

Civil Engineers & Earthmoving Contractors

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FIRST AND FINAL

REPORT

ON

E.L. 4917

PROGRAM AND EXPENDITURE

FOR YEAR 1

09-09-87 TO 08-09-88

OPENFILE CR89/061

A Member of the Macmahon Holdings Limited Group of Companies Northern Territory, South Australia, Western Australia, Queensland, Victoria

INTRODUCTION

E.L. 4917 is mainly flat area known as Paddy's Plain, lying within the Macdonnell Ranges, approximately 80km ENE of Alice Springs. The area of 14 blocks was applied for on 20-11-1985 and was granted on the 09-09-1987 for a period of six years.

Interest in the mineral potential of the area arose because of it's proximity to the Arltunga and White Range Goldfields which lie almost adjacent to the north and northeast and because of some minor mineral occurences within or adjacent to E.L. 4917. It was felt that the soil cover of the plain could be concealing important deposits of gold or basemetals.

Reconnaissance showed that B.I.F.'s occured in the area. These were mapped by means of a detailed ground magnetic survey. Geochemical prospecting was also undertaken and some anamalous samples were collected.

Selected areas of interest were costeaned. One gossanous zone was geophysically surveyed by the EM 37 method.

No significant mineral deposit or prospect was found.

Whereas the area has not been exhaustively explored, the large geophysical and geochemical effort required to investigate the rest of the plain is not considered justified by results to date and hence the area will be surrendered.

LOCATION AND ACCESS

The licence area is located approximately 105km by road northeast of Alice Springs via Ross River Highway and Arltunga Tourist Road. Ross River Highway is a sealed bitumen road whilst Arltunga Tourist Road is an unsealed gravel road. Access can be gained at most times of the year although 4WD may be required during wet periods.

CLIMATE

The climate of Central Australia is arid, charecterised by low, highly variable annual rainfall and by seasonal variations in temperatures. Relative humidity is low and evaporation high throughout the year.

Rainfall is seasonal, with most occurring in Summer during localised and sporadic thunderstorms.

Summer temperatures are high with almost ten days per month reaching 39 degrees or higher.

Winter day temperatures are warm (around 20 degrees) but night temperatures are cold (around 5 degrees).

GEOLOGY

Use was made of the Arltunga Harts Range 1:100,000 geological map prepared by the BMR 1984.

This shows the area of the plain to be occupied by quartzo-felspathic gneisses of the Arunta Block, including thin amphibolites, with large wedges of Heavitree Quartzite encroaching from the east and west at the southern edge of the plain, causing strong topography. The southern most part of the licence consists of garnet - sillimanite - biotite gneisses, with amphibolite.

MINERALIZATION

Various minerals were found to exist within the E.L. although in small quantities.

Minerals detected or observed were copper, gold, lead, zinc, silver and asbestos.

WORK UNDERTAKEN

A. AERIAL PHOTOGRAPHS.

Previous aerial photography at scale 1:8,000 was collected. Airsearch Mapping P/L were then contracted to cover areas of the E.L. not previously covered, at a similar scale to previous works.

B. GEOPHYSICS.

In January 1988, a grid system was installed in the Northern half of the licence. This was then surveyed with ground magnetics. The area covered measured approximately 7km by 3.6km.

North - South control lines were surveyed approximately 1km apart depending on visibility and east-west lines 200 metres apart were read at stations 20m apart.

After corrections, the readings were plotted and contoured at 100nt intervals. A copy of the resulting contour plan is attached.

The plan showed less features than expected. Two relatively linear B.I.F. anomalies 1.2km apart, running parallel and roughly north-south, dominate the pattern. There is a kink in the middle of each of these linear features and some dislocation and complication of the eastern B.I.F. line.

E.M. 37 geophysic survey was carried out in this area of dislocation, mainly because some gossan with slightly anomalous silver had been found here and because Macmahon was using the services of Sydney based Geoterrex P/L in the Alice Springs area at the time.

A loop $600m \times 200m$ was laid out, using the ground magnetic grid co-ordinates and 5 east-west lines varying from 500m to 700m long were surveyed. Although strong loop effects were registered, no true anomalies were detected.

C. GEOCHEMISTRY

Geochemistry was restricted to rock chip sampling, either of surface float or of materials exposed in costeaning.

Some surface samples were collected in the course of the magnetic survey described above, and the others during reconnaissance. Three anamalous locations were discovered. Using the ground magnetic grid co-ordinates, these were at 4700w 800s

3740w 1800s
2700w 2600s

Fresh sulphide-bearing siliceous mineralization with assays up to 3.75g1t gold, 6% copper, 15% lead, 2500ppm zinc and 925ppm silver was found at the first location (4700w 800s).

Extensive costeaning showed that the mineralization occured as a narrow discontinuous lens about 15cm thick and about 40m long.

At the second site (3740w 1800s), costeaning found similar gossan to that occuring in float, with silver in the order 3-4 ppm, and minor copper or zinc values, all <500ppm. As described above, an E.M. 37 survey discounted the presence of any significant sulphide body here. The third anomaly at 2700w 2600s (350ppm cu) was not followed up.

D. COSTEANING

The company's Kato 1220 excavator was used as a prime exploration tool. It proved to be a very suitable method on Paddy's Plain because the in-site weathered Arunta Block rock units generally occur within 1 metre of the surface, and rarely deeper than 3 metres. Incidentally, this shallow depth of cover discounted any likelihood of a major alluvial goldfield in the fenil drainage from Arltunga and White Range.

Four zones were costeaned with east-west lines placed on the ground magnetic grid system and averaging 60m in length.

The costeans were geologically scanned for gossan, quartz - veining and structure. No significant features were observed. A set of 4 channel samples were collected but assays showed them to be barren.

EXPENDITURE

Under the terms of being granted E.L. 4917 a minimum amount of \$7,500 was to be expended in carrying out exploration during year.

