POTTERGOLD PTY LTD

(ACN 072 945 361)

Specialising in gold in Victoria

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»»««

EXPLORATION LICENCE 3025
GRANITE FLAT
(Mitta Mitta, Vic)

ANNUAL REPORT
to
27th OCTOBER 1997

for
Perseverance Mining Pty Ltd

20 November 1997

EXPLORATION LICENCE 3025

GRANITE FLAT

(Mitta Mitta, Vic)

ANNUAL REPORT

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1. INTRODUCTION

Exploration Licence 3025 covers a large portion of the Banimboola Intrusion near Mitta Mitta, eastern Victoria, see Plan 1. At the township of Granite Flat there are minor historic workings on gold/sulphide mineralisation within altered zones of a quartz monzodiorite. The alluvial deposits emanating from the area of these workings and possibly some elluvial deposits have also been very productive for gold.

From 1986 to Nov 1994, extensive exploration programs have been completed in the search for a gold resource that is amenable to bulk mining and treatment by heap leaching. This work has involved surface surveying and mapping, reopening of some old workings with associated surveying, mapping and sampling, extensive programs of stream sediment, rock chip and soil sampling, magnetic and IP geophysics. Follow-up programs involved the excavation of 18 trenches, 32 RC percussion holes and 13 diamond holes which have returned isolated significant inter-sections of gold mineralisation with occasional sub-economic grades of copper and zinc.

From Nov '94 to Oct '96 five areas of significant soil and drill results were tested for strike continuity by 20 RC percussion holes for 691 m. Interpretation of the results has allowed a preliminary resource estimate of 364,000 tonnes at 0.98 g/t Au.

This report details the exploration and metallurgy work completed during the 12 months to 27 Oct 1997 and records the interpretation and proposed programs for the oncoming 12 months. The report presupposes a familiarity with the past exploration activity as recorded in previous annual reports.

2. HISTORY OF TENURE.

The area of the old workings of Granite Flat was originally under the tenure of EL 1546 which was granted in April 1985. The area to the south and west of this Licence was covered by EL 1787 and to the north and east by EL 2000 both being held by CRAE Ltd.

In October 1989, EL 1546 was renewed by CRAE as EL 2478 thus giving CRAE tenure over the 130 sq km Banimboola Granodiorite Intrusion. This allowed regional exploration by way of stream sediment and helimag surveys to cover the entire intrusion to outline trends or variations thus directing future exploration. In November 1992, EL 2478 was renewed as EL 3025 and the adjacent ELs (which had been renewed as EL 3230 and EL 3257) were amalgamated with it. Statutory reductions since then have reduced the area to the current 66 sq km.

In November 1994 a joint venture was concluded whereby Perseverance Exploration Pty Ltd continued the exploration for a large low grade gold resource on EL 3025 on behalf of the Licence holder CRAE Ltd.

3. WORK DONE.

3.1 Reassay of Drill Samples.

Following the collection of the 1 m drill samples of the March-April '96 drill program, 104 samples representing the 2 m composites of > 0.5 g/t Au were resubmitted as 1 m samples and analysed for Au, As, Cu, Pb, Zn, and Mo.

As expected this reassay work has revealed that in some instances the two metre grades were due to 1 m of barren material plus 1 m of high grade material (or probably less than 0.5 m of very high grade) thus showing that some mineralisation is occurring as narrow rich veins. Examples are GF11-12, GF13-24 & 26, GF24-12, GF25-28 etc. This style of mineralisation does not attract a realistic exploration target.

The reassays also show that in other instances the mineralisation occurs as broad zones that are unrelated to the narrow high grade veins. Examples occur in holes GF8, GF11, GF16, GF19, GF23, etc. This style of mineralisation presents the possibility of very desirable exploration targets.

The individual results of all elements and the table and graphs showing the comparisons of the 2 m assays with the average of both 1 m assays are presented as Appendix 1.

3.2 Relogging of Drill Core.

The core of diamond drill hole DD91 BO2 was inspected and relogged to define the style(s) of mineralisation. The work had the advantage over the original logging in the sawn half core reveals more information particularly now that the core is oxidising and that the assays are available for guidance (sampling of the core was unfortunately over 2 m intervals and irrespective of geology).

The relogging clarified that the sulphide (and Au) mineralisation in the lower part of the hole is hosted by ill-defined quartz veins, some of which show strong brecciation. The host rock for the veins is strongly fractured granite with very strong chlorite alteration as vague shear zones in two or three directions, and pervasive sericite and K alteration development. The host rock is void of gold values and visible sulphides. The sulphidic quartz veins are interpreted to be shear/joint related but having different timing to the chlorite etc alteration. The location of these reef lines in the field is indicated by the presence of quartz float and hence were prospected by the historical miners for their high gold grades. The workings on these reefs have a strike of 300-320° Mag and a dip of 80-90°SW.

The upper part of the hole showed the sulphide (and Au) mineralisation to be as disseminated grains and clusters within a granite rock that is more mafic than the hosting granite. Some of the contacts are zoned or fused while others are weakly faulted-the absence of strong faulting is very evident. Because there is no vein quartz in the disseminated sulphide zone and therefore no tell-tail sign on the surface, the historical miners have not prospected this style of mineralisation. This mineralisation has been interpreted to be a separate intrusive phase within the Banimboola Granite.

The degree of faulting and fracturing in the upper portion of the hole is much less than in the lower portion. The upper portion contains the intersection of 32 m at 1.11 g/t Au and the lower portion contains 6 m at 1.80 g/t Au plus several 2 m intersections.

However,despite the work completed to date, the geography of the mafic granite and its disseminated mineralisation still eludes definition. It may be associated with the 300-320° shears but at a different time to the quartz veined mineralisation?, or it may have a different strike direction due to shearing or linear intrusion, or it may be as irregular or pod shaped intrusion(s).

Recognising that the Banimboola Granite is a multi-phase intrusion or at least hosting more than one period of mineralisation, places a greater potential on the area to host a large low grade gold resource. The aeromags give some support to the multi-phased intrusion theory.

The log and the drill section is presented as Appendix 2.

3.3 Petrology Studies.

Four samples of core from holes DD91 BO1 and BO2 and one surface rock chip were submitted to S McKnight at University of Ballarat for petrological Studies.

Samples from the vein type mineralisation show the gold to be associated with Cpy in a Cpy-Py phase. A later sulphide phase is characterised by an unusual assemblage of chalcocite(after Cpy), native bismuth, bismuth sulphosalts and Bi-Pb-Se minerals with the gold occurring as high silver electrum. The alteration is propyllitic, ie chlorite-epidote-sphene-carbonate.

A sample of the disseminated mineralisation revealed the rock to be a strongly altered diorite or monzodiorite with 1-2% Cpy scattered through-out. The plagioclase has been altered to sericite and the primary biotite may be after amphibole or pyroxene and has been altered to chlorite, actinolite and probably secondary biotite. Magnetite and ilmenite appear to be very minor. Scheelite is also observed. The Cpy is distinctly associated with the secondary minerals, particularly secondary biotite, and cavities.

The resultant report is presented as Appendix 3.

3.4 Recontouring of Soil Geochemistry.

The results of the soil geochemistry for the entire area was obtained in digital form and using different software to that used by CRAE the data was recontoured. This was completed for Au, Cu, Mo, Sb and Bi.

This work has produced a new and different picture to the plans currently being used and may require a new approach to the modified and new anomalies generated. The data is being reviewed to identify a possible direction for the disseminated mineralisation. The EW direction of the copper anomaly in the northern portion of the area is prominent and the relationship between Hodders and Crawleys Lines with the geochemistry also becomes clearer. There are also two obvious E-W anomalies marked by Mo. Sb and Bi that are parallel to the Empress of India line. The southern line has not been tested and the northern line only partly so.

The plan of gold geochemisrry is presented as Appendix 4.

3.5 Metallurgy Studies.

Seven composite samples of mineralisation in weathered granite and in fresh granite have been submitted for Bottle Roll tests to determine the extractability of the gold.

The results reveal that the gold is easily obtainable with six of the samples averaging 92% extraction. The remaining sample, GF19, returned 39% extraction which is most likely due to the 0.3% Cu in the sample. Cyanide consumption averaged 0.9 kg/t for six of the samples which is considered to be high but the more practical column leach tests may show a lower consumption. GF19 consumed 3 kg of cyanide per tonne due to the Cu and Zn present.

With this encouragement three unprepared drill samples were submitted for column leach testing to determine the suitability of the mineralisation to treatment under heap leach conditions.

The results reveal gold recovery rates of 51.2% and 52.4% for two samples and 72.5% for the third sample. These tenuous results say that a normal heap leach scenario would be an unfavourable option for the treatment of the mineralisation. The bottle roll tests indicate that acceptable extraction can be achieved if the material is ground before treatment, and thus it is considered that acid leach prior to cyanidation may improve the recovery rate for heap leaching. There is however the problem of excessive reagent consumption due to the presence of deleterious elements.

Both metallurgy reports are presented as Appendix 5.

4. FUTURE WORK.

Future work will continue the assessment of the historic and recent data compiled for the tenement. Work will also be directed to gaining new information relevant to the target sought by the company. This will involve office and field work to varying degrees.

The work may involve;

- defining the character of the more mafic sulphidic intrusion possibly by relogging additional diamond drill core, field work and a more critical look at previous results to distinguish between the two styles of mineralisation.

- a critical review of the Cu anomaly areas in the northern area with associated field work.

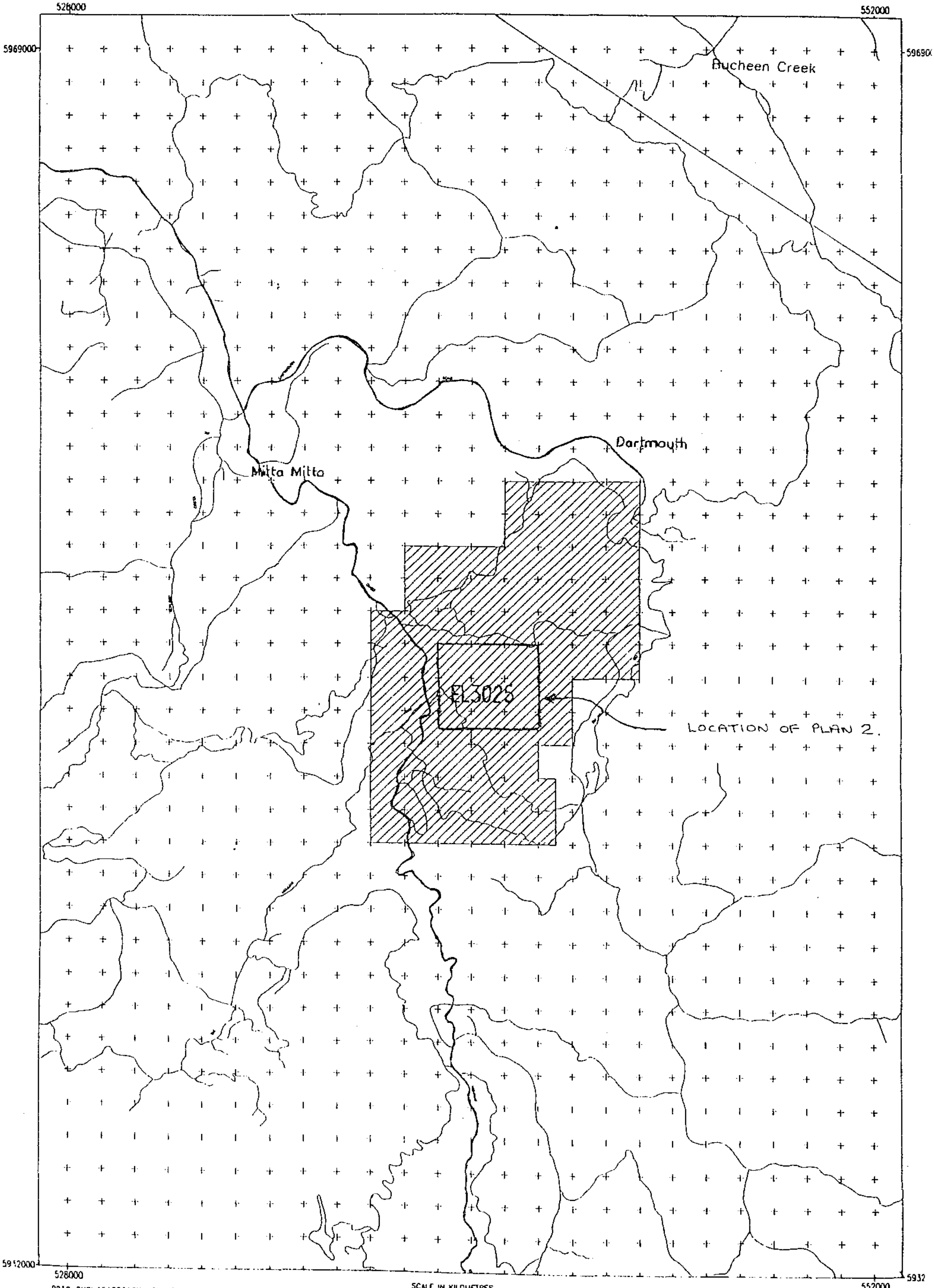
- a critical review of the anomaly area around the Empress of India with associated field work.

6. CONCLUSION.

The work over the last twelve months has revealed several different aspects of the mineralisation at Granite Flat. It has been most productive in ascertaining that there are two styles of mineralisation which has given direction to future work.

