

000

71 - 755

D/259

885001

REPORT NO. EAW 71/49

**MICROFILMED**

INTERNATIONAL MINING CORPORATION N.L.

FINAL REPORT

on

STREAM SEDIMENT SURVEY

of

EXPLORATION LICENCE 18/69

FORTH AND MERSEY RIVER VALLEYS

TASMANIA

by

N. P. Owen

April 23rd, 1971.

E.A. Webb & Associates Pty.Ltd.,  
152 Little Lonsdale Street,  
Melbourne, Victoria, 3000.

REPORT NO. EAW 71/49 - EXPLORATION LICENCE 18/69

This report has been drawn up by N.P. Owen, and is based upon personal examination of the property and all relevant data available to the author at the time of compilation.

Neither E.A. Webb & Associates Pty.Ltd., as a company, nor the author have, or expect to receive, any interest or profit, either directly or indirectly, in or from the property discussed in the report, other than professional fees.

E.A. WEBB & ASSOCIATES PTY.LTD.

N. P. Owen

TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION	1
ACTIVITIES	1
A. Mersey-Arm River Area	1
B. Upper Forth River Valley	2
GEOLOGY AND RESULTS	3
A. FOLLOW-UP SURVEY MERSEY-ARM RIVER AREA	3
1. Anomaly 1	3
2. Anomalies 2, 3, and 4.	4
3. Anomaly 5	6
B. FOLLOW-UP SURVEY IN THE FORTH VALLEY	8
1. Geology	8
2. Results and Discussion	10
CONCLUSIONS	13
RECOMMENDATIONS	15

APPENDIX I.

Analytical Data Relevant to Reconnaissance and  
Follow-up Survey of Mersey-Arm River Region.

APPENDIX II.

Analytical Data Relevant to Detailed Stream  
Sediment Survey of the Upper Forth Valley.

LIST OF FIGURES

- Figure 1. Geological Map of E.L. 18/69
- Figure 2. Reconnaissance Stream Sediment Survey of the Mersey-Arm River Area.
- Figure 3. Mersey-Arm River Tributaries.  
Follow-up Survey - Anomaly 1.
- Figure 4. Mersey-Arm River Tributaries.  
Follow-up Survey - Anomaly 2.
- Figure 5. Mersey-Arm River Tributaries.  
Follow-up Survey - Anomaly 3.
- Figure 6. Mersey-Arm River Tributaries.  
Follow-up Survey - Anomaly 4.
- Figure 7. Mersey-Arm River Tributaries.  
Follow-up Survey - Anomaly 5.
- Figure 8. Detailed Stream Sediment Survey -  
Upper Forth Valley.
- Figure 9. Southern Geochemical Province -  
Upper Forth Valley.

FINAL REPORT  
on  
STREAM SEDIMENT SURVEY  
of  
EXPLORATION LICENCE 18/69  
FORTH AND MERSEY RIVER VALLEYS  
TASMANIA

A preliminary report on reconnaissance sampling of the Mersey-Arm area, and work in progress was submitted on the 18th February, 1971. This report covers all stream sediment surveys carried out in Exploration Licence 18/69, including follow-up surveys of anomalies located during the reconnaissance survey. No additional stream sediment sampling is envisaged.

Attached, as Appendices 1 and 2, are analytical results for all samples collected which were not included in the previous report.

ACTIVITIES

A. Mersey-Arm River Area

During the reconnaissance survey 5 anomalous zones worthy of additional work were located. These anomalies, numbered 1 to 5, are shown on Figure 2.

In following up these anomalies, samples were collected along the anomalous streams at approximately 500 foot intervals, as well as at the original sample sites.

-2-

Traverses were made over the surrounding hill slopes, but in most instances the thick scree cover prevented recognition of geological features.

Sample sites and other features noted during the follow-up of anomalies 1 to 5 are shown on Figures 5 to 9 inclusive.

B. Upper Forth River Valley

Sampling of all creeks draining into the Forth River was completed. Creeks were sampled at 400 foot intervals.

