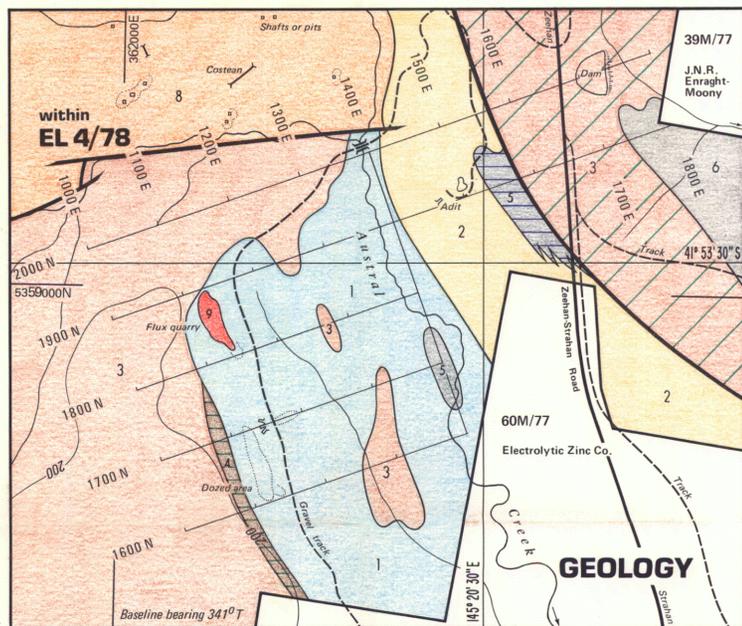
GEOCHEMISTRY
Computer graphics by Pittmen Data Systems. Logarithms of the actual geochemical values are contoured. Annotation on contours refers to the number of standard deviations above the mean log value. Zero (0) grid values denote values less than 1 ppm (1ppb-Hg)

GEOPHYSICS
Ground Magnetics and Gradient Array Induced Polarization surveyed and compiled by Scintrex, November and December 1978



AMOCO 127068
Amoco Minerals Australia Company 79-1585

Project	ZEEHAN	Nº A-78-60
Project Partner	Maxim Prospect EL 4/78	
COMPOSITE GEOLOGY, SOIL GEOCHEMISTRY & GEOPHYSICS		
Map Ref. ANG	K-55-S	Latitude 42° 00' S Longitude 145° 20' E
Surveyed	R. Jones	Date 1978-79 Scale 1:5000
Drawn	S. Fowler	Date 1979 Drawing Nº M79-1239
Report 151		



Location



Geology

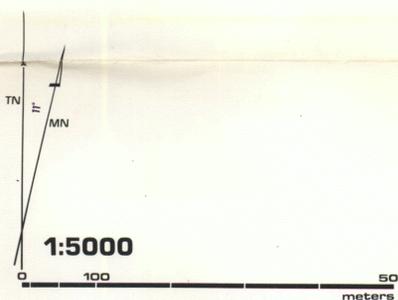
- DEVONIAN**
Florence Quartzite . . . quartzite with siltstone interbeds
- SILURIAN**
Crotty Quartzite . . . quartzite (2) with minor shale (5) interbeds
- ORDOVICIAN**
Gordon Limestone . . . dolomite (1) carbonaceous, prytic with beds of dolomitic siltstones, shales (5) and limestones conglomerate (4)
- DISCONFORMITY**
- MOINA SANDSTONE** . . . sandstone with minor conglomerate and grit beds
- CAMBRIAN**
Crimson Creek Formation . . . shale with minor tuff, black siltstone and argillite
- Ironstone** . . . massive concretionary ironstone
- Fault**

Notes

COMPILED
Bases compiled from enlargements of 1:15840 scale maps of the area and field data. Topographic contour interval is 50 meters. Sheet edge coordinates relative to AMG, Zone 55

