RELINQUISHMENT REPORT TO

THE DEPARTMENT OF MINES & ENERGY

NORTHERN TERRITORY

ROBINSON RIVER 1:250 000

EXPLORATION LICENCE

EL 8534

REPORTING PERIOD

17/07/95 - 26/06/97

CARNEGIE MINERALS NL

ACN 009 237 736

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August 1997

CARNEGIE MINERALS NL

EL 8534

EXPLORATION WORK SUMMARY

1995-1996

Carnegie Minerals NL during the first year began to carry out exploration to evaluate placer and primary diamond potential over the tenement area, following discoveries of diamondiferous kimberlite by the ADEX Joint Venture at the Merlin field and other diamond projects inland of Carnegie's Batten Group of tenements.

The first year exploration programme included a review of NTGS Open files and published geological data as well as preliminary interpretation of the standard b/w 1:85,000 aerial photographs.

The Company contracted World Geoscience Corporation Limited to carry out a 400 m line spacing airborne magnetic/radiometric survey involving approximately 4,200 line kilometres over EL 8534 in conjunction with other tenements belonging to Carnegie, and to process the acquired data.

CRA Exploration Pty Ltd ("CRAE") in 1995 entered into arrangement with Carnegie whereby CRAE carried out processing and digital enhancement of geophysical data which was completed by April 1996.

A reconnaissance field visit in November 1995 and helicopter sample programme over the tenement area in May 1996 were carried out as a follow-up to airborne data and geological assessment based on that data interpretation (7x20 kg samples). The samples were geochemically tested and observed for minerals.

1996-1997

Carnegie carried out evaluation of the obtained geophysical data using independent geophysical consultant services.

Based on the geophysical evaluation results and in line with the current market and political situation, the EL 8534 area has been substantially reduced.

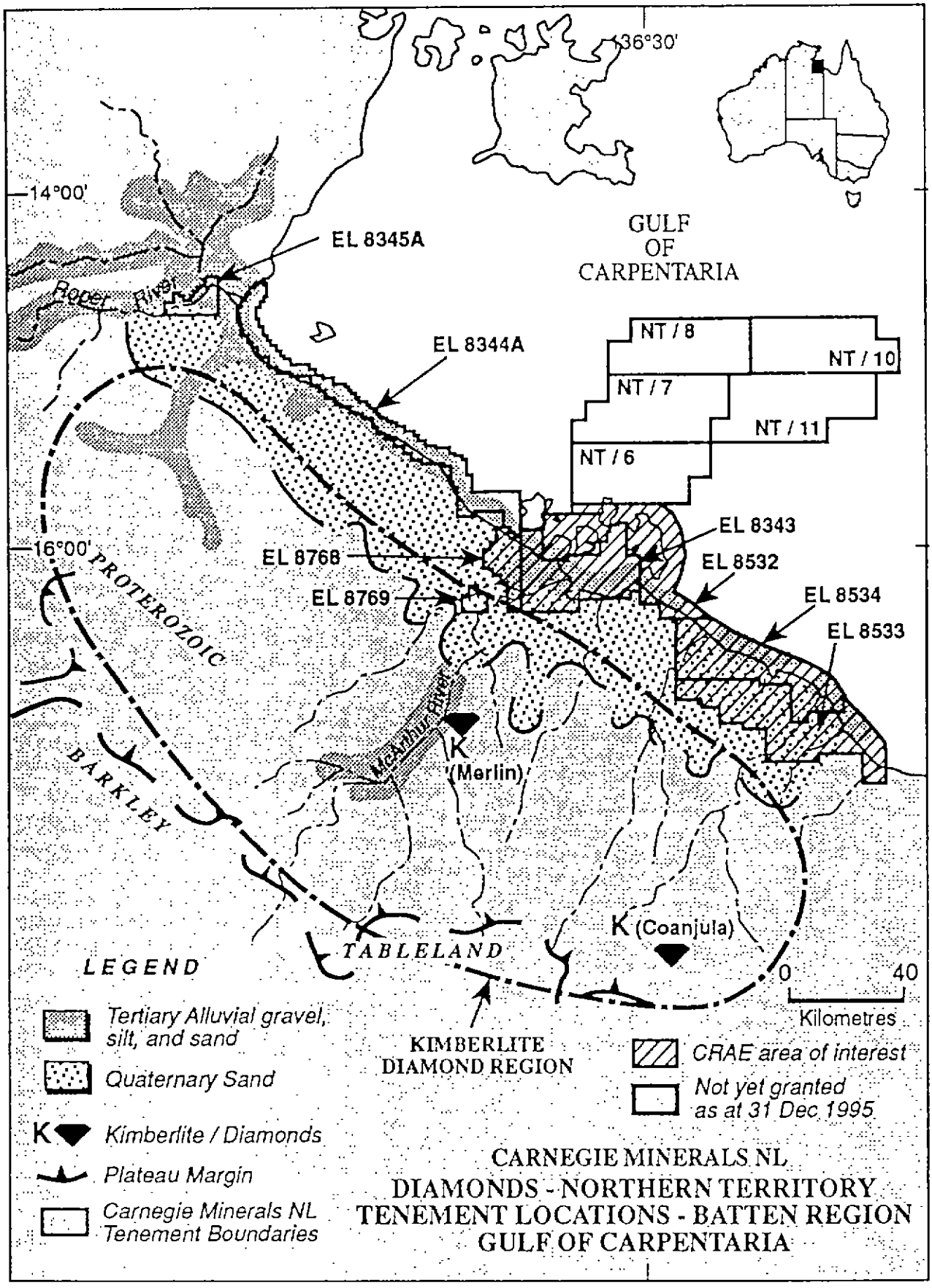

136°30'
14°00'
16°00'
GULF
OF
CARPENTARIA
Roper River
EL 8345A
EL 8344A
NT / 8
NT / 10
NT / 7
NT / 11
NT / 6
EL 8343
EL 8532
EL 8534
EL 8533
EL 8768
EL 8769
PROTEROZOIC
BARKLEY
TABLELAND
McArthur River
K (Merlin)
K (Coanjula)
0
40
Kilometres
LEGEND
Tertiary Alluvial gravel, silt, and sand
Quaternary Sand
K Kimberlite / Diamonds
Plateau Margin
Carnegie Minerals NL Tenement Boundaries
KIMBERLITE DIAMOND REGION
CRAE area of interest
Not yet granted as at 31 Dec 1995
CARNEGIE MINERALS NL
DIAMONDS - NORTHERN TERRITORY
TENEMENT LOCATIONS - BATTEN REGION
GULF OF CARPENTARIA

Fig. 1

CONTENTS

Key: Robinson River 1:250,000 Sheet, airborne magnetic/radiometric survey, loam sampling, geochemistry, diamonds, indicator minerals.

List of Appendices

1. INTRODUCTION

EL 8534 contains 28 graticular blocks (495 blocks before the reduction of the tenement area) approximating to 90 km^2. The tenement was granted by the Minister for Mines and Energy on 17 July 1995 to Carnegie Minerals NL ("Carnegie"). Approximately 90 kilometres E of Borroloola, the tenement lies within the Robinson River 1:250,000 map sheet and represents a part of Carnegie's Batten Group of tenements (Figure 1).

EL 8534 is included into the group of tenements principally pegged to explore for placer and primary diamonds after previous work by Ashton Mining Limited - ADEX Joint Venture ("ADEX") which identified eleven diamond-bearing pipes in the Merlin and Coanjula projects inland of Carnegie's Batten tenement group. In addition the McArthur River HYC base metal mine occurs sixty kilometres south west of the company's Group of tenements, thus the potential for base metal mineralisation was also taken into consideration.

In September 1995 CRA Exploration Pty Limited ("CRAE") entered into an agreement with Carnegie Minerals NL regarding the funding for the processing and the interpretation of the results of an airborne magnetic/radiometric survey flown in December 1995 and funded by Carnegie over its Batten tenement Group.

