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ANNUAL REPORT FOR YEAR EIGHT
EXPLORATION LICENCE 5678
ACACIA AREA
NORTHERN TERRITORY
04.09.96 TO 03.09.97

Project Name: FLAMING FURY - HIGHLANDER

Map Sheets: DARWIN SD 52-04 1:250,000

Commodities: COPPER, LEAD, ZINC, GOLD

Author: K. A. Williams

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Report No. 21988

TABLE OF CONTENTS

SUMMARY

1. INTRODUCTION

2. TENURE

3. CONCLUSIONS

4. PREVIOUS EXPLORATION

5. GEOLOGY AND MINERALISATION

6. WORK CARRIED OUT AND RESULTS

7. EXPENDITURE DURING YEAR SEVEN

8. PROPOSED WORK PROGRAMME AND BUDGET

9. REFERENCES

LIST OF FIGURES

Figure 1 EL 5678 Location Map 1:1,000,000

LIST OF ENCLOSURES

Enclosure 1 Flaming Fury - Highlander Project Exploration Summary Plan 1:5,000

Report No: 21988

Title: ANNUAL REPORT FOR YEAR EIGHT
EXPLORATION LICENCE 5678
ACACIA AREA, NORTHERN TERRITORY
04.09.96 - 03.09.97

Author: Kent Williams

Date: 29 September, 1997

LOCATION MAP

SUMMARY

EL5678 is strategically located immediately to the east of Woodcutters Mine in the Palaeoproterozoic Pine Creek Inlier. The geology comprises easterly dipping Upper Whites Formation sediments and Acacia Gap Quartzite on the eastern limb of the Woodcutters Anticline.

A considerable amount of exploration has been carried out over and along strike from the current EL5678. Early exploration was mainly for uranium and base metals. Exploration conducted by Nicron Resources over the period of tenure has concentrated on gold. A stratabound zone of vein type gold mineralisation which passes through EL5678 has been outlined over a strike length of 4.5 kms. Within this gold zone most exploration to date has concentrated on the Highlander Prospect located north of EL5678 and the Flaming Fury prospect to the south.

The Woodcutters Deposit is now interpreted to have developed in a thrust tectonic regime with a number of flat laying laminated shears ramping up to north-south structures that host massive sulphide lenses which have been mainly mined out. Underground drilling has revealed that the geometry of the orebody at depth is different and is not necessarily controlled by the prominent N-S structures as previously interpreted. Re-logging of old diamond core has shown the Huandot structure to be a normal fault down-thrown to the east beneath EL5678 (see Figure 1) where target zones remain untested.

The new structural information, combined with the fact that the CO orebody discovered at depth, is more pyritic and contains significant gold values, has implications for exploration at EL5678. There is a consistent gold and arsenic anomaly at EL5678 which could reflect leakage from the CO mineralisation recently discovered. This idea needs to be tested.

1. *INTRODUCTION*

Exploration Licence 5678 is located 80 kms south of Darwin immediately to the east of Woodcutters Mine. It is on the Darwin 1:250,000 (Sheet SD 5241), Noonamah 1:100,000 (Sheet 5172 and Manton Dam 1:50,000 (Sheet 5172-3) topographical sheets.

The topography is dominated by a north-south trending ridge with predominant east-west incised drainage.

The licence was taken out by Nicron Resources to explore for gold mineralisation.

The purpose of this report is to outline the work completed by Nicron Resources in the area of tenure during the eighth year of tenure and present a work programme with an estimated budget for the forthcoming year.

2. *TENURE*

Exploration Licence 5678 consists of one graticular block and was granted to Nicron Resources on the 3rd of September 1989 for a period of six years. It was renewed for a further two years in 1995 and in 1997.

