

NORD RESOURCES (PACIFIC) PTY. LTD.

OPEN FILE

REPORT ON EXPLORATION AT EVA VALLEY, N.

EXPLORATION LICENCE 1594

23 AUGUST, 1981 - 22 AUGUST, 1982

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31 JAN 1996

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J. M. FOGARTY

September 1982

CR82/290

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1. INTRODUCTION

Exploration Licence 1594 is situated on Eva Valley Pastoral Station, about 290Km southeast of Darwin.

This report gives details of exploration by Nord Resources in the licence area during the year ended 22 August, 1982. Work completed included geological inspection of results of previous work and collection of samples for analysis.

2. LOCATION AND ACCESS

The location of the licence is shown on figure 1.

Access by road from Darwin is via the Stuart Highway to Katherine, a distance of 340Km; then 48Km on the sealed highway to the Maranboy turnoff; then 19Km on the gravel road towards Maranboy to the Eva Valley turnoff; then about 30Km on the graded Eva Valley road. Station tracks and fence lines within the area give reasonable access during the dry season, but are generally impassable during the wet season.

3. DESCRIPTION AND TENURE

On renewal after 23 August, 1981 the licence covered an area of about 19.4 square kilometres. The shape of the licence and the boundary definition are shown on Plate 1 and on Figure 2.

Occupancy rights were originally granted to Nord Resources (Pacific) Pty. Ltd on 23 August, 1977. The licence was transferred to Nord Australex Nominees Pty Ltd. on 31 December, 1980. The approved transfer was registered on 6 April, 1981.

Renewal of a portion of the area consisting of three one minute blocks totalling approximately 9.7 square kilometres has been requested.

4. GEOLOGY

The lower Proterozoic succession is correlated with the South Alligator Group and the basal portion of the Finnis River Group (ref. Needham et al, 1979; and Pine Creek Geosyncline 1:500,000 Geol. Sheet, 1979). A folded sequence of sediments and acid and basic volcanics is intruded by dolerite (Plate 1). Post tectonic granites intrude in the west (Yeuralba Granite) and north (P1 Gr - Plate 1).

Exhalative basemetal and gold mineralization is associated with a silica-silicate-sulphide banded iron formation (BIF) facies in the volcanic/sedimentary sequence.

In the east of the licence, acid volcanics and sandstone of Middle Proterozoic age unconformably overlie the Lower Proterozoic rocks.

Higher level plateaux in the east and south comprise flat-lying sandstone and ferruginous conglomerate of Cretaceous age.

5. PREVIOUS EXPLORATION

Nord Resources' 1978, 1979, 1980 and 1981 reports, and a Newmont Proprietary Limited report, give details of investigations prior to 22 August, 1981. A potential for basemetal and gold deposits associated with the Lower Proterozoic exhalites remained to be conclusively tested.

Results of an Induced Polarisation survey indicated that several features warranted further investigation.

5.1 Area 8 South (Plan 1)

This area has not been drilled previously. Induced Polarisation anomalies are associated with gossans at South Ridge (Plan 1) which contain anomalous copper (to 2650ppm), lead (to 5.7%), zinc (to 5750ppm) and silver (28ppm). The gossan is generally of the order of one metre wide in outcrop with possible local thickening between 8000W and 8100W. Total length of the gossan is about one kilometre.

Drill holes are proposed as follows.

Hole No	Coords	Declination	Bearing	Depth(m)
SR 1	58205, 8100W	60°	23°	60
SR 2	58005, 8000W	60°	23°	60
SR 3	58305, 8200W	60°	23°	60
SR 4	59855, 8400W	60°	23°	60

5.2 Area 8 North (Plan 1)

Based on I.P. results and anomalous geochemistry, (Copper, up to 2100ppm; Lead, up to 34%; Zinc, up to 5400ppm, and Silver up to 48.0ppm) holes were proposed as follows.

Hole No	Coords	Declination	Bearing	Depth(m)
NR 1	53905, 7500W	60°	23°	60
NR 2	53905, 7600W	60°	23°	60
NR 3	52005, 8000W	60°	23°	80

This gossan is generally less than three metres wide with local thickening up to seven metres. Total known length of sulphide facies mineralisation is about 800 metres.

5.3 Luden Area (Plan 2)

Thick gossan development and anomalous basemetal geochemistry coincident with weak but clear I.P anomalies indicate that drilling is warranted as follows.

LA 1	5500N, 4540E	60°	53°	80
------	--------------	-----	-----	----

Drilling by Geopeko further north (DDH EV 2) intersected narrow copper and zinc sulphides at a depth of 45 metres.

Shallow percussion drilling by Nord near 5530N and 5480N (EVP14 and EVP15 respectively) intersection anomalous copper, lead, zinc, silver and gold over widths of 10 metres in the oxidised zone.

6. EXPLORATION, YEAR ENDED 22-8-1982

6.1 Ground Inspections

Programmes of geological traverses along gossans especially in areas with anomalous I.P responses were completed.

6.2 Geochemical Sampling.

Programmes of rock sampling of gossanous outcrops in areas 3 and 5 were completed. Results of analyses are shown in Appendix 1.