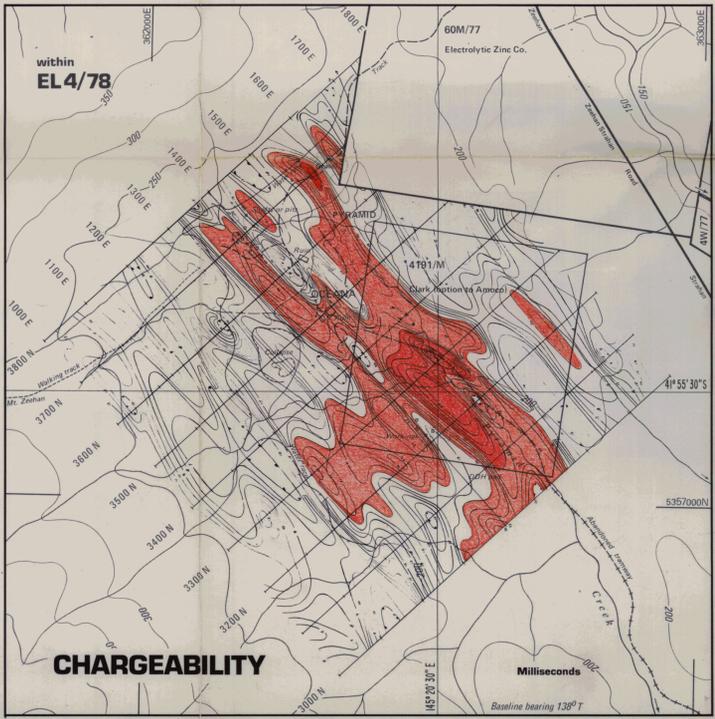
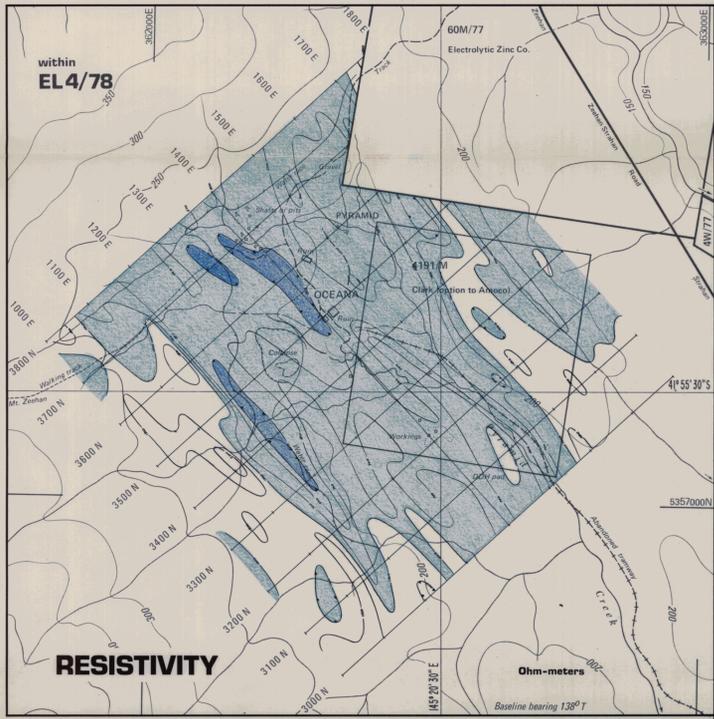
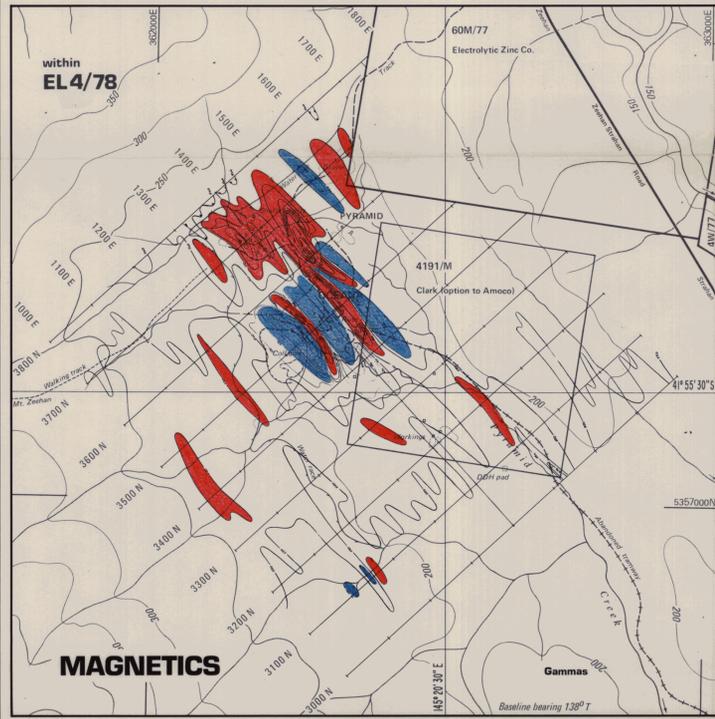
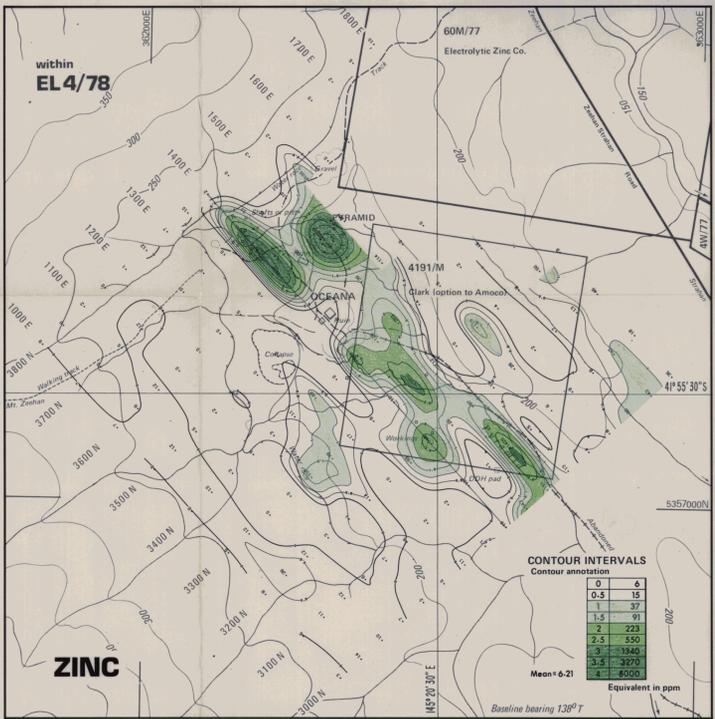
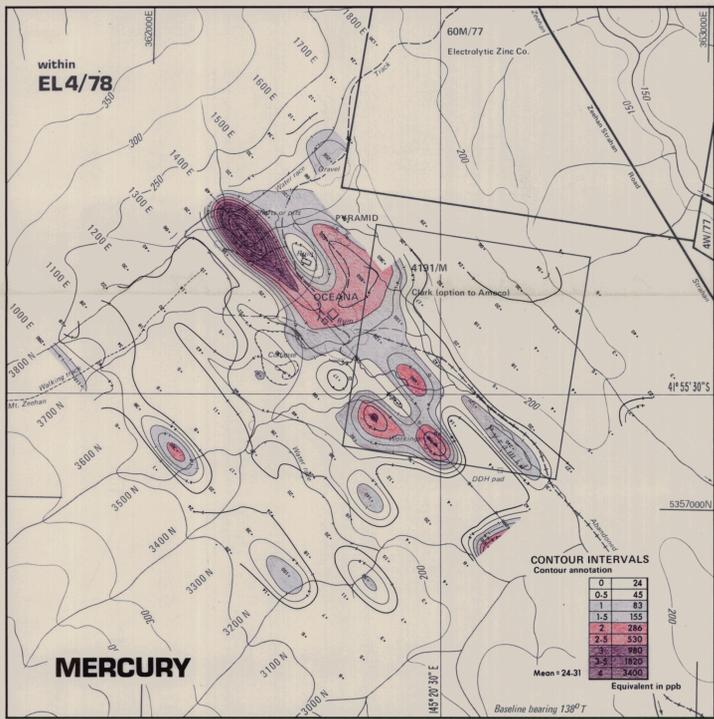
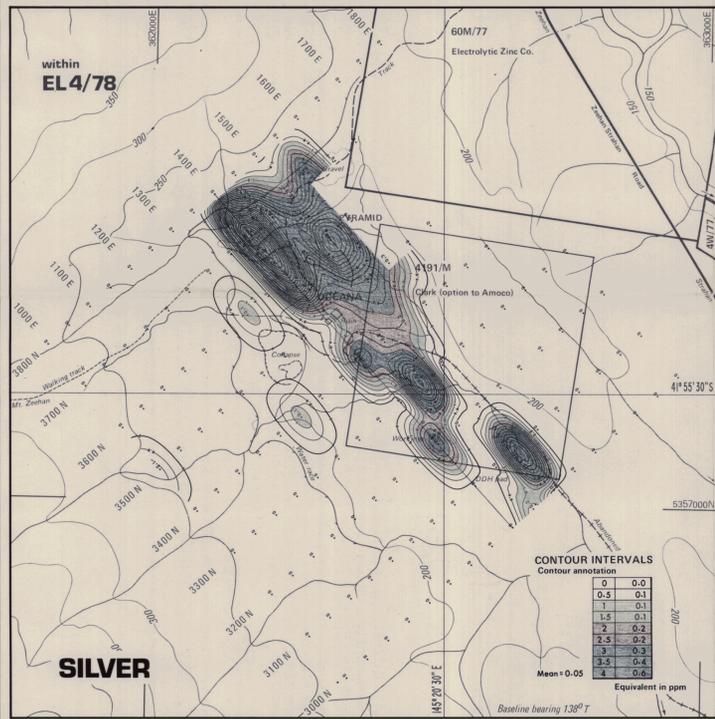
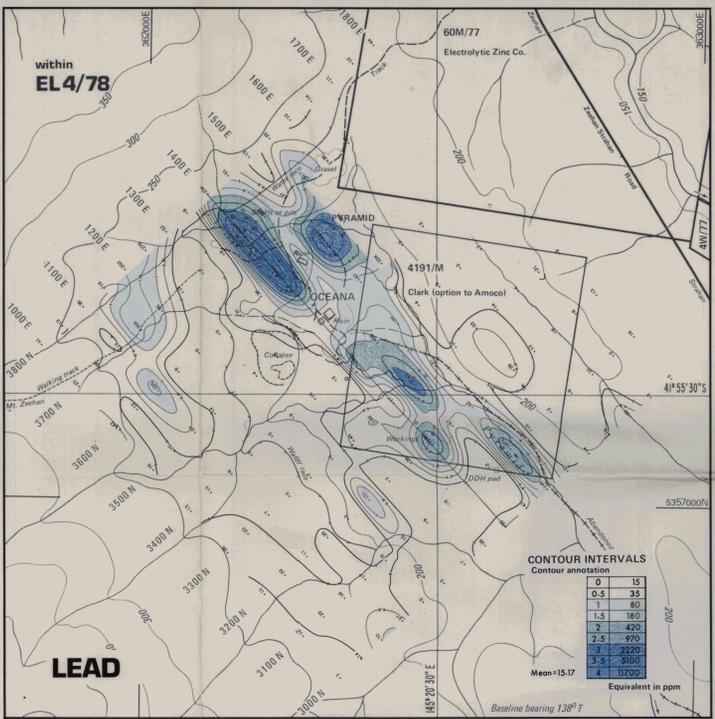
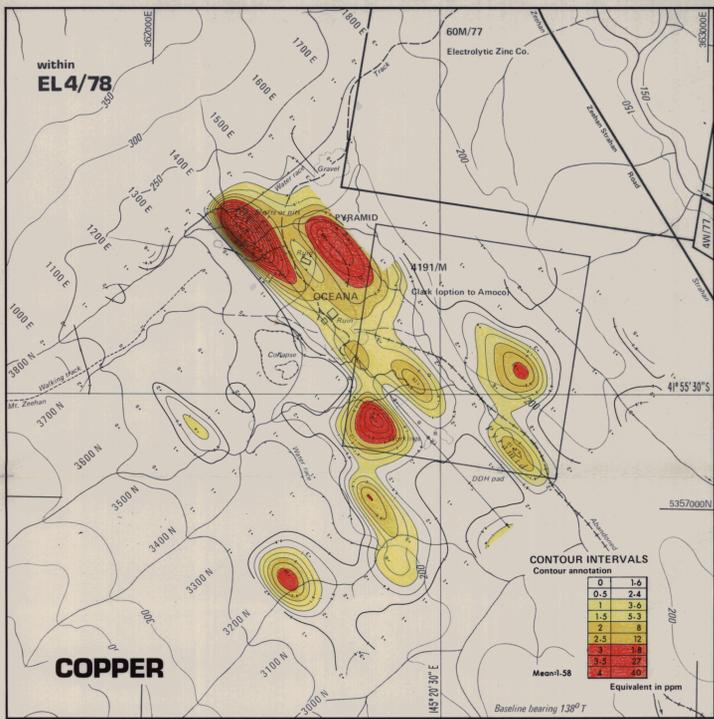
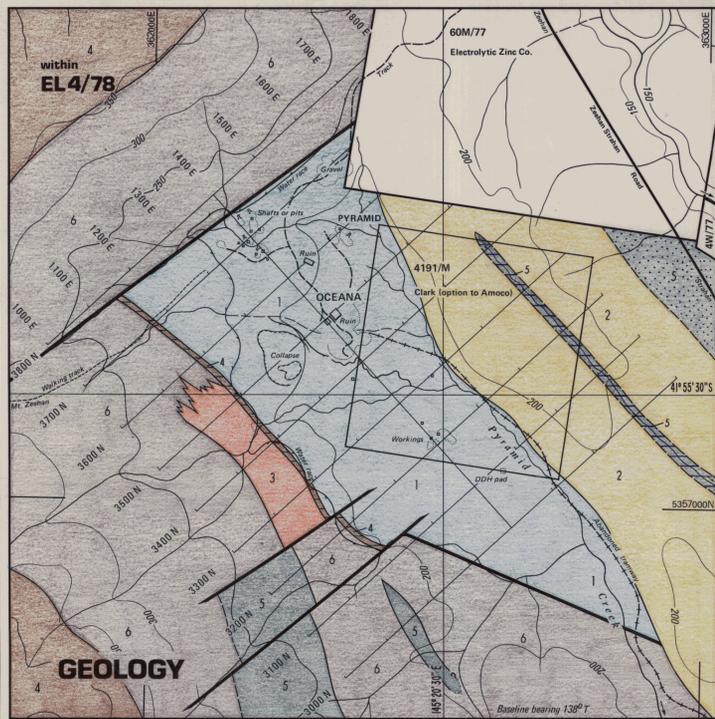
GEOCHEMISTRY
Computer graphics by Pittmen Data Systems. Logarithms of the actual geochemical values are contoured. Annotation on contours refers to the number of standard deviations above the mean log value. Zero (0) grid values denote values less than 1 ppm (1ppb-Hg)