Terry F Potter

Terry F Potter

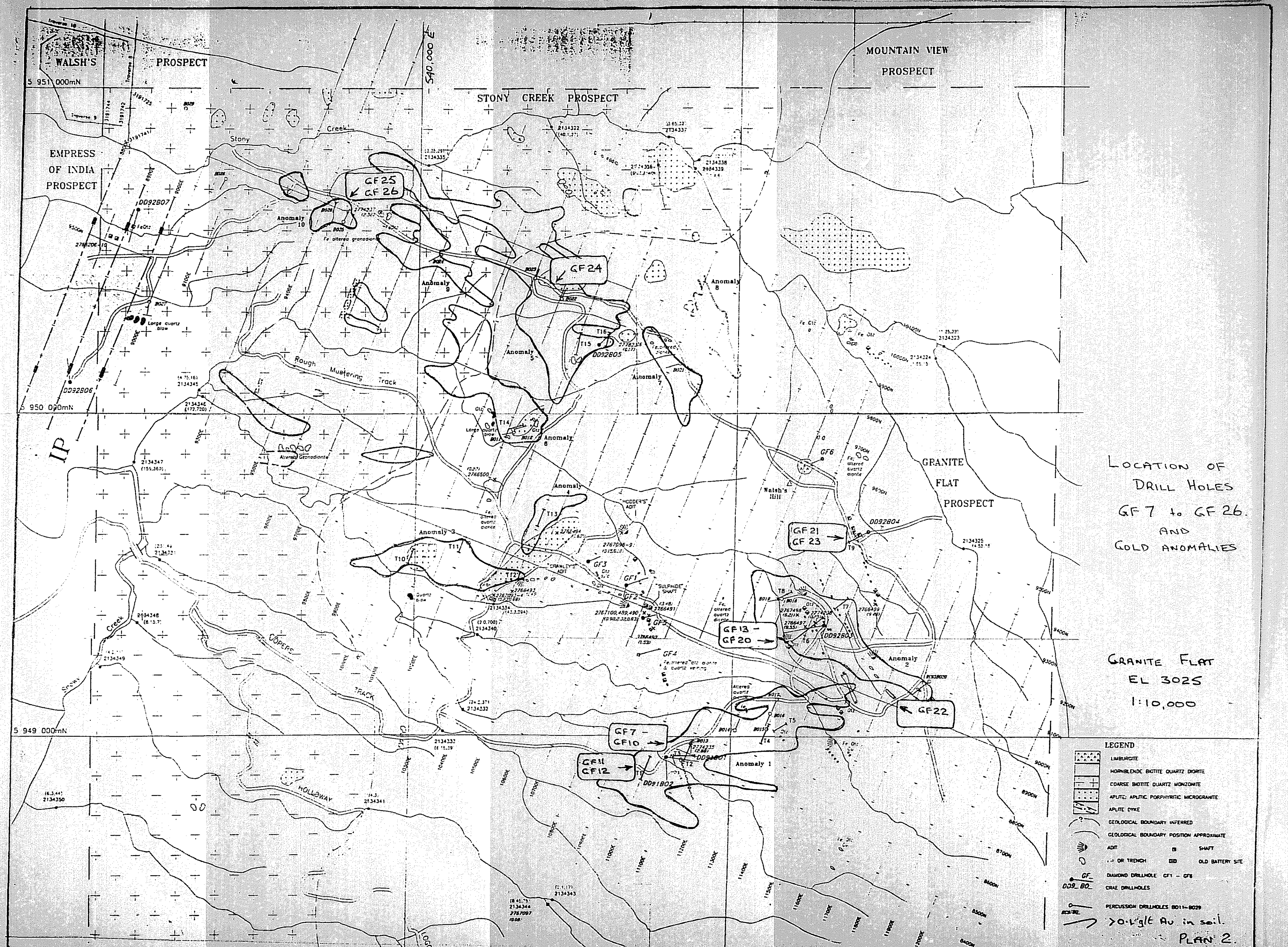


DATA QUALIFICATION: ALL BASE MAPPING INCLUDING CROWN LAND AREAS HAVE BEEN SOURCED FROM SCALES RANGING TO 1:500,000 AND ARE NOT REGARDED AS ACCURATE. PLEASE REFER TO DCNR FOR PRECISE AND CURRENT CROWN LAND STATUS.

SCALE IN KILOMETRES
ZONE 55

PRODUCED BY GEDIS
DEPARTMENT OF ENERGY AND MINERALS, VICTORIA

DATE: 10/11/9



WALSH'S PROSPECT
MOUNTAIN VIEW PROSPECT
STONY CREEK PROSPECT
EMPRESS OF INDIA PROSPECT
GRANITE FLAT PROSPECT
5 951 000mN
5 950 000mN
5 949 000mN
540,000 E
Stony Creek
Rough Mustering Track
COOPERS TRACK
HOLLOWAY
Snowy Creek
Walsh's Hill
HODDER'S ADIT
CRAWLEY'S ADIT
SULPHIDE SHAFT
Anomaly 1
Anomaly 2
Anomaly 3
Anomaly 4
Anomaly 5
Anomaly 6
Anomaly 7
Anomaly 8
Anomaly 9
Anomaly 10
GF25 GF26
GF24
GF21 GF23
GF13 - GF20
GF22
GF7 - GF10
GF11 GF12
DD92B07
DD92B06
DD92B05
DD92B04
DD92B03
DD91B01
DD91B02
Large quartz blow
Altered Granodiorite
Fe altered granodiorite
IP
LOCATION OF DRILL HOLES GF 7 to GF 26. AND GOLD ANOMALIES
GRANITE FLAT EL 3025 1:10,000
LEGEND
LIMBURGITE
HORNBLENDE BIOTITE QUARTZ DIORITE
COARSE BIOTITE QUARTZ MONZONITE
APLITE; APLITIC PORPHYRITIC MICROGRANITE
APLITE DYKE
GEOLOGICAL BOUNDARY INFERRED
GEOLOGICAL BOUNDARY POSITION APPROXIMATE
ADIT
SHAFT
PIT OR TRENCH
OLD BATTERY SITE
DIAMOND DRILLHOLE GF1 - GF6
CRAE DRILLHOLES
PERCUSSION DRILLHOLES B011-B029
>0.1g/t Au in soil.
PLAN 2.

EXPLORATION LICENCE 3025 - GRANITE FLAT
(Granite Flat, Vic)

RE-ASSAY of RC DRILL SAMPLES
1 m Individual Samples

ALS

BENDIGO

Attention: MR T POTTER
YourOrder:
SampleType:RAB DRILL CHIP
Project: 78291

Batch-no: 6217
Sub-batch:0
No-samples:104
Received: 05/11/96
Checked:

Element	Au	Au PM209	Cu	Pb	Zn	Mo	As
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Method	PM209	CHECKS	G102	G102	G102	G102	G102
GF 7 4A	0.25		79	21	69	<5	<20
GF 7 4B	0.22		106	22	63	<5	<20
GF 7 6A	0.44		176	21	126	<5	<20
GF 7 6B	0.16		169	19	56	<5	<20
GF 7 8A	0.35		228	21	51	<5	<20
GF 7 8B	0.30		172	21	65	<5	<20
GF 8 26A	0.32		230	32	73	<5	<20
GF 8 26B	0.54		476	30	94	<5	<20
GF 8 28A	1.07	1.09	1240	151	149	<5	50
GF 8 28B	0.21		176	25	71	<5	<20
GF 9 30A	21.0	20.1	741	33	101	23	<20
GF 9 30B	2.84	2.69	266	22	85	<5	<20
GF 9 32A	0.40		88	21	82	5	<20
GF 9 32B	0.59		68	24	121	<5	<20
GF10 14A	0.18		132	19	52	<5	<20
GF10 14B	0.46		176	18	61	<5	<20
GF10 16A	0.14		126	18	51	<5	<20
GF10 16B	1.06	0.98	643	25	67	<5	<20
GF10 18A	1.05	1.23	163	18	56	5	<20
GF10 18B	0.31		82	14	51	<5	<20
GF10 38A	1.81	1.84	90	19	74	<5	<20
GF10 38B	1.37	1.45	74	22	127	<5	<20
GF10 40A	2.14	1.78	102	17	76	16	<20
GF10 40B	0.68		119	19	69	<5	<20
GF11 08A	0.50		215	20	63	<5	<20
GF11 08B	1.53	1.60	186	21	135	<5	<20
GF11 10A	2.07	1.93	214	20	72	<5	<20
GF11 10B	0.97		167	16	51	<5	<20
GF11 12A	0.04		173	19	174	<5	<20
GF11 12B	1.76	1.24	366	25	78	<5	<20
GF11 14A	0.46		142	15	69	<5	<20
GF11 14B	0.59		144	16	71	<5	<20
GF12 08A	0.09	0.09	167	14	130	<5	<20
GF12 08B	1.77	2.79	200	21	97	5	<20
GF12 10A	0.54		154	17	62	<5	<20
GF12 10B	0.03		75	19	55	<5	<20
GF12 12A	0.26		72	20	69	<5	<20
GF12 12B	0.63		82	25	48	<5	<20
GF13 24A	<0.01		65	16	98	<5	<20
GF13 24B	1.34	1.97	2520	78	80	<5	<20
GF13 26A	1.79	1.48	1870	91	88	<5	20
GF13 26B	0.10		451	51	85	<5	<20
GF14 32A	0.76	0.74	220	18	45	<5	<20
GF14 32B	0.16		315	23	89	<5	<20
? GF15 04B	5.90		428	24	68	<5	<20
Limit of Detection	0.01	0.01	5	5	5	5	20

Legend

GF 7 4 = Hole GF 7, sample from 2-4 m depth,
see "Drill Program on EL 3025, Mar-April 1996"

GF 7 4A = Hole GF 7, sample from 2-3 m depth.

GF 7 4B = Hole GF 7, sample from 3-4 m depth.

BENDIGO

Attention: MR T POTTER
YourOrder:
SampleType:RAB DRILL CHIP
Project: 78291

Batch-no: 6217
Sub-batch:0
No-samples:104
Received: 05/11/96
Checked:

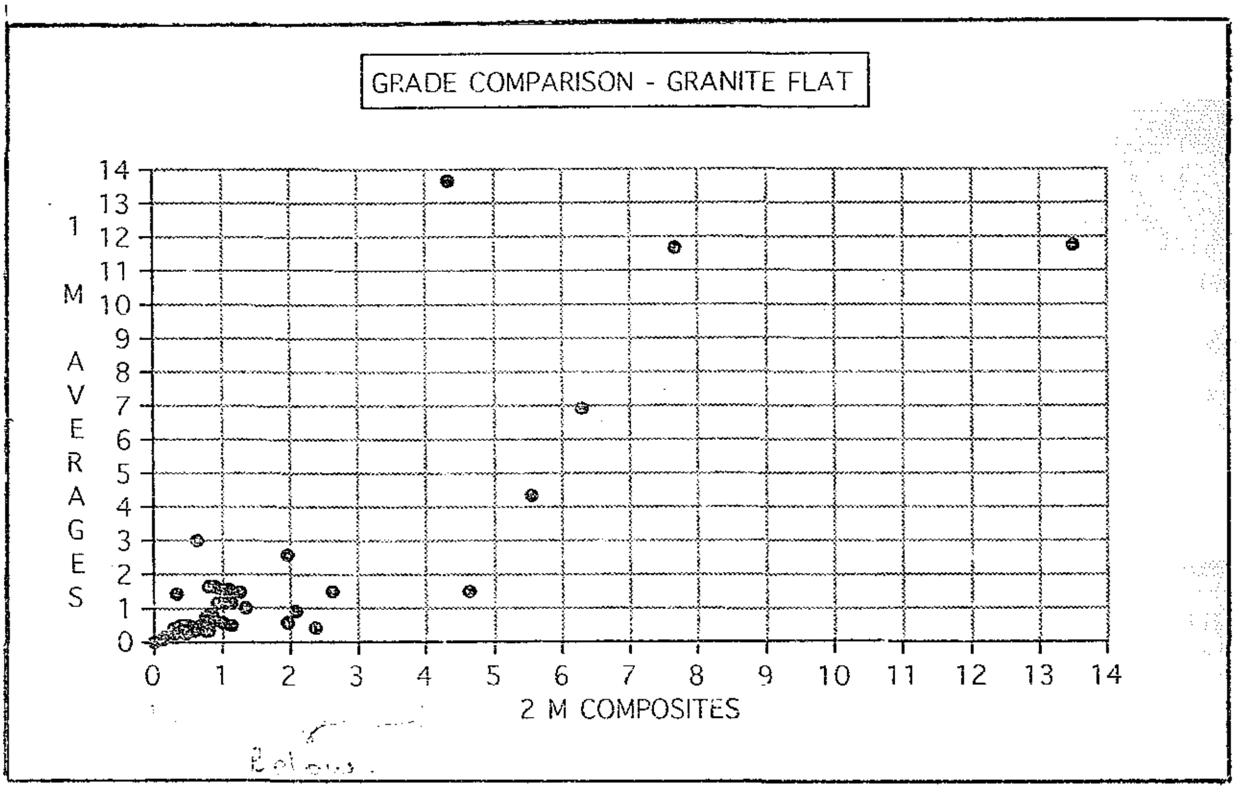
Element	Au	Au PM209	Cu	Pb	Zn	Mo	As
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Method	PM209	CHECKS	G102	G102	G102	G102	G102
GF15 06A	0.21		359	28	340	<5	<20
GF15 06B	0.41		620	29	205	<5	<20
GF16 04A	0.15		482	24	94	<5	<20
GF16 04B	0.61		549	19	46	<5	<20
GF16 06A	0.04		264	18	79	<5	<20
GF16 06B	2.98	2.72	377	37	73	<5	<20
GF16 14A	0.12		218	20	77	<5	<20
GF16 14B	1.71	1.71	729	24	69	<5	20
GF16 16A	1.08		553	23	77	<5	<20
GF16 16B	2.20	1.89	359	22	60	<5	20
GF17 14A	0.56		276	18	51	<5	<20
GF17 14B	1.10		680	142	69	<5	<20
GF18 14A	0.16		301	95	110	<5	40
GF18 14B	3.34	2.71	582	28	100	5	<20
GF18 24A	1.02		433	21	161	<5	<20
GF18 24B	0.20		256	21	66	<5	<20
GF19 18A	2.79	5.92	1890	42	61	<5	100
GF19 18B	5.95	5.88	3540	47	28	5	250
GF19 20A	15.6	13.2 14.4	2810	60	41	9	250
GF19 20B	9.10	9.23 [illegible]	4080	44	44	7	270
GF19 22B	1.52		3020	42	162	<5	50
GF19 24A	2.92	1.94 2.48	3370	31	113	<5	20
GF19 24B	0.60		3240	23	89	<5	<20
GF21 18A	0.03		175	21	75	<5	<20
GF21 18B	0.70		789	55	162	<5	20
GF21 20A	0.56		1260	24	70	<5	<20
GF21 20B	0.29		1060	26	136	<5	<20
GF21 22A	0.23	0.25	731	35	89	<5	<20
GF21 22B	0.01		384	22	57	<5	<20
GF21 24A	1.99		1090	60	92	<5	<20
GF21 24B	0.26		973	52	63	<5	<20
GF22 16A	0.42		2810	31	76	<5	<20
GF22 16B	1.90		2040	47	65	<5	<20
GF22 18A	0.16		1160	21	87	<5	<20
GF22 18B	0.54		1420	25	75	<5	<20
GF23 06A	0.43		1690	69	123	<5	170
GF23 06B	0.55		1620	45	94	<5	90
GF23 08A	0.46	0.44	1390	485	155	<5	120
GF23 08B	26.8	27.0	1610	2960	328	10	2830
GF23 10A	7.28	6.64	1360	3190	379	9	2790
GF23 10B	6.59	7.10	1040	2270	637	8	1040
GF24 12A	0.16		2420	29	58	<5	<20
GF24 12B	7.25	4.48	4280	64	348	<5	20
GF24 14A	0.54		2560	41	90	<5	<20
GF24 14B	0.42		2520	24	104	<5	<20
GF25 24A	0.02		162	25	69	5	<20
GF25 24B	1.00	0.96	397	28	53	5	20
GF25 26A	0.05		159	40	59	<5	120
GF25 26B	0.02		116	21	56	<5	70
GF25 28A	0.02		599	23	67	<5	30
GF25 28B	5.51	4.90	3470	66	161	12	370
GF26 18A	0.09		274	22	62	<5	30
GF26 18B	0.81		1320	41	84	<5	80
GF26 20A	0.22		1240	27	93	<5	30
GF26 20B	0.06		314	19	61	<5	20
GF26 22A	0.10		260	16	90	<5	<20
GF26 22B	0.86		1380	26	91	<5	20
GF26 24A	0.36		1310	24	90	<5	<20
GF26 24B	0.11		692	20	65	<5	30
Limit of Detection	0.01	0.01	5	5	5	5	20