The expenditure for year 1 totalled \$28,500 being made up of the following-

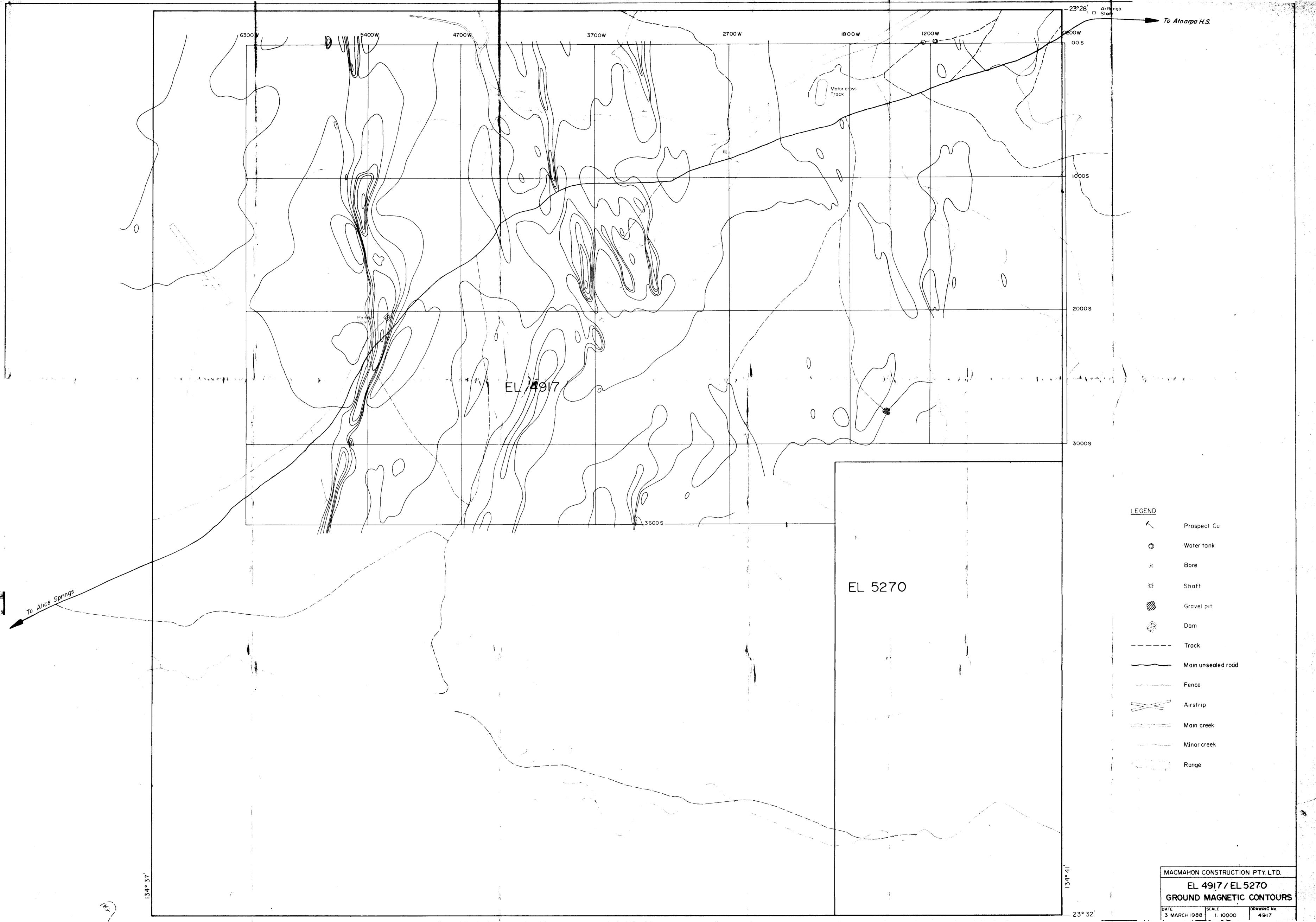
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Licence Inspection	\$8,	000
Aerial Photography	\$3,	200
Geophysics	\$3,	500
Assaying	\$	800
Drafting	\$	500
Costeaning	\$8,	000
Overheads	<u>\$3,</u>	500
TOTAL	\$28	500

