

000

131001

MICROFILMED

OPEN FILE

ANNUAL REPORT

FOR

EXPLORATION LICENCE 9/84

(WOODY HILL AREA)

WESTERN TASMANIA

D.M.	A.O.	C.E.	E.O.	D.R.
				Regis
D. Dir.	18 JUL 1985			ECIL
	DEPT. OF MINES			
RES. No.	7485/35			

T. G. Summons

SUMMONS GEOSERVICES PTY. LTD.

with contributions: R. Poltock

Roger Poltock Geological Pty. Ltd.

JULY, 1985

T A B L E O F C O N T E N T S

	Page No.
<u>1. INTRODUCTION</u>	1
<u>2. BACKGROUND HISTORY</u>	2
<u>3. PREVIOUS EXPLORATION</u>	5
<u>4. CURRENT EXPLORATION</u>	
4.1. INTRODUCTION	6
4.2. ROCK CHIP SAMPLING RESULTS	6
4.3. STREAM SEDIMENT SAMPLE RESULTS	8
4.4. RECONNAISSANCE MAPPING	10
<u>5. DISCUSSION</u>	
5.1. IGNEOUS ROCKS	11
5.2. FEATURES OF KNOWN GOLD MINERALIZATION	12
5.3. GEOCHEMICAL ANOMALIES, APPARENT VS REAL	13
5.4. STRUCTURAL CONTROLS ON MINERALIZATION	15
<u>6. CONCLUSIONS AND RECOMMENDATIONS</u>	16
<u>REFERENCES</u>	17
<u>TABLES 1 - 4</u>	
<u>FIGURES 1 - 8</u>	
<u>APPENDICES 1 & 2</u>	
<u>APPENDIX 3</u> (Roger Poltock Geological Pty. Ltd.)	

1.

1. INTRODUCTION

Exploration Licence 9/84 covers an area of 56 sq. km., the north east corner being 5km south west of Queenstown in Western Tasmania. It is bounded by the following corner co ordinates: 375 000E 5 332 050 N, 375 000E 5 328 000N, 370 000E 5 328 000N, 370 000E 5 337 000N, 377 100E 5 337 000N and 377 100E 5 332 050 N.

The licence was granted to Trikon International Pty. Ltd. (Trikon) on the 18th July 1984, prior to which Trikon had held the same area as SPL 806.

Previous exploration of SPL 806 was done by the EZ Coy of A'sia Ltd. (EZ) under a joint venture agreement based on the adjacent EL 51/80, held by EZ at the time.

Access to EL 9/94 is good, using the Lyell Highway between Queenstown and Strahan, and to a lesser extent the Abt Railway, which traverses the valley of Halls Creek, and which once connected Queenstown with Strahan.

The physiography varies from comparatively level Misery Flat in the north, to the strongly dissected southern and east portions which adjoin the King and Queen Rivers respectively.

The Lyell Highway follows the watershed for both the west flowing streams (Lost Creek, Tully River, Little Tully River), and the east/south flowing streams (Starting, Fleabite and Halls Creeks).

This report details exploration work undertaken by Trikon for the twelve months ended 18. 7. 85.

2. BACKGROUND HISTORY

The Lynchford area of western Tasmania was one of the earliest centres of gold mining in the state; this feature of the region is due in part to the Government of the day being intent on discouraging gold diggers moving to Victoria in the 1850's.

Accordingly, the first Government Geologist, (C. Gould), was, upon his arrival in Hobart in 1859, instructed to search for gold in western Tasmania. During the subsequent four years, Gould found traces of gold in several localities, including "drift gold in the King's River", (Gould 1862, 1863).

However, he did not recommend any further prospecting for gold in the area, and it was not until early in 1878 that a party led by C. Lynch discovered gold in the Queen River valley, but not in economic concentrations.

Several years later, in 1881, Lynch returned to the area, and after further prospecting discovered coarse gold in what now is Lynchs Creek.

Lynch was granted a Reward Claim in the locality, and after the discovery of auriferous reef quartz in 1883, the King River Mine came into being.

The subsequent increase in prospecting activity in the area resulted in the discovery of alluvial deposits (e.g. Flanigans in 1885, Coupon Mine near Halls Creek), and eventually gold bearing quartz reefs.

Most of the hard rock gold deposits had stamper batteries erected to treat the ore (or mullock as was sometimes the case) on site.

Typical of these mines were the Woody Hill (1887), Macquarie (1888), Princess (1888), Davie (1893), Guilfoyle (1894), Madam Howard (1894), Harris' Reward (1895) and the May (1905).

Despite initial optimism, most of the mines were unprofitable, and Montgomery (1890) observed tartly that the King River and Macquarie Mines bore witness to the "evil policy of prematurely putting up (crushing) machinery".

The only gold mines known to have existed within EL 9/84 were the Davie and

the Coupon workings.

The gold mines closest to the licence area were the Macquarie, Woody Hill, Princess, May and the King River.

2.1. Davie Mine (≈ 376 100E, 5 336 000N)

The date of discovery is not known— two gold lease in the name of L. H. Propsting appear on a lease map dated 1902, while a later addition to the map states simply "Davie P. A. Lode Au". Green (1985) recorded intensive prospecting of this deposit between 1909 and 1910, and that a quartz reef had assayed 14 g/tonne Au at the surface.

2.2. Coupon Mine (≈ 375 900E, 5 333 600N)

Little is known about this mine, and it is assumed to have been an alluvial operation. Four, ten acre mineral leases appear on a lease map dated 1902, and the area covered lies between Gorings, Halls and Harveys Creeks.

2.3. Macquarie Mine (375 200E 5 337 900N)

Information about this mine is sparse, except that a 10 stamp crushing battery was installed in 1888, and sold in 1894, covering an interval of unrecorded, but implied sub economic gold production (Julen 1981).

2.4. Woody Hill Mine (375 445E 5 337 710N)

The original gold lease was taken out in 1887 by G. V. Kemp and later worked by the Woody Hill Prospecting Association (1892-1900), and subsequently by W.W.F. and T. C. Murray (1901-1907). The latter persons also held the lease over the Macquarie Mine in 1902.

The Woody Hill deposit consisted of two quartz reefs, the No. 1 lode striking 033° - 039°, and dipping steeply to the SE. The No. 2 lode was discovered in 1894 during the excavation of the No. 2 adit (Montgomery 1894), and strikes 033° (Green, 1985).

The width of the No. 1 lode ranged 0.61m - 1.2m, while the other quartz reef was seen to be 4.4m wide in the adit.

Extensive underground workings consisted of an underlay shaft sunk on the

4.

outcrop of No. 1 lode, which connected with the No. 1 adit (and drive) at an inclined depth of 26m.

The No. 2 adit was driven on a bearing of 240°, 40m below the shaft.

Limited production data for the mine show a gold grade of 45.9 g/tonne from a 3 tonne parcel in 1894, while from 1898 to 1905, 4.66 kg of Au was produced from 265 tonnes of ore, for an average gold grade of 17.6 g/tonne (Green 1985).

Additional production data, for the period 1887 - 1907, shows 4.60 kg of Au was produced from 339.4 tonnes of ore, for an average grade of 13.6 g/tonne.

The No.1 lode appears to have thinned (?out) toward the southern end of the No. 1 drive, with an associated decrease in grade (Montgomery 1894).

Sampling of the reef (? on the No. 1 level) by C. Costain in 1936 showed the grade to be ≤ 1.5 g/tonne.

The No, 2 lode was described by Montgomery (1894) as being "almost barren of gold".

2.5. Princess Mine (≈ 377 300E 5 337 200N)

This mine was located above a waterfall in Princess Creek, and operated (profitably) from 1888- 1890. There were at least two quartz reefs, the main lode of which appears to have had a NW strike.

The average grade of production during the early months ranged 16.8 - 26 g/tonne of Au, and is assumed to have dropped below 10 g/tonne in 1890.

2.6. King River Mine (≈ 379 100E 5 336 300N)

The early bonanza grades of gold obtained from this deposit were short lived, and the general grade of the quartz was poor. The 120000 g/tonne "discovery grade" in 1883 soon declined, and a grade of 27.7 g/tonne Au obtained in 1894 was also probably atypical, whereas the grade of 1.15 g/tonne Au (in 1921) may have been more representative.

3. PREVIOUS EXPLORATION

As indicated in the introduction, previous exploration of the area was conducted by the EZ Coy, as detailed by Nyvlt (1981) and McDonald (1983).

An earlier phase of exploration by Pickands - Mather in 1966, involved the collection of stream samples, but the results of this work are apparently unavailable.

The EZ program involved reconnaissance mapping, rock and stream sampling, photogeological and petrographic studies.

1981 Program - total of 156 rock chip, 30 stream sediment and 7 tailings samples collected/analysed.

1983 Program - total of 8 rock chip, 19 stream sediment and 12 panned gravel samples collected/analysed.

The 1981 samples were analysed for Cu, Pb, Zn, Ag, As, Au, Fe, Mn, Bi, Sn, W and Sb; the 1983 rock samples were analysed similarly with the exception of W, while the stream samples had Co substituted for Au.

However,, despite the extensive sampling, statistical processing of the samples was not reported, and presumably not done.

EZ concluded (McDonald 1983) that their primary exploration objective of Carlin style gold mineralization was unlikely to occur in the area, and that their secondary targets (carbonate hosted Ag Pb Zn, and replacement Sn-W mineralization) also had very low potential occurrence.

4. CURRENT EXPLORATION

4.1. INTRODUCTION

The present phase of exploration has embraced several aspects, but primarily to review the previous exploration results and to identify the requirements, if any, for follow up exploration.

Because the geochemical data collected by EZ had not been processed and systematically interpreted, meaningful appraisal of the 1985 field results required the interpretation of this earlier data.

The proposed program of fieldwork for 1985 was not entirely adhered to, (e.g. lack of stream sediment sampling of Starting and Lost Creeks, detailed appraisal of the SE corner magnetic anomaly). Reasons for the changes to the program include delays in obtaining field crews, inordinate logistical problems, and results of reconnaissance mapping.

After taking account of these factors, the field work was directed to the eastern part of the EL, and consisted of reconnaissance mapping, and close spread stream sampling.

4.2. ROCK CHIP SAMPLING RESULTS

4.2.1. INTRODUCTION

A total of 4 rock associations was used to assess the EZ data, namely the Shale-Siltstone (Bell Shale correlates), the Sandstone-Quartzite (Florence and Crotty Quartzite correlates) the Siltstone-Limestone, and the Limestone (Gordon Limestone). The last association was not amenable to statistical treatment due to the small number of samples.

4.2.2. PROCESSING

All sample locations are shown in Figure 1, with further details in Table 1, and Figures 2, 3, 4 and 5.

Raw assay data is attached as Appendix 1.

Assessment of the analyses was done by combining the arithmetic with the graph threshold values, (Table 1), various element correlations were also evaluated, with the following results:

ROCK CHIP SAMPLING (1981 AND 1983) RESULTS

TABLE 1

Lithological Association	Element	Calculated					Graph Indicated Threshold	Threshold Values Used
		N	Mean \bar{x}	Stand. Dev. σ	Threshold $\bar{x} + 2\sigma$	Prob. Anom. $\bar{x} + 3\sigma$		
Shale/Siltstone (Bell Shale Corr.)	Cu	60	12.8	9.0	30.8	39.8	36	33 ppm
	Pb	58	22.4	17.0	56.4	73.4	75	65 ppm
	Zn	60	27.0	16.1	59.2	75.3	120	90 ppm
	Ag	60	211.7	310.0	832	1142	-	800ppb
	As	58	8.3	10.5	29.3	39.8	27	28 ppm
	Au-1	60	2.5	4.7	11.9	16.6	} 11	11 ppb
	Au-2	60	6.0	3.7	13.4	17.1		
Sandstone/Quartzite (Florence and Crotty Quartzite correlates)	Cu	61	7.7	13.5	34.7	48.2	33	34 ppm
	Pb	56	17.6	17.2	51.8	69.0	80	66 ppm
	Zn	59	16.0	13.8	43.6	57.4	56	50 ppm
	Ag			(All B. L. D.)				
	As	61	14.0	31.0	76.0	107.0	50/75	75 ppm
	Au-1	61	4.0	5.4	14.8	20.2	} 17	16 ppb
	Au-2	61	6.8	3.9	14.6	18.5		
Siltstone/Limestone	Cu	17	31.8	14.6	61.0	75.6	67	65 ppm
	Pb	15	34.0	19.5	73.0	92.5	83	78 ppm
	Zn	16	110.6	49.8	210.2	260.0	195/250	200ppm
	Ag	18	258.3	408.1	1074	1483	1700	1390ppb
	As	15	10.0	5.4	20.8	26.2	33	27 ppm
	Au-1	18	1.8	2.3	6.4	8.7	} NA	7 ppb
	Au-2	18	5.3	1.0	7.3	8.3		

TRIKON CORPORATION PTY. LTD.

