ZAPOPAN N.L.

MCN 147 - BRITANNIA

ACTIVITY REPORT

AUTHOR: T. ROVIRA

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REPORT No: 92.733-TR:SL

CONTENTS

1.0 INTRODUCTION

MCN 147 (Figure 2) is located about two kilometres NNE of the old Zapopan Mine at Brocks Creek (Figure 1). Contained within the tenement are the old mine workings known as the Britannia Mine. The tenement was granted on 7th July 1983 for a period of 10 years. Access is easily obtained from the Fountainhead road off the Stuart Highway, about 60 kilometres southeast of the Adelaide River township, thence via the track along the abandoned railway line. This report discusses work carried out during 1992.

2.0 REGIONAL GEOLOGICAL SETTING

Regionally, the area contains rocks of the South Alligator Group (Koolpin Formation, Gerowie Tuff and Mt Bonnie Formation) and the lower part of the Finniss River Group (Burrell Creek Formation), both of which form part of the Pine Creek Geosyncline (Figure 1). This geosyncline contains Early Proterozoic sediments deposited from about 2400 to 2100 Ma onto a gneissic and granitic Archaean basement. This basement does not outcrop within the EL area. After a period of uplift and erosion sedimentation continued until approximately 1870 Ma when greenschist metamorphism and a major phase of deformation took place.

The Koolpin Formation comprises a low energy sequence of carbonaceous and ferruginous (pyritic) siltstones and shales, together with laminated and nodular cherts and narrow banded iron rocks (bif). This is overlain by the Gerowie Tuff which consists of tuffaceous mudstones (variable carbonaceous) and laminated cherts, with minor interbedded tuffaceous siltstones and greywackes. The Mt Bonnie Formation is a transitional sequence of tuffaceous mudstones and cherts with minor tuffaceous siltstones and greywackes, grading up to a predominantly siltstone/greywacke sequence of terrigenous origin. It is conformable with the overlying Burrell Creek Formation, a high energy sequence consisting mostly of greywackes, siltstones and shales. Basic intrusive units, probably equivalent to the Zamu Dolerite, are present as bedding - conformable sills.

These groups have been folded into a tight array of steeply dipping to isoclinal anticlines and synclines. Associated with the anticlinal hinges are broad zones of axial plane foliation producing a pronounced cleavage.

The Pine Creek Geosyncline is a significant gold producing region with major gold mines operating at Cosmo Howley, Woolwonga and Pine Creek, while Mount Todd, Union Reefs and Spring Hill are three major gold deposits at an advanced evaluation stage. Although controls on the localisation of gold mineralisation within the Pine Creek area are not completely understood it is known that, at the major operating gold mines mentioned above, there is a strong spatial relationship between the mineralisation and certain favourable geological units, anticlinal structures and axial planar shear zones.

3.0 LOCAL GEOLOGY

The Britannia Mine lode is a strongly silicified mineralised shear zone located within a bedded sequence of coarse to fine pale cream to white, quartz-felspathic micaceous tuffs. The beds are of variable thickness up to several metres thick. Within the tuff beds are laminated siltstones (in part carbonaceous) with a preferred mica orientation defining an axial plane cleavage. Minor 2-4 cm thick saccharoidal chert beds occur within the tuff layers. These are heavily iron stained and contain rare relict sulphides.

Float blocks (approximately five to ten centimetres in size) from a hematitic/silicic/pyritic Banded Iron Formation have also been identified near the old workings. This B.I.F. horizon is similar to another ferruginous chert horizon which has proved useful as a marker bed within the Brocks Creek region where it has a definite lateral continuity.

The Britannia lode is an axial planar shear zone located within the hinge zone of the prominent Britannia anticline. This structure is tight to isoclinal, strikes southeast, and plunges gently in the same direction.

4.0 PREVIOUS EXPLORATION

Historically, the Britannia Mine is reported to have produced 190 tonnes for 870 ounces of gold in the period 1892 - 1893 (NT Geological Survey). Further ore is said to have been produced to 1897 but details were not reported. Shaft and level development to the 200 foot level is also reported.

No further exploration at Britannia took place until 1988 when Zapopan carried out a three stage program (Holden, 1989):-

1. Rock chip sampling in the old Britannia mine workings.
2. Soil sampling.
3. Excavating, mapping and sampling eight trenches.

The rock chip sampling involved selectively collecting samples from within the various old mine working, however it has not been possible to find the assay results.