In addition, base of slope samples were collected along the track south of the Mt. Pelion Wolfram Mine. In this area, numerous large gossan floaters are evident and it is possible that some originated from the Big Blow Lode.

Despite intensive combing of the area, the Big Blow Lode has not as yet been located.

Samples from the southern end of the Exploration Licence were analysed for lead, in addition to copper, zinc and molybdenum.

## GEOLOGY AND RESULTS

### A. FOLLOW UP SURVEY MERSEY-ARM RIVER AREA

#### 1. Anomaly 1 (Figs. 1, 2 and 3)

##### a. Geology

The country rock is exposed in one bank of the creek 30' south of sample site 1504. It is predominantly quartzite and silicified siltstone with some interlaminated schist. Minor structures are intense, with inter-bedded schists being squeezed in the limbs of drag folds between the more competent quartzites. There is considerable quartz veining, particularly at the western end of the outcrop. This quartz contained no visible mineralization and analysis indicated the presence of no significant metal content.

The quartzite is in part pyritic and from assay results contains some copper (30 ppm) which is not reflected in the stream sediments and is not considered significant.

##### b. Discussion of Results

The follow-up stream sediment samples were collected at approximately half the interval used in the reconnaissance survey. It was considered that the original anomaly could be due to any or all of the following causes:

- i. The occurrence of a mineralised zone
- ii. The high humic content of the samples collected
- iii. The concentration of zinc in the swampy area above the creek.

Field observations do not support points ii, and iii, as the creek has a higher humic content upstream from sample 1504, and little, if any, swampy area is drained by the creek.

The presence of substantial outcrop containing numerous quartz veins at the point where stream values for zinc show a marked reduction, indicates that despite the lack of visible mineralisation the origin of the anomaly most likely is weak mineralisation associated with the quartz veins. However, as the anomalous values are not reflected in creeks either side of the one under investigation, the anomalous zone indicated is small, and contains a low level of mineralisation.

This anomaly does not appear to warrant any additional work.

2. Anomalies 2, 3 and 4. (Figs. 1,2,4,5 and 6).

These three anomalies are treated jointly because of the similarity between the results and the geology of the areas.

a. Geology

In all three areas there are good exposures of bedrock in or very close to the creeks. The bedrock is Pre-cambrian meta-sediments, mainly quartzites and silicified siltstones with some inter-bedded schist.

At anomalies 2 and 3, the strike is approximately east-west with the dip very steep to the south or vertical.

The structure at anomaly 4 is more complex. An anticline trending east-west has its axial plane intersecting the creek approximately midway between samples 1524 and 1525.

Intense minor structures sympathetic to this anticline are abundant.

There is minor quartz veining in the Pre-cambrian rocks but this contains no significant metal values.

TABLE 1

COMPARISON OF RECONNAISSANCE AND FOLLOW-UP  
ANALYTICAL RESULTS

<u>Reconnaissance</u> <u>Sample Nos.</u>	<u>Cu</u> <u>ppm</u>	<u>Zn</u> <u>ppm</u>	<u>Mo</u> <u>ppm</u>	<u>Follow-Up</u> <u>Sample Nos.</u>
1241	170 (5 ) ( < 5 )	105 (15) (10)	5 (2) (2)	1509 1511
1242	25 (< 5) (5 )	30 (15)	23 (4) (2)	1512 1513
1243	45 (< 5) ( < 5 )	30 (30) (30)	11 (2) (3)	1514 1515
1244	55	65	3	

Figures in brackets are the follow-up assay results.

Samples 1509, 1511, 1514, were collected from the same sites as 1241, 1242, 1243 respectively, by the same person.

All analyses were carried out by the same laboratory and have been checked.

In all three areas there is abundant dolerite scree close to, and in, the creeks. In the case of anomaly 4, there is also considerable basalt float.

b. Results and Discussion

The results of the follow-up survey were invariably lower than those obtained during the reconnaissance survey. (See Table 1.)

