

EXPLORATION LICENCE 4656

BAN BAN

REPORT FOR THE YEAR ENDING

30TH SEPTEMBER 1987

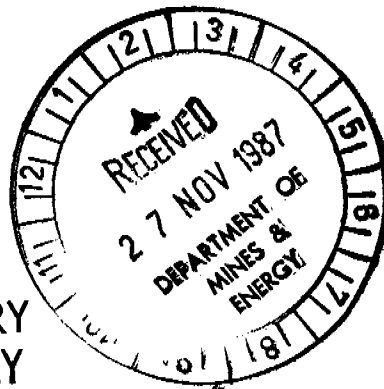
PREPARED FOR ZAPOPAN N.L.

by

G.R. ORRIDGE
GEONORTH
DARWIN

NOVEMBER 1987

NORTHERN TERRITORY
GEOLOGICAL SURVEY



CR 87 / 234

27/11/87

CONTENTS

	<u>Page No.</u>
1. INTRODUCTION	1
2. GEOLOGY	2
3. PREVIOUS WORK IN THE AREA	3
4. WORK CARRIED OUT	3
5. DISCUSSION OF RESULTS	4
6. PROPOSALS FOR FUTURE EXPLORATION	6

APPENDIX I	ANALYTICAL RESULTS ROCK CHIP SAMPLES
APPENDIX II	ANALYTICAL RESULTS SEDIMENT SAMPLES
APPENDIX III	ANALYTICAL RESULTS SOIL SAMPLES
APPENDIX IV	EXPENDITURES

FIGURES

FIGURE 1	LOCALITY MAP	
FIGURE 2	TENEMENT MAP	1:100,000
FIGURE 3	REGIONAL GEOLOGY	1:100,000
FIGURE 4	GEOLOGY WITH ROCK CHIP AND SEDIMENT SAMPLE LOCATIONS	1:10,000
FIGURE 5	SOIL SAMPLE LOCATIONS	1:10,000
FIGURE 6	FREQUENCY DISTRIBUTION PLOTS Cu, Pb and Zn	

1. INTRODUCTION

Exploration Licence 4656 is situated 130km southeast of Darwin on Ban Ban Springs station in the Bachelor 1:100,000 sheet area.

The Licence was originally granted to Zapopan Consolidated Pty. Ltd. for a six year term commencing 1st October 1984, and covered two one-minute-square blocks and an area of six square kilometres. In October 1986 the western of the two blocks was surrendered.

The location of the area is shown in Figures 1 and 2.

Topographically the area consists of a series of northeast-trending low ridges formed by relatively resistant horizons of Early Proterozoic metasediments; conformable mafic intrusions and softer sediments underlie low ground between the ridges beneath shallow soils. Vegetation consists of open savannah woodlands typical of the district. The drainage system within the EL is poorly defined and there are no permanent sources of surface water. The only commercial activity is pastoral, principally grazing for buffalo.

There are no presently known mineral deposits but the area is situated in a district currently the scene of vigorous gold mining development and exploration. The Brocks Creek/Zapopan mining centre lies 5km to the southwest, Fountain Head alluvial gold mine is 6km to the southeast, and Glencoe prospect is located 5km east of the Exploration Licence.

The area was included in a regional gold exploration survey conducted by CSR Limited under joint venture with Zapopan in 1985. This work was targetted specifically on gold occurrences in mafic host rocks and produced no results of significance in EL4656.

This report describes reconnaissance geological and geochemical surveys oriented towards stratabound gold deposits in sedimentary host rocks, analogous to the Cosmo Howley and Golden Dyke mines which are situated respectively 17km SW and 17km SSE of the Licence area. The surveys were carried out by GEONORTH on behalf of Zapopan N.L. in September/October 1987.

2. GEOLOGY

2.1 REGIONAL GEOLOGY AND MINERALISATION

The Exploration Licence is in the northwestern part of the Cullen Mineral Field which lies centrally within the Early Proterozoic Pine Creek Geosyncline.

The geology is shown on the 1:100,000 Bachelor/Hayes Creek sheet (BMR 1985), a portion of which is shown in Figure 3.

The stratigraphy consists of metasediments and volcanics of the South Alligator Group in the upper part of the Early Proterozoic succession. These are interlayered with thick conformable intrusions of mafic rocks assigned to the Zamu Dolerite.

These strata dip at moderate angles to the southeast on the margin of a major dome structure surrounding the Burnside Granite intrusion.

The surrounding district contains a large number of small to medium sized hardrock and alluvial gold deposits. The primary deposits include both stratiform types, typically developed associated with iron-rich sediments in the South Alligator Group (e.g. Golden Dyke, Mt. Bonnie, Cosmo Howley), and structurally controlled types, typically occurring as quartz vein systems localised along anticlinal hinge lines (e.g. Glencoe, Woolwonga, Zapopan).

2.2 LOCAL GEOLOGY

Within the Exploration Licence, metasediments of the Koolpin Formation (the lower unit of the South Alligator Group) form three NE-SW trending belts with intervening belts of Zamu Dolerite (Figure 4). The northwesterly Koolpin belt consists mainly of carbonaceous phyllites with a lenticular horizon of gossanous quartzite (metamorphosed chert) at the upper contact with Zamu Dolerite. The middle belt consists of banded iron formation, hematitic schist, carbonaceous phyllite and quartz-tourmalite.

The banded iron formation consists of finely banded limonite/hematite with nodular layers of saccharoidal quartz. Sulphide boxworks are sometimes abundant in conformable bands and in cross-cutting veinlets.

The quartz-tourmalines are lenticular conformable bodies of milky quartz with layers and pockets of fine black tourmaline. This central belt of Koolpin Formation is closely similar in lithofacies to the ore-bearing formations at Golden Dyke and Cosmo-Howley, and is probably their stratigraphic equivalent.

The southeastern belt of Koolpin contains carbonaceous phyllites and, in the extreme southeast, fine-grained, siliceous, possibly tuffaceous lithologies which may represent the base of the overlying Gerowie Tuff.

3. PREVIOUS WORK IN THE AREA

As noted above, CSR Limited carried out a regional geochemical reconnaissance which encompassed the present area of interest. However no rock chip samples or bulk sediment samples were actually taken within the present area of EL 4656.

The CSR work included three traverses of soil samples across the area. Samples were analysed for Cr, Fe, Cu and As, but not for gold. The only anomalies of interest were in arsenic which reported values of 25 to 100ppm associated with the southwestern portion of the central belt of Koolpin Formation.