6.3 Discussion of Results

Anomalous geochemical results were obtained in areas 3 and 5 for base metals, silver, gold and arsenic and further exploration appears warranted although the priority may be low because of size limitations.

Results of previous exploration indicate that testing by drilling is warranted in Area 8 and Luden Area and this is the basis of the 1982-83 exploration programme.

7. COST OF EXPLORATION

Exploration on the licence in the year ended 22 August 1982 amounted to \$12,376-00 as follows:-

Salaries and Wages	\$6,376-00
Stores, Services, Regional Office Costs	\$1,385-00
Travel and Accommodation	\$2,498-00
Vehicle Running	\$ 120-00
Laboratory Analysis	\$1,099-00

Sub Total: \$11,478-00

Head Office overheads 898-00

Grand Total: \$12,376-00

8. REFERENCES:

DODDS, A.R., 1981: Report on an induced polarization survey at Eva Valley, near Katherine, N.T. for Nord Resources. Unpublished Geoex report.

NEEDHAM, R.S., CRICK, J.H., and STUART SMITH, P.G., Regional geology of the Pine Creek Geosyncline. Intern. Uran. Symp. on the Pine Creek Geosyncline, Ext. Abst., 134-138.

SCHULTZ, K., 1978: Report on exploration at Eva Valley, N.T., exploration licence 1594, 23 August 1977 - 23 August 1978. Unpublished Nord resources report.

1979: Report on exploration at Eva Valley, N.T., exploration licence 1594, 23 August 1978 - 22 August 1979. Unpublished Nord Resources report.

1980: Report on exploration at Eva Valley, N.T., exploration licence 1594, 1 January - 22 August 1980. Unpublished Nord Resources report.

1981: Report on Exploration at Eva Valley N.T., exploration licence 1594, 23 August 1980 - 22 August 1981. Unpublished Nord Resources report.

TELUK, J.A., 1980: Eva Valley, E.L. 1594, Northern Territory joint venture final report, year ended 31 December 1979. Unpublished Newmont report.

APPENDIX I

ANALYSES RESULTS

GEOCHEMICAL SAMPLE RECORD

No. 1165

LABORATORY BY POST

Date Sampled:**Date Dispatched:**

Project:

Analyst:

Job Type:

Priority:

Operator:

Results (Date/ Cross Ref.):[illegible]**Laboratory Instructions:**

Local Grid Details:

Map Reference:

Origin Co-Ords.:

Bearing:

ANALABS

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Phone (09) 458 7999

52 Murray Road, Welshpool, W.A. 6106

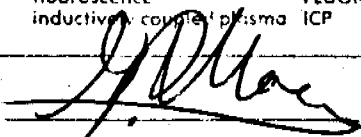
Telex AA92560

ANALYTICAL REPORT No. 87.0.01.24319

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Nord Resources (Pacific) PL P O Box 63 GUILDFORD WA 6055		ORDER No.		PROJECT							
		1165&1167									
		DATE RECEIVED		RESULTS REQUIRED							
		21/06/82		ASAP							
No. OF PAGES OF RESULTS		DATE REPORTED		No. OF COPIES							
5		07/07/82		1							
				TOTAL No. OF SAMPLES							
				16							
STATE OF SAMPLES		PRE-TREATMENT				ANALYSIS					
REFER BELOW	SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
Ro	EV 116501/10.		1	3	2/4				Cu, Zn, Ag, Pb Au		10 30
Ro	116701/06 N.A.		1	3	2/4				Cu, Zn, Pb N.A. As Sb Au		10 11 40 30
RESULTS TO RESULTS TO		as above								REMARKS	
STATE OF SAMPLES		ANALYSIS -- PREPARATION						ANALYSIS -- METHOD			
whole core	WC	perchloric acid	A1	cold acid	CA			atomic absorption	AAS		
split core	SC	hydrochloric acid	A2	specific sulphide	SS			x-ray fluorescence	XRF		
cutting	CU	nitric acid	A3	other mixed acids	Ma			spectrophotometry	SPEC		
rock	Ro	aqua regia	A4	alkaline attack	AA			colorimetry	COL		
soil	SO	nitric-perchloric	A5	volatilization	VO			chromatography	CHR		
pulp	PU	HF mixture	A6	ignition	IG			titration	TTN		
water	WA	HF under pressure	A7	pressed powder (XRF)	PP			other chemicals means	CHEM		
tissue	TI	fusion	A8	glass fusion (XRF)	GF			miscellaneous	MISC		
stream sediment	SS							fluorescence	FLUOR		
heavy mineral	HM							inductively coupled plasma	ICP		

