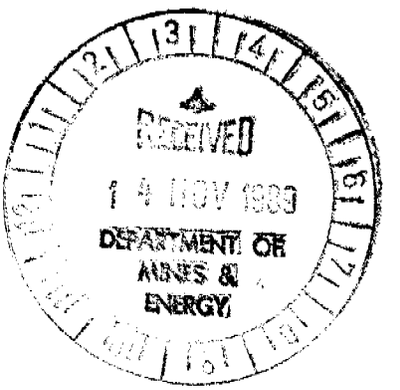
# OPEN FILE

EXPLORATION LICENCE 5310

REPORT ON AREAS RELINQUISHED 12TH AUGUST 1989




Prepared for OCEANIA EXPLORATION & MINING N.L.,

by

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November 1989.

## CONTENTS.

A. SUMMARY.

Exploration Licence 5310, originally comprising four blocks (13 sq.km), is situated 10 kilometres northeast of Adelaide River and 25 kilometres west of Goodall goldmine. In 1988, under a farm in agreement with GPN Pty Ltd, exploration work for gold was carried out including geological mapping, rock chip sampling and airborne magnetic and radiometric surveys. The geology consists of a turbidite sequence of the Early Proterozoic Burrell Creek Formation which is folded into a series of south-plunging anticlines and synclines. Quartz veins emplaced in this sequence are generally small but report distinctly anomalous gold values at several locations. The eastern two blocks show no magnetic features of interest, and the gold values were not considered sufficiently promising to warrant further work; these blocks have accordingly been surrendered.

## 1 INTRODUCTION.

Exploration Licence 5310 was granted to Robert Johnston on 13th August 1987 for a three year term. It initially consisted of four one minute square blocks, with a total area of 13 square kilometres, situated 80 kilometres southeast of Darwin and 10 kilometres northeast of Adelaide River (Figure 1).

During the first year of title exploration for gold was conducted by GPN Pty Ltd (a wholly owned subsidiary of Golden Plateau N L) under a joint venture agreement with the titleholders; Golden Plateau withdrew at the end of the first year.

Exploration during year one included airborne magnetics and radiometrics, geological mapping and rock chip sampling. During year two activities were concentrated on evaluating anomalous rck chip sampling results arising from the first years work.

This report describes exploration results obtained in the two eastern blocks which were surrendered at the end of the second year.

## 2. GEOLOGY.

The rocks in the area are part of the Early Proterozoic Burrell Creek Formation, a turbidite sequence of shales, siltstones and greywackes, which hosts a number of the most important gold deposits of the Pine Creek Geosyncline, including the Goodall orebody of Western Mining situated 25 kilometres to the east.

Within the Licence area the sequence is represented by ridges of interbedded siltstones and fine to medium grained greywackes. The formation youngs to the west, broadly coarsens upwards, and is folded into a series of north-northwesterly trending, southerly plunging anticlines and synclines (Figure 2). Significant quartz veining is restricted to a north-

trending ridge in the western (retained) part of the Licence, and as relatively insignificant conformable veins in the southeast (surrendered) areas.

## 3. GEOPHYSICS.

The airborne geophysical surveys were part of an extensive regional program conducted by Golden Plateau N.L. The magnetic contours for the areas relinquished from EL5315 are shown in Figure 3. There are no significant magnetic features in these areas.

## 4. GEOCHEMISTRY.

Geochemical samples taken within the relinquished area consisted of 10 rock chip samples. Sample locations are shown in Figure 4.

Rock samples were analysed for gold using acid digest and graphite furnace AAS techniques. All analytical work was done by AMDEL Laboratories in Darwin. Results are given in Appendix I.

Gold values were low for all the rock samples, with a maximum value of 0.058ppm Au.