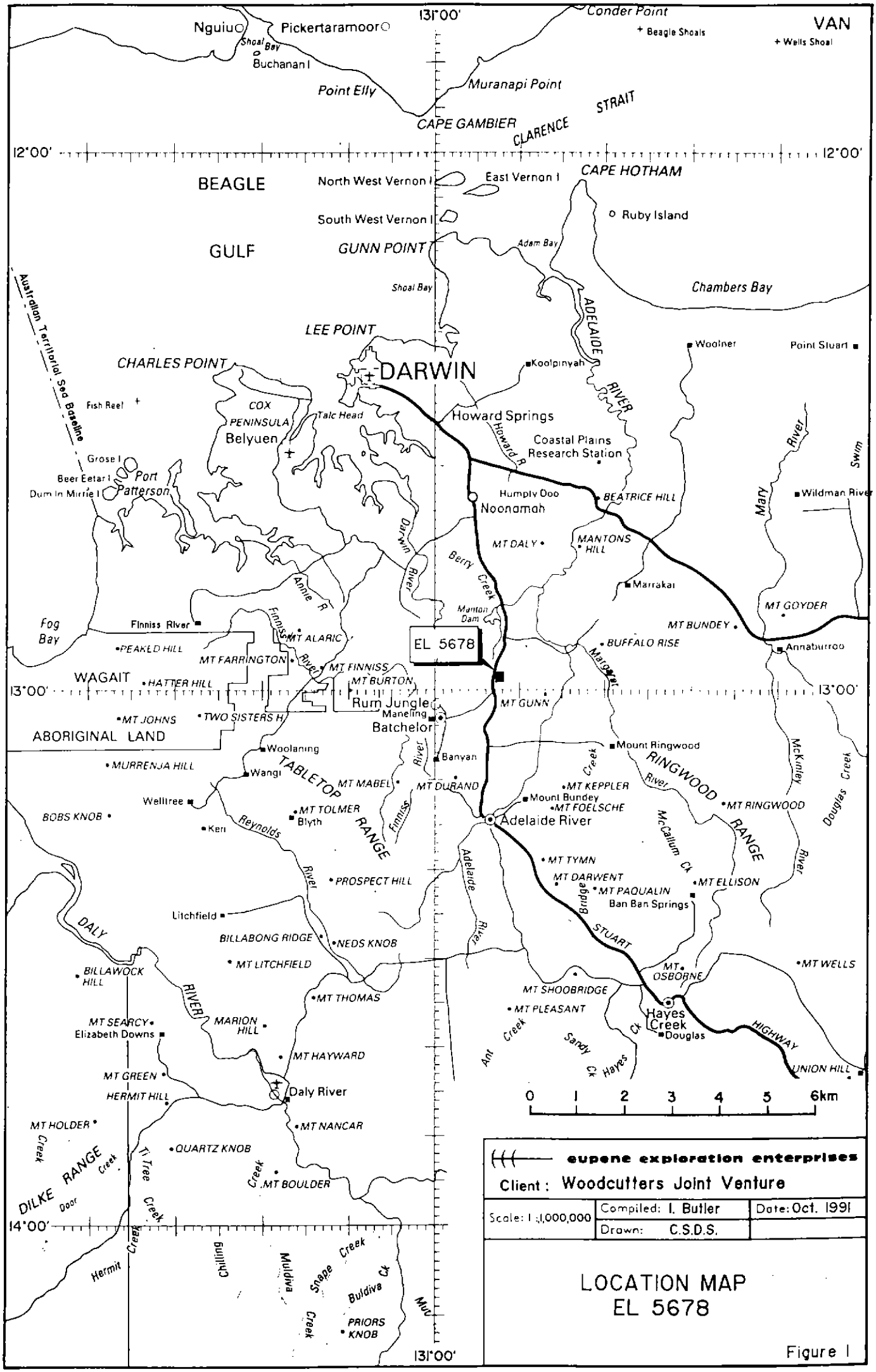
Note that Nicron Resources has now become Normandy Woodcutters Limited.

3. *CONCLUSIONS*

1) A strike extensive stratabound zone of vein type gold mineralisation has been outlined immediately to the east of the Woodcutters base metal mineralised structures.

2) The geological and structural controls for the gold mineralisation are not well understood, however it is interpreted to reflect metal zonation within the larger Woodcutters mineralisation system.

3) Further exploration is required to test the gold mineralised system within EL 5678.