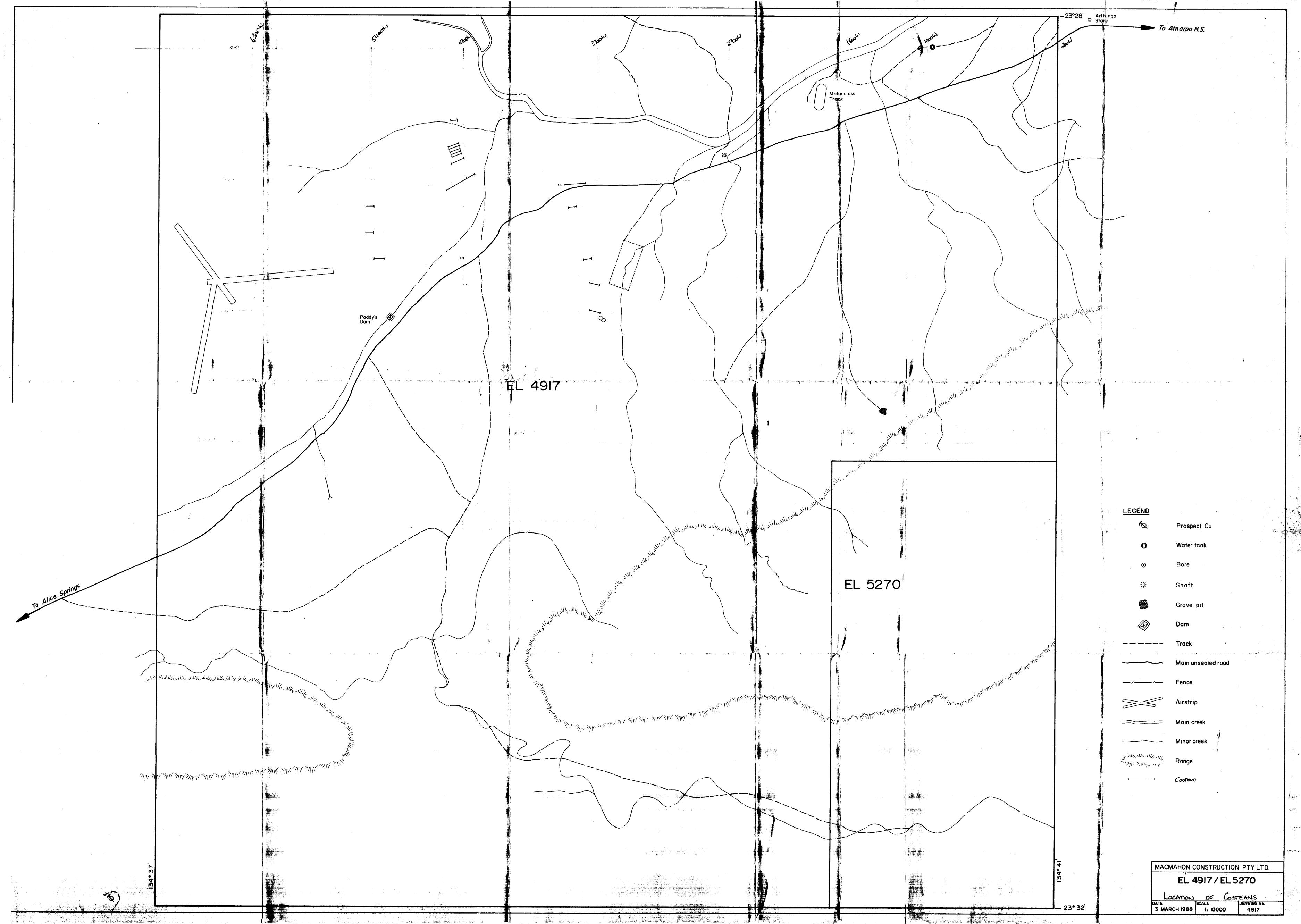
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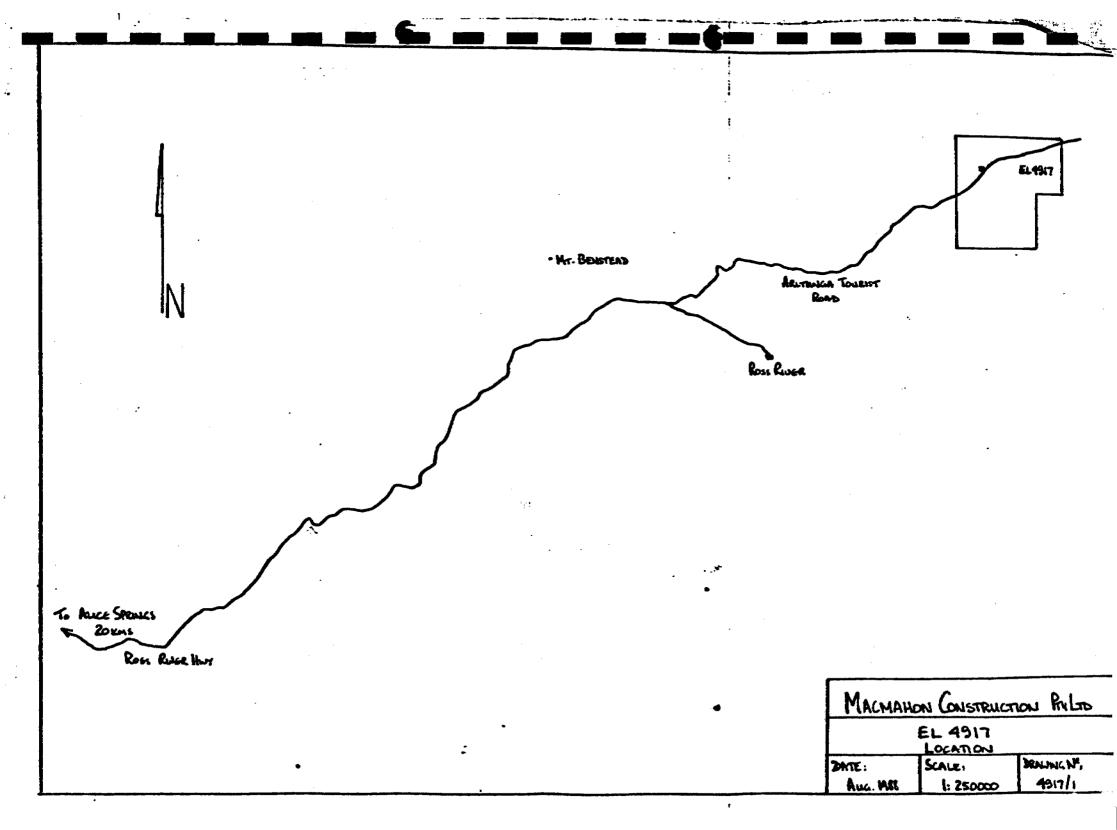
E.L. 4917 Was surrendered in November 1988.