## 5. CONCLUSIONS.

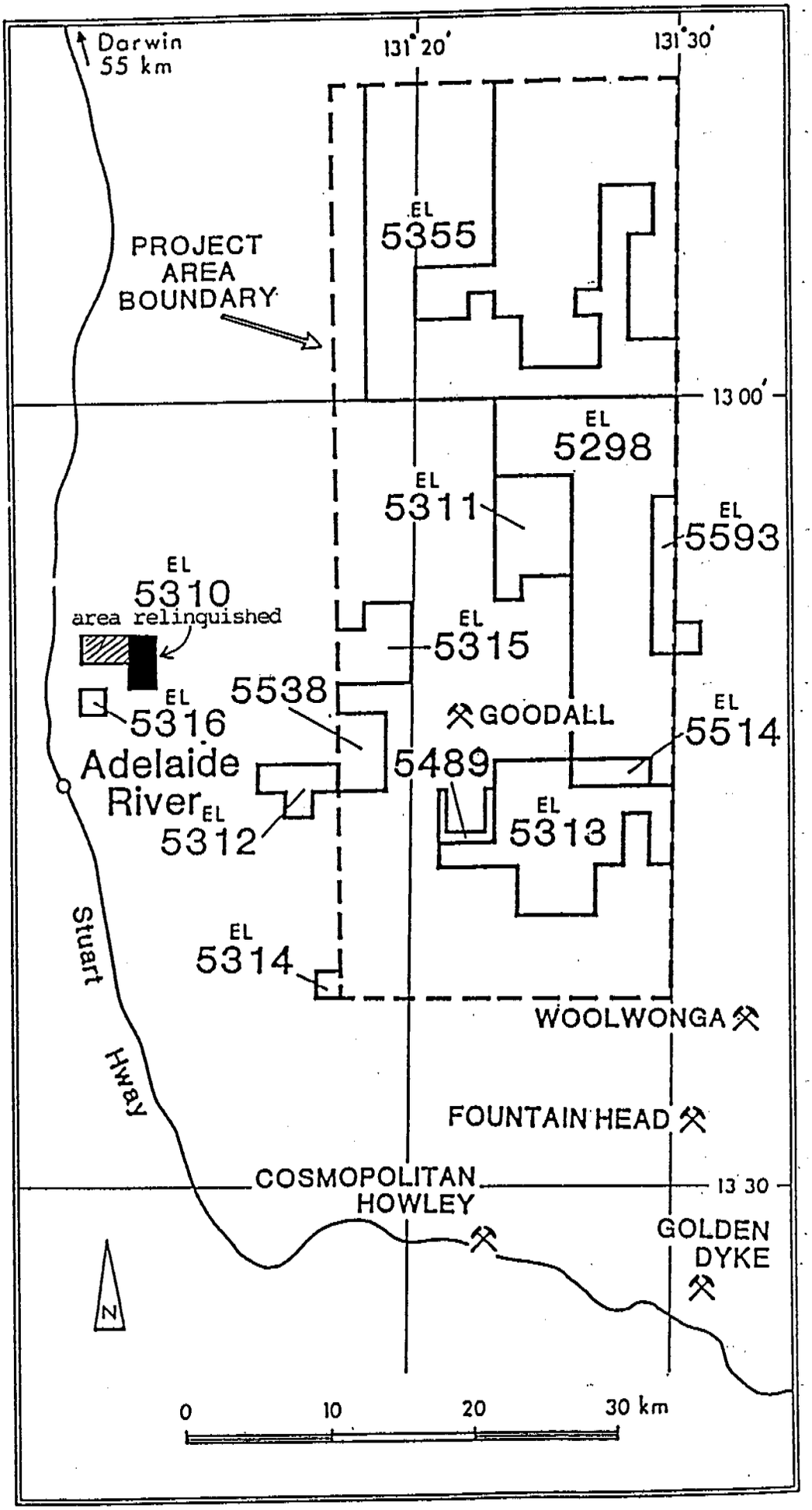
The results of both magnetic and geochemical surveys in the surrendered areas were negative. The potential for gold mineralisation of commercial interest is very low and no further exploration is warranted.