Nguiu
Pickertaramoor
Shoal Bay
Buchanan I
Point Elly
Muranapi Point
CAPE GAMBIER
CLARENCE STRAIT
Conder Point
Beagle Shoals
VAN
Wells Shoal
131°00'
12°00'
BEAGLE
GULF
North West Vernon I
East Vernon I
South West Vernon I
CAPE HOTHAM
Ruby Island
GUNN POINT
Adam Bay
Chambers Bay
Shoal Bay
Australian Territorial Sea Baseline
LEE POINT
CHARLES POINT
DARWIN
Koolpinyah
ADELAIDE RIVER
Woolner
Point Stuart
Fish Reef
COX PENINSULA
Talc Head
Howard Springs
Howard R
Coastal Plains Research Station
Belyuen
Grose I
Beer Eetar I
Dum In Mirrie I
Port Patterson
Humpty Doo
Noonamah
BEATRICE HILL
Mary River
Swim
Wildman River
Berry Creek
Bamm River
MT DALY
MANTONS HILL
Marrakai
Annie R
Manton Dam
MT GOYDER
Fog Bay
Finniss River
Finniss River
MT ALARIC
MT BUNDEY
PEAKED HILL
EL 5678
BUFFALO RISE
Annaburroo
MT FARRINGTON
MT FINNISS
Margaret
WAGAIT
HATTER HILL
MT BURTON
Rum Jungle
MT GUNN
13°00'
MT JOHNS
TWO SISTERS H
Maneling
Batchelor
ABORIGINAL LAND
Woolaning
Banyan
Mount Ringwood
McKinley
Douglas Creek
MURRENJA HILL
Wangi
TABLETOP RANGE
MT MABEL
MT DURAND
Creek
MT KEPPLER
RINGWOOD RANGE
Wellitree
Mount Bundey
MT FOELSCHE
MT RINGWOOD
BOBS KNOB
MT TOLMER
Blyth
Finniss
Adelaide River
McCallum Ck
Keri
Reynolds River
PROSPECT HILL
Adelaide River
MT TYMN
MT DARWENT
MT ELLISON
MT PAQUALIN
Ban Ban Springs
Bringage
STUART
Litchfield
DALY RIVER
BILLABONG RIDGE
NEDS KNOB
MT LITCHFIELD
MT WELLS
BILLAWOCK HILL
MT OSBORNE
MT SHOOBRIDGE
MT THOMAS
MT PLEASANT
MT SEARCY
Elizabeth Downs
MARION HILL
Hayes Creek
Douglas
HIGHWAY
Ant Creek
Sandy Ck
Hayes Ck
MT HAYWARD
UNION HILL
MT GREEN
HERMIT HILL
Daly River
0 1 2 3 4 5 6km
MT HOLDER
MT NANCAR
QUARTZ KNOB
DILKE RANGE
Ti Tree Creek
MT BOULDER
14°00'
Hermit Creek
Chilling
Mulpiva Creek
Snape Creek
Buldiva Ck
PRIORS KNOB
Muc
131°00'
eupene exploration enterprises
Client : Woodcutters Joint Venture
Scale: 1 :1,000,000
Compiled: I. Butler
Drawn: C.S.D.S.
Date: Oct. 1991
LOCATION MAP
EL 5678
Figure 1

4. *PREVIOUS EXPLORATION*

Exploration Licence 5678 is situated close to Woodcutters (Ag-Pb-Zn) Mine. No previous mining has been documented as occurring within the Exploration Licence.

In 1974 Magnum Exploration NL was granted EL 739 which included the southern portion of EL 5678. The Company conducted literature research into previous BMR work (Clark, 1975, 1976) in the adjoining Woodcutters Prospect Area (on the western side of the Stuart Highway). Their research was aimed at finding lead, zinc and uranium mineralisation.

In 1976, Amax Exploration (Australia) Inc., under a joint venture agreement with Magnum Exploration, carried out geological mapping, reconnaissance geochemical sampling and a combined airborne radiometric and magnetic survey (Gellattly, 1977).

Geochemical work by Amax included stream sediment sampling (-120 and +16 mesh fraction) and selected rock chip sampling of ferruginous outcrops. All samples were assayed for Cu, Pb, Zn, Ni, Co, Mn and U with selected samples also assayed for Ag.

Exploration Licence 739 was relinquished after further work on radiometric anomalies outside EL 5678 failed to locate significant uranium mineralisation (Wyatt and Braham, 1977).

In 1979, Mines Administration Pty Ltd was granted EI 1983 which covered EI 5678 and areas to the south and east. Geological mapping, gridding, rock sampling and traversing were carried out in 1980 (Hamilton 1980). Follow-up work in 1981 concentrated upon the Wildman Siltstone along the south-western side to the south of EL 5678, (Area 1) which was considered to have the highest potential for uranium and base metal mineralisation (Hamilton, 1982).