4. WORK CARRIED OUT

During the present survey the work completed included reconnaissance geological mapping, rock chip sampling, stream sediment sampling and soil sampling.

The work was concentrated in the belts of Koolpin formation which were regarded as prospective for stratabound gold mineralisation.

Sample locations are shown in Figures 4 and 5, and analytical results are given in Appendices I, II and III.

Soil sample traverses were laid out by tape and compass, and samples of 'C' horizon soil were taken at intervals of 25 metres on traverses 400 metres apart. The minus 80 mesh sample fraction was analysed for gold, arsenic, copper, lead and zinc.

5. DISCUSSION OF RESULTS

5.1 SOIL SAMPLING

Figure 5 illustrates frequency distribution plots for copper, lead and zinc analyses of soil samples. These indicate that values above 200 ppm Cu, 150 ppm Pb and 200 ppm Zn may be anomalous.

Most gold and arsenic values are below detection limits of 5 ppb Au and 20 ppb As. Values in excess of 10 ppb Au and 40 pp As are nominally taken as anomalous.

Figure 4 shows the locations of samples reporting values equal to or above the thresholds noted above.

The central belt of Koolpin Formation shows anomalous lead, copper, zinc and arsenic values on four out of five traverses, but gold values are low with only three samples reaching the threshold level of 10 ppb Au. The base metal values probably indicate a high level of syngenetic sulphides in these horizons. The high arsenic values, above 100 ppm, are a favourable indicator for gold. The absence of high gold values is not conclusive on the broad sample spacing employed on this survey.

The northeastern belt of Koolpin shows a scattering of relatively high gold values (70 to 150 ppb Au), associated with anomalous lead (up to 440 ppm) on the most northeastern traverse. Further work is required to resolve the significance of these results.

The southeastern Koolpin belt also shows locally anomalous zinc, lead, copper and arsenic values which require further data before their significance can be determined.

5.2 ROCK CHIP SAMPLING

Only rock sample BB1201 reported anomalous gold, with a value of 0.20 ppm Au. Anomalous arsenic, zinc and lead are also present in this sample which was of a banded hematitic ironstone from the central Koolpin belt.

Other samples reported anomalous base metal values up to maxima of 510 ppm Cu, 4400 ppm Pb and 380 ppm As.

5.3 STREAM SEDIMENT SAMPLING

Analyses of the stream sediment samples (minus 80 mesh fraction) reported values up to maxima of 0.012 ppm Au, 100 ppm Cu, 170 ppm Pb, 275 ppm Zn, and 12 ppm A.

These results are weakly anomalous in base metals but do not show any strong gold/arsenic anomalies which might indicate significant gold mineralisation.

5.4 CONCLUSIONS

The geochemical results indicate high backgrounds of base metals, arsenic and gold associated with the Koolpin Formation, but do not, at this stage, give a positive indication of significant mineralisation or provide clear targets for detailed follow-up work.

The results however are sufficiently interesting to warrant further sampling to better define the anomalies and determine their source.

6. PROPOSALS FOR FUTURE EXPLORATION

The sites of anomalous soil or rock chip samples should in the first instance be inspected on the ground and subjected to check soil sampling, and selective rock chip sampling where there is sufficient outcrop.

If the anomalies are confirmed, particularly in relation to arsenic and gold, the site would require systematic investigation involving grid survey, detailed geological mapping, detailed rock chip and soil sampling.

If the results at this stage are encouraging in indicating significant anomalous gold, then follow-up programmes of trenching and channel sampling would be required prior to shallow drill tests if warranted.

A minimum expenditure of \$15,000 would be required to complete the geological and geochemical surveys to define possible trenching/drilling targets.

APPENDIX I

ANALYTICAL RESULTS ROCK CHIP SAMPLES

ROCK SAMPLE LEDGER

COMPANY: ZAPOPAN N.L.

PROJECT: EL 4656

PROSPECT: BAN BAN

SAMPLE NO.	COORDINATES		LOCATION	SAMPLE TYPE e.g. grab: chip: channel:	DESCRIPTION	SAMPLE WIDTH M	ANALYSES					
	N	E					Al ppm					
381201			BAN BAN	GRAB	Banded Hematite.		0.20					
381204			BAN BAN	"	VEN. Quartz + Hematite		0.03					
381205			BAN BAN	"	Quartz + Tourmaline		0.02					
381206			BAN BAN	"	Gossanous Vein		0.03					
381207			BAN BAN	"	Quartz Hematite Breccia near above vein.		0.01					
381208			BAN BAN	"	"Blue Quartz" Quartz + Hematite.		<0.01					
381209			BAN BAN	"	"Blue Quartz" Quartz + Silicates.		<0.01					
381210			BAN BAN	"	Streaky Quartz + Hematite.		<0.01					
381211			BAN BAN	"	Quartz + Hematite along fractures		<0.01					
381215			BAN BAN	"	Quartz + Hematite Brecciated as above.		<0.01					
381217			BAN BAN	"	Quartz + Silicates + Gossanous coating.		<0.01					
381218			BAN BAN	"	"Blue Quartz"		<0.01					
381219			BAN BAN	"	Breccia - Limonite + Quartz in Hematite. - From thin quartz vein.		0.03					
381220			BAN BAN	"	BIF with bands & layers of sulphide boxworks		0.02					
381221			BAN BAN	"	Banded quartz-hematite		0.02					

Date: OCT. 1987

Sampled by: CB & GRD
GEOGRAPHIC

BAN BAN
YAM CK

© B's rocks

4th November, 1987

Our Ref : D370/88

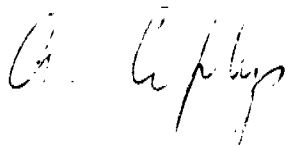
REPORT NUMBER : D370/88

CLIENT : Geonorth

CLIENT REFERENCE : Order Number 29

REPORT COMPRISING : Cover Page
Page 1

DATE RECEIVED : 5th October, 1987



Alan Ciplys
Manager
AMDEL Limited (N.T.)

