EXPLORATION LICENCE 972

ANNUAL REPORT

for the period

8th August 1981 - 7th August 1982

North Flinders Mines Limited
25 Greenhill Road
WAYVILLE, S.A. 5034

ATTACHMENTS

Fig. 1	Location Plan (1:5 000 000)
2	Detailed Location
3	Una May Prospect
Appendix 1	Soil Sample Evaluation - The Una May Project, Seigel 1:100 000 Sheet area, N.T." by J.W. Antal

TENEMENT

EL 972 was granted to NFM on 8th August 1978 and renewed in 1979, and again after 50% area reduction in 1980. Application was made for the area remaining (approximately 80 sq km) after a further 50% reduction in 1981. Grant of this renewal application has not been achieved at the date of writing, but is believed to be imminent.

OPERATIONS

As the tenement has had only application status for most of the current 12 month term very limited ground investigations have been conducted. Joint Venture partners have been actively sought and preliminary discussions held with several parties.

Active negotiations have been pursued with Minatome, and their evaluation of data included significant field investigations. A geological team spent one month in the area conducting reconnaissance geological mapping and orientation stream geochemical sampling and radiometric surveys.

These supported detailed mapping, stream sampling, and radiometric surveying of selected anomalies and sites of mineralisation.

While they retain the results of such work as confidential, their eventual rejection of the farm-in opportunity suggests that results were discouraging.

Further statistical assessment of the NFM geochemical results (previously reported) was undertaken, without revealing significant anomalies (see Appendix 1).

As a consequence of these and earlier results, it is proposed that NFM withdraw from its joint venture arrangement on this property.