2. PREVIOUS EXPLORATION

The area within EL 8534 has not been previously explored in detail. According to the NTGS Open files, the area covered by Carnegie's EL 8534 was examined briefly in 1968 by Placer Prospecting (Australia) Pty Ltd on behalf of Australus Mining Co Pty Ltd. Scout hand auger drilling within the present day sandy beach to the west of the Robinson River mouth failed to recover heavy minerals concentrations of interest (Murphy, 1969).

In 1993-94 the area immediately to the east and south east of Carnegie's EL 8343, 8534 and 8533 was pegged by North Mining Ltd ("North") and explored for sediment hosted base-metal mineralisation. North flew a widely spaced trial airborne EM survey and also carried out regional gravity survey along roads. Interpretation of the acquired data and an unsuccessful follow-up drilling programme failed to identify any exploration targets (Allan, 1994).

3. GEOLOGICAL

Carnegie's Batten Group of Tenements occupies a portion of the Middle Proterozoic McArthur Basin (Haines et.al.,1993).

The McArthur Basin contains a thick and diverse succession of Paleo- to Mesoproterozoic sedimentary and minor volcanic rocks subdivided into four groups. These rocks in turn, are covered by relatively thin and flat lying terrestrial and marine rocks of Early Cretaceous age.

Outcrops of Proterozoic and Cretaceous rocks are limited within the tenement Group's area with the major geological boundaries inferred from regional geological and geophysical interpretations.

EL 8534 consists of rocks belonging to the Proterozoic Tawallah Group which includes sandstone, siltstone and minor conglomerates.

According to geomorphic classification, the major part of the Group's area is represented by tidal silty and sandy flats, and almost flat coastal marine terrace covered with a thin veneer of Cainozoic mainly unconsolidated sandy, silty deposits with minor evaporates and alluvial gravel, sand and clay deposits within river valleys. Further inland, there are gentle erosional slopes on the coastward side of the escarpments, low hills and ridges made up by Proterozoic sandstone.

4. WORK PROGRAMME - CARNEGIE MINERALS 1995-1996

The work engaged the services of various consultants to carry out field work and subsequent processing of samples. This work was carried out in varying stages.

1995-1996

1. Review of NTGS Open files and general published geological data.

2. Purchase and preliminary interpretation of the standard b/w 1:85,000 aerial photographs for the tenement area.

3. World Geoscience Corporation Limited was contracted to carry out a 400 m line spaced magnetic/radiometric survey over Carnegie's Batten Group of tenements (approximately 4200 line kilometres within EL 8534).

4. The airborne magnetic/radiometric survey data were processed by World Geoscience Corporation Limited and CRA Exploration Pty Ltd, using a number of image filter methods.

5. Discussions with Aboriginal Affairs Planning Authority requesting access certification.

6. Reconnaissance field visits and helicopter sample programme over the tenement area (7x20 kg samples). The samples were mineralogically observed after processing by Diamond Metallurgical Services, Perth. Processing involved screening, Pleitz jigging, TBE separation.

7. Laboratory testing for geochemical anomalies: 7 samples using Genalysis Laboratories, Perth.

1996-1997

1. Carnegie carried out interpretation of the obtained geophysical data using independent geophysical consultant services.

2. General evaluation of the tenement potential based on the results of sampling and the geophysical interpretation as well as on the current market and political situation.

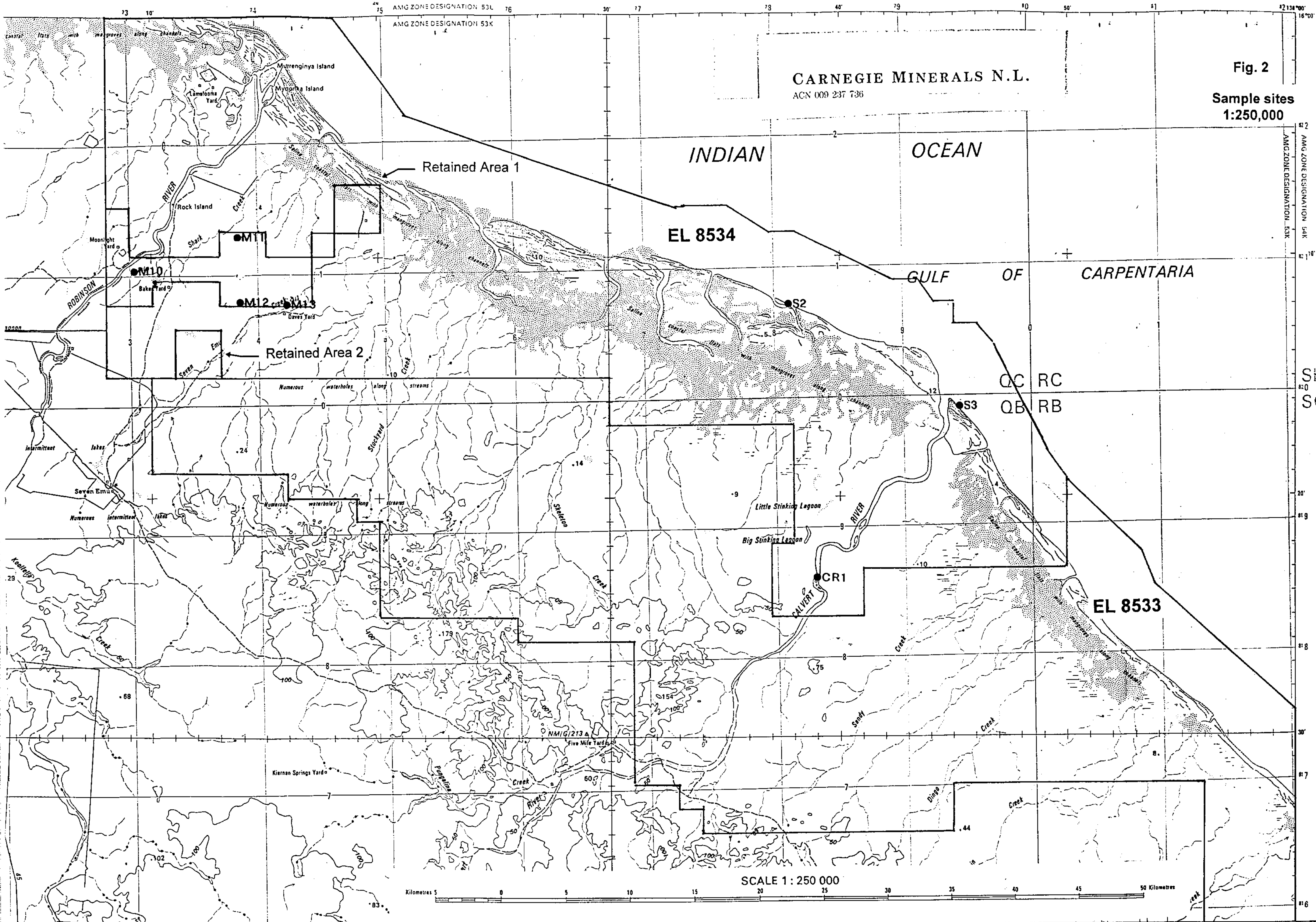
5. RESULTS OF CARNEGIE WORK PROGRAMME

Based on the desk-top study 7x20 kg deflation surface samples of -2mm screen size were processed in Perth by Diamond Metallurgical Services. Results of the sample analysis were negative. Refer to Figure 2 for samples location.

Geochemistry of soil samples did not highlight any major geochemical anomaly.

The helicopter programme over the tenement also involved closer inspection of localised geology.

The World Geoscience interpretation of the data of the magnetic/radiometric survey outlined a number of dipolar and sinuous anomalies (refer to Appendices for the results of the survey).


