ANNUAL REPORT FOR YEAR THREE - EL 5106 LAKE BENNETT AREA

15 OCTOBER, 1989 TO 14 OCTOBER, 1990

BY
I. K. BUTLER B.APP.SC

OF

EUPENE EXPLORATION ENTERPRISES PTY LTD

FOR

NICRON RESOURCES LIMITED

Darwin SD 52-4
Noonamah 5172
Manton Dam 5172-3

DARWIN, NT
NOVEMBER, 1990

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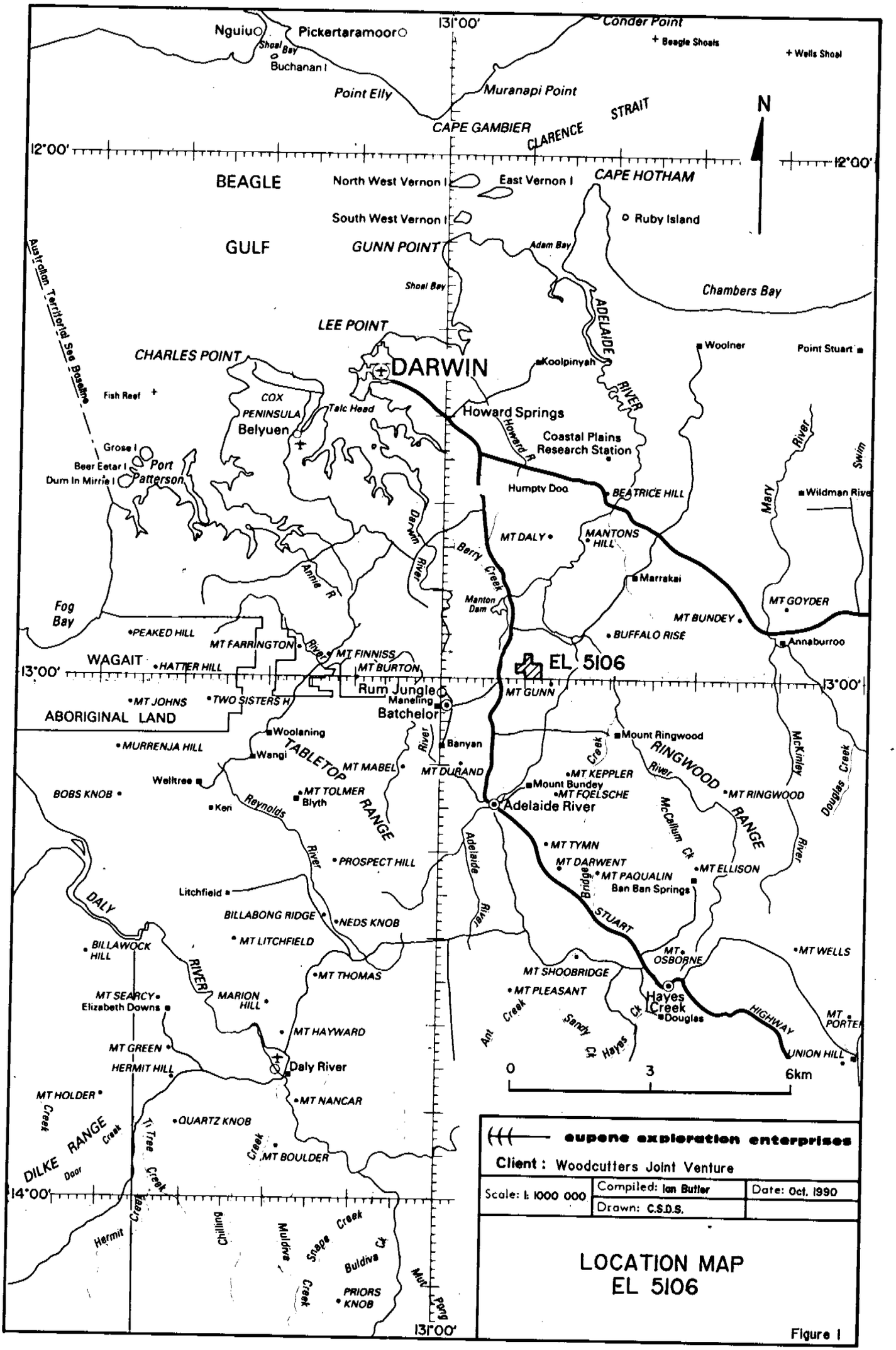
1. INTRODUCTION

Exploration Licence 5106 is located 65 kms southeast of Darwin (Figure 1) on the Manton Dam (5172-3) 1:50 000 map sheet. The centre of the licence is 6 kms ENE of the Woodcutters Pb-Zn-Ag mine in the Lake Bennett area. Access is gained via Chinner Road from the Stuart Highway.

The licence is a joint venture between Mr. R. M. Biddlecombe and the Woodcutters Joint Venture who are the operators.

The area has been explored primarily for gold and to a lesser extent base metal mineralisation. The aim of this report is to discuss the work conducted in the third year of tenure, present results and propose a work programme with an estimated budget for the fourth year of tenure.



eupene exploration enterprises

Client : Woodcutters Joint Venture

Scale: 1: 1000 000	Compiled: Ian Butler	Date: Oct. 1990
	Drawn: C.S.D.S.	

LOCATION MAP EL 5106

Figure 1

2. TENURE

Exploration Licence 5106 was granted to Mr. R. M. Biddlecombe on the 15th of October, 1987 for a period of four years. The licence holders are presently Woodcutters Joint Venture (80%) and R. M. Biddlecombe (20%).

The licence area comprised of 6 blocks (20 sq kms approx.) throughout Year Three, however it is now comprised of 3 blocks after the compulsory 50% relinquishment.

3. SUMMARY

Exploration Licence 5106 is underlain by Lower Proterozoic sediments and volcanics belonging to the Mount Partridge Group in the west and the overlying South Alligator Group to the east.

Literature research revealed that no previous mining was recorded in the area. Modern exploration has concentrated upon uranium and base metals, with no previous systematic exploration specifically for gold. A number of geochemically anomalous (Au, Cu, Pb, Zn and As) samples have been recorded in the region by previous workers.

Exploration activity during the first two years of tenure concentrated on reconnaissance stream sediment sampling with follow-up detailed stream sediment and rock chip sampling. This work resulted in a geochemically anomalous area, Octa Anomaly (Figure 2) being defined in the southeast of the licence area.

Work carried out during 1989/90 consisted of detailed stream sediment sampling, geological traversing, rock chip and soil sampling in the vicinity of the Octa Anomaly.

This work has revealed weak Cu, Zn and Au soil geochemistry anomalies associated with quartz veined ferruginous, trace gossanous sediments and dolerite within the Koolpin Formation of the South Alligator Group. The stream sediment sampling failed to identify any further geochemically anomalous areas.

4. CONCLUSIONS

(a) Follow up rock chip and soil sampling has confirmed a stream geochemistry anomaly at the Octa Anomaly.

(b) The weak base metal and gold geochemical anomalism within the Octa Anomaly is associated with the Koolpin Formation.