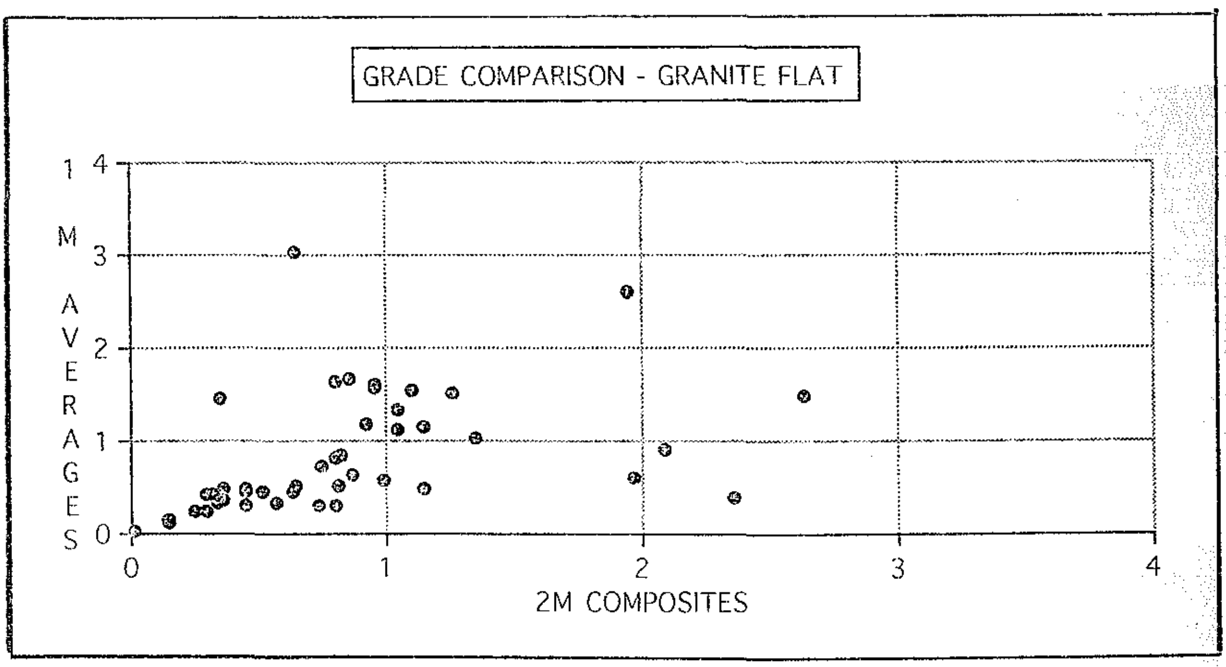
EXPLORATION LICENCE 3025 - GRANITE FLAT
COMPARISON of ASSAYS
2 m Composite Samples vs 1 m Samples Averaged to 2 m

HOLE/SAMPLE	2M COMPOSITE	1M SAMPLES			
GF7 4	0.25	0.24			
GF7 6	0.8	0.3			
GF7 8	0.33	0.33			
GF8 26	0.31	0.43			
GF8 28	0.87	0.65			
GF9 30	7.67	11.69			
GF9 32	0.36	0.5			
GF10 14	0.57	0.32			
GF10 16	0.99	0.58			
GF10 18	0.74	0.73			
GF10 38	0.96	1.62			
GF10 40	1.04	1.32			
GF11 8	1.35	1.04			
GF11 10	2.63	1.48			
GF11 12	0.82	0.85			
GF11 14	0.65	0.53			
GF12 8	0.92	1.18			
GF12 10	0.45	0.29			
GF12 12	0.63	0.45			
GF13 24	0.86	1.66			
GF13 26	0.8	1.64			
GF14 32	0.51	0.46			
GF15 6	0.73	0.31			
GF16 4	2.36	0.38			
GF16 6	0.34	1.45			
GF16 14	2.09	0.92			
GF16 16	1.1	1.56			
GF17 14	0.8	0.83			
GF18 14	0.96	1.59			
GF18 24	1.97	0.61			
GF19 18	5.56	4.37			
GF19 20	13.5	11.78			
GF19 22	4.62	1.52			
GF19 24	1.26	1.52			
GF21 18	0.34	0.37			
GF21 20	0.29	0.43			
GF21 22	0.14	0.12			
GF21 24	1.05	1.13			
GF22 16	1.14	1.16			
GF22 18	0.36	0.35			
GF23 6	0.44	0.49			
GF23 8	4.35	13.63			
GF23 10	6.31	6.92			
GF24 12	0.64	3.02			
GF24 14	0.44	0.48			
GF25 24	0.81	0.51			
GF25 26	0.01	0.04			
GF25 28	1.95	2.61			
GF26 18	0.45	0.45			
GF26 20	0.15	0.14			
GF26 22	1.14	0.48			
GF26 24	0.29	0.24			

EXPLORATION LICENCE 3025 - GRANITE FLAT
(Granite Flat, Vic)

COMPARISON of ASSAYS
2 m Composite Samples vs 1 m samples Averaged to 2 m





EL 3025 Granite Flat.

Relog of Hole DD91 BO2.   Logged by Terry F Potter.

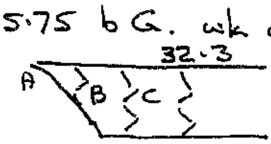
Co-ords 5948940 m N   540815 m E   Brg Mag / In 145/55°

	Fm - to	Au.
0 - 1.8 open hole		
1.8 - 5.45m weath granite lt bn crumbly.	1.8 - 4m	0.05
5.45 - 7.6m fresh granite (G.) last 800m sl weath.	4 - 6m	0.09
numerous veins infilled with chl 5-10mm thck.	6 - 8m	0.02
stockworks at 70° both ways and at 30°		
one set at 70° is qtz/fespar rich.		
7.6 - 8.1 weath G & partly weath G.	8 - 10m	0.04
8.1 - 12.0 fresh G. wk veins of chl at 45° & 70°	10 - 12m	0.09
9.0m 3 fractures over 30mm width.		
12.0 - 16.5m fresh G stg vning of chl at 70-80°	12 - 14m	0.03
and 15-20° Veins have vague boundaries and	14 - 16m	0.29
possibly shears generally 5-10mm wide.		
12.2 - 12.9 mod & stg bkn core no prom. direct.		
16.5 - 22.0m fresh G very sparse chl v wk K alt.	16 - 18m	0.29
21.65 - 22.1 mod disseminated sulphides	18 - 20m	0.02
top contact 80° & chloritic. bottom just	20 - 22m.	0.16
phases out along a 0-5° chlorite zone.		
	22 - 24m	1.24
22.0 - 23.3 G. one stg chl vn at 0-10° with a		
multitude of fractures in all directions		
v wk K alteration.		
23.3 - 27.1 G. darker than above definite top	24 - 26m	1.23
contact at 30°. Showing very stg dissem.	26 - 28m	1.60
sulphides. Core is solid with only v wk		
& sparse fractures 9. qtz vns at 2-5mm		
all at 60-80° all with sulphides. The		
general appearance is that this zone is		
a different intrusion.		

		Av. g/t.
27.1 – 29.0m FAULT ZONE mod – stg bkn core		
generally stg chl. 3 qv 5-10m all with sulph.	28. – 30m	2.14
29.0 – 32.3 same as 23.3 – 27.1	30 – 32m	2.78
32.3 – 39.05 lighter colour biotite G. with minor	32 – 34m	1.26
zone of K alt. 35.7m shear at 5° showing	34 – 36m	0.12
definite slicks at 80° (horizontal)	36m – 38	0.11
wk - mod sporadic chl veins at 40-60°	38 – 40m	0.41
39.05 – 39.60m bG with 2 vague zones of		
darker G with dissem sulphides, 20% of block.		
39.60 – 41.85m bG vy wk K alt. sparce chl at 0 & 45°	40 – 42m	0.93.
41.85 – 42.3m. darker G with disseminated sulphide.		
50 mm qtz with sulphides at 80°		
4 x 3mm qv ~~to~~ 50mm with 1-2% sul.		
5-10mm qv at 20° with 1-2% sul.		
42.3 – 46.15 bG with mod chl vns at 45° & 5°.	42 – 44m	4.82.
Some 45° vns with sulphides	44 – 46m	0.46
46.15 – 48.65m bG sparce wk vns, v wk K alt.	46 – 48m	0.03
0 – 48 in general the core is solid with no		
microfractures. Below 48m contains microfract.		
48.65 – 53.75m bG. with broad zones of chl & K alt	48 – 50m	0.04
48.65 120m fault at 80° no sulph.	50 – 52m	0.02
made up of 40mm solid seri/chl.	52 – 54m	0.03
15mm shear, 40mm bG, 25mm vbk G.		
48.77 500m mod K alt wk-mod chl vns 45°	54 – 56	0.03
50.25 3mm qtz vn at 0° no sulph	56 – 58	0.1
51.0 200mm v stg K alt. with stg vns	58 – 60	0.01
of chl at 40° & 70°	60 – 62	0.02
52.25 100mm stg K alt. 53.25 mod K alt 200m	62 – 64	0.06
53.75 – 59.55 bG. with sparse v wk chl vns.	64 – 66	0.45
59.55 – 65.60 bG. v wk K alt. chl vn becoming		
stronger & more common 45-80°		