CARNEGIE MINERALS N.L.
ACN 009 237 736
Fig. 2
Sample sites
1:250,000
AMG ZONE DESIGNATION 53L
AMG ZONE DESIGNATION 53K
AMG ZONE DESIGNATION 54K
INDIAN OCEAN
GULF OF CARPENTARIA
EL 8534
EL 8533
Retained Area 1
Retained Area 2
M10
M11
M12
M13
S2
S3
CR1
QC
RC
QB
RB
SH
SG
Mutrenginya Island
Myoorika Island
Rock Island
Moonlight Yard
Bakers Yard
Daves Yard
Seven Emu
ROBINSON RIVER
Shark Creek
Seven Emu
Stockyard
Skeleton Creek
Little Stinking Lagoon
Big Stinking Lagoon
CALVERT RIVER
Sandy Creek
Dingo Creek
Five Mile Yard
Kiernan Springs Yard
Pungalina Creek
NMIG/213
Numerous waterholes along streams
Numerous intermittent lakes
Intermittent lakes
SCALE 1 : 250 000
Kilometres 5 0 5 10 15 20 25 30 35 40 45 50 Kilometres

Geophysical Aeromagnetic/Radiometric Survey Specifications

Contractor	World Geoscience Corporation Limited VH-FGS Rockwell Aerocommander Shrike 500S

Magnetometer

Sensor	Split Beam Cesium Scintrex VIW2321/CS2
Resolution	0.001 nT
Cycle rate	0.1 seconds
Sampling interval	7 metres

Spectrometer

256 channel PGAM 1000

Volume	33.56 litres
Cycle rate	1.0 second
Sample interval	70 metres

Data Acquisition

1 Chart recorder
Picodas PDAS 1000 acquisition system

Flight Specifications

Flight line spacing	400m
Direction	000-180° AMG
Tie line	4000m
Tie line direction	090-270° AMG
Mean terrain clearance	60m
Navigation	Differential GPS satellite positioning

Geochemical Sampling

Genalysis Laboratory Services Pty Ltd

Suite analysed (variable)	B/ETA: Au B/AAS - Ag, Cu, Pb, Zn A/OES - Ni, Cr, Ti A/MS - MS - Ba, Ce, Nb, Sr, Zr, Nd, U

Stream-Loam Sampling

7x20 kg sediment samples of -2mm material were collected as soil samples over features or drainages. A portion of -0.4mm material was retained for geochemical processing.

Samples were processed at Diamond Metallurgical Services for diamonds and mineral indicators. Results were negative.

Airborne Magnetics/Radiometrics

Details of the contoured magnetics and digitised radiometrics are provided as an appendix. World Geoscience Corporation was contracted to process the raw data into ER Mapper format. Raw data images were raster processed using a simulated light source to illuminate the data set from a selected elevation and azimuth and also an Automatic Gain Control (AGC) Enhancement to amplify low and suppress high amplitudes - to enable the detection of extremely subtle features in the data. Vertical derivatives of the magnetic field were also used to enhance subtle features.

Further geophysical interpretation of the data in 1997 by an independent geophysical consultant has revealed some areas with magnetic/radiometric signatures which warrant follow-up exploration and have been retained.

6. CONCLUSIONS

Based both on the results of the preliminary sampling programme and geophysical interpretation as well as in line with the current market and political situation, the EL 8534 area was substantially reduced. Retained areas of magnetic interest are to be explored further by drilling.

8. REFERENCES

ALLAN, A. (1994) First an Final Report for the twelve months ended 23 September 1994. EL 8021 "Manangoora".. Unpublished North Mining Limited report M195/05S. NTGS Open file CR 94/802.

ALLAN, A. (1994) First an Final Report for the twelve months ended 23 September 1994. EL 8205 "Scrutton Lagoon".. Unpublished North Mining Limited report M195/04S. NTGS Open file CR 94/820.

HAINES, P.W., PIETSCH, B.A., RAWLINGS, D.J and MADIGAN, T.L. (1993) Explanatory Notes. Mount Young SD53-15. Northern Territory Geological Survey. Darwin.

MURPHY, T.D. (1969) Report on Heavy Mineral Beach Sands, Robinson River, NT. Unpublished Placer Prospecting (Australia) Pty Ltd Report, 14 July 1969. NTGS Open file CR 69/40.

APPENDIX 1

RESULTS OF AIRBORNE MAGNETIC/RADIOMETRIC SURVEY

CARNEGIE MINERALS NL

Aeromagnetic Survey - Flight Plan
1:227,000

137°20' 137°25' 137°30' 137°35' 137°40' 137°45' 137°50'

8220000 mN
8210000 mN
8200000 mN
8190000 mN
8180000 mN

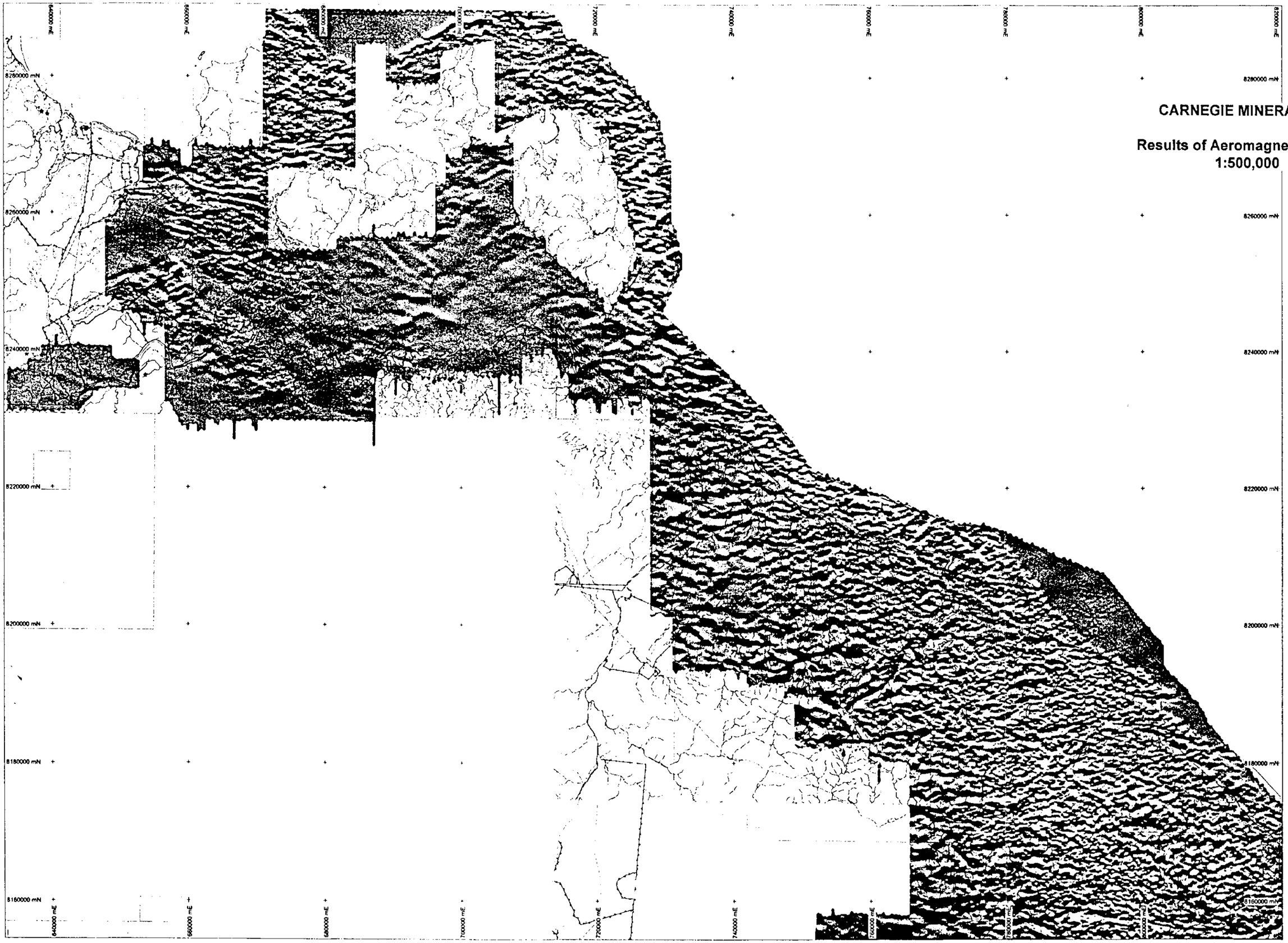
16°00'
16°05'
16°10'
16°15'
16°20'