(c) Anomalous base metal and arsenic geochemistry is associated with ferruginous, weakly gossanous shales/siltstones.

(d) Anomalous gold geochemistry is associated with
   i) a quartz veined ferruginous/gossanous chert breccia horizon, and
   ii) a ferruginous quartz stockworked dolerite.

(e) Further work is required to test the soil geochemistry anomalies.

(f) Results of the stream sediment sampling throughout the remainder of the licence area indicate there is little potential for significant gold or base metal mineralisation.

5. PREVIOUS EXPLORATION

No previous mining is recorded in the licence area. Modern exploration of the district commenced in the 1960's when the BMR discovered the Pb-Zn-Ag mineralisation at the nearby Woodcutters Prospect. Exploration by the BMR and subsequent private companies was almost exclusively confined to the western side of the Stuart Highway until Magnum Explorations NL was granted EL 739 in 1974.

Exploration Licence 739 included portions of the current EL 5106. Magnum Explorations conducted extensive literature research into previous work conducted by the BMR (Clark, 1975, 1976) and therefore specifically sought lead, zinc and uranium on EL 739. In 1976, Amax Exploration (Australia) Inc., carried out geological mapping, reconnaissance geochemical sampling and a combined airborne radiometric and magnetic survey under a joint venture agreement with Magnum Explorations (Gellattly, 1977).

Geochemical work by Amax included stream sediment sampling (-120 and + 16 mesh fractions) and selected rock chip sampling of ferrunginous outcrops. All samples were assayed for Cu, Pb, Zn, Ni, Co, Mn and U and selected samples were also assayed for Ag. Several weakly anomalous Cu and Zn values (between 100 and 130 ppm) were found in the +16 mesh samples collected from within the EL 5106 region. Follow-up sampling located further weakly anomalous Cu, Pb and Zn values from along a tributary to Otto Creek (located by current sample number 25-7-25B, 26S and LS24, Figure 2). The highest assays were 1200 ppm Zn (rock sample) and 155 ppm Zn (+16 mesh silt sample).

No uranium anomalies were located on the current EL 5106 area. Further follow-up work by Amax concentrated upon areas outside EL 5106 (Wyatt & Braham, 1977).

In 1979, Mines Administration Pty Ltd was granted EL 1983 which covered portions of EL 5106. Geological mapping, gridding, rock chip sampling and traversing were carried out in 1980 (Hamilton, 1980). Follow-up work in 1981 concentrated upon the Koolpin Formation which was considered to be the most favourable host for economic mineralisation (Hamilton, 1982), and included detailed gridding, mapping (1:2500 scale), radiometric traverses, rock chip sampling and trenching. Four trenches were excavated in the Koolpin Formation, located on radiometric anomalies. Channel samples were

collected over 2m intervals and assayed for Cu, Pb, Zn, Ag, Bi, As, Sb, Hg, U, Th, Sn and Au. No significant radiometric anomalies were located, and all gold values were less than the detection limit (0.1 ppm). Some anomalous base metal and arsenic results were obtained however, the maximum values being: 0.26% Zn, 0.13% As, 480 ppm Pb and 210 ppm Cu. Seventy five rock chip samples collected from the Koolpin Formation were also assayed for the same elements, and the results included 0.4 ppm Au (three other samples attained 0.2 ppm Au), 0.4% As, 0.42% Zn, 960 ppm Pb and 360 ppm Cu.

Further follow-up work was conducted outside of the current EL 5106 area where more significant anomalies were located, and the licence was finally relinquished in 1984 (Hamilton, 1984).

The Woodcutters Joint Venture commenced exploration of the licence area in 1988. The initial programme involved regional stream sediment sampling (BCL - Bulk Cyanide Leach and -50 mesh) over most of the accessible areas. Anomalous gold levels (>1 ppb Au) were obtained in 5 BCL samples collected from around Lake Bennett however check BCL sampling only repeated one of the anomalies and none of the anomalous drainages were confirmed by Au analysis of the -50 mesh sediments.

During Year Two, the remainder of the licence area was evaluated by regional stream sediment sampling and anomalous drainages detected during the initial programme were followed up with detailed -40 mesh stream sediment sampling and rock chip sampling.

This work defined two geochemically anomalous areas:-

a) a stream draining from Lake Bennett just below the dam with anomalous gold and arsenic (LS14B), and

b) an area in the southeastern corner of EL 5106 with anomalous gold in one stream (LS26) and with elevated gold and base metals in rock chips.

6. WORK CARRIED OUT AND RESULTS

Exploration during Year Three has mainly involved follow-up work in the southeastern corner of the exploration licence around the only significant geochemically anomalous area defined during the previous programmes. This area is referred to as the Octa Anomaly (see Figure 2 for location). In addition, stream sediment sampling and geological traversing was carried out within the licence.

6.1 Stream Sediment Sampling

A total of fifteen -40 mesh stream sediment samples (LBS 1001-1015) were collected in the vicinity of the initial anomalous BCL samples (see Figure 2 for location) in order to complete the detailed stream sediment programme. The samples were analysed for Au (30 gram fire assay), Cu, Pb, Zn, Ag (AAS) and As (hydride generation - AAS finish). The geochemical levels of all elements were background or below the level of detection (see Appendix I for results). The area tested by this sampling programme was subsequently included in the compulsory 50% relinquishment for Year Three.

6.2 Geological Traversing and Rock Chip Sampling

The Octa Anomaly area was initially investigated by reconnaissance traversing and further rock chip sampling in order to follow up weakly anomalous stream sediments (LS26 - 0.024 ppm Au and LS24 - 105 ppm Zn) and rock chips collected during Year Two.

The geology of the Octa Anomaly area is dominantly goethitic/hematitic weakly gossanous siltstones/shales with narrow, commonly boudinaged, chert beds. A distinctive quartz veined, ferruginous, brecciated chert horizon trending generally north-south outcrops in the centre of the Octa Anomaly. An iron stained, quartz veined (stockwork) feltic textured dolerite outcrop was noted in the south east corner of the area investigated.

A total of 14 samples of strongly ferruginous/gossanous sediments, chert beds and quartz veins were selectively rock chip sampled (see Figures 2 and 3 for location) and analysed for Au (30 gram fire assay), Cu, Pb, Zn, Ag, and As (AAS). Weak

to moderately anomalous levels were obtained for all of the elements except Ag, however there is little correlation between the sample types and anomalous elements. The elevated geochemical levels are generally spotty. Most of the samples had anomalous levels of As (800 ppm max.). The highly ferruginous samples had unpredictable weakly anomalous base metal levels - Cu 760 ppm max., Pb 300 ppm max., and Zn 960 ppm max. (See Appendix II for results).

Only one sample (IBLB04), had anomalous gold (0.72 ppm). It was a sample of brecciated ferruginous chert outcropping at the headwaters of the only stream anomalous in gold within the Octa Anomaly.