GEOPHYSICS
Ground Magnetics and Gradient Array Induced Polarization surveyed and compiled by Scintrex, November and December 1978.



Amoco Minerals Australia Company 137009

Project	ZEEHAN	Nº A-78-60
Project Partner	Austral Prospect EL 4/78	
COMPOSITE GEOLOGY, SOIL GEOCHEMISTRY & GEOPHYSICS		
Map Ref. ANG	K-55-5	Latitude 42° 00' S Longitude 145° 20' E
Surveyed	R. Jones	Date 1978-79 Scale 1:5000
Drawn	S. Fowler	Date 1979 Drawing Nº M79-1262



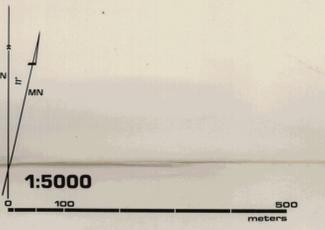
- Geology**
- SILURIAN Amber Slate . . . shale
 - Crofty Quartzite . . . quartzite (2) with minor shale (5) interbeds
 - OROVIGIAN Gordon Limestone . . . dolomite (1) carbonaceous, pyritic with beds of dolomitic siltstones, shales and limestones
 - conglomerate (4)
 - DISCONFORMITY
 - Moina Sandstone . . . sandstone (3) with major siltstone (6) and shale beds (5)
 - Mt. Zeehan Conglomerate . . . conglomerate unsorted
 - Fault

Notes

COMPILATION
Bases compiled from enlargements of 1:15840 scale maps of the area and field data. Topographic contour interval is 50 meters. Sheet edge coordinates relative to AMG, Zone 55

GEOCHEMISTRY
Computer graphics by Pittmen Data Systems. Logarithms of the actual geochemical values are contoured. Annotation on contours refers to the number of standard deviations above the mean log value. Zero (0) grid values denote values less than 1 ppm (1ppb-Hg)

GEOPHYSICS
Ground Magnetics and Gradient Array Induced Polarization surveyed and compiled by Scintrex, November and December 1978.



AMOCO

Amoco Minerals Australia Company

137070

Project **ZEEHAN** No **A-78-60**

Project Partner

Oceana Prospect EL 4/78

COMPOSITE GEOLOGY, SOIL GEOCHEMISTRY & GEOPHYSICS

Map Ref. ANG K-55-5 Latitude 42° 00' S Longitude 145° 20' E

Surveyed R. Jones Date 1978-79 Scale 1:5000

Drawn S. Fowler Date 1979 Drawing No M79-1240

Report 151

Geology

SILURIAN
Crotty Quartzite . . . quartzite (2) with minor shale (5) interbeds



ORDOVICIAN
Gordon Limestone . . . dolomite carbonaceous, pyritic with beds of dolomitic siltstones, shales and limestones



Fault



Contour Intervals

Copper

Contour annotation	0	3
	0.5	7
	1	13
	1.5	27
	2	51
	2.5	100
Mean=3.32	3	197
Equivalent in ppm		

Lead

Contour annotation	0	19
	0.5	43
	1	96
	1.5	216
Mean=19.03	2	486
Equivalent in ppm		