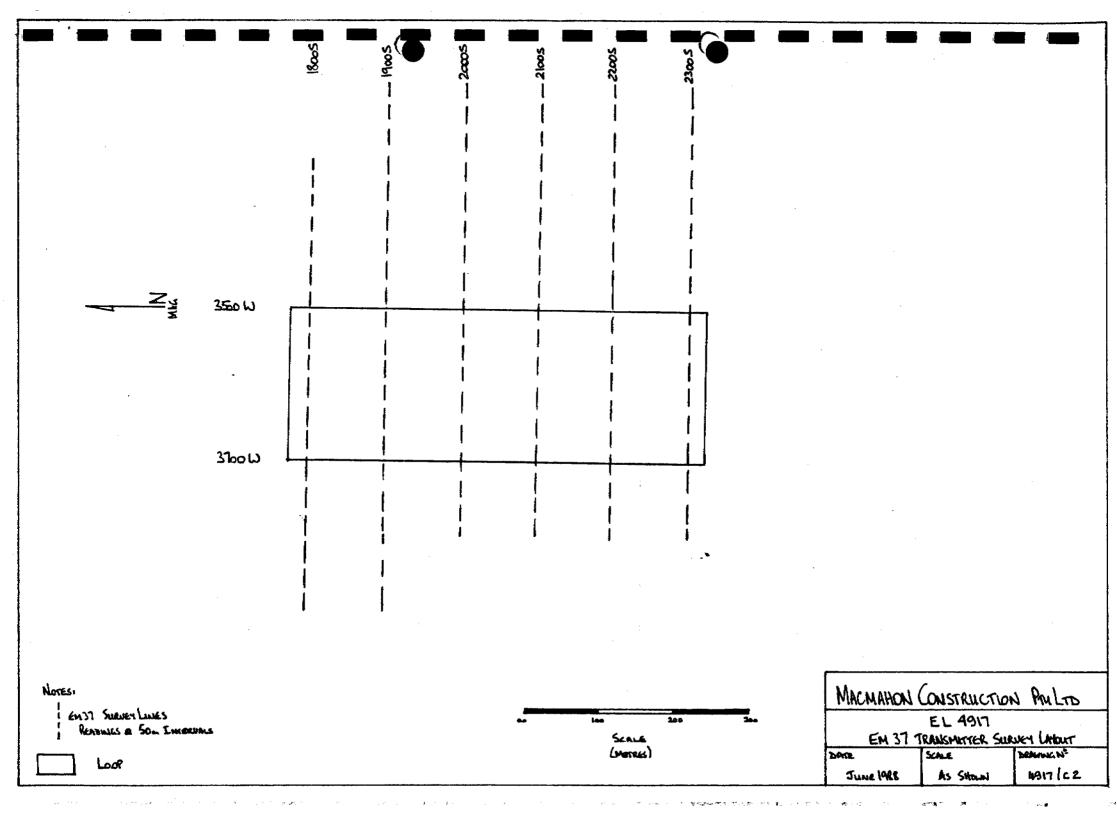
ATTACHMENTS

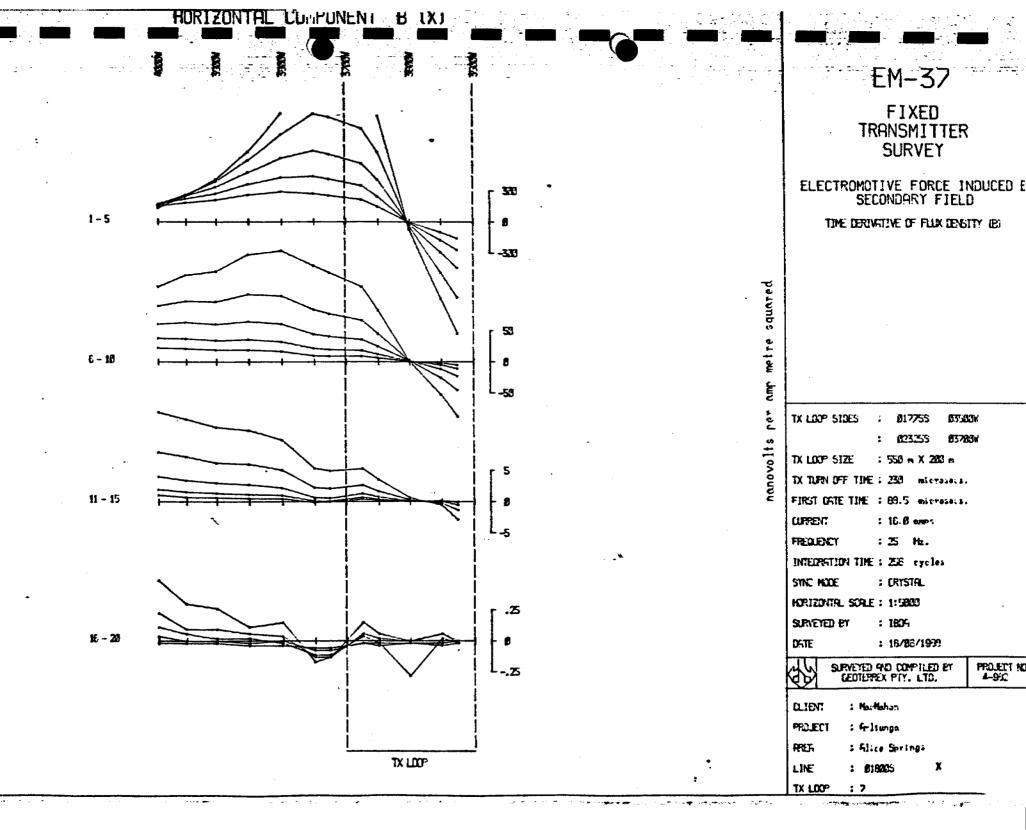
- A. Plan E.L. location.
- B. Plan Ground Magnetic Contours.
- C. Plan Costean Locations.
- D. E.M. 37 Loop plan and survey profiles.
- E. Assay results.