6.3 Soil Sampling

A soil sampling programme was carried out over the Octa Anomaly defined by the earlier stream sediment, rock chip sampling and geological mapping traverses. A total of 124, -40 mesh soil samples (LB1-124) were collected on a 100m x 25m grid within an area of 1000m x 400m (see Figure 2 and 3 for sample locations). The samples were analysed for Au (30 gram fire assay) and Cu, Pb, Zn and As (AAS) (see Appendix III for results).

Weakly anomalous levels of Au, Cu and Zn were obtained in the soil samples. The maximum values were Au 0.78 ppm, Cu 172 ppm and Zn 260 ppm. Only background levels were obtained for Pb and As. The Cu and Zn anomalies are broadly coincident (see Figures 5 and 6) and define a weakly anomalous zone 750 m long and 1-200m wide. There are two small (200m x 50m) Au geochemistry anomalies (see Figure 4).

- western anomaly (max 28 ppb Au) that is coincident with the elevated Cu and Zn soil geochemistry and is associated with a quartz veined ferruginous brecciated chert horizon located at the headwaters of the only stream with anomalous Au within the Octa Anomaly.

- eastern anomaly (max 778 ppb Au) that is not coincident with the elevated Cu and Zn soil geochemistry and is associated with strongly ferruginised quartz veined dolerite.

7. GEOLOGY AND MINERALISATION

The western and northern sections of EL 5106 comprise Lower Proterozoic siltstones and shales of the Wildman Siltstone belonging to the Mount Partridge Group. Intercalated orthoquartzites and sandstones of the Acacia Gap Quartzite Member form prominent ridges in the western portion of the licence and around the periphery of Lake Bennett.

The Lower Proterozoic South Alligator Group overlies the Mount Partridge Group in the southern and eastern sections of the licence. The basal unit, Koolpin Formation, comprises goethitic ironstones, paraquartzite breccia, chert breccia and siltstones with chert nodules. The overlying Gerowie Tuff consists of tuffaceous shales and siltstones, cherts and thin banded iron formation beds. The youngest unit of the South Alligator Group is the Mount Bonnie Formation which incorporates siltstones, shales, greywackes and banded iron formation beds.

Siltstones, shales and greywackes of the Burrell Creek Formation (Finniss River Group) may subcrop in the southern central section of EL 5106 which is overlain by Quaternary silts and floodplain deposits. Quaternary deposits and a laterite duricrust also occur along most of the low-lying valleys and drainages.

The structure of the licence area is dominated by a number of major south-plunging anticlines and synclines. Many smaller scale subsidiary folds are also evident on the aerial photos. Faults appear to be generally oriented NE-SW or NW-SE, and are sometimes marked by fault breccia outcrops.

Follow-up detailed stream sediment sampling failed to substantiate the original anomalous BCL Au values with the exception of a tributary of Otto Creek which produced a -40 mesh silt sample of 24 ppb Au (LS26). This area is now referred to as the Octa Anomaly. Work conducted during Year Three has shown the anomalous stream, rock chip and soil geochemistry is associated with the Koolpin Formation. Anomalous base metal and arsenic values have been obtained by previous explorers in this unit. Specifically, anomalous gold is associated with a distinctive quartz veined ferruginous chert breccia and a ferruginous quartz stockworked dolerite nearby. The elevated base metal values are associated with ferruginous weakly gossanous siltstones and shales. Exploration by competitors has identified a small gold resource along strike in the Koolpin Formation within the vicinity of the Octa Anomaly.

8. EXPENDITURE - YEAR THREE

Overall expenditure on the licence area for Year Three is as follows:-

Geological consultants	$3,850
Field assistants	$920
Drafting	$670
Consumables, maps, photocopying	$320
Analysis	$3,060
Tenement lease/payments	$100
Administration (15%)	$1,338
TOTAL	**$10,258**

9. PROPOSED PROGRAMME AND EXPENDITURE FOR YEAR FOUR

The proposed work programme for Year Four of EL5106 is as follows.

1) Costean and channel sampling to test the soil geochemistry anomalies at the Octa Anomaly.

2) Geological traversing and rock chip sampling along the prospective horizons within the Koolpin Formation.

The estimated budget for this programme is $5,000.

9. REFERENCES

CLARK, A.B., 1975. Annual Report 1975, Exploration Licence 739. Unpublished Report for Magnum Explorations NL. *NT Department of Mines and Energy Library, Open File Record CR75/63.*

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SMITH, S.R. 1989. Annual Report for Year Two, EL 5106. Lake Bennett Area, 15th October, 1988 to 14th October, 1989. Unpublished Report for the Woodcutters Joint Venture and NT Department of Mines and Energy.

WYATT, D.H. & BRAHAM, B., 1988. Assessment Report on EL's 995, 739 and Adjoining Areas of the Daly Range - Adelaide River Area, Northern Territory (In Agreement with Magnum Explorations NL). Unpublished Report for Amax Exploration - Magnum Exploration Joint Venture. *NT Department of Mines and Energy Library, Open File Record CR78/54.*

APPENDIX I

STREAM SEDIMENT SAMPLE ANALYSIS RESULTS

ANALABS

A Division of Inchcape Inspection and Testing Services, Australia, Pty. Ltd.
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28 SEP 1990
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ANALYTICAL REPORT No. 330.0.21.04543

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INVOICE TO:

WOODCUTTERS JOINT VENTURE
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ORDER No.	PROJECT
23643/44	

DATE RECEIVED	RESULTS REQUIRED
07/09/90	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES
6	21/09/90	1

TOTAL No. OF SAMPLES: 55

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
LBS 10,01/15	SS Prep: 029	Au/309,Au/CAL,Au(R),Au(S)/309
LBS 10,01/15	SS	Cu,Pb,Zn,Ag/140
LBS 10,01/15	SS	As/114
Various	RO Prep: 019	Au,Au(R),Au(S)/329
Various	RO	Pb,Zn,Cu,As,Ag,Co,Fe,Ni,Mn/140

REMARKS

RESULTS TO:

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ANALABS

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	330.0.21.04543	21/09/90	23643744	1 OF 6

TUBE No.	SAMPLE No.	Mn	Fe	Co	Ni	Cu	Zn	As	As	Ag
1	LBS 1001	-	-	-	-	10	10	2	-	0.5
2	LBS 1002	-	-	-	-	10	10	3	-	0.5
3	LBS 1003	-	-	-	-	10	10	5	-	0.5
4	LBS 1004	-	-	-	-	10	10	2	-	0.5
5	LBS 1005	-	-	-	-	10	5	3	-	<0.5
6	LBS 1006	-	-	-	-	25	10	6	-	1.0
7	LBS 1007	-	-	-	-	15	5	6	-	0.5
8	LBS 1008	-	-	-	-	10	10	5	-	0.5
9	LBS 1009	-	-	-	-	15	20	8	-	0.5
10	LBS 1010	-	-	-	-	25	20	7	-	0.5
11	LBS 1011	-	-	-	-	15	5	24	-	0.5
12	LBS 1012	-	-	-	-	10	<5	17	-	0.5
13	LBS 1013	-	-	-	-	20	5	4	-	0.5
14	LBS 1014	-	-	-	-	15	5	4	-	<0.5
15	LBS 1015	-	-	-	-	10	10	6	-	0.5