E.L. 9/84
SHALE - SILTSTONE ASSOCIATION
ROCK CHIP SAMPLE RESULTS
Cumulative Frequency Distribution
of Cu, Pb, Zn, As, Au
T.G. Summons June 1985

ELEMENT VALUE IN ppm (ppb for Au)

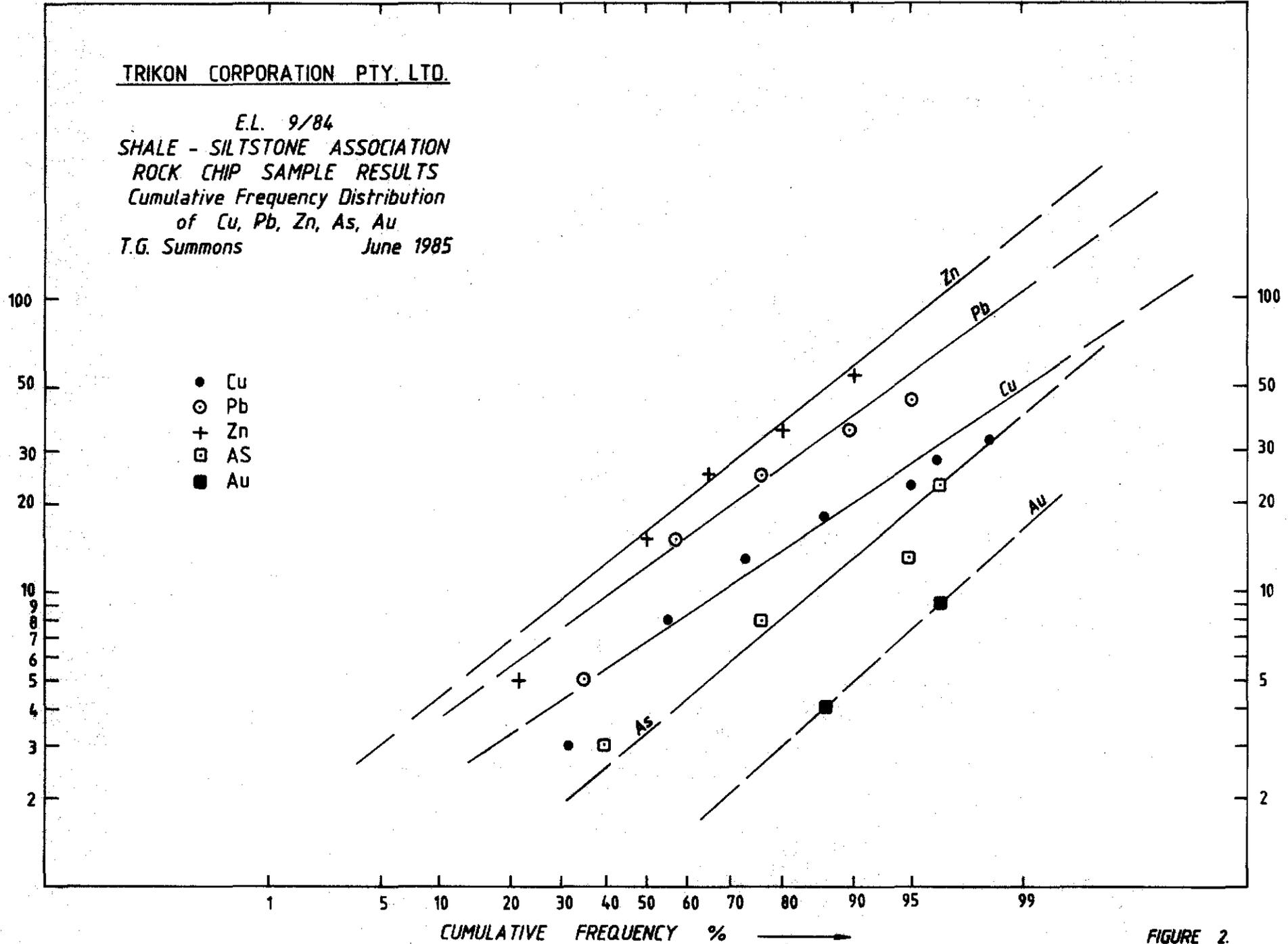


FIGURE 2.

TRIKON CORPORATION PTY. LTD.

E.L. 9/84
SANDSTONE - QUARTZITE ASSOCIATION
ROCK CHIP SAMPLE RESULTS
Cumulative Frequency Distribution
of Cu, Pb, Zn, Au
T.G. Summons June 1985

ELEMENT VALUE IN ppm (ppb for Au)

- Cu
- Pb
- + Zn
- Au

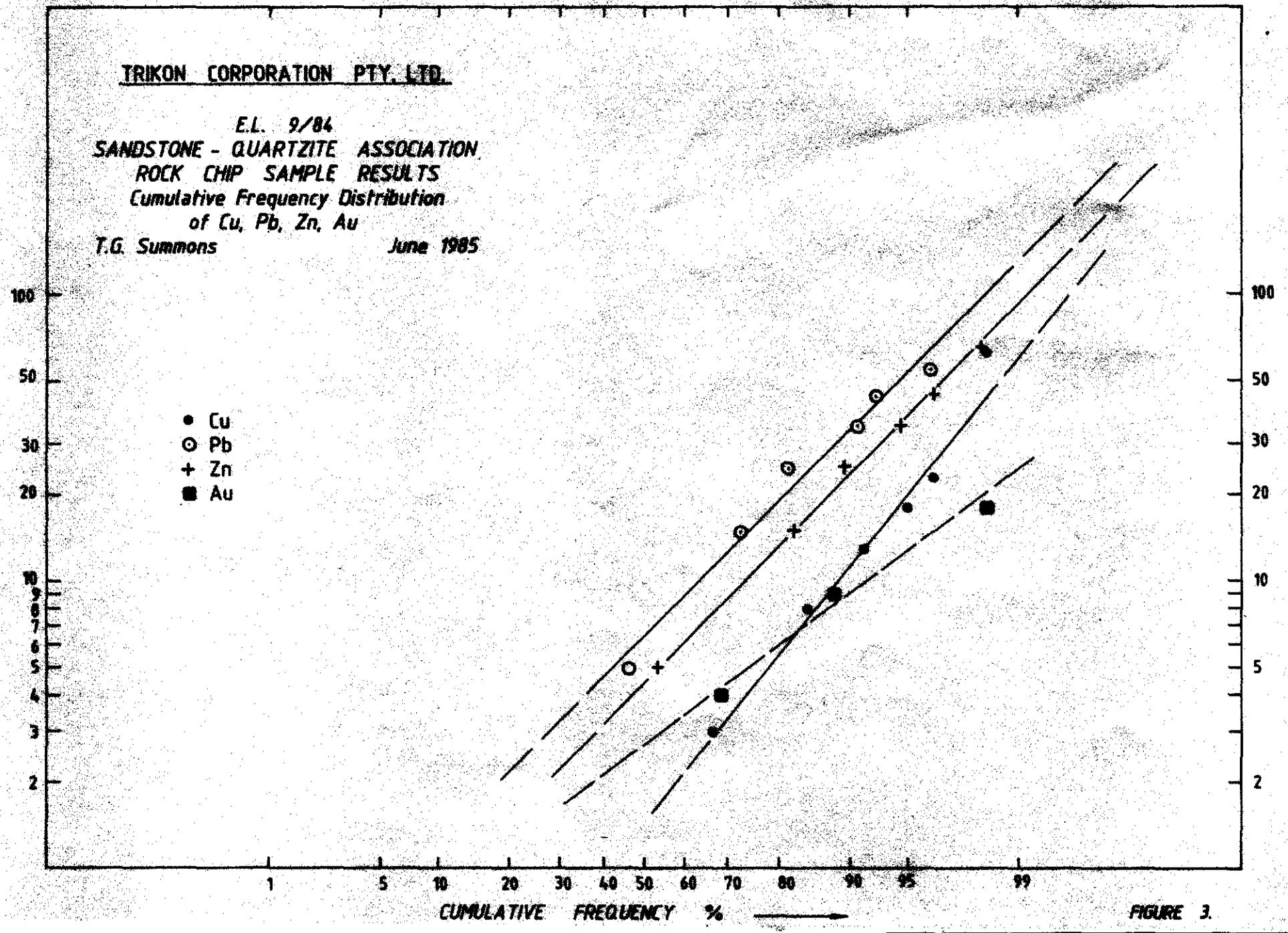


FIGURE 3.

TRIKON CORPORATION PTY. LTD.

E.L. 9/84
SANDSTONE - QUARTZITE ASSOCIATION
ROCK CHIP SAMPLE RESULTS
Cumulative Frequency Distribution of As
T.G. Summons June 1985

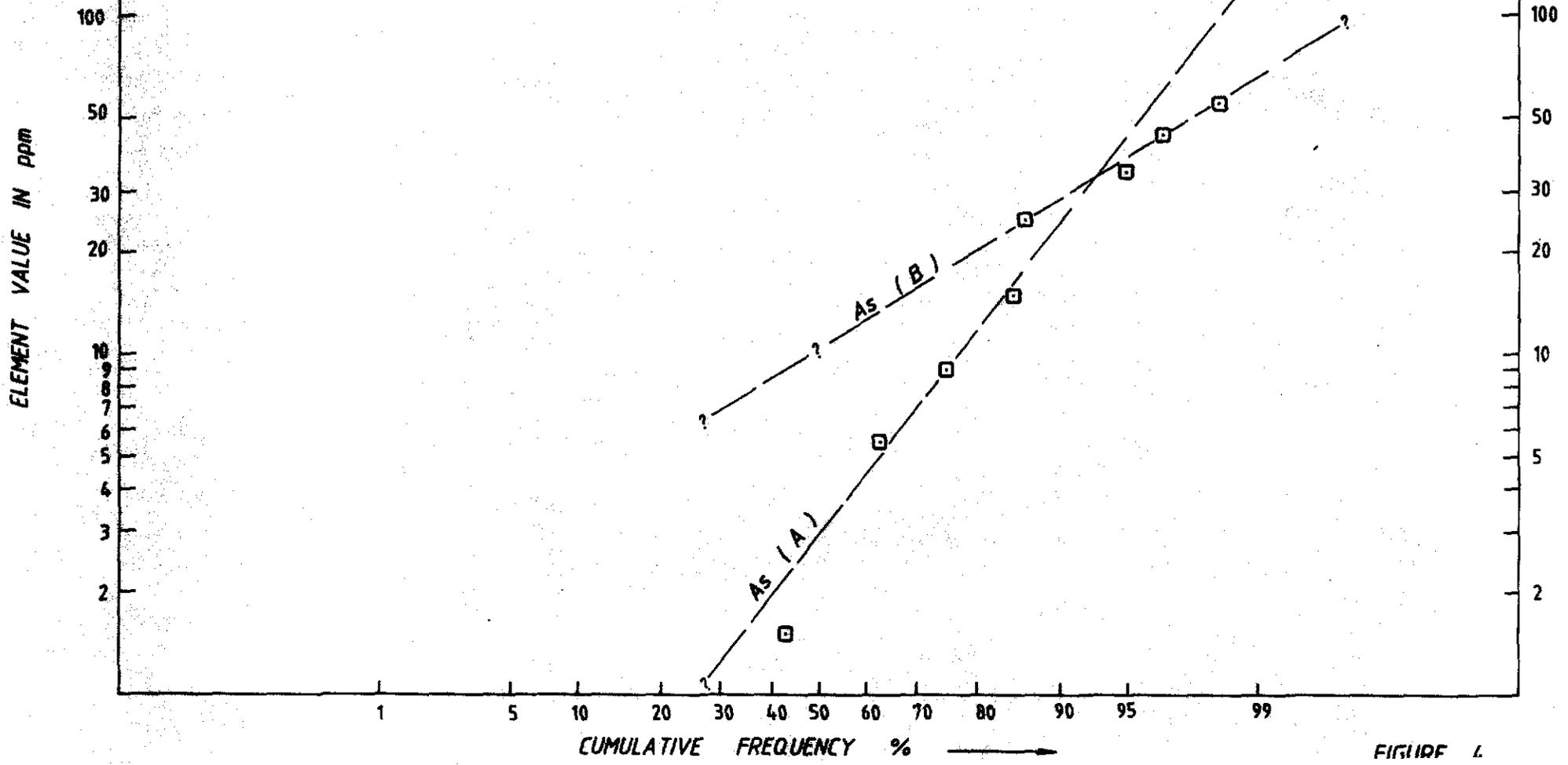
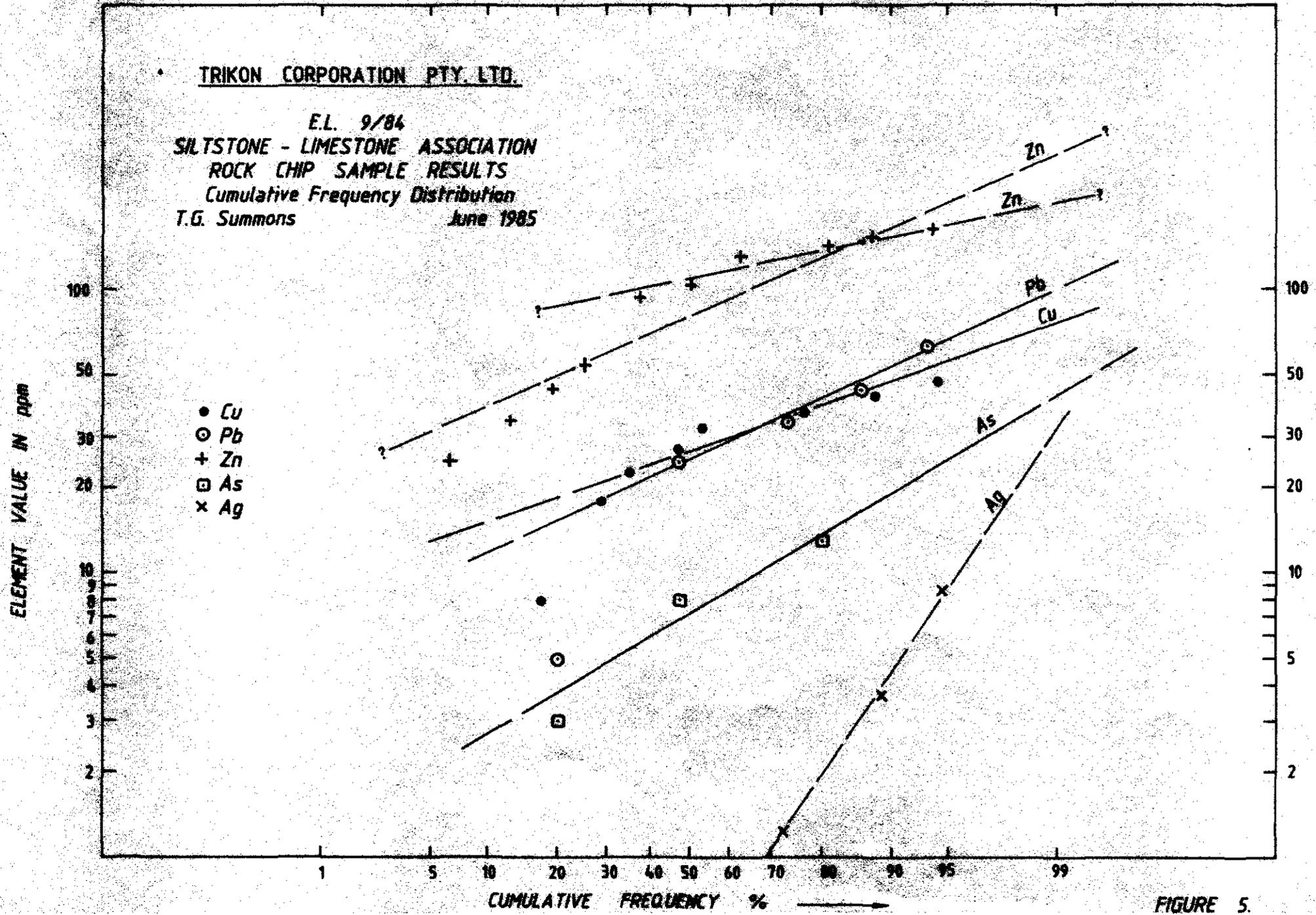


FIGURE 4

TRIKON CORPORATION PTY. LTD.
E.L. 9/84
SILTSTONE - LIMESTONE ASSOCIATION
ROCK CHIP SAMPLE RESULTS
Cumulative Frequency Distribution
T.G. Summons June 1985



131013

FIGURE 5.