730000 mE 740000 mE 750000 mE 760000 mE 770000 mE 780000 mE 790000 mE 800000 mE 810000 mE

Job 1138
Area BATTEN
Scale
Sheet 1000-a2

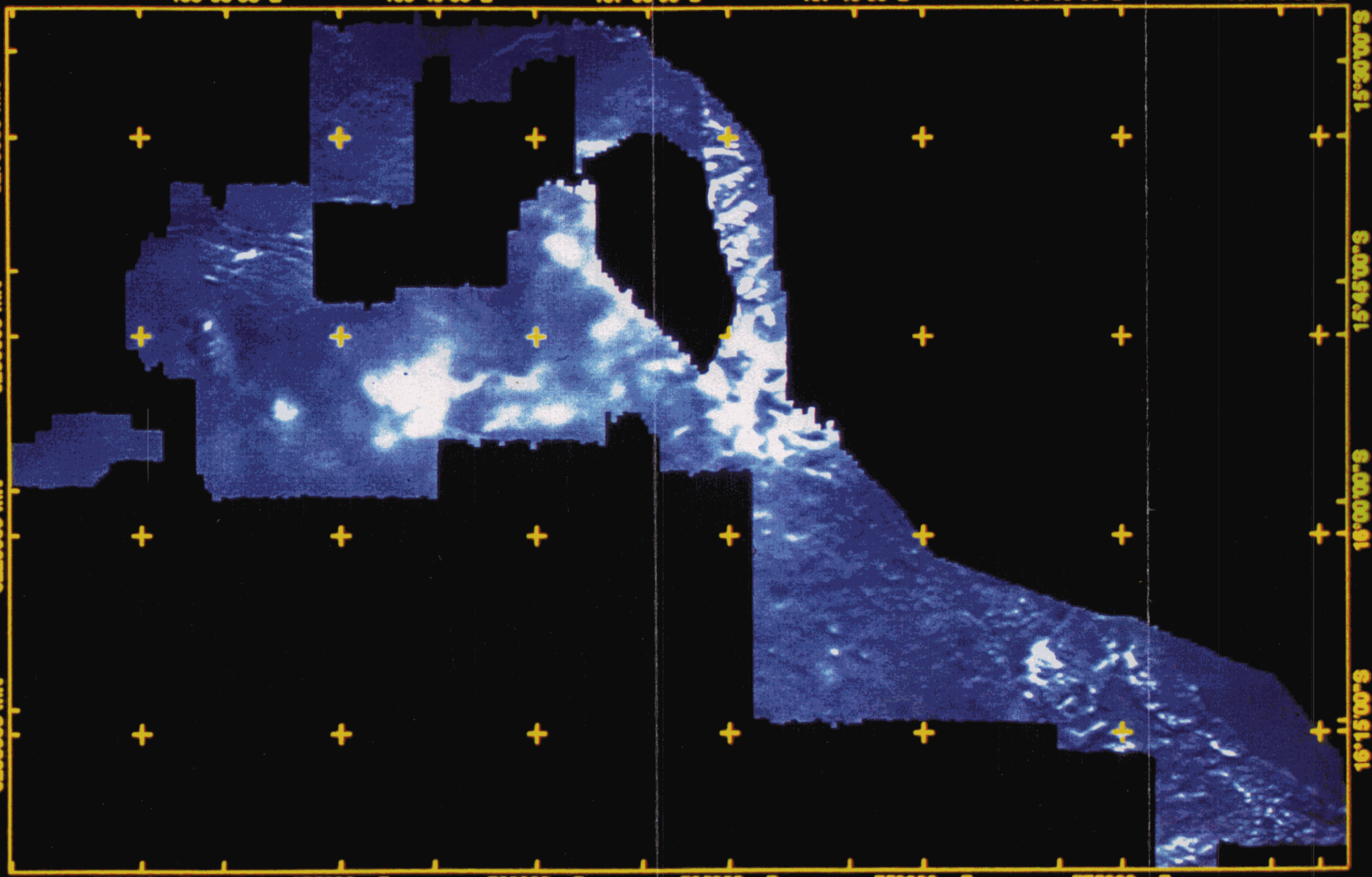
CARNEGIE MINERALS NL

Results of Aeromagnetic Surve
1:500,000



CARNEGIE MINERALS NL

Structural Interpretation of Aeromagnetic Survey
1:500,000



BATTEN TROUGH
Northern Territory

Carnegie Minerals
Airborne Geophysical Survey

Total Magnetic Intensity

SURVEY DETAILS

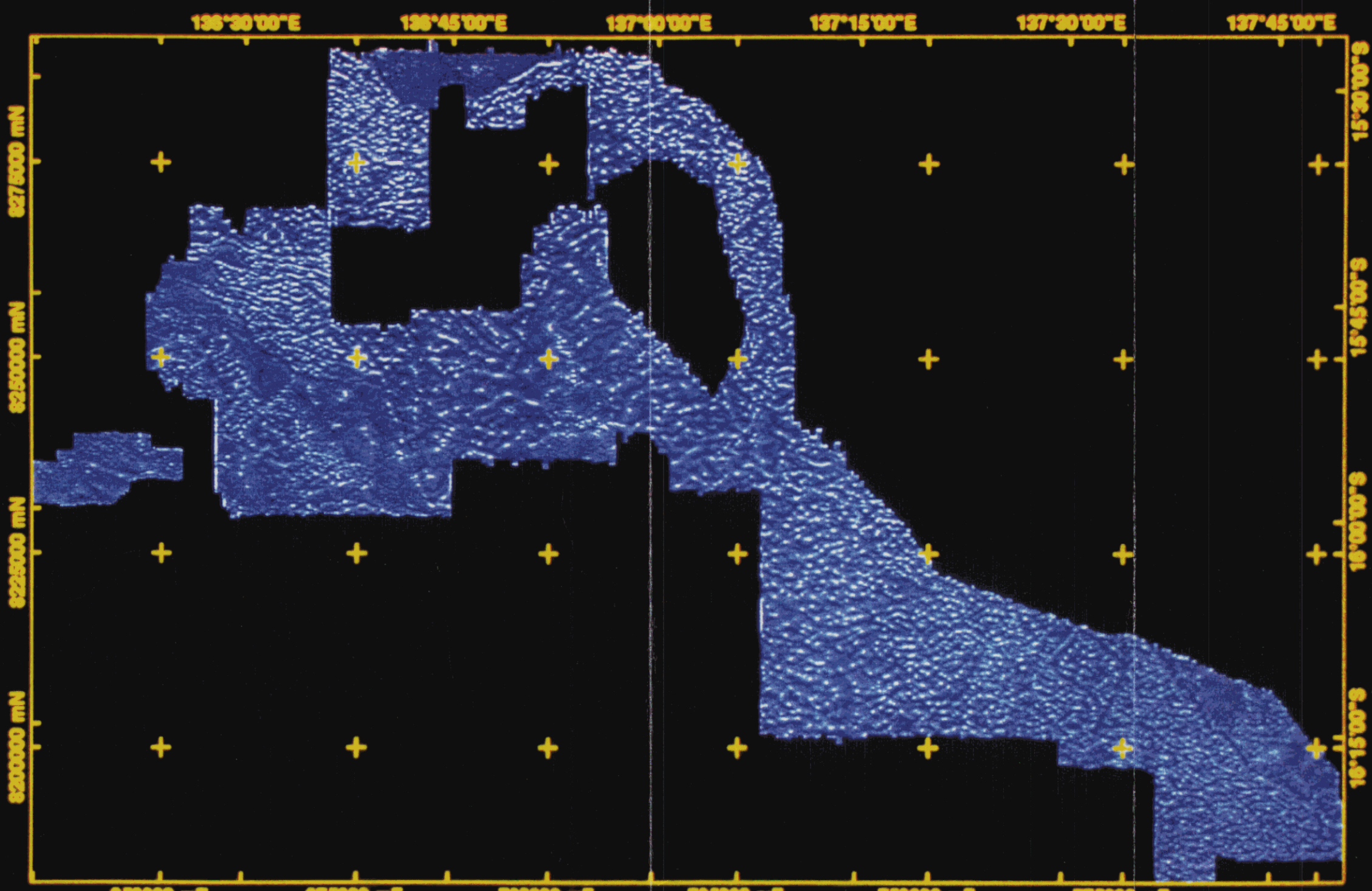
Traverse Spacing: 400m
Traverse Direction: N-S
Tie Line Spacing: 4000m
Tie Line Direction: E-W
Flying Height: 60m
Data Grid Cell Size: 135m
Image Pixel Size: 150m