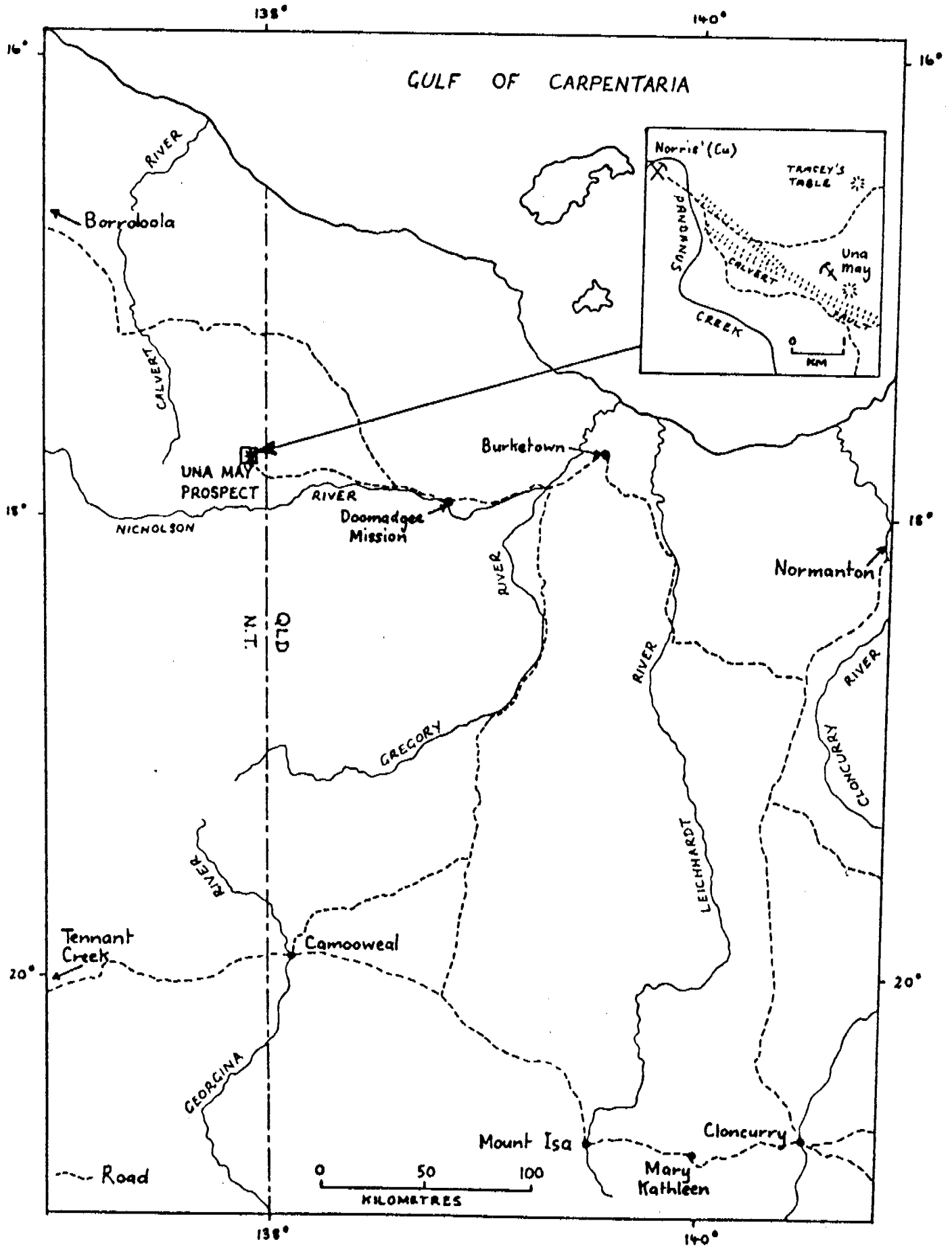
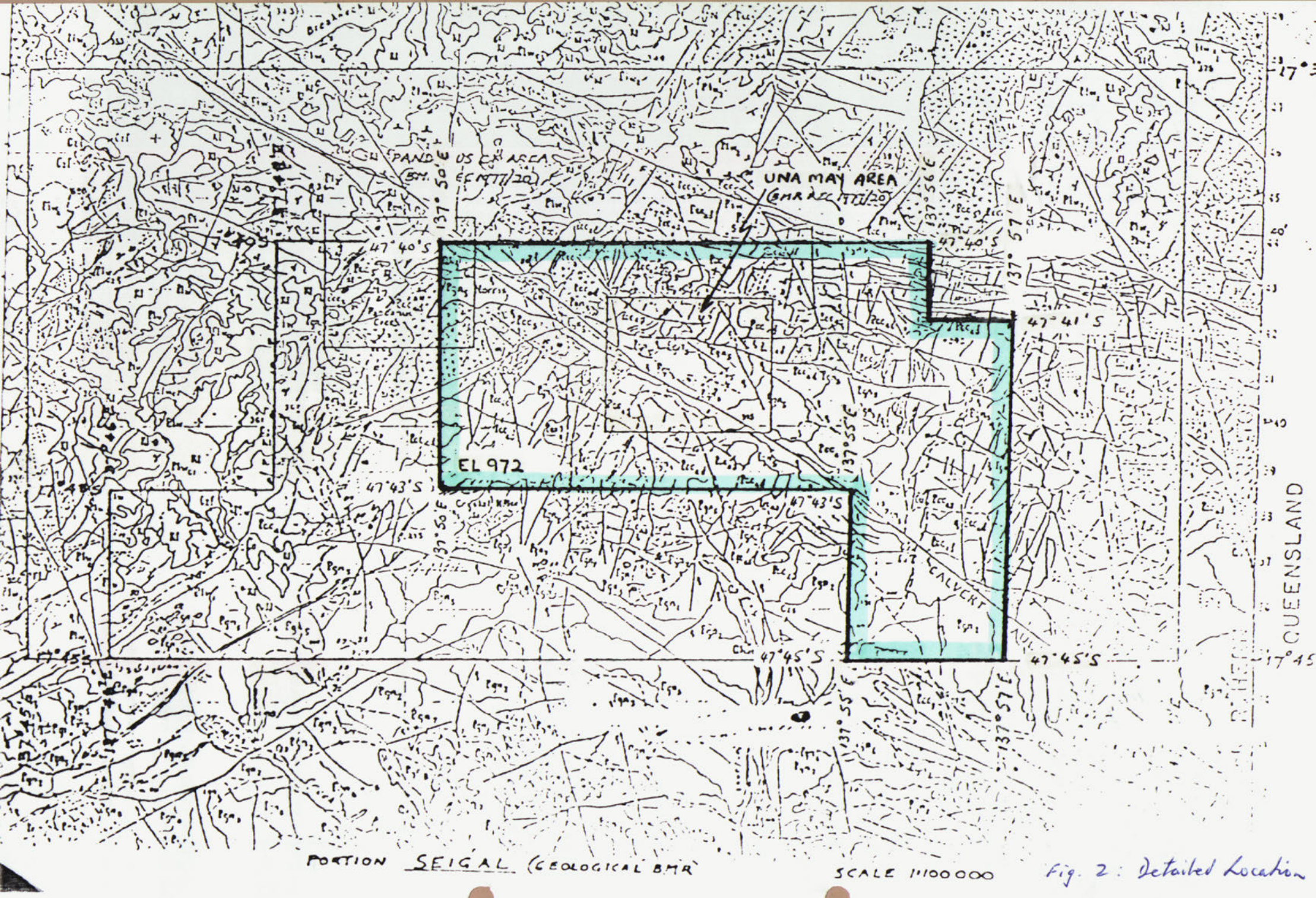