The soil sampling program consisted of a grab sample of surficial material collected on a 20 m x 20 m grid pattern over most of the claim area. Results show moderate to high gold values over most of the sampling grid, which is to be expected considering the amount of mining activity in the area.

The trenching program consisted of excavating eight costeans across the line of old workings. All costeans were mapped and sampled with the most significant result being 14m @ 3.61g/t Au. This was not associated with the Britannia lode itself, but a zone of abundant quartz veining 30m to the south. The Britannia lode returned relatively insignificant gold values. Geological mapping confirmed the presence of the NW - SE trending Britannia anticline, the hinge of which hosts the Britannia lode, with the mineralisation observed in the trench being restricted to the southern limb.

5.0 RECENT EXPLORATION

During August 1992, a data review was undertaken to assess the potential; of the area. On the basis of this evaluation, an exploration program was designed to test the mineralisation detected in the costean, and to test the down-dip extent of the Britannia lode.

The program consisted of 8 RAB holes totalling 225 metres. Four holes targeted the Britannia lode (BR1 - BR4) while the other four holes (BR5 - BR8) tested the quartz stockwork system (Figure 3).

Holes which targeted the Britannia lode returned very disappointing results with a maximum value of 3m @ 0.15g/t Au. Drill holes which targeted the quartz stockwork were more successful, returning the following intercepts:-

BR5	0 - 12m	12m @ 0.21g/t Au
BR6	0 - 15m	15m @ 0.48g/t Au
BR7	0 - 24m	24m @ 0.65g/t Au
BR8	0 - 3m	3m @ 2.74g/t Au

6.0 SUMMARY AND RECOMMENDATIONS

MCN 147 has been held by Zapopan NL since 1983. The recent RAB drilling program was successful in confirming the presence of gold mineralisation in a quartz stockwork system beneath the exposure in the old costean. The drill results, together with the surface expressions of quartz veining along strike indicate that this area has the potential for gold mineralisation and warrants further exploration.

7.0 EXPENDITURE STATEMENT

	$
COMPUTER SUPPORT	1,695.00
CONSUMABLES	166.27
ASSAYING	848.00
DRILLING	2,107.50
SURVEYING/GRIDDING	202.75
TENEMENT RENTS	70.00
	5,089.52

8.0 REFERENCES

HOLDEN, D., 1989
Annual Report for MCN 147, Britannia Mine
(Zapopan N.L. Company Report)