Zinc

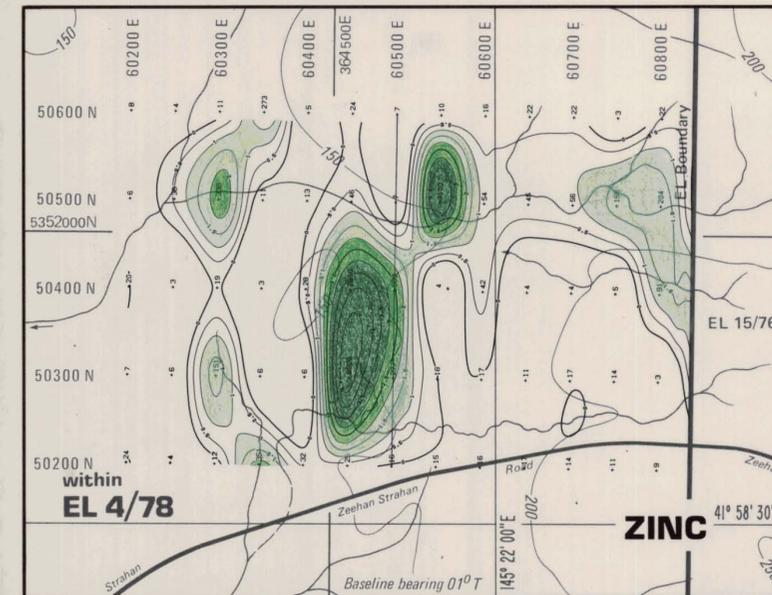
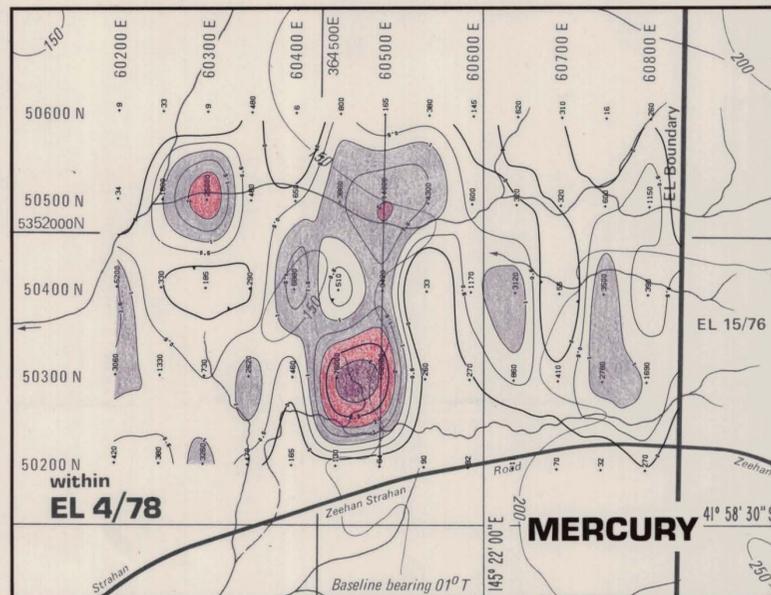
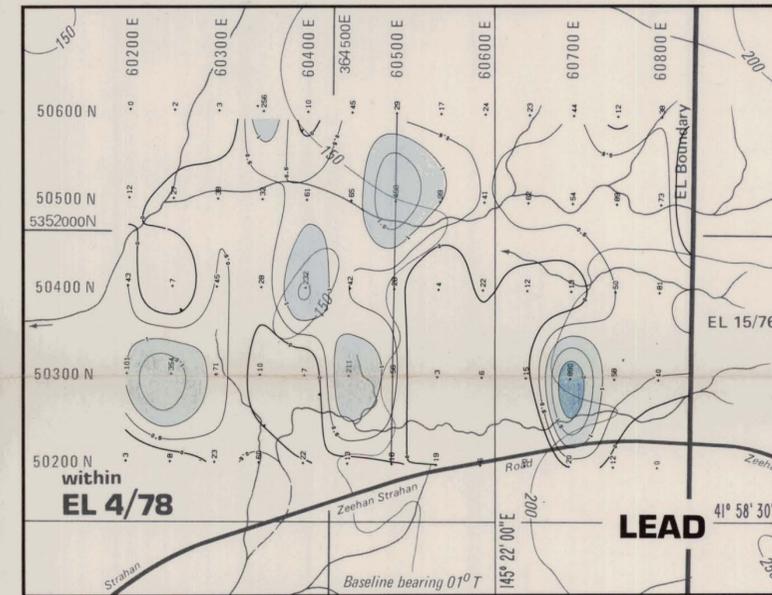
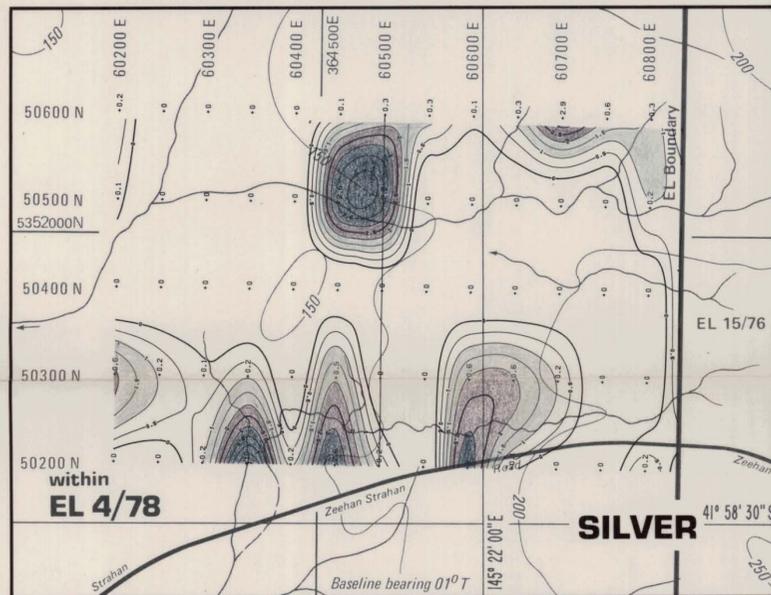
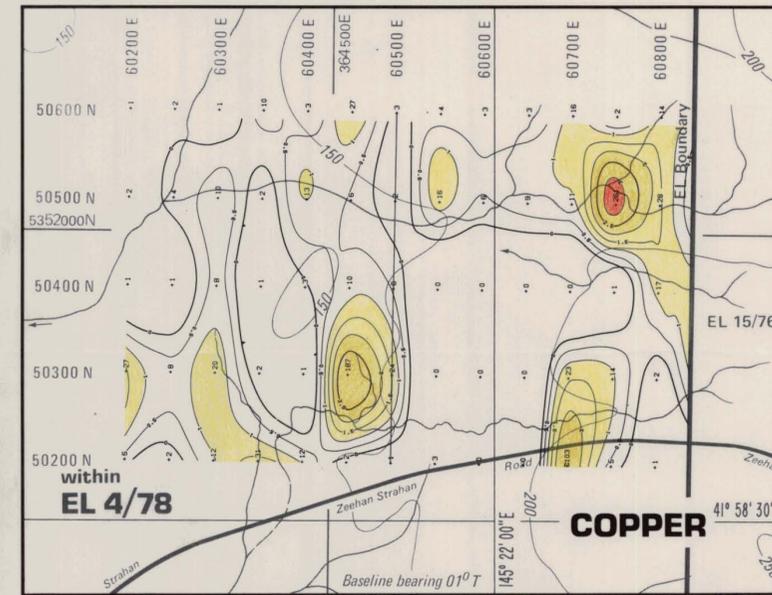
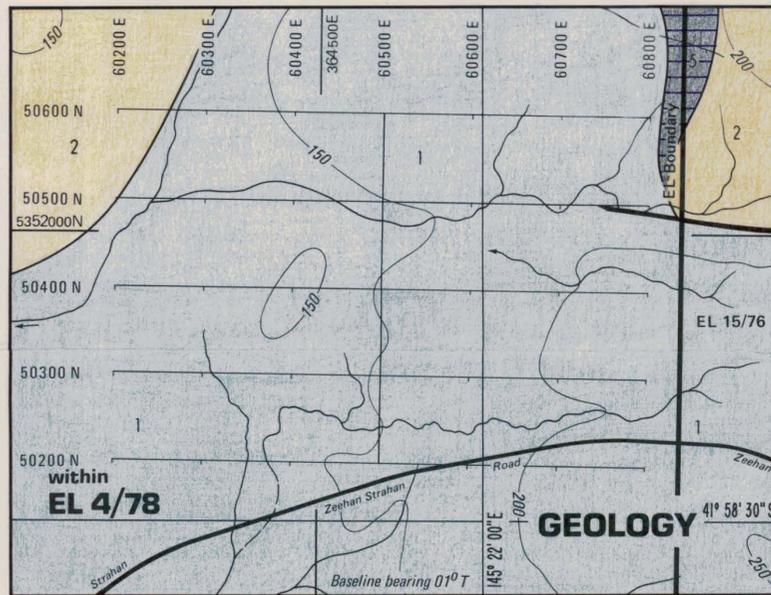
Contour annotation	0	18
	0.5	34
	1	65
	1.5	124
	2	240
	2.5	455
	3	872
Mean=17.73	3.5	1670
Equivalent in ppm	4	3200

Silver

Contour annotation	0	0.1
	0.5	0.1
	1	0.2
	1.5	0.3
	2	0.6
	2.5	0.9
	3	1.4
	3.5	2.3
Mean=0.08	4	3.7
Equivalent in ppm		