ANALABS

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SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	330.0.21.04543	21/09/90	23643/44	4 OF 6

TUBE No.	SAMPLE No.	Au	Au	Pb	Au(R)	Au(S)	Au(R)	Au(S)		
1	LBS 1001	<0.008	-	15	-	-	-	-		
2	LBS 1002	<0.008	-	10	-	-	-	-		
3	LBS 1003	0.008	-	10	-	-	-	-		
4	LBS 1004	<0.008	-	<5	-	-	-	-		
5	LBS 1005	<0.008	-	5	-	-	-	-		
6	LBS 1006	0.008	-	10	-	-	-	-		
7	LBS 1007	<0.008	-	5	-	-	-	-		
8	LBS 1008	<0.008	-	10	-	-	-	-		
9	LBS 1009	<0.008	-	15	-	-	-	-		
10	LBS 1010	0.015	-	15	-	-	-	-		
11	LBS 1011	<0.008	-	5	-	<0.008	-	-		
12	LBS 1012	<0.008	-	<5	<0.008	-	-	-		
13	LBS 1013	0.009	-	5	-	-	-	-		
14	LBS 1014	<0.008	-	10	-	-	-	-		
15	LBS 1015	<0.008	-	5	-	-	-	-		

APPENDIX II

ROCK CHIP SAMPLE ASSAY RESULTS

ANALABS
A Division of Inchcape Inspection and Testing Services Australia, Pty. Ltd.
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ORDER No.	PROJECT
024986	

DATE RECEIVED	RESULTS REQUIRED
09/11/90	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
1	14/11/90	1	4

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
RC-,1/4	RO Prep: 029	Au/309,Au/CAL,Au(R),Au(S)/309
RC-,1/4	RO	Cu,Pb,Zn,As/140

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	330.0.21.04705	14/11/90	024986	1 OF 1

TUBE No.	SAMPLE No.	Cu	Zn	As	Au	Pb	Au(R)	Au(S)		
1	RC-1	28	25	<100	<0.008	7	-	<0.008		
2	RC-2	30	59	<100	<0.008	11	-	-		
3	RC-3	760	346	200	<0.008	26	-	-		
4	RC-4	111	291	300	<0.008	25	-	-		
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13										
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15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	100	0.008	5	0.008	0.008		
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM		
25	METHOD	140	140	140	309	140	309	309		

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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024720	

DATE RECEIVED	RESULTS REQUIRED
26/10/90	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
1	09/11/90	1	10

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
<IBLB 0,1/9,10	RO Prep: 029	Au/309,Au/CAL,Au(R),Au(S)/309
<IBLB 0,1/9,10	RO	Cu,Pb,Zn,As,Ag/140

RESULTS TO

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RESULTS TO

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	330.0.21.04674	09/11/90	024720	1 OF 1

TUBE No.	SAMPLE No.	Cu	Zn	As	Ag	Au	Pb	Au(R)	Au(S)	
1	IBLB 01	104	96	<100	<1	<0.008	65	–	–	
2	IBLB 02	38	76	<100	<1	<0.008	300	–	–	
3	IBLB 03	12	475	800	<1	<0.008	26	–	–	
4	IBLB 04	96	129	800	1	0.718	27	–	–	
5	IBLB 05	65	463	100	<1	<0.008	28	–	–	
6	IBLB 06	203	890	300	<1	0.032	13	–	–	
7	IBLB 07	136	25	<100	<1	<0.008	14	–	<0.008	
8	IBLB 08	68	87	400	<1	0.024	24	–	–	
9	IBLB 09	103	960	200	<1	<0.008	26	–	–	
10	IBLB 010	91	880	600	<1	<0.008	12	–	–	
11										
12										
13										
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15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	2	2	100	1	0.008	5	0.008	0.008	
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	
25	METHOD	140	140	140	140	309	140	309	309	

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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APPENDIX III

SOIL SAMPLE ANALYSIS RESULTS

ANALABS

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Division of Inchcape Inspection and Testing Services Pty Ltd

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No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
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SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
B-,1/9,10/29,31/99,100/124	SO Prep: 029	Au/309,Au/CAL,Au(R),Au(S)/309
B-,1/9,10/29,31/99,100/124	SO	Cu,Pb,Zn,As/140
B-,1/9,10/29,31/99,100/124	SO	Cu,Pb,Zn,As/101

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SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	330.0.21.04704	14/11/90	024986	1 OF 6

TUBE No.	SAMPLE No.	Cu	Zn	As	Au	Pb	Ø	Au(R)	Au(S)	
1	LB-1	70	17	<100	<0.008	17	–	–	–	
2	LB-2	67	39	<100	<0.008	9	–	–	–	
3	LB-3	42	17	<100	<0.008	5	–	–	–	
4	LB-4	40	24	<100	0.029	6	–	–	–	
5	LB-5	46	19	<100	<0.008	6	–	–	–	
6	LB-6	40	14	<100	<0.008	<5	–	–	–	
7	LB-7	53	33	<100	0.009	8	–	–	–	
8	LB-8	55	74	<100	<0.008	5	–	–	–	
9	LB-9	47	26	<100	<0.008	7	–	–	<0.008	
10	LB-10	52	24	<100	<0.008	5	–	–	–	
11	LB-11	56	17	<100	<0.008	<5	–	–	–	
12	LB-12	45	26	<100	<0.008	6	–	<0.008	–	
13	LB-13	36	36	<100	<0.008	11	–	–	–	
14	LB-14	46	21	<100	<0.008	16	–	–	–	
15	LB-15	51	41	<100	<0.008	5	–	–	–	
16	LB-16	45	20	<100	<0.008	<5	–	–	–	
17	LB-17	44	7	<100	<0.008	5	–	–	–	
18	LB-18	21	15	<100	<0.008	5	–	–	–	
19	LB-19	41	53	<100	<0.008	9	–	–	–	
20	LB-20	90	70	<100	0.012	19	–	–	–	
21	LB-21	67	32	<100	<0.008	5	–	–	<0.008	
22	LB-22	50	25	<100	<0.008	10	–	<0.008	–	
23	LB-23	52	19	<100	0.008	7	–	–	–	
24	LB-24	26	12	100	<0.008	5	–	–	–	
25	LB-25	24	6	<100	<0.008	8	–	–	–	

Results in ppm unless otherwise specified
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— = element not determined

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	330.0.21.04704	14/11/90	024986	2 OF 6