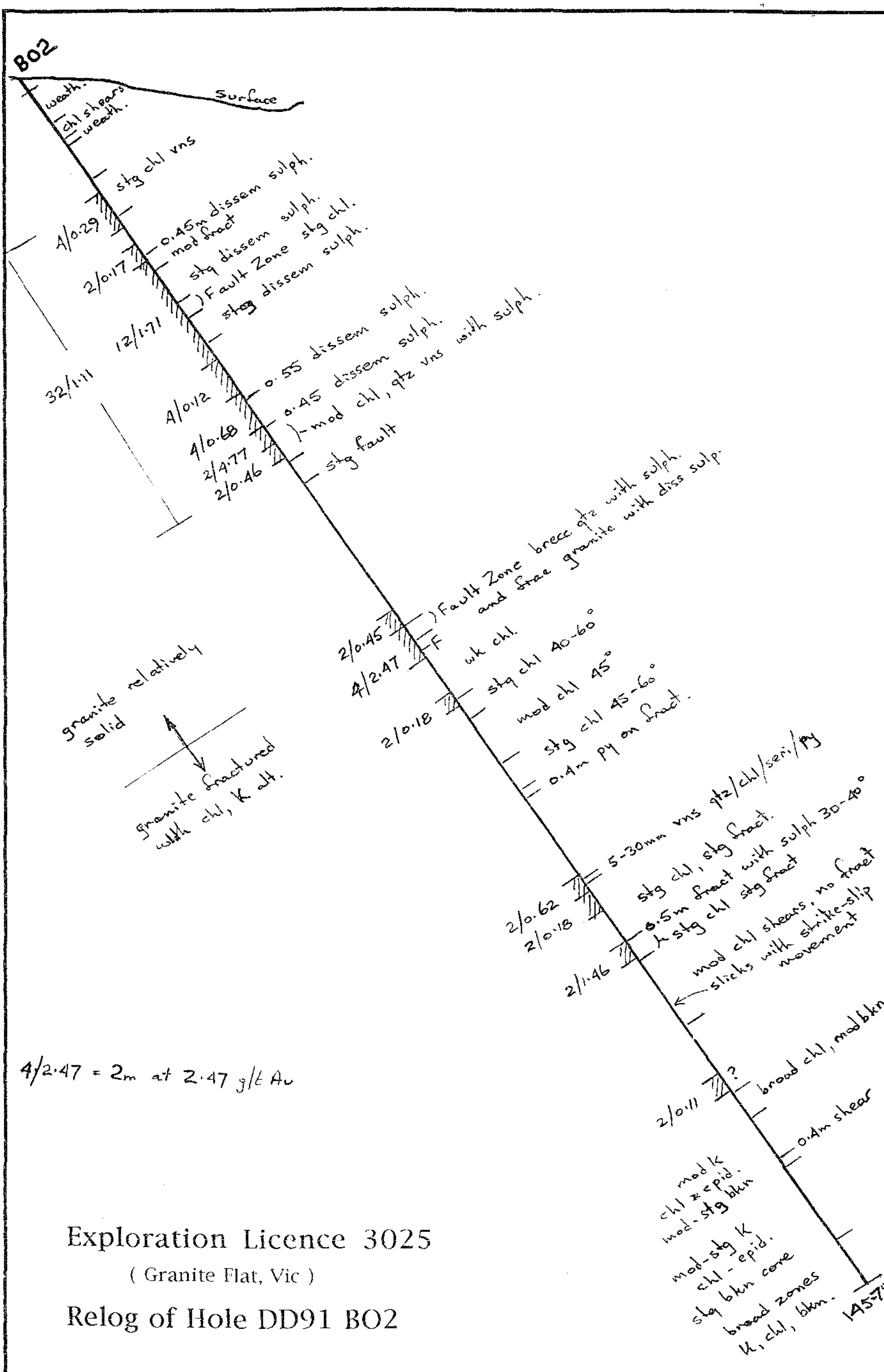
65.6 – 67.25 FAULT ZONE Mega breccia of darker granite and siliceous/seri/chl rock with vfg Py & Cpy & Po? in fractures. 2 × 50mm qtz vn at 45°. Faulting at 45° & 70°/180°. 65.9 – 66.2 v stg sulphides. 67.25 – 67.5 dk G sil, chl & seri with stg dissem sulphides, top contact faulted at 40° bottom contact solid at 70°, fract stg.	66. 68 m	Au 3.59 g/t 0.55% Cu.
67.5 – 68.8m b G with mod vn chl at 45° & 70° and wk K alt.	68 – 70m	1.27
68.8 – 69.6m dark G. 68.8 stg shear at 60° no sulph, 10 mm chl/ser, 50mm lam qtz 68.9 – 69.5 Py & Cpy in qtz vnlts and fractures in dk G 69.5 70mm qtz breccia against G.		
69.6 – 74.8 b G. with dissem chl, v wk K alt. wk & sparse seri at 45° – 80° in stockworks.	70 – 72m 72 – 74m	0.04 0.01
74.8 – 77.0 b G. stg devel of chl as dissem and vns at 40 – 60° 76.35m mod shear with kaolin & K alt.	74 – 76m 76 . 78	0.18 0.03
77.0 – 78.0m dk gn & b G. stg chl.		
78.0 – 83.0m b G wk K alt. mod chl vns at 45°	78 – 80	0.01
83.7 – 87.0m dk gn & ~~sp~~ b G. stg chl with wk seri vns at 45 – 60°	80 – 82 82 – 84	0.01 0.02
87.0 – 106.5 chloritic G. strongly fractured. in all directions. All contain some chl/seri to varying degrees and from microfractures to obvious strong fractures. 30° & 70° K alt. appears not assoc with fract. 88.75 400m mod K alt.	84 – 86 86 – 88 88 – 90 90 – 92 92 – 94 94 – 96m	0.02 0.09 0.01 0.01 0.01 0.07

		Au
96.15 vague vns of qtz/chl/seri, 10°, 50% sulph.		
96.6 10-30mm " " " " " 30% "	96-98	0.62
97.0 discontin. shears to 5mm, 70°, sulph.	98-100	0.18
97.45 5mm vague vn qtz/chl/seri with	100-102	0.07
5% sulphides as Py & Cpy	102-104	0.02
97.45-104.8 stg fract chl G.	104-106	1.46
104.3 500mm sulphide zone occurring		
only on fractures and commonly in qv.		
Fractures at 30-40° and a series of Py, Cpy		
fractures are truncated at bottom by the		
75° contact.		
no disseminated sulphides 87-106.5m.		
106.5-114.0 sl chl G with mod shears of chl	106-108	0.02
but no fracturing. Shears at 45° with	108-110	0.02
minor 45/180 & 70°. v wk K alt.	110-112	0.01
111.7 shears with slicks at 90° ie		
strike slip movement. Chl becoming wkr		
114.0-118.0 b G. with wk & mod sparse chl shears	112-114	0.02
at 45°, 0° & 70°	114-116	0.03
118.0-122.2 chl G. as broad vague zones at 30°	116-118.	0.02
Qtz vn at 30°/180 no sulph.	118-120	0.02
122.2-125.1 chl G. as above mod bkn no sulph.	120-122	0.11
125.1-131 mod K alt G. with chl & epid. vns, mod bkn.	122-124	0.09
130-130.4m intensly sheared and brecciated	124-126	0.07
pink G. with chl, qtz vnlts. no prom. direction.	126-128	<0.01
131 50mm stg shear with pk fels stg bkn	128-130	<0.01
131-132.6 b G wk bkn, wk chl shears.	130-132	<0.01
132.6-140.2 G mod and stg K alt. with chl & epid.	132-134	<0.01
Several zones bkn core. 137.6 50mm calcite 20°	134-136.	<0.01
140.2-145.75 b G. wk chl sh, zones of stg K alt, chl, epid	136-138 ↓ 145	<0.01



A = stg sul dk G.
B = chl/sil/G mod sul.
C = normal G, sparse vns sulp.

EOH 145.75m.



Exploration Licence 3025

(Granite Flat, Vic)

Relog of Hole DD91 BO2

Scale 1:500

Terry F Potter

PETROGRAPHIC REPORT ON DRIIL-CORE AND ROCK SAMPLES SUBMITTED BY PERSEVERANCE MINING

S W McKnight
22-7-97

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DRILL CORE FROM HOLE DD91 B01 16.5m

Half core assay: 16 - 18m 2.28 g/t Au 0.175% Cu 50ppm Zn 5ppm Bi 10ppm Pb

Log: 15.5 - 17.95 qtz monzodiorite with minor K. alteration.
1-2mm qtz veins and sericite veins abundant.
Qtz veins are offset by sericite veins.
Cpy ? Py associated with quartz veins.
16.5 - 16.6 two Py stringers on 1-5mm qtz vns.

DESCRIPTIONS

#Bo1 16.5m

The drill-core sample is a fresh, relatively mafic (CI~ 35), even grained (~3-4mm), igneous rock. Pale pink k'spar to 4mm are observed on wetted surfaces.

Traces of sulphide minerals can be seen (<0.5mm) on parts of the sawn surfaces of the sample.

Petrography

Under the microscope this rock is seen to be a partially altered monzonitic rock, dominated by; plagioclase, orthoclase and red/brown pleochroic biotite. Biotite appears to be primary igneous in origin (ie not after any earlier mafic phases, although this possibility cannot be ruled out) and is strongly altered to green chlorite, epidote and minor sphene, Hornblende and pyroxene are absent. Some euhedral sphene is clearly primary.

Estimate of Primary Modal Mineralogy

	%		
Orthoclase	35	Magnetite	1
Plagioclase	25	Sphene	tr
Biotite	35	Apatite	tr
Quartz	3	Zircon	tr
Ilmenite	1		

An allotriomorphic granular texture is displayed by both feldspars, the very minor quartz content is late in formation and some appears to fill cavities.

Mineralisation and Alteration

A typical propylitic assemblage of: chlorite-epidote-sphene-carbonate minerals is displayed, these account for about 30% of the present mineralogy.

Biotite is most strongly altered, followed by significant sericite replacement of plagioclase. Ilmenite and magnetite have largely been replaced by secondary sphene.

There is a suggestion that areas of strong alteration have been associated with cryptic fractures.

Chalcopyrite is relatively abundant (~1%) and occurs both in association with secondary minerals and in quartz lined cavities. Pyrite is present in trace quantities.

Name: Altered (*mineralised*) Monzonite.

DRILL CORE FROM HOLE DD91 BO2 31·0m

Half core assay: 30-32m 2·81 g/t Au, 0·88% Cu, 7ppm Ag 45ppm Zn 80ppm Bi

Log 29·0 – 32·3m a more mafic granite with strong disseminated sulphides. 2-5mm qtz vns are common, all with sulphides Core solid with very few weak fractures.

31·0m

#Bo2 ~~33.1~~0m

The sample submitted is a fresh drill-core segment of a relatively mafic (CI~35) coarse grained (~5mm) igneous rock. Chalcopyrite mineralisation (~1-2%) is scattered throughout the sample.

Petrography

Pol-microscopy shows that this rock is a strongly altered diorite or monzodiorite. Plagioclase is clearly the most abundant primary felsic phase and has been heavily altered to sericite. It is quite difficult to estimate the original k'spar content of this sample, the impression is that it was relatively low (<10%). Quartz is also only present in small amounts and occurs as an interstitial phase and lines mineralised cavities.

The primary texture of this rock differs from #Bo1 16.5m in that a near panidiomorphic texture is displayed by the heavily altered plagioclase.

Primary hornblende is absent from this rock, the possibility that it was present and has been replaced by biotite cannot be ruled out, however, no traces are of this mineral are seen in the cores of the large biotite flakes.

Iron-titanium oxides (magnetite and/or ilmenite) are not readily observed in reflected light and secondary sphene is not commonly developed, indicating that these two minerals were not in great abundance, small magnetite grains are observed as inclusions within plagioclase in minor amounts.

A very complex history is shown by the primary biotite and its alteration products. These include; chlorite, blue-green actinolite and a green highly birefringent phyllosilicate, probably green secondary biotite. The primary biotite, which may be after amphibole or pyroxene, displays some compositional variation, which is reflected in its range in strong pleochroic colour from deep chocolate brown to red/brown.

An estimate of the primary modal mineralogy is difficult because of alteration but is

Plagioclase	55 %		
K'spar	4-5 ?	Magnetite	1
Quartz	4-5	Apatite	tr
Biotite	35	Zircon	tr+

Mineralisation

Chalcopyrite is present at around 1-2% and displays a very distinctive occurrence in association with secondary mineral assemblages, this is in the form of scattered clots to 4mm. A particular feature is the association with blue-green amphibole blades (see plates), green secondary biotite and euhedral albite crystals ie in association with altered biotite and in what resemble cavities.

Minor traces of scheelite are observed under examination in the SEM.

Name: Altered (*mineralised*) biotite diorite

DRILL CORE FROM HOLE DD 91 B02 62.05m
Half core assay 62 - 64m 0.06 g/t Au, 50ppm Cu 5 ppm Pb 40ppm
<5ppm Bi,
Log: qtz monzodiorite very slight alteration

#Bo2 62.05m

The drill-core sample is a fresh, relatively mafic (CI~25), coarse grained (~5mm) igneous rock. Large k'spar grains are stained pink in places.

Petrography

Under the microscope it is seen that the sample submitted displays a well developed monzonitic texture, with large microperthitic orthoclase pools enclosing euhedral to subhedral grains of the other primary phases of the rock.

Alteration is light and an estimate of the primary model mineralogy can be made:

	%
Orthoclase	30
Plagioclase	35
Quartz	10
Hornblende	23
Magnetite	1
Ilmenite	0.5
Apatite	tr
Zircon	tr-

Quartz forms as graphic intergrowths with both feldspars and hornblende is green/light green pleochroic.

In places hornblende is partially replaced by green chlorite and yellow/green epidote minerals.

Sericitisation of plagioclase is variable, being strong in places and not developed in others.

Magnetite and ilmenite occur in association as grains up to 0.2mm.

Chalcopyrite and pyrite are seen (<0.1%) as scattered grains (~0.1mm) throughout the section.

Several veinlets (~1mm wide) of secondary minerals cut the section, the more prominent of these are composed of prehnite and chlorite (see plates), alteration of the host tends to be marginal to these structures.

Name: *(Partially altered)* Quartz monzonite.

DRILL CORE FROM HOLE DD91 BO2 · 66.7m

Half core assay 66–68m = 3.66 g/t Au, 0.55% Cu, 35ppm Pb, 35ppm Zn
1 ppm Ag 20 ppm Mo 90 ppm Bi.

Log: Fault Zone in quartz monzodiorite. Strong quartz veining with Cpy ≥ Py. Pervasive chlorite alteration. Minor dissem sulphides in matrix.

#Bo2 66.7m

The fresh drillcore sample is a brecciated, mineralised mesocratic medium grained igneous rock.

Chalcopyrite masses up to 1cm are seen on sawn surfaces associated with disrupted veins of a light coloured mineral.