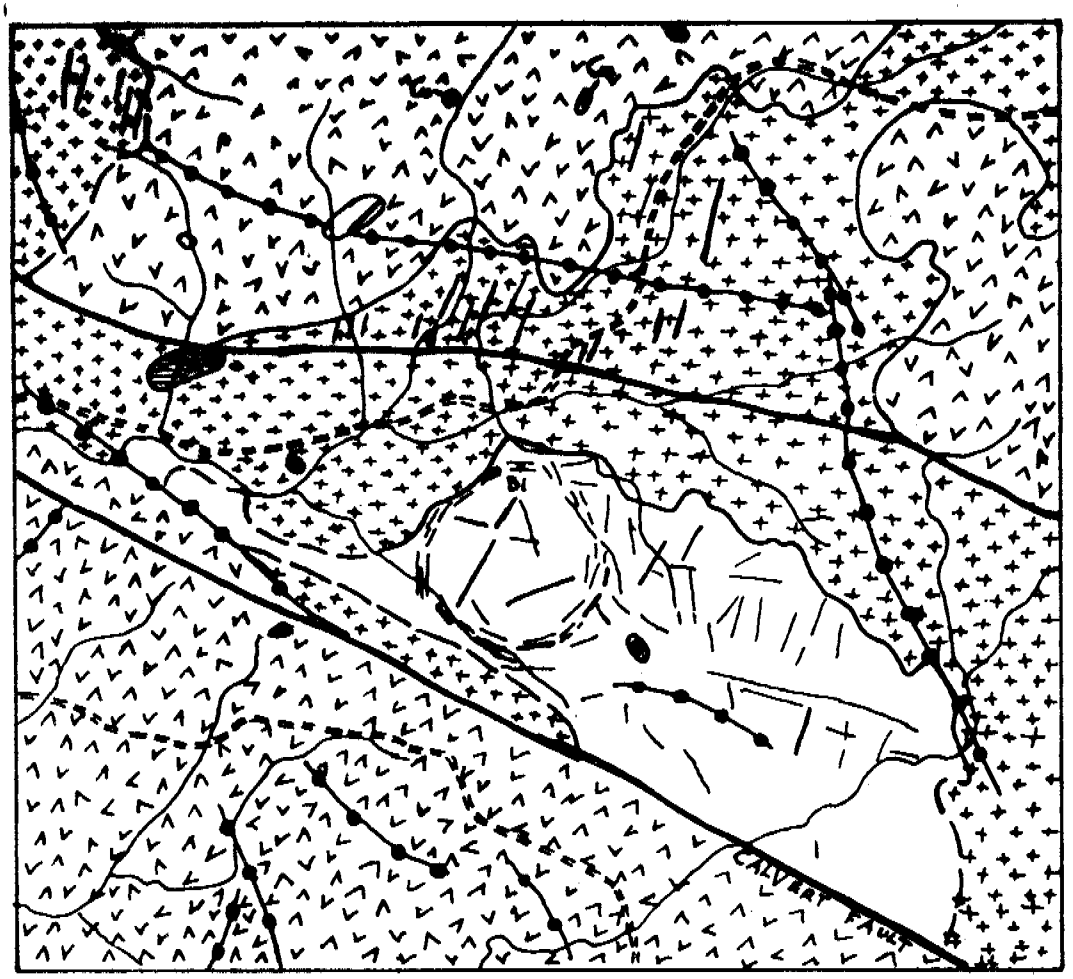
Figure 1 : Location map.