7.

Fe - As: sample size of 125, with BLD (< 1ppm) values for As assumed at 0.5ppm; there is a reasonable positive correlation, of the form
 $As = 6.67Fe + 1.84$, (correlation coefficient = 0.66).

Au - As: sample size of 26, taken from the shale/siltstone and sandstone/quartzite associations, BLD values for As assumed 0.5ppm; there is no significant relationship, (corr. coeff. = 0.01).

Cu - Au: as for Au - As data, with BLD (< 5ppm) values for Cu assumed at 1 ppm; there is no significant relationship, (corr. coeff. = 0.23).

Accordingly, likely As anomalies required correction for the level of Fe in the samples, such corrections being shown in Table 2.

Further assumptions were made for the evaluation of the Au results, due to the detection level of 8 ppb;

Au - 1 results incorporate assumed BLD values of 1 ppb, and Au - 2 results use 5 ppb.

A similar approach was used for Ag, where BLD (< 0.5 ppm) values were assumed at 0.05 ppm.

Preliminary processing enabled the "eyeball" recognition of anomalous results, which were then excluded from the final calculations shown in Table 1.

4.2.3. APPARENT ANOMALIES

A total of 41 apparent anomalies were recognised (Table 2) of which 17 occur in the Sandstone Quartzite association, 13 in the Shale - Siltstone associations, and 11 occur in the Siltstone - Limestone association.

A broad two fold division is present, namely, the gold (and related) apparent anomalies, and the base metal apparent anomalies.

Despite the poor correlations of Au with As and Cu, other evidence suggests that at least some of the Au mineralization is associated with Cu, and that other (assumed) Au mineralization may have accompanying As haloes.

TABLE 2

APPARENT ANOMALIES - ROCK CHIP SAMPLES

SAMPLE NUMBER	Rock Assoc. ⁿ	Element Values in ppm (ppb for Au)						COMMENTS
		Cu T=34	Pb T=66	Zn T=50	Ag T=NA	As T=75	Au T=16	
46111	Sandst/Qtzite	-	145	810	-	-	8	Stratiform, ?+assoc. with Au. Associated with (or actual) Au mineralization (?overprinted stratiform Zn in 46118). Stratiform. ?Assoc with Au min. ⁿ Stratiform. ?Assoc. with Au min. ⁿ Stratiform. Assoc. with/actual Au min. ⁿ
46312	"	-	-	10	-	6	17	
46116	"	65	10	15	-	-	16	
46117	"	15	20	10	-	40	16	
46118	"	-	60	265	-	1	24	
46122	"	5	10	10	-	37	16	
46124	"	10	20	30	-	(137)	-	
46125	"	10	70	45	-	12	-	
46127	"	10	35	55	-	3	-	
46128	"	-	100	30	-	11	-	
46130	"	80	45	20	-	60	-	
46133	"	-	70	20	-	34	-	
46134	"	15	35	10	-	(72)	-	
46136	"	-	100	10	-	9	-	
46137	"	15	170	15	-	8	-	
46139	"	5	350	20	-	-	-	
46146	"	20	35	75	-	17	17	
<hr/>								
	Shale/Siltst	T=33	T=65	T=90	T=0.8	T=28	T=11	
46158	"	5	70	5	-	(95)	-	As - Cu (?assoc. with Au min. ⁿ) overprinting on stratiform Pb values. Adjacent to Ag Pb Reward Leases. ?Assoc./actual Au min. ⁿ
46159	"	20	65	10	-	56	-	
46160	"	30	30	40	-	61	-	
46161	"	45	265	45	-	59	8	
46171	"	10	150	55	-	12	-	
46176	"	15	70	20	-	9	8	
46181	"	35	15	35	-	4	25	

*T = Threshold Value

(Cont.)...

TABLE 2 (Cont.)

SAMPLE NUMBER	Rock Assoc. ⁿ	Element Values in ppm (ppb for Au)						COMMENTS
		Cu	Pb	Zn	Ag	As	Au	
	Shale/Siltst.	T=33	T=65	T=90	T=0.8	T=28	T=11	
46186	"	5	45	10	1.0	8	-	} Related to Pb - Ag mineralization.
46190	"	10	20	30	1.5	6	-	
46191	"	15	10	15	1.0	10	-	
46193	"	-	5	-	1.0	1	-	
46322	"	10	20	30	-	4	25	Assoc. with Au mineralization.
46324	"	5	35	165	-	41	-	Leakage ironstone.
	Siltst./Limest.	T=65	T=78	T=200	T=1.4	T=27	T=7	
46335	"	10	110	390	0.5	-	-	} Stratiform
46336	"	50	105	300	-	11	-	
46338	"	35	65	45	-	17	8	} Assoc. with Au mineralization
46343	"	40	25	105	-	4	8	
46345	"	45	35	70	-	(69)	-	
46344	"	10	10	15	-	5	8	
46352	"	105	30	30	0.5	15	-	?Stratiform
		1983 Samples						
43833	"	10	10	35	0.5	90	-	Assoc. with Au mineralization
43839	"	40	510	135	1.5	9	-	Stratiform
43858	"	5	5	10	-	100	-	Leakage wad
35198	"	55	25	180	-	11	-	?Stratiform

T = Threshold value

016

The apparent Au anomalies are considered more likely to reflect actual mineralization than the base metal anomalies; the latter, (particularly Pb and Zn) appear distinctly bedded or stratiform, and are considered to be either a contrast effect, or trace mineralization. EZ identified Pb - Zn - Ag mineralization in the Gordon Limestone (HEC quarry), and it is possible that some of the Cu, Pb, Zn apparent anomalies are real (e.g. near the AgPb Reward Leases in the headwaters of Starting Creek).

The likely bimodal distribution of As in the Florence and Crotty Quartzite correlates is presumably an indication of hydrous Fe Mn oxide scavenging of the As, while the possible bimodality of the Zn distribution in the Siltstone-Limestone association may reflect weak mineralization.

The location and likely distribution of the apparent geochemical anomalies are shown in Figure 8.

4.3. STREAM SEDIMENT SAMPLE RESULTS

4.3.1. INTRODUCTION

A total of 71 stream samples were collected from the eastern part of the EL; initially three, and ultimately two source rock associations were adopted to evaluate the 1985 stream sediment sample analyses.

These groups were the Sandstone - Quartzite (Crotty Quartzite correlate and ? others), and the Siltstone - Limestone association, in which about half the streams were of mixed provenance.

However, the distinction between groups 2 and 3 (Table 3) was minimal, and to assist the statistical significance, these groups were combined, and considered to have an effective source in the Siltstone - Limestone association.

An important difference exists between the 1981 - 83 and the 1985 stream sediment samples, principally the larger size range of particles collected in 1985. The 1981 - 83 samples were screened to -80#(-180 μ), whereas the 1985 samples were only screened to -1mm; in addition the recent samples were probably bigger, (250g), than the early samples and Au was determined by fire assay/AAS after a bulk leach with cyanide.

STREAM SEDIMENT SAMPLING (1985) RESULTS

TABLE 3

Lithological Association	Element	Calculated				Graph Indicated Threshold	Threshold Values Used
		Mean \bar{x}	Stand.Dev. σ	Threshold $\bar{x} + 2\sigma$	Prob.Anom. $\bar{x} + 3\sigma$		
1. Sandstone/Quartzite (N=14)	Cu	4.4	0.6	5.6	6.2	-	6 ppm
	Pb	3.6	6.4	16.4	22.8	-	16ppm
	Zn	8.4	4.9	18.2	23.1	-	18ppm
	As	5.3	11.1	27.5	38.6	-	28ppm
	Au	0.3	0.8	1.9	2.7	-	2 ppb
2. Siltstone/Limestone (N=25) (Preliminary Results)	Cu	8.4	5.2				
	Pb	5.3	5.9				
	Zn	25.7	13.7				
	As	20.2	23.5				
	Au	2.4	5.5				
3. Mixed (1 and 2) (N=28)	Cu	8.7	8.1				
	Pb	5.2	5.8				
	Zn	27.2	29.2				
	As	6.8	7.1				
	Au	0.9	3.0				
4. Combined (2 and 3) (N=53) (Final Siltstone / Limestone)	Cu	8.5	6.8	22.1	28.9	30	22ppm
	Pb	5.3	5.8	16.9	22.7	22	17ppm
	Zn	26.5	23	72.5	95.5	-	
	Zn-A	NA	NA	NA	NA	50) 50ppm
	Zn-B	NA	NA	NA	NA	73	
	As	13.1	18.1	49.3	67.4	72	49ppm
	Au	1.6	4.4	10.4	14.8	25	10ppb

TRIKON CORPORATION PTY. LTD.

E.L. 9/84
SILTSTONE - LIMESTONE ASSOCIATION
STREAM SEDIMENT SAMPLE RESULTS
Cumulative Frequency Distribution
of Cu, Pb, Zn, As, Au
T.G. Summons June 1985

ELEMENT VALUE IN ppm (ppb for Au)

- Cu
- Pb
- + Zn
- As
- Au

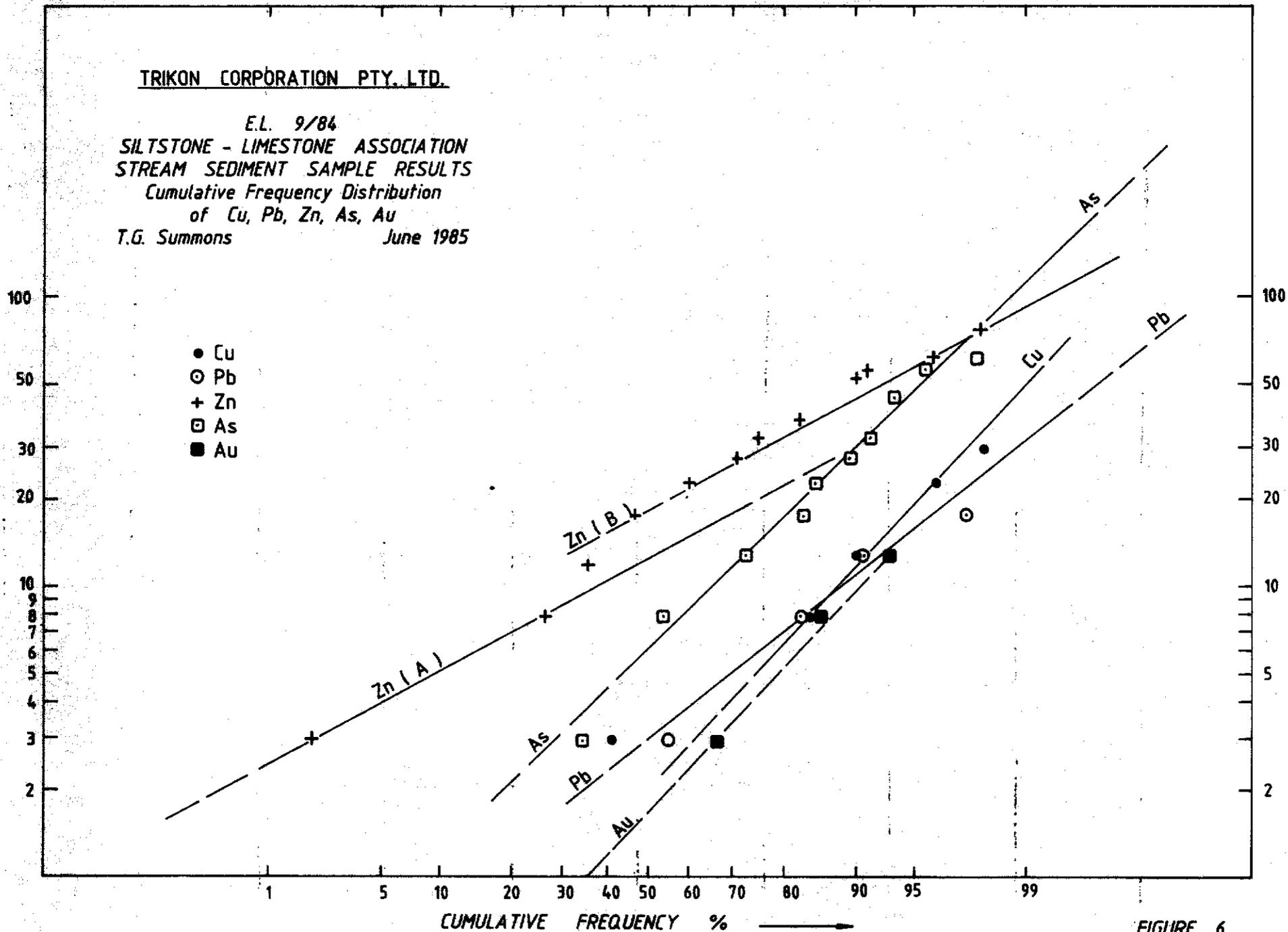


FIGURE 6

4.3.2. PROCESSING

All sample locations are shown in Figure 1, with other details shown in Table 3 and Figure 6. Raw assay data is attached in Appendix 2.