Petrography

Pol-microscopy shows that the sample has suffered intense sericite-chlorite-silica-carbonate alteration, quartz-albite and carbonate veins cut the section.

All primary mafic phases have been replaced by chlorite and sphene, felsic minerals are partially sericitised or replaced by carbonate. Magnetite and or ilmenite are replaced by sphene.

It is difficult to make an estimation of the original igneous assemblage. The rock would, however, have been monzonitic to dioritic in composition.

Mineralisation

Sulphide mineralisation appears to have been in two stages:

(i) An earlier chalcopyrite + pyrite + minor gold (high Ag) mineralisation in the form of veins and patchy replacement.

(ii) A later overprinting by a complex assemblage of native bismuth, Pb-Bi-Cu-Ag-(Se) sulphosalts, Pb-Bi sulphides, Pb selenides, pyrite and minor electrum.

Name: Altered *(mineralised)* Diorite or Monzonite

GR F1 "microgranite" Surface rock chip.

The sample submitted is a relatively fresh surface sample of a felsic medium grained igneous rock, a subtle porphyritic texture is displayed by plagioclase phenocrysts to 4mm and clots of mafic minerals to 5mm.

Petrography

Under the microscope it is seen that the sample is a slightly porphyritic fine grained hornblende granite.

Estimate of Modal Mineralogy

	%
Orthoclase	35
Plagioclase	30
Quartz	25
Hornblende	10
Magnetite	0.2
Ilmenite	0.1
Apatite	tr
Zircon	tr

Quartz shows common development of b-forms, plagioclase is partly sericitised in more calcic cores and orthoclase is microperthitic. Hornblende is the only mafic silicate mineral present and displays some compositional variation reflected in a range of pleochroism from strong green to green-brown.

Chlorite and epidote replace hornblende in places.

Name: Hornblende microgranite.

Refer to Large Diagrams at End of File

PERSEVERANCE MINING PTY LTD

MEMO TO: BAS VAN RIEL

FROM: ROB STEPHENS

DATE: 19-Nov-97

cc: Terry Potter
Chris Roberts

SUBJECT: GRANITE FLAT - METALLURGY

SUMMARY

Preliminary Metallurgical testwork was carried out on samples from the Granite Flat area.

Gold recovery testwork involving seven bottle roll cyanidation tests were performed by Metallurgy International Pty Ltd. Gold recoveries were generally encouraging ranging from 88 to 97%, except for sample GF19 which returned a recovery of 39%.

Gold recovery by column leach cyanidation tests were performed by Perseverance Mining Pty Ltd. Perseverance Mining Pty Ltd. Gold recoveries were lower than for the bottle roll tests ranging from 51 to 72%.

SAMPLES

Seven RC drill chip samples of mineralised altered granite labelled GF10, GF11, GF16, GF19, GF23, GF25 and GF26 were submitted to Metallurgy International Pty Ltd. Sample GF10 was described as fresh granites, samples GF11 and GF16 described as weathered/fresh granites, and the remaining samples as weathered granites.

Assayed head grades are listed as follows.

SAMPLE	GF10	GF11	GF16	GF19	GF23	GF25	GF26
Au g/t	1.47	0.98	1.61	5.18	16.7	2.61	0.48

A range of samples from RC drill holes representing 1metre intervals were received by Perseverance Mining Pty Ltd for holes GF11, GF19, GF25 and GF26.

Assayed head grades are listed as follows.

HOLE	INTERVAL	Au g/t	Cu g/t	Pb g/t	Zn g/t	As g/t
GF11	7 m	0.50	215	20	63	<20
GF11	8	1.57	186	21	135	<20
GF11	9	2.00	214	20	72	<20
GF11	10	0.97	167	16	61	<20
GF11	6-8	1.35	-	-	-	-
GF11	8-10	2.63	-	-	-	-
GF 19	17	2.79	1890	42	61	100
GF 19	18	5.95	3540	47	28	250
GF 19	19	14.40	2810	60	41	250
GF 19	20	9.17	4080	44	44	270
GF 19	22	1.52	3020	42	162	50
GF 19	23	2.52	3370	31	113	20
GF 19	24	0.60	3240	23	89	<20
GF25	28	5.31	3470	66	161	370
GF26	22	0.86	1380	26	91	20

BOTTLE ROLLS

Standard cyanidation tests were carried out by Metallurgy International Pty Ltd in which a 400g split of ground sample was bottle rolled for 24 hours. Grind size was a nominal 80% passing 75 microns. Initial solutions were adjusted to 0.05% sodium cyanide and pH10.

Results were generally encouraging with the only exception being for sample GF19 which returned a low gold extraction of 38.9%. All other results were above 87% extraction.

The full report from Metallurgy International Pty Ltd is attached as an Appendix to this memo.

A summary of results is given below.

SAMPLE	GF10	GF11	GF16	GF19	GF23	GF25	GF26
Reagents							
Lime, kg/t	0.50	2.63	3.48	2.00	6.02	4.05	2.52
NaCN, kg/t	0.49	0.67	0.56	2.95	1.60	1.26	0.69
Head Assay							
Calc, Au g/t	1.43	0.69	0.71	4.14	20.5	0.74	0.54
Assay, Au g/t	1.47	0.98	1.61	5.18	16.7	2.61	0.48
Extraction							
24hr %	91.6	88.3	87.2	38.9	97.2	93.2	96.3
g/t	1.31	0.61	0.62	1.61	19.9	0.69	0.52

COLUMN LEACH TESTS

Standard column tests were carried out by Perseverance Mining Pty Ltd in which the sample was agglomerated using cement prior to leaching in a 150mm diameter PVC column.

All samples were dried and weighed and subsequently composited to provide sufficient material for three column leach tests as well as to calculate a weighted assay head as indicated in the following table.

	SAMPLE	DRY WT	MOISTURE	ASSAY	
Column 1	GF11 7m	11835	1.13	0.50	
(GF11 7-10m)	GF11 8m	10920	0.95	1.57	
	GF11 9m	9775	1.36	2.00	
	GF11 10m	13025	1.44	0.97	
	GF11 6-8m	2660	2.56	1.35	
	GF11 8-10	2515	1.95	2.63	
		50730		**1.29**	Weighted Au g/t
Column 2	GF19 17m	10455	7.47	2.79	
(GF19 17-24m)	GF19 18m	7745	8.02	5.95	
	GF19 19m	11080	1.55	14.40	
	GF19 20m	2560	0.58	9.17	
	GF19 22m	9645	1.18	1.52	
	GF19 23m	7080	8.11	2.52	
	GF19 24m	8430	1.29	0.60	
		56995		**5.19**	Weighted Au g/t
Column 3	GF25 28m	10745	4.49	5.31	
(GF25+26)	GF26 22m	7930	1.8	0.86	
		18675		**3.42**	Weighted Au g/t

Subsamples were split from the composite samples and agglomerated in a cement mixer at a cement addition of 10 kg/t. Curing time was 48 hours prior to leaching.
Gold recovery was generally poor with the best result of 72.5% for GF11.

A summary of the results is given below. See graphs.

COLUMN		COLUMN 1 (GF11 7-10m)	COLUMN 2 (GF19 17-24m)	COLUMN 3 (GF25+26)
DRY WT	g	27346	27674	16714
DAYS		45	102	44
SOLN/ORE		3.3	9.8	8.5
EXTRACTED	Au g/t	0.91	2.38	1.01
RESIDUE	Au g/t	0.35	2.17	0.96
CALC HEAD	Au g/t	1.25	4.55	1.96
ASSAY HEAD	Au g/t	1.29	5.19	3.42
RECOVERY	Au %	72.5	52.4	51.2
RESIDUE	Cu g/t	196	-	2625
ASSAY HEAD	Cu g/t	195	2966	2583
RECOVERY	Cu %	-	-	-

COMMENTS

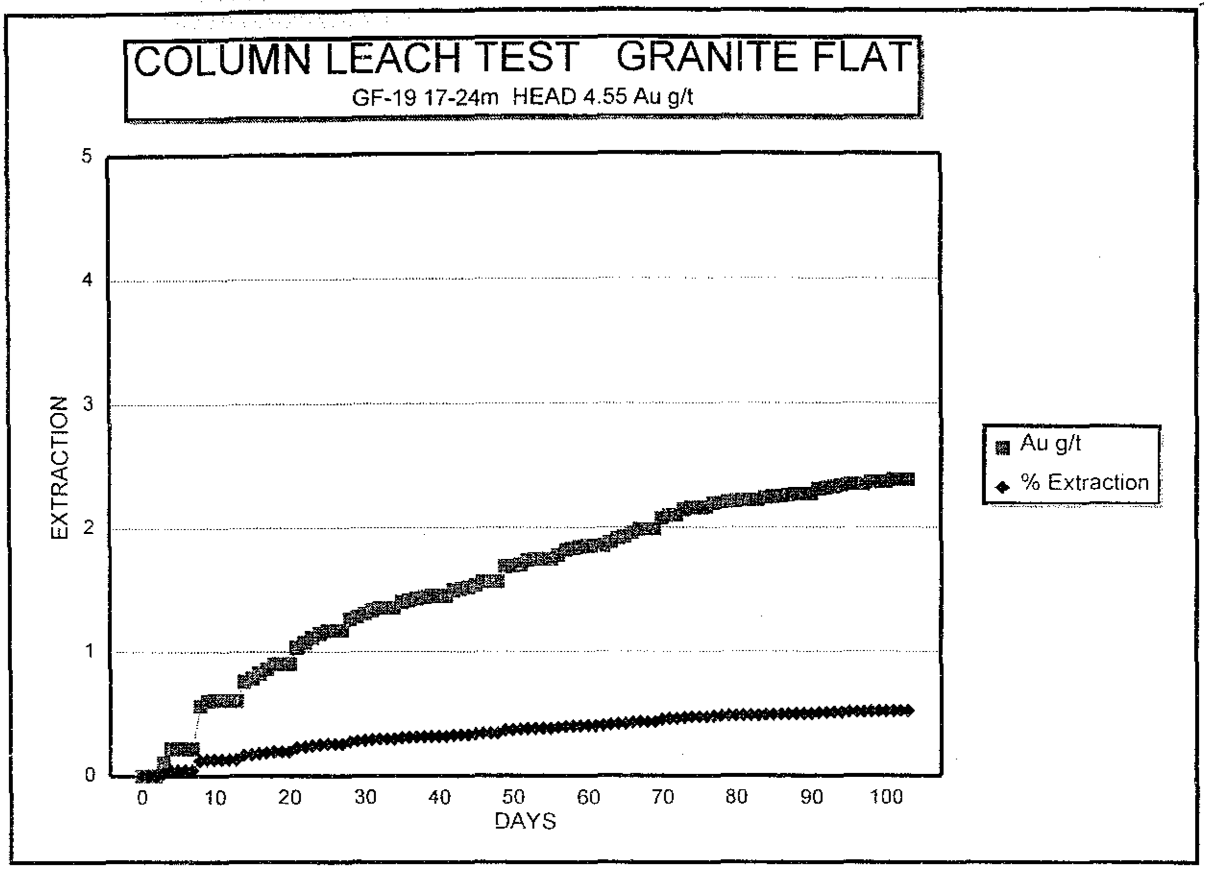
With the exception of GF19, the samples responded well to cyanidation in a rolling bottle test. It was thought that the high copper content was responsible for the poor recovery in GF11 due to it's cyanide consuming properties. Where higher copper levels were encountered there was an increase in the cyanide consumption.

Lime addition rates were satisfactory but increased in the weathered samples to a high 6kg/t for sample GF23.

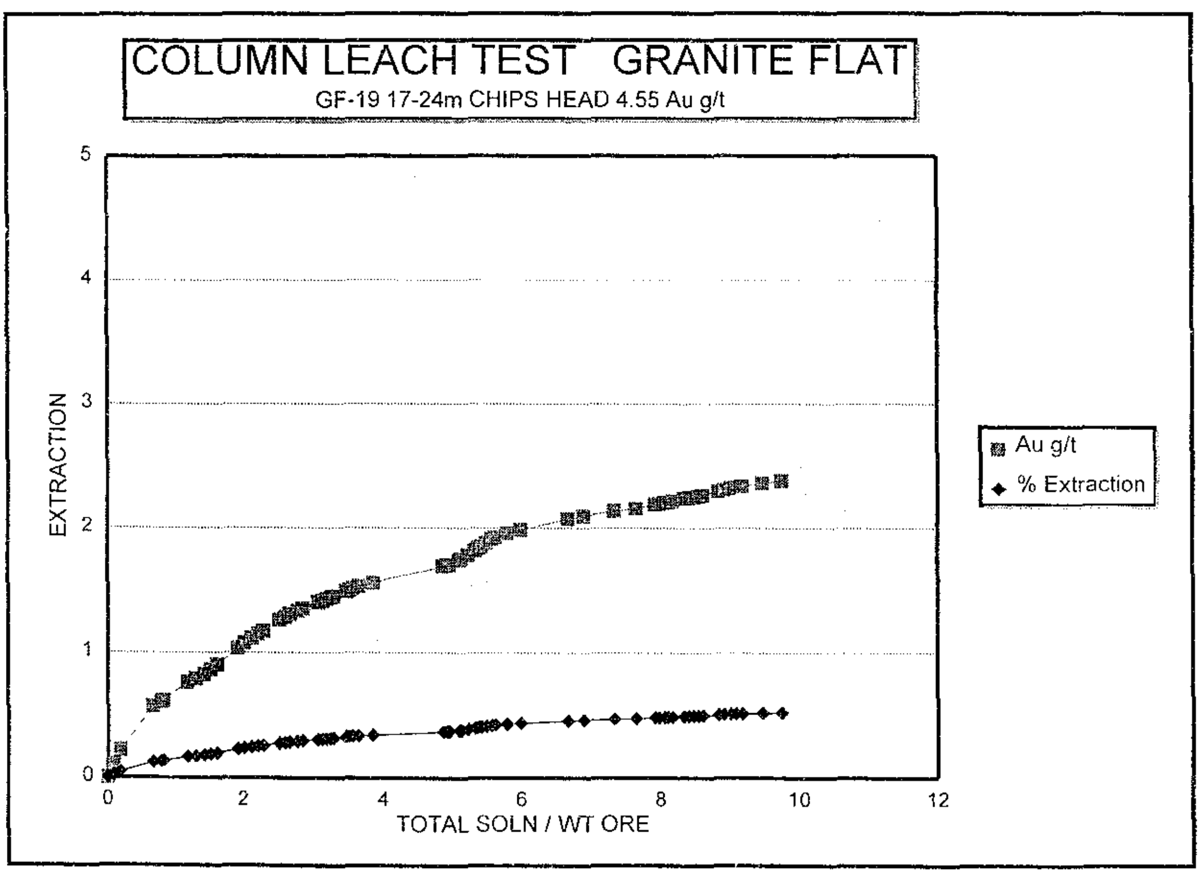
There is potential for cyanidation of this ore type in a convential grinding/CIP circuit. Further testwork on grind size and work index/hardness would be necessary if there is sufficient ore reserves to warrant further investigation.