Work on Area 1 included gridding (100m centres), mapping at 1:2,500 scale radiometric traverses, rock chip sampling, trenching, shallow drilling and a SIROTEM geophysical survey. Specifically, on the current EI 5678, Mines Administration (later CSR) drilled 82 shallow (10m) vertical RAB holes along two 400m long lines spaced 200m apart. Two adjacent holes returned assays of 1.4 g/t Au from bottom hole samples. The RAB holes were also radiometrically logged. Low order anomalies were recorded in the siltstones and the outcropping laterite was also anomalous. None of the radiometric anomalies were considered to be significant.

Further work on EL 1983 concentrated on areas to the south of the current EI 5678 and despite encouraging results, CSR relinquished the licence considering there to be "little chance of an economic deposit" (Hamilton, 1984).

In Year One of the current tenure EL5678 was partially gridded and mapped. Stream sediment sampling was also carried out and anomalous areas were followed up by -40 mesh soil sampling (Butler, 1990). A seismic survey was conducted along line 5500N and an aeromagnetic/radiometric survey covered the western portion of the licence.

Data compilation in the following year resulted in a reinterpretation of the geology (Butler, 1991). Work in Year Three mainly comprised further gridding, mapping and soil and rock sampling in the northern most part of the current licence with the main emphasis on the area covered by mineral claims and mineral claim applications (Sirait, 1992).

Exploration in Year Four consisted of soil sampling and accurate positioning of grids and samples using a Garmin GPS survey unit. Rock chip sampling was also carried out (Ormsby, 1993).

Exploration in Year Five consisted of a review of the soil sampling results, geological mapping, costeaning and RC drilling (Scriven, 1994).

During Year Six costeans and drill sites from previous exploration programmes were rehabilitated.

Exploration in Year Seven consisted of a ground gravity survey adjacent to EL5678. This survey was undertaken to better define a locally doubly plunging anticline. This work was part of the re-interpretation and understanding of the Woodcutters structure and geology adjacent to it.

5. *GEOLOGY AND MINERALISATION*

The Paleoproterozoic Whites Formation consists of massive dark grey carbonaceous dolomitic shales with thin light grey tuff interbeds in drill core from the area south of the licence. The Whites Formation is conformably overlain by very similar carbonaceous, dolomite shales and siltstone of the Wildman Siltstone which are characterised in drill core by very common thin, highly pyritic beds (Georgees, 1987).

The Wildman Siltstone also incorporates interbeds of quartzite and a predominantly quartzite unit, the Acacia Gap Quartzite Member, which forms the highest ridges in the area. Higher in the stratigraphy, the Mt Dean Volcanic Member consists predominantly of silicified vitric tuff with interbedded sandstones, siltstones and minor nodular chert and phyllite (Hamilton, 1980).

Gold and base metal mineralisation has been outlined south of EL 5678 at the Flaming Fury prospect. The mineralisation located to date is confined to a 200 metre wide zone in the vicinity of the interpreted boundary between Whites Formation and Wildman Siltstone. Anomalous Au, Pb, Zn, Cu and As

have been identified along this zone. Gold mineralisation has also been outlined at the Highlander Prospect north of EL 5678 (Enclosure 1). The host rocks at both gold prospects are limonitic siltstones commonly with pseudomorphs after pyrite and thin gossanous quartz veins.

6. *WORK CARRIED OUT AND RESULTS*

The geological re-interpretation of the Woodcutters deposit, utilising Exploremin as consultants, is ongoing and the interpretation is being refined as more holes are drilled. Woodcutters is now interpreted to have developed in a thrust tectonic regime with a number of flat laying laminated shears ramping up to the north-south structures that host the massive sulphide lenses. The geometry of the orebody at depth is different and not necessarily controlled by the north-south structures as previously interpreted.

The huge near mine database, including all exploration data, is being validated at present and will be part of the process of generating near mine targets for the next field season.

It is planned to expand the area being re-interpreted during the forthcoming Wet season which will include EL5678.

7. *EXPENDITURE DURING YEAR EIGHT*

Salaries/labour	2,350
Contract Services	1,500
Administration - 15%	578
Total	**$4,428**

8. *PROPOSED WORK PROGRAMME AND EXPENDITURE*

Compilation and interpretation of data	2,000
Diamond drill testing deep targets	30,000
Total	**$32,000**