0 5 10 15 20 25 30
km
AMG Zone 53

Flown and Compiled by
World Geoscience Corporation

Image Processed by
WORLD GEOSCIENCE CORPORATION
April 1996

Job No. 1138



BATTEN TROUGH
Northern Territory

Carnegie Minerals N.L.
Airborne Geophysical Survey

Total Magnetic Intensity

AGC Enhancement
(Scale Factor=1.0)

SURVEY DETAILS

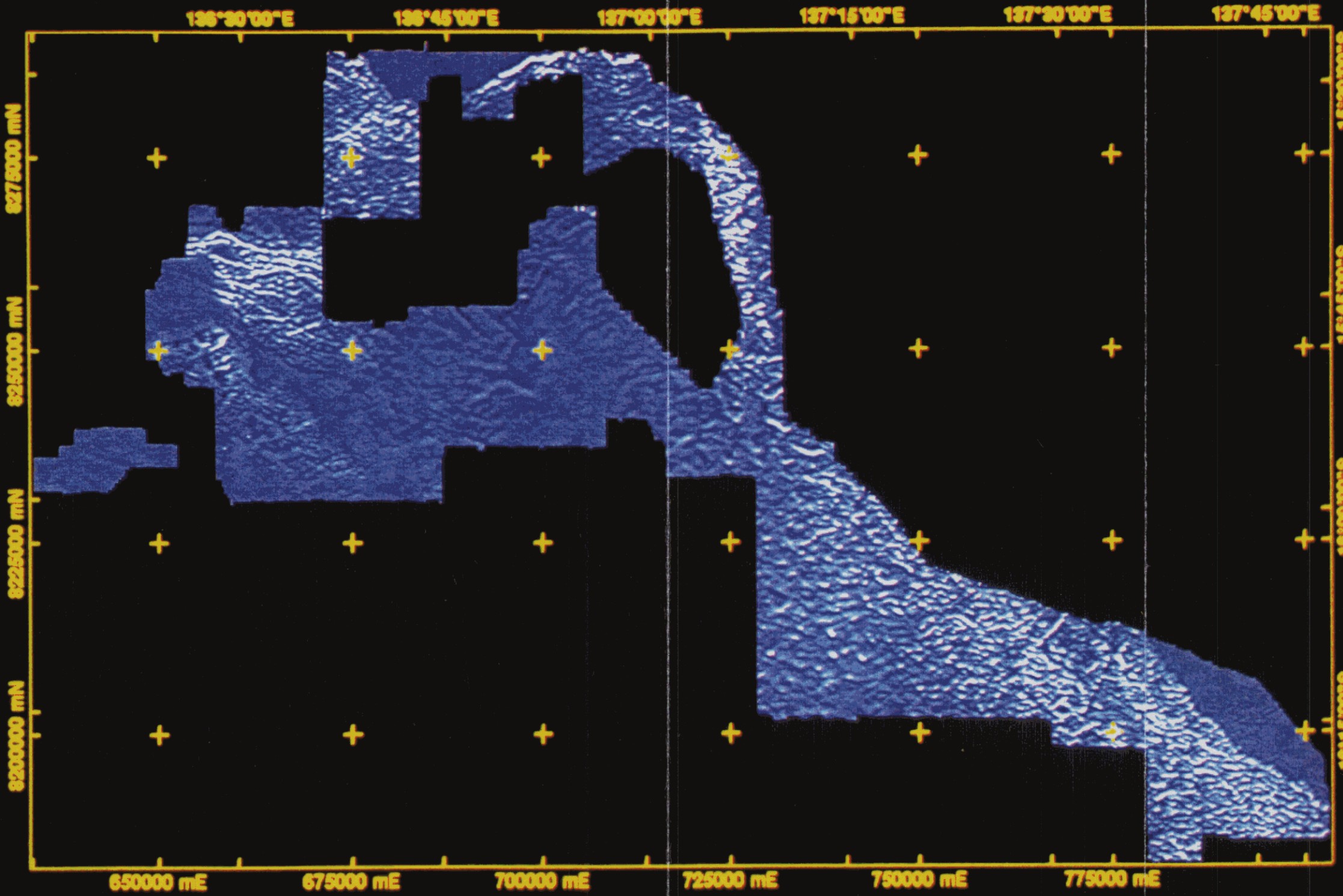
Traverse Spacing: 400m
Traverse Direction: N-S
Tie Line Spacing: 4000m
Tie Line Direction: E-W
Flying Height: 60m
Data Grid Cell Size: 135m
Image Pixel Size: 150m

0 5 10 15 20 25 30
km
AMG Zone 53

Flown and Compiled by
World Geoscience Corporation

Image Processed by
WORLD GEOSCIENCE CORPORATION
April 1996

Job No. 1138



BATTEN TROUGH
Northern Territory

Carnegie Minerals N.L.
Airborne Geophysical Survey

Total Magnetic Intensity

First Vertical Derivative

SURVEY DETAILS

Traverse Spacing: 400m
Traverse Direction: N-S
Tie Line Spacing: 4000m
Tie Line Direction: E-W
Flying Height: 60m
Data Grid Cell Size: 135m
Image Pixel Size: 150m

0 5 10 15 20 25 30
km
AMG Zone 53

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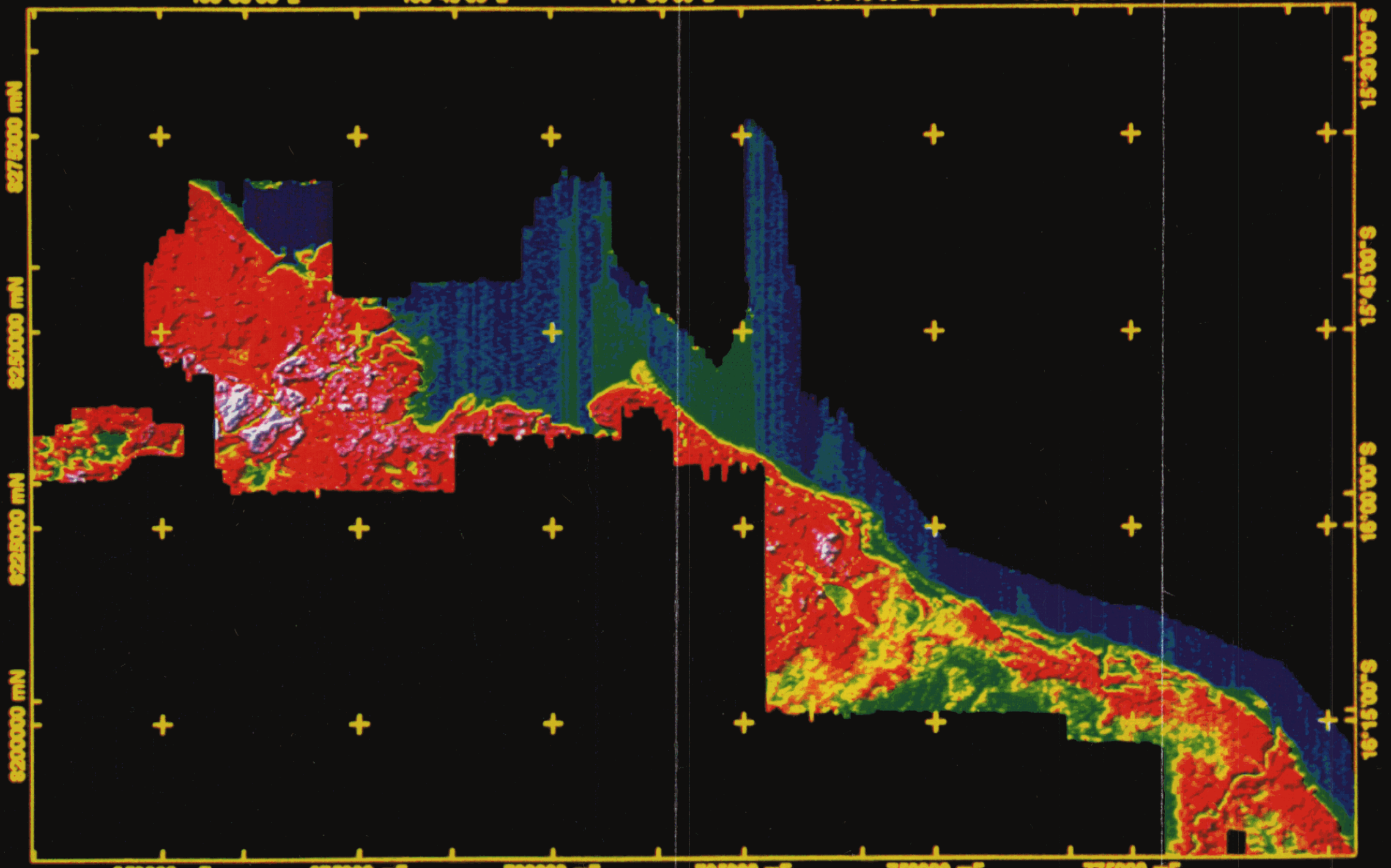
World Geoscience Corporation