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

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07/07/82

1165&1167

1 OF 5

TUBE No.	SAMPLE No.	Cu	Cu%	Zn	As	As (R)	Ag	Sb	Sb	Au
1	116701	[REDACTED]					N.A. -	-	[REDACTED]	[REDACTED]
2	116702	[REDACTED]					N.A. -	[REDACTED]	-	[REDACTED]
3	116703	[REDACTED]					N.A. -	[REDACTED]	-	[REDACTED]
4	116704	[REDACTED]					N.A. -	[REDACTED]	-	[REDACTED]
5	116705	[REDACTED]					N.A. -	[REDACTED]	-	[REDACTED]
6	116706	[REDACTED]					N.A. -	[REDACTED]	-	[REDACTED]
7	EV 116501	1.00%	0.820	195	-	-	1.0	-	-	-
8	EV 116502	4.10%	4.550	225	-	-	0.5	-	-	-
9	EV 116503	5.20%	5.300	240	-	-	x	-	-	-
10	EV 116504	5500	-	340	-	-	x	-	-	-
11	EV 116505	3.00%	3.030	375	-	-	7.5	-	-	-
12	EV 116506	2.20%	2.240	2000	-	-	3.0	-	-	-
13	EV 116507	4500	-	1550	-	-	8.0	-	-	-
14	EV 116508	7500	-	3400	-	-	16.0	-	-	-
15	EV 116509	1.10%	1.120	5150	-	-	2.0	-	-	-
16	EV 116510	2400	-	3850	-	-	26.0	-	-	-
17										
18										
19										
20										
21										
22										
23										
24										

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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2 OF 5

TUBE No.	SAMPLE No.	Cu	Cu%	Zn	As	As (R)	Ag	Sb	Sb	Au
1	STD 4	320	-	800	21	26	1.0	-	-	-
2 R	116701		-				N-R	-	-	-
3	STD 32	-	-	-	-	-	-	-	-	-
4 R	EV 116510	-	-	-	-	-	-	-	-	-
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23	DETECTION	5	0.003	5	1	1	0.5	3	0.01	0.008
24	DIGESTION									
25	METHOD	101	104	101	114	114	101	402	404	309

Results in ppm unless otherwise specified

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TUBE No.	SAMPLE No.	Au	Pb	Pb ₂						
1	116701	-			N.A.					
2	116702	-			N.A.					
3	116703	-			N.A.					
4	116704	-			N.A.					
5	116705	-			N.A.					
6	116706	-			N.A.					
7	EV 116501	0.720	70	-						
8	EV 116502	0.864	85	-						
9	EV 116503	0.808	40	-						
10	EV 116504	0.152	65	-						
11	EV 116505	5.200	50	-						
12	EV 116506	1.390	850	-						
13	EV 116507	0.672	490	-						
14	EV 116508	0.864	400	-						
15	EV 116509	2.080	1350	-						
16	EV 116510	3.200	2000	-						
17										
18										
19										
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21										
22										
23										
24										
25										

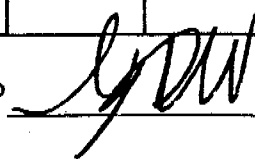
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- = element not determined

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TUBE No.	SAMPLE No.	Au	Pb	Pb%						
1	STD 4	-	100	-						
2 F	116701	-		-						
3	STD 32	1.920	-	-						
4 F	EV 116510	3.280	-	-						
5										
6										
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23	DETECTION	0.008	5	0.003						
24	DIGESTION									
25	METHOD	303	101	104						

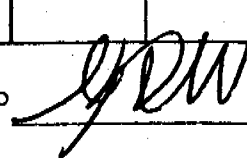
Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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GEOCHEMICAL SAMPLE RECORD

No. 1156

BASE OFFICE

Date Sampled: 21/10/81 Date Dispatched: 22/10/81
 Project: Eva Valley NT Analyst: Chalais
 Job Type: Rock Sampling Priority: Normal
 Operator: KS HVAH Results (Date, Cross Ref.):

SAMPLE NUMBER	TYPE OF MATERIAL	LOCATION	REMARKS SPECIAL INSTRUCTIONS ETC.
15601	Rock chip	Copper Flowers W of road.	
2	" "	Reumont Grid 8800 S / 8100 W	CF (1) Cu min ? vol.
3	" "	" "	" " CF (2) 2.5 - carb
4	" "	" "	" " CF (3) min vol.
5	" "	" " 8800 S / 7800 W	} BIF
6	" "	" "	
7	" "	" "	
8	" "	" "	
9	" "	" " 8600 S / 7800 W	} Chert
10	" "	" "	
11	" "	" "	
12	" "	" "	
13	" "	" "	}
14	" "	West of Fence - Hawk's Sample	
15	" "	" " "	
16	" "	" " "	
17	" "	Near Fence - Chert	}
18	" "	" "	
19	" "	" "	
20	" "	" "	
21	" "	" " - North outcrops	} min vol.
22	" "	" "	
23	" "	" " in Gully	

Laboratory Instructions: Analyse
 Au (LG20), Cu, Pb,
 Zn, Ag, As by AAS

Local Grid Details:
 Map Reference:
 Origin Co-Ords.:
 Bearing:

Phone (09) 458 7999

Telex AA92560

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PROJECT

RESULTS REQUIRED

TOTAL No. OF SAMPLES

RESULTS

TO

RESULTS

TO

REMARKS

STATE OF SAMPLES		ANALYSIS — PREPARATION				ANALYSIS — METHOD	
le core	WC	perchloric acid	A1	cold acid	CA	atomic absorption	AAS
core	SC	hydrochloric acid	A2	specific sulphide	SS	x-ray fluorescence	XRF
ing	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
	PU	HF mixture	A6	ignition	IG	titration	TTN
er	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemicals means	CHEM
re	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
am sediment	SS					fluorescence	FLUOR
ry mineral	HM					inductively coupled plasma	ICP

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Page No.