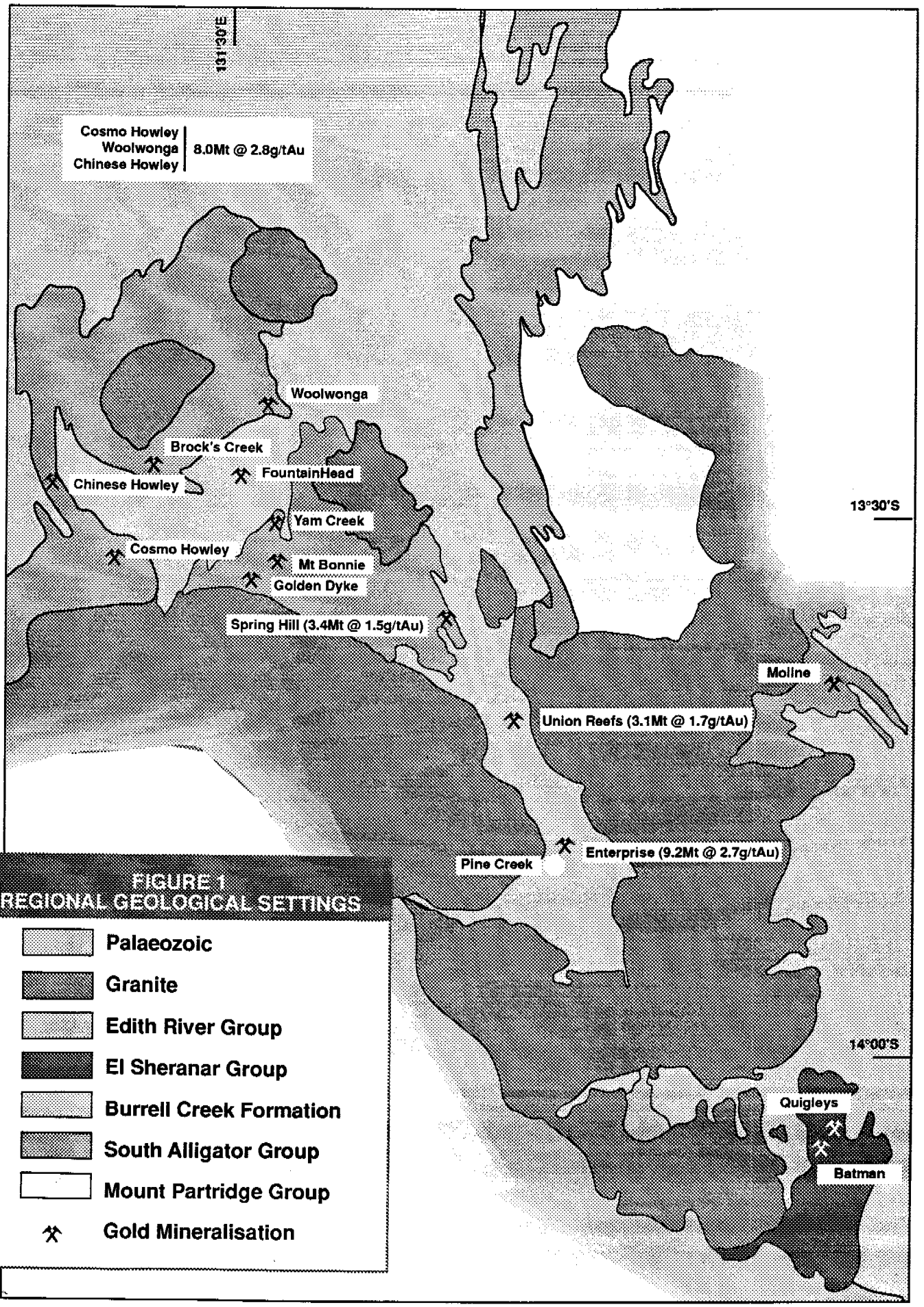
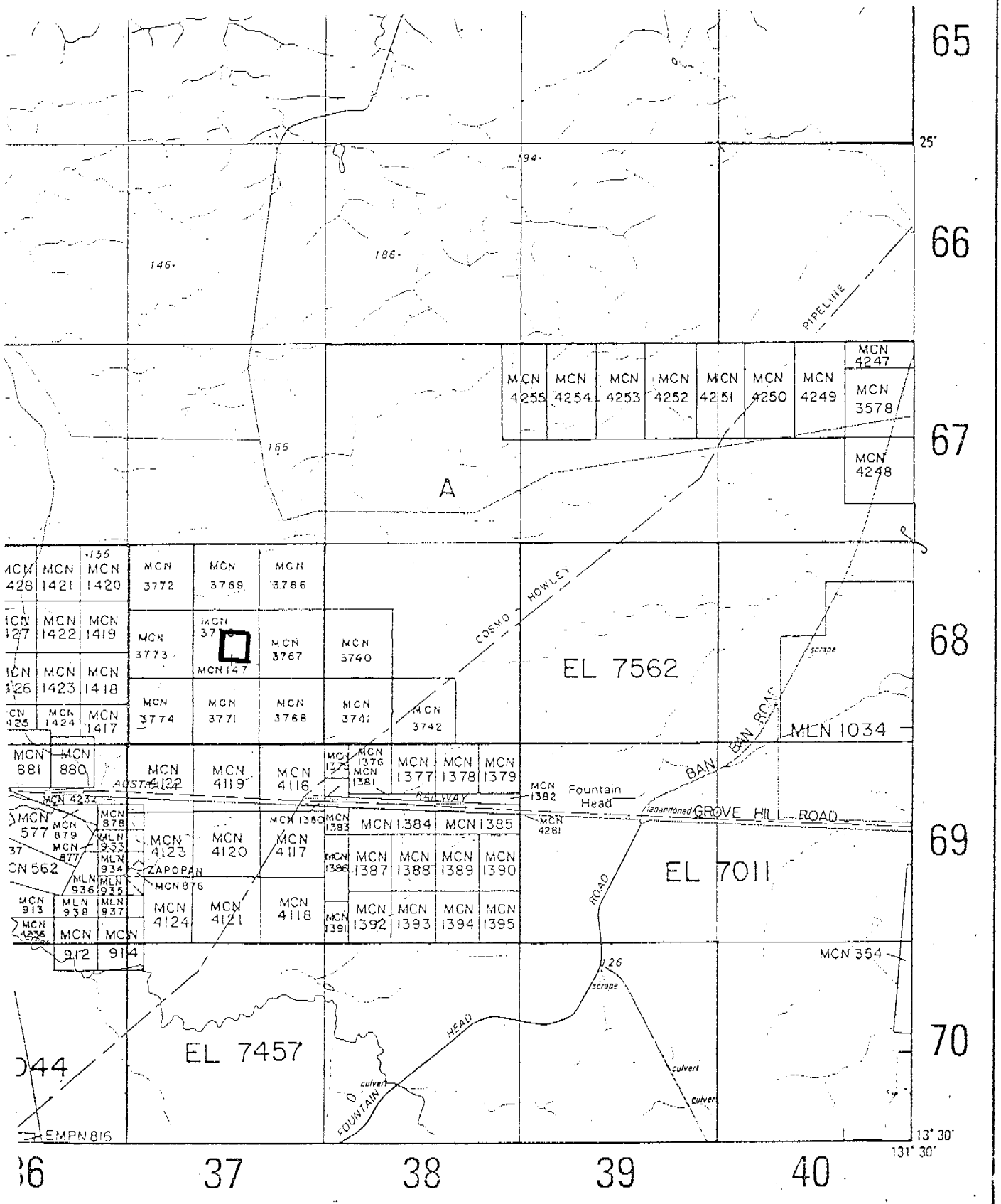