Assessment of the analysed data was done by combining the arithmetic and graph threshold values (Table 3).

The bimodal distribution of Zn in the Siltstone-Limestone association is regarded as a clear indication of the presence of limestone lenses within/interbedded with a fine grained clastic succession.

The EZ stream sample results were not suitable for statistical treatment due to most of them being below the limits of detection for the various elements. However, because some overlap in sampling took place, a comparison of the 1985 with the 1983 results was possible using the following pairs:

4.3.2.1. Sandstone - Quartzite Association

43844 - 0021, 43845 - 0022, 43848 - 0024

Ratio of 1983 to 1985 results (average), Cu = 1.8, Pb = 1.9, Zn = 1.6, As = 0.5.

4.3.2.2. Siltstone - Limestone Association

43829 - 0055, 43830 - 0058, 43831 - 0059, 43832 - 0060, 43851 - 0020,
43854 - 0009.

Ratio of 1983 to 1985 results (averages), Cu = 2.1, Pb = 9.7, Zn = 3.9 and As = 2.3.

The comparison of the results indicated a consistent variation, such that approximate threshold values could be estimated for the 1981 - 83 stream sediment samples collected by EZ.

4.3.2.3. Estimated Threshold Values for EZ Stream Sample Results

Sandstone - Quartzite association - Cu = 11, Pb = 30, Zn = 29, As = 14 ppm.

Siltstone - Limestone association - Cu = 46, Pb = 165, Zn = 195, As = 113 ppm.

Application of these values to the EZ data for stream sediments indicated 5 apparent anomalies.

4.3.3. APPARENT ANOMALIES

A total of 28 apparent anomalies were recognised, as shown in Table 4, of which

TABLE 4

APPARENT ANOMALIES - STREAM SEDIMENT SAMPLING

SAMPLE NUMBER	ROCK ASSOC. ^N	Element Values in ppm (ppb for Au)						COMMENTS
		Cu	Pb	Zn	Ag	As	Au	
<u>1981 Results</u>								
43516	Sandstone/	T=11	T=30	T=29	T=NA	T=14	T=NA	} Related to Au mineralization Stratiform origin.
43520	Quartzite	20	-	-	-	-	15	
43521	"	15	-	-	-	-	-	
43521	"	-	-	35	-	-	-	
<u>1983 Results</u>								
43844	"	10	15	15	-	15	ND	} ?Peripheral to Au Min. ⁿ
43845	"	10	25	15	-	14	ND	
<u>1985 Results</u>								
0011	"	T=6	T=16	T=18	T=NA	T=28	T=2	} Related to Au mineralization As for 43844-45
0021	"	5	17	15	0.1	9	3	
0022	"	5	6	11	-	40	-	
0022	"	4	19	6	-	17	-	
0027	Siltstone/	T=22	T=17	T=50	T=NA	T=49	T=10	} Stratiform origin } Related to Au min. ⁿ } Stratiform origin } Related to Au min. ⁿ (overprinted Pb in 0076) } Stratiform origins
0026	Limestone	4	15	9	-	4	-	
0020	"	12	19	17	0.1	-	-	
0032	"	7	18	25	0.1	30	-	
0009	"	8	8	26	0.1	8	6	
0012	"	6	1	25	0.1	13	15	
0017	"	9	8	41	0.1	12	5	
0075	"	10	11	43	-	10	7	
0076	"	8	7	25	0.1	98	1	
0077	"	12	28	24	-	60	12	
0007	"	5	11	18	-	64	10	
0074	"	5	-	77	0.1	2	1	
0072	"	23	18	141	-	14	-	
0073	"	6	3	55	-	16	-	
0064	"	22	9	62	-	13	-	
0064	"	24	9	57	-	17	-	

T = Threshold

TABLE 4 (Cont)

SAMPLE NUMBER	ROCK ASSOC. ^N	Element Values in ppm (ppb for Au)						COMMENTS
		Cu	Pb	Zn	Ag	As	Au	
		<u>T=22</u>	<u>T=17</u>	<u>T=50</u>	<u>T=NA</u>	<u>T=49</u>	<u>T=10</u>	
0060	Siltstone/	9	8	63	-	43	1	} ... Related to Au min. ⁿ
0059	Limestone	7	3	20	-	31	24	
0039	"	31	2	15	0.1	3	-	} ... Stratiform origin
0042	"	7	2	41	0.1	12	-	
0067	"	38	5	26	0.1	14	3	?Stratiform origin

T = Threshold

8 are sourced in the Sandstone/Quartzite association, and 20 in the Siltsone-Limestone association.

Similarity to the rock analyses, two broad groups occur, the gold (and related) apparent anomalies, and the base metal apparent anomalies.

All anomaly information is shown in Figure 8 where it has been integrated with the rock analyses.

4.4. RECONNAISSANCE MAPPING

The results of this mapping by R. Poltock are shown in Figure 7, and discussed in Appendix 3.

The most significant result of the work has been the recognition of a major fault along the valleys of Sulphide and Harveys Creeks, which has allowed the juxtaposition of Siluro-Devonian rocks with Cambrian age rocks; the latter rocks may be the source of the aeromagnetic anomaly in the south east corner of the licence.

5. DISCUSSION

5.1. IGNEOUS ROCKS

5.1.1. EL 9/84

During the 1981 field program by EZ, several unusual rocks were collected along the Lyell Highway, and found to be altered acid igneous lithologies as follows:

Sample 46114: completely altered, foliated, veined and mineralized (possibly vesicular) porphyritic igneous rock of acid composition.

Sample, 46115: altered, foliated, veined and mineralized pyroclastic of acid origin.

Sample 46151: altered, foliated, and mineralized fragmental rock of acid origin, (and similar to 46115).

All three samples are characterised by pyritic sulphides, quartz veins and whole rock alteration, all of which were considered to be due to hydrothermal processes.

Two types of quartz veining were recognized, early hydrothermal (and variably mineralized), and later veins associated with the recrystallization of the sandstones.

Samples 46114 and 46115 occur at the Woody Hill gold deposit, and sample 46151 is within the West Rinadeena apparent gold anomaly.

Adjacent to the Woody Hill samples was sample 46314 which is a veined and weakly mineralized fine grained carbonaceous arenite. The pyritic sulphide mineralization (0.2%) is present in the quartz veins (12%).

Samples 46114 and 115 contain weak Cu - Zn - Au mineralization, averaging 930 ppm Cu, 118 ppm Zn, 25 ppb Au.

5.1.2. HENTY - YOLANDE AREA

Sheppard (1974) recognized two types of acid porphyries in this area to the north of EL 9/84, microgranophyres, and quartz keratophyres. Examples of the latter occur at Diamond Hill and the Yolande River porphyry (which has been pyritised adjacent to a fault).

Both these bodies have been intruded by auriferous quartz veins, the gold reportably declining markedly with depth.

5.1.3. LOWER HENTY RIVER AREA

The Strahan 1:50 000 scale geological sheet records small bodies (?dykes) of hornblende and feldspar porphyry, within a Cambrian age sequence of sediments and acid/intermediate volcanics.

5.2. FEATURES OF KNOWN GOLD MINERALIZATION

5.2.1. GEOCHEMICAL CHARACTER

The initial impression gained from studying the data on and around the Macquarie, Woody Hill and Davie gold deposits is that they do not show a strong primary geochemical dispersion of the analysed elements.

(The apparent Pb and Zn anomalies at the Woody Hill deposit are assumed to represent non hydrothermal concentrations of these elements).

However, none of the gold deposits has been studied in detail (by either rock or stream sampling), such that neither their true primary or secondary dispersion patterns have been irrefutably identified.

The only data on secondary dispersion is that collected from near the Davie deposit; 1985 stream sample 0020 (equivalent to EZ sample 43851) was collected 300m south of the deposit and was not obviously anomalous for Au or As.

However, sample 43851 is possibly anomalous for Cu (20ppm), but was not assayed for Au.

Limited appraisal of fluvial dispersion of gold elsewhere was inconclusive, mainly due to the insufficient number of samples.

025

5.2.2. OTHER CHARACTERISTICS

The following features have been recorded for the three deposits:

- Macquarie deposit - quartz veins, in Bell Shale correlate
- Woody Hill deposit - quartz veins, and silicification of the host Florence/
Crotty Quartzite correlate.
- Davie deposit - quartz veins, and silicification of the host ? Crotty
Quartzite correlate.

5.3. GEOCHEMICAL ANOMALIES, APPARENT VERSUS REAL

As indicated previously, the apparent base metal anomalies are generally considered to represent contrast effects, or very weak mineralization, and so are probably not significant anomalies indicative of extensive mineralization.

The apparent gold anomalies however, require more detailed appraisal to resolve what may be conflicting data.

Seven apparent gold anomalies are recognized (Fig. 8), and have the following associated features:

1. Lost Creek (headwaters): parallel to the Woody Hill lodes, with a coincident Cu anomaly, and some silicification of country rock.
2. Lost Creek - T Bone Creek Junction: coincident As anomaly.
3. North T Bone Creek - Davie Deposit: quartz veins, silicification of country rock, and coincident As anomaly; adjacent (?related) As and Cu anomalies, with quartz veining and further silicification of host rocks.
4. Sulphide Creek - T Bone Creek Linear Junction: quartz veins, and with adjacent (?related) As anomaly and silicification.
5. Halls Creek (north confluence of Harveys Creek): coincident As anomaly; the present unnamed creek cutting this apparent anomaly was the original Sulphide Creek.

6. Gorings Creek: coincident As anomaly, (with ? a related Zn anomaly); this apparent gold anomaly occurs in the original Rinadeena Reward Lease for antimony.

7. West Rinadeena: minor quartz veins, silicification of host Florence Quartzite correlate, presence of altered acid volcanic, (sample 46151), and a ? coincident Zn anomaly.

Discrimination of real from apparent (or non significant) gold anomalies requires the selection of both the appropriate physical and geochemical criteria.

Quantative geochemical assessment of these apparent anomalies is complicated by:

1. The absence of clearly identified primary dispersion characteristics about the known gold deposits;
2. The possibility of two styles of gold mineralization,
 - (a) Quartz veins associated with NE orientated acidporphyry dykes which may have Cu haloes.
 - (b) Quartz veins in NW to N orientated fractures with distinct As haloes.
3. The possibility that disseminated gold mineralization, free of quartz veining, is present in the EL; this represents the best target for further work in the area.

Use of physical criteria (namely presence of quartz veins and country rock silicification), as a discriminant for real gold anomalies suggest apparent anomalies 1, 3, 4 and 7 may warrant further attention.

However, some of the quartz veins may be due to the effects of recrystallization, and thus spurious, while poor exposures in Halls, Gorings, and Sulphide Creeks may have prevented recognition of veining/silification.

5.4. STRUCTURAL CONTROLS ON MINERALIZATION

The general area about EL 9/84 is peripheral to the WNW aligned Linda Fault System, in which steep reverse faults (often with sinistral offset) occur, (Williams 1979).

The photo linears depicted in Figure 8 range in orientation from NW through to WE, with the NW trend probably dominant.

The King River, Princess, May, Macquarie and Woody Hill gold deposits occur in a NW corridor, with the first two having quartz reefs striking NW, while the Woody Hill reefs strike NE.

One possible structural model to incorporate all of these features involves a NW orientated dextral shear couple which develops NW shear fractures, and NE tensile fractures. In particular, the tensile fractures would be expected to occur in an echelon fashion, and to fade out rapidly both along "strike" and down dip.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 A review of all previous exploration results obtained by the EZ Coy, in conjunction with the 1985 program of stream sampling, has identified numerous apparent geochemical anomalies of two main types, gold and base metal.

6.2. The apparent base metal anomalies are thought to reflect contrast effects or very weak mineralization, and are thus not significant. Accordingly, the potential for carbonate hosted Pb Zn Ag mineralization in the eastern half of the EL seems unattractive.

6.3. Meaningful interpretation of the apparent gold anomalies is complicated by various factors, including previous sample types/spacing/analyses.

Although the absolute values of the apparent gold (and related element) anomalies are not spectacular, the potential for low grade - medium tonnage gold mineralization cannot be precluded using the present data.

6.4. The potential for replacement Sn-W mineralization in a carbonate host (e.g. - the south east corner aeromagnetic anomaly), now seems remote in the eastern half of EL 9/84.

6.5. It is recommended that the apparent gold anomalies in EL 9/84 be further investigated by close spaced rock/soil/stream sampling.