1

Order No.

RESULT SHEET

TUBE No.	SAMPLE No.	Cu	Zn	As	Ag	Pb				
1	15601	1050	120	500	22.0	235				
2	02	1100	30	550	2.5	10				
3	03	70	15	16	X	10				
4	04	165	10	24	1.0	X				
5	05	495	1300	400	0.5	3250				
6	06	305	7750	300	1.0	1150				
7	07	600	4550	300	2.5	1100				
8	08	90	430	210	0.5	3150				
9	09	90	55	12	X	70				
10	15610	60	15	49	0.5	40				
11	11	40	15	65	X	30				
12	12	160	30	220	X	160				
13	13	45	15	130	X	50				
14	14	50	10	44	X	10				
15	15	155	15	300	X	30				
16	16	45	5	55	X	20				
17	17	710	20	9000	0.5	75				
18	18	45	5	380	X	10				
19	19	585	25	700	0.5	100				
20	15620	335	10	2900	0.5	220				
21	21	80	100	32	X	25				
22	22	130	110	5	X	15				
23	15623	625	55	10	X	5				
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RESPONSIBLE OFFICER

at concentration too low to measure
tion is below detection limit
nined

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52 Murray Road, Welshpool, W.A. 6106 (Reg. Office)

Code No. 87.0.01.2137

Phone.....

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Page No. _____

Order No. _____

[illegible]**RESPONSIBLE OFFICER**

T = element present; but concentration too low to measure
X = element concentration is below detection limit
- = element not determined