PORTION SEIGAL (GEOLOGICAL BMR)

SCALE 1:100000

Fig. 2: Detailed Location



0 1 2

Kilometres

Geological boundary

Geological boundary (approximate)

Fault

Dyke, quartz vein

Greisen Vein

Joint

Bi Bismite occurrence

Cu Malachite in greisen

Track

MESOZOIC

Sandstone

NICHOLSON GRANITE COMPLEX

Aplite

Microgranite

CARPENTARIAN

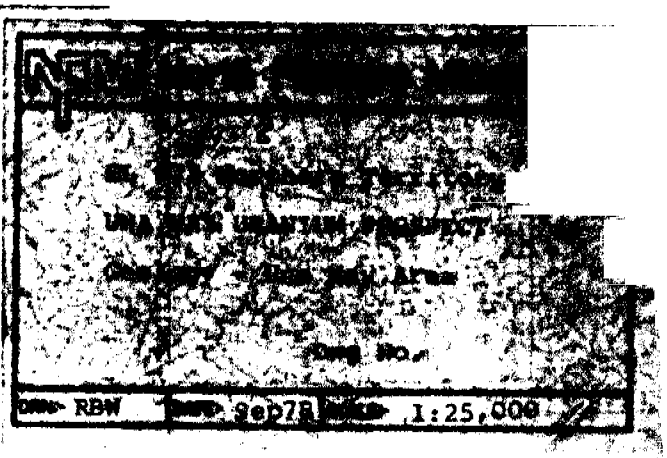
White Granite

Pink Granite

CLIFFDALE VOLCANICS

Dacite

After Bur. Min. Res. Record 1977/20
A.G. Rossiter



R E P O R T

Soil Sample Evaluation

The Una May Project

Seigal 1:100 000 Sheet Area,

Northern Territory

by J. W. Antal

15th March, 1982

C O N T E N T S

To: Mr. Geoffrey Stuart
Managing Director
North Flinders Mines Limited
25 Greenhill Road
Wayville S.A. 5034

From: Dr. J. W. Antal
Managing Director
Jevant Research Pty. Ltd.
39 Bunker Road
Victoria Point Q. 4163

Date: 15th March, 1982

Report: Soil Sample Evaluation
The Una May Project
Seigal 1:100 000 Sheet Area, Northern Territory

INTRODUCTION: This paper is an appraisal of the results of soil sampling carried out on the Una May Project; the purpose, to assess the results of the soil survey in relation to the geomorphology of the map area.

ABSTRACT: According to Rossiter, "Above values of 8 ppm for stream sediments and 12 ppm for soils there are abrupt changes in the slopes of the logarithmic plots, implying deviations from typical background values. In each case a second, anomalous, population is beginning to make a significant contribution to the total uranium distribution. Values of 8 ppm in stream sediments and 12 ppm in soils can be used, therefore, to distinguish anomalous from background samples".

Using the above criteria, combined with the soil sample results, the possibility of confirming anomalous content throughout the entire map area on the Una May Prospect may not be far removed. One must, however, take into account the local geomorphology and attempt to differentiate between in situ uranium anomalies and those created through dispersal and superficial enrichment; the topography imposes a variable distribution of soil types, consequently, a variable distribution of mineral content.

Rossiter also states, "As uranium is often leached from the oxidised zone, a primary grade in excess of 400 ppm may well underlie soils at Una May containing up to 64 ppm and surface rock samples containing up to 20 ppm uranium". For this reason, soils containing 50 p.p.m. or better have been designated as having significant uranium content.

Rossiter has found that, in the Westmoreland Area, lead anomalies

were associated with uranium anomalies and concluded, lead to be the by-product of uranium decay. It is evident, therefore, lead should be dispersed by gravitational phenomena and that anomalous accumulations should be formed down-slope of the uranium anomalies. Furthermore, because the lead is dispersed by gravitational phenomena whereas the uranium dispersion is chemical, it may be concluded that the distribution of lead would indicate the path of mineral dispersal from in situ deposits. On the Una May Prospect this is, in fact, the situation; it has been found that lead anomalies exhibit tongues reaching to, or towards, up-slope uranium concentrations.

Rossiter has also found copper enrichment to be in the vicinity of basic rocks or in the form of a "halo" around the uranium anomalies. Again the situation at Una May confirms this observation. It has also been found, that where the uranium enrichment was associated with transported sediments, the uranium, lead and copper anomalies were coincidental.