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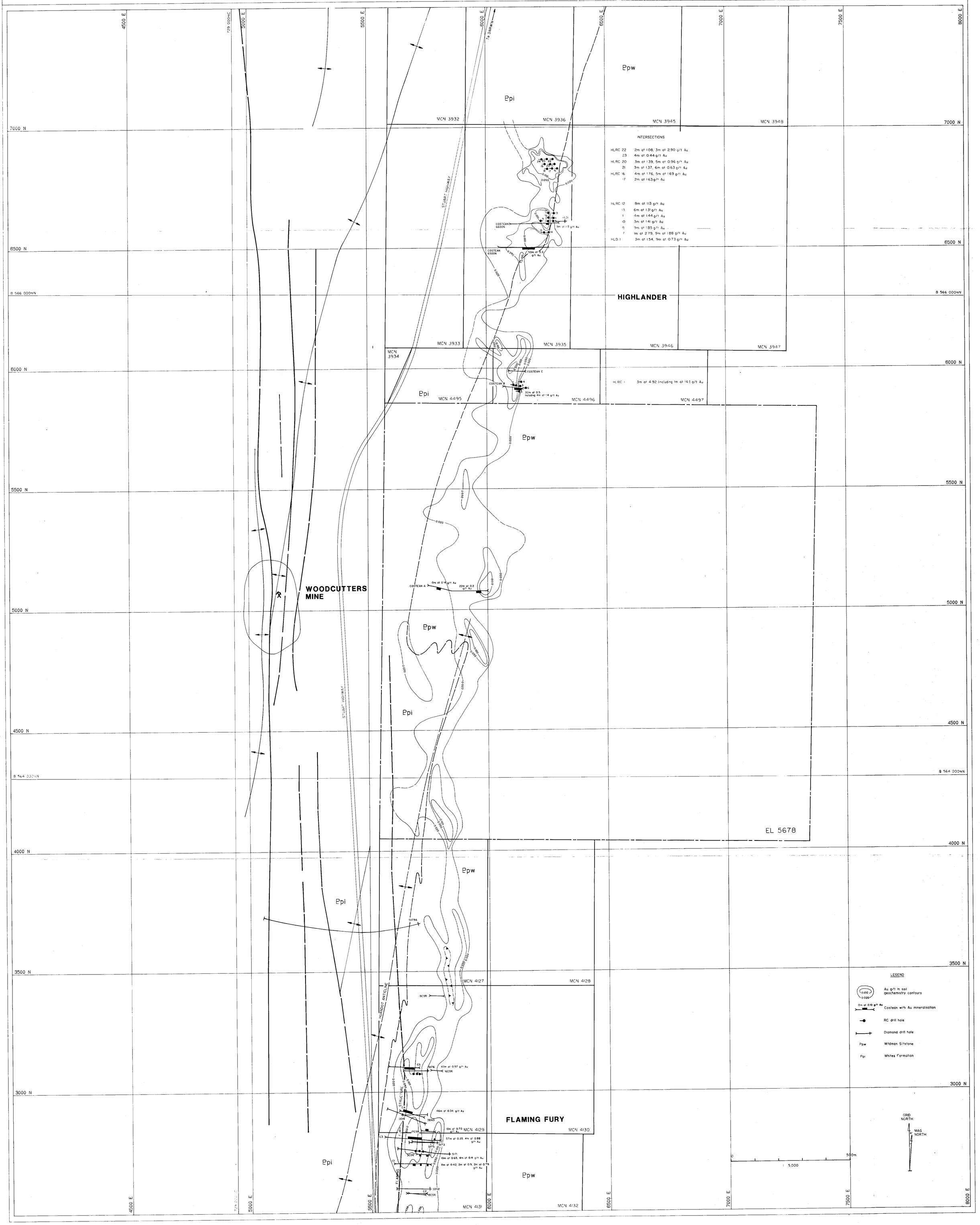
CR97/608