Image Processed by
WORLD GEOSCIENCE CORPORATION
April 1996

Job No. 1139



BATTEN TROUGH
Northern Territory

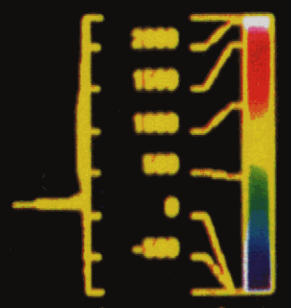
Carnegie Minerals N.L.
Airborne Geophysical Survey

RADIOMETRIC TOTAL COUNT

Colour: Total Count
Shade: North-West Illumination

SURVEY DETAILS

Traverse Spacing: 400m
Traverse Direction: N-S
Tie Line Spacing: 4000m
Tie Line Direction: E-W
Flying Height: 60m
Data Grid Cell Size: 135m
Image Pixel Size: 150m



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World Geoscience Corporation

Image Processed by
WORLD GEOSCIENCE CORPORATION
April 1996

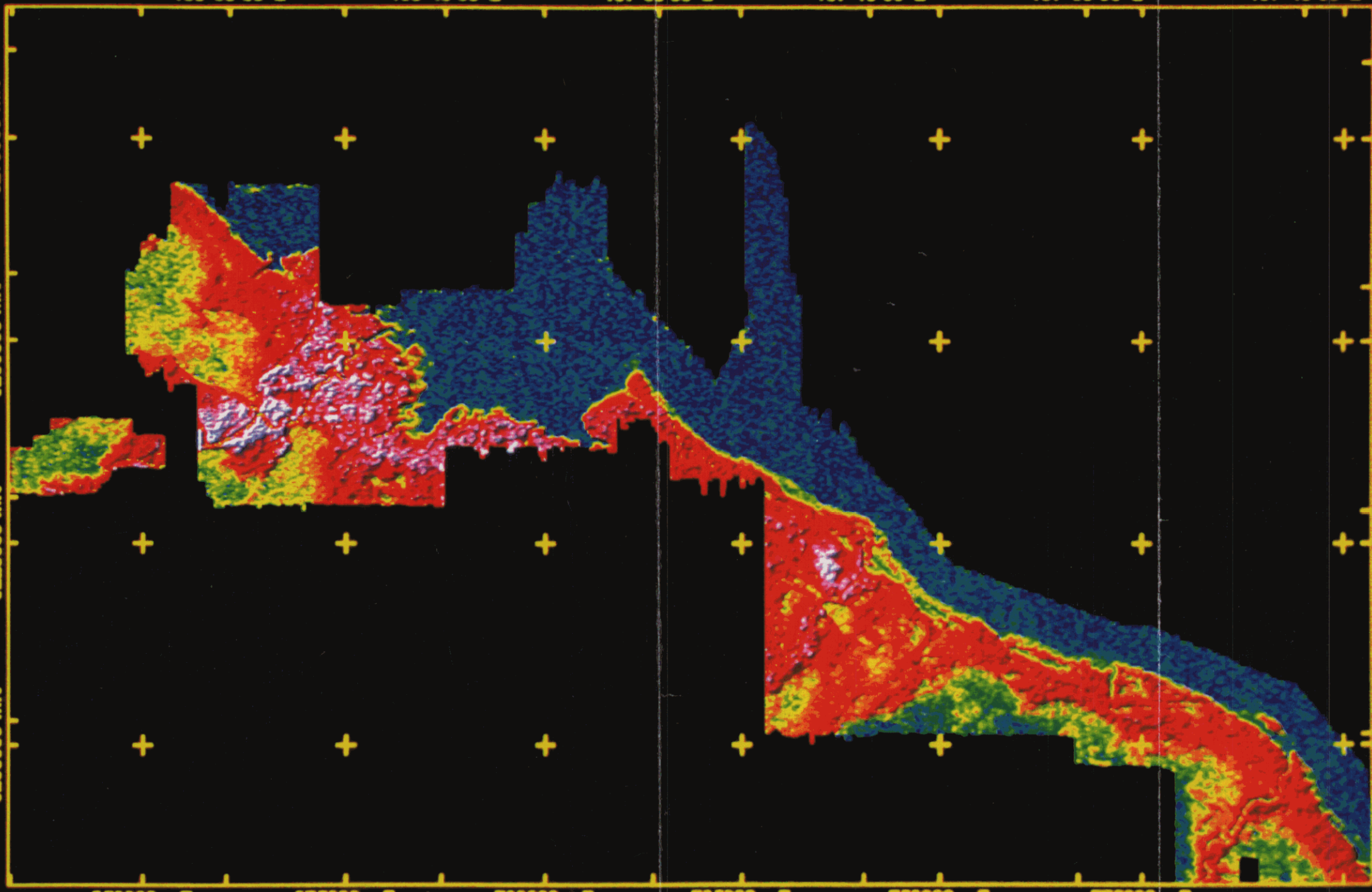
Job No. 1138

136°30'00"E
136°45'00"E
137°00'00"E
137°15'00"E
137°30'00"E
137°45'00"E

8275000 mN
8250000 mN
8225000 mN
8200000 mN

15°00'00"S
15°15'00"S
15°30'00"S
15°45'00"S
16°00'00"S
16°15'00"S

650000 mE
675000 mE
700000 mE
725000 mE
750000 mE
775000 mE



SURVEY DETAILS

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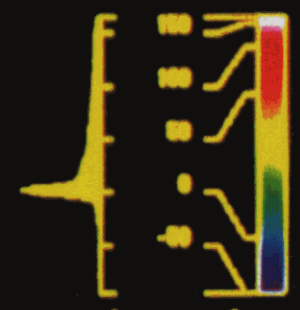
Traverse Direction: N-S
Tie Line Spacing: 4000m
Tie Line Direction: E-W
Flying Height: 60m
Data Grid Cell Size: 135m
Image Pixel Size: 150m