TUBE No.	SAMPLE No.	Cu	Zn	As	Au	Pb	00	Au(R)	Au(S)	
1	LB-26	29	18	<100	<0.008	8	–	–	–	
2	LB-27	51	123	<100	<0.008	10	–	–	–	
3	LB-28	59	199	<100	<0.008	9	–	–	–	
4	LB-29	48	26	<100	<0.008	13	–	–	–	
5	LB-31	32	30	<100	<0.008	<5	–	–	–	
6	LB-32	31	10	<100	<0.008	<5	–	–	–	
7	LB-33	25	<5	<100	<0.008	8	–	–	–	
8	LB-34	47	33	<100	0.010	15	–	–	–	
9	LB-35	52	19	<100	<0.008	12	–	–	–	
10	LB-36	29	8	<100	<0.008	6	–	–	–	
11	LB-37	16	9	<100	<0.008	8	–	–	–	
12	LB-38	15	6	<100	<0.008	9	–	–	–	
13	LB-39	37	5	<100	<0.008	13	–	0.012	–	
14	LB-40	78	55	100	<0.008	72	–	–	–	
15	LB-41	86	70	<100	<0.008	19	–	–	–	
16	LB-42	20	25	<100	<0.008	21	–	–	–	
17	LB-43	13	16	<100	<0.008	10	–	–	–	
18	LB-44	16	18	<100	<0.008	20	–	–	–	
19	LB-45	44	5	100	0.011	16	–	–	–	
20	LB-46	40	17	100	<0.008	17	–	–	–	
21	LB-47	60	84	100	<0.008	5	–	–	–	
22	LB-48	51	27	<100	<0.008	7	–	–	–	
23	LB-49	44	5	<100	<0.008	5	–	<0.008	–	
24	LB-50	39	5	<100	<0.008	7	–	–	–	
25	LB-51	18	<5	<100	0.009	6	–	–	–	

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	330.0.21.04704	14/11/90	024986	3 OF 6

TUBE No.	SAMPLE No.	Cu	Zn	As	Au	Pb	00	Au(R)	Au(S)	
1	LB-52	25	<5	<100	0.024	13	–	–	0.049	
2	LB-53	49	67	<100	0.014	8	–	–	–	
3	LB-54	51	70	<100	<0.008	26	–	–	–	
4	LB-55	94	135	100	<0.008	32	–	–	–	
5	LB-56	172	56	100	0.020	61	–	–	–	
6	LB-57	107	57	100	0.017	9	–	–	–	
7	LB-58	61	71	200	<0.008	5	–	–	–	
8	LB-59	88	159	100	0.010	5	–	–	–	
9	LB-60	58	100	100	<0.008	10	–	–	–	
10	LB-61	59	21	100	<0.008	9	–	–	–	
11	LB-62	34	15	100	0.019	10	–	–	–	
12	LB-63	48	5	100	<0.008	8	–	–	–	
13	LB-64	35	10	<100	<0.008	10	–	–	–	
14	LB-65	79	50	<100	<0.008	13	–	0.010	–	
15	LB-66	93	61	<100	<0.008	8	–	–	–	
16	LB-67	94	146	<100	<0.008	12	–	–	–	
17	LB-68	45	82	<100	<0.008	33	–	–	–	
18	LB-69	91	77	<100	<0.008	21	–	–	–	
19	LB-70	89	117	<100	0.010	16	–	–	–	
20	LB-71	60	126	<100	<0.008	25	–	–	–	
21	LB-72	66	123	<100	<0.008	14	–	–	–	
22	LB-73	79	58	<100	0.008	17	–	–	–	
23	LB-74	50	31	<100	<0.008	17	–	–	–	
24	LB-75	35	13	100	0.010	17	–	<0.008	–	
25	LB-76	55	13	100	0.010	10	–	–	–	

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	330.0.21.04704	14/11/90	024986	4 OF 6

TUBE No.	SAMPLE No.	Cu	Zn	As	Au	Pb	00	Au(R)	Au(S)	
1	LB-77	105	147	<100	0.010	18	–	–	–	
2	LB-78	64	32	100	0.016	18	–	–	–	
3	LB-79	66	29	200	0.008	15	–	–	–	
4	LB-80	9	22	100	0.011	7	–	–	–	
5	LB-81	75	63	<100	<0.008	15	–	–	<0.008	
6	LB-82	37	30	<100	0.008	15	–	–	–	
7	LB-83	34	5	<100	0.040	34	–	–	–	
8	LB-84	42	29	100	0.009	28	–	–	0.010	
9	LB-85	75	260	<100	0.203	137	–	–	–	
10	LB-86	71	61	<100	0.009	35	–	–	–	
11	LB-87	48	61	<100	<0.008	9	–	–	–	
12	LB-88	30	35	<100	<0.008	31	–	–	–	
13	LB-89	38	55	<100	<0.008	40	–	–	–	
14	LB-90	86	102	<100	<0.008	29	–	–	–	
15	LB-91	84	50	100	0.028	19	–	–	–	
16	LB-92	51	28	<100	0.028	9	–	–	–	
17	LB-93	37	38	<100	<0.008	20	–	–	–	
18	LB-94	37	7	<100	<0.008	16	–	–	–	
19	LB-95	47	17	<100	<0.008	28	–	–	–	
20	LB-96	51	43	<100	<0.008	16	–	–	–	
21	LB-97	44	41	<100	0.013	13	–	–	–	
22	LB-98	37	26	<100	0.021	10	–	–	–	
23	LB-99	33	21	<100	0.778	5	–	–	–	
24	LB-100	24	16	<100	0.022	6	–	–	–	
25	LB-101	26	6	<100	<0.008	18	–	0.010	–	

Results in ppm unless otherwise specified.
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X = element concentration is below detection limit.
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ANALYTICAL DAT

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIE	N	AGE
	330.0.21.04704	14/11/90	024986		5 OF 6

TUBE No.	SAMPLE No.	Cu	Zn	As	Au	Pb	00	Au(R)	Au(S)	
1	LB-102	83	39	100	0.010	14	–	–	–	
2	LB-103	101	55	100	0.008	7	–	–	–	
3	LB-104	73	47	100	0.022	10	–	–	–	
4	LB-105	73	53	<100	0.009	5	–	–	–	
5	LB-106	56	31	<100	0.009	27	–	–	–	
6	LB-107	63	38	<100	0.008	8	–	–	–	
7	LB-108	53	35	<100	0.014	25	–	–	–	
8	LB-109	55	43	<100	0.008	16	–	0.010	–	
9	LB-110	46	64	<100	0.016	9	–	–	–	
10	LB-111	55	69	<100	0.008	5	–	–	0.018	
11	LB-112	36	36	<100	0.008	5	–	–	–	
12	LB-113	47	34	<100	0.012	7	–	–	–	
13	LB-114	83	30	100	0.017	11	–	–	–	
14	LB-115	50	11	<100	0.018	10	–	–	–	
15	LB-116	46	24	<100	<0.008	6	–	<0.008	–	
16	LB-117	47	19	100	0.010	5	–	–	–	
17	LB-118	48	10	<100	0.009	10	–	–	–	
18	LB-119	42	10	<100	0.011	13	–	–	–	
19	LB-120	43	18	<100	<0.008	8	–	–	–	
20	LB-121	31	22	<100	<0.008	5	–	–	–	
21	LB-122	53	44	<100	<0.008	14	–	–	–	
22	LB-123	32	46	<100	<0.008	15	–	–	–	
23	LB-124	21	51	<100	<0.008	20	–	–	–	
24										
25										