ANALYSIS

SAMPLE MARK	Au (ppm) QC CHECKS	Au ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
BB1201		0.20	140	1550	640	260
BB1204		0.03	33	80	100	<50
BB1205		0.02	48	60	88	<50
BB1206		0.03	180	4400	91	80
BB1207		0.01	280	175	165	130
BB1208		<0.01	230	70	74	<50
BB1209	<0.01	<0.01	INSUFF. SAMP. FOR BASE METAL ANALYSIS			
BB1210		<0.01	20	<5	12	95
BB1211		<0.01	21	<5	34	<50
BB1215		<0.01	36	<5	33	20
BB1217		<0.01	165	<5	26	430
BB1218		<0.01	24	<5	3	<50
BB1219		0.03	510	510	63	380
YC3224		<0.01	33	<5	14	<50
YC3227		<0.01	20	<5	20	<50
YC3228		<0.01	34	<5	45	<50
YC3231		<0.01	20	<5	5	<50
YC3232		<0.01	32	<5	51	<50
YC3233		<0.01	52	<5	70	<50
YC3238	<0.01	<0.01	200	<5	28	50
YC3239		<0.01	40	18	4	<50
YC3240		<0.01	50	<5	10	300
YC3245		0.12	50	<5	4	180
YC3246		<0.01	46	10	8	120
YC3248		<0.01	36	<5	14	<50
YC3249		<0.01	32	<5	4	50
YC3256		0.08	28	<5	4	120
YC3259		<0.01	44	<5	4	60
YC3264		<0.01	32	10	44	<50
YC3266		<0.01	1240	<5	12	<50
YC3271		0.02	58	130	22	400

METHOD : PM3/2, A1/A2

APPENDIX II

ANALYTICAL RESULTS STREAM SEDIMENT SAMPLES

ANALYSIS

SAMPLE MARK	Au	Repeat Au	Cu ppm	Pb ppm	Zn ppm	As ppm
BB2001	0.007		63	19	69	9
BB2002	0.008		100	70	74	10
BB2003	0.006		60	33	82	9
BB2004	0.009	0.008	56	38	190	12
BB2005	0.007		48	82	200	9
BB2006	0.008		49	31	71	5
BB2007	0.006		30	62	84	5
BB2008	0.004		15	43	40	6
BB2009	0.008		52	45	120	3
BB2010	0.005		55	48	120	3
BB2011	0.003		26	18	19	<2
BB2012	0.005		30	36	27	6
BB2013	0.005		46	37	48	7
BB2014	0.006		37	10	21	8
BB2015	0.006		53	94	90	<2
BB2016	0.007	0.010	78	170	275	<2
BB2017	0.006		70	36	34	5
BB2018	0.012		87	24	110	8

METHOD : PM2/3, A1/A2, X3

APPENDIX III

ANALYTICAL RESULTS SOIL SAMPLE



Amdel Limited
(Incorporated in S.A.)
P.O. Box 58
Berrimah, N.T. 5788

Telephone (089) 32 2637
Telex: AA85987
FAX (089) 323531

FACSIMILE TRANSMISSION

TO: GEO NORTH

ATTN: GEOFF ORRIDGE

CITY: _____

FAX NO: 411372

Transmission of 11 sheets including this sheet

FROM: ALAN CIPLYS

DATE: 17/11/87 TIME: _____

SPECIAL INSTRUCTIONS:

IF YOU DO NOT RECEIVE ALL PAGES PLEASE ADVISE IMMEDIATELY

Offices in Adelaide, Sydney, Melbourne, Perth, Brisbane, Canberra, Townsville. Represented world-wide

FORM 38

REPORT AG

0383/88

ANALYSIS

ppm

Sample No		ppb Au	Au p.c. check	Cu	Pb	Zn	As
BB 1		45		14	27	42	20
2		45		8	15	37	<
3		10		12	19	49	<
4		45		39	17	48	<
5		5		33	26	58	<
6		45		18	67	105	<
7		15	10	35	69	125	<
8		5		61	51	73	<
9		45		74	61	99	<
10		10		82	140	135	<
11		<		77	255	105	<
12		<		120	310	150	<
13		<	2	110	440	130	<
14		<		130	250	130	<
15		<		150	150	120	<
16		<		85	34	88	<
17		10		53	48	21	<
18		10		57	60	17	<
19		70		67	16	13	<
20		<		40	17	12	<
21		15		32	12	36	<
22		10		55	28	87	<
23		45		45	14	54	<
24		20		51	11	48	<
25		45		82	17	135	<

METHOD

pmi/3 , A1/A2

FORM 28

REPORT AG

0383/88

ANALYSIS

ppm

Sample No		ppb As	As p.c check		Cu	Pb	Zn	As
BB 26		<5			38	65	43	<20
27		<			36	56	125	<
28		<	<5		39	32	85	<
29		<			35	48	97	<
30		<			30	74	77	<
31		<			29	49	51	<
32		<			38	47	52	<
33		<			58	46	76	<
34		<			105	46	93	<
35		<			56	44	64	<
36		<			84	39	64	<
37		<			87	32	96	<
38		<			66	42	92	<
39		<			50	33	98	<20
40		<			42	29	82	<
41		<			64	30	50	<
42		10			54	12	41	<
43		<			75	12	47	<
44		<			30	12	14	<
45		<			50	14	9	<
46		<			79	10	11	<
47		<			86	12	15	<
48		<	<5		51	26	91	<
49		<			49	30	54	<
50		<			52	28	67	<

METHOD

Pm1/3, A1/A2

FORM 38

REPORT AG
ANALYSIS

0383/88

ppm

Sample No		ppb As	As y.c check	Cu	Pb	Zn	As	
BB 51		<5		41	36	60	<20	
52		<		35	37	72	<	
53		<		24	38	84	<	
54		<		51	36	60	<	
55		150		49	43	54	<	
56		<		50	33	56	<	
57		<		58	27	58	<	
58		<		76	17	35	<	
59		<		120	26	42	<	
60		<		70	42	48	<	
61		<		130	56	67	<	
62		80		125	82	180	<	
63		<		86	29	75	<	
64		<		75	25	76	<	
65		<		84	33	110	<	
66		<		56	49	115	<	
67		<	<5	69	72	110	<	
68		<		69	150	78	<	
69		<		66	79	44	<	
70		<		80	195	36	<	
71		5		64	34	42	<	
72		<		66	40	58	<	
73		<		80	34	51	<	
74		<		44	25	51	<	
75		<		61	41	43	<	

461400

Pm1/3, A1/A2

FORM 38

REPORT AG
ANALYSIS

D383/88

ppm

Sample No		nph Au	Au g.c check	Cu	Pb	Zn	As	
BB 76		<5		48	14	37	<20	
77		<		54	19	52	<	
78		<		63	8	54	<	
79		5		23	8	43	<	
80		10		38	16	66	<	
81		5		46	28	135	<	
82		10		44	26	79	<	
83		<		27	23	37	<	
84		<		32	26	40	<	
85		<		34	25	91	<	
86		<		47	16	105	<	
87		<		62	15	170	<	
88		<		43	25	120	<	
89		<	<5	74	34	110	<	
90		<		60	30	73	<	
91		<		66	21	49	<	
92		20		57	32	54	<	
93		<		47	9	78	<	
94		10		34	8	15	35	
95		<		48	21	11	125	
96		<		57	30	33	<20	
97		<		78	21	51	<	
98		<		83	14	72	<	
99		<		45	14	38	<	
100		<		79	13	47	<	