Mercury

Contour annotation	0	304
	0.5	758
	1	1890
	1.5	4700
	2	11700
	2.5	29200
Mean=304.33	3	72600
Equivalent in ppb		



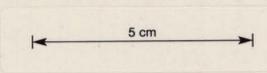
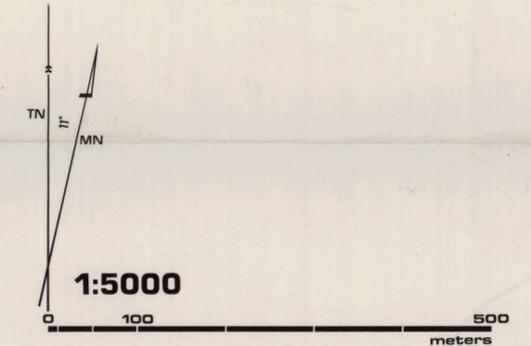
Location



Notes

COMPILATION
Bases compiled from enlargements of 1:15840 scale maps of the area and field data. Topographic contour interval is 50 meters. Sheet edge coordinates relative to AMG, Zone 55

GEOCHEMISTRY
Computer graphics by Pittmen Data Systems. Logarithms of the actual geochemical values are contoured. Annotation on contours refers to the number of standard deviations above the mean log value. Zero (0) grid values denote values less than 1 ppm (1ppb-Hg)