FIGURE 1
REGIONAL GEOLOGICAL SETTINGS



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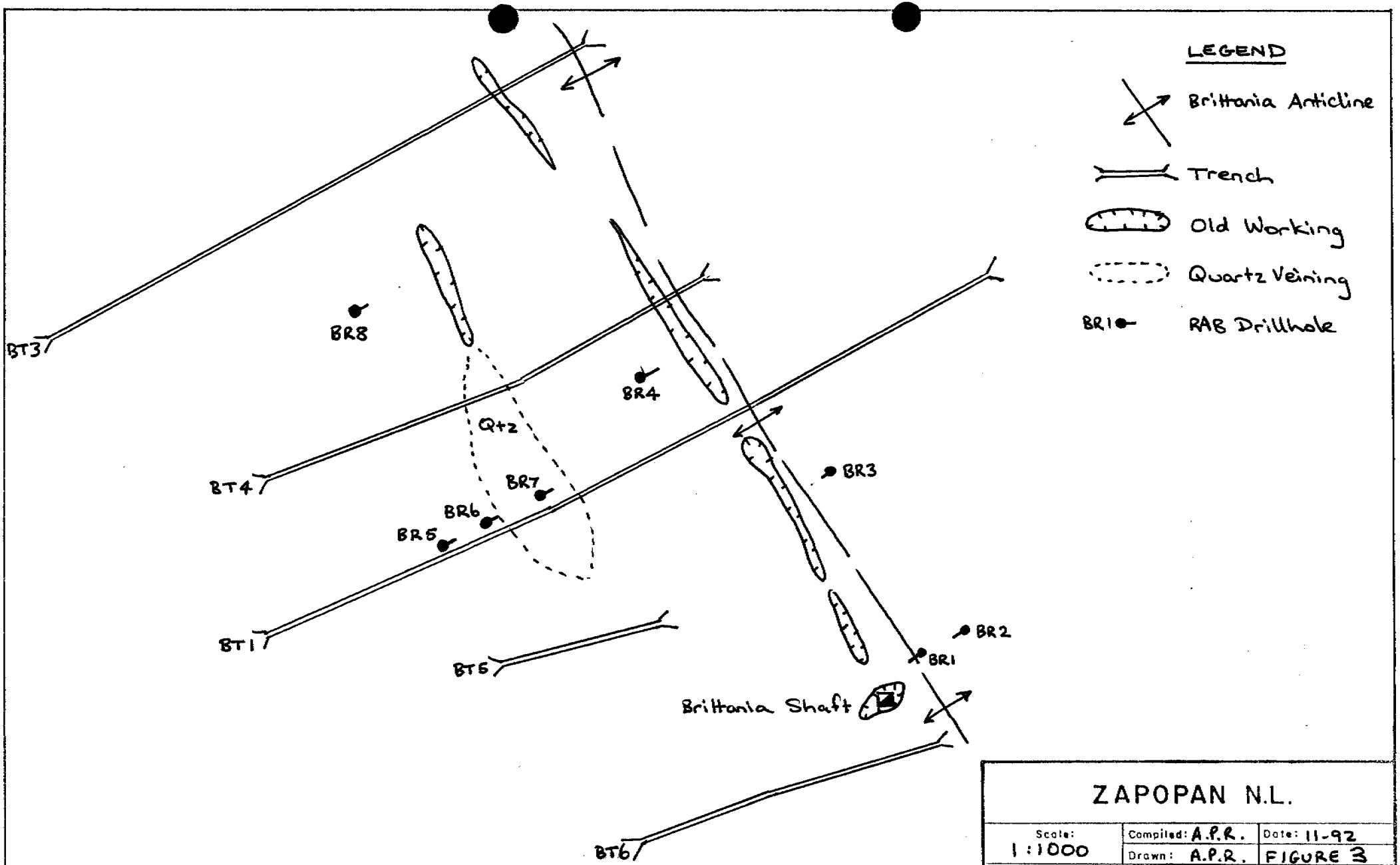
Scale:	Compiled: A.P.R.	Date: 11-92
1:50,000	Drawn: A.P.R.	FIGURE 2