The reasons for the wide differences between results are not known.

The pH of flowing water present at sample sites was taken on all occasions.

At all sample sites under review the pH was six during both the reconnaissance and the follow-up survey.

It has been suggested that rain which fell in the interval between reconnaissance and detailed sampling caused a reduction in the metal content of the sediments. However, it is not likely that this could have caused a reduction to the extent found.

Reduction of the pH of the stream by dilution with rain-water could be expected to cause an increase in the precipitation of copper into the sediment.

Wholesale deposition or removal of sediment did not occur because it was possible in places to see marks made in the collection of the original samples.

TABLE 2

ROCK ANALYSES - ANOMALIES 2, 3 AND 4

Rock Sample No.	Description	Cu (T=70) ppm	Zn (T=104) ppm	Mo (T=5) ppm
R 1512	Quartz & silicified schist	5	10	<2
R 1525	Quartz & silicified siltstone	5	10	2
R 1032	Dolerite	65	20	2
R 1033	Basalt	95	70	14
R 1076	"	60		3
R 33	"	240		3

Samples R 1076 and R 33 analysed for Bismuth not Zinc.  
Results for Bismuth were 110 and < 10 ppm respectively.

T = Threshold value (ppm)

TABLE 3

ROCK ANALYSES FROM ANOMALY 5 AREA

Rock Sample No.	Description	Cu ppm	Zn ppm	Mo ppm
R 1321	Granite	10	30	2
R 1528	Chloritic schist	10	120	<2
R 1529	Pyritic quartz	40	55	2
R 1535	Quartz with minor indurated sediment	170	60	4
R 1536	Grey-green chloritic schist	60	125	2
R 1537	Limonitic material from joint	10	300	5

Samples R 1528 and R 1529 are from the head of the creek.

Apart from the geochemical results, other factors common to the three anomalies must be considered. These are:

- i. The lack of any observed mineralization apart from minor pyrite in some of the quartzites and schists. In the areas of the anomalies the bedrock showed copper, zinc and molybdenum values well below threshold values, as illustrated in Table 2.
- ii. The occurrence in all three areas of abundant basaltic and/or doleritic scree. Samples of these have been analysed and they commonly have metal values in excess of threshold values.  
(See Table 2.)

### 3. Anomaly 5. (Figs. 1,2 and 7)

#### a. Geology

The country rock in this area is a grey-green chloritic schist with some silicified siltstone. The strike is generally east - west and the dip about 70° south.

Quartz veining is abundant, and in the lower reaches of the creek there is marked silicification of the schist adjacent to the quartz veins. The quartz appeared barren except for sample R1529, which contained minor pyrite.

Just above sample site 1536, a narrow shear zone 4' wide was observed. There occurred much quartz veining and limonitic material derived from water seeping from joints. Representative samples of the schist, quartz and limonite were collected and analysed. Results are presented in Table 3.

b. Results and Discussion

The high copper and zinc values of the reconnaissance survey were reproduced during the follow-up survey. The molybdenum figures were different, though not significantly so.

The absence of any definite drainage train would indicate that the anomaly is in fact due to higher average base metal content of the country rock. This higher average metal content of the rocks is due to either of the following factors, or a combination of them:

- i. The country rock of the area is predominantly chloritic schist which may originally have been black shales. Black shales invariably have higher metal values than, for example, sandstones.
- ii. Approximately half-a-mile north of the head of the creek, the Pre-cambrian sediments have been intruded by a granite batholith assigned to the Devonian Dove Granite. This granite may have been responsible for base metal mineralization of the country rock.

No work at all was done along the granite contact as it is outside the E.L. A grab sample of the granite was analysed (Refer Table 2).

Metal values within the granite itself appear to be low.