081400

pmi/3 , A1/A2

FORM 38

REPORT NO

0383/88

ANALYSIS

ppm

Sample No		ppb Au	Au p.c. check	Cu	Pb	Zn	As	
BB 101		< 5		97	19	61	< 20	
2		<		83	14	43	<	
3		<		89	15	40	<	
4		<		72	12	56	<	
5		<		110	10	78	<	
6		<		105	49	84	<	
7		<		69	46	160	<	
8		<		63	47	165	<	
9		<		135	59	145	<	
10		10		200	130	85	<	
11		<		105	11	65	<	
12		<		490	14	61	<	
13		<		195	18	60	<	
14		<		120	32	43	<	
15		<	< 5	120	31	68	<	
16		<		95	35	67	<	
17		<		60	32	84	<	
18		<		69	32	70	<	
19		<		43	19	57	<	
20		<		47	155	160	<	
21		10		61	170	210	<	
22		10		42	35	230	<	
23		<		60	50	360	35	
24		<		90	100	185	40	
25		<		43	115	24	<	

WELDON

Pm1/3, A1/A2

FORM 38

REPORT AND
ANALYSIS

0383/88

ppm

Sample No		As	As Q.C. check	Cu	Pb	Zn	As	
BB 126		< 5		38	74	19	< 20	
27		<		33	44	13	<	
28		<		34	40	10	<	
29		<		33	93	9	<	
30		<		34	200	8	<	
31		<		83	185	13	<	
32		<		51	42	52	<	
33		<		55	46	44	<	
34		<		84	12	35	<	
35		<	< 5	57	21	30	<	
36		<		55	60	40	<	
37		<		67	1500	115	<	
38		<		76	60	41	<	
39		<		36	46	10	<	
40		<		51	71	12	<	
41		<		65	40	49	<	
42		<		59	34	38	<	
43		<		51	18	22	<	
44		<		52	67	36	<	
45		<		32	26	43	<	
46		<		28	19	33	<	
47		<		29	15	24	<	
48		<		31	22	33	<	
49		<		29	89	29	<	
50		<		51	980	44	<	

METHOD

Pm1/3, A1/A2

FORM 38

REPORT AG
ANALYSIS0383/88
ppm

Sample No		prob Au	Au q.c. check	Cu	Pb	Zn	As
BB 151		<5		45	73	125	<20
52		<		150	32	135	140
53		<	<5	80	25	53	<20
54		<		32	23	17	<
55		<		42	35	15	<
56		<		61	32	16	<
57		<		84	27	74	<
58		<		160	26	21	80
59		<		78	10	41	25
60		<		48	27	59	<20
61		<		37	20	40	<
62		<		33	47	46	<
63		<		41	26	26	<
64		<		49	14	28	<
65		<		42	32	29	<
66		<		53	15	24	<
67		<		62	27	45	<
68		<		46	39	48	<
69		<		41	53	130	70
70		<		42	24	130	30
71		<		340	21	14	<20
72		<		20	19	16	55
73		<		17	14	9	25
74		<		35	22	12	60
75		<		25	21	12	<20

METHOD

Pm1/3, A1/A2

FORM 38

REPORT AO

0383/88

ANALYSIS

ppm

Sample No		ppb As	As G.C. check	Cu	Pb	Zn	As
BB 176		< 5		28	13	8	< 20
77		<		35	20	10	40
78		<		36	21	10	< 20
79		<		42	18	12	<
80		<		68	13	31	<
81		<		52	12	19	<
82		<		55	15	23	<
83		<		68	14	39	<
84		<		58	10	50	<
85		<		44	27	32	<
86		<		34	18	12	25
87		<		21	16	8	25
88		<		19	14	8	< 20
89		<		32	20	11	<
90		<		75	20	14	<
91		<	< 5	41	9	12	<
92		<		56	52	82	<
93		<		55	25	43	<
94		<		76	41	115	40
95		<		74	37	135	30
96		<		73	45	290	< 20
97		10		76	140	130	<
98		<		145	225	150	<
99		<		140	180	220	<
200		<		165	145	245	<

METHOD

pmi/3, A1/A2

FORM 38

REPORT AC
ANALYSIS

0383/88

ppm

Sample No		npb Au	Au P.C. check	Cu	Pb	Zn	As
BB 201		<5		79	70	120	<20
2		<		30	12	12	<
3		<		30	11	9	<
4		<		35	11	7	<
5		<		45	17	12	30
6		40		59	19	9	35
7		<		60	16	8	25
8		<		68	9	11	<20
9		<		79	8	35	<
10		<		99	9	57	<
11		<		96	5	37	<
12		<		98	6	44	<
13		<		76	22	275	<
14		<		52	24	140	<
15		<		32	9	47	<
16		<		37	14	22	<
17		<		35	20	10	<
18		<		29	13	8	<
19		<		31	19	7	<
20		<		36	23	6	<
21		<		99	22	7	<
22		<		69	24	8	<
23		<		53	28	25	<
24		<		51	14	24	<
25		<		37	13	17	<

METHOD

1m/3, A1/A2

FORM 38

REPORT AG
ANALYSIS

0383/88
0000

Sample No		ppb Au	Au p.c. check	Cu	Pb	Zn	As	
BB 226		<5		36	25	13	<20	
27		<		36	21	14	25	
28		<		41	14	13	<20	
29		10	<5	34	13	22	<	
30		10		83	10	34	<	
31		<		72	12	40	<	
32		<		92	9	50	<	
33		<		77	16	38	<	
34		15		70	53	150	<	
35		<		60	36	135	<	
36		<		54	30	55	<	
37		5		43	20	10	30	
38		<	2	42	22	7	<	
39		<		48	18	13	<	
40		<		31	19	5	<	
41		<		32	14	4	<	
42		<		71	14	10	<	
43		<		51	12	16	<	
44		<		55	20	19	<	
45		<		36	14	11	<	
BB 246		<		45	21	12	<	