TENEMENT PLAN
MCN 147
BRITTANIA MINE



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Scale: 1:1000	Compiled: A.P.R.	Date: 11-92
	Drawn: A.P.R.	FIGURE 3

BRITTANIA MINE

MCN 147

DRILLHOLE LOCATION PLAN

APPENDIX I

DRILL LOGS

BRITTANIA MINE RAB DRILLING.

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60° → 255° M 15/8/92 GADEN DRILLING.

BRITTANIA

Prospect:
Hole No: BR 1

Depth (m) From	To	Sample Number	Assay Data Au ppm	Au(R) ppm	Sample Number	Au	Rock Type	Colour	DRYNESS	RECOV	OXID.	Alteration BL	Ser	Sil	Chl	Veining % Q	CO	Mineralization L	H	Py	CODE	COMMENTS
0	1							Br	D		W											Mullock
	2															.5						Siliceous greywacke + minor ferrug. chert.
	3	101	.016	.026																		
	4																					
	5							G			F					.5						
	6	102	.09	.12												.5						
	7															.5						
	8																					
	9	103	.01																			Siltstone + minor chert
	10																					Siliceous greywacke + minor ferrug chert.
	11																					
	12	104	.003																			
	13																					
	14																					
	15	105	.004																			
	16																					
	17									0												STOPE
	18	106	.003	.002						0												STOPE
																					*	Stope FW @ 18 m EOH.

Z
Zapopan NL

60° → 255° M

16/8/92

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-62

Prospect: BRITTANIA
Hole No: BR2

Depth (m) From	To	Sample Number	Assay Data Au ppm	Au(Rpt)	Sample Number	Au	Rock Type	Colour	DRYNESS	RECOV	OXID.	Alteration BL	Ser	Sil	Chl	Veining % Q	CO	Mineralization L	H	Py	CODE	COMMENTS
0	1							Br	D		W											Siliceous greywacke
	2																					+ minor siltstone
	3	201	.002																			↓
	4																					
	5															.5						AA + minor grey chert
	6	202	.002																			
	7																					
	8															1						
	9	203	.001													.5						
	10							Gr			T											
	11																					
	12	204	.002																			
	13																					
	14																					
	15	205	.002																			
	16							Br			W					.5						AA + pyritic chert.
	17															.5						
	18	206	.001													.5						
	19							G			T					.5						
	20															.5						
	21	207	.006								F					.5						
	22															.5						
	23															.5						
	24	208	.005													.5						
	25							C														Cream siliceous greywacke
	26																					
	27	209	.002																			
	28																					

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Prospect: BRITANNIA
Hole No: BR2

Depth (m) From	Depth (m) To	Sample Number	Assay Data Au ppm	Assay Data Au (rpt)	Sample Number	Au	Rock Type	Colour	DRYNESS	RECOV	OXID.	Alteration BL	Alteration Ser	Alteration Sil	Alteration Chl	Veining % Q	Veining % CO	Mineralization L	Mineralization H	Mineralization Py	CODE	COMMENTS
28	29							C	D		F											Siliceous greywacke
	30	210	.096	.090																		↓
	31																					AA + grey/clear banded chert
	32																					(pyritic in parts)
	33	211	.038																			↓
	34																					
	35																					
	36	212	.004																			
	37																					
	38								M													Siliceous greywacke + minor banded chert
	39	213	.001						"													↓
	40								W													
	41																					
	42	214	.003																			
	43																					
	44																					
	45	215	.001																			
	46																					
	47																					
	48	216	.002																			↓
																						EOH @ 48m