APPRAISAL: Uranium Anomalies 1, 2 and 3 are located on in situ weathered rock; the samples were probably in place, and these anomalies indicate an underlying source for the uranium. The remaining uranium anomalies are on soils brought in by water and do not necessarily indicate uranium in the underlying rock.

The lead anomalies are downhill of the uranium anomalies and are probably derived from the latter. Specifically, the lead at Pb-1 and Pb-7, as well as a low anomaly in-between, are probably derived from U-1. Anomaly U-7, which coincides with Pb-7, may also have originated at U-1.

Anomaly Pb-3 is close to, but uphill of U-3. It may well be connected to the same underlying source. Alternately, because a low level tongue reaches from Pb-3 towards U-1, this latter may be the source of Pb-3. Anomaly, U-2 is probably the source of the lead at Pb-2, and it is possible that the lead at Pb-4, Pb-4/1 and Pb-4/2 is derived from U-3, as may be the uranium anomalies U-4 and U-5.

The copper anomalies form a broken circle, "halo", around uranium anomalies U-1, U-2 and U-3. This fact would tend to confirm that these particular uranium anomalies are in situ.

It is significant that the in situ uranium anomalies occur on high topography where dispersal would be limited to intermittent wash; alternately, other anomalous concentrations

of all three minerals are to be found on low-lying flats where run-off would stagnate. The values of all three minerals are generally low in stream beds where the rate of deposition, as well as dispersal, would be high. This confirms the assumption that the variability of the results from soil sampling is, to a large extent, due to erosional patterns.

RESUME:

1. Twenty-five significant concentrations of uranium, lead and copper have been found on the map area. Of these, twelve are concentrated on about one-quarter of the total area.

2. The above concentration is located on the Una May Nappe which had been considered to be the most prospective structure in the area.

3. Anomalies U-1, U-2 and U-3 are located near the top of the mountain and considered to be in place.

4. It is probable that all other anomalies have been derived from any of these three.

5. Copper anomalies form a rough circle "halo" around these three anomalies.

6. The variability of the thicknesses and types of soil cover could well be the reason that only three in situ concentrations of uranium have been found on the Una May Nappe.

CONCLUSION: This analysis supports the conclusion that the Una May Nappe, on the Una May Prospect is a valid exploratory target for uranium.

Further soil sampling, due to the varied topography in the area, would probably bring questionable results. It is, therefore, recommended that a rock sampling program be carried out on the Una May Nappe and that fresh rock samples should be analysed with a view to correlating such values with those obtained from the analysis of the soil samples.

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"A Preliminary Geological and Geochemical Investigation of the Una May Uranium Prospect, Seigal 1:100 000 Sheet Area, Northern Territory"
by A. G. Rossiter,
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"Geological Report, The Una May Project, E.L. 972, Northern Territory"
by J. W. Antal
Aug. 8, 1980.

for Jevant Research Pty. Ltd.

J. W. Antal

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J. W. Antal B.Sc. D.Sc. M.Aus.I.M.M.
Managing Director

Sun & Star Observation Point
TBM 1
ARBITRARY DATUM 0.0m.
Reference Tree
NOT TO SCALE
Spike
118°0'
SPIKE IN ROCK PAINTED RED
TBM 2
RL 391
Spike in Rock
TBM 5
RL 543
R.S. NAIL IN ROCK PAINTED RED
TBM 3
RL 505
208°0'
Spike TBM9
RL 75
Spike in Rock
TBM 6
RL 427
ROCK PAINTED YELLOW
TBM 7
RL 830
CONTINUED BELOW
TBM 8
RL 415
TBM 12
RL 661
Ground Level
Spike
TBM 10
RL 748
Top Of Ridge
CONTINUED ABOVE
Top Of Ridge
Ridge
Top Of Ridge
Of
Calvert
Fault
Top Of Ridge
13·7 SPIKE IN ROCK
TBM 4 PAINTED RED
RL 317
Top Of Star Picket
TBM 11
RL 12 9
25·0
50·0
75·0
100·0

100 50 0 100 200 METRES

SCALE 1:2000
CONTOUR INTERVAL, 5 METRES
LEVELS SHOWN THUS 104·3 ARE TO ARBITRARY DATUM

CR82/227A

CONTOUR PLAN
"UNA MAY" PROSPECT — NORTHERN TERRITORY
FOR NORTH FLINDERS MINES LTD.

