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CHESTER-PINNACLES REGIONAL

INTERIM REPORT

SEPTEMBER 1971

M. EVERETT

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

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CHESTER-PINNACLES REGIONAL - INTERIM REPORT

PART A

1. ABSTRACT

Exploration in this area took two forms; a regional geochemical programme and a geophysical (I.P.) follow-up programme. Part A concerns the regional coverage.

2. GENERAL

In order to obtain a complete regional coverage those streams not previously covered by the Pinnacles-Chester grids were stream-sediment sampled at 500' intervals.

3. PREVIOUS WORK

Previous work is considerable and is summarised in the Chester-Pinnacles-Silver Falls summer report 1970.

4. GEOLOGY

See summer report 1970.

5. GEOCHEMISTRY

The areas covered by sampling lie in the eastern portion of map 860/350 and in the NW portion of map 860/360 (see Tas 2-244)

The samples were analysed by spectrographic scan for Cu, Zn, Ni, Ag, Bi and Sn.

Generally the results are of a low order, surprisingly so, as most of the samples were taken over the Read Volcanics previously thought to have quite high geochemical background values.

Several anomalous samples were obtained (see Tas 2-244)

	<u>Sn</u>	<u>Ag</u>	<u>Ni</u>	<u>Cu</u>	<u>Zn</u>	<u>Comments</u>
CC 1.0	60					
RCP 1.0		5		80	1000	Near railway line - possible contamination.
CAD 44 T1 1.0			200	120	1700	Apparently located within Owen Shear Zone.
CMA 136.0				55	210	Confirms soil anomalies along Huskisson road.
BBC 11.0					200	} No immediate follow-up work recommended.
CMA 21.0					190	

6. FUTURE WORK

Further exploration will entail close spaced stream sediment sampling (200' intervals) followed by gridding and soil sampling where genuine anomalies are confirmed. Suggested grid layouts are illustrated in Figs. 2-5.

7. CONCLUSIONS

Apart from the anomalies realised (see above) the region is of little geochemical interest and thus of low priority. If the anomalies listed above are proved meaningless, then the whole area must be regarded as barren of economically viable mineralisation.

PART B - GEOPHYSICS

1. ABSTRACT

Exploration in this area took two forms; a regional geochemical programme and a geophysical follow-up programme. Part B concerns the latter.

2. GENERAL

Previous gridding in the Chester-Pinnacles area and subsequent soil sampling revealed low grade anomalies for Cu, Pb, and Zn on lines 50S, 55S, 60S, 65S, 70S, 75S, 80S, 165S, 175S and 185S (see Tas 2-245 and Tas 2-246).

It was thought that these anomalies had some linear significance, possibly being an indication of an orebody located within the Owen Shear Zone.

Selected lines were chosen for geophysical traversing. Induced polarisation was the primary method with subsidiary S.P. and magnetometer surveys.

3. PREVIOUS WORK AND GEOLOGY

See summer report 1970.

4. RESULTS

4.1. Induced Polarisation

The area was traversed by Compagnie Generale de Geophysique using a gradient assay over the Pinnacles grid and a dipole-dipole assay at Chester.

Anomalies were located on all lines traversed and the trend of the anomalies is suggested to conform to the trend of the Owen Shear Zone, i.e., NNW-SSE, veering to NW-SE in the south.

C.G.G. maintain that the Pinnacles anomalies are shallow, their depth not exceeding 100', have a near vertical dip, and that the I.P. effect is due to disseminated conductive particles within a resistant matrix. Similarly, the Chester anomalies appear to be shallow and near vertical or dipping to the west with the largest anomaly on the east side of line 185S.

4.2. Magnetometer

Parts of lines 42S, 43S, 50S, 165S, 175S and 185S were traversed but no anomalies were located (see Tas 2-249).

4.3. Self Potential

Parts of lines 42S, 43S, 50S, 165S, 175S and 185S were traversed but only one very minor anomaly was obtained (line 185S (east)). It is doubtful that this anomaly has significance and it lies outside the main zone of I.P. anomalies (see Tas 2-248 and Tas 2-249).

4.4. Soil Geochemistry (see Tas 2-245).

In order that a clearer understanding of geochemical and geophysical trends may be obtained, 40 soil samples were taken every 50' along lines 165S, 175S and 185S and the connecting base line. Further, extra lines were cut at points 1000' and 1500' along lines 165S (west) and 175S (east) to equivalent points on lines 175S (west) and 185S (east) respectively.

Samples from 165S, 185S and the base line were spectrographically scanned for Cu, Pb, Zn, Ag and Sn. Similarly, samples from line 175S were scanned for the above elements plus Au, Ga, Ge, As, Sb, Cd and Bi to ensure an adequate cover of all cations of interest.

The results were of a very low order. Only one genuine anomaly was realised. This was located at station 175S (east) 1500/250S (800 ppm Pb, 5.0 ppm Ag) and has no obvious relationship to the previous geochemistry (Chester-Pinnacles report 1969) or to the geophysical anomaly zone.

Two areas were conspicuous in having slightly above background values:

- (i) To the east of station 1500' on line 185S (east) elements: Pb, Zn, Cu; values (max) 200, 120, 20 respectively.
- (ii) Between stations 750'W and 1000'W on line 175S element: Ag; value (max) 2.0 ppm.

These two areas correspond approximately to geochemical and geophysical anomalies on lines 185S and 175S respectively but they only have significance in that they partially confirm the original geochemical highs.

5. CONCLUSIONS

In view of the poor soil geochemistry, it is possible that the I.P. anomalies are caused merely by disseminated iron pyrites within the Owen Shear Zone.

At present there seems little justification for doing further work on the Pinnacles-Chester grids. On the other hand, previous geochemistry appears not to have shown the small orebody in the south open-cut (Pinnacles line 45S) believed to assay Cu 0.83%, Pb 4.27%, Zn 6.12%, Ag 0.92 oz/ton (B.H.S. assays - see summer report 1970). Thus, the validity of Ao soil geochemistry in this area may be suspect.