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Prospect: BRITTANIA
Hole No: BR3

Depth (m) From	To	Sample Number	Assay Data Au ppm	Au (Repl)	Sample Number	Au	Rock Type	Colour	DRYNESS	RECOV	OXID.	Alteration BL	Ser	Sil	Chl	Veining % Q	CO	Mineralization L	B	Py	CODE	COMMENTS
0	1							Br	D		W											Greywacke
	2							↓	↓		↓											↓
	3	301	.002					↓	↓		↓											Greywacke + grey/clear banded chert (trace pyrite)
	4							↓	↓		↓											↓
	5							↓	↓		↓											↓
	6	302	.009					↓	↓		↓											↓
	7							C	↓		T											↓
	8							"	↓		↓											↓
	9	303	.005					Br	↓		W											Greywacke clays
	10							↓	↓		↓											↓
	11							↓	↓		↓											↓
	12	304	<					↓	↓		↓											↓
	13							↓	↓		↓											↓
	14							↓	↓		↓											↓
	15	305	.002					↓	↓		↓											↓
	16							↓	↓		V											↓
	17							C	↓		F					1						Greywacke + grey pyritic chert + minor VQ
	18	306	.15	.16				↓	↓		↓					1						↓
	19							↓	↓		↓					1						↓
	20							↓	↓		↓					1						↓
	21	307	.016					↓	↓		↓					1						↓
	22							↓	↓		↓											↓
	23							↓	↓		↓											Greywacke + minor chert
	24	308	.013					↓	↓		↓											↓
	25							↓	↓		↓											↓
	26							↓	↓		↓											↓
	27	309	.011					↓	↓		↓											↓
	28							●	↓		↓							●				

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Prospect: BRITTANIA
Hole No: BR3

Depth (m) From	Depth (m) To	Sample Number	Assay Data Au ppm	Assay Data Au(Rpt)	Sample Number	Au	Rock Type	Colour	DRYNESS	RECOV	OXID.	Alteration BL	Ser	Sil	Chl	Veining % Q	CO	Mineralization L	H	Py	CODE	COMMENTS
28	29							C	D		F											Greywacke + minor chert.
	30	310	.005					"	"		"											"
																						EOH @ 30m

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60° → 060°m

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Prospect: BRITTANIA
Hole No: BR 4

Depth (m) From	To	Sample Number	Assay Data Au ppm	Au (Repeat)	Sample Number	Au	Rock Type	Colour	DRYNESS	RECOV	OXID.	Alteration BL	Ser	Sil	Chl	Veining % Q	CO	Mineralization L	H	Py	CODE	COMMENTS
0	1							Br	D		W											Greywacke
	2							↓	↓		↓											↓
	3	401	.005					↓	↓		↓											↓
	4							↓	↓		↓											↓
	5							↓	↓		↓											↓
	6	402	.005					C	↓		T											Siltstone
	7							↓	↓		↓											↓
	8							↓	↓		F											Fresh siltstone + minor
	9	403	.001					↓	↓		↓											grey pyritic chert.
	10							↓	↓		↓											↓
	11							↓	↓		↓											↓
	12	404	<					↓	↓		↓											↓
	13							↓	↓		↓											↓
	14							↓	↓		↓											↓
	15	405	.001					↓	↓		↓											↓
	16							Br	↓		W					.5						Weathered AA
	17							G	↓		T											Grey pyritic chert.
	18	406	.005					↓	↓		↓											"
	19							Br	↓		W					.5						Weathered siltstone
	20							↓	↓		↓					.5						"
	21	407	.005					G	↓		F					.5						Grey siliceous wacke
	22							C	↓		↓											Greywacke + ▪ chert.
	23							↓	↓		↓											↓
	24	408	.004					↓	↓		↓											↓
	25	409	.003					↓	M		↓											EOH @ 25m
																						Bogged Rods.