# APPENDIX I

## EL 5310 - Gold Assay Results 1987-1988

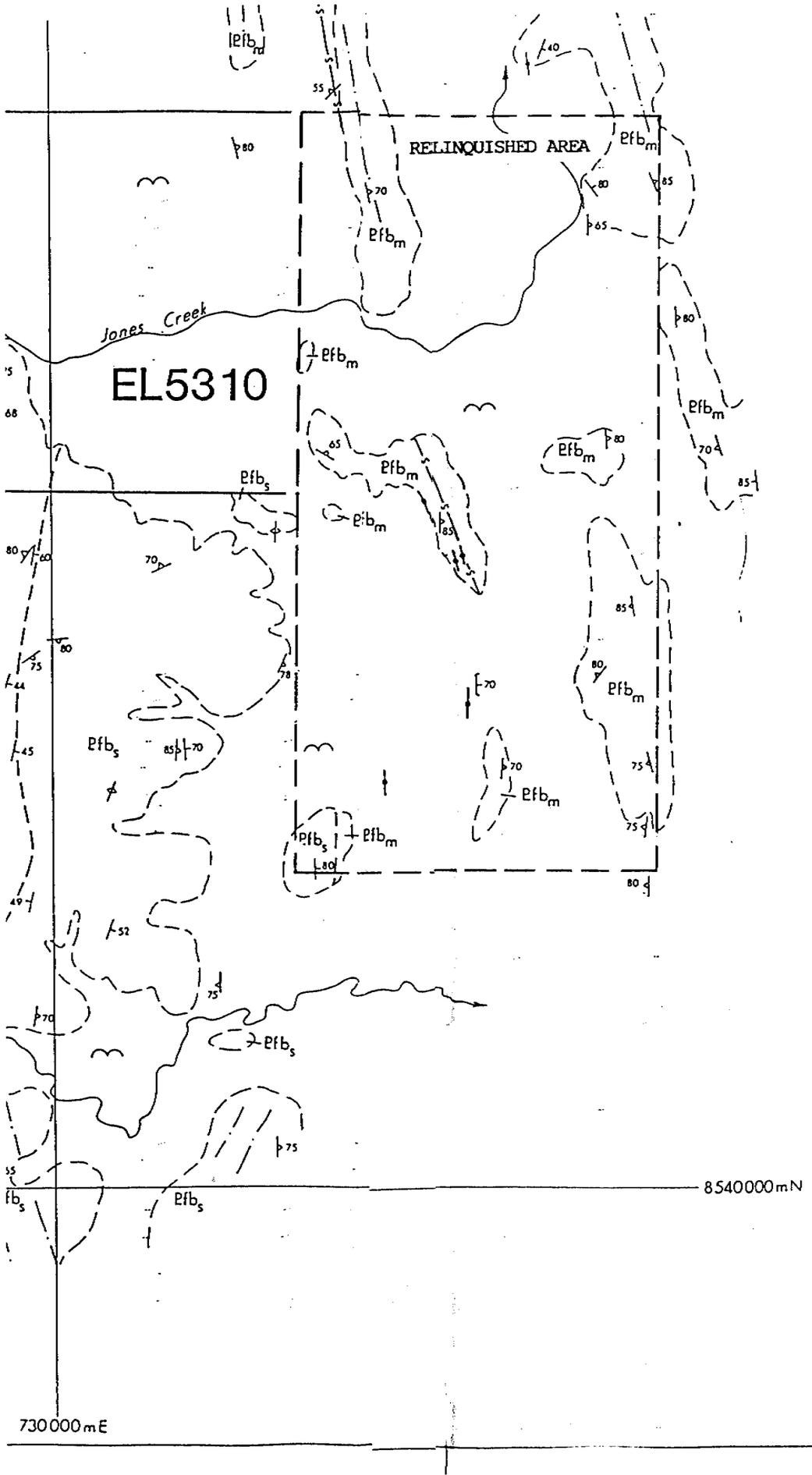
| Sample Number | Gold (ppm) |
|---|---|
| 36656 | x |
| 36657 | x |
| 36658 | x |
| 36659 | x |
| 36660 | x |
| 36661 | x |
| 36662 | 0.058 |
| 36663 | 0.002 |
| 36664 | 0.001 |
| 36665 | 0.002 |

x = less than 0.001 ppm Au.