REFERENCES

- GOULD, C. 1862: Report on Macquarie Harbour; House of Assembly Paper No. 26, 1862.
- GOULD, C. 1863: Report on the Exploration of the Western Country; House of Assembly Paper No. 9, 1863.
- GREEN, G.R. 1985: Strahan 1:50 000 Geological Sheet. Explan. Rep. Geol. Surv. Tas.
- JULEN, H. 1981: A History of Goldmining on the Tasmanian West Coast.
- McDONALD, I.R. 1983: SPL 806. Report on Exploration Activities for the twelve months ended 10.3.83. Unpub. Rep. 163, E.Z. Coy. A'sia Ltd.
- MONTGOMERY, A. 1890: Report on the state of the mining industry on the West Coast Rep. Sec. Mines. Tas. 1889 - 1890, 11-26.
- MONTGOMERY, A. 1894: Notes on the Queen River and Mt. Lyell Mining Districts. Rep. Sec. Mines Tas. 1893 - 1894.
- NYVLT, J.A. 1981: SPL 806. Report for six months ended 10.9.81. Unpub. Rep. 138, EZ Coy A'sia Ltd.
- SHEPPARD, N.W. 1974: EL 41/71 Annual Report. Unpub. Rep. Mt. Lyell Mining and Railway Coy. Ltd.
- WILLIAMS, E. 1979: Tasmanian Fold Belt System in Tasmania; Tas. Dept. Mines Explan. Rep.

30

131031

APPENDIX ONE

131032

52 Murray Road, Welshpool, W.A. 6106
44 Lane Street, Kalgoorlie, W.A. 6430

Phone (09) 458 7999
Phone (090) 21 1416

ANALYTICAL REPORT

This report must be read in conjunction with the results given for JOB No. 27.1 08 283

Client: Electrolytic Zinc

(1) Roseberg

Order No. 900270 Date Received 19/6/81

Reference..... Results Required.....

Delivered by..... Total No. of Samples 4S

(2) SAMPLE NUMBERS	STATE OF SAMPLES	Average Weight	PRETREATMENT							ANALYSIS				
	Refer to section (5) for terminology		Dry	Crush	Split	Pulverize	Sieve	Evaporate	Other (see remarks)	None	Refer to section (5) for terminology	Preparation	Method	Coefficient of variation (%)
<u>46101-4S</u>	<u>Ro</u>		<u>1</u>			<u>2(c)</u>					<u>Cu Pb Zn Ag Fe Mn</u>	<u>A1/1</u>		
						<u>3A</u>					<u>As</u>	<u>A1/3</u>		
											<u>Sn</u>	<u>A1/2</u>		

(3) Number of pages of results: 4

Date Reported: 26/6/81

Results to: (1) As Above (2).....

Per: Mail

Number of Copies: 3

(4) Remarks: SPK 806 Lock samples.

(5) 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
fusion	TL	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC

Authorized Officer: [Signature]

03

131033

3
26.6.81

RESPONSIBLE OFFICER

Results ... μm ...
T = element present, but concentration too low to measure
X = element concentration is below detection limit
- = element not determined

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Fe	Mn	As
1	46101	10	50	25	x	3550	30	
2	02	20	30	30	x	5.0%	20	
3	03	10	40	20	x	4600	10	
4	04	20	40	20	x	3850	10	
5	05	x	20	15	x	2500	10	
6	06	5	10	10	x	2500	5	
7	07	5	20	10	x	2050	10	
8	08	10	10	20	x	6700	10	
9	09	5	35	15	x	1950	25	
10	10	5	35	15	x	2850	10	
11	11	x	145	810	x	2500	20	
12	12	x	20	35	x	3300	15	
13	13	10	30	10	x	3600	20	
14	14	x	10	10	x	1650	5	
15	15	905	25	130	x	6.8%	3900	
16	16	65	10	15	x	3950	40	
17	17	15	20	10	x	2.3%	20	
18	18	x	60	265	x	2050	15	
19	19	x	10	20	x	1800	5	
20	46120	5	15	15	x	9.5%	10	
21	21	5	15	10	x	4600	20	
22	22	5	10	10	x	4.6%	10	
23	23	x	10	20	x	1.3%	20	
24	24	10	20	30	x	12.1%	10	
25	25	10	70	45	x	1.4%	55	
26	26	15	25	20	x	5.9%	15	
27	27	10	35	55	x	2.9%	120	
28	28	x	100	30	x	7.2%	30	
29	29	10	55	20	x	8000	25	
30	30	80	45	20	x	21.5%	5	
31	31	10	40	20	x	5250	20	
32	32	x	15	10	x	3900	5	
33	33	x	70	20	x	4700	5	
34	34	15	35	10	x	5500	10	
35	35	x	10	10	x	2350	10	
36	36	x	100	10	x	2050	10	
37	37	15	170	15	x	5650	30	
38	38	x	25	20	x	1.5%	5	
39	39	5	350	20	x	1.8%	10	
40	46140	10	25	10	x	5000	25	
Detection		5	5	5	0.5	5	5	
Standard*	ASS5	430	325	105	0.5	29.9%	235	
Repeat-	46101	10	60	25	x	3600	30	
Repeat-	46120	5	10	10	x	9.7%	10	
Method		AV						

038

131034

RESPONSIBLE OFFICER B. D. [Signature]
261681

..results in ppm unless otherwise specified
T = element present but concentration too low to measure
X = element concentrations below detection limit
- = element not determined

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Fe	Mn
1	46141	S	15	10	0.5	4700	10
2	42	X	15	10	X	2300	S
3	43	10	15	S	X	3950	25
4	44	S	15	10	X	1.2%	S
5	46145	S	15	S	X	2300	10
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
Detection		S	S	S	0.5	S	S
Standard#	A555	450	340	95	0.5	29.0%	240
Repeat-	46141	S	15	10	X	4800	10
Repeat-							
Method							

...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

RESPONSIBLE OFFICER

B. [Signature]
 30, 6, 81

10131035

035

TUBE No.	SAMPLE No.	Bi
1	46101	S
2	02	X
3	03	S
4	04	X
5	05	10
6	06	X
7	07	X
8	08	X
9	09	S
10	10	X
11	11	10
12	12	X
13	13	X
14	14	10
15	15	10
16	16	S
17	17	10
18	18	X
19	19	S
20	46120	X
21	21	S
22	22	X
23	23	X
24	24	X
25	25	X
26	26	15
27	27	X
28	28	S
29	29	X
30	30	10
31	31	X
32	32	S
33	33	X
34	34	10
35	35	X
36	36	X
37	37	X
38	38	X
39	39	S
40	46140	S
Detection		S
Standard	ASSS	X
Repeat -	46101	X
Repeat -	46120	X
Method		ANA

035

131036

RESPONSIBLE OFFICER

B. Dorn
30, 6, 81

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

TUBE No.	SAMPLE No.	Result
1	46141	X
2	42	X
3	43	S
4	44	10
5	45	X
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
Detection		S
Standard	ASSS	X
Repeat -	46141	X
Repeat -		
Method		

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

RESPONSIBLE OFFICER

B. Don

1 7 81

Flatt

10-7-81

RBH

131039038

TUBE No.	SAMPLE No.	Av
1	46101	X
2	02	X
3	03	X
4	04	X
5	05	0.008
6	06	X
7	07	X
8	08	X
9	09	X
10	10	X
11	11	0.008
12	12	X
13	13	X
14	14	X
15	15	0.032
16	16	0.016
17	17	0.016
18	18	0.024
19	19	0.008
20	46120	0.008
21	21	0.008
22	22	0.016
23	23	X
24	24	X
25	25	X
26	26	X
27	27	X
28	28	X
29	29	X
30	30	X
31	31	X
32	32	X
33	33	X
34	34	X
35	35	X
36	36	X
37	37	X
38	38	X
39	39	X
40	46140	X
Detection		0.008
Standard		
Repeat-		
Repeat-		
Method		

13104032

RESPONSIBLE OFFICER

B. Dan
1.7.81

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

TUBE No.	SAMPLE No.	Element	Concentration
1	46141	Au	X
2	42		X
3	43		X
4	44		0.008
5	46145		0.008
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
Detection			0.008
Standard			
Repeat -			
Repeat -			
Method			16.20

52 Murray Road, Welshpool, W.A. 6106
44 Lane Street, Kalgoorlie, W.A. 6430

Phone (09) 458 7999
Phone (090) 21 1416

131047

ANALYTICAL LABORATORY (AUSTRALIA) PTY. LTD.

ANALYTICAL REPORT

This report must be read in conjunction with the results given for JOB No. 27108310

Client: Electrolytic Zinc

(1) Rosebery

Order No. 900273 Date Received 26/6/81

Reference 4 Results Required

Delivered by 5-0 Total No. of Samples 63

(2) SAMPLE NUMBERS	STATE OF SAMPLES	Average Weight	PRETREATMENT							ANALYSIS					
	Refer to section (5) for terminology		Dry	Crush	Split	Pulverize	Sieve	Evaporate	Other (see remarks)	None	Refer to section (5) for terminology				Preparation
46146-200	Ro		1	2		3(c)					Cu Pb Zn Ag Fe Mn Bi	A1/1			
46301-308						4	5				As	A1/3			
											Sb	A11/1			
											Au	RGSO			
											Sp. Wt.	XRF			

(3) Number of pages of results: 6

Date Reported: 1/7/81

Results to: (1) As Above (2)

Per: Mail

Number of Copies: 3

(4) Remarks:

SPL 806 ROCK SAMPLES.

*Noted
0-7-81
K.R. [Signature]*

(5) 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

Authorized
Officer

[Signature]

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

RESPONSIBLE OFFICER *[Signature]*

131049 *048*

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Fe	Mn	B
1	46186	S	45	10	1.0	5350	15	S
2	87	15	15	10	0.5	9700	10	S
3	88	20	10	10	0.5	1.05%	10	S
4	89	10	25	25	0.5	1.05%	25	10
5	90	10	20	30	1.5	1.5%	50	S
6	91	15	10	15	1.0	2.05%	20	X
7	92	10	10	10	X	1.4%	20	S
8	93	X	5	X	1.0	1550	15	X
9	94	X	20	5	X	1900	10	10
10	95	X	10	X	X	1400	5	X
11	96	X	X	X	X	1350	10	X
12	97	X	S	S	X	1.5%	15	X
13	98	X	S	X	X	6600	10	X
14	99	15	20	10	X	3400	15	X
15	46200	25	135	5	0.5	3800	10	X
16	46301	20	20	15	0.5	7250	10	10
17	02	X	X	10	0.5	3700	10	X
18	03	5	15	10	0.5	6550	10	X
19	04	X	X	25	X	1.1%	35	X
20	05	X	5	45	0.5	1.85%	75	S
21	06	15	20	35	0.5	7700	30	X
22	07	15	25	50	1.0	1.6%	40	X
23	46308	15	30	40	0.5	1.9%	40	10
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
Detection		S	S	S	0.5	S	S	S
Standard	ASSS	425	300	100	0.5	21.5%	275	X
Repeat -	46186	S	50	15	1.0	5500	25	S
Repeat -	46305	S	10	50	0.5	1.9%	75	X
Method		ALL						

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

RESPONSIBLE OFFICER

B. Doan

8 7 81

Platt
10-7-51
Doan

131057

1050

TUBE No.	SAMPLE No.	SN
1	46146	X
2	47	X
3	48	X
4	49	X
5	50	X
6	51	X
7	52	X
8	53	X
9	54	X
10	55	X
11	56	X
12	57	4
13	58	X
14	59	X
15	60	X
16	61	X
17	62	X
18	63	X
19	64	X
20	46165	X
21	66	X
22	67	2
23	68	X
24	69	X
25	70	X
26	71	X
27	72	X
28	73	X
29	74	4
30	75	2
31	76	2
32	77	X
33	78	X
34	79	X
35	80	X
36	81	X
37	82	X
38	83	X
39	84	X
40	46185	X
Detection		1
Standard		
Repeat -		
Repeat -		
Method		

Alfa

52 Murray Road, Welshpool, W.A. 6106
 44 Lane Street, Kalgoorlie, W.A. 6430

Phone (09) 458 7999
 Phone (090) 21 1416

131061

ANALYTICAL REPORT

This report must be read in conjunction with the results given for JOB No. 27.1 08 328

Client Electrolytic Zinc

(1) Roseberg

Order No. 900275 Date Received 30/6/81

Reference..... Results Required.....

Delivered by..... Total No. of Samples 48

(2) SAMPLE NUMBERS	STATE OF SAMPLES	Average Weight	PRETREATMENT								ANALYSIS						
	Refer to section (5) for terminology		Dry	Crush	Split	Pulverize	Sieve	Evaporate	Isae remarkel	Other	None	Refer to section (5) for terminology				Preparation	Method
<u>46309-56</u>	<u>Ro</u>			<u>1</u>		<u>2cc</u>							<u>Cu Pb Zn Ag Fe Mn Bi</u>	<u>A1/1</u>			
						<u>34</u>							<u>As</u>	<u>A1/3</u>			
													<u>Sb</u>	<u>A1/1</u>			
													<u>Sn</u>	<u>A1/2</u>			
													<u>Au</u>	<u>RA50</u>			
													<u>W</u>	<u>XRF</u>			

(3) Number of pages of results: 6

Date Reported: 6/7/81

Results to: (1) As Above (2) Sydney office

Per: Mail Mail

Number of Copies: 3 1

(4) Remarks: SPH 806 rocks.

*Noted
10-7-81
D. J. H. [Signature]*

(5) 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 chemical means	CHEM
tissue TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC

Authorized Officer.....