## B. FOLLOW-UP SURVEY IN THE FORTH VALLEY

### 1. Geology (Fig.1)

The bedrock in the Forth Valley is Pre-cambrian quartzites and silicified siltstones with some interbedded schist. This is unconformably overlain by Permian Tillite which is exposed in a few places, high up on the eastern side of the valley. In other places, the tillite is covered by scree of the overlying Jurassic Dolerite.

The Pre-cambrian rocks have been intruded by several small granitic bosses of Devonian age. These bosses include the Lone Pine Granite and the Birthday Granite, which both outcrop on Paton's Track.

Quartz veins associated with the granites cut both the intrusives and the Pre-cambrian sediments. Of the veins observed, only the Birthday Granite Prospect and the Mt. Pelion Wolfram Prospect are mineralized, and they contain wolframite, pyrite, cassiterite and rare molybdenite.

Several patches of granitic float have been found higher up the valley slopes but no definite outcrop related to these has been found. It has been suggested that this granitic float has been derived from the tillite. However, this is considered unlikely, because:

- (a) Stream sediment samples close to observed areas of granitic float commonly have higher metal values, as could be expected at the margins of small intrusions.

- (b) The float has been found in only a few restricted areas.
- (c) The granitic boulders are often up to four feet in diameter, which is much larger than any boulders seen in the tillite; and
- (d) good exposures of tillite have been seen in many places and no granite boulders were observed, although this does not rule out the possibility of their occurrence in the tillite.

On the more gradual gradients encountered on the lower parts of the valley south of Mt. Pelion Wolfram Mine, there is deep dolerite scree, with little or no outcrop of the Pre-cambrian sediments.

The Pre-cambrian is well exposed higher up the slopes.

The drainage in this area is diffuse, most of it being by seepage through the dolerite scree.

Mapping carried out in conjunction with stream sediment sampling has lead to the recognition of Permian exposed above the Pre-cambrian along much of the area investigated. This has lead to slight modifications of the geology of the area, and the geology portrayed in Fig.1 shows Permian occurring much further north than published maps.

Gossanous float was observed along, and above the track south of the Mt. Pelion Wolfram Mine. The source of this gossanous material, which carried high metal values, was not located.

The major structure in the Pre-cambrian is a series of sub-parallel east-west folds. The folds are open and assymetrical with their axial planes dipping to the north. Anticlinal and synclinal axes cross the north and centre of the E.L. respectively.

Minor structure in many places is intense, with the less competent schists being strongly squeezed between the quartzites.

2. Results and Discussion (Figs. 8 and 9)

The results of the follow-up survey in the Forth Valley indicate that the most promising area is in the extreme south of the E.L., south of Creek 15.

The higher values correspond to the occurrence of granites and acid dykes with which the mineralization of the area is associated, and they show that this southern area must be considered as a separate geochemical province.

Interpretation of the geophysical data obtained by The Broken Hill Proprietary Company Limited, lead to the belief that there may be granite at shallow depth below the Pre-cambrian sediments, south of the Mt. Pelion Wolfram Mine. This interpretation is supported by the presence of quartz veining. In addition, the Big Blow Lode occurs in the area, together with widespread distribution of pyritic quartzite.

Further examination of the geochemical results for this southern province reveals that the data falls into at least two statistical populations. Statistically the populations are apparent but in practice further sub-division of the province is not feasible because:-

- (a) of the random occurrence of intrusive igneous rocks within the province, and
- (b) of the differing types of drainage within the province.

Base of slope samples collected south of Mt. Pelion Wolfram Mine generally gave high results, which are undoubtedly due to both the occurrence of mineralization (viz. The Big Blow Lode) and to the metal content of the dolerite scree which covers the lower slopes.

Until the Big Blow Lode is located, the relative importance of the two factors cannot be fully appreciated, but lead values of samples from this area are consistently higher than one would expect from basalt and dolerite.

Apart from the geochemical results, the gossanous material located in this area is additional evidence that mineralization does exist.

All samples from the southern geochemical province were also analysed for lead. It was considered that the lower mobility of lead (i.e., relatively lower than copper and zinc) would permit more detailed interpretation of the initial distribution of base metals in the rocks. However, the distribution of zinc and lead is not significantly different.