CHRISP de VRIES & ASSOCIATES
Consulting Civil and Structural Engineers
Licensed Surveyors
Suite 1, 34 Cavenagh Street, Darwin Telephone 814166

Scale	1:2000
Date	JULY '80
Job No	6195
Drawing No	6195/2
Issue	2
Sheet	2

D Ps C Pc S N W

LEGEND

- Alluvium.
- Quartz dyke U. Prot.
- Granophyre dyke U. Prot.
- Norris Granite L. Prot.
- Cliffdale Volcanics L. Prot.
- Nicholson Granite (white) L. Prot.
- Nicholson Granite (pink) L. Prot.
- Fault
- Thrust fault - stiples show direction of movement.
- Geological Contact.
- Disconformity.
- Intersection not visible.

Boundary of prospect

SCALE: 1:2000

SCALE: 1:2000

UNA MAY PROSPECT, N.T. FOR NORTH FLINDERS MINES LTD. BY NORTHERN GEOLOGICAL CONSULTANTS, DARWIN

DR. J.W. ANTAL J.W. Antal AUG. 1980

CR82/227 A

	00	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	<10	20	20	15	15	25	25	15	20	20	15	25	15	15	20	20	20	20	25	25	60
B	25	25	30	25	20	20	30	25	20	25	15	30	26	36	25	25	15	40	30	35	55
C	30	20	10	20	20	45	15	35	20	20	15	30	25	20	20	20	35	25	30	25	25
D	26	20	20	30	30	20	25	30	30	25	20	30	35	35	20	25	25	15	25	35	25
E	30	20	40	40	40	35	45	25	30	30	15	25	20	25	25	25	20	15	30	20	40
F	25	20	20	20	15	15	30	30	30	25	20	15		40 30		25	30	20	25	30	30
G	25	15	15	20	35	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	10
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I	20	20	20	20	25	25	30	20		15	30	30	30	35	30	20	30	15	30	25	15
J	20	35	25	25	20	10	30	10	30	20	25	20	20	20	25	15	25	20	20	20	20
K	20	35	25	20	30	30	10	25	25	<10	20	25	40	30	30	20	35	25	30	15	20
L	25	25	25	20	20	30	20	25	20	35	25	20	20	32	30	20	30	25	15	20	10
M		20	30	20	35	35	15	15	25	20	20	40	25	20	25	25	10	15	10	10	10
N	15	15	25	25	25	20	25	30	20	25	25	30	20	20	20	15	25	15	15	15	20
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P	<10	15	10	20		15	10	15	20	10	10	15	20	10	10	15	10		15	20	15
Q	10	<10	15	10	<10	15	<10	10	10	10	<10	15	20	10	15	15	15	15	15	15	20
R	<10	10	15	10	15	<10	10	10	10	25	<10	15	15	10	<10	<10	10	10	10	<10	15
S	10	10	10	<10	10	15	<10	15	10	<10	10	<10	15	<10	10	10	<10	10	10		

A — CONTINUED BELOW

K — CONTINUED ABOVE A

N

Soil Samples

Taken By:	Dr. J.W. Antal Northern Geological Consultants
Depth:	Approx. 20cm
Sieved:	To 180um
Analysis:	Comlabs Pty. Ltd., Mile End, SA
	Cu, Pb Scheme AAS1
	Bi, U, W Scheme XRF1

North Flinders Mines N.L.