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Prospect: BRITTANIA
Hole No: BR5

Depth (m) From	To	Sample Number	Assay Data Au ppm	Au(Rpt)	Sample Number	Au	Rock Type	Colour	DRYNESS	RECOV	OXID.	Alteration BL	Ser	Sil	Chl	Veining % Q	CO	Mineralization L	H	Py	CODE	COMMENTS
0	1							RBr	D		W											Colluvium
	2							Br														Siltstone
	3	501	.24	.42				PaBr								20						
	4							↓								50						
	5															20						
	6	502	.36	.41				Gr								5						
	7							↓								1						
	8															—						
	9	503	.35					Br								10						
	10							↓								.5						
	11							Gr			T					.5						Micaceous siltstone
	12	504	.14													.5						+ minor chert.
	13																					
	14																					
	15	505	.012	.011				↓	↓		↓											EOH @ 15m

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Prospect: BRITANNIA
Hole No: BR #6

Depth (m) From	To	Sample Number	Assay Data Au ppm	Au(Rpt)		Sample Number	Au				Rock Type	Colour	DRYNESS	RECOV	OXID.	Alteration BL	Ser	Sil	Chl		Veining % Q	CO		Mineralization L	H	Py		CODE	COMMENTS
0	1											Br	D		W													Colluvium
	2																											Siltstone
	3	601	.775	149																	1							
	4																				1							
	5																				1							
	6	602	.350																		10							
	7											Gr									20							Micaceous siltstone + minor
	8																				.5							chert
	9	603	.410																		.5							
	10																				2							
	11																				1							
	12	604	.195																		.5							
	13																				.5							
	14																				30							
	15	605	.440									W									100							Quartz vein + ferruginous flags.
	16											Gr									2							Micaceous siltstone +
	17																				.5							minor chert.
	18	606	.089																		.5							
	19											G			T													
	20											Gr																
	21	607	.030	.057																								
	22																											
	23											G			F													Grey chert.
	24	608	.014																									EOH @ 24m

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Prospect: BRITTANIA
Hole No: BR 7

Depth (m) From	To	Sample Number	Assay Data Au ppm	Au(Rpt)		Sample Number	Au			Rock Type	Colour	DRYNESS	RECOV	OXID.	Alteration BL	Ser	Sil	Chl		Veining % Q	CO		Mineralization L	B	Py		CODE	COMMENTS
0	1											D		W														Trench Spoil
	2																											AA
	3	701	1.40	2.43							K																	Khaki micaceous siltstone
	4																											+ minor chert.
	5																											
	6	702	.15	.32																								
	7																											
	8																											
	9	703	.19								Gr			T														Chert
	10										G			F														
	11																											
	12	704	.60								C																	Chert + green micaceous Sst
	13																											
	14																			.5								
	15	705	.72	1.29																10								
	16										PaBr									80								Ferruginous Quartz Vein +
	17																			80								minor Siltstone
	18	706	.64																	80								
	19										Br									50								Siltstone
	20																			50								
	21	707	.205																	5								Siltstone + chert.
	22																			10								
	23																			5								
	24	708	.27	.50							Gr									.5								
	25																			.5								
	26																			.5								
	27	709	.035								G									2								Siltstone
	28																			.5								"

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Prospect: BRITTANIA
Hole No: BR 7

Depth (m) From	To	Sample Number	Assay Data Au ppm	Au(Rpt)	Sample Number	Au	Rock Type	Colour	DRYNESS	RECOV	OXID.	Alteration BL	Ser	Sil	Chl	Veining % Q	CO	Mineralization L	R	Py	CODE	COMMENTS
28	29							G	D		F											Siltstone
	30	710	.015																			"
	31																					AA + minor banded chert.
	32																					
	33	711	.018																			
	34																					
	35							Gr	M													Micaceous siltstone
	36	712	.005																			EOH @ 36 m.