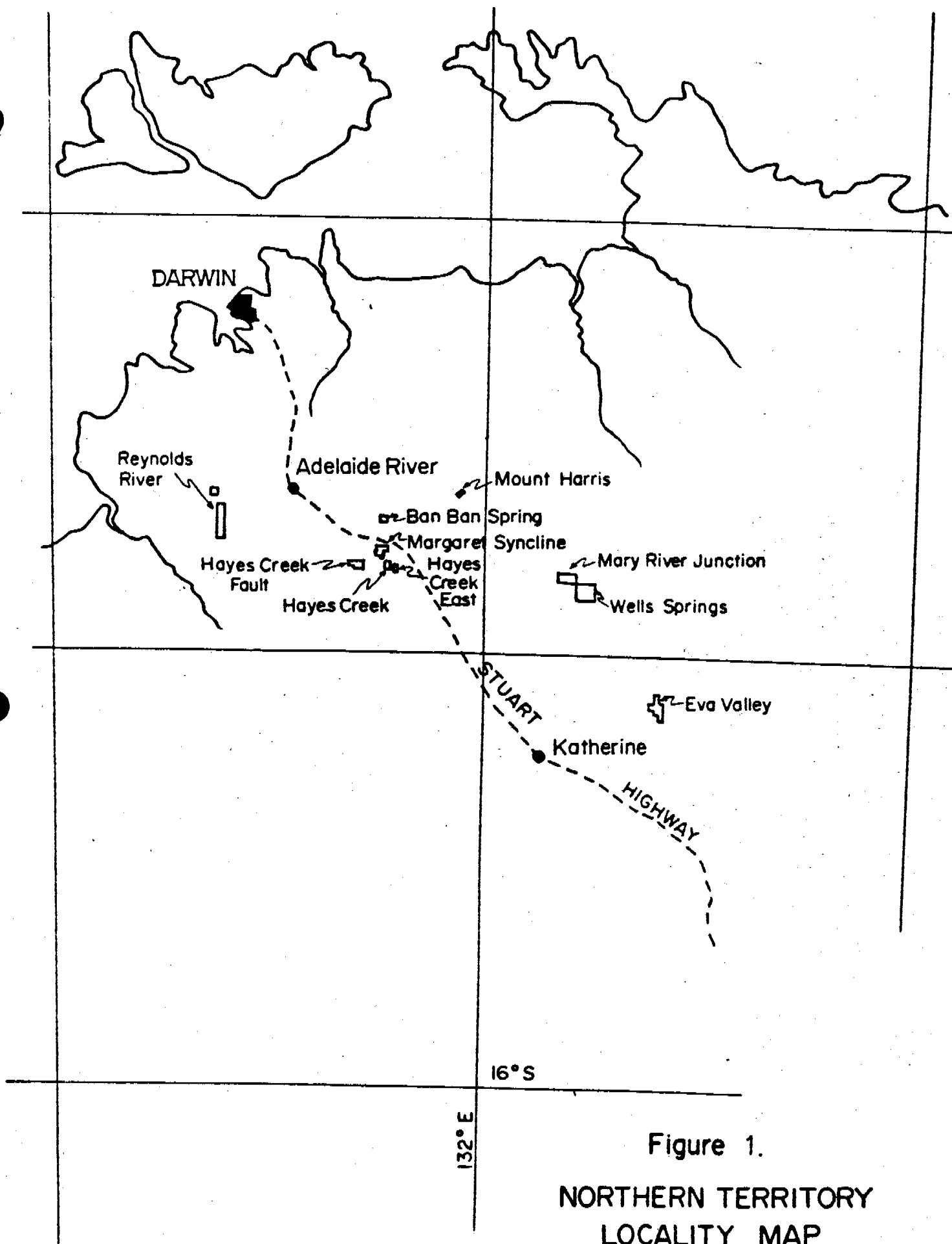
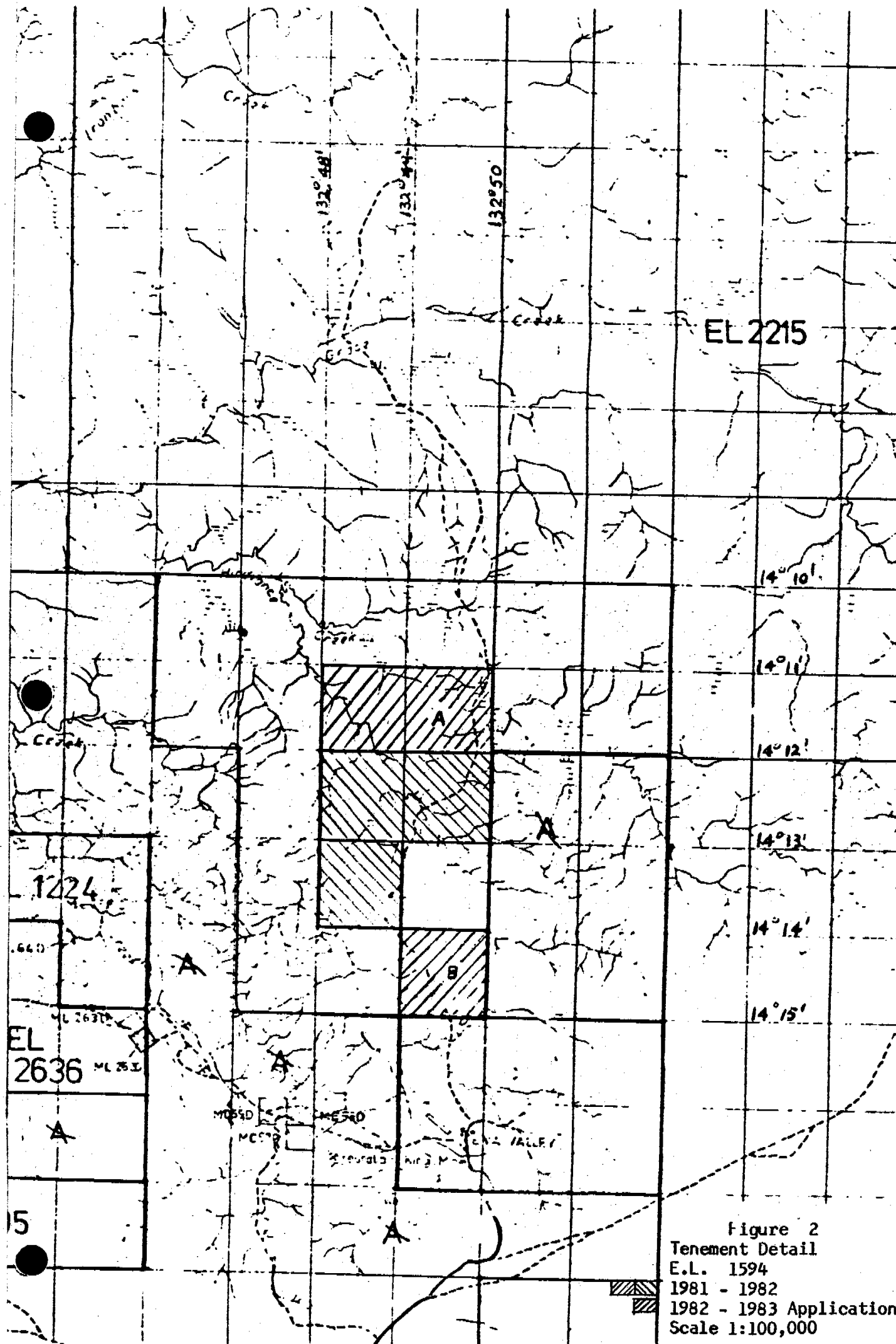
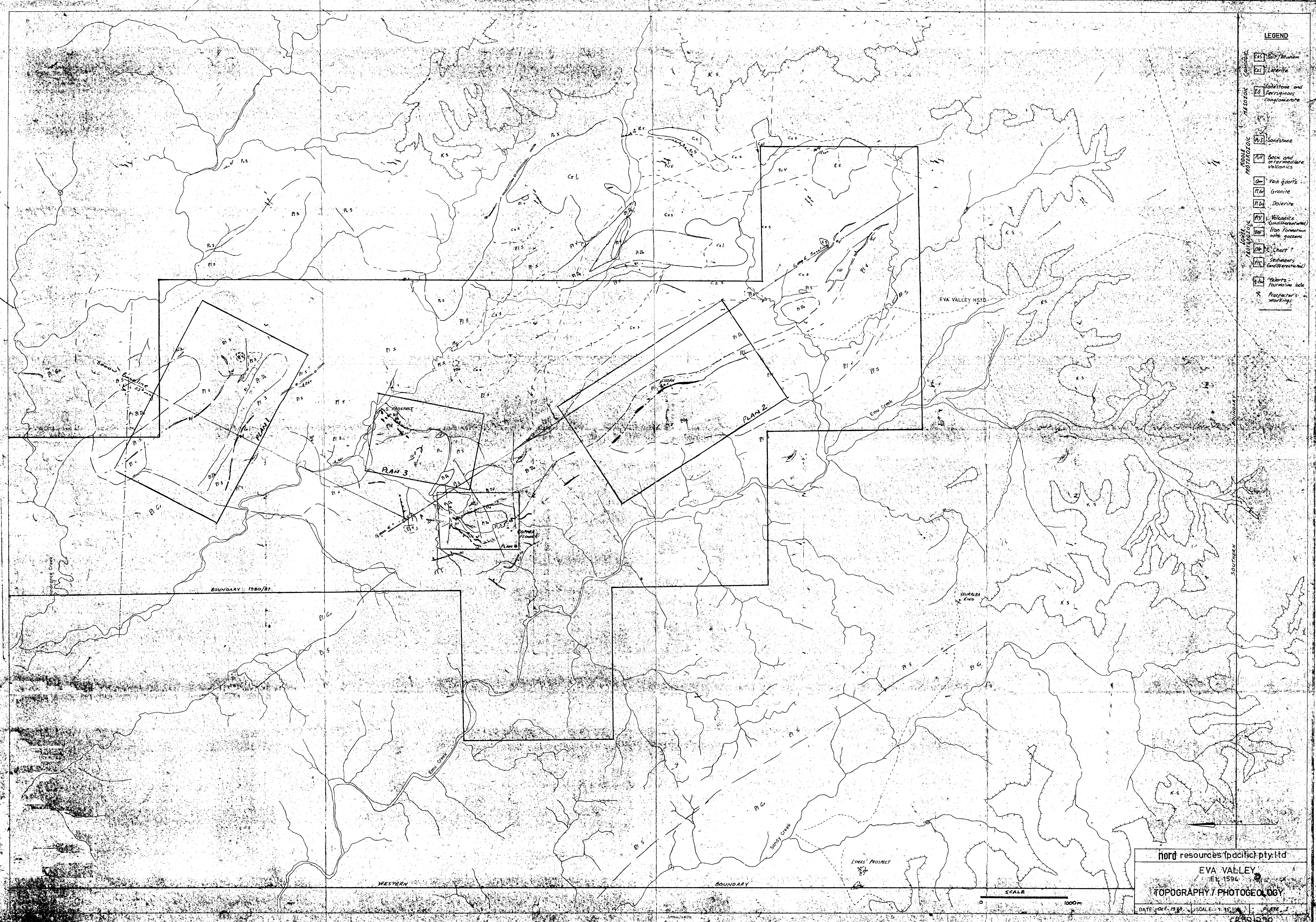