LOCALITY MAP EL 5310

FIGURE 1




LEGEND

- Superficial deposits, flood plain, soil cover.
- Pfb_m — Dominantly mudrock, strike ridges formed by thin multiple siltstone units.
- Pfb_s — Dominantly siltstone, massive medium grained sandstone units to 2m thickness.
- —s— Sandstone unit too thin to show contacts.
- —T— Tuffaceous unit too thin to show contacts.
- Concordant quartz veins sub parallel to bedding or cleavage, sheared contact with host rock.
- Discordant quartz veins (photo interp).
- Inferred geological contact.
- Boundary of superficial deposits.
- Bedding dip from airphotography.
- Bedding trend from airphotography.
- Strike and dip of bedding.
- Strike and dip of slaty/spaced cleavage.
- Strike and dip of vein wall or layering in vein.

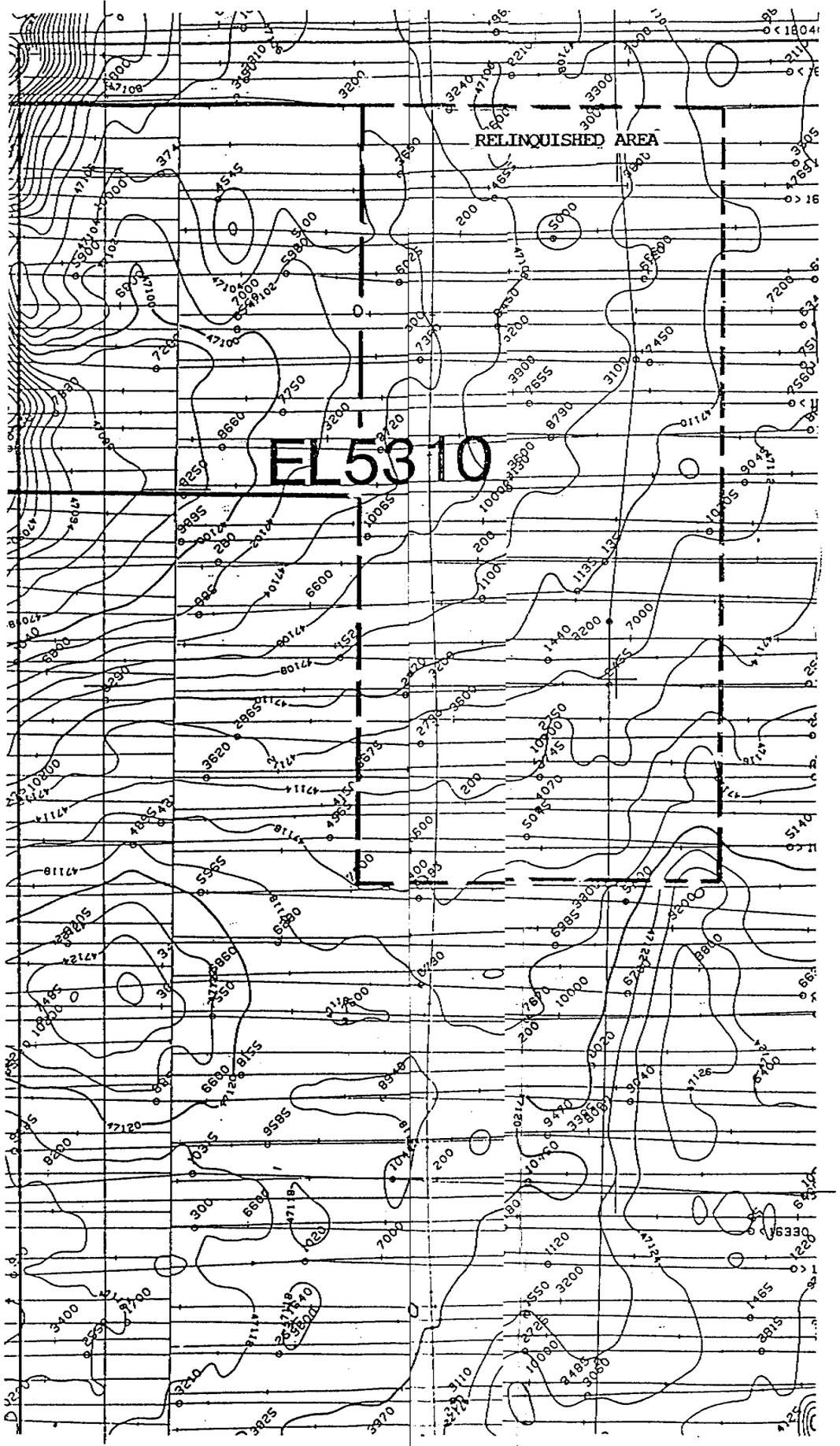
Geology by Wilhelmij, Marshall & Thornett, July 1988