METHOD

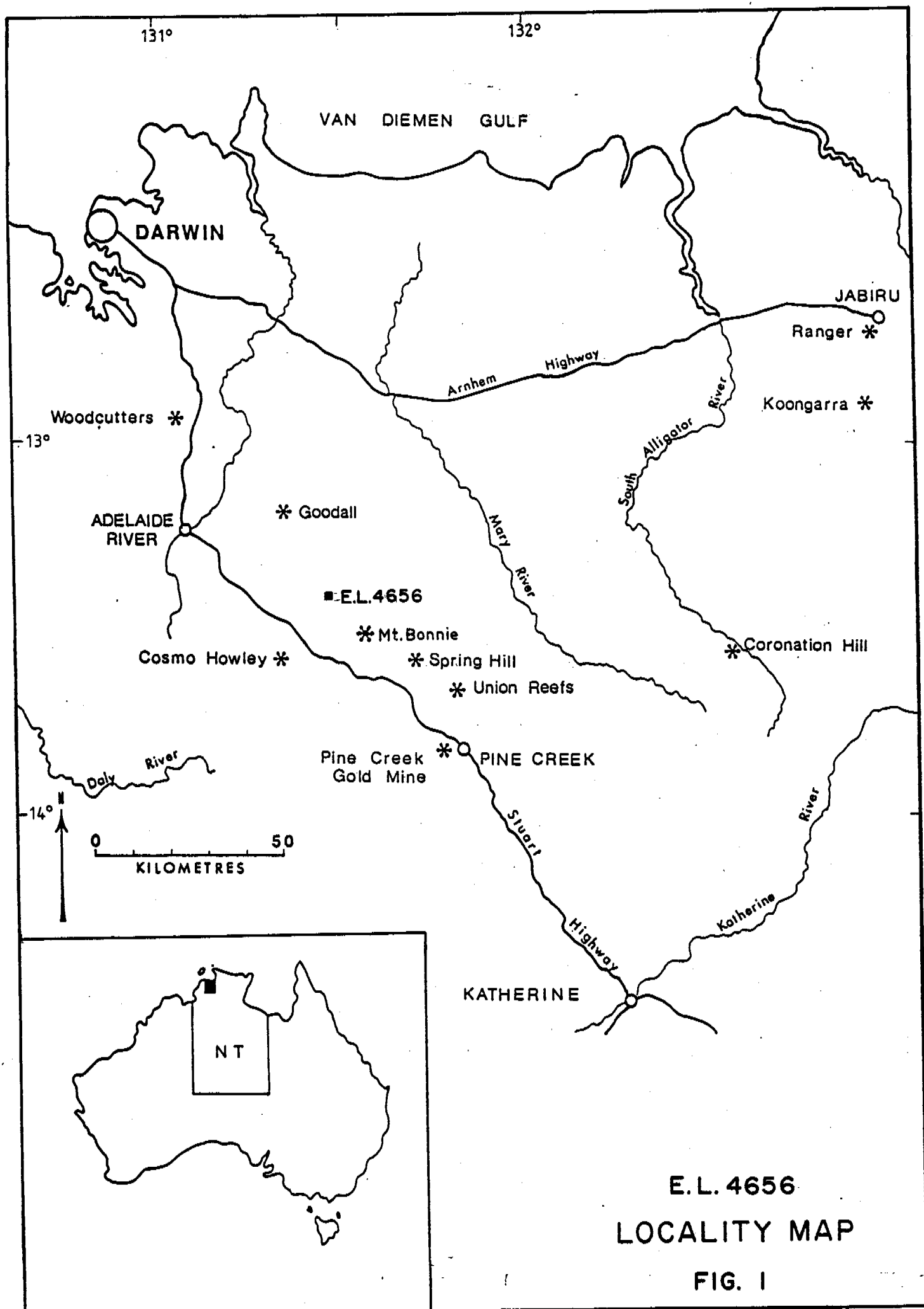
pm/3 , A1/A2

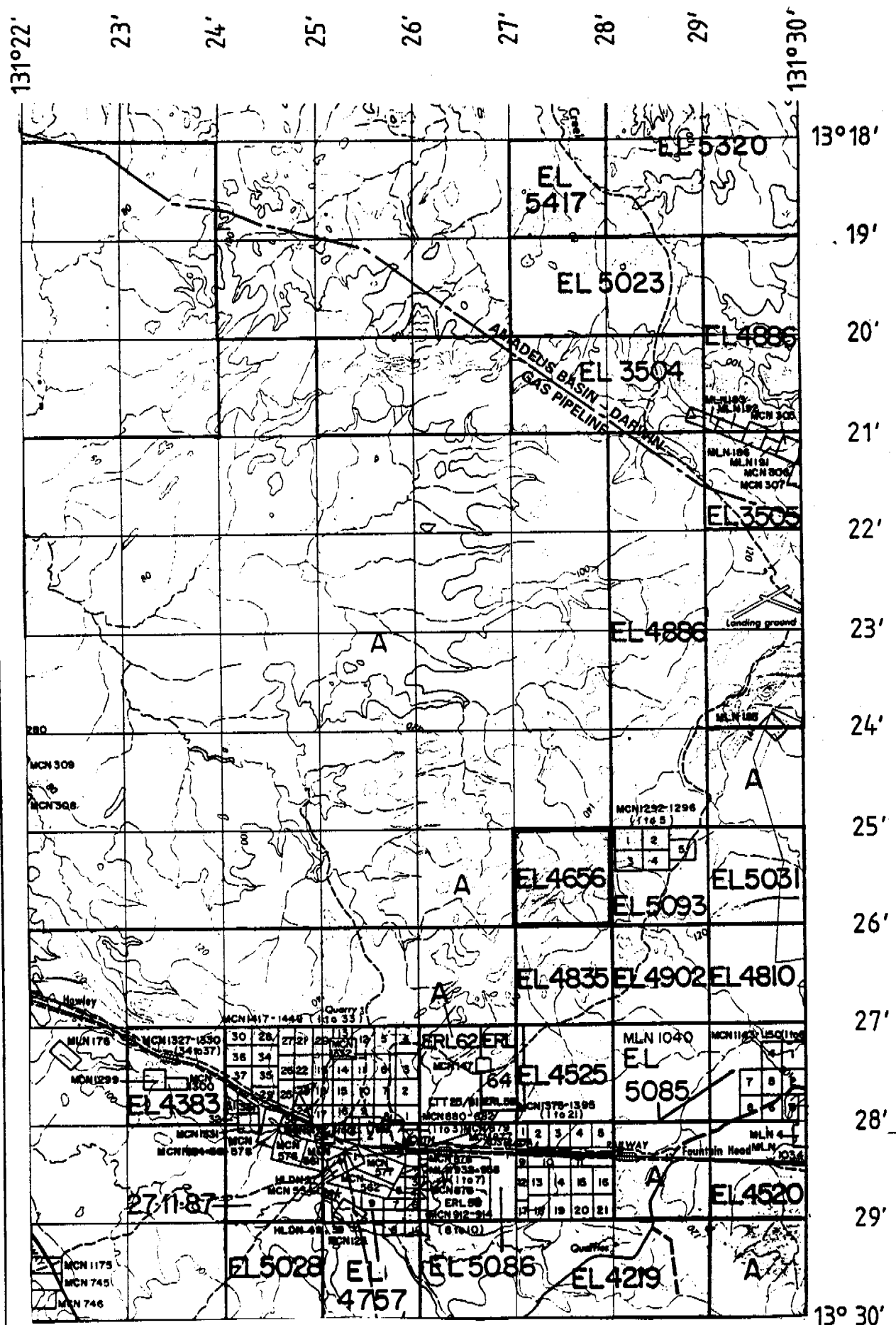
APPENDIX IV

The expenditures incurred in carrying out the exploration work described in this report are estimated to be as follows:-