061

131062

B. Duran
6 7 81

RESPONSIBLE OFFICER

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

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Fe	Mn	Bi
1	46309	x	5	10	x	1000	5	x
2	10	x	10	5	x	1200	5	x
3	11	5	x	5	x	2000	20	5
4	12	x	x	10	x	1450	10	x
5	13	x	5	5	x	2250	15	5
6	14	40	80	105	x	6050	15	x
7	15	5	10	55	x	1.5%	30	x
8	16	10	15	55	x	2.0%	35	10
9	17	5	x	30	x	1.4%	15	x
10	18	5	x	5	x	9050	25	x
11	19	5	5	15	x	5450	30	x
12	20	5	5	40	x	1.6%	45	x
13	21	5	x	5	x	3350	25	x
14	22	10	20	30	x	6150	10	x
15	23	5	5	5	x	2150	5	x
16	24	5	35	165	x	7.8%	180	x
17	25	5	10	10	x	6900	10	x
18	26	5	15	60	x	2.3%	10	x
19	27	5	10	55	x	2.5%	105	x
20	46328	5	10	45	x	2.5%	65	10
21	29	5	5	15	x	3250	50	x
22	30	5	30	45	x	4850	15	x
23	31	30	115	1800	x	4750	310	x
24	32	5	70	105	x	3350	385	x
25	33	10	1250	9350	1.5	5500	325	x
26	34	255	3.0%	24.5%	40.0	9700	915	x
27	35	10	110	390	0.5	7150	835	x
28	36	50	105	300	x	4.7%	400	x
29	37	40	50	150	x	3.0%	40	x
30	38	35	65	45	x	2.8%	30	x
31	39	30	35	95	x	3.4%	70	x
32	40	25	35	145	x	3.9%	80	x
33	41	20	40	145	x	3.6%	440	x
34	42	30	45	170	x	3.3%	45	x
35	43	40	25	105	x	3.7%	40	x
36	44	10	10	15	x	6200	85	x
37	45	45	35	70	x	4.3%	590	x
38	46	45	25	60	x	3.5%	160	x
39	47	10	10	105	x	3.9%	95	x
40	46348	5	15	45	x	2.4%	135	x
Detection		5	5	5	0.5	5	5	5
Standard	A555	430	320	100	0.5	2750	260	x
Repeat-	46309	x	5	5	x	1000	5	x
Repeat-	46328	5	10	50	x	2.7%	55	x
Method		all						

06

131063

RESPONSIBLE OFFICER B. Dora
6 7 81

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

LINE	SAMPLE No.	Cu	Pb	Zn	Ag	Fe	Mn	B:
1	46349	15	20	75	0.5	2.35%	70	X
2	50	15	5	50	0.5	1.8%	100	X
3	51	10	20	40	X	1.3%	110	X
4	52	10.5	30	30	0.5	3.0%	15	X
5	53	25	10	15	0.5	1.2%	5	X
6	54	15	35	20	0.5	7.25%	55	X
7	55	10	30	35	X	3.0%	35	X
8	46356	20	20	35	0.5	7.75%	95	X
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
Detection								
Standard	ASSS	460	340	100	0.5	2.9%	250	X
Report -	46349	15	20	70	X	1.2%	75	X
Method								

NOTE: THESE ARE GEOCHEMICAL RESULTS
IF ACCURATE ASSAY RESULTS ARE
REQUIRED THEN A6/3 METHOD
SHOULD BE USED.

911

068

131064

Plotted
20-7-81
B. D. ...

RESPONSIBLE OFFICER
B. D. ...
16.7.81

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

TUBE No.	SAMPLE No.	AS																		
1	46309	7																		
2	10	4																		
3	11	4																		
4	12	6																		
5	13	2																		
6	14	8																		
7	15	7																		
8	16	3																		
9	17	1																		
10	18	1																		
11	19	2																		
12	20	5																		
13	21	x																		
14	22	4																		
15	23	x																		
16	24	95																		
17	25	1																		
18	26	1																		
19	27	x																		
20	46328	6																		
21	29	4																		
22	30	x																		
23	31	10																		
24	32	13																		
25	33	24																		
26	34	27																		
27	35	x																		
28	36	11																		
29	37	19																		
30	38	17																		
31	39	17																		
32	40	6																		
33	41	8																		
34	42	7																		
35	43	4																		
36	44	5																		
37	45	99																		
38	46	45																		
39	47	11																		
40	46348	5																		
Detection		1																		
Standard	F54	19																		
Repeat--	46309	5																		
Repeat--	46328	7																		
Method																				

X

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

RESPONSIBLE OFFICER

B. D. ...
 9 . 7 . 81

Plotted
 13-7-81
[Signature]

131066

063

TUBE No.	SAMPLE No.	Element	Concentration	Notes
1	46309	Au	X	
2	10	X		
3	11	0.008		
4	12	0.017		
5	13	0.008		
6	14	X		
7	15	X		
8	16	X		
9	17	0.008		
10	18	X		
11	19	X		
12	20	X		
13	21	X		
14	22	0.025		
15	23	0.008		
16	24	X		
17	25	X		
18	26	X		
19	27	X		
20	28	X		
21	29	X		
22	30	X		
23	31	X		
24	32	X		
25	33	X		
26	34	X		
27	35	X		
28	36	X		
29	37	X		
30	38	0.008		
31	39	X		
32	40	X		
33	41	X		
34	42	X		
35	43	0.008		
36	44	0.008		
37	45	X		
38	46	X		
39	47	X		
40	48	X		
Detection		0.008		
Standard				
Repeat -				
Repeat -				
Method		R650		

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

RESPONSIBLE OFFICER

B. Dora

9.7.81

13.7.81
13.7.81

131009

06

TUBE No.	SAMPLE No.	Au
1	46349	X
2	50	X
3	51 0.008	
4	52	X
5	53	X
6	54	X
7	55	X
8	46356	X
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
Detection Standard	0.008	
Repeat -		
Method		

131071

RESPONSIBLE OFFICER

B. [Signature] 7.8.81

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

JOBE No.	SAMPLE No.	W																		
1	46349	X																		
2	50	X																		
3	51	X																		
4	52	X																		
5	53	X																		
6	54	X																		
7	55	X																		
8	46356	X																		
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16						X														
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				
31																				
32																				
33																				
34																				
35																				
36																				
37																				
38																				
39																				
40																				
Detection																				
Standard																				
Repeat-																				
Repeat-																				
Method																				

10

XRF

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

52 Murray Road, Welshpool, W.A. 6106

Phone (09) 458 7999

131072

Telex AA92560

ANALYTICAL REPORT No. 27.1 08 1984

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

Electrolytic Zinc Co of Australia
PO Box 21
Rosebery
Tasmania 7470

ORDER No.	PROJECT
980428	SPL 806
DATE RECEIVED	RESULTS REQUIRED
28.4.83	

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
		3	20

DATE OF SAMPLE	SAMPLE NUMBERS	PRE-TREATMENT							ANALYSIS		
		DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
RO	35198,199,200 43833-843 43855-860	1	2		3				Cu Pb Zn Ag Fe Mn Bi As Au Sb Sn	108 108	101 101 114 301 117 118

Ms Above
Att. Chief Geologist

REMARKS
SPL 806
Rock used for powdered gravel samples.

RESULTS TO

RESULTS TO

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
splitting	CU	nitric acid	A3	other mixed acids	Ma	spectrophotometry	SPEC
rock	Ro	aqua regia	A4	alkaline attack	AA	colorimetry	COL
oil	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
slip	PU	HF mixture	A6	ignition	IG	titration	TTN
water	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemical means	CHEM
slime	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
stream sediment	SS					fluorescence	FLUOR
heavy mineral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER *[Signature]*

ANALABS

A Division of MacDonald Hamilton & Co. Pty. Ltd.

131073

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

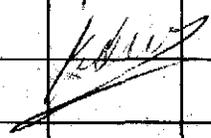
27.1 00 1984

9.5.83

900428

1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Fe	Mn	Bi	Hg	As
1	35198	55	25	180	X	3.30%	365	X	X	11
2	35199	X	5	5	X	1400	15	X	X	X
3	35200	5	X	20	X	3250	25	X	X	X
4	43833	10	10	35	0.5	1.55%	365	X	X	103
5	43834	10	X	35	X	1.30%	120	X	X	26
6	43835	15	10	35	X	8050	80	X	X	1
7	43836	10	5	35	X	7050	55	X	X	X
8	43837	30	5	25	X	2950	30	X	X	X
9	43838	10	5	10	0.5	4350	25	X	X	X
10	43839	40	510	135	1.5	1.10%	65	X	X	9
11	43840	5	5	5	0.5	3800	25	X	X	X
12	43841	10	10	35	X	8600	60	X	X	5
13	43842	5	X	15	X	4100	25	X	X	X
14	43843	10	5	10	X	2300	15	X	X	X
15	43855	10	10	35	X	1.20%	70	X	0.130	25
16	43856	15	00	30	X	1.30%	180	X	X	51
17	43857	10	10	50	X	3.75%	400	X	X	110
18	43858	5	5	10	X	2.25%	55	X	X	100
19	43859	15	75	160	1.0	2.65%	780	X	X	11
20	43860	40	5	140	X	3.30%	100	X	X	4
21										
22										
23										
24										
25										

End 2/5/83


Units in ppm unless otherwise specified
 X = element present but concentration too low to measure
 * = element concentration is below detection limit
 - = element not determined

AUTHORIZED OFFICER



ANALABS

131074

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

27.1 08 1984

9.5.83

900428

2 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Fe	Mn	Bi	Hu	As
1	STD FS4	310	100	775	1.0	7.00%	650	X		22
2	RPT 35198	55	15	175	0.5	3.35%	360	X		10
3	RPT 43860	45	10	145	X	3.35%	100	X		5
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	0.5	50	5	10	0.1	1
24	DIGESTION	100	100	100	100	100	100	100		100
25	METHOD	101	101	101	101	101	101	101	301	114

Results in ppm unless otherwise specified
 = element present but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER

[Signature]

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

131075

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

27.1 08 1984B

11.5.83

900428

3 OF 3

TUBE No.	SAMPLE No.	Sn	Sb						
1	35198	X	X						
2	35199	X	X						
3	35200	X	X						
4	43833	X	X						
5	43834	X	X						
6	43835	X	X						
7	43836	X	X						
8	43837	X	X						
9	43838	X	X						
10	43839	X	X						
11	43840	X	X						
12	43841	X	X						
13	43842	X	X						
14	43843	X	X						
15	43855	X	X						
16	43856	X	X						
17	43857	X	X						
18	43858	X	X						
19	43859	X	X						
20	43860	X	X						
21									
22									
23	DETECTION	1	1						
24	DIGESTION								
25	METHOD	116	117						

Subst. notes
MD

Results in ppm unless otherwise specified
 I = element present, but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER *[Signature]*

APPENDIX TWO

ANALABS

131077

Phone (09) 458 7999

A Division of MacDonald Hamilton & Co. Pty. Ltd.
52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

ANALYTICAL REPORT No. 999.0 88 3046

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

Summons Geoservices Pty. Ltd.,
1 Greenlands Avenue,
Sandy Bay,
Hobart - TAS 7005

ORDER No. PROJECT
R. Pollock

DATE RECEIVED RESULTS REQUIRED
26.4.85 NSRF

No. OF PAGES OF RESULTS DATE REPORTED No. OF COPIES TOTAL No. OF SAMPLES
3 72

ROW	SAMPLE NUMBERS	PRE-TREATMENT							OTHER SEE REMARKS	NONE	ANALYSIS		
		DRY	CRUSH	SPLIT	PULVERISE	SIEVE	REFER TO ANALYSIS SECTION	PREPARATION			METHOD		
88	0001,0002,0004-0009,0011-22,0024-28,0030-33,0052-77	1	2	4	3 5					Cu Pb Zn Ag As Au	101	102 114 168	

RESULTS

TO

As Above

RESULTS

TO

REMARKS

STATE OF SAMPLES	ANALYSIS - PREPARATION	ANALYSIS - METHOD
whole core	perchloric acid A1	atomic absorption AAS
split core	hydrochloric acid A2	x-ray fluorescence XRF
split core	nitric acid A3	spectrophotometry SPEC
split core	oxo-nitro A4	colorimetry CQI
split core	nitro-perchloric A5	chromatography CHR
split core	HF mixture A6	titration ETN
split core	HF under pressure A7	other chemical means CHEM
split core	fusion A8	miscellaneous MISC
split core		fluorescence FLUOR
split core		inductively coupled plasma ICP

AUTHORISED OFFICER *[Signature]*

ANALABS

131078

A Division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

999.0 08 3046

15.5.85

R. Pollock

1 OF

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	As	Au			
1	0001	7	2	7	0.2	12	X			
2	0002	14	12	53	0.1	15	0.002			
3	0004	10	10	330	X	61	X			
4	0005	15	22	85	X	31	X			
5	0006	13	62	230	0.1	13	X			
6	0007	5	X	77	0.1	2	0.001			
7	0008	9	4	33	0.1	18	X			
8	0009	6	1	25	0.1	13	0.015			
9	0011	5	17	15	0.1	9	0.003			
10	0012	9	8	41	0.1	12	0.005			
11	0013	9	3	25	0.1	9	X			
12	0014	6	4	26	0.1	12	X			
13	0015	10	6	36	0.1	16	X			
14	0016	6	X	36	X	10	X			
15	0017	10	11	43	X	10	X			
16	0018	5	5	10	X	1	X			
17	0019	9	6	37	X	9	X			
18	0020	7	18	25	0.1	30	X			
19	0021	5	6	11	X	40	X			
20	0022	4	19	6	X	17	X			
21	0024	5	2	12	X	6	X			
22	0025	4	2	10	X	1	X			
23	0026	12	19	17	0.1	X	X			
24	0027	4	15	9	X	4	X			
25	0028	5	7	7	X	1	X			

Results in ppm unless otherwise specified
 = element present, but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER

Pollock

ANALABS

131079

A Division of MacDonold Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

999.0 08 3046

15.5.85

R. Pollock

2 OF 4

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	As	Ru			
1	0030	4	X	21	X	1	X			
2	0031	3	X	6	0.1	X	X			
3	0032	8	8	26	0.1	8	0.006			
4	0033	5	4	17	0.1	5	X			
5	0034	6	6	12	X	7	X			
6	0035	9	3	30	0.1	11	0.003			
7	0036	7	10	26	X	18	X			
8	0037	5	1	6	0.1	1	X			
9	0038	5	X	8	0.1	X	X			
10	0039	31	2	15	0.1	3	X			
11	0040	5	X	6	X	X	0.001			
12	0041	5	3	15	X	2	X			
13	0042	7	2	41	0.1	12	X			
14	0043	5	X	6	X	3	0.001			
15	0044	6	2	6	X	4	X			
16	0045	4	X	5	0.1	2	X			
17	0046	4	X	6	0.1	X	X			
18	0047	4	X	5	0.1	X	X			
19	0048	4	X	7	0.1	1	X			
20	0049	4	X	7	X	X	X			
21	0050	5	6	8	X	X	X			
22	0052	5	X	14	X	2	X			
23	0053	5	X	7	X	X	X			
24	0054	5	1	5	X	X	X			
25	0055	5	X	9	X	10	X			