BATTEN TROUGH
Northern Territory

Carnegie Minerals N.L.
Airborne Geophysical Survey

RADIOMETRIC POTASSIUM

Colour: Potassium
Shade: North-West Illumination



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April 1996

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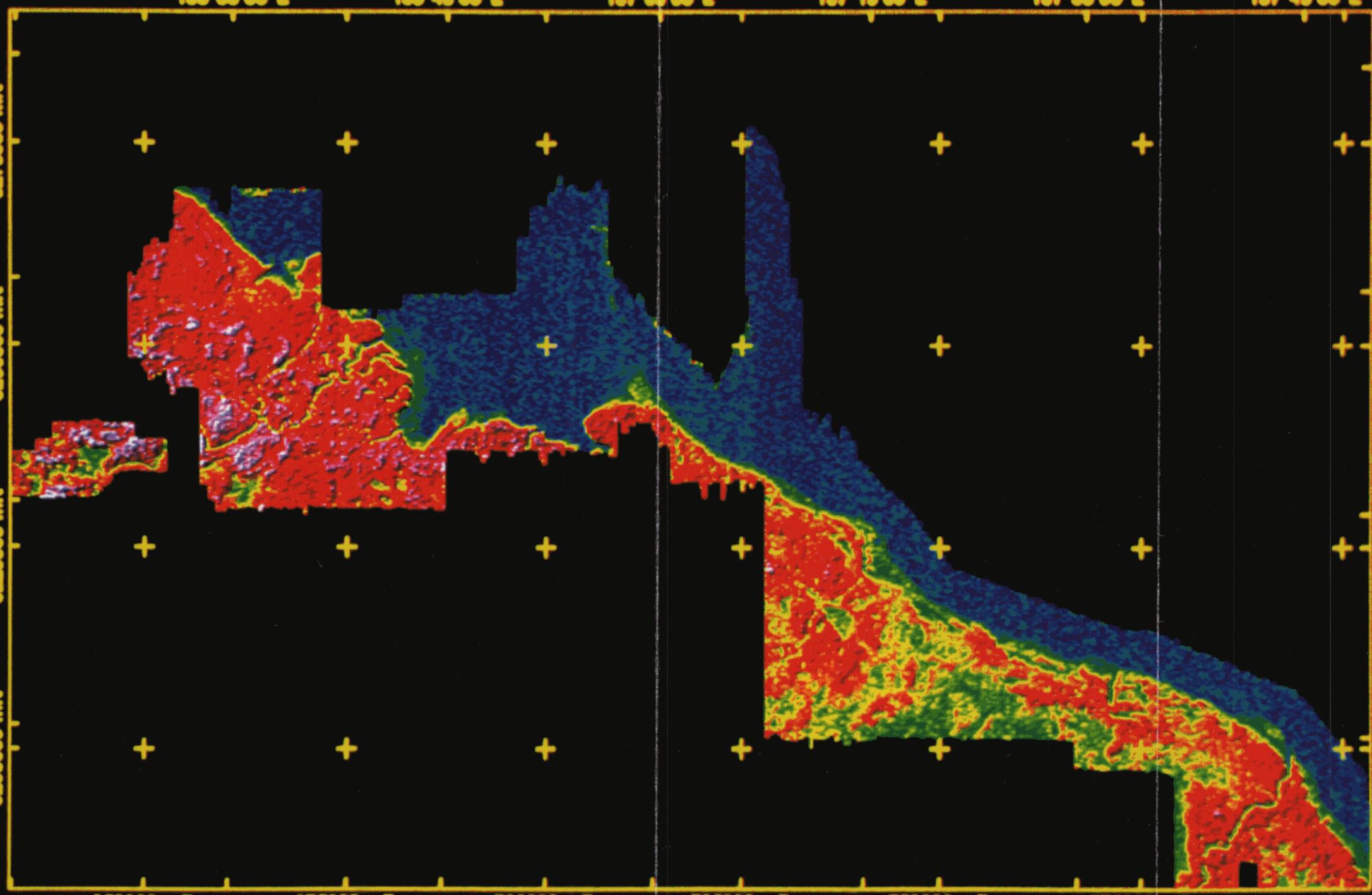

BATTEN TROUGH
Northern Territory

Carnegie Minerals N.L.
Airborne Geophysical Survey

RADIOMETRIC THORIUM

Colour: Thorium
Shade: North-West illumination

SURVEY DETAILS

Traverse Spacing: 400m
Traverse Direction: N-S
Tie Line Spacing: 4000m
Tie Line Direction: E-W
Flying Height: 80m
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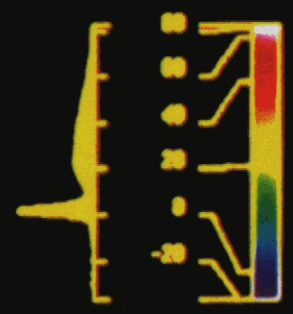
Image Pixel Size: 150m



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World Geoscience Corporation

Image Processed by
WORLD GEOSCIENCE CORPORATION
April 1996

Job No. 1138

136°30'00"E 136°45'00"E 137°00'00"E 137°15'00"E 137°30'00"E 137°45'00"E

8275000 mN 8250000 mN 8225000 mN 8200000 mN

15°30'00"S 15°45'00"S 16°00'00"S 16°15'00"S

650000 mE 675000 mE 700000 mE 725000 mE 750000 mE 775000 mE

BATTEN TROUGH
Northern Territory

Carnegie Minerals N.L.
Airborne Geophysical Survey

RADIOMETRIC URANIUM

Colour: Uranium
Shade: North-West Illumination

SURVEY DETAILS

Traverse Spacing: 400m
Traverse Direction: N-S
Tie Line Spacing: 4000m
Tie Line Direction: E-W
Flying Height: 60m
Data Grid Cell Size: 135m
Image Pixel Size: 150m

counts per second

0 5 10 15 20 25 30

km

Flown and Compiled by
World Geoscience Corporation

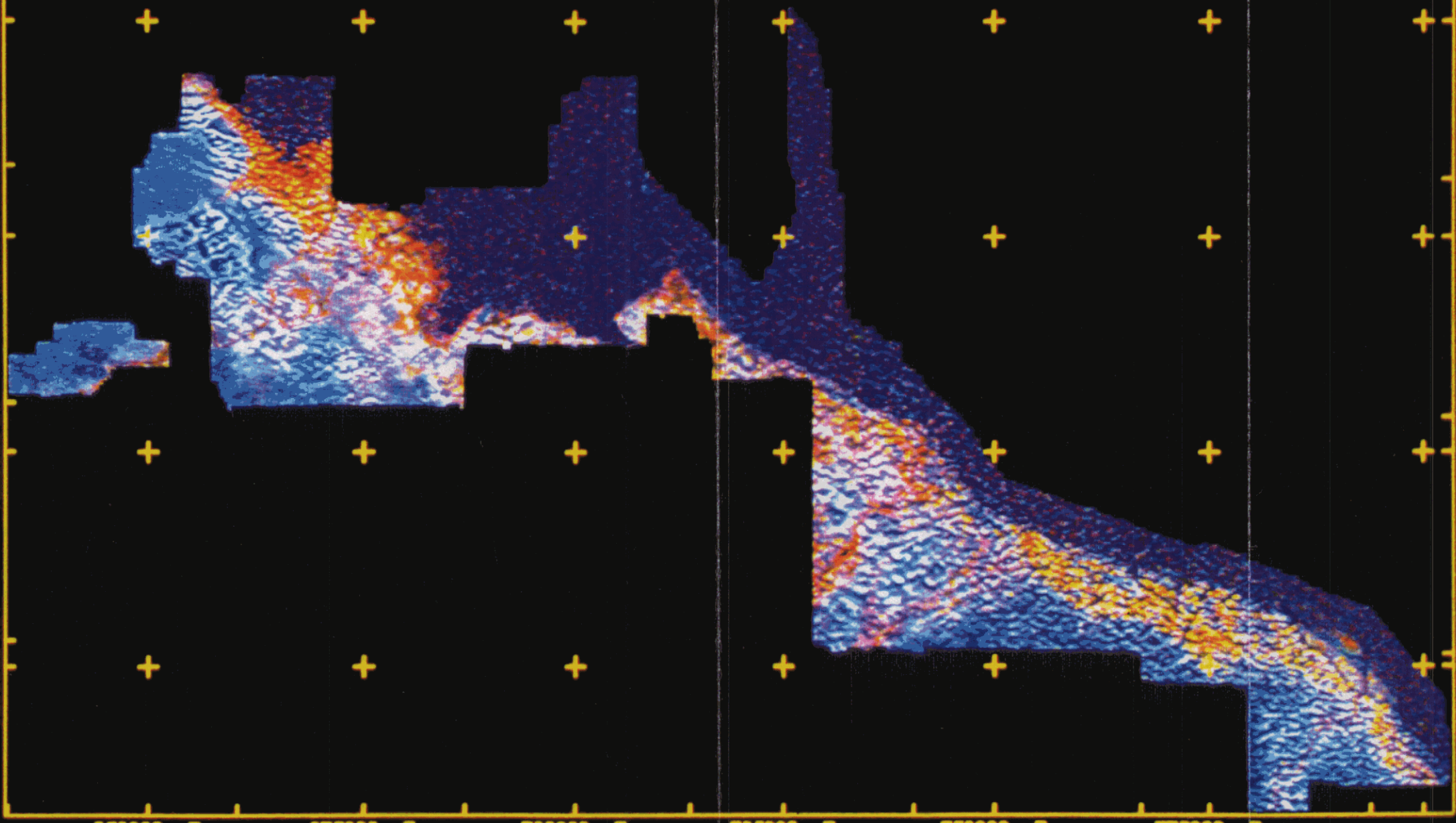
Image Processed by
WORLD GEOSCIENCE CORPORATION
April 1986