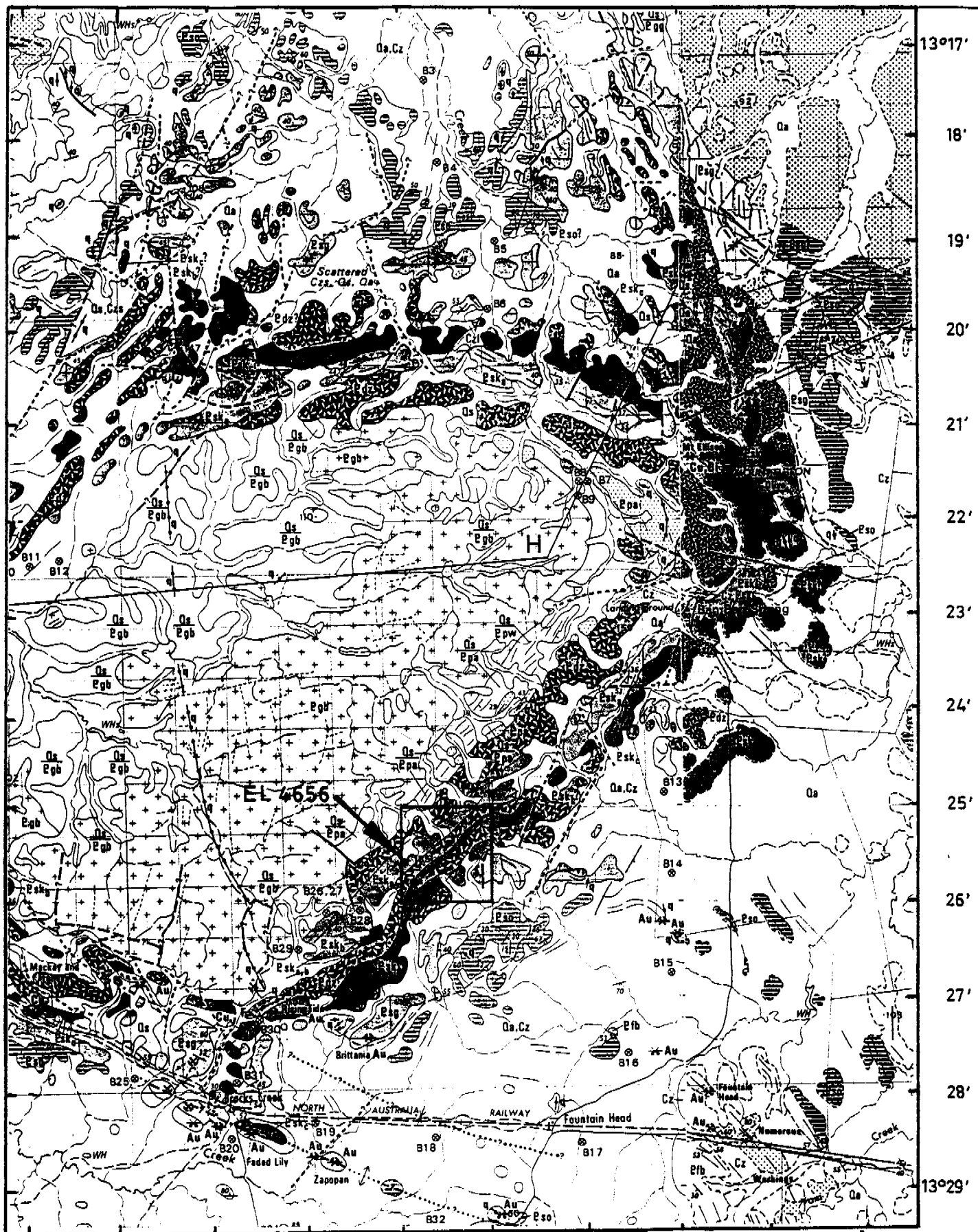
	\$
GEOLOGISTS	2,270
FIELD ASSISTANTS	1,250
DRAFTSMAN	133
VEHICLES	605
ACCOMMODATION & TRAVEL	923
SUPPLIES	151
ANALYSES	2,187
REPORT PREPARATION	137