Results in bold unless otherwise specified.
 X = element present, but concentration too low to measure
 - = element concentration is below detection limit
 = element not determined

AUTHORISED OFFICER

Refman K

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No

PAGE

999.0 08 3046

15.5.85

R. Pollock

3 OF 4

TUBE No.	SAMPLE No.	Cu	Pb	Zn	As	Hg	Pb			
1	0056	4	X	4	0.1	X	X			
2	0057	3	X	3	X	X	X			
3	0058	5	1	21	X	22	0.001			
4	0059	7	3	20	X	31	0.024			
5	0060	9	8	63	X	49	0.001			
6	0061	12	6	36	0.1	9	X			
7	0062	5	1	14	X	2	X			
8	0063	5	3	20	0.1	1	X			
9	0064	24	9	57	X	17	X			
10	0065	5	4	18	X	2	X			
11	0066	7	5	23	0.1	2	X			
12	0067	38	5	26	0.1	14	0.003			
13	0068	4	X	8	X	X	0.001			
14	0069	7	4	32	X	5	X			
15	0070	5	X	29	X	30	0.001			
16	0071	5	2	13	0.1	7	X			
17	0072	6	3	55	X	16	X			
18	0073	22	9	62	X	13	X			
19	0074	23	18	141	X	14	X			
20	0075	8	7	25	0.1	98	0.001			
21	0076	12	20	24	X	60	0.012			
22	0077	5	11	10	X	64	0.010			
23										
24										
25										

Results in ppm unless otherwise specified
 X = element present but concentration too low to measure
 - = element concentration is below detection limit
 ? = element not determined

AUTHORISED OFFICER

[Signature]

ANALABS

A Division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX
REPORT NUMBER
REPORT DATE
CLIENT ORDER No.
PAGE

999.0 08 3046
15.5.85
R. Pollock
4 OF 4

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Hg	Mn			
1	STD 3036	161	550	270	2.1	740				
2	RPT 0001	7	X	7	0.1	12				
3	RPT 0022	4	17	6	0.1	16				
4	STD 3036	156	540	260	1.7	830				
5	RPT 0045	4	X	5	X	4				
6	RPT 0065	5	X	16	X	1				
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	1	1	1	0.1	1	0.001			
24	DIGESTION					101				
25	METHOD	102	102	102	102	114	308			

Results in ppm unless otherwise specified
 1 = element present, but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER

ANALABS

131082

Phone (09) 458 7999

A Division of Macdonald Hamilton & Co. Pty. Ltd.
52 Murray Road, Welshpool, W.A. 6106

Telex AA92560

ANALYTICAL REPORT No. 27.1 08 1983

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

Electrolytic Zinc Co of Australia
PO Box 21
Rosebery
Tasmania 7470

ORDER No. 900427 PROJECT SPL 806
DATE RECEIVED 28.4.83 RESULTS REQUIRED

No. OF PAGES OF RESULTS DATE REPORTED No. OF COPIES TOTAL No. OF SAMPLES
3 17

REF NO	SAMPLE NUMBERS	PRE-TREATMENT							ANALYSIS			
		DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NOTE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD	
88	43825-832 43844-854				2	1			Cu Pb Zn Ag Fe Mn Co As Sb Sn	108 108	101 101 114 117 119	

Rs Above
Att. Chief Geologist

REMARKS
SPL 806
Stream Sed. samples.

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
slip SL	HF mixture A6 ignition IG	titration TTN
water WA	HF under pressure A7 pressed powder (XRF) PP	other chemical means CHEM
slime SI	fusion A8 glass fusion (XRF) GF	miscellaneous MISC
stream sediment SS		fluorescence FLUOR
heavy mineral HM		inductively coupled plasma ICP

AUTHORISED OFFICER *[Signature]*

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

131083

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

27.1 08 1983

4.5.83

900427

1 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Fe	Mn	Co	Ni
1	43825	5	5	35	X	3550	35	5	X
2	43826	5	5	50	X	5200	20	5	1
3	43827	5	10	65	X	8600	110	10	X
4	43828	50	20	125	X	2.15%	95	5	5
5	43829	10	15	95	X	1.45%	190	15	36
6	43830	10	15	55	X	1.75%	115	10	64
7	43831	15	25	70	X	2.20%	330	20	39
8	43832	20	25	135	X	2.90%	600	30	63
9	43844	10	15	15	X	4750	30	5	15
10	43845	10	25	15	X	6400	40	10	14
11	43846	5	15	20	X	4900	40	5	12
12	43847	5	X	15	X	4550	15	X	4
13	43848	5	X	10	X	2100	25	5	1
14	43849	10	20	30	X	1.20%	305	15	21
15	43850	10	20	50	X	1.50%	375	15	22
16	43851	20	30	50	X	1.60%	410	20	35
17	43852	15	30	45	X	1.45%	585	25	30
18	43853	5	X	15	X	3500	70	10	2
19	43854	10	15	65	X	1.80%	1200	55	40
20									
21									
22									
23									
24									
25									

Checked 9/5/83
[Signature]

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

AUTHORISED OFFICER

[Signature]

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

27.1 08 1983

4.5.83

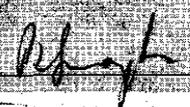
900427

2 OF 2

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Ag	Fe	Mn	Co	Ba	
1	STD FS4	295	100	785	1.0	7.00%	635	120	19	
2	RPT 43825	5	5	35	X	3500	35	5	1	
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	0.5	50	5	5	1	
24	DIGESTION	108	108	108	108	108	108	108	108	
25	METHOD	101	101	101	101	101	101	101	114	

Results in ppm unless otherwise specified
 I = element present, but concentration too low to measure
 X = element concentration is below detection limit
 — = element not determined

AUTHORISED OFFICER



084

ANALABS

131085

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

27.1 08 1983

6.5.83

900427

3 OF 3

TUBE No.	SAMPLE No.	Sn	Sb						
1	43825	X	X						
2	43826	X	X						
3	43827	X	X						
4	43828	X	X						
5	43829	X	X						
6	43830	X	X						
7	43831	X	X						
8	43832	X	X						
9	43844	X	X						
10	43845	X	X						
11	43846	X	X						
12	43847	X	X						
13	43848	X	X						
14	43849	X	X						
15	43850	X	X						
16	43851	X	X						
17	43852	X	X						
18	43853	X	X						
19	43854	X	X						
20									
21									
22									
23	DETECTION	1	1						
24	DIGESTION								
25	METHOD	118	117						

Collected from 9/5/83

Results in ppm unless otherwise specified
 I = element present, but concentration too low to measure
 X = element concentration is below detection limit
 - = element not determined

AUTHORISED OFFICER

[Signature]



131086

A.C.S. Laboratories Pty. Ltd.
 50 MARY STREET
 UNLEY, S.A. 5081
 P.O. BOX 3
 UNLEY, S.A. 5081
 PHONE: 272 5733

ANALYTICAL RESULTS

Samples from: E.Z. Company of Australasia Limited

Spl 206

Area:

Samples of: Sediments

Preparation: Sieved -80 mesh

Sheet No.: 1

Batch No.: A 4127

COPY AS REQUESTED.

Date: 9.9.81

SAMPLES WILL BE DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

Sample Description	Cu ppm	Pb ppm	Zn ppm	Fe %	Mn ppm	Ag ppm	Bi ppm
43501 ✓	<10	<20	<10	0.35	25	<20	<20
43502 ✓	25	<20	10	0.34	20	<20	<20
43510 ✓	<10	<20	<10	0.30	25	<20	<20
1	15	<20	<10	0.54	20	<20	<20
2	20	<20	15	1.5	100	<20	<20
3	<10	<20	<10	0.44	15	<20	<20
4	10	<20	<10	1.2	110	<20	<20
5	<10	<20	<10	0.34	20	<20	<20
6	20	<20	<10	2.2	200	<20	<20
7	<10	<20	<10	0.14	10	<20	<20
8	<10	<20	<10	0.62	55	<20	<20
9	<10	<20	<10	0.44	15	<20	<20
20	15	<20	<10	0.58	50	<20	<20
1	<10	<20	35	0.54	30	<20	<20
2	<10	<20	15	0.85	50	<20	<20
3	<10	<20	10	0.16	15	<20	<20
4	<10	<20	<10	0.15	15	<20	<20
5	<10	<20	<10	0.07	<10	<20	<20
6	<10	<20	<10	0.38	30	<20	<20
7	<10	<20	<10	0.08	<10	<20	<20
8	<10	<20	<10	0.19	20	<20	<20
9	<10	<20	<10	0.02	<10	<20	<20
30	<10	<20	<10	0.19	15	<20	<20
1	<10	<20	<10	0.05	<10	<20	<20
2	<10	<20	<10	0.40	30	<20	<20
3	10	<20	10	0.28	10	<20	<20
4	<10	<20	15	1.1	70	<20	<20
5	<10	<20	<10	0.20	10	<20	<20
6	15	<20	25	0.85	100	<20	<20
43537 ✓	<10	<20	<10	0.40	15	<20	<20
<u>Repeats and Checks</u>							
43511	15	<20	<10	0.52	20	<20	<20
43530	<10	<20	<10	0.20	15	<20	<20

ANALYTICAL METHODS: Cu, Pb, Zn, Fe, Mn, Ag, Bi determined by AAS.



DISTRIBUTION: E.Z. Co. of A/Asia Ltd.
 Mr. J. Mills, Rosebery, T.

Signed: *[Signature]*

This Laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be valid unless signed in full.

086



131087

A.C.S. Laboratories Pty. Ltd.
80 MARY STREET
UNLEY, S.A. 5061
P.O. BOX 3
UNLEY, S.A. 5061
PHONE: 272 5733

ANALYTICAL RESULTS

Samples from: E.Z. Company of Australasia Limited

Area:

Samples of: Sediments

Preparation: Sieved -80 mesh

Sheet No.: 2

Batch No.: A 4127 COPY AS REQUESTED.

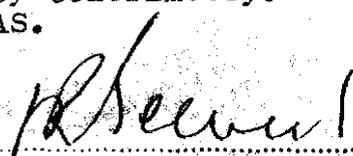
Date: 9.9.81

SAMPLES WILL BE DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

Sample Description	Sb pom	As ppm	Sn ppm	W ppm	Au ppb
43501	20	GG	<10	<10	20
43502	20	GG	<10	25	20
43510	20	GG	<10	<10	35
1	20	GG	<10	90	<10
2	20	10	<10	<10	<10
3	20	GG	<10	80	15
4	20	GG	<10	<10	15
5	20	GG	<10	40	15
6	20	GG	<10	<10	15
7	20	GG	<10	30	<10
8	20	GG	<10	<10	15
9	20	GG	<10	45	15
20	20	GG	<10	<10	<10
1	20	GG	<10	65	<10
2	20	GG	<10	<10	<10
3	20	GG	<10	40	<10
4	20	GG	<10	<10	<10
5	20	GG	<10	35	<10
6	20	GG	<10	<10	15
7	20	GG	<10	20	<10
8	20	GG	<10	<10	<10
9	20	GG	<10	60	<10
30	20	GG	<10	<10	<10
1	20	GG	<10	30	20
2	20	GG	<10	<10	15
3	20	GG	<10	50	<10
4	20	GG	<10	<10	15
5	20	GG	<10	30	<10
6	20	GG	<10	<10	20
43537	20	GG	<10	70	<10
<u>Repeats and Checks</u>					
43511	20	GG			<10
43530	20	GG			<10

ANALYTICAL METHODS: Sb determined by AAS. As by Colorimetry.
Sn, W by XRF. Au by CRA/AAS.

DISTRIBUTION: E.Z.Co. of A/Asia Ltd.
Mr. J. Mills, Rosebery. T.

Signed  

*no/3924 This Laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced in full.

187

131088

APPENDIX THREE

088

131089

EL 9/84 LYNCHFORD

STREAM SEDIMENTS - RECONNAISSANCE GEOLOGY

APRIL, 1985

Roger Poltock Geological P/L for
TRIKON Corporation - S.A. Pty. Ltd.

SUMMARY

Mineralization encountered on stream sampling traverses was negligible. Two areas of previous prospecting activity were located, a short adit in limonitic quartzite in N.W. of area and alluvial workings in the lower section of Hall's Creek. Both these prospects presumably for gold.

A N.N.W. trending fault extending through this section of the licence is the only feature of interest, being associated with:

- a) emplacement of Cambrian volcanics in S.E.
- b) magnetic anomaly in S.E. (interpreted association).
- c) silicification of sandstones in Sulphide Creek, Sample 0023.

INTRODUCTION

The area sampled is located east of Strahan Road, streams being tributaries of Hall's Creek and Queen River. Field work was orientated to gold search via stream sediments and assessment of aero-magnetic anomaly in the S.E. corner of the E.L.

Geology consists of a north trending sequence of sandstone, siltstone and limestone ranging in age from Ordovician to Siluro-Devonian. A N.N.W. trending fault has emplaced Cambrian volcanics and Owen equivalent conglomerates into the above sequence in the S.E. of the area.

Seventy seven samples were collected, six of these rock chips, the balance -1 mm stream samples. These sediments were taken from stream bed gravels and sieved in situ (approximately 400 gm).