The poor results from the column leach tests would indicate that a normal heap leach scenario for treating Granite Flat ore would not be a favourable option . Some improvement to the recovery may be achieved by performing an acid leach followed by neutralisation and a cyanide leach. This practise is currently being carried out by Golden Hills Mining NL at it's Temora operation. It would appear that copper extraction, by cyanide, in the column leach tests was low but was still sufficient to consume most of the free cyanide in the leach solution. The hardness of the individual granite pieces could also be a factor in the overall poor performance.

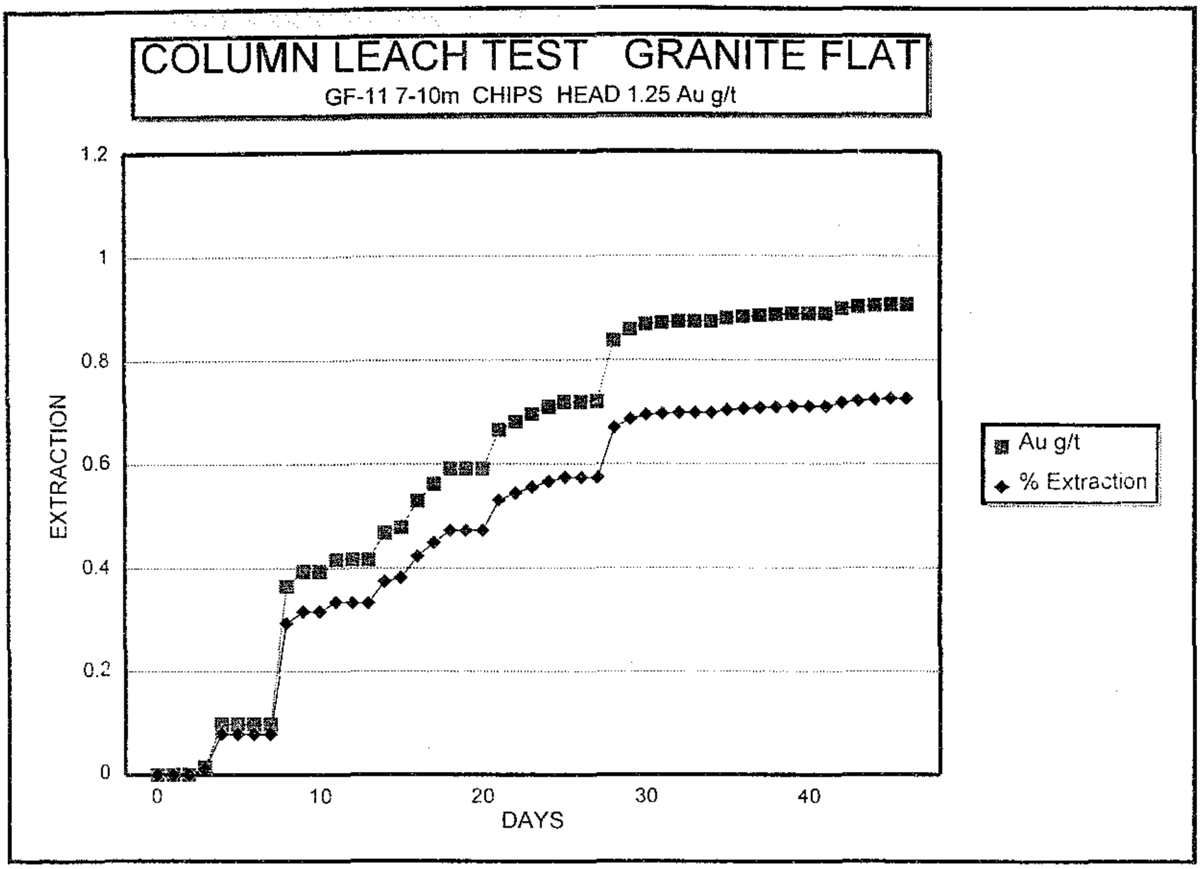
Percolation rates were not a problem in the column leach tests but were not quantified.



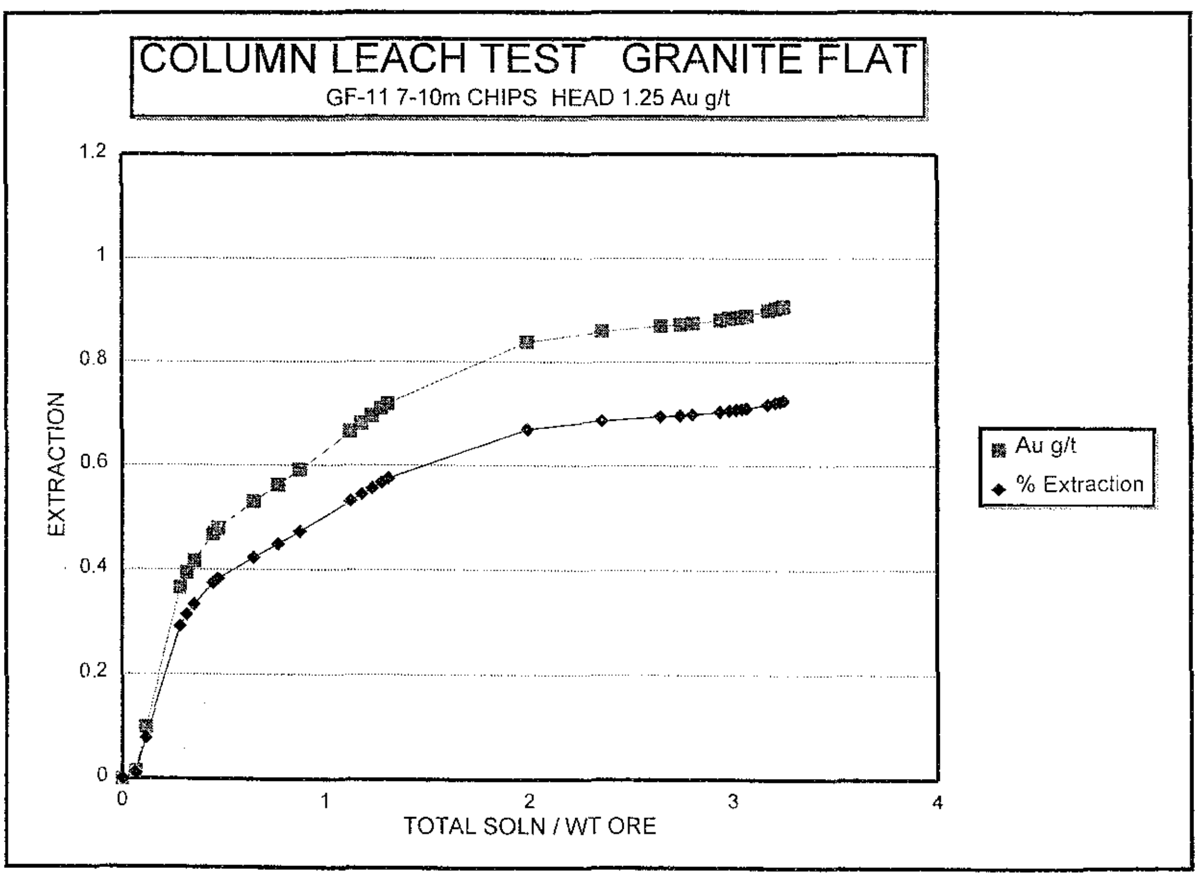
COLUMN LEACH TEST GRANITE FLAT
GF-19 17-24m HEAD 4.55 Au g/t
EXTRACTION
DAYS
Au g/t
% Extraction



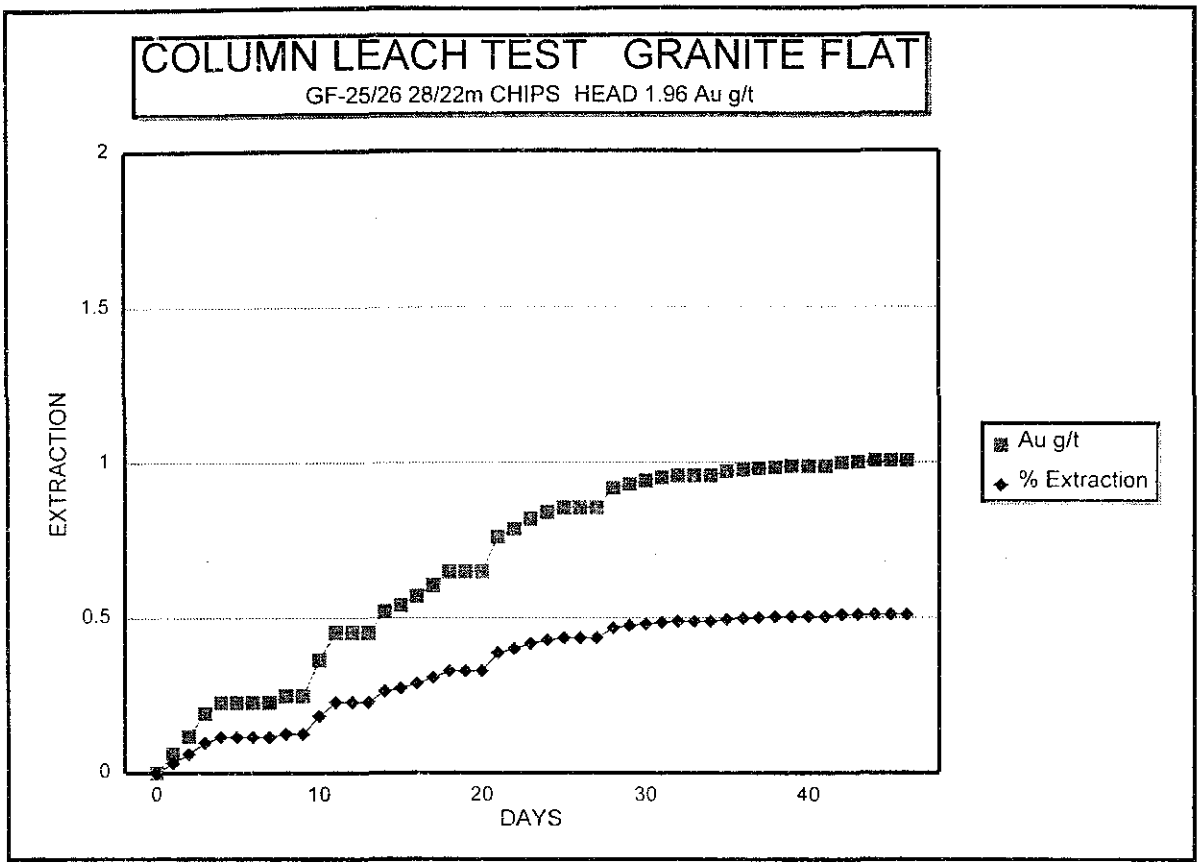
COLUMN LEACH TEST GRANITE FLAT
GF-19 17-24m CHIPS HEAD 4.55 Au g/t
EXTRACTION
TOTAL SOLN / WT ORE
Au g/t
% Extraction



COLUMN LEACH TEST GRANITE FLAT
GF-11 7-10m CHIPS HEAD 1.25 Au g/t
EXTRACTION
1.2
1
0.8
0.6
0.4
0.2
0
0
10
20
30
40
DAYS
Au g/t
% Extraction



COLUMN LEACH TEST GRANITE FLAT
GF-11 7-10m CHIPS HEAD 1.25 Au g/t
EXTRACTION
1.2
1
0.8
0.6
0.4
0.2
0
0
1
2
3
4
TOTAL SOLN / WT ORE
Au g/t
% Extraction