As a final check, the following is recommended:

- (a) Ao soil sampling at 50' intervals on lines 45S, 50S, 60S, 65S,
- (b) Auger samples at 50' intervals on the above lines,
- (c) Auger samples on lines 165S (west), 175S (west), and 185S (east) at 100' intervals as a check on previous Ao soil analysis.

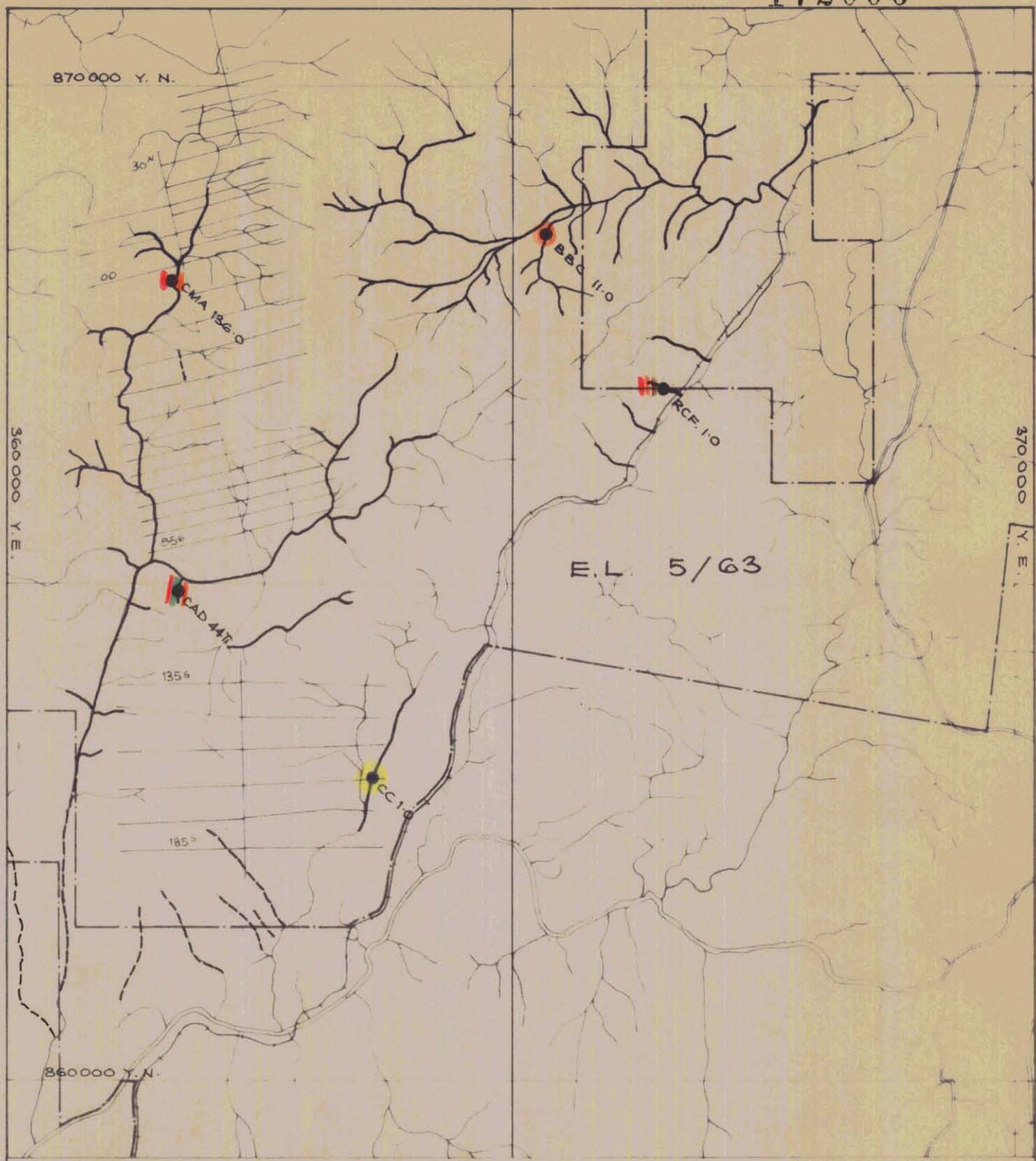
M.P. EVERETT

September 1971.

Maps - Chester Pinnacles Supplementary Regional Sub-project

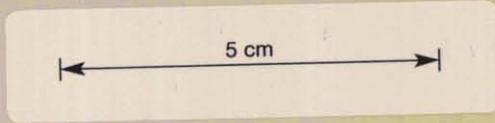
Tas 2-244	Geochemistry
Tas 2-245	Chester Grid Geochemistry
Tas 2-246	Pinnacles Grid Geochemistry
Tas 2-247	Histograms
Tas 2-248	Chester Grid Geophysics
Tas 2-249	Pinnacles Grid Geophysics
Tas 2-250	Proposed Follow-up Grids

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-  STREAMS SAMPLED 1971
-  STREAMS SAMPLED PREVIOUSLY
-  SAMPLE SITE NUMBER

-  Cu.
-  Ni.
-  Zn.
-  Ag.
-  Sn.
-  Bi.