Figure 1.

NORTHERN TERRITORY
LOCALITY MAP

SCALE 1:2,500,000





LEGEND

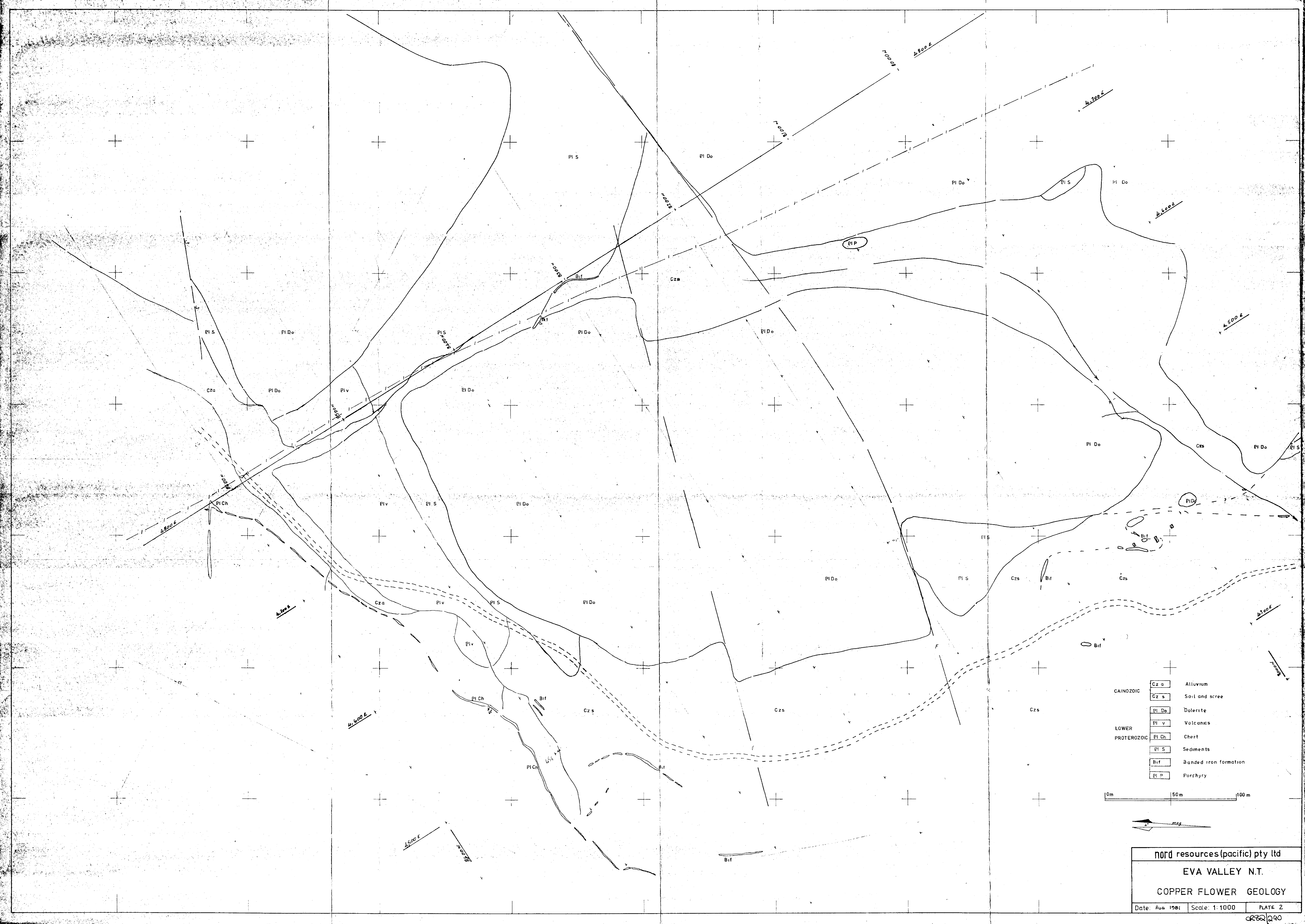
- Geological**
 - CaS Salt/Alumina
 - CaL Laterite
 - Ks Sandstone and Ferruginous conglomerate
- Middle Tertiary**
 - PlS Sandstone
 - PlV Basic and intermediate volcanics
- Lower Tertiary**
 - Qa Vain quartz
 - PlG Granite
 - PlD Diorite
 - PlV Volcanics (and/or andesite)
 - PlF Iron formation with gossans
 - PlC Chert
 - PlS Sediments (and/or andesite)
 - PlD Diorite formation late
 - R Prospector's workings