GEOLOGY

The area is dominated by a north trending sequence of Siluro-Devonian sandstone, quartzite and siltstone with minor limestone lenses. These sediments are broadly interlayered, this is reflected in the topography, resistant quartzite forming strike ridges with intervening valleys associated with siltstone and limestone (Plan 1).

These Siluro Devonian sediments overly Gordon Limestone in the lower section of Hall's Creek. This unit is a hard blue grey laminated-massive limestone. Approximately 500 m east of the E.L. boundary in this area the limestone overlies Cambrian Mt. Read Volcanics.

Lower Ordovician and Cambrian lithologies are only located in the SE of the licence, associated with a major fault (Plan 1). Medium grained intermediate volcanic derived clastics are closely associated with quartz pebble conglomerate which are interpreted to be Owen Conglomerate equivalents.

Features of Possible Economic Significance

- .1 N.N.W. Fault.

This feature has been mapped in part by Mines Department (see Queenstown 1:250000 sheet). In the SE Cambrian volcanoclastics and Owen Conglomerate have been emplaced into the younger Ordovician-Devonion sequence. Further

091

north in Sulphide Creek extensive silicification occurs in sandstone (No. 0023). This alteration appears to be localized by this fault structure.

In both areas mineralization wasn't apparent.

.2 Magnetic Anomaly.

Located in the SE corner of licence, lying east of above fault. The area was traversed, only quartz sandstones located. In addition all stream detritus draining area was of sandstone and quartz. It is assumed that the anomaly source isn't outcropping, and is interpreted to be a Cambrian volcanic unit.

.3 Adit 300 m East of Strahan Road (Sample 0029).

This working has collapsed, judging by the amount of dump material the adit was probably 20 m long. The dump consists of highly jointed quartzite with quartz limonite joint faces.

.4 Alluvial Workings Lower Section of Hall's Creek.

These prospects are in Owen Conglomerate derived gravels, <2m thick lying on limestone bedrock. It is assumed that the gravels have been worked for gold, the interpreted source being palaeo Queen River gravels derived from Lynchford-Queestown area.

.5 Ferruginous Fragments in Soil (Sample 0004).

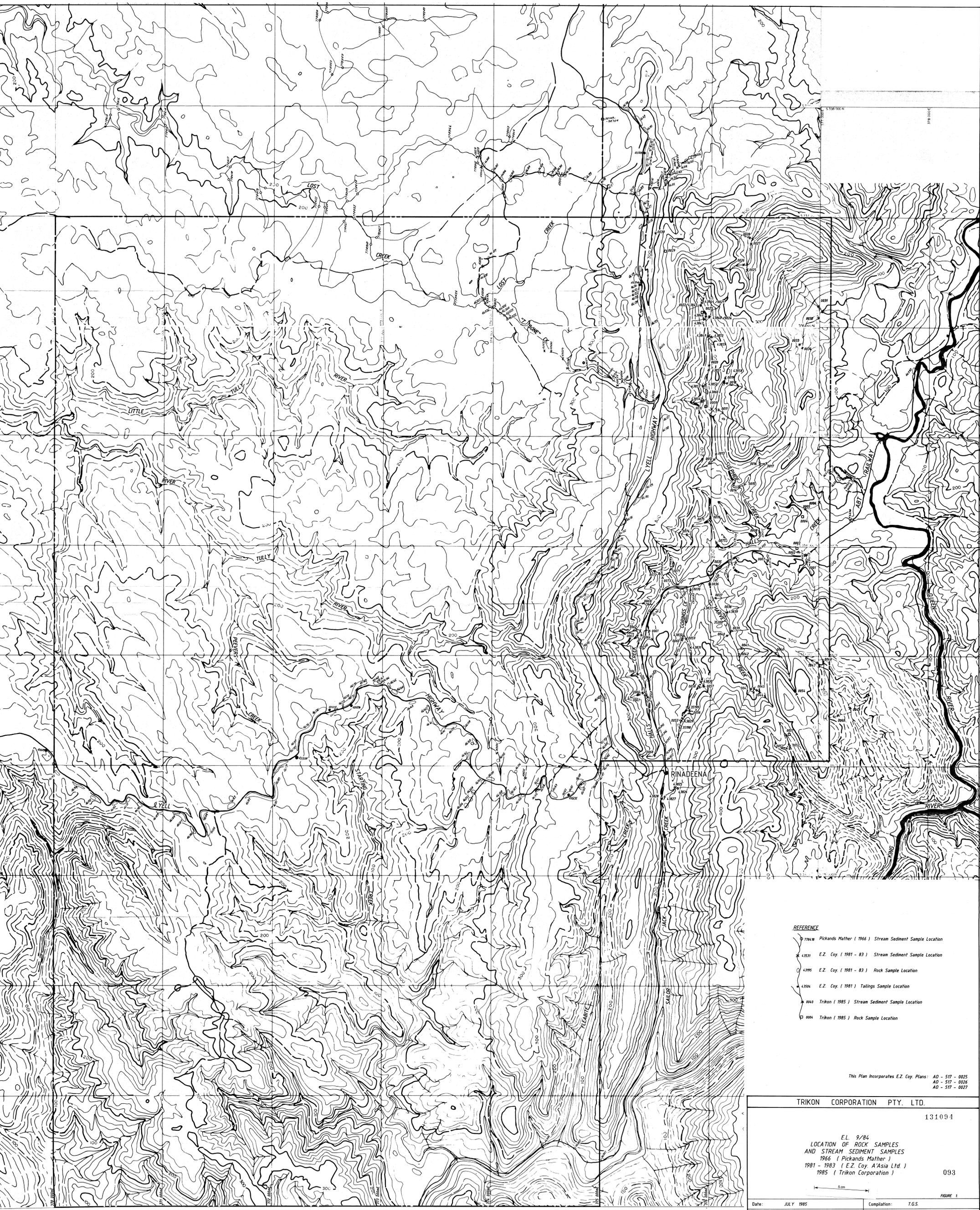
This feature is most likely associated with weathering of Gordon Limestone, not a sulphide body.

092

APPENDIX 1

SAMPLE RECORD

No. 0001 - 0002	-1 mm sediment
0003	Limestone
0004	Ferruginous float
0005 - 0009	-1 mm sediment
0010	Siltstone with limestone lenses
0011 - 0022	-1 mm sediment
0023	Silicified sandstone
0024 - 0028	-1 mm sediment
0029	Limonitic quartzite adit dump
0030 - 0050	-1 mm sediment
0051	Medium grained crystal tuff
0052 - 0077	-1 mm sediment



- REFERENCE**
- 17848 Pickands Mather (1966) Stream Sediment Sample Location
 - ✕ 43531 E.Z. Coy (1981 - 83) Stream Sediment Sample Location
 - 43995 E.Z. Coy (1981 - 83) Rock Sample Location
 - ✕ 43504 E.Z. Coy (1981) Tailings Sample Location
 - ✕ 0040 Trikon (1985) Stream Sediment Sample Location
 - 0004 Trikon (1985) Rock Sample Location

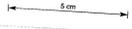
This Plan Incorporates E.Z. Coy. Plans: AD - 517 - 0025
AD - 517 - 0026
AD - 517 - 0027

TRIKON CORPORATION PTY. LTD.

131094

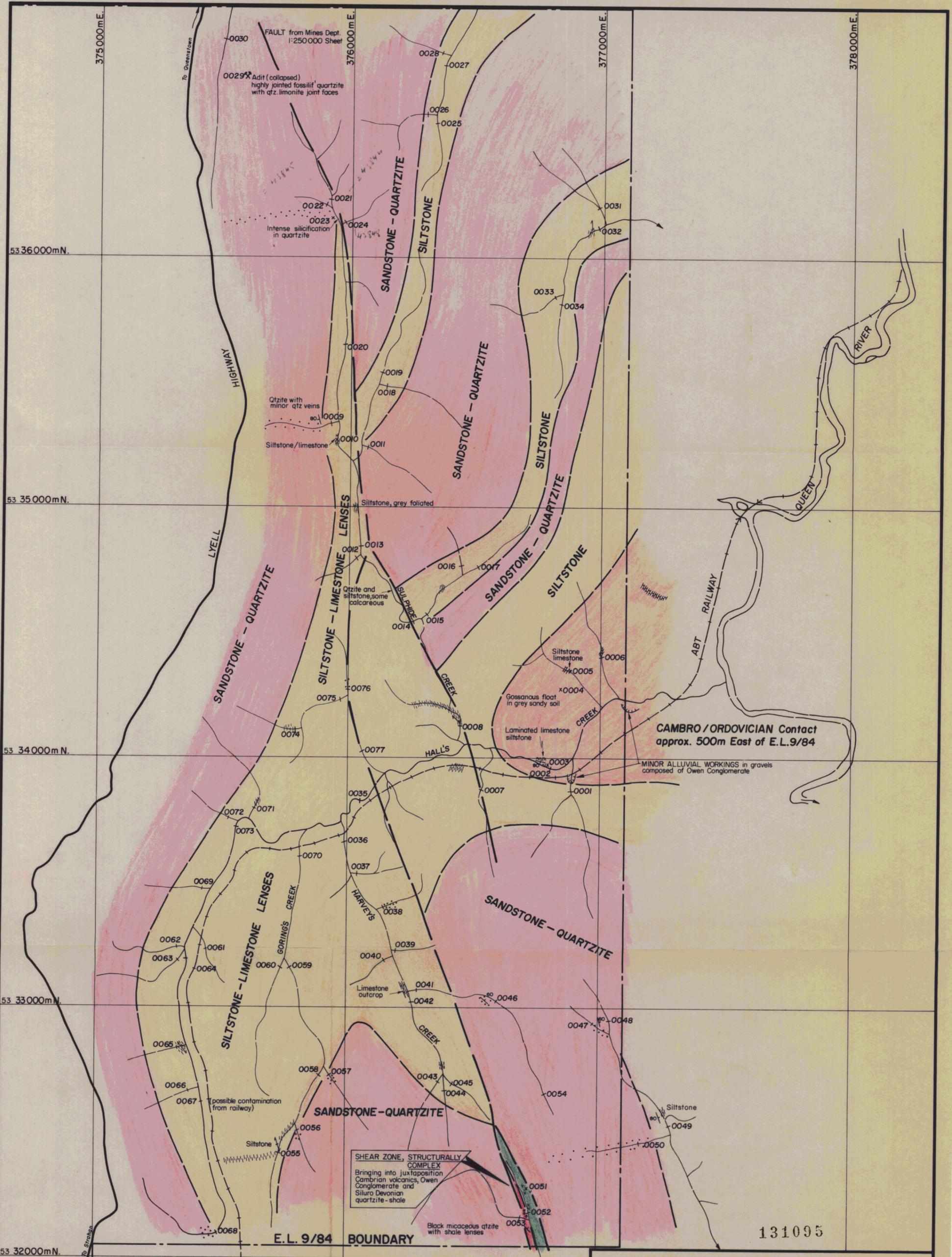
E.L. 9/84
LOCATION OF ROCK SAMPLES
AND STREAM SEDIMENT SAMPLES
1966 (Pickands Mather)
1981 - 1983 (E.Z. Coy A'Asia Ltd.)
1985 (Trikon Corporation)

093



Date: JULY 1985	Compilation: T.G.S.
Scale: 1 : 10 000	Drawn: R.T.

FIGURE 1



LEGEND		TRIKON CORPORATION S.A. PTY. LTD.	
<p>SILURO-DEVONIAN</p> <p>Micaceous sandstone, siltstone, minor limestone</p> <p>ORDOVICIAN</p> <p>Gordon Limestone Owen Conglomerate - sandstone, minor pebble conglomerate</p> <p>CAMBRIAN</p> <p>Medium grained volcanics</p>	<p>SAMPLES</p> <p>00041 Stream sample x0004 Rock sample</p> <p>GEOLOGICAL FEATURES</p> <p>Interpreted geological boundary</p> <p>Interpreted fault</p>	<p>E.L. 9/84 094</p> <p>Geology & Sample Locations</p> <p>5 cm</p> <p>SCALE: 1:10000</p> <p>200 100 0 100 200 300 400</p>	<p>DRAWN: R.P.</p> <p>TRACED: T.G.D.S.</p> <p>DATE: JUNE '85</p> <p>FIGURE 7</p>



- SILURO - DEVONIAN**
- SD-1 Shale / Siltstone
 - SD-2 Sandstone / Quartzite
- ? ORDOVICIAN**
- SD-3 Siltstone / Limestone
- ORDOVICIAN**
- O-1 Gordon Limestone
 - O-2 Owen Conglomerate
- CAMBRIAN**
- C Volcaniclastics

- APPARENT GEOCHEMICAL ANOMALIES**
- Sample Point
- Cu
 - Pb
 - Zn
 - Ag
 - As
 - Au
- Probable Extent
- Cu
 - Pb
 - Zn
 - Ag
 - As
 - Au

- F** FAULT - Position Approximate
- P** PHOTOLINEAR
- A** Aeromagnetic Anomaly
- M** Mine Shaft
- Adt** Adit

GEOLOGY / SAMPLING : J.A. NYVLT (E.Z. Coy. 1981)
 I.R. McDONALD (E.Z. Coy. 1983)
 R. POLTOCK (Roger Poltock Geological P/L 1985)
 COMPILATION / INTERPRETATION : T.G. SUMMONS (Summons Geoservices P/L 1985)

THIS PLAN INCORPORATES E.Z. COY. PLANS :
 AO - 517 - 0028
 AO - 517 - 0029
 AO - 517 - 0030
 AO - 517 - 0033

TRIKON CORPORATION PTY. LTD.

85-244

E.L. 9/84
 INTERPRETATION OF GEOLOGY
 AND GEOCHEMISTRY

(Apparent Anomalies Based on)
 (Rock and Stream Sediment)
 (Sampling)

Scale 1 : 10,000 **095**

131096

Figure 8. Drawn: R.T. July 1985