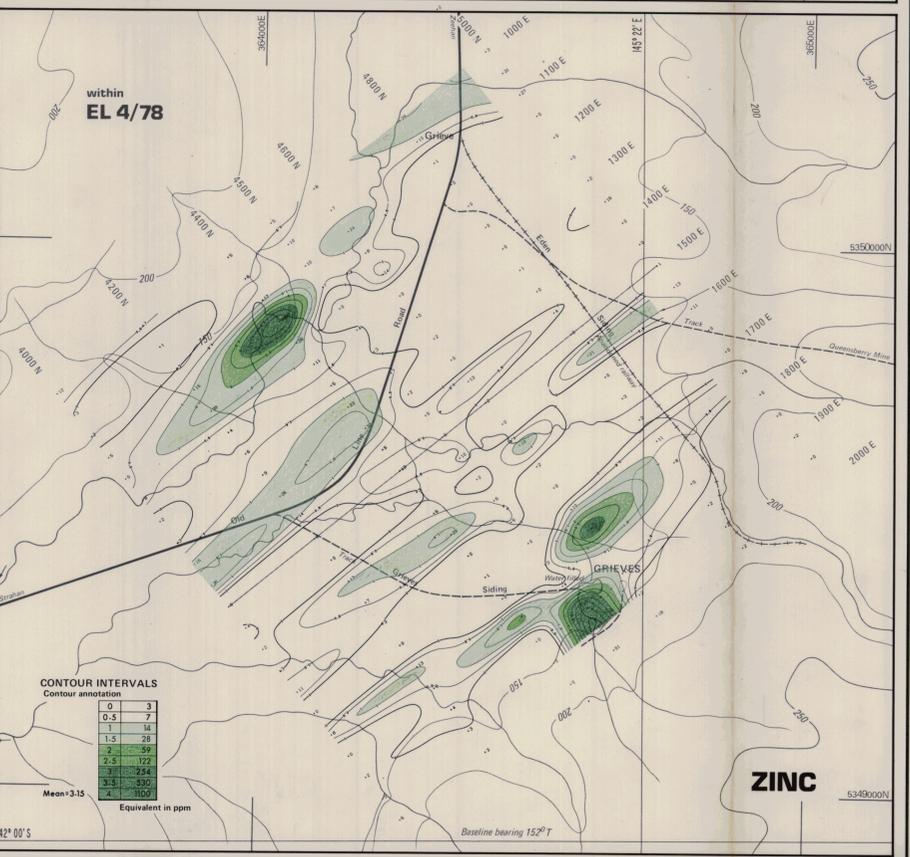
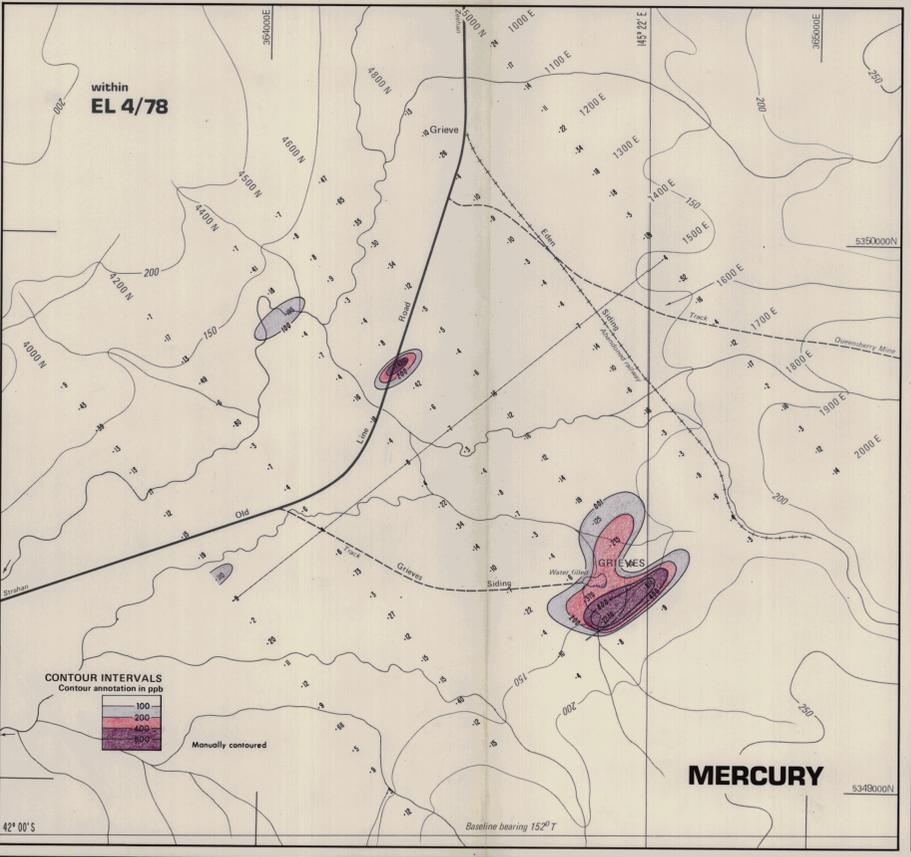
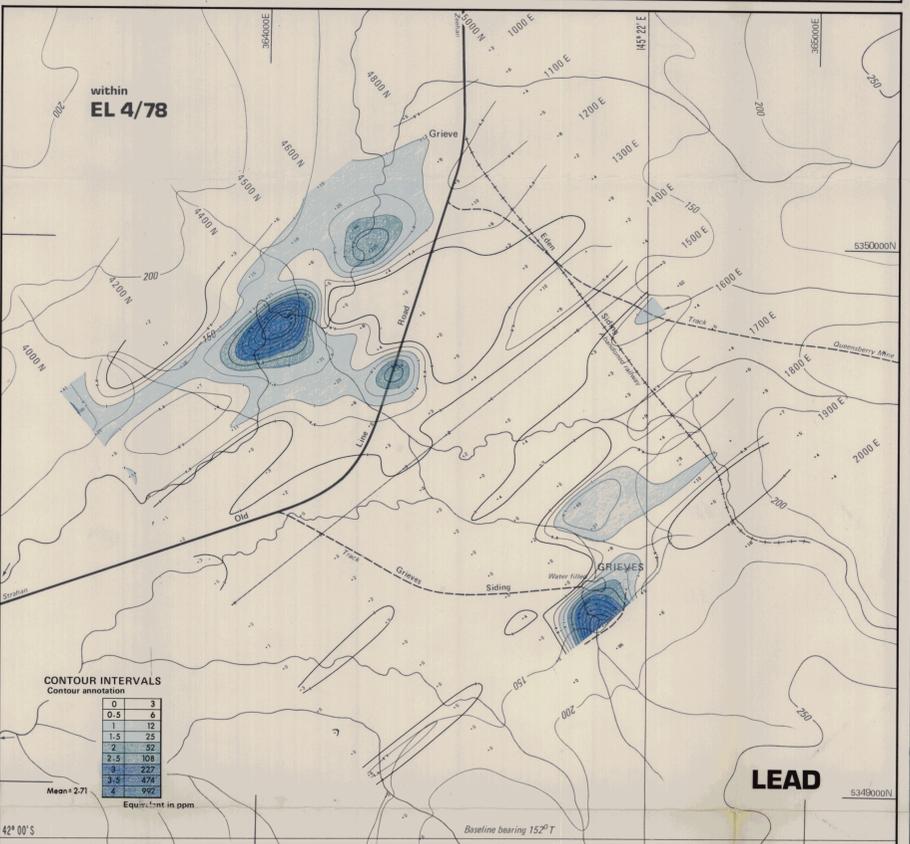
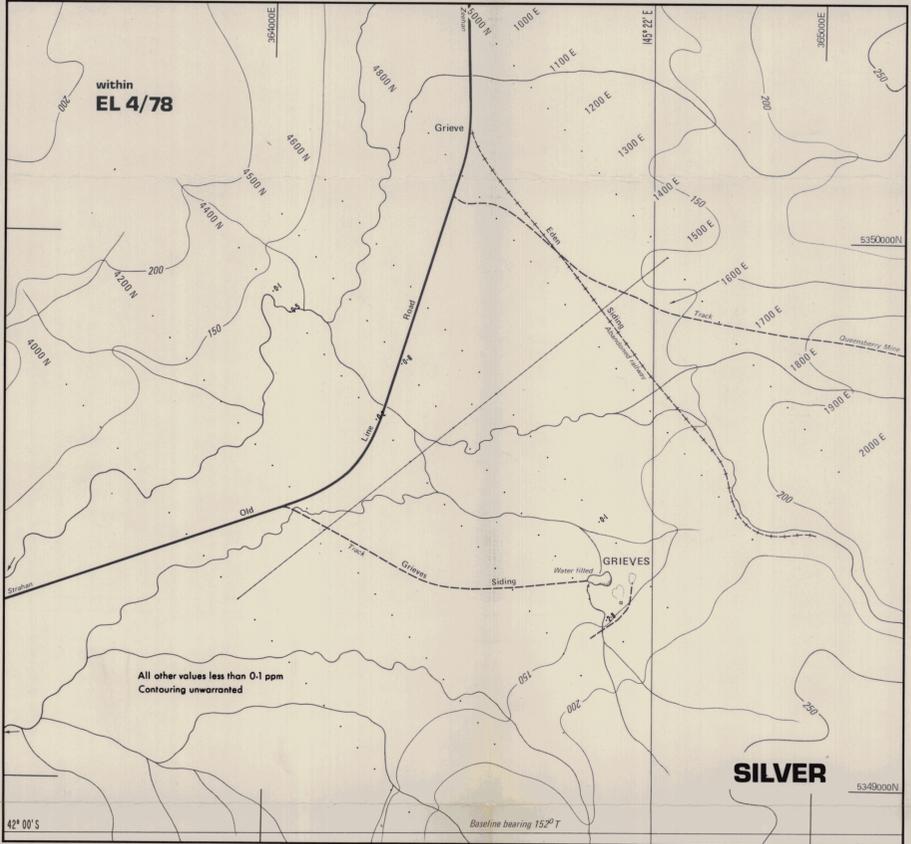
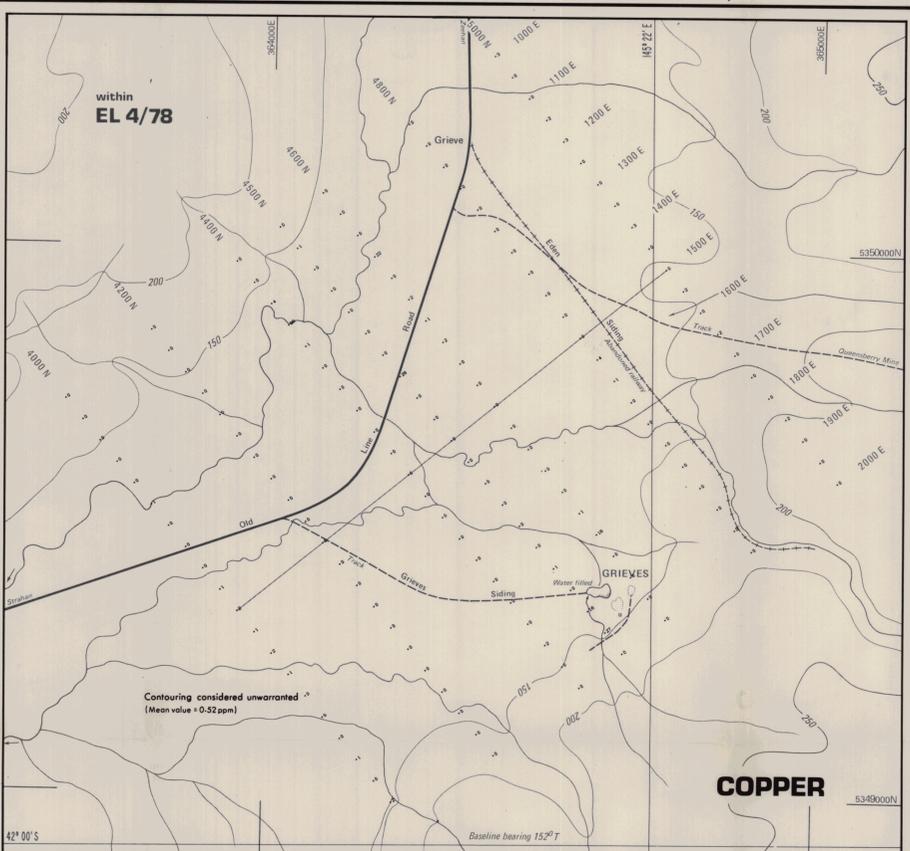
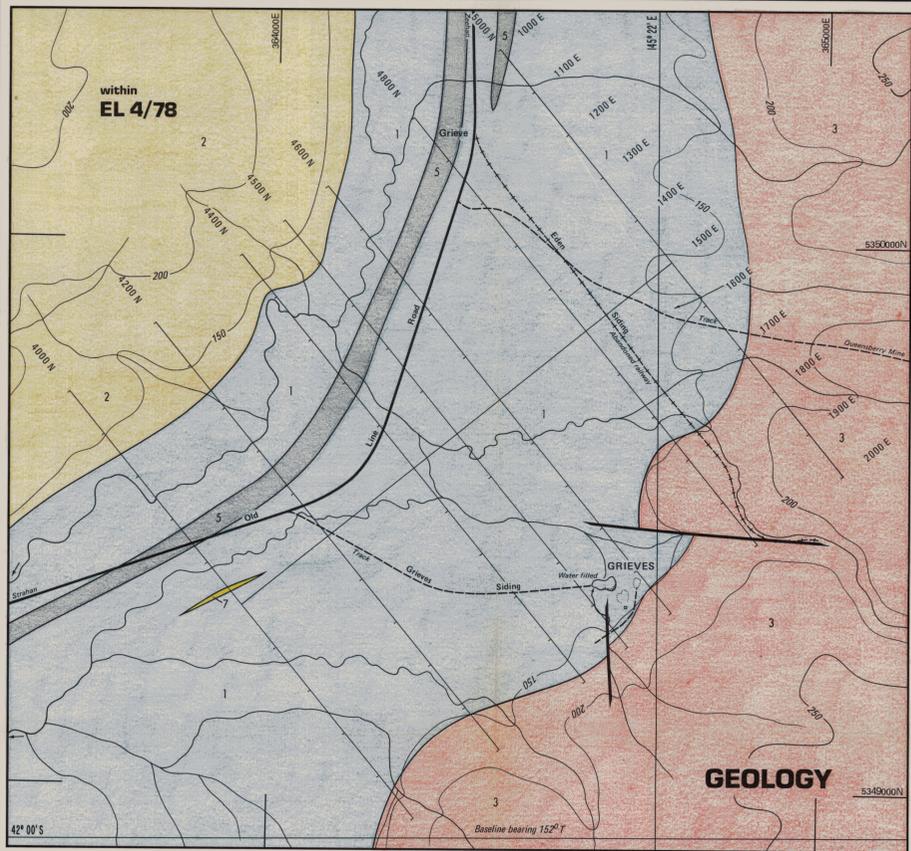