* Results in ppm unless otherwise specified
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XX = element concentration is below detection limit
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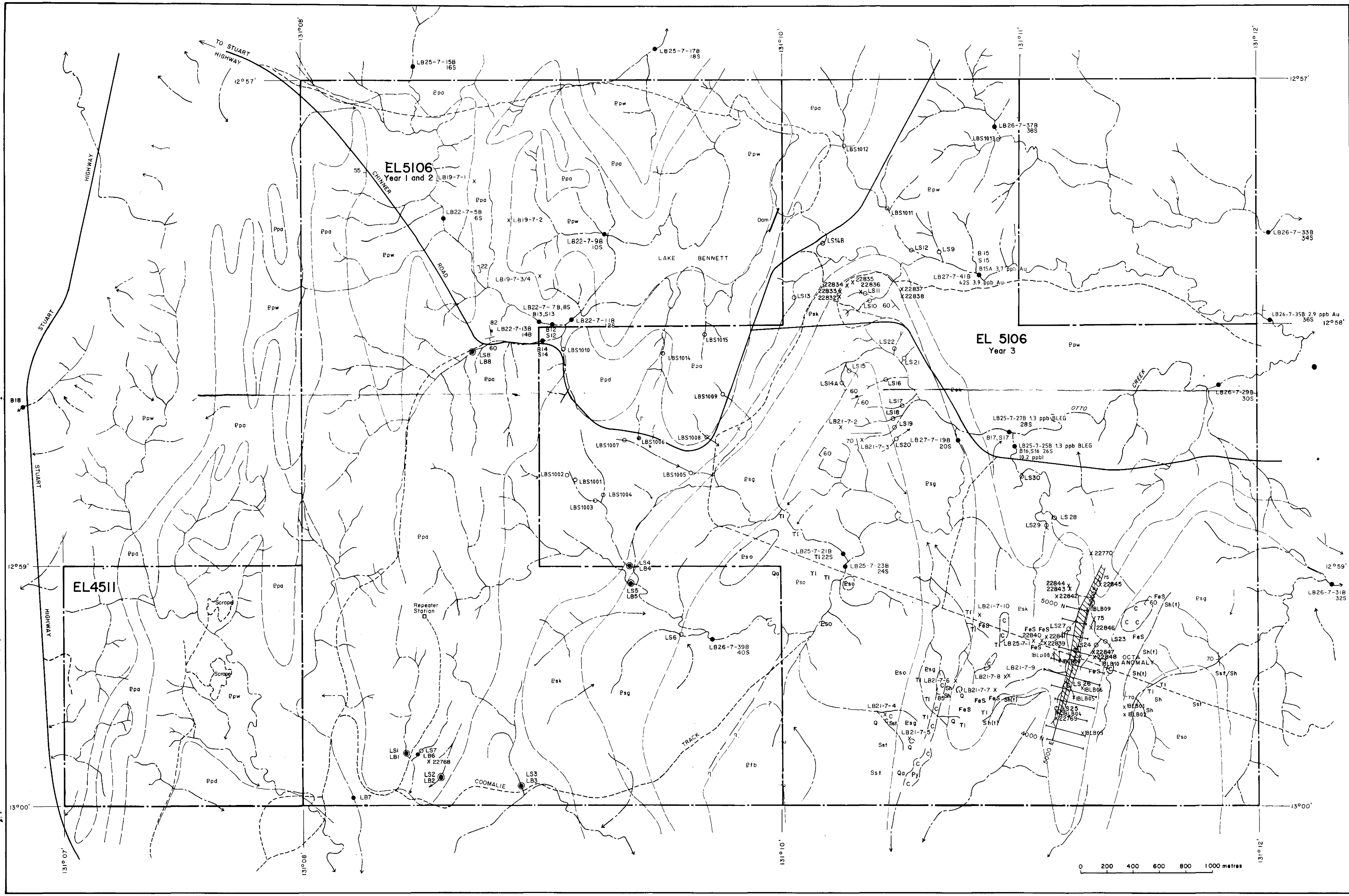


FINNISS RIVER GROUP

Unit	Description
Burrell Creek Formation Pfb	Siltstone, shale, greywacke

SOUTH ALLIGATOR GROUP

Unit	Description
Mount Bonnie Formation Pso	Siltstone, shale, banded iron formation, greywacke, rare chert
Gerowie Tuff Psg	Tuffaceous shale and siltstone argillite, chert, thin banded iron formation beds
Koolpin Formation Psk	Geothitic ironstone, paraquartzite breccia, chert breccia, siltstone with chert nodules

MOUNT PARTRIGE GROUP

Unit	Description
Wildman Siltstone Ppw	Shale and argillite
Mt Deane Volcanic Mbr. Ppd	Altered basic volcanics
Acacia Gap Quartzite Mbr. Ppa	Orthoquartzite, sandstone, interbedded shale or argillite

Quartz veined ferruginous and weakly gossanous commonly brecciated cherts with shale/siltstone partings

River, creek, dainage

Track

Main roads

Inferred formation boundary (mainly airphoto interpretation, some ground traverses and after Geology of the Rum Jungle Region, 1:100000 Map). BMR

60 Bedding

60 Cleavage

60 Major joint direction

(0·5) Au in ppb

● BCL sample location

○ -40mesh silt sample location

X Rock chip sample location

Qa - alluvium/colluvium

Ti - laterite duricrust

Sh - shale

Sh(t) - tuffaceous shale

Sst - siltstone

C - chert

FeS - ironstone

Pqb - paraquartzite breccia

Q - quartz

Py - pyritie

MAG. NTH.

eupene exploration enterprises

Client: Woodcutters Joint Venture

Scale: 1:15000	Compiled: Barr, Ormsby, Smith	Date: Nov. 1989
	Drawn: C.S.D.S.	