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Prospect: Brittania
Hole No: BR8

Depth (m) From	To	Sample Number	Assay Data Au ppm	Au(Rpt)		Sample Number	Au			Rock Type	Colour	DRYNESS	RECOV	OXID.		Alteration BL	Ser	Sil	Chl		Veining % Q	CO		Mineralization L	H	Py		CODE	COMMENTS
0	1											D		E															Colluvium
	2																												"
	3	801	2.32	3.15							Br			W															Siltstone + chert
	4										↓																		↓
	5										C																		
	6	802	.011	.098							Br																		Chert
	7																												↓
	8	8																											
	9	803	.031																										Chert + micaceous siltstone
	10																												AA
	11										C																		Siltstone
	12	804	.008																										Siltstone + minor chert.
	13																												↓
	14																												
	15	805	.010								Gr			T															Micaceous (chloritic) Sst
	16																												+ minor chert
	17																												↓
	18	806	.003																										
	19																												
	20																												
	21	807	.002																										↓
	22										C			F															Chert
	23										↓										1								↓
	24	808	.001								G																		
	25																												
	26																												
	27	809	.001																										
	28										●	M												●					↓

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Zapopan NL

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Prospect: Brittania
Hole No: BR8

Depth (m) From	Depth (m) To	Sample Number	Assay Data Au ppm	Assay Data Au(Rpt)	Sample Number	Au			Rock Type	Colour	DRYNESS	RECOV	OXID.		Alteration BL	Ser	Sil	Chl		Veining % Q	CO		Mineralization L	H	Py		CODE	COMMENTS
28	29									G	W		F														Pyritic chart
	30	810	.001							↓	↓		↓														↓
	31	811	.029	.038																							EOH @ 31m
																											Bogged Rods.

APPENDIX II

ASSAYS

ASSAYCORP PTY LTD

A.C.N. 052 982 911

174 Ward Street, Pine Creek, N.T. 0847

P.O. Box 41, Pine Creek, N.T. 0847

Telephone (089) 76 1262

Facsimile (089) 76 1310

ASSAY CODE: AC 03723

Zapopan NL - Yam Creek

Distribution

Tony Rovira

Client Reference:

Project :

Cost Code:

Date Received: 18/08/1992

Number of Samples: 103

Sample Preparation

Analysis	Analytical Technique	Precision & Accuracy	Detection Limit	Data Units
Au	FA50	Acc. ± 15%	1	ppb
Au(R)	FA50	Acc. ± 15%	1	ppb

Authorisation: Ray Wooldridge

Report Dated: 21/08/1992

ASSAYCORP PTY LTD
A.C.N. 052 982 911
174 Ward Street, Pine Creek, N.T. 0847
P.O. Box 41, Pine Creek, N.T. 0847
Telephone (089) 76 1262
Facsimile (089) 76 1310

ASSAY CODE: AC 03723

Sample	Au (ppb)	Au(R) (ppb)
BR 101	16	26
BR 102	90	120
BR 103	10	
BR 104	3	
BR 105	4	
BR 106	3	2
BR 201	2	
BR 202	2	
BR 203	1	
BR 204	2	
BR 205	2	
BR 206	1	
BR 207	6	
BR 208	5	
BR 209	2	
BR 210	96	90
BR 211	38	
BR 212	4	
BR 213	1	
BR 214	3	
BR 215	1	
BR 216	2	
BR 301	2	
BR 302	9	

ASSAYCORP PTY LTD
A.C.N. 052 982 911
174 Ward Street, Pine Creek, N.T. 0847
P.O. Box 41, Pine Creek, N.T. 0847
Telephone (089) 76 1262
Facsimile (089) 76 1310

ASSAY CODE: AC 03723

Sample		Au (ppb)	Au(R) (ppb)
BR	303	5	
BR	304	<1	
BR	305	2	
BR	306	150	160
BR	307	16	
BR	308	13	
BR	309	11	
BR	310	5	
BR	401	5	
BR	402	1	
BR	403	1	
BR	404	<1	
BR	405	1	
BR	406	5	
BR	407	5	
BR	408	4	
BR	409	3	
BR	501	240	420
BR	502	360	410
BR	503	350	
BR	504	140	
BR	505	12	11
BR	601	775	1190
BR	602	350	
BR	603	410	

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Sample		Au (ppb)	Au(R) (ppb)
BR	604	195	
BR	605	440	
BR	606	89	
BR	607	30	57
BR	608	14	
BR	701	1400	2430
BR	702	150	320
BR	703	190	
BR	704	600	
BR	705	720	1290
BR	706	640	
BR	707	205	
BR	708	270	500
BR	709	35	
BR	710	15	
BR	711	18	
BR	712	5	
BR	801	2320	3150
BR	802	81	98
BR	803	31	
BR	804	8	
BR	805	10	
BR	806	3	
BR	807	2	
BR	808	1	

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Sample	Au (ppb)	Au(R) (ppb)
BR 809	1	
BR 810	1	
BR 811	29	38