Amoco Minerals Australia Company

137071

Project	ZEEHAN	Nº A-78-60
Project Partner	79-1385	
Myrtle Prospect EL 4/78		
COMPOSITE GEOLOGY AND SOIL GEOCHEMISTRY		
Map Ref. ANG	K-55-5	Latitude 42° 00' S Longitude 145° 20' E
Surveyed	P. Jones	Date 1978-79 Scale 1:5000
Drawn	S. Fowler	Date 1979 Drawing Nº M79-1265

Report 151

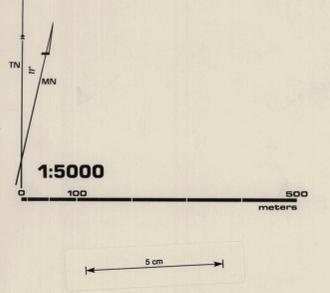


- Geology**
- SILURIAN
 - Croty Quartzite . . . quartzite with minor shale interbeds ■ 2
 - ORDOVICIAN
 - Gordon Limestone . . . dolomite (1) carbonaceous, pyritic with beds of dolomitic siltstones, limestones and brecciated chert/A prominent shale member (5) is present ■ 1, 5
 - Moira Sandstone . . . sandstone (3) with minor conglomerate and grit beds ■ 3
 - Fault —

Notes

COMPILATION
Bases compiled from enlargements of 1:15840 scale maps of the area and field data. Topographic contour interval is 50 meters. Sheet edge coordinates relative to AMG, Zone 55

GEOCHEMISTRY
Computer graphics by Pittmen Data Systems. Logarithms of the actual geochemical values are contoured. Annotation on contours refers to the number of standard deviations above the mean log value. Zero (0) grid values denote values less than 1 ppm (1ppb-Hg)