EL 5106

SAMPLE LOCATION AND INTERPRETED GEOLOGY MAP

Figure 2

CR90/695

5000 N
1 2 3 4 5 X IBLB09 6

4900 N
7 8 9 10 11 12 13

4800 N
RC-1 X RC-2 RC-3 X X
14 15 16 17 18 19 20

4700 N
21 22 23 24 25 26 27 28 29 X IBLB10 31

X IBLB07

X IBLB08

4600 N
32 33 34 35 36 37 38 39 40 41 42 43 44

4500 N
45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

X IBLB06

4400 N
61 62 63 64 65 66 67 68 69 70 71 72 73 74

75

X IBLB05

4300 N
76 77 78 79 80 81 82 83 84 85 86 87 88 89

X IBLB04

4200 N
90 91 92 93 94 95 96 97 98 99 100

4100 N
101 102 103 104 105 106 107 108 109 110 111 112

X IBLB03

X RC-4

4000 N
113 114 115 116 117 118 119 120 121 122 123 124

4800 E 4900 E 5000 E 5100 E 5200 E 5300 E 5400 E

MN GN 10°

0 50 100m

● Soil sample location
X Rockchip sample location
Fence
Track

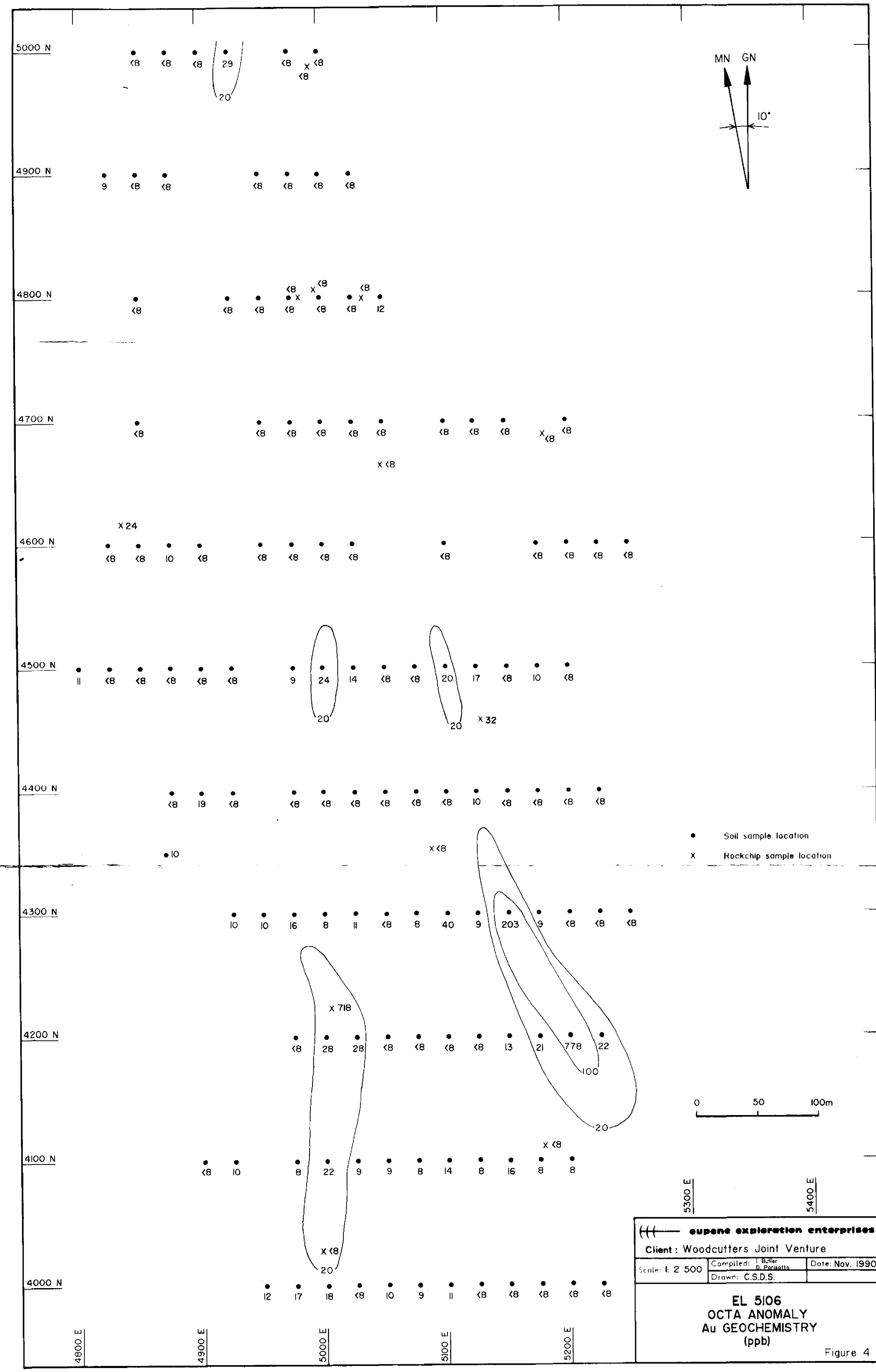
eupene exploration enterprises
Client : Woodcutters Joint Venture
Scale: 1: 2 500 | Compiled: Butler D. Parisotto | Date: Nov. 1990
Drawn: C.S.D.S.