Scale 1:25000

GOLDEN PLATEAU NL
MT BUNDEY JOINT VENTURE; NT

# Geology, EL 5310

FIGURE 2




AIRCRAFT

VH-EXH ROCKWELL SHRIKE COMMANDER 500S

MAGNETOMETER

SPLIT BEAM CESIUM SCINTREX V201

| | |
|---|---|
| RESOLUTION | 0.01 nanoTesla |
| CYCLE RATE | 0.2 seconds |
| SAMPLE INTERVAL | 14 metres |

SPECTROMETER

256 CHANNEL EXPLORANIUM GR800B

| | |
|---|---|
| VOLUME | 33.56 litres |
| CYCLE RATE | 1.0 seconds |
| SAMPLE INTERVAL | 70 metres |

DATA ACQUISITION

8 CHANNEL WATANABE MC 6700 CHART RECORDER
HEWLETT PACKARD 9000 SERIES COMPUTER
AERODATA DIGITAL ACQUISITION SYSTEM

FLIGHT LINE SPACING

| | |
|---|---|
| TRAVERSE LINES | 200 metres |
| TIE LINES | 5000 metres |

FLIGHT LINE DIRECTION

| | |
|---|---|
| TRAVERSE LINES | 090 - 270 degrees |
| TIE LINES | 180 - 360 degrees |

SURVEY HEIGHT

MEAN TERRAIN CLEARANCE - 70 metres

NAVIGATION AND RECOVERY

Using SYLEDIS UHF positioning system

DATA PROCESSING

| | |
|---|---|
| REGIONAL FIELD | IGRF MODEL 1985 REMOVED |
| BASE VALUE ADDED | 46900 nanoTeslas |
| GRID CELL SIZE | 70 metres |
| CONTOUR INTERVAL | 2 nanoTeslas |
| PARALLAX CORRECTION | 0.7 fiducials |