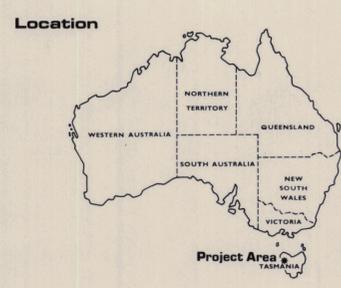
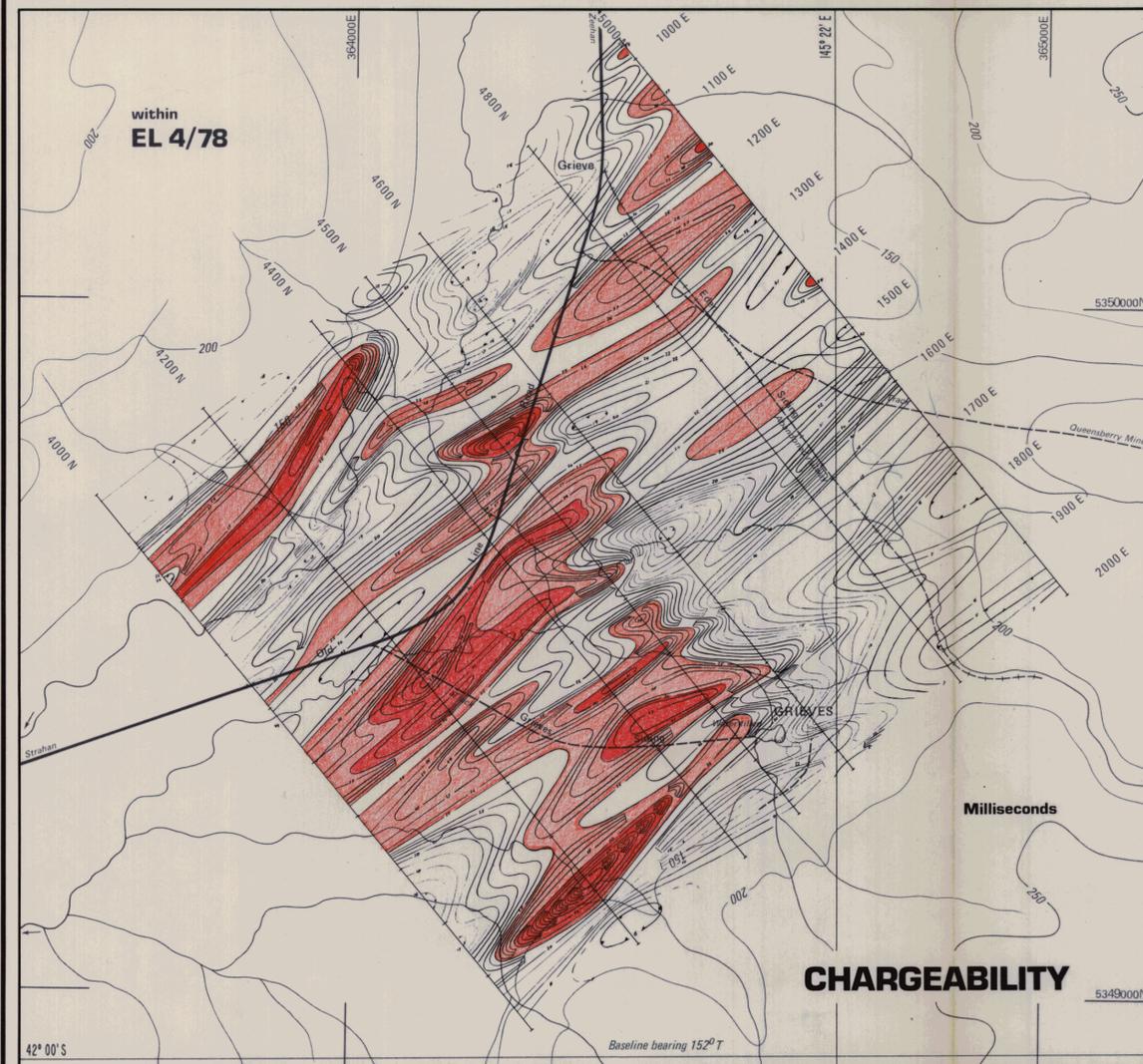
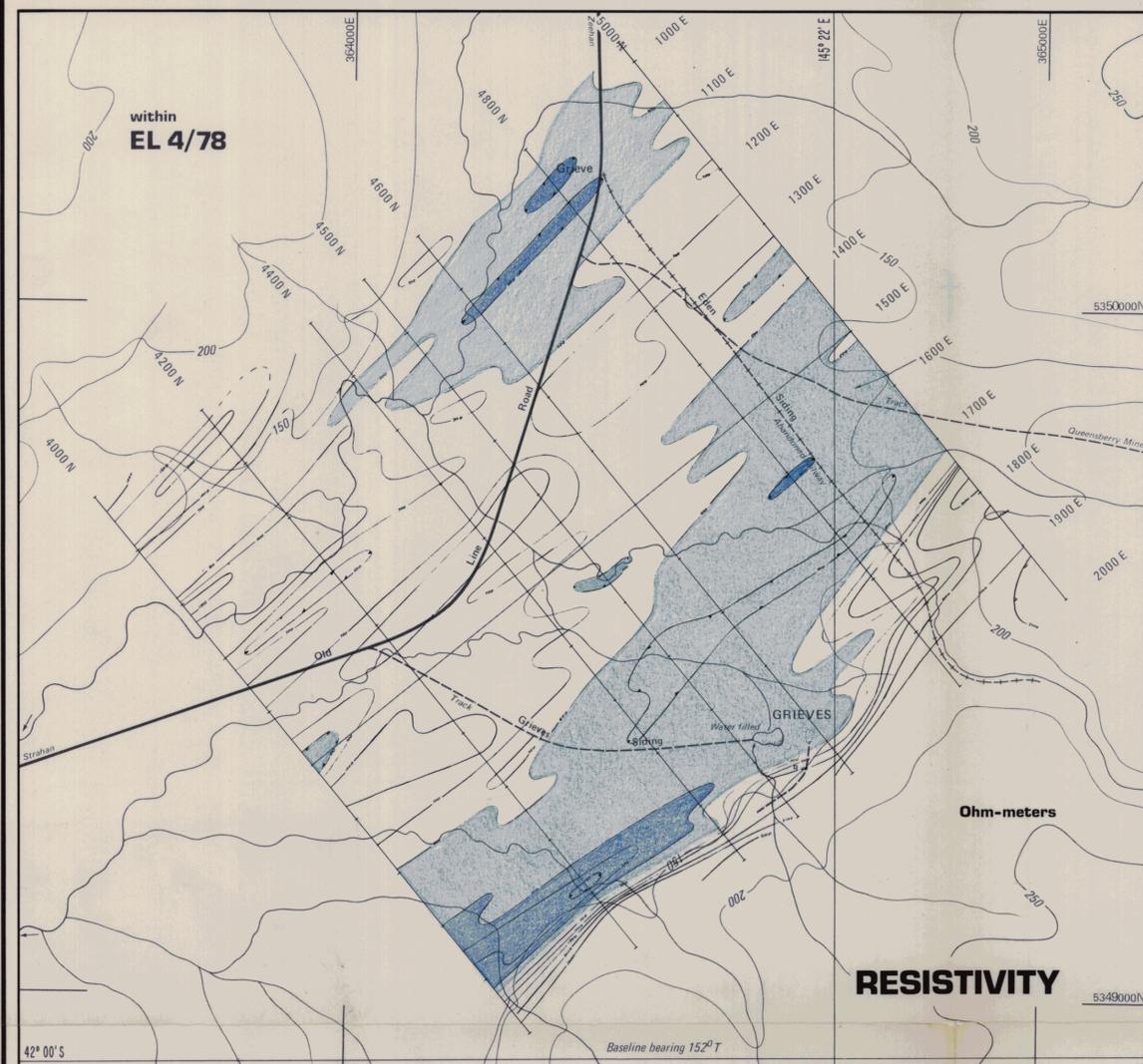
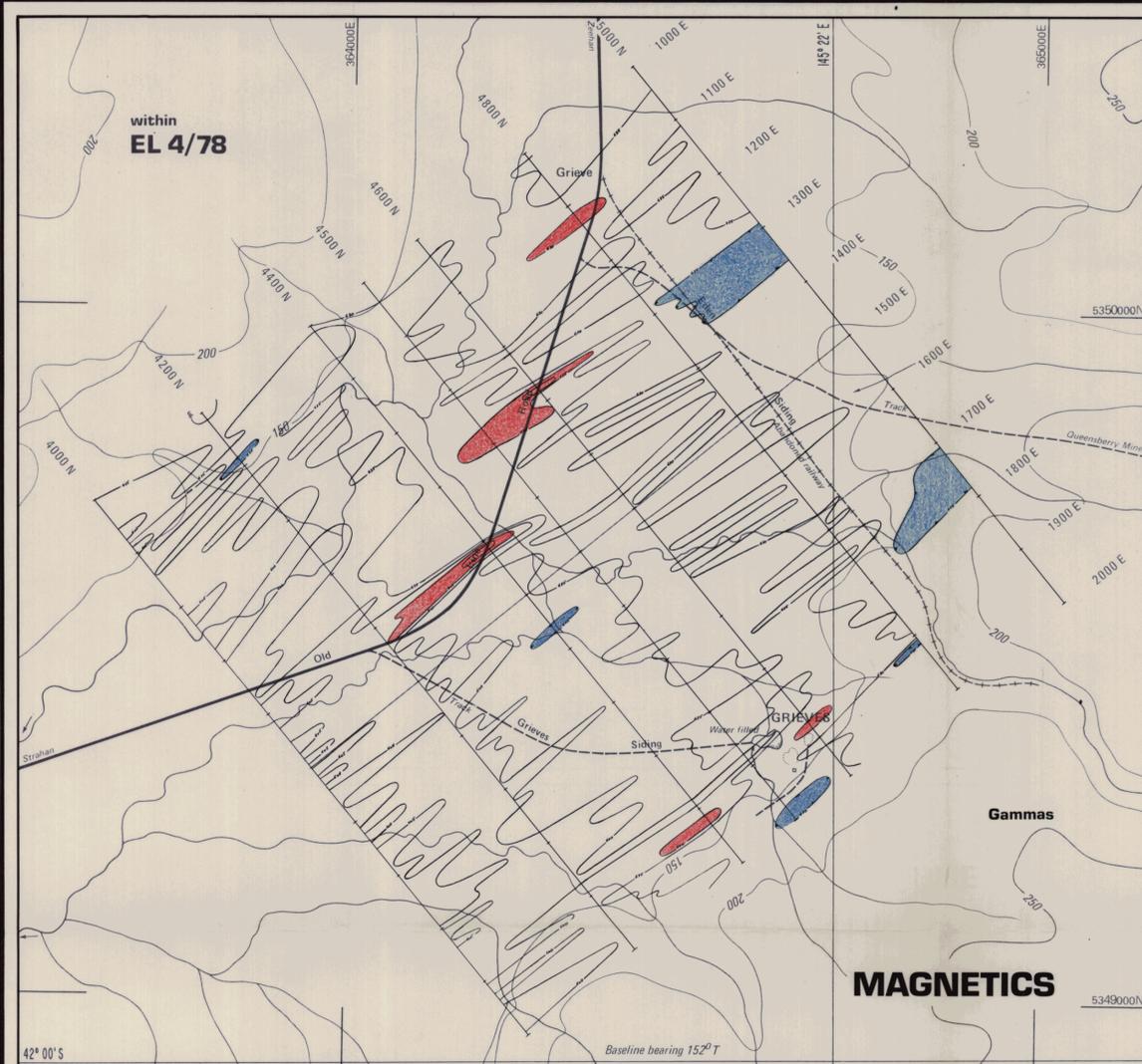


137072
Amoco Minerals Australia Company

Project **ZEEHAN** N° A-78-60
Project Partner

Grieve Prospect EL 4/78
COMPOSITE GEOLOGY AND SOIL GEOCHEMISTRY

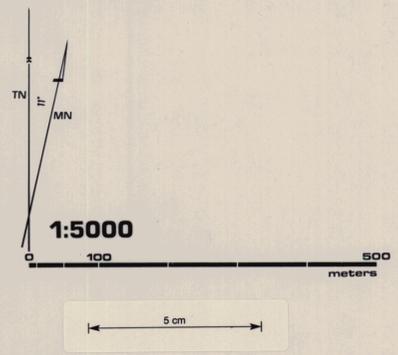
Map Ref. ANG K-55-5 Latitude 42° 00' S Longitude 145° 20' E
Surveyed R. Jones Date 1978-79 Scale 1:5000
Drawn S. Fowler Date 1979 Drawing N° M79-1266
Report 151



Notes

COMPILATION
 Bases compiled from enlargements of 1:15840 scale maps of the area and field data. Topographic contour interval is 50 meters. Sheet edge coordinates relative to AMG, Zone 55

GEOPHYSICS
 Ground Magnetics and Gradient Array Induced Polarization surveyed and compiled by Scintrex, November and December 1978



137073
 Amoco Minerals Australia Company
 79-1385

Project	ZEEHAN	Nº	A-78-60
Project Partner	Grieve Prospect EL 4/78		
GEOPHYSICAL COMPOSITE			
Map Ref.	ANG	K-55-5	Latitude 42° 00' S Longitude 145° 20' E
Surveyed	R. Jones	Date	1978-79 Scale 1:5000
Drawn	S. Fowler	Date	1979 Drawing Nº M79-1267

Report 151