Several other areas of interest have been found in the Forth Valley. These include Creeks 3, 9, 10, 11, and the upper reaches of Creeks 13 and 14 and Creek 25 (Borradaile Creek). It is unlikely that all anomalous values are due to leaching of the basic rocks, but at the same time, significant mineralization would be expected to give higher values than those encountered.

The source of anomalous metal obtained in Borradaile Creek is probably the swampy Borradaile Plains and the McCoy's Prospect area, both of which are drained by this creek.

-12-

The swamp from which comes the greater proportion of water-flow in the creek is on Tertiary basalt which is known to contain high copper, zinc, bismuth and molybdenum values.

Other anomalies in the Forth Valley must be interpreted in the knowledge that although McCoy's Prospect has contributed to the geochemical environment, the prospect itself is not significant.

CONCLUSIONSA. MERSEY AND ARM RIVER AREA1. Anomaly 1.

The follow-up survey located the anomaly source but indicated that the anomalous zone is small.

Further work would involve detailed mapping, geophysics and selection of drilling targets, because the area does not lend itself to further geochemical work.

2. Anomalies 2, 3 and 4.

The high metal content of the dolerite and basalt is adequate to explain the high initial results obtained in these areas.

The non-reproductibility of the results is not fully understood. However, the presence of economic mineralization would have ensured more consistency.

3. Anomaly 5.

The anomalous values obtained in this creek are due either to minerals in the country rocks or to mineralization caused by the nearby granite mass.

Whether either or both of these possibilities apply can only be determined by soil sampling along the granite-sediment contact.

B. FORTH VALLEY

The geochemical data obtained supports the geological and geophysical evidence of possible economic mineralization in the extreme south of the Exploration Licence.

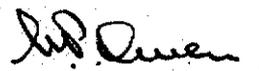
-14-

The data has also revealed the presence of anomalous zones which cannot be explained fully in terms of the dolerite scree. These occur in Creeks, 3, 9, 10, 11, 13, 14 and 25. Of these, the most interesting is Creek 11, which shows consistently high copper values.

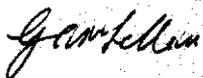
Additional geochemistry in the southern province at this stage would not yield useful results and it is considered that some geophysical method, probably a ground magnetometer survey, would be more applicable.

The separate anomalous areas would have to be treated individually. Rapid reconnaissance mapping, in conjunction with spur sampling in the more promising areas, could be used to effect.

E.A. WEBB & ASSOCIATES PTY.LTD.



N.P. Owen



G.A. McLellan

..15/

APPENDIX 1

Analytical Data Relevant to Reconnaissance and Follow-up  
Survey of Mersey-Arm River Region.

022


**GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.**

 REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

 INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

15th March, 1971.

Job No.      71/ 154

<b>RECEIVED</b>
DATE <u>17-3-71</u>

Attention:      Mr. M. Rangott.
 E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
MELBOURNE.      3000
Your Order No.      AS 0204

<u>Sample No's.</u>	<u>Cu ppm</u>	<u>Zn ppm</u>	<u>Sample No's.</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
18/69/ 180 C	20	85	18/69/ 201 C	35	255
181	25	75	202	5	190
182	15	55	203	5	195
183	10	55	204	5	250
184	15	85	205	10	295
185	25	55	206	10	255
186	5	50	207	15	45
187	10	80	208	30	140
188	15	55	209	30	205
189	15	75	210	35	130
190	40	255	211	40	100
191	20	195	212	15	85
192	15	140	213	45	115
193	20	215	214	45	115
194	25	275	215	40	120
195	15	210	216	35	125
196	10	240	217	35	140
197	20	355	218	35	110
198	15	65	219	30	120
199	15	50	220	15	80
200	15	45	221	30	110