Woodcutters Mine

	Init	Date
Geologist	IKB	
Drawn	MCB	
Checked		
Approved		

MANTON DAM
FLAMING FURY-HIGHLANDER PROJECT
EXPLORATION SUMMARY PLAN

File : EL5678
Scale : 1 : 5000
Date : 29 May 1995
Enclosure 1



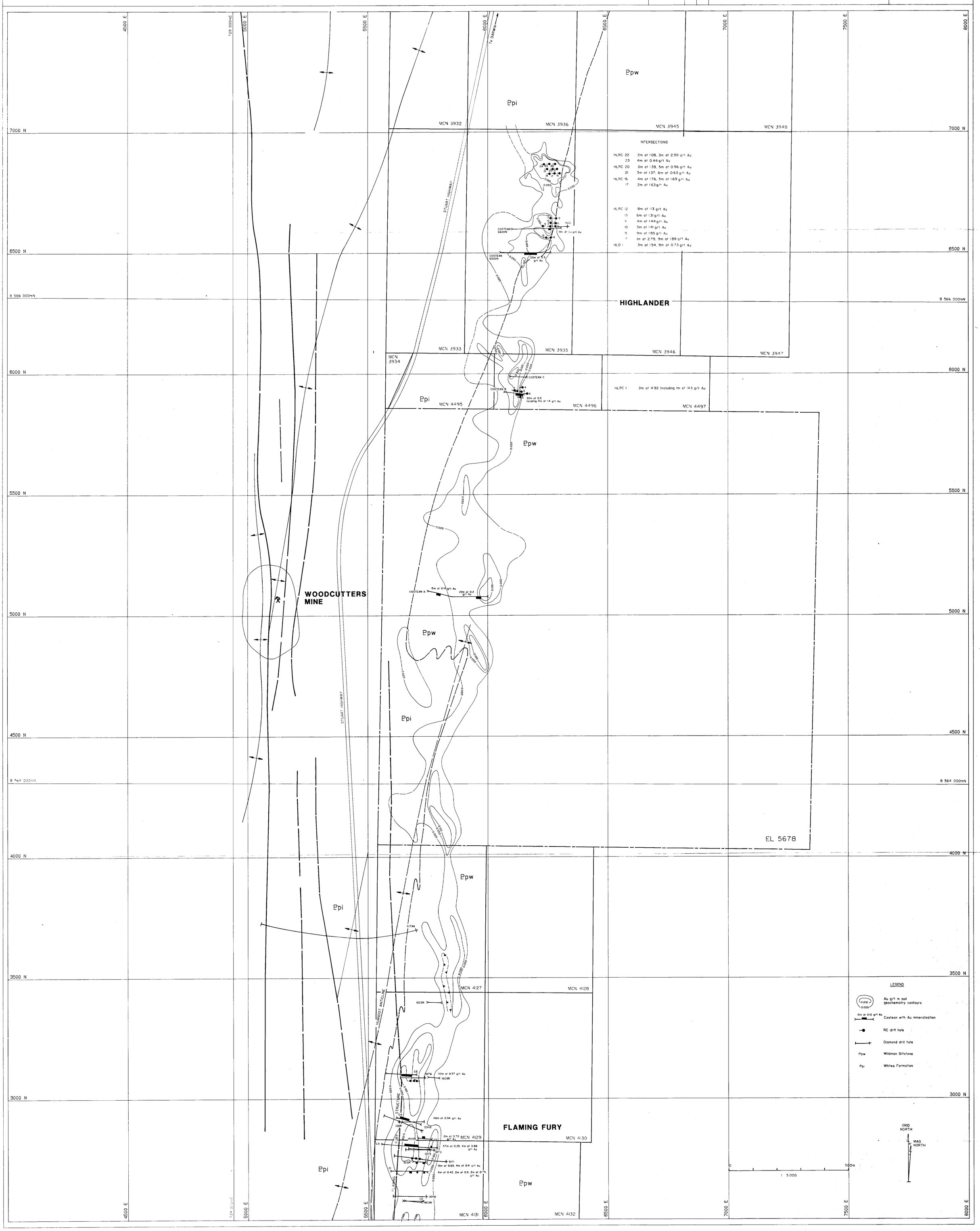
CR97/608

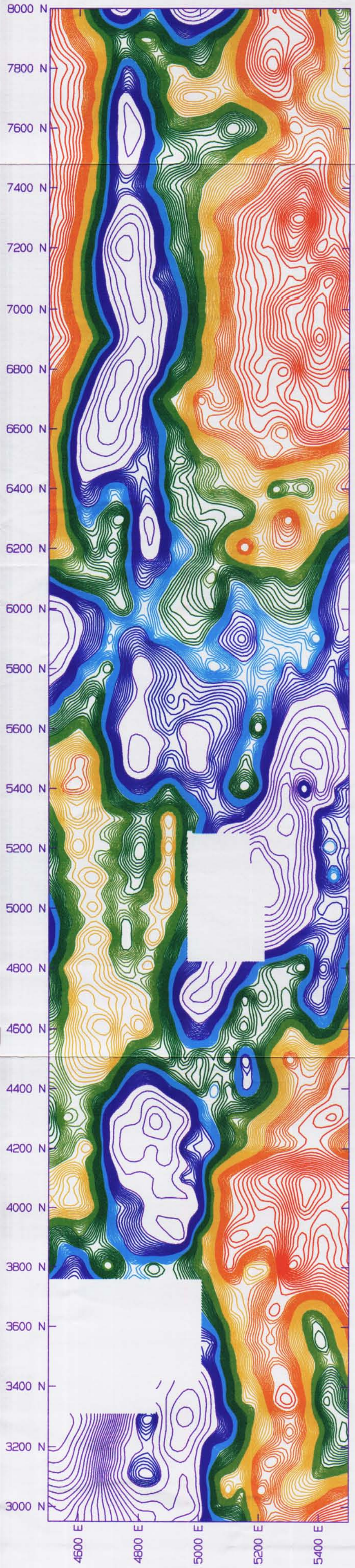
Woodcutters Mine

	Init	Date
Geologist	IKB	
Drawn	MCB	
Checked		
Approved		

MANTON DAM
FLAMING FURY-HIGHLANDER PROJECT
EXPLORATION SUMMARY PLAN

File : EL5678
Scale : 1 : 5000
Date : 29 May 1995
Enclosure I





LEGEND

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Light Blue	3.41 / 3.50	0.01
Dark Green	3.52 / 3.70	0.02
Light Green	3.71 / 3.80	0.01
Yellow	3.82 / 4.00	0.02