Job No. 1138

136°30'00"E
136°45'00"E
137°00'00"E
137°15'00"E
137°30'00"E
137°45'00"E

15°30'00"S
15°45'00"S
16°00'00"S

8275000 mN
8250000 mN
8225000 mN
8200000 mN



650000 mE
675000 mE
700000 mE
725000 mE
750000 mE
775000 mE

SURVEY DETAILS

Traverse Spacing: 400m
Traverse Direction: N-S
Tie Line Spacing: 4000m
Tie Line Direction: E-W
Flying Height: 80m
Data Grid Cell Size: 135m
Image Pixel Size: 150m

BATTEN TROUGH
Northern Territory

Carnegie Minerals N.L.
Airborne Geophysical Survey

TERNARY RADIOMETRICS

Red: Potassium
Green: Thorium
Blue: Uranium
Intensity: Total Count
merged with First Vertical

0 5 10 15 20 25 30
km
AMG Zone 53

Flown and Compiled by
World Geoscience Corporation

Image Processed by
WORLD GEOSCIENCE CORPORATION
April 1996

Job No. 1138

APPENDIX 2

GEOCHEMICAL ANALYSIS

NT. SAMPLING 96.

GENALYSIS LABORATORY SERVICES PTY. LTD.

LABORATORY REPORT

COMMENTS
ATTENTION : ....C GEACH....
UNSPEC....

JOB INFORMATION

JOB CODE	:378.0/963218
No. SAMPLES	:28
ELEMENTS	:15
CLIENT O/N	:S615
DATE RECEIVED	:29/05/96
DATE COMPLETED	:12/06/96

LEGEND

'X' = LESS THAN DETECTION LIMIT
'N/R' = SAMPLE NOT RECEIVED
'*' = RESULT CHECKED
'( )' = RESULT STILL TO COME
'I/S' = INSUFFICIENT SAMPLE FOR ANALYSIS
'I6' = RESULT x 1,000,000

MAIN OFFICE AND LABORATORY
17 DAVISON ST, MADDINGTON, WA 6109
P.O. BOX 144 GOSNELLS WA 6110
Tel:(09)459 9011 Fax:(09)459 5343

KALGOORLIE SAMPLE PREPARATION DIVISION
12 KEOGH WAY, KALGOORLIE WA 6430
P.O. BOX 383 KALGOORLIE WA 6430
Tel:(090)21 2881 Fax:(090)21 3476

ELEMENTS	Au	Ti	Cr	Ni	Cu	Zn	Sr	Zr	Nb	Ag	Ba
UNITS	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
DETECTION	1	5	2	1	1	1	0.1	1	0.5	0.1	1
METHOD	B/ETA	A/OES	A/OES	A/OES	B/AAS	B/AAS	A/MS	A/MS	A/MS	B/AAS	A/MS
SAMPLE NUMBERS											
1 BBD 1	X	860	120	12	16	6		35	2.5	X	
2 BBD 2A	1		215	22	22	14			6.0	X	
3 BBD 2B	X		140	15	21	7			3.0	X	
4 CR1	1		74	19	32	15			7.5	X	
5 H01	X		155	34	22	8			12.5	X	
6 H02	1		24	10	18	7			2.5	X	
7 H03	X		96	10	12	3			1.5	X	
8 H04	X		72	18	27	8			1.5	X	
9 H05	X		80	17	38	7			2.0	X	
10 H06	1		68	16	52	* 11			3.0	X	
11 H07	X		18	5	16	3			0.5	X	
12 H08 1-2	1		112	29	36	* 11			1.5	X	
13 H09	X		66	8	9	4			1.0	0.1	
14 K01	X	1600	100	11	10	7	12.0		3.0	X	69
15 K02	X	1160	44	6	8	3	15.5		2.0	X	60
16 K05	1	4300	68	24	21	23	72.0		9.0	X	295
17 K07	X	2600	34	12	16	20	66.0		6.0	X	290
18 K08	X	4100	70	23	14	30	92.0		8.5	X	410
19 K09	X	4700	74	25	13	27	78.0		9.5	X	205
20 K10	X	1950	44	17	13	7	40.0		5.5	X	240
21 M11	X	2600	46	13	17	6	49.0		6.5	X	430
22 M11 R1	1	3300	58	27	17	20	78.0		9.0	X	1040
23 M12	1	4500	58	28	27	14	60.0		11.0	X	400
24 M13	X	2100	40	14	10	6	29.5		4.5	X	96
25 M13 R1	X	1160	18	7	7	4	34.0		3.0	X	165
26 MBB	X	2400	215	19	14	8	18.5		5.5	X	82
27 S2	1	275	12	3	5	2		14	0.5	X	
28 S3	X	360	24	6	8	5		16	1.0	X	
Ch.0001(BBD 1)	X	940	125	15	14	7		38	3.0	X	
Ch.0026(MBB)	X	2200	200	18	15	9	18.5		5.5	X	78
STD: PL-5	13										
STD: PL-5					14	17				0.4	
STD: PC03		5000	940	2250							
STD: PC03							265.0	330	64.0		1120

ELEMENTS	Ce	Nd	Pb	U
UNITS	ppm	ppm	ppm	ppm
DETECTION	0.1	0.1	1	0.1
METHOD	A/MS	A/MS	B/AAS	A/MS
SAMPLE NUMBERS				
1 BBD 1			17	2.0
2 BBD 2A			33 *	
3 BBD 2B			21	
4 CR1			24	
5 H01			22	
6 H02			4	
7 H03			9	
8 H04			15	
9 H05			15	
10 H06			13	
11 H07			3	
12 H08 1-2			10	
13 H09			14	
14 M01	9.6	3.6	8	
15 M02	13.5	6.2	5	
16 M05	56.0	25.0	16	
17 M07	37.0	17.5	8	
18 M08	60.0	28.0	11	
19 M09	56.0	23.0	12	
20 M10	28.5	13.5	7	
21 M11	45.0	17.5	13	
22 M11 R1	92.0	35.0	16	
23 M12	76.0	36.0	19	
24 M13	17.0	7.8	4	
25 M13 R1	18.5	8.8	4	
26 MBB	21.0	8.3	19	
27 S2			3	0.4
28 S3			5	0.8
Ch.0001(BBD 1)			17	2.1
Ch.0026(MBB)	20.0	8.4	21	
STD: PL-5				
STD: PL-5			20	
STD: PC03				
STD: PC03	1350.0	520.0		12.5

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