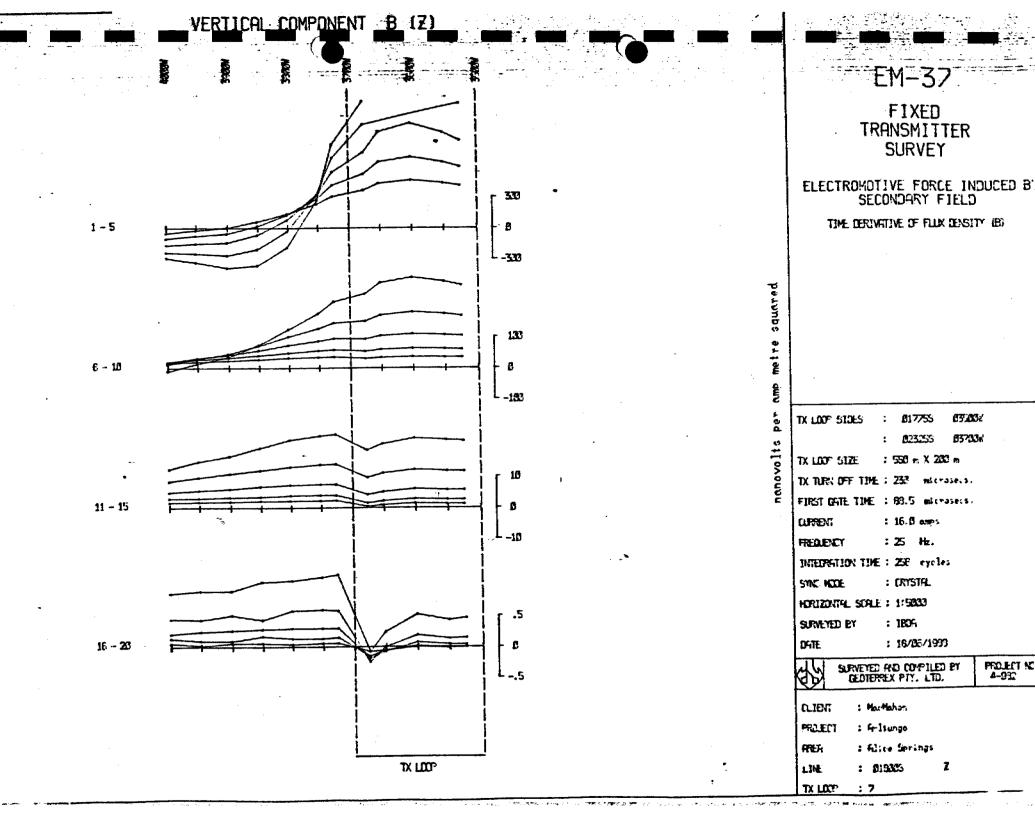


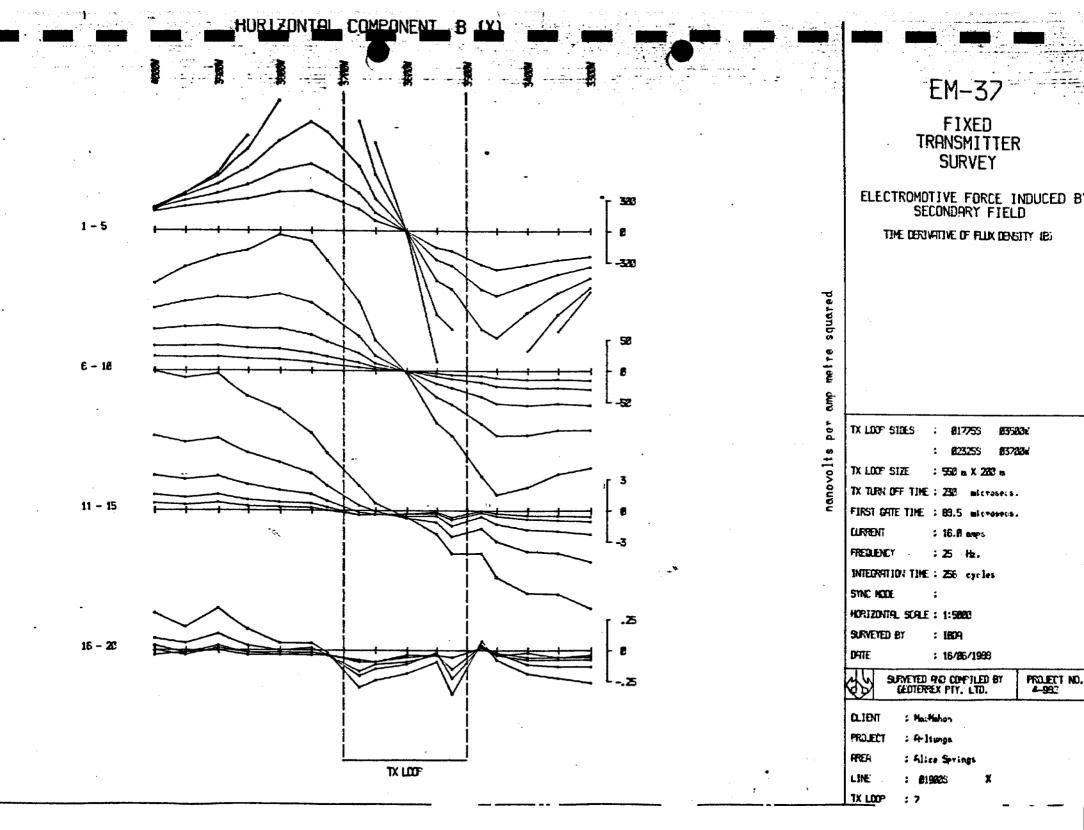


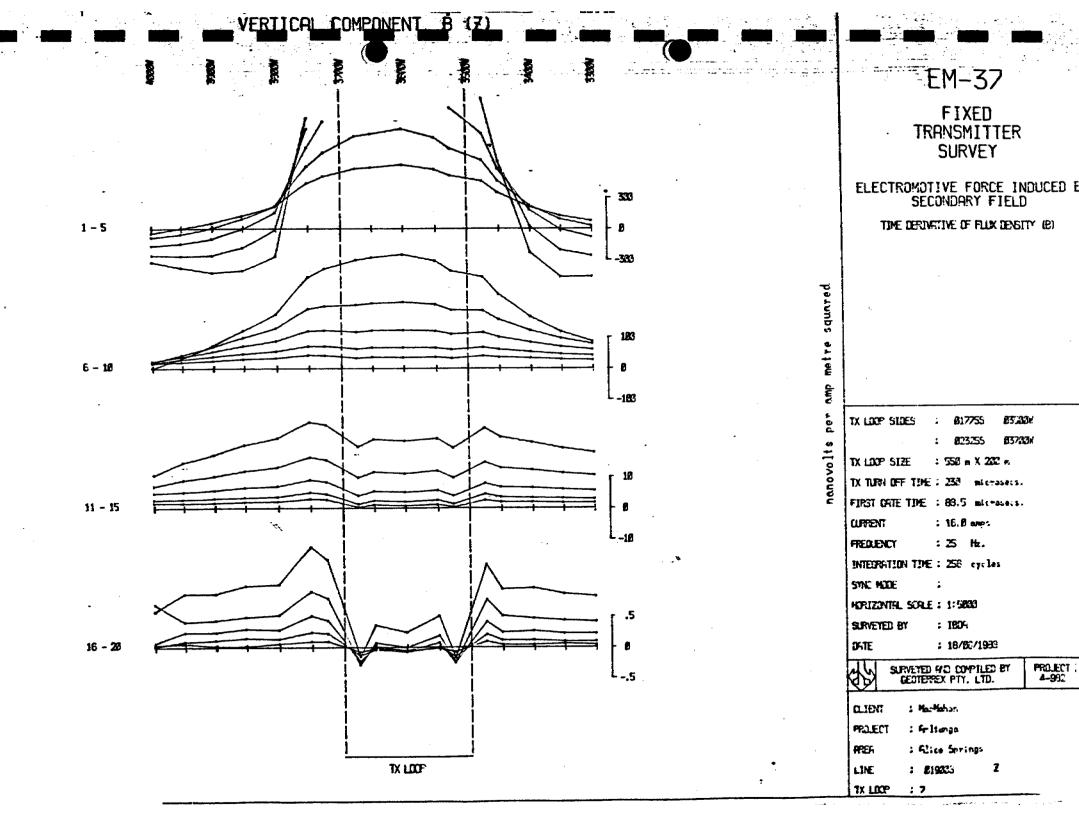


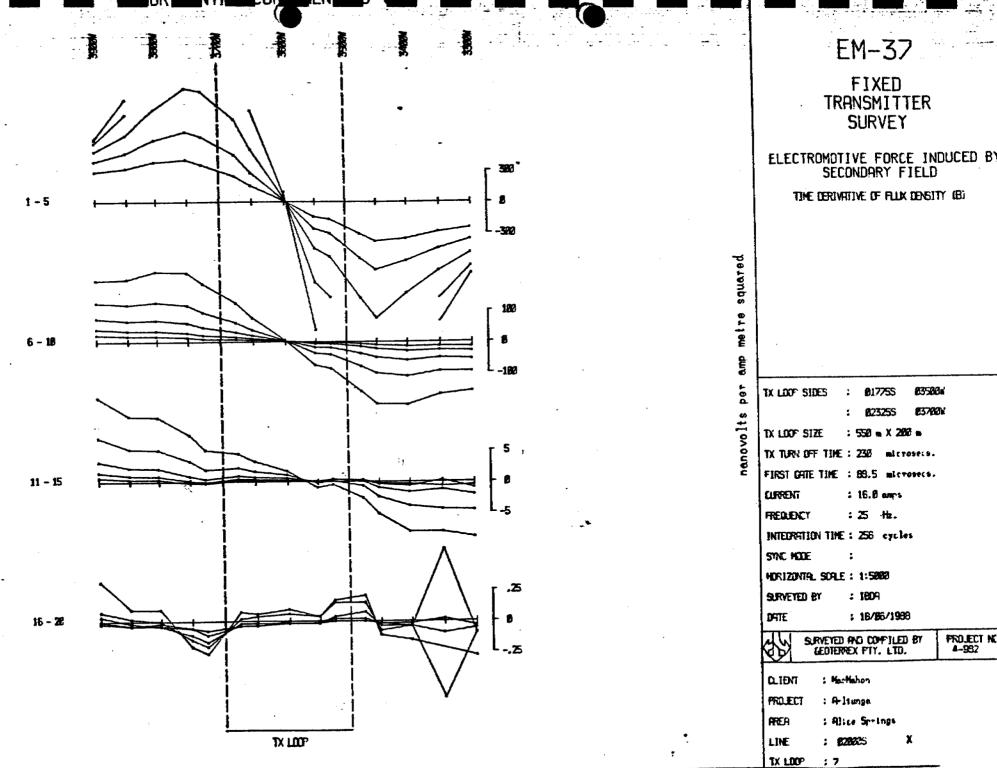