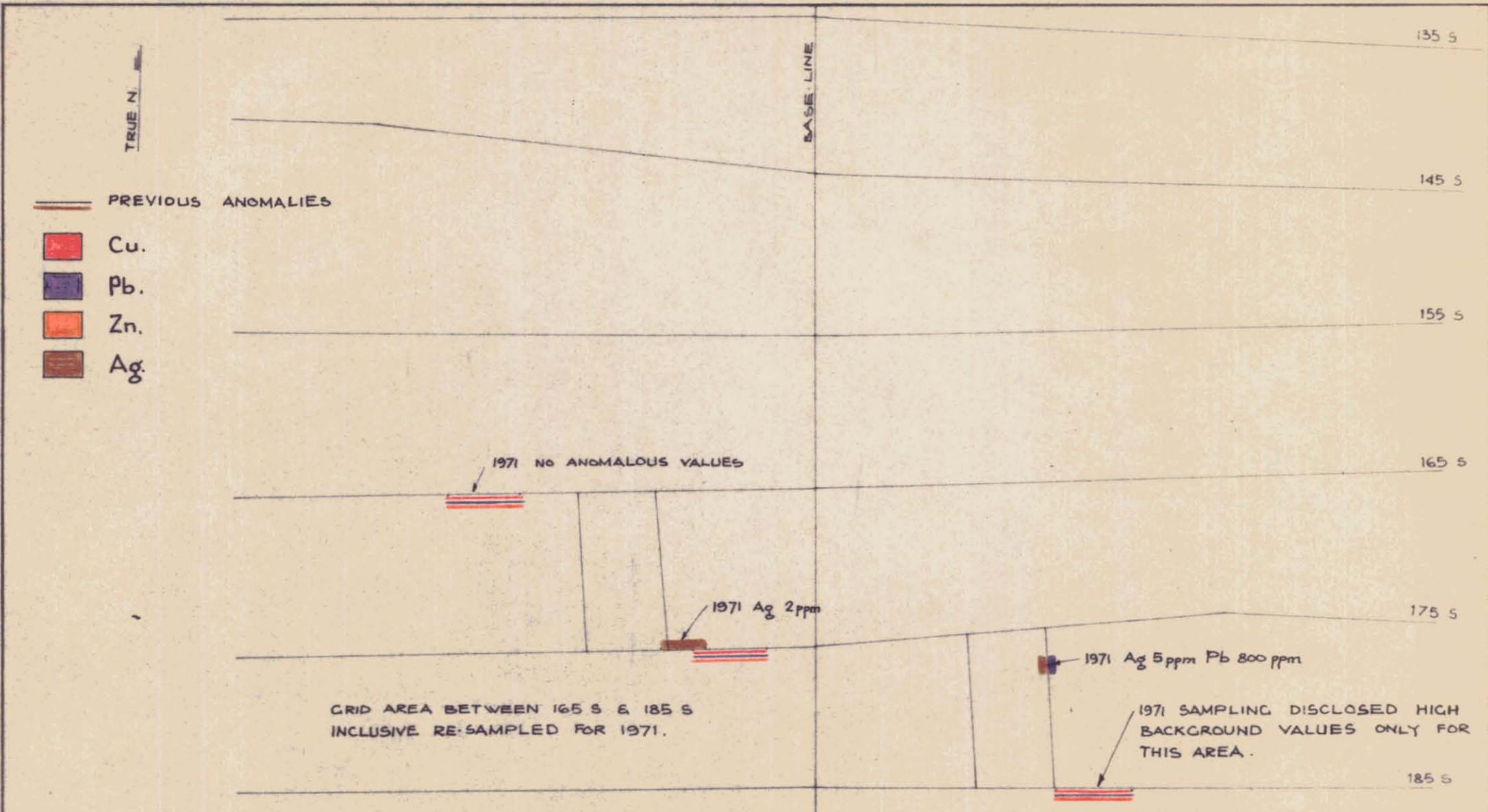


COMSTAFF PROPRIETARY LIMITED		
CHESTER PINNACLES SUPPLEMENTARY REGIONAL SUBPROJECT		
GEOCHEMISTRY		
SCALE 1:50000	DWN. C.E.C.	TAS 2-244