COLUMN LEACH TEST GRANITE FLAT
GF-25/26 28/22m CHIPS HEAD 1.96 Au g/t
EXTRACTION
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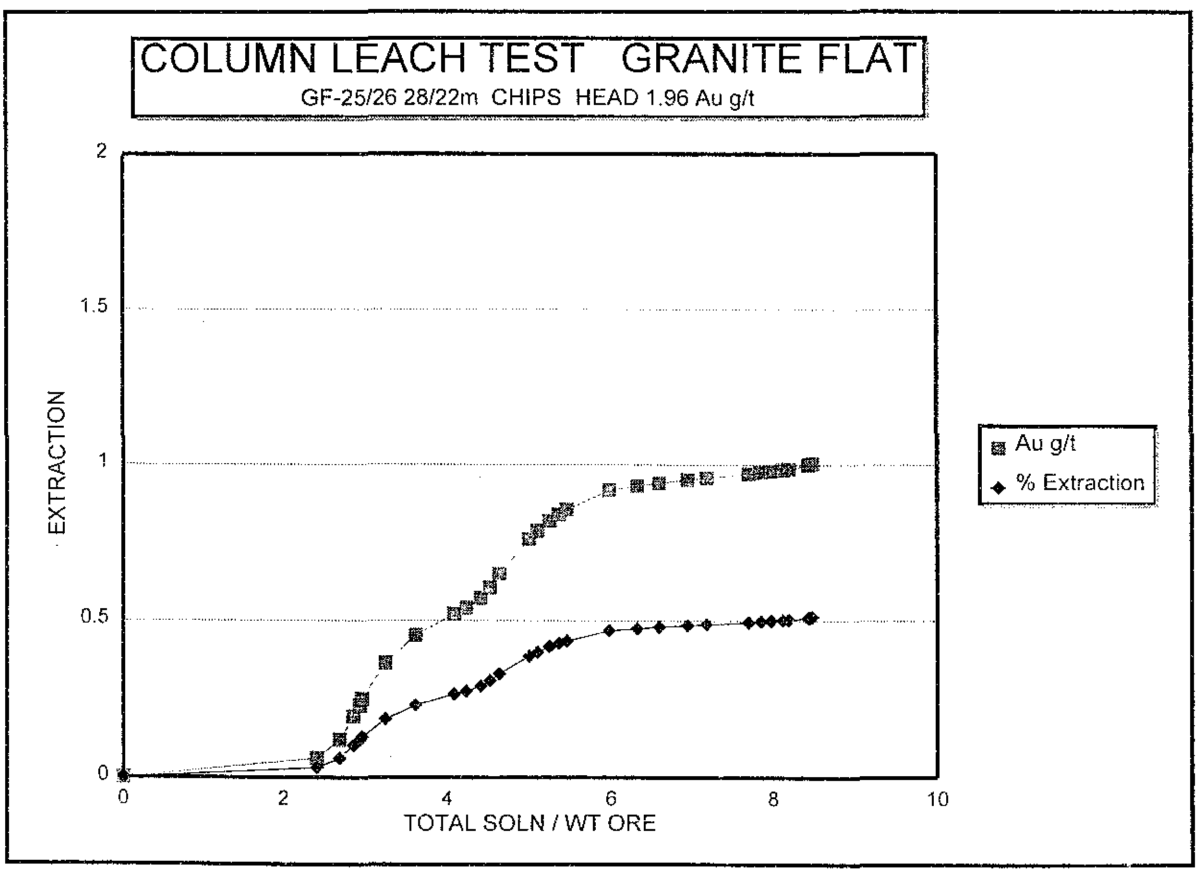
1.5
1
0.5
0
0
10
20
30
40
DAYS
Au g/t
% Extraction


COLUMN LEACH TEST GRANITE FLAT
GF-25/26 28/22m CHIPS HEAD 1.96 Au g/t
EXTRACTION
2
1.5
1
0.5
0
0
2
4
6
8
10
TOTAL SOLN / WT ORE
Au g/t
% Extraction

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PERSEVERANCE EXPLORATION PTY LTD

MINERALISED GRANITE SAMPLES

CYANIDATION TESTWORK

SUMMARY

In December 1996, seven samples of mineralised granite were delivered to Metallurgy International Pty Ltd from Perseverance Exploration Pty Ltd.

Samples were labelled GF10, GF11, GF16, GF19, GF23, GF25 and GF26.

Cyanidation of these samples generally gave good gold recoveries ranging from 88 to 97% with the exception of GF19 from which only 38.9% was extracted.

This is probably due to the high copper content of 0.31% which is an active consumer of cyanide. High cyanide consumptions were observed in this sample as well as GF23 and GF25 which also contained significant levels of copper.

Lime consumptions ranged from 2.0 to 6.0 kg/t in the weathered samples GF11 to GF26, but for GF10 which was a fresh granite oretype, the consumption was only 0.5 kg/t.

David Foster
Principal Metallurgist
January 1997

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APPENDIX 1. Cyanidation Test Conditions.

1. INTRODUCTION

On 19th December 1996, Metallurgy International Pty Ltd (MI) received seven samples of mineralised granite from Perseverance Exploration Pty Ltd.

At the request of Mr Terry Potter, MI conducted cyanidation tests on these samples to determine gold extraction and reagent consumptions.

Sample head assays were provided by the client and are presented in Table 1.

2. SAMPLE PREPARATION

Samples were received as percussion chip which required drying prior to testwork. Each was then riffle split to obtain a sample for grind time establishment. A nominal grind size of 80% passing 75 microns was chosen.

Due to limited sample, grind time was determined by stage grinding and sizing until the desired size was obtained.

3. TEST PROCEDURE

Standard cyanidation tests were conducted in which a 400g split of ground sample was bottled rolled for 24 hours. pH was adjusted with hydrated lime to around 10.0, and sodium cyanide added initially to give 0.05% cyanide in solution.

Both pH and cyanide were monitored throughout the tests during which staged lime and cyanide additions were made to maintain required levels.

At the completion of each test final pH was determined and the slurry filtered to obtain a pregnant liquor for assay, residual cyanide and protective alkalinity determination.

The solid residue was then washed, dried and submitted for assay.

Worksheets for individual tests are included in Appendix 1.

4. RESULTS

Table 2 contains a summary of all test results and conditions.

Test L01 - Sample GF10

Response to cyanidation was good with a gold recovery of 91.6% (1.31 g/t) with a solids residue assay of 0.12 g/t Au.

The calculated head grade of 1.43 g/t Au agreed well with the assay of 1.47 g/t.

Both cyanide and lime consumptions were low at 0.49 kg/t and 0.50 kg/t respectively.
Test L02 - Sample GF11

Gold recovery was 88.3% (0.61 g/t) with a low residue assay of 0.08 g/t Au.

There was fair agreement between the calculated head grade of 0.69 g/t Au and the assayed value of 0.98 g/t.

Cyanide consumption was low at 0.67 g/t while lime consumption was moderate-high at 2.63 kg/t

Test L03 - Sample GF16

The gold recovery was 87.2% (0.62 g/t) with a residue of 0.09 g/t Au.

There was poor agreement between the calculated head grade of 0.71 g/t Au and the assayed grade of 1.61 g/t which may result from the effect of gold grain size.

Consumption of cyanide was low at 0.56 kg/t, but high for lime at 3.48 kg/t.

Test L04 - Sample GF19

Gold recovery was poor for this sample at only 38.9% (1.61 g/t).

The residue assay was high at 2.53 g/t Au.

Calculated and assayed head grades were in reasonable agreement at 4.14 and 5.18 g/t Au respectively.

Cyanide consumption was high at 2.95 kg/t. For lime the consumption was moderate at 2.00 kg/t.

During this test it was necessary to raise the cyanide level to 0.1% after 2 hours due to the high rate of use.

The poor Au recovery and high cyanide consumption are probably due to the high level of copper (0.31%) in this oretype.

Test L05 - Sample GF23

Response to cyanidation was excellent with a recovery of 97.2% (19.9 g/t).

The calculated head of 20.5g/t Au and the assayed value of 16.7 g/t Au were in fair agreement.

Cyanide consumption was moderate at 1.60 kg/t, while lime consumption was very high at 6.02 kg/t.

As for sample GF19, the cyanide level was raise to 0.1% at the 2 hour mark due to the high rate of usage.

Test L06 - Sample GF25

Gold recovery was good at 93.2% (0.69 g/t) with a low residue of 0.05 g/t Au.

The calculated and assayed head grades did not agree at 0.74 g/t Au and 2.61 g/t respectively.

Cyanide consumption was moderate at 1.26 kg/t and quite high for lime at 4.05 kg/t.

Test L07 - Sample GF26

Cyanide response was excellent at 96.3% (0.52 g/t) with a very low residue assay of 0.02 g/t. The calculated head grade of 0.54 g/t Au was fairly close to the assayed grade of 0.48 g/t.

The consumption of cyanide was low at 0.69 kg/t, and moderate-high for lime at 2.52 kg/t.

5. COMMENTS

With the exception of GF19, the samples responded very well to cyanidation.

The low recovery of 38.9% for GF19 was probably due to the copper content of 0.31%.

The cyanide level for sample GF19 was raised to 0.1% during the test, however the residual concentration was still quite low. A higher concentration maintained throughout leaching may improve gold recovery.

Other leaching techniques, such as using ammonia to complex the copper ions, during cyanide leaching, may improve the gold extraction.

The cyanide consumptions were significantly higher for the 3 samples containing the high copper levels ie. GF19, GF23 and GF25.

Lime consumptions were higher in the weather samples GF11 to GF26 In the case of GF23 were the consumption was much higher at 6.02 kg/t, the lead content of 0.26% may have contributed.

The lowest lime consumption of 0.50 kg/t was for the fresh granite sample GF10.
Oxides present in the weathered samples are probably the cause of the higher lime requirements.

TABLE 1. SAMPLE ASSAY DETAILS

SAMPLE NAME	ASSAYS (ppm) Au	Cu	Pb	Zn	As
GF10	1.47	141	19	87	< 20
GF11	0.98	201	19	90	< 20
GF16	1.61	306	23	69	20
GF19	5.18	3136	41	77	136
GF23	16.70	1325	2615	483	1935
GF25	2.61	2035	45	114	200
GF26	0.48	820	21	91	20

Note: Assays supplied by Perseverance Exploration Pty Ltd.

TABLE 2. SUMMARY OF CYANIDATION TEST CONDITIONS AND RESULTS

Test No.	L01	L02	L03	L04	L05	L06	L07
Sample	GF10	GF11	GF16	GF19	GF23	GF25	GF26
Description	Fresh	Weath/Fresh	Weath/Fresh	Weathered	Weathered	Weathered	Weathered
Pretreatment							
Grind time (min)	15	25	25	25	25	25	25
Grind p80 (microns)	75	75	75	75	75	75	75
Cyanidation							
Objective	std leach	std leach	std leach	std leach	std leach	std leach	std leach
Sample weight (g)	399.9	398.9	401.6	400.1	395.0	394.7	396.9
Leach time (hr)	24	24	24	24	24	24	24
Leach % solids	40.4	39.8	40.5	39.7	39.3	38.4	40.3
pH natural	8.8	8.0	7.6	7.3	6.2	6.9	7.6
adjusted	10.3	10.1	9.8	9.8	9.8	9.8	10.0
final	9.7	9.5	9.5	9.5	9.4	9.5	9.5
Ca(OH)2 addition (kg/t)	0.50	2.63	3.49	2.00	6.08	4.05	2.52
Residual CaO (%)	0.000	0.000	0.001	0.000	0.004	0.000	0.000
Ca(OH)2 consumption (kg/t)	0.50	2.63	3.48	2.00	6.02	4.05	2.52
NaCN addition (kg/t)	0.98	1.28	1.12	3.30	2.35	1.85	1.31
Residual NaCN (%)	0.033	0.040	0.038	0.023	0.049	0.037	0.042
NaCN consumption (kg/t)	0.49	0.67	0.56	2.95	1.60	1.26	0.69
Au Assays, ppm							
Solution 24 hr	0.89	0.40	0.42	1.06	12.90	0.43	0.35
Residue	0.12	0.08	0.09	2.53	0.57	0.05	0.02
Calc. Head, g/t Au	1.43	0.69	0.71	4.14	20.5	0.74	0.54
Assay Head, g/t Au	1.47	0.98	1.61	5.18	16.7	2.61	0.48
Au Extraction							
24 hr %	91.6	88.3	87.2	38.9	97.2	93.2	96.3
g/t	1.31	0.61	0.62	1.61	19.9	0.69	0.52

Note: Assayed head grades supplied by Perseverance Exploration Pty Ltd.

CYANIDATION TEST CONDITIONS AND METALLURGICAL BALANCE

TEST No: 339-L01

SAMPLE: No. GF10
Description Fresh granite

Grind p80 ~75 microns

PURPOSE: 24 hr standard leach.

TEST CONDITIONS:

Ca(OH)2 addition		(g)	0.20	NaCN addition	(g)	0.39
		(kg/t)	0.50		(kg/t)	0.98
pH	natural		8.8	NaCN residual	(%)	0.033
	initial		10.3		(g)	0.19
	final		9.7	NaCN consumption	(kg/t)	0.49
Wt % solids			40.4			

TEST RESULTS:

SAMPLE NAME	WT. OR VOLUME g or ml	SOLUTION SUB/ADD ml	ml	Au ASSAYS ppm	UNITS	LEACH TEST EXTRACTION g/t	%
SAMPLED HEAD				1.47			
SOLUTION 24 hr	590.4	0	0	0.89	525.48	1.31	91.6
LEACH RESIDUE	399.9			0.12	47.99		
CALC HEAD	399.9			1.43	573.47		

LAB TEST DATA

Time hours	pH	Ca(OH)2 add'n g	NaCN conc'n %	NaCN add'n g	Protective Alkalinity % CaO	Oxygen conc'n ppm
	8.8	0.20				
0.0	10.3			0.30		
1.0	10.0		0.035	0.09		7.65
2.0	10.0		0.045			8.00
4.0	9.8		0.045			7.83
21.0	9.7		0.040			
24.0	9.7		0.033		0.00	7.70
Total (g)		0.20		0.39		

CYANIDATION TEST CONDITIONS AND METALLURGICAL BALANCE

TEST No:		339-L02
SAMPLE:	No.	GF11
	Description	Weathered fresh granite
	Grind p80	~75 microns
PURPOSE:		24 hr standard leach.