EL 5106
OCTA ANOMALY
SOIL/ROCKCHIP
SAMPLE LOCATION

Figure 3

CR90/695

CR90/695



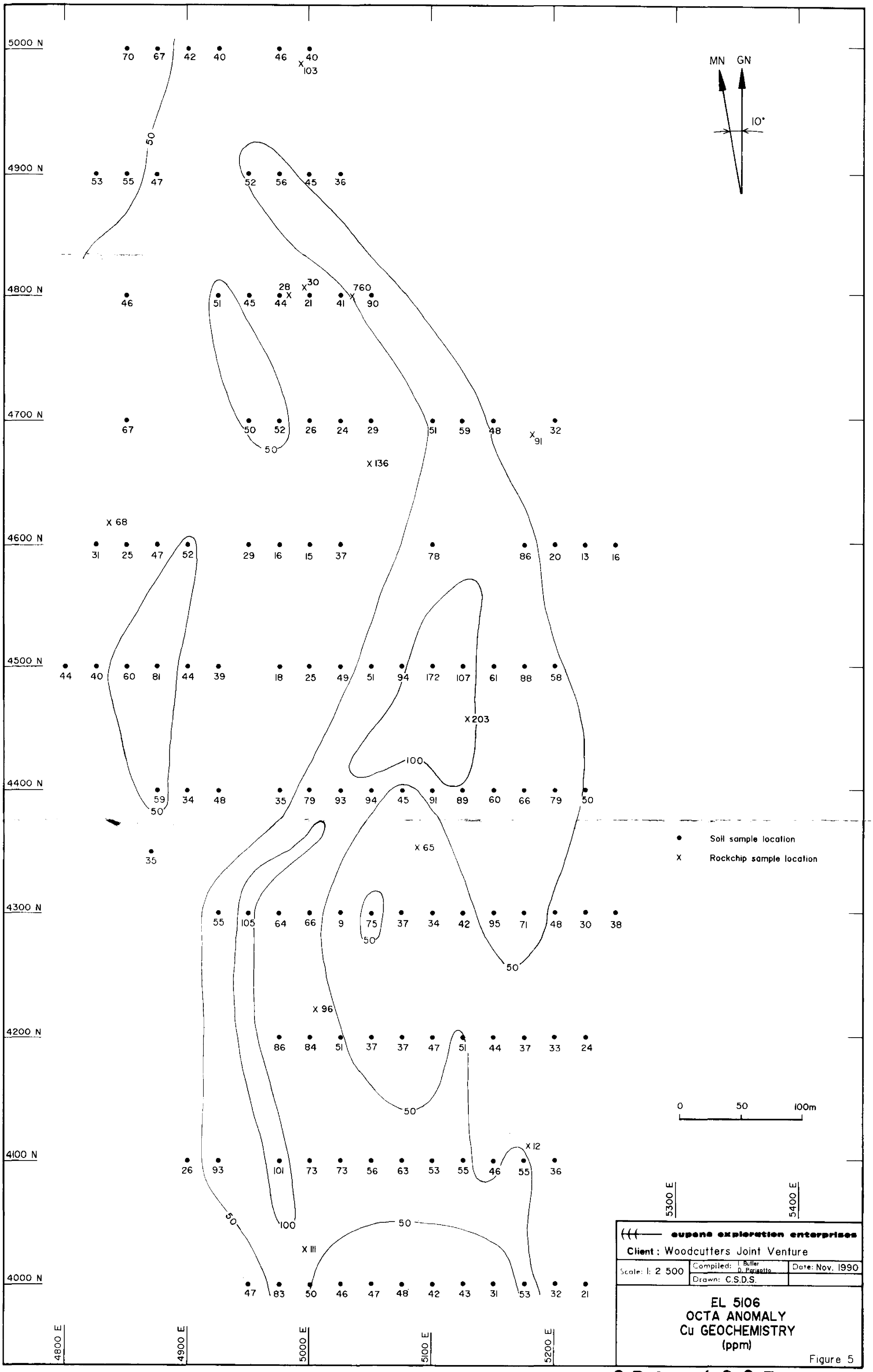
eupene exploration enterprises

Client : Woodcutters Joint Venture

Scale: 1: 2 500	Compiled: I. Butler, D. Parisotto	Date: Nov. 1990
	Drawn: C.S.D.S.	

EL 5106
OCTA ANOMALY
Au GEOCHEMISTRY
(ppb)

Figure 4



eupene exploration enterprises

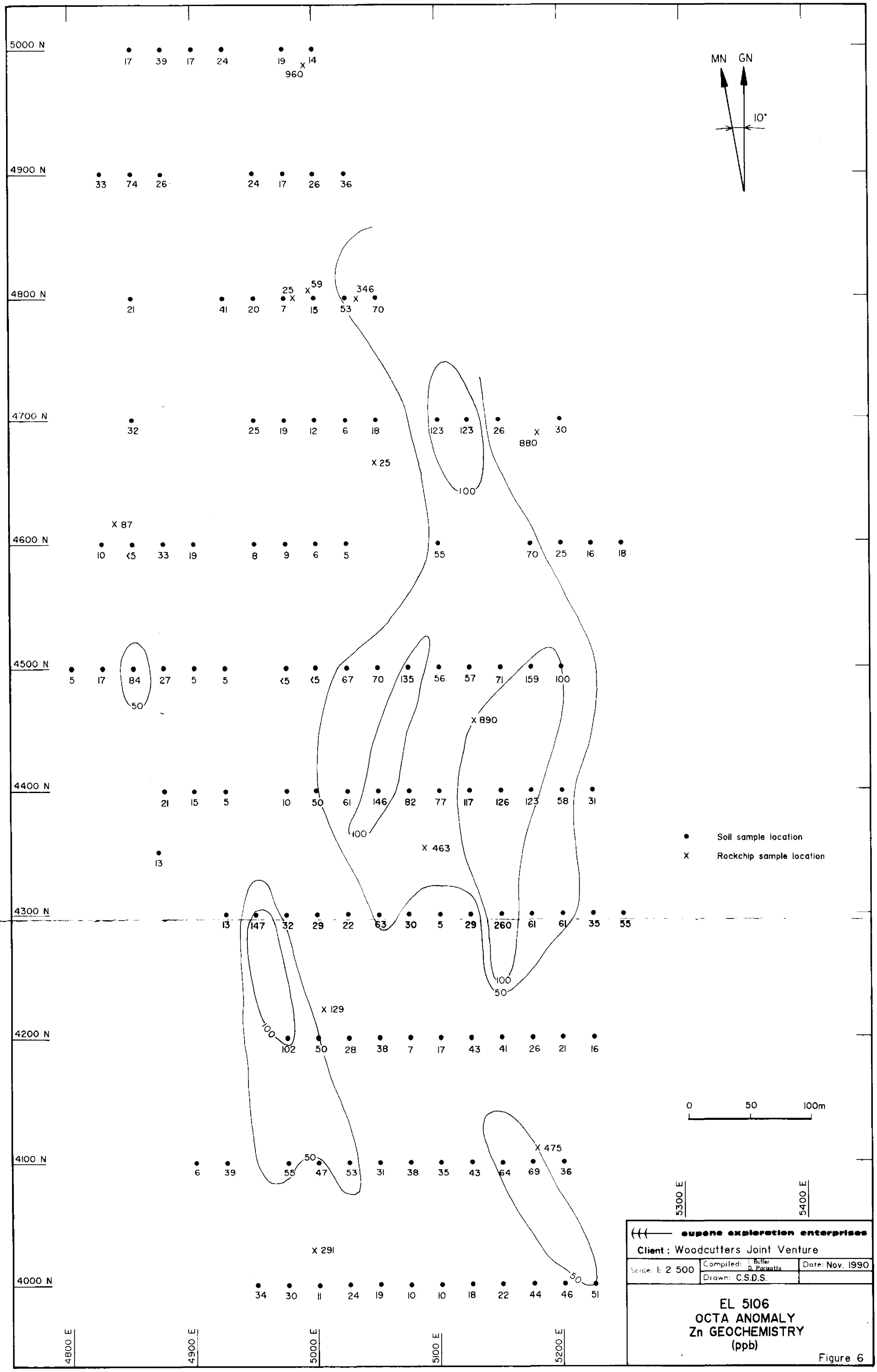
Client : Woodcutters Joint Venture

Scale: 1: 2 500	Compiled: I. Butler D. Perisotto	Date: Nov. 1990
	Drawn: C.S.D.S.	

EL 5106
OCTA ANOMALY
Cu GEOCHEMISTRY
(ppm)

Figure 5

CR90/695


5000 N
17 39 17 24 19 X 14
960
MN GN
10°
4900 N
33 74 26 24 17 26 36
4800 N
21 41 20 25 X 7 59 X 15 346 X 53 70
4700 N
32 25 19 12 6 18 123 123 26 X 30
880
X 25
100
X 87
4600 N
10 <5 33 19 8 9 6 5 55 70 25 16 18
4500 N
5 17 84 27 5 5 <5 <5 67 70 135 56 57 71 159 100
50
X 890
4400 N
21 15 5 10 50 61 146 82 77 117 126 123 58 31
13
100
X 463
4300 N
13 147 32 29 22 63 30 5 29 260 61 61 35 55
100
50
X 129
4200 N
102 50 28 38 7 17 43 41 26 21 16
100
4100 N
6 39 55 50 47 53 31 38 35 43 64 69 36
X 475
X 291
4000 N
34 30 11 24 19 10 10 18 22 44 46 51
50
4800 E
4900 E
5000 E
5100 E
5200 E
5300 E
5400 E
0 50 100m
Soil sample location
X Rockchip sample location
supone exploration enterprises
Client : Woodcutters Joint Venture
Scale: 1: 2 500
Compiled: I. Butler D. Parisotto
Date: Nov. 1990
Drawn: C.S.D.S.
EL 5106
OCTA ANOMALY
Zn GEOCHEMISTRY
(ppb)
Figure 6