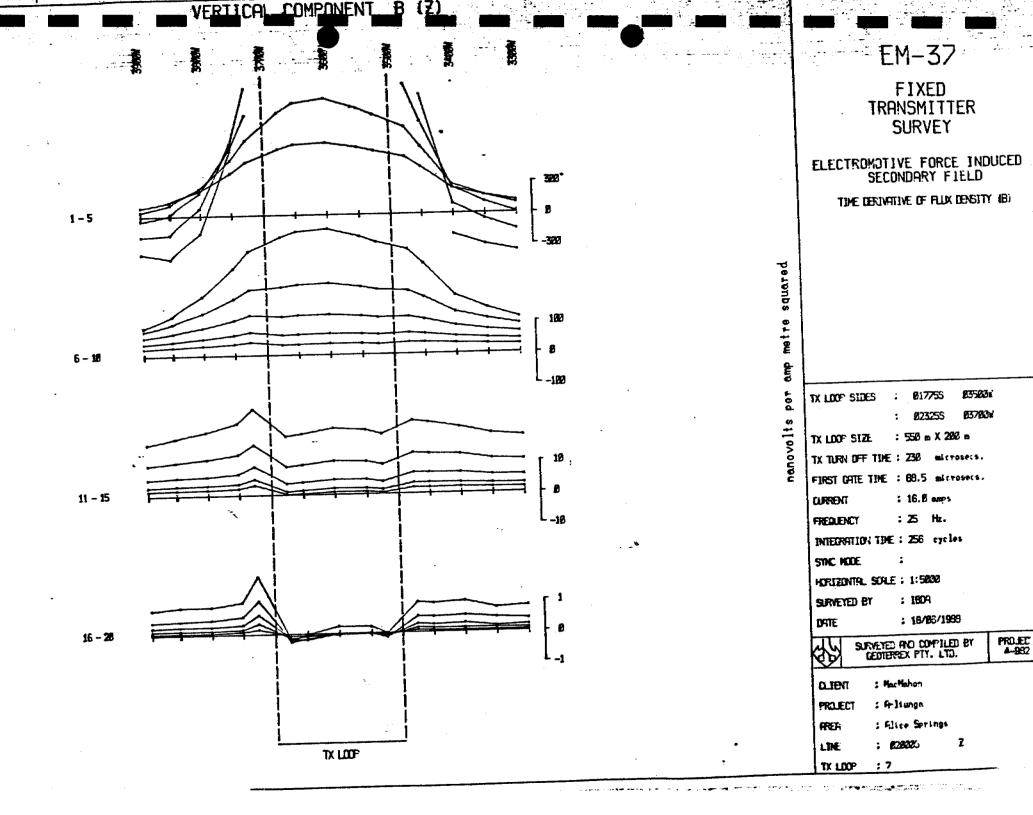


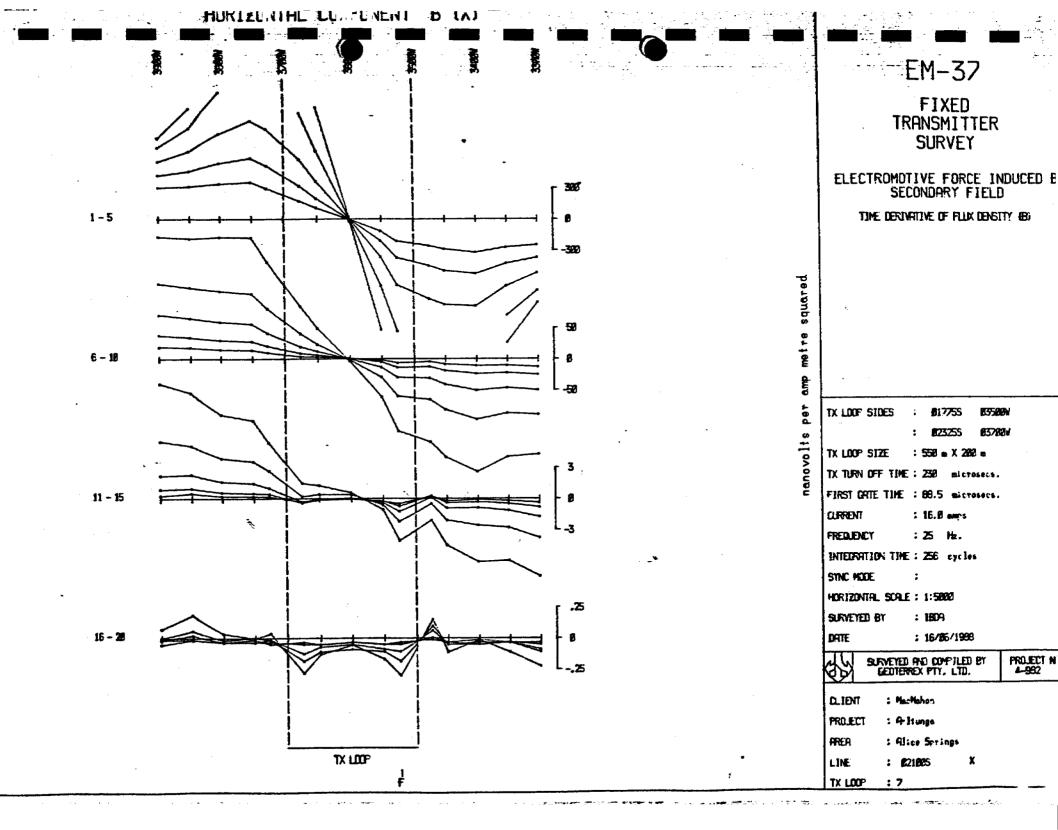


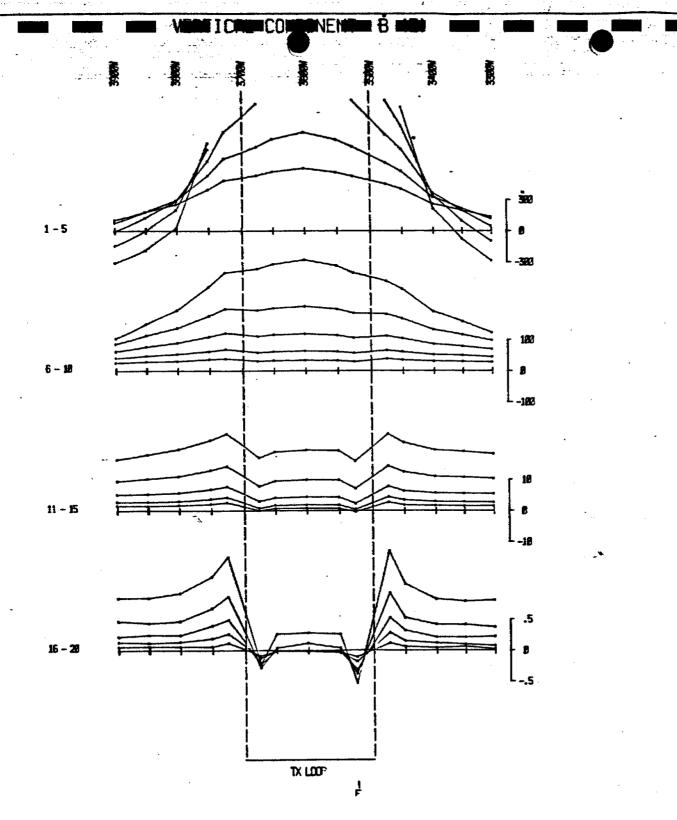












EM-37

FIXED TRANSMITTER SURVEY

ELECTROMOTIVE FORCE INDUCED SECONDARY FIELD

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TX LOOF SIZE : 558 a X 282 c

TX TURN OFF TIME : 23% microsecs.

FIRST DATE TIME : 88.5 microsocs.