85-2301

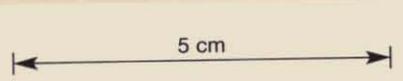
85-2394

172007



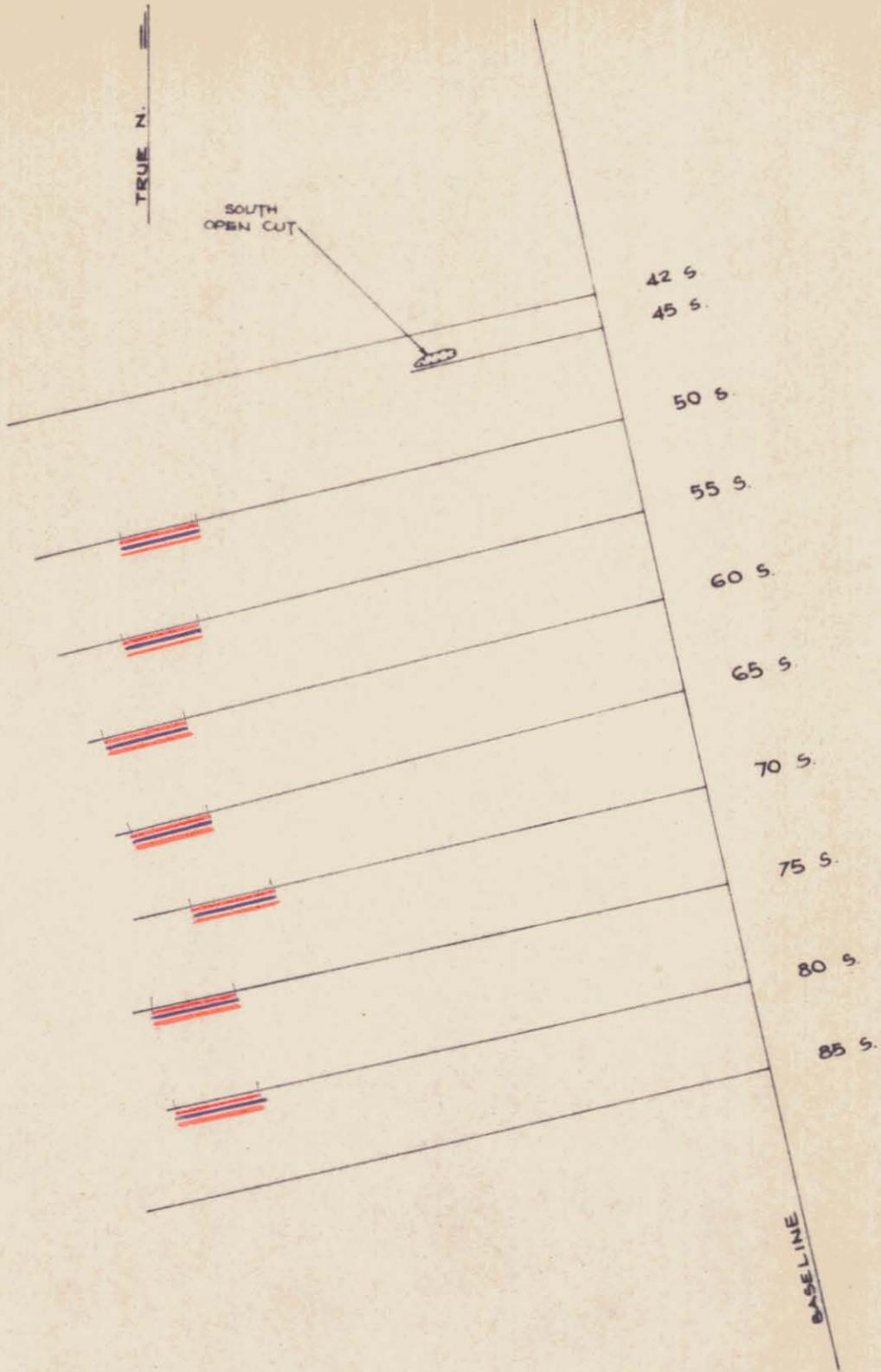
GRID AREA BETWEEN 165 S & 185 S INCLUSIVE RE-SAMPLED FOR 1971.

1971 SAMPLING DISCLOSED HIGH BACKGROUND VALUES ONLY FOR THIS AREA.

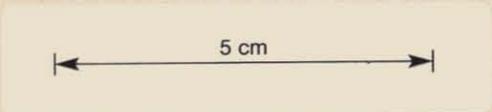


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CHESTER GRID GEOCHEMISTRY		