TEST CONDITIONS:

$Ca(OH)_2$ addition	(g)	1.05	NaCN addition	(g)	0.51
	(kg/t)	2.63		(kg/t)	1.28
pH natural		8.0	NaCN residual	(%)	0.040
pH initial		10.1		(g)	0.24
pH final		9.5	NaCN consumption	(kg/t)	0.67
Wt % solids		39.8			

TEST RESULTS:

SAMPLE NAME	WT. OR VOLUME g or ml	SOLUTION SUB/ADD ml	ml	Au ASSAYS ppm	UNITS	LEACH TEST EXTRACTION g/t	%
SAMPLED HEAD				0.98			
SOLUTION 24 hr	603.9	0	0	0.40	241.58	0.61	88.3
LEACH RESIDUE	398.9			0.08	31.91		
CALC HEAD	398.9			0.69	273.49		

LAB TEST DATA

Time hours	pH	$Ca(OH)_2$ add'n g	NaCN conc'n %	NaCN add'n g	Protective Alkalinity % CaO	Oxygen conc'n ppm
	8.0	0.65				
0.0	10.1			0.30		
1.0	9.3	0.10	0.030	0.12		7.64
2.0	9.4	0.10	0.040			7.68
3.0	9.3	0.20	0.035	0.09		7.75
20.0	9.5		0.045			
24.0	9.5		0.040		0.00	7.53
Total (g)		1.05		0.51		

CYANIDATION TEST CONDITIONS AND METALLURGICAL BALANCE

TEST No: 339-L03

SAMPLE: No. GF16
Description: Weathered fresh granite

Grind p80: ~75 microns

PURPOSE: 24 hr standard leach.

TEST CONDITIONS:

Ca(OH)2 addition		(g)	1.40	NaCN addition	(g)	0.45
		(kg/t)	3.49		(kg/t)	1.12
pH	natural		7.6	NaCN residual	(%)	0.038
	initial		9.8		(g)	0.22
	final		9.5	NaCN consumption	(kg/t)	0.56
Wt % solids			40.5			

TEST RESULTS:

SAMPLE NAME	WT. OR VOLUME g or ml	SOLUTION SUB/ADD ml	ml	Au ASSAYS ppm	UNITS	LEACH TEST EXTRACTION g/t	%
SAMPLED HEAD				1.61			
SOLUTION 24 hr	588.8	0	0	0.42	247.30	0.62	87.2
LEACH RESIDUE	401.6			0.09	36.14		
CALC HEAD	401.6			0.71	283.44		

LAB TEST DATA

Time hours	pH	Ca(OH)2 add'n g	NaCN conc'n %	NaCN add'n g	Protective Alkalinity % CaO	Oxygen conc'n ppm
	7.6	0.85				
0.0	9.8			0.30		
1.0	9.2	0.10	0.025	0.15		7.96
2.0	9.3	0.25	0.050			8.08
3.0	9.4	0.20	0.045			8.01
20.5	9.6		0.040			
24.0	9.5		0.038		0.001	8.11
Total (g)		1.40		0.45		

CYANIDATION TEST CONDITIONS AND METALLURGICAL BALANCE

TEST No: 339-L04

SAMPLE: No. GF19
Description Weathered granite

Grind p80 ~75 microns

PURPOSE: 24 hr standard leach.

TEST CONDITIONS:

$Ca(OH)_2$ addition	(g)	0.80	NaCN addition	(g)	1.32
	(kg/t)	2.00		(kg/t)	3.30
pH natural		7.3	NaCN residual	(%)	0.023
initial		9.8		(g)	0.14
final		9.5	NaCN consumption	(kg/t)	2.95
Wt % solids		39.7			

TEST RESULTS:

SAMPLE NAME	WT. OR VOLUME g or ml	SOLUTION SUB/ADD ml	ml	Au ASSAYS ppm	UNITS	LEACH TEST EXTRACTION g/t	%
SAMPLED HEAD				5.18			
SOLUTION 24 hr	608.8	0	0	1.06	645.34	1.61	38.9
LEACH RESIDUE	400.1			2.53	1012.25		
CALC HEAD	400.1			4.14	1657.59		

LAB TEST DATA

Time hours	pH	$Ca(OH)_2$ add'n g	NaCN conc'n %	NaCN add'n g	Protective Alkalinity % CaO	Oxygen conc'n ppm
	7.3	0.80				
0.0	9.8			0.30		
1.0	9.8		0.005	0.30		7.61
2.0	9.7		0.015	0.51		7.99
19.0	9.5		0.015	0.21		
24.0	9.5		0.023		0.00	7.76
Total (g)		0.80		1.32		

Note: Cyanide concentration adjusted to 0.1% at 2 hours due to high consumption rate.

CYANIDATION TEST CONDITIONS AND METALLURGICAL BALANCE

TEST No: 339-L05

SAMPLE: No. GF23
Description Weathered granite

Grind p80 ~75 microns

PURPOSE: 24 hr standard leach.

TEST CONDITIONS:

Ca(OH)2 addition		(g)	2.40	NaCN addition	(g)	0.93
		(kg/t)	6.08		(kg/t)	2.35
pH	natural		6.2	NaCN residual	(%)	0.049
	initial		9.8		(g)	0.30
	final		9.4	NaCN consumption	(kg/t)	1.60
Wt % solids			39.3			

TEST RESULTS:

SAMPLE NAME	WT. OR VOLUME g or ml	SOLUTION SUB/ADD ml	ml	Au ASSAYS ppm	UNITS	LEACH TEST EXTRACTION g/t	%
SAMPLED HEAD				16.70			
SOLUTION 24 hr	609.6	0	0	12.90	7863.84	19.91	97.2
LEACH RESIDUE	395.0			0.57	225.15		
CALC HEAD	395.0			20.48	8088.99		

LAB TEST DATA

Time hours	pH	Ca(OH)2 add'n g	NaCN conc'n %	NaCN add'n g	Protective Alkalinity % CaO	Oxygen conc'n ppm
	6.2	2.00				
0.0	9.8			0.30		
1.0	9.4		0.020	0.18		7.77
2.0	9.3	0.20	0.025	0.45		7.68
18.5	9.2	0.20	0.045			
24.0	9.4		0.049		0.004	7.65
Total (g)		2.40		0.93		

Note: Cyanide concentration adjusted to 0.1% at 2 hours due to high consumption rate.

CYANIDATION TEST CONDITIONS AND METALLURGICAL BALANCE

TEST No: 339-L06

SAMPLE: No. GF25
Description Weathered granite

Grind p80 ~75 microns

PURPOSE: 24 hr standard leach.

TEST CONDITIONS:

$Ca(OH)_2$ addition		(g)	1.60	NaCN addition	(g)	0.73
		(kg/t)	4.05		(kg/t)	1.85
pH	natural		6.9	NaCN residual	(%)	0.037
	initial		9.8		(g)	0.23
	final		9.5	NaCN consumption	(kg/t)	1.26
Wt % solids			38.4			

TEST RESULTS:

SAMPLE NAME	WT. OR VOLUME g or ml	SOLUTION SUB/ADD ml	ml	Au ASSAYS ppm	UNITS	LEACH TEST EXTRACTION g/t	%
SAMPLED HEAD				2.61			
SOLUTION 24 hr	632.9	0	0	0.43	272.13	0.69	93.2
LEACH RESIDUE	394.7			0.05	19.73		
CALC HEAD	394.7			0.74	291.87		

LAB TEST DATA

Time hours	pH	$Ca(OH)_2$ add'n g	NaCN conc'n %	NaCN add'n g	Protective Alkalinity % CaO	Oxygen conc'n ppm
	6.9	1.10				
0.0	9.8			0.30		
0.5	9.4	0.15				
1.0	9.4	0.15	0.025	0.15		8.04
2.0	9.4	0.20	0.035	0.09		7.98
4.0	9.5		0.035	0.09		8.39
22.0	9.5		0.030	0.10		
24.0	9.5		0.037		0.000	8.40
Total (g)		1.60		0.73		

CYANIDATION TEST CONDITIONS AND METALLURGICAL BALANCE

TEST No: 339-L07

SAMPLE: No. GF26
Description Weathered granite

Grind p80 ~75 microns

PURPOSE: 24 hr standard leach.

TEST CONDITIONS:

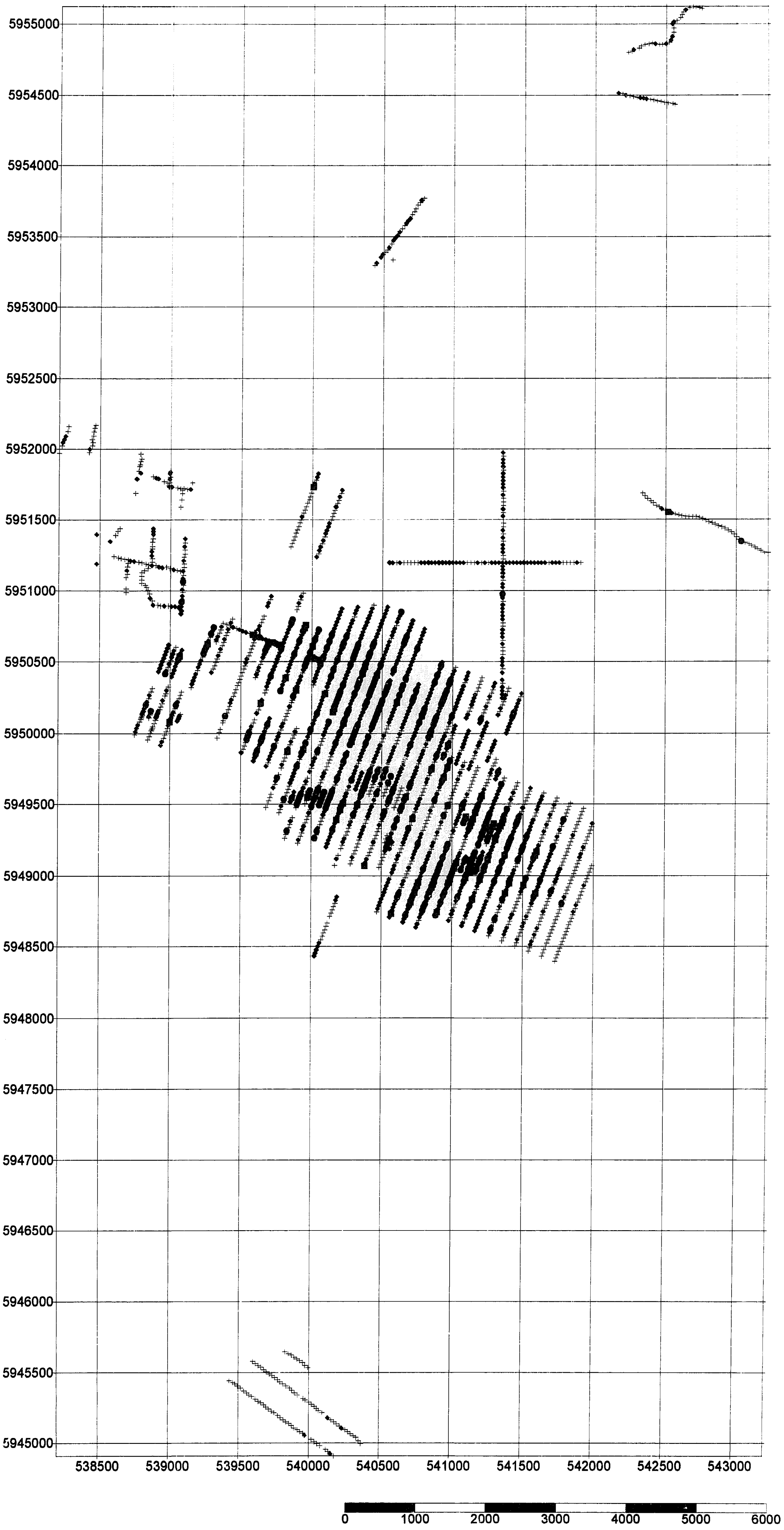
Ca(OH)2 addition		(g)	1.00	NaCN addition	(g)	0.52
		(kg/t)	2.52		(kg/t)	1.31
pH	natural		7.6	NaCN residual	(%)	0.042
	initial		10.0		(g)	0.25
	final		9.5	NaCN consumption	(kg/t)	0.69
Wt % solids			40.3			

TEST RESULTS:

SAMPLE NAME	WT. OR VOLUME g or ml	SOLUTION SUB/ADD ml	ml	Au ASSAYS ppm	UNITS	LEACH TEST EXTRACTION g/t	%
SAMPLED HEAD				0.48			
SOLUTION 24 hr	588.6	0	0	0.35	206.00	0.52	96.3
LEACH RESIDUE	396.9			0.02	7.94		
CALC HEAD	396.9			0.54	213.93		

LAB TEST DATA

Time hours	pH	Ca(OH)2 add'n g	NaCN conc'n %	NaCN add'n g	Protective Alkalinity % CaO	Oxygen conc'n ppm
	7.6	0.70				
0.0	10.0					
1.0	9.4	0.10	0.030	0.30		7.97
2.0	9.5		0.040	0.12		8.28
4.0	9.4	0.20	0.045			8.12
22.0	9.5		0.039	0.10		8.31
24.0	9.5		0.042		0.000	8.58
Total (g)		1.00		0.52		



GRANITE FLAT EL3025
GOLD GEOCHEMISTRY
FROM CRA DATABASE IN AMG
1:25,000 MAY'97

+ <21
◆ 21-50
◆ 50-90
● 90-300
■ PLUS 300 PPB GOLD

TJJ May 1997
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