E L 972 NORTH TERRITORY

UNA MAY PROSPECT

SOIL GEOCHEMISTRY

tungsten

CK82/227A

DRN:- R B W | DATE:- 11-9-80 | SCALE:- 1:2000

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B	40	38	40	36	40	55	70	50	75	40	75	55	75	95	80	42	42	48	46	46	125	
C	32	30	55	40	65	70	55	38	55	80	105	80	50	95	50	26	20	12	20	55	55	
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E	75	32	44	60	70	65	38	38	50	60	50	34	44	32	55	30	22	30	28	32	230	
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I	40	55	36	32	40	34	22	36		170	290	120	85	48	30	42	28	22	30	38	42	
J	55	42	55	38	18	28	24	75	65	70	90	115	95	40	32	26	24	60	50	38	28	A
K	70	50	70	70	110	50	60	55	50	65	85	55	75	100	85	60	65	65	75	95	34	CONTINUED BELOW
L	34	60	150	65	32	46	70	42	48	70	48	36	65	36	32	32	60	85	110	115	12	
M		120	145	149	70	50	36	60	60	32	38	36	46	145	65	32	95	80	32	48	60	
N	70	105	90	110	38	30	115	50	50	55	60	90	195	135	32	105	95	55	170	38	110	
O	105		70	50	80	48	42	95	50	65	42	30	40	70	22	38	14	32	70	50	42	
P	38	32	145	24	42	60	18	8	30	20	170	55	65	75	30	28	18	46	42	55	10	
Q	12	12	10	10	10	16	18	8	14	12	40	22	36	70	26	26	24	75	32	12	10	
R	14	10	14	14	12	16	20	24	32	22	44	130	28	85	70	32		40	24	24	20	
S	12	14	14	28	20	36	70	38	130	48	50	28	75	60	42	90	14	16				
	K CONTINUED ABOVE A																				K	

N

Soil Samples

Taken By:	Dr. J.W. Antal Northern Geological Consultants
Depth:	Approx. 20cm
Sieved:	To 180um
Analysis:	Comlabs Pty. Ltd., Mile End, SA
	Cu, Pb Scheme AAS1
	Bi, U, W Scheme XRF1

North Flinders Mines N.L.

E L 972 NORTH TERRITORY

UNA MAY PROSPECT

SOIL GEOCHEMISTRY

copper

CR82/227A

DRN:- R B W	DATE:- 11-9-80	SCALE:- 1:2000

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B	10	8	<4	4	<4	22	14	18	8	10	10	8	12	18	10	4	10	4	6	<4	36
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I	8	<4	10	<4	<4	<4	<4	<4		<4	16	10	12	<4	10	<4	<4	6	14	<4	10
J	20	6	<4	<4	<4	<4	<4	<4	8	<4	4	18	18	<4	<4	<4	<4	6	10	<4	4
K	16	8	6	6	<4	<4	<4	<4	8	6	8	10	10	<4	<4	<4	<4	<4	<4	6	10
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M		10	10	14	4	<4	<4	<4	4	<4	<4	<4	<4	6	4	<4	<4	<4	<4	<4	<4
N	12	6	<4	8	<4	<4	<4	<4	<4	<4	4	8	10	6	<4	<4	<4	<4	<4	<4	6
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P	6	<4	8	8		<4	<4	8	6	6	10	<4	4	<4	<4	<4	<4		<4	<4	6
Q	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	8	<4	<4	4	6	10	6	6	<4	<4	<4
R	<4	<4	<4	10	<4	<4	6	12	<4	<4	12	18	<4	6	10	<4		<4	<4	<4	<4
S	6	<4	<4	8	<4	<4	<4	<4	4	<4	10	10	10	6	<4	<4	<4	<4			

A CONTINUED BELOW A

K CONTINUED ABOVE K

N

Soil Samples

Taken By: Dr. J.W. Antal
Northern Geological Consultants

Depth: Approx. 20cm

Sieved: To 180um

Analysis: Comlabs Pty. Ltd., Mile End, SA

Cu, Pb Scheme AAS1
Bi, U, W Scheme XRF1

North Flinders Mines N.L.