SCALE 1:10000	DWN. G.E.C.	TAS 2-245

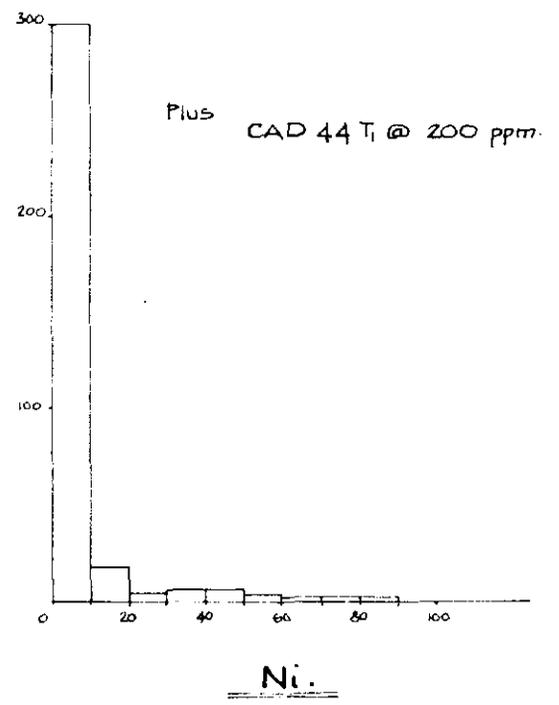
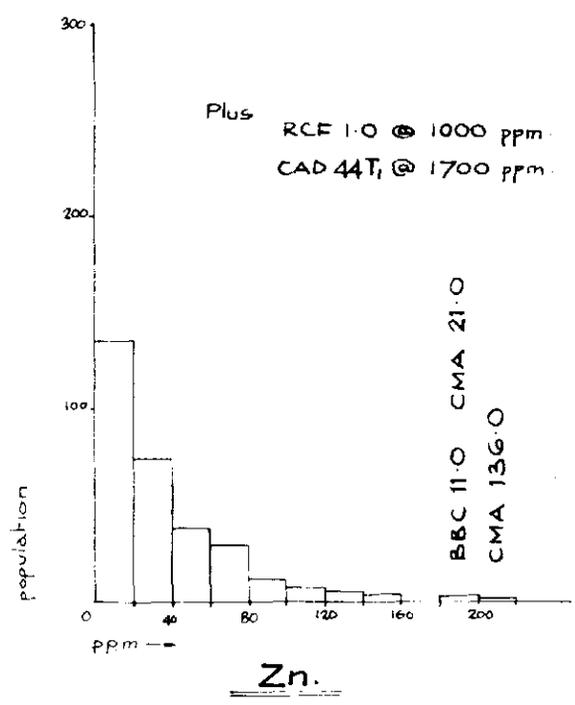
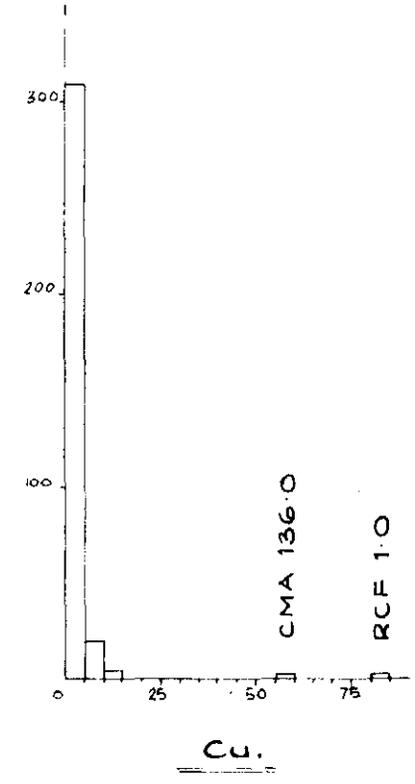
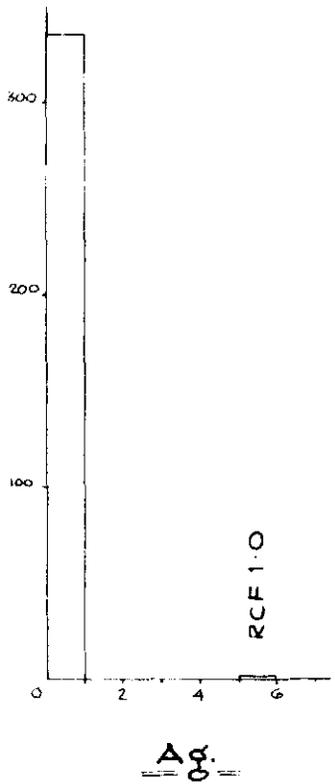
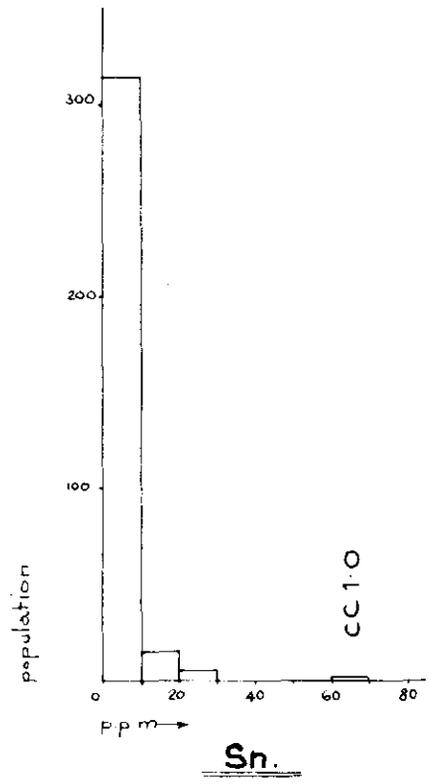
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- COPPER ANOMALY
- LEAD ANOMALY
- ZINC ANOMALY