—— 50 fiducial interval

Aerodata Survey No. 1096, Dec 1987 - May 1988

MAP REFERENCE : 1:25000 5171-IV-SW
5171-IV-SE

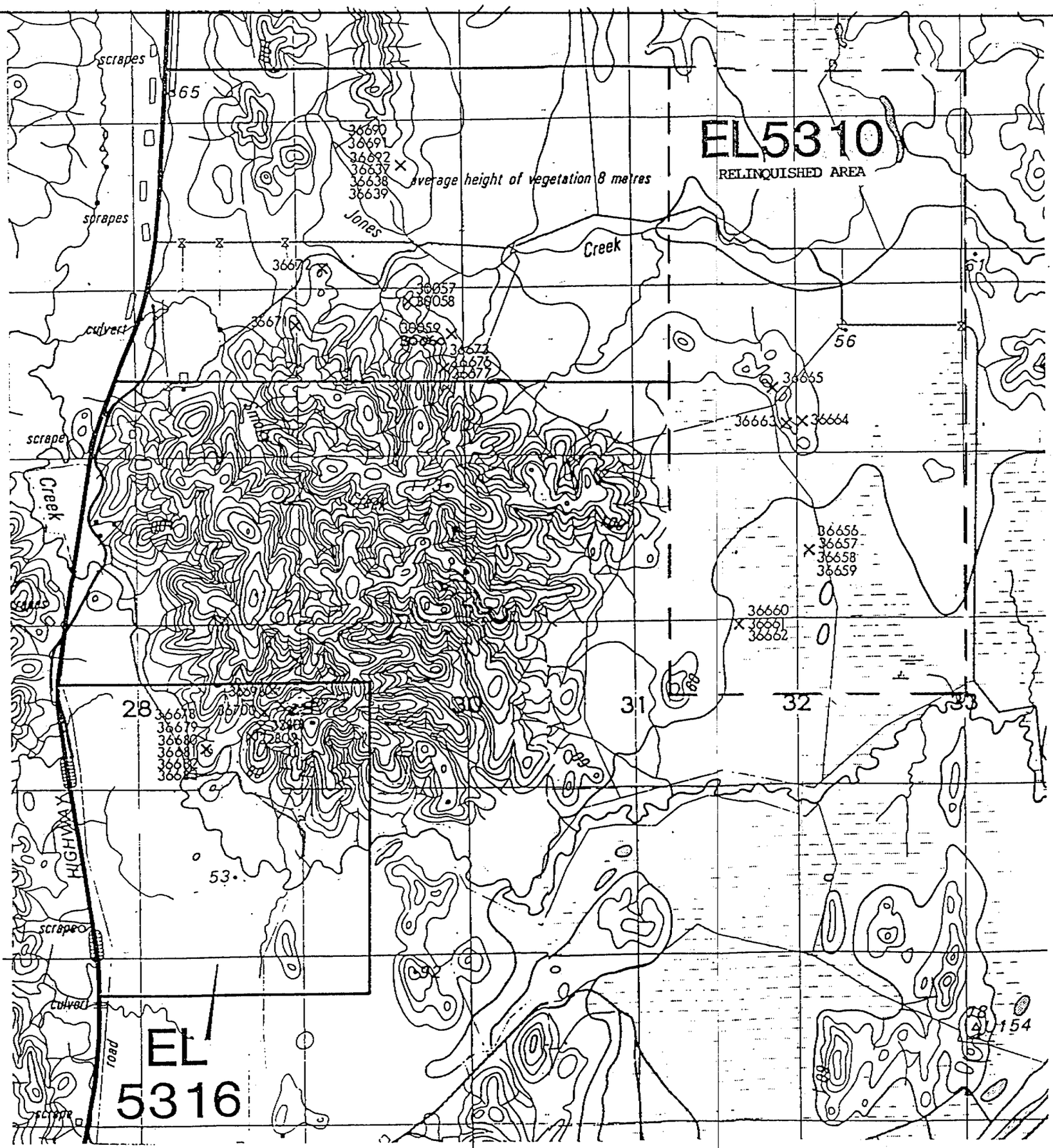
N

Scale 1:25000

GOLDEN PLATEAU NL
MT BUNDEY JOINT VENTURE, NT

# Magnetics, EL5310

FIGURE 3




○ 29499 Stream sediment sample site & number.

× 36595 Rock chip sample site & number

MAP REFERENCE : 1 : 100 000 BATCHELOR
1 : 50 000 BATCHELOR

N

Scale 1:25000

GOLDEN PLATEAU NL
MT BUNDEY JOINT VENTURE, NT

# Sample Localities, EL5310

FIGURE 4