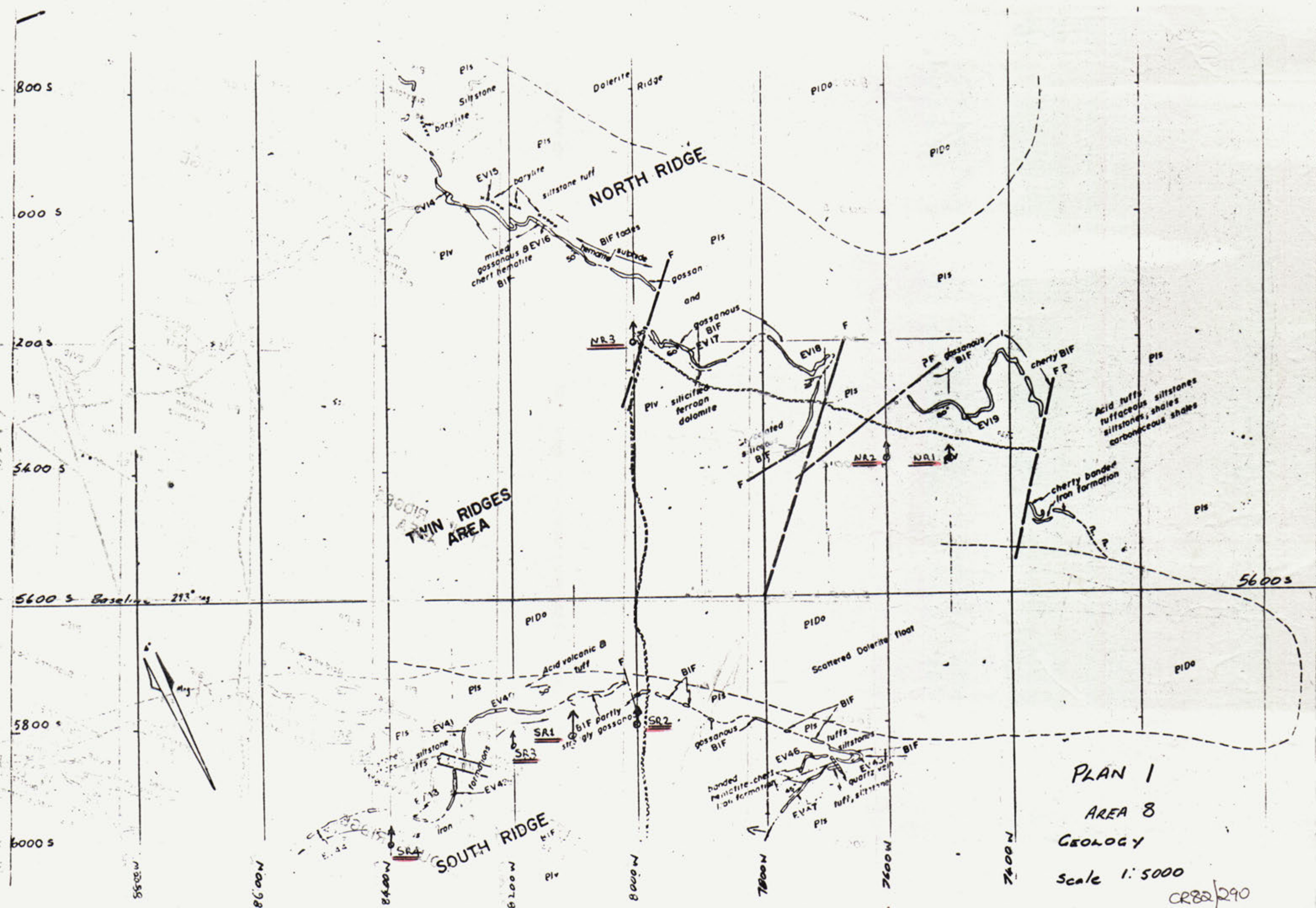
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EVA VALLEY