E L 9 7 2 NORTH TERRITORY

UNA MAY PROSPECT

SOIL GEOCHEMISTRY

bismuth

CR82/227A

DRN:- R B W | DATE:- 11-9-80 | SCALE:- 1 : 2000

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D	18	14	24	32	28	34	28	40	50	50	24	28	26	22	26	18	20	22	28	28	28
E	16	24	26	34	44	30 30	32	24	34	36	18	38	40	15	30	25	16	30	30	28	55
F	22	22	26	24	48	24	44	24	30	48	20	20		15 30		28 25	26	34	36	48	36
G	32	34	26	28	34	20	30	28	30	38	28	36	28	36	26	22	28	24	40	36	36
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I	24	32	26	26	30	28	32	26		20	26	30	32	30	22	18	16	18	38	22	28
J	28	28	34	26	22	32	32	20	26	24	55	30	28	20	28	18	32	30	24	20	20
K	18	38	30	18	44	36	38	28	20	20	28	32	30	28	24	14	50 60	34	22	12	18
L	24	24	36	32	22	44	32	32	30	34	20	24	24	24	24	26	85	24	32	36	12
M		26	34	46	30	22	24	34	28	28	28	24	24	50	28	20	20	20	22	16	32
N	20	30	26	30	24	18	26	24	20	24	30	22	24	28	14	36	30	22	30	22	32
O	30		22	26	20	33	34	24	20	10	16	16	18	18	20	22	18	18	24	20	28
P	12	10	18	12		22	8	6	12	12	12	18	30	16	28	28	22		28	16	16
Q	6	6	6	10	12	12	12	10	8	12	12	12	14	20	10	12	12	16	14	10	10
R	6	8	8	12	12	12	12	8	14	16	18	22	14	22	18	10		14	10	10	10
S	4	6	8	6	10	8	10	10	16	12	10	12	12	12	6	10	6	8			

K CONTINUED ABOVE A

A CONTINUED BELOW A

TN

Soil Samples

Taken By:	Dr. J.W. Antal Northern Geological Consultants
Depth:	Approx. 20cm
Sieved:	To 180um
Analysis:	Comlabs Pty. Ltd., Mile End, SA
	Cu, Pb Scheme AAS1
	Bi, U, W Scheme XRF1

NFM North Flinders Mines N.L.

E L 972 NORTH TERRITORY

UNA MAY PROSPECT

SOIL GEOCHEMISTRY

uranium

CR82/227A

DRN:- R B W | DATE:- 11-9-80 | SCALE:- 1:2000

	00	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	16	16	20	16	16	36	36	20	24	30	65	16	20	20	24	28	48	32	28	24	85
B	28	24	28	16	36	36	40	32	44	24	32	32	32	16	36	48	40	38	40	36	70
C	28	32	32	20	44	95	36	32	70	40	44	75	36	16	20	32	30	40	28	40	28
D	20	8	20	30	24	60	70	50	65	50	20	28	44	24	48	30	28	55	32	30	28
E	24	20	30	32	65	60	85	50	70	36	44	70	80	24	32	16	20	28	50	24	95
F	20	20	36	32	36	50	60	55	95	65	24	36	32	20	40	36	44	55	55	36	
G	40	36	28	28	40	22	55	65	60	48	28	30	80	44	20	24	60	32	36	32	55
H	24	20	30	32	36	32	48	65	85	50	12	44	85	20	24	16	20	32	55	24	36
I	48	24	32	32	60	65	44	32		44	20	80	300	40	20	28	24	16	40	20	40
J	32	20	28	16	32	40	44	30	40	28	36	36	75	20	24	24	30	105	36	20	16
K	16	36	16	12	36	32	32	50	65	65	48	28	28	75	60	36	20	32	32	28	24
L	36	16	24	24	36	32	36	60	70	40	44	20	32	32	24	36	24	24	24	24	4
M		16	28	16	16	20	16	32	24	32	20	20	28	24	28	20	12	8	8	4	16
N	20	28	16	20	24	24	32	32	20	20	16	16	270	16	4	8	12	12	12	12	24
O	24		16	16	24	24	24	20	12	8	8	12	4	4	12	16	8	4	8	4	12
P	8	12	16	8	12	20	8	4	8	8	16	4	4	8	16	12	8	4	12	8	4
Q	4	8	8	8	8	8	12	4	8	4	8	8	4	24	8	8	8	8	4	4	4
R	8	8	12	8	8	8	8	12	12	8	12	20	20	24	12	8		12	12	12	12
S	12	12	4	8	8	12	12	8	12	16	16	12	16	16	12	20	12	20			

CONTINUED BELOW
CONTINUED ABOVE

N

Soil Samples

Taken By: Dr. J.W. Antal
Northern Geological Consultants

Depth: Approx. 20cm

Sieved: To 180um

Analysis: Comlabs Pty. Ltd., Mile End, SA

Cu, Pb Scheme AAS1
Bi, U, W Scheme XRF1

North Flinders Mines N.L.

E L 972 NORTH TERRITORY

UNA MAY PROSPECT

SOIL GEOCHEMISTRY

lead

CR82/227A

DRN:- R B W | DATE:- 11-9-80 | SCALE:- 1:2000