TOTAL \$ 7,656





Scale 1:100 000
 0 1 2 3 4 5 Kms. **E.L. 4656**
TENEMENT MAP



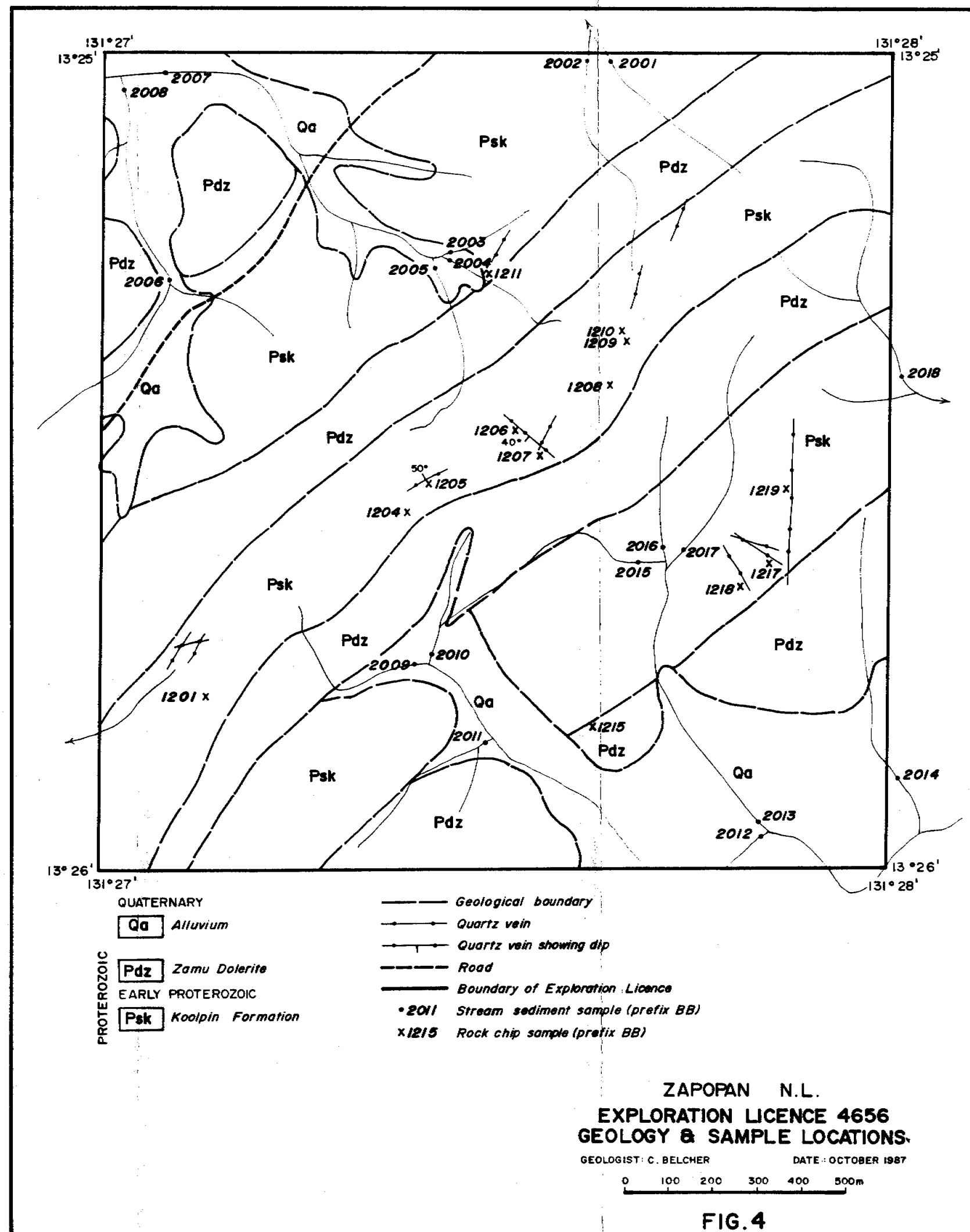
EARLY PROTEROZOIC

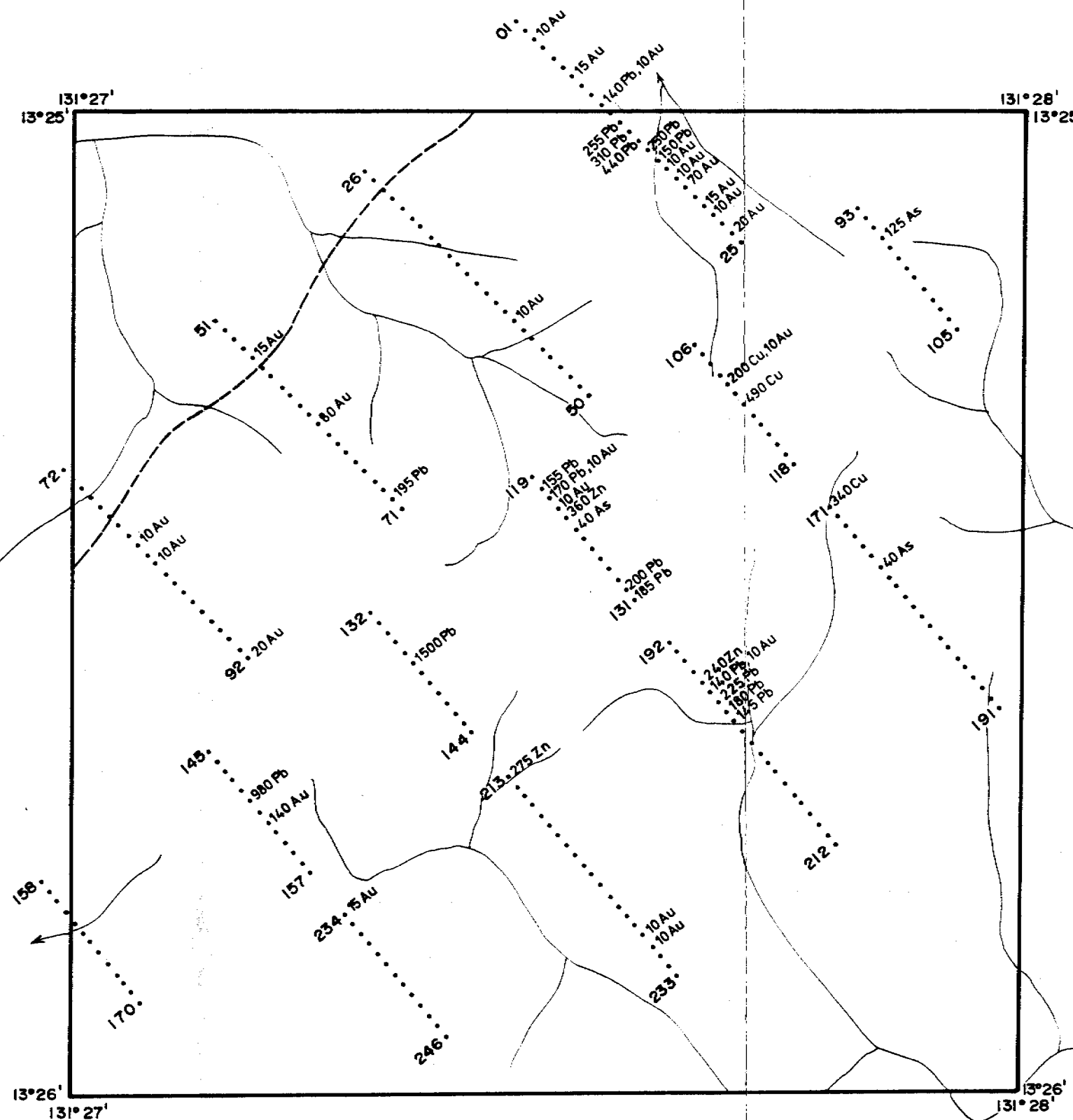
Pgb	Burnside Granite.
Edz	Zamu Dolerite.
Eso	Mt. Bonnie Formation.