COMSTAFF PROPRIETARY LIMITED		
CHESTER PINNACLES SUPPLEMENTARY REGIONAL SUBPROJECT PINNACLES GRID GEOCHEMISTRY		
SCALE 1:10000	DWN. C.E.C.	TAS 2-246



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CHESTER PINNACLES
SUPPLEMENTARY REGIONAL SUB PROJECT

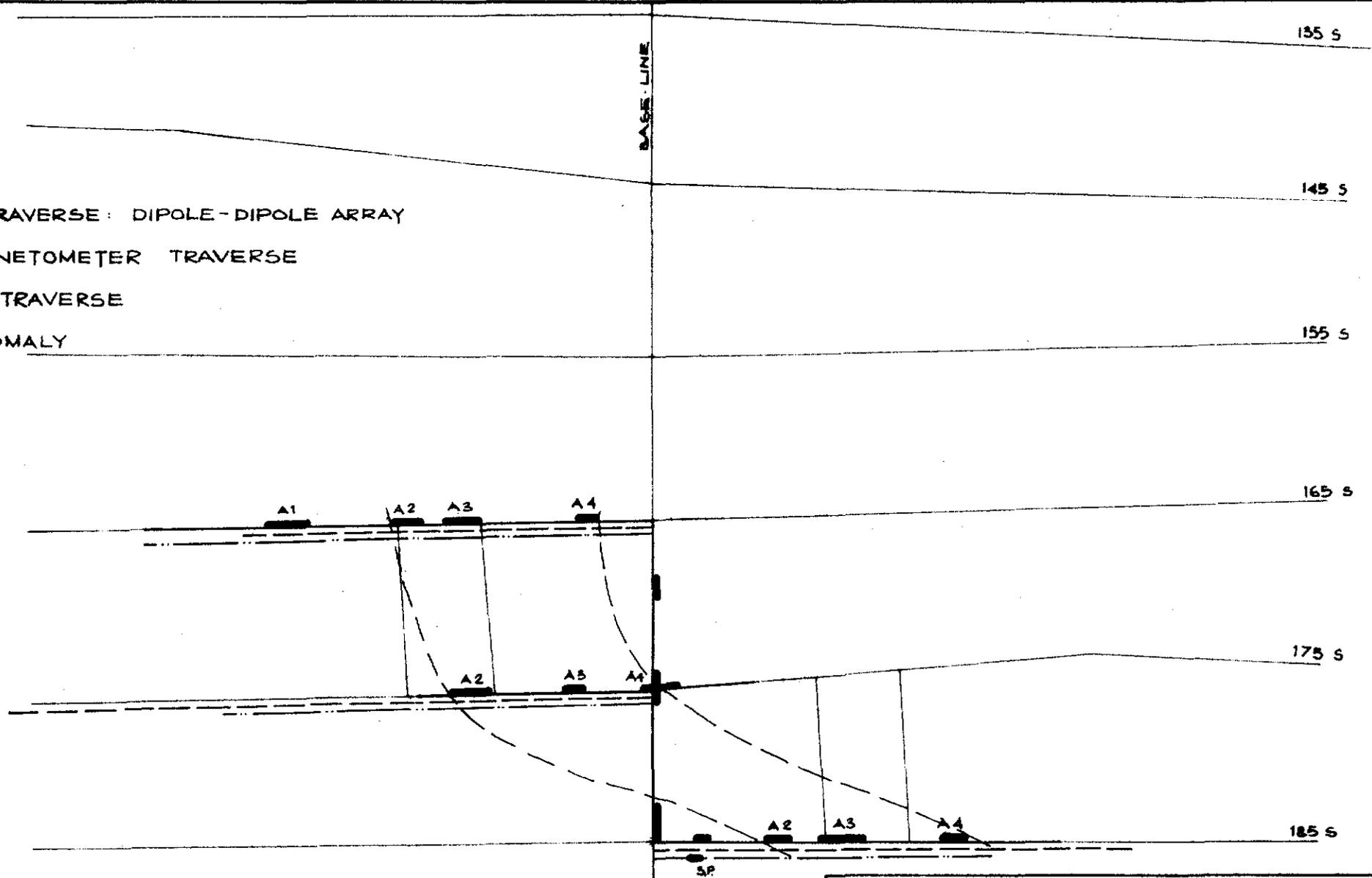
HISTOGRAMS

TAS 2-267

TRUE N.

BASE LINE

- I.P. TRAVERSE: DIPOLE-DIPOLE ARRAY
- - - - MAGNETOMETER TRAVERSE
- S.P. TRAVERSE
- ANOMALY



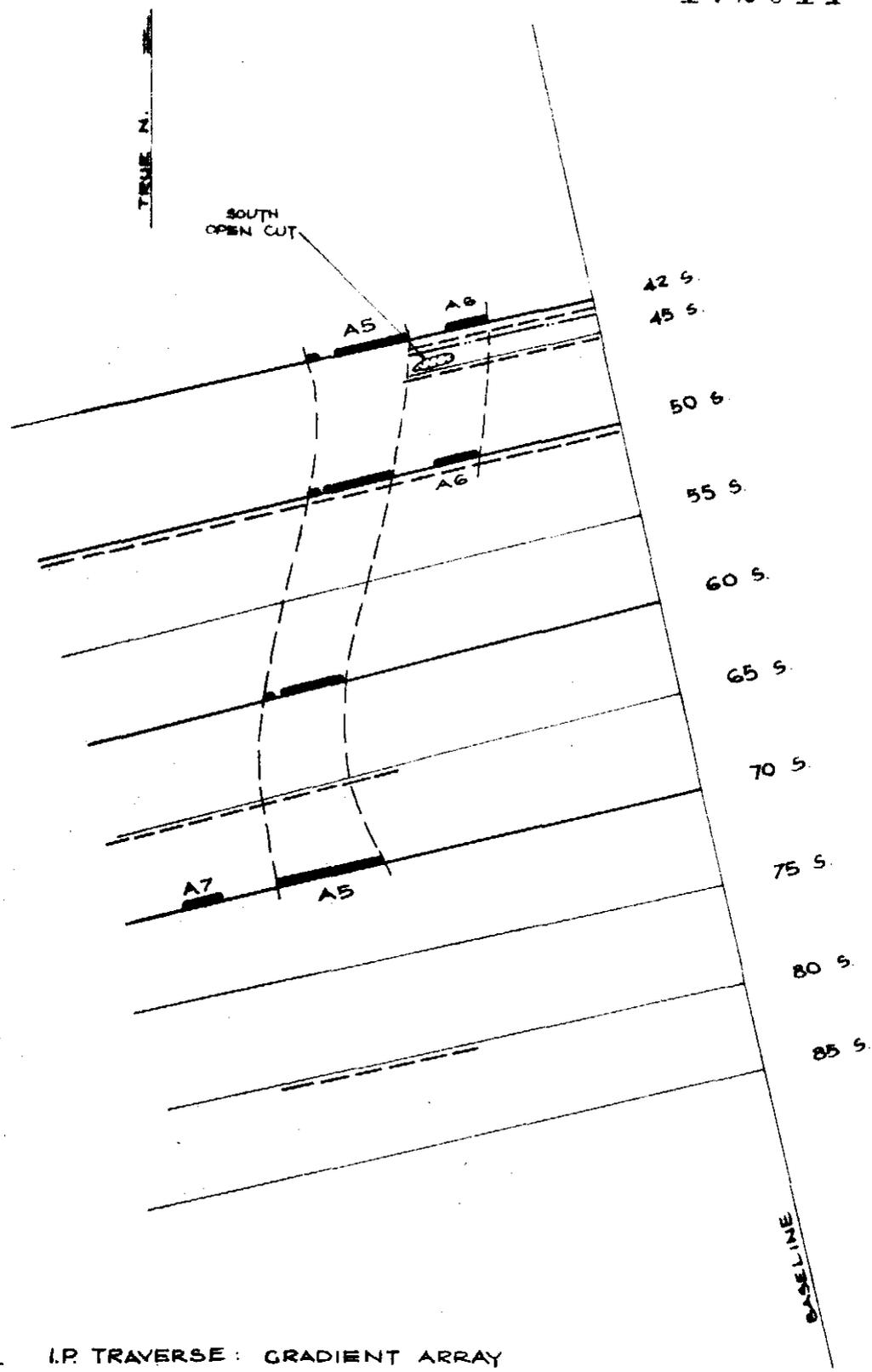
5 cm

COMSTAFF PROPRIETARY LIMITED		
CHESTER PINNACLES		
SUPPLEMENTARY REGIONAL SUBPROJECT		
CHESTER GRID GEOPHYSICS		
SCALE 1:10000	DWN. G.E.C.	TAB 2-248