CLIFFICATI : 16.0 ees

:25 Hz. FRED ENCY

INTECRATION TIME: 256 cycles

SYNC MODE

HORIZONTAL SCALE: 1:5000

SURVEYED BY : 1809

DATE : 18/06/1998

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; Alice Springs PREF

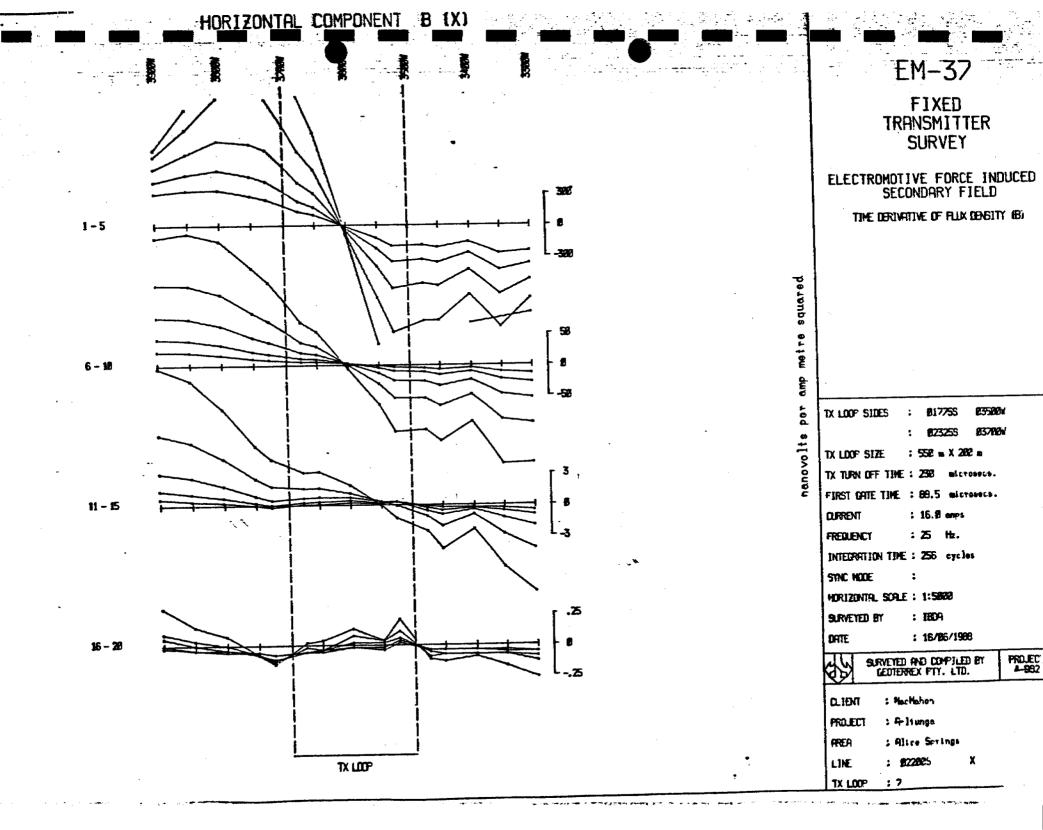
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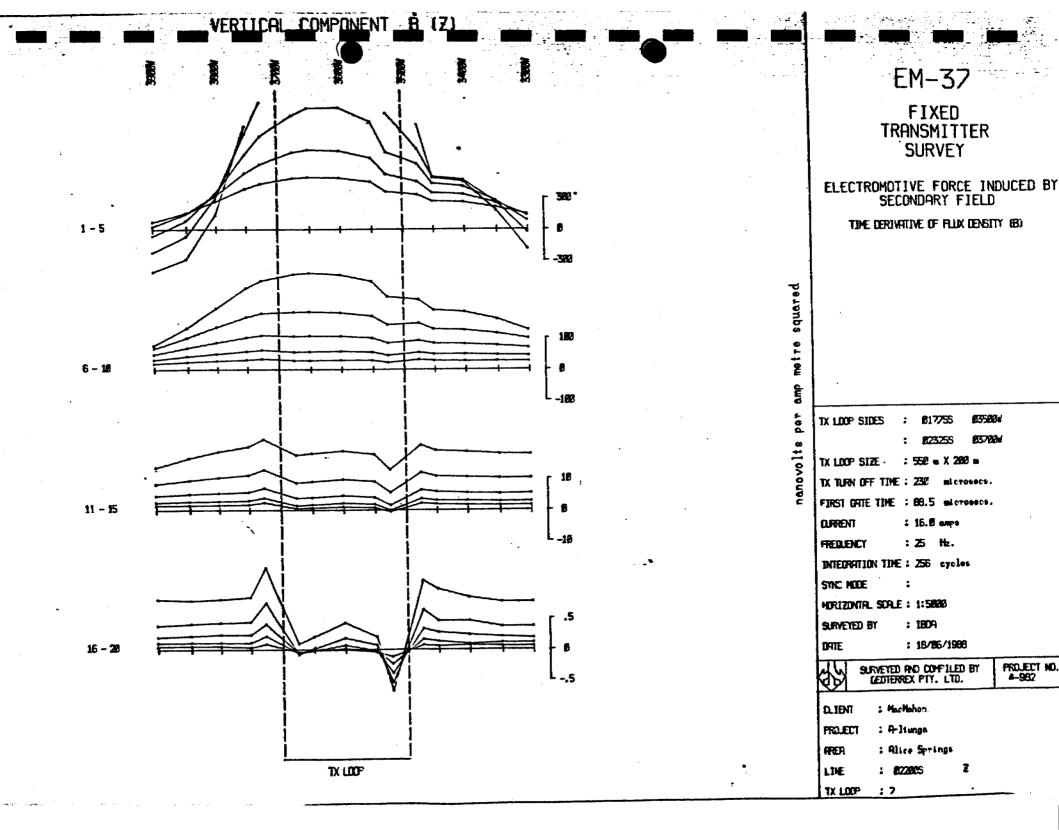
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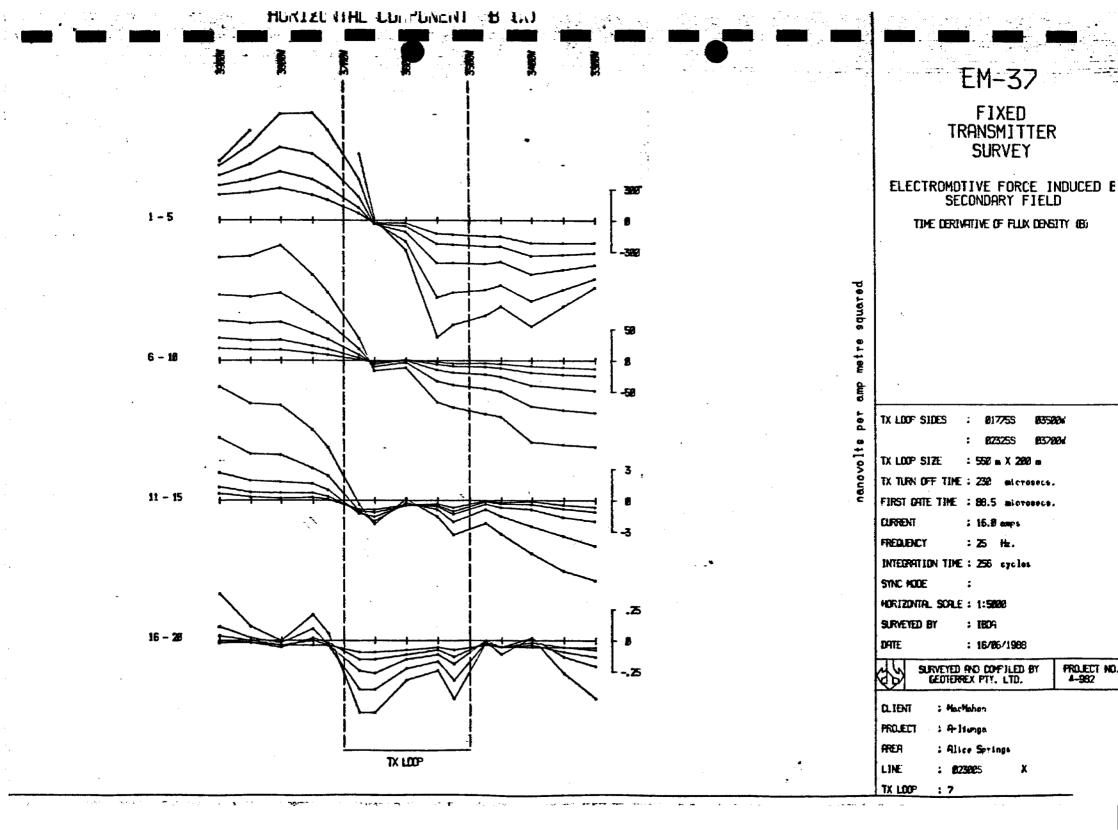
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PROJECT

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: Alice Springs

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TX LOOP

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