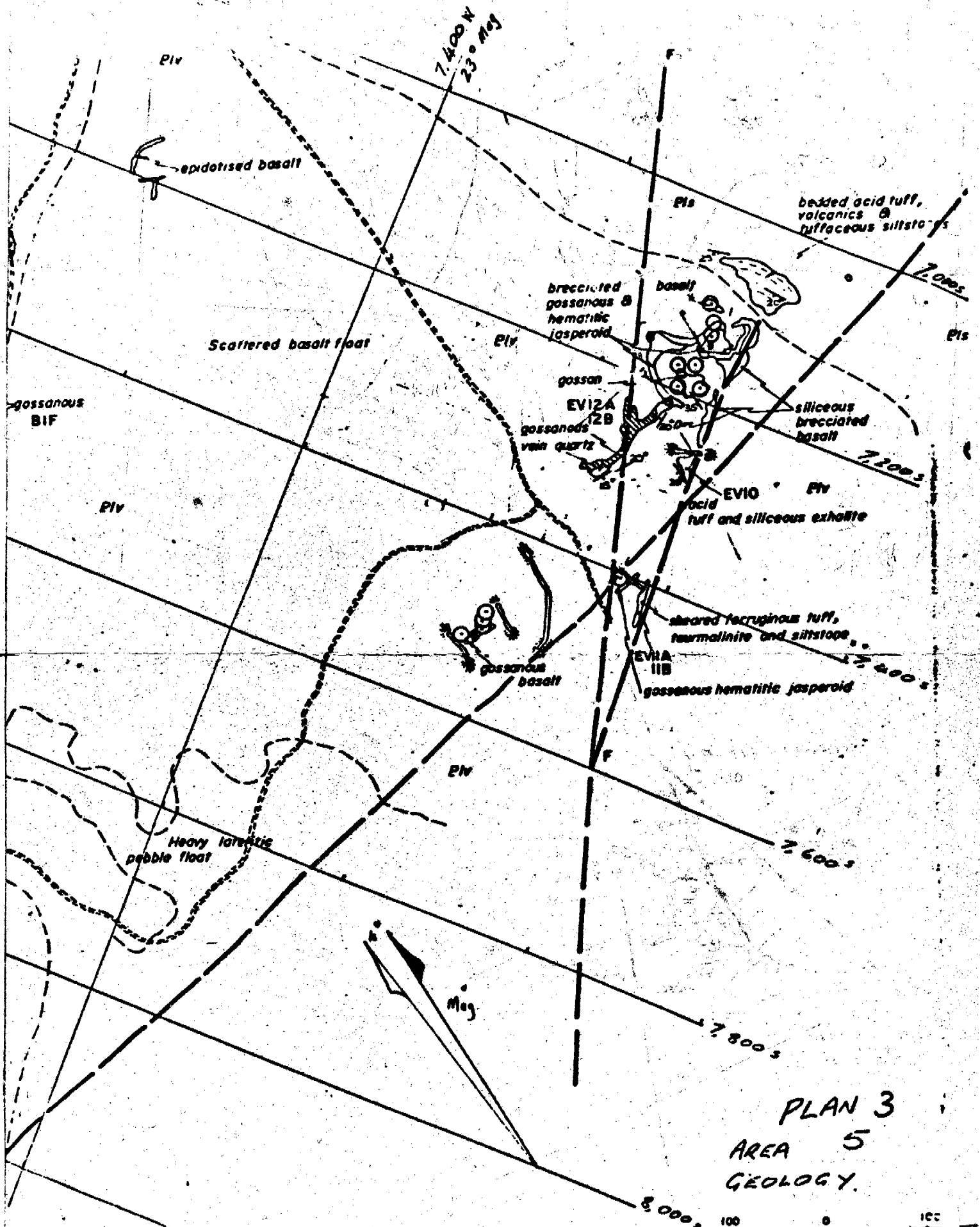
TOPOGRAPHY / PHOTO GEOLOGY

DATE: Oct 1988 SCALE: 1:15000





PLAN 1
AREA 8
GEOLOGY
Scale 1:5000
CR82/290



PLAN 3
AREA 5
GEOLOGY.

CR82/290



PLAN 4
COPPER FLOWER
GEOLOGY

Scale: 1:7000

CRB2/290