Orange	4.02 / 4.20	0.02
Red	4.25 / 5.20	0.05

N

0 200 400 600 M

SCALE 1: 10000

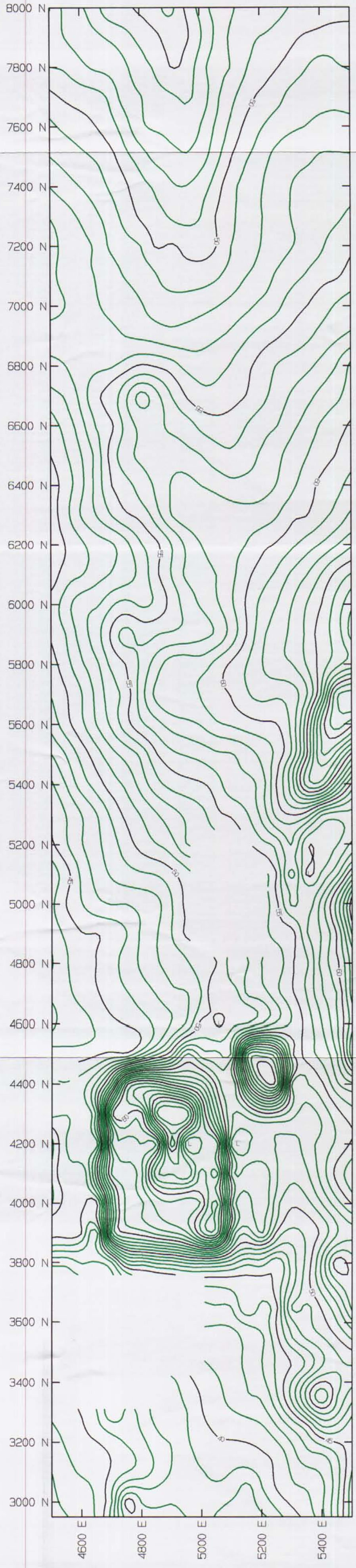
NORMANDY WOODCUTTERS LIMITED

EXPLORATION DIVISION

COLOUR CONTOURS OF BOUGUER GRAVITY (D=2.4g/cc)

Author: K.Tucknott
Date: 28/10/97

GR97/608

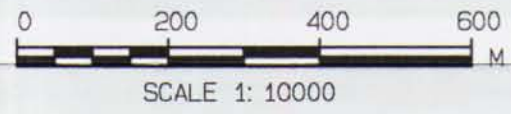


DATA ACQUISITION

Operator : P. Walton
Gravimeter : Lacoste & Romberg G1007
Navigation : Grid
Station Spacing : 50m
Line Spacing : 100m

DATA PRESENTATION

Contour Interval : 1 m
Contour Levels : 1 m - Green
5 m - Black



SCALE 1: 10000

NORMANDY WOODCUTTERS LIMITED

EXPLORATION DIVISION

CONTOURED ELEVATION MAP (AHD)

Author: K.Tucknott
Date: 28/10/97

CR97/608