Esg	Gerowie Tuff.
Psk	Koolpin Formation.

E.L. 4656

REGIONAL GEOLOGY **FIG. 3**





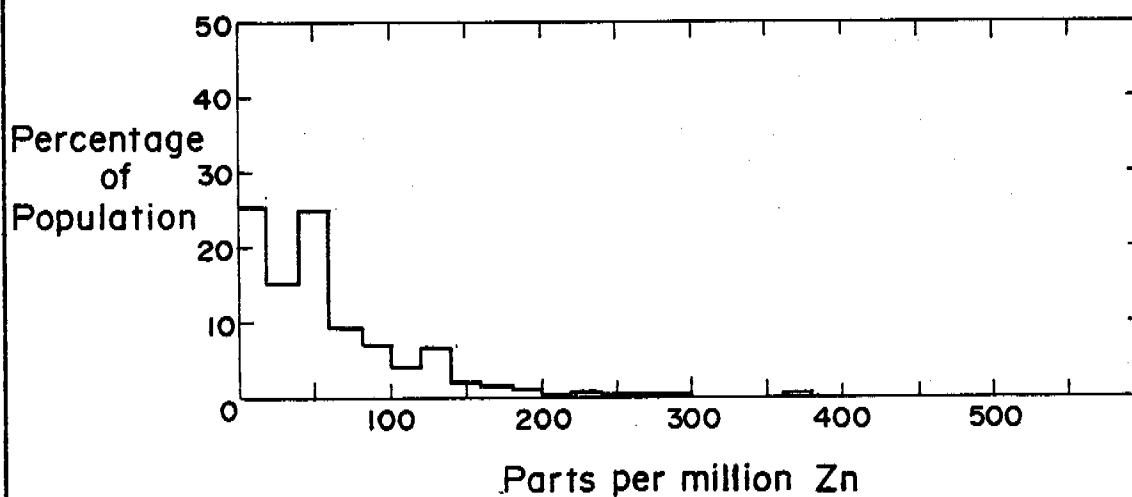
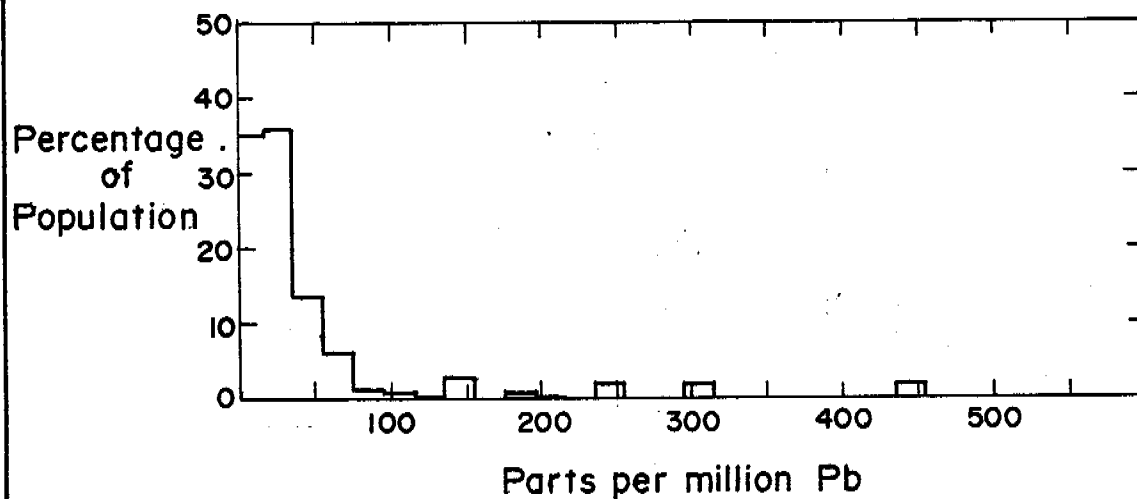
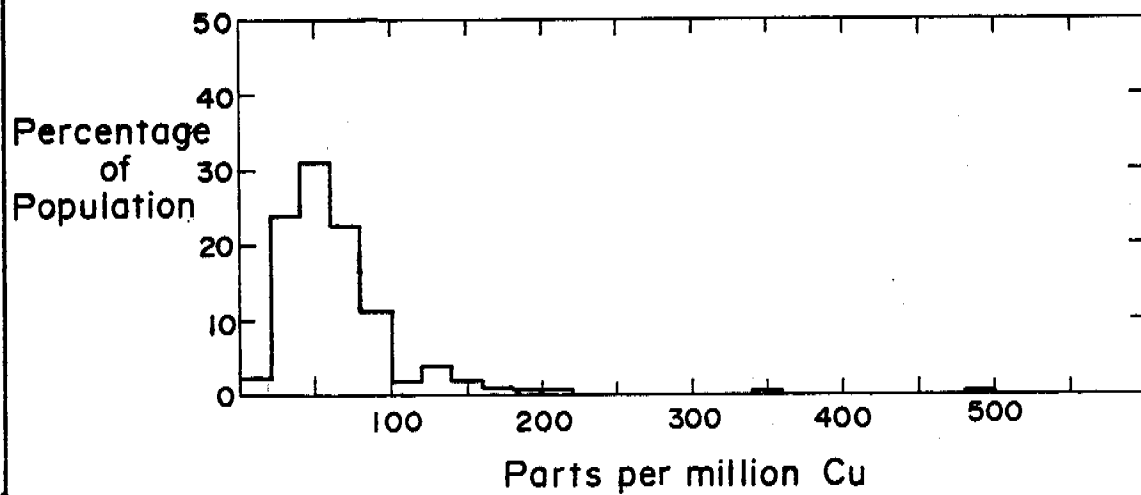
..... Soil traverse line - first and last sample numbers shown
 All sample numbers prefixed by BB
 ————— Boundary of Exploration Licence
 - - - - - Road

Values shown are:
 ≥10ppb Au,
 40ppm As
 200ppm Cu
 140ppm Pb
 200ppm Zn

ZAPOPAN N.L.
 EXPLORATION LICENCE 4656
 SOIL SAMPLE LOCATION MAP
 GEOLOGIST: C. BELCHER DATE: OCTOBER 1987
 0 100 200 300 400 500 m

FIG. 5

CR 87/234



E.L. 4656
FREQUENCY DISTRIBUTION PLOT
SOIL SAMPLES MINUS 80 MESH FRACTION

Fig. 6

CR 87 / 234