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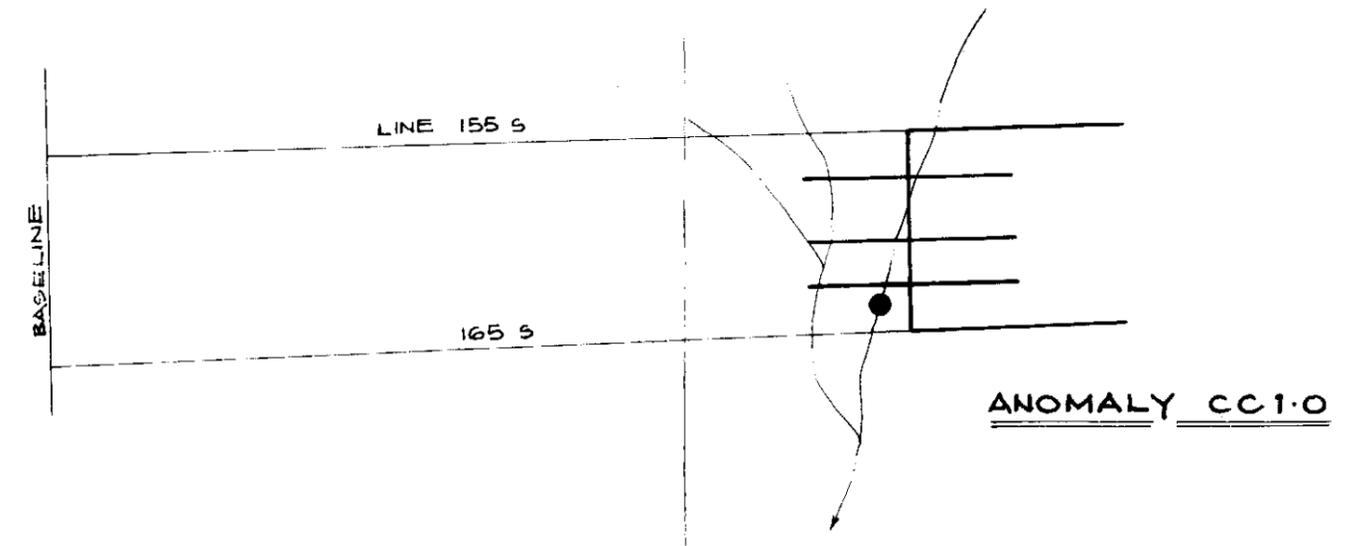
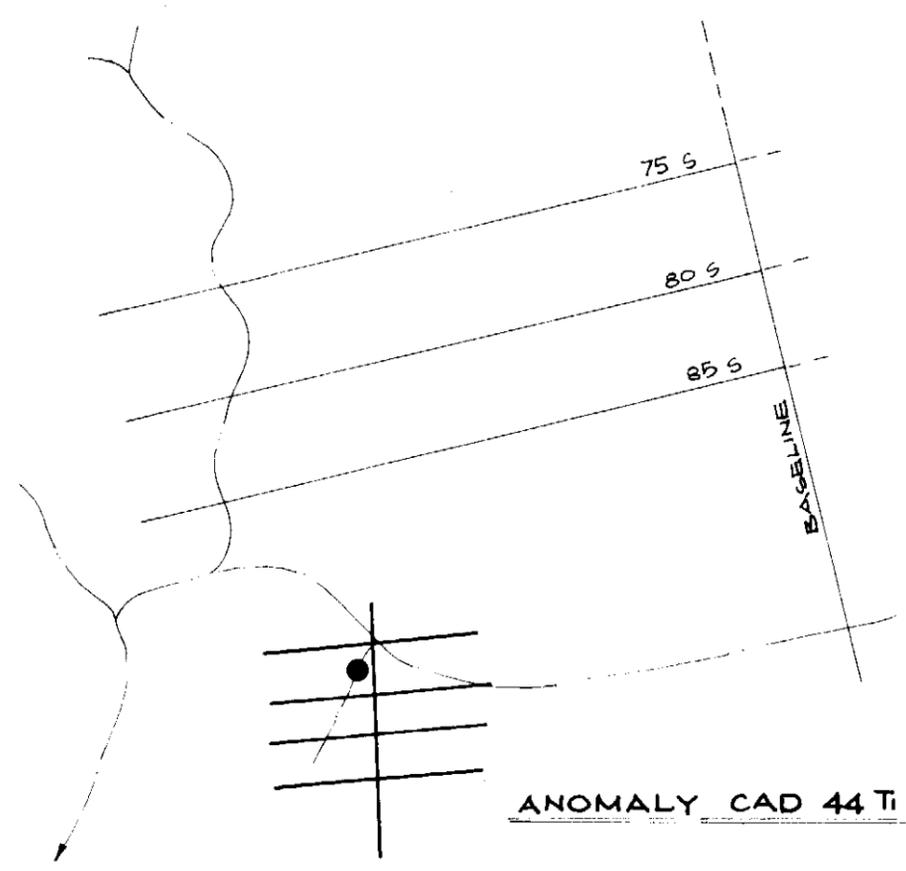
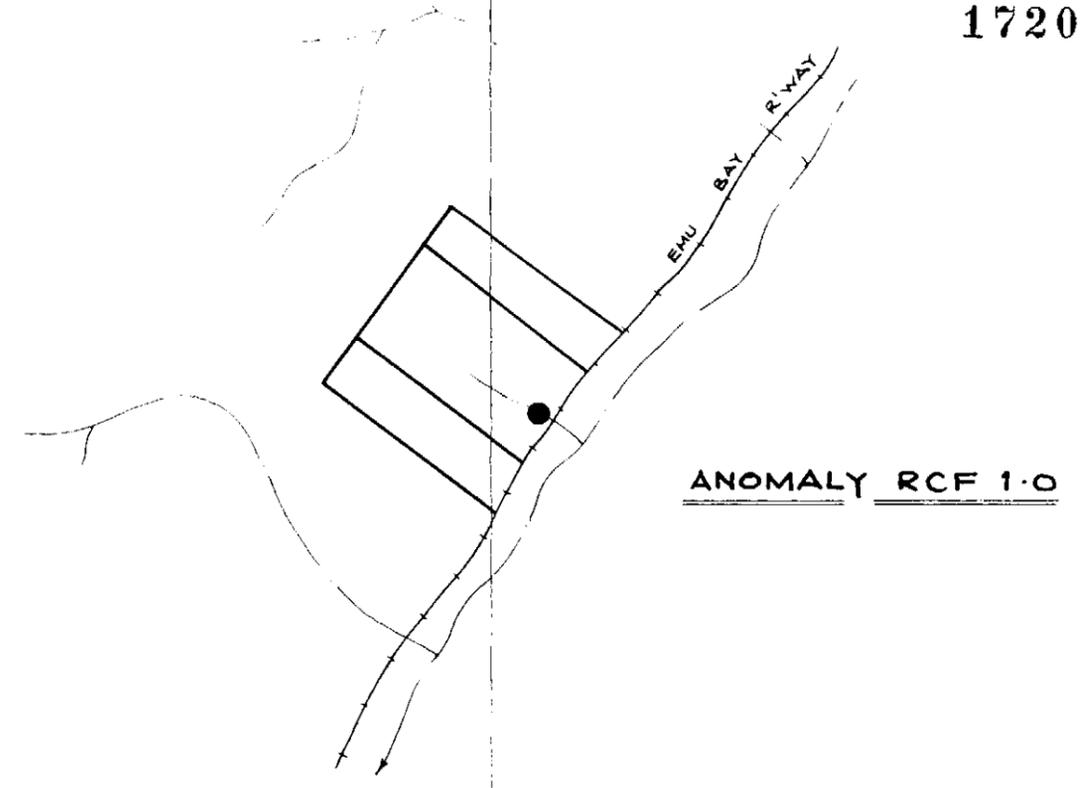
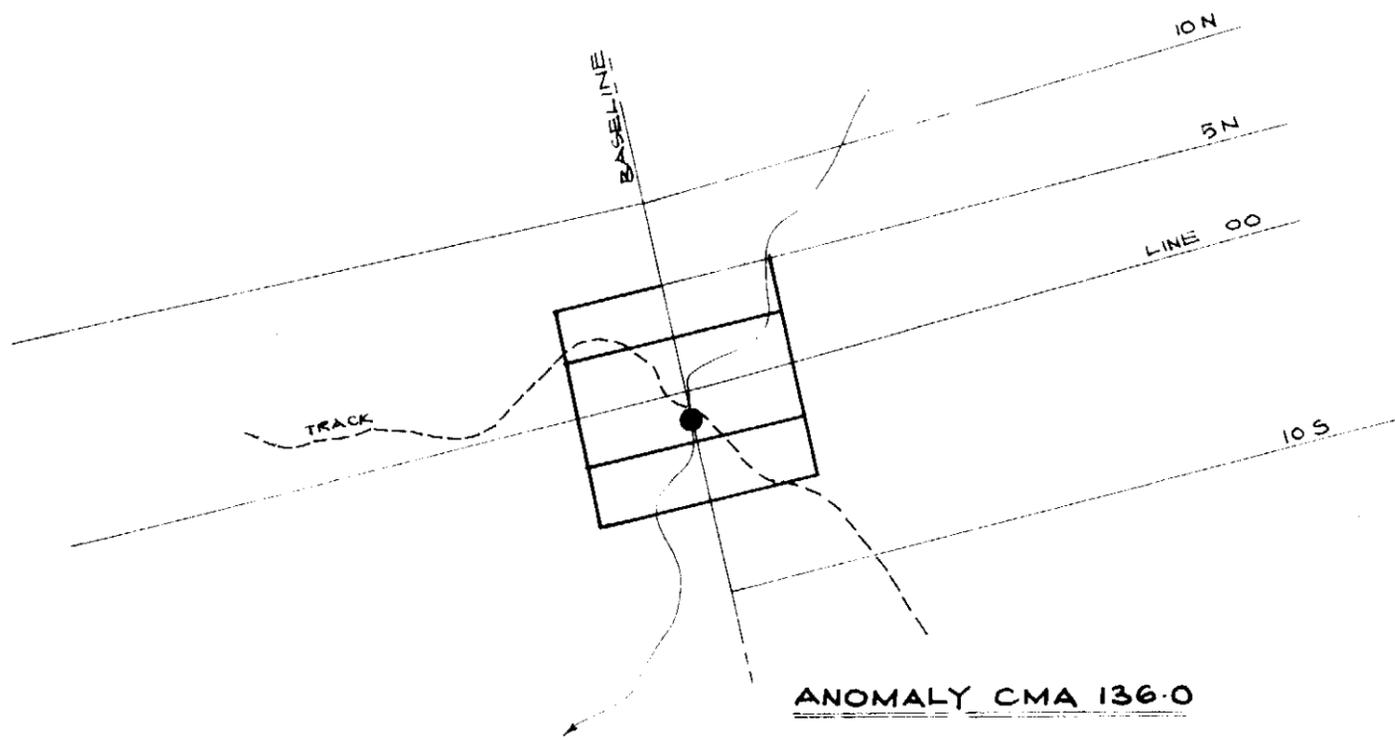
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- I.P. TRAVERSE : GRADIENT ARRAY
- MAGNETOMETER TRAVERSE
- S.P. TRAVERSE

5 cm

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CHESTER PINNACLES		
SUPPLEMENTARY REGIONAL SUBPROJECT		
PINNACLES GRID GEOPHYSICS.		
SCALE 1:10000	DWN. G.E.C.	TAS 2-249



Legend and Scale:

- ANOMALY
- CREEK
- EXISTING GRID
- PROPOSED GRID

5 cm

COMSTAFF PTY. LTD.	
CHESTER PINNACLES SUPPLEMENTARY REGIONAL SUBPROJECT PROPOSED FOLLOW-UP GRIDS	SCALE: 1:10000
	DWN: G.E.C.
	DATE: SEP. 1971
	TAS 2-250