023

885023

RECEIVED  
DATE 12.3.71

Sample No's.	Cu ppm	Zn ppm	Sample No's.	Cu ppm	Zn ppm
18/69/ 222 C	30	105	18/69/ 261 C	20	30
223	30	110	262	40	50
224	25	105	263	15	60
225	15	80	264	25	5
226	5	10	265	20	60
227	15	95	266	20	375
228	15	85	267	25	225
229	15	70	268	20	290
230	10	15	269	20	220
231	10	20	270	30	300
232	<5	70	271	120	190
233	<5	15	272	55	105
234	10	35	273	50	110
235	<5	15	274	40	115
236	<5	25	275	50	110
237	35	15	276	65	150
238	5	20	277	80	245
239	20	25	278	50	70
240	10	30	279	55	130
241	20	60	280	10	15
242	15	55	281	5	15
243	5	15	282	<5	15
244	20	20	283	15	65
245	10	35	284	<5	15
246	35	100	285	<5	10
247	35	120	286	20	50
248	45	130	287	5	15
249	70	80	288	<5	5
250	45	135	289	<5	15
251	40	110	290	5	30
252	35	110	291	10	40
253	45	125	292	<5	30
254	35	120	293	15	40
255	50	75	294	45	110
256	60	205	295	15	35
257	60	115	296	30	135
258	40	90	297	20	65
259	45	80	298	5	35
260	25	50	299	5	35

024

RECORDED  
DATE 12 3 71

<u>Sample No's.</u>	<u>Cu ppm</u>	<u>Zn ppm</u>	<u>Sample No's.</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
18/69/ 300 C	10	25	18/69/ 338 C	20	400
301	25	115	339	45	285
302	50	90	340	10	70
303	25	65	341	5	40
304	5	15	342	<5	20
305	10	25	343	5	60
306	<5	20	344	10	85
307	25	20	345	10	55
308	10	60	346	10	90
309	5	45	347	15	75
310	15	60	348	15	35
311	20	50	349	25	130
312	15	25	350	80	150
313	10	35	351	25	135
314	5	25	352	15	90
315	5	45	353	25	480
316	30	40	354	15	125
317	5	40	355	30	120
318	10	40	360	5	110
319	15	85	361	5	115
320	20	35	362	5	105
321	10	40	363	5	75
322	20	50	364	5	50
323	10	50	365	10	120
324	15	45	366	10	75
325	35	55	367	5	60
326	15	55	368	10	175
327	25	75	369	15	225
328	15	145	370	5	70
329	10	105	371	10	120
330	10	70	372	10	85
331	20	120	373	10	105
332	15	320	374	10	75
333	10	265	375	<5	50
334	20	210	376	15	105
335	15	350	377	20	405
336	20	410	379	10	100
337	20	400	380	5	85

025

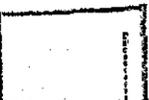
RECEIVED  
DATE 17-3-77

Sample No's.	Cu ppm	Zn ppm	Sample No's.	Cu ppm	Zn ppm
18/69/ 381 C	10	75	18/69/ 419 C	10	210
382	<5	45	420	15	75
383	5	60	421	20	145
384	5	40	422	35	1650
385	<5	45	423	20	95
386	<5	35	424	95	770
387	<5	40	425	45	650
388	<5	20	426	10	80
389	5	50	427	<5	15
390	<5	70	428	5	20
391	70	365	429	<5	55
392	45	405	430	<5	20
393	40	385	431	<5	10
394	30	75	432	<5	35
395	55	470	433	<5	20
396	65	200	434	5	50
397	10	105	435	10	30
398	<5	120	436	5	65
399	10	110	437	<5	20
400	10	205	438	5	30
401	15	230	439	20	75
402	15	445	440	10	35
403	15	180	441	10	30
404	15	310	442	<5	15
405	20	345	443	<5	20
406	20	350	444	<5	15
407	45	1300	445	<5	10
408	10	390	446	15	90
409	20	460	447	<5	15
410	10	165	448	15	90
411	25	450	449	15	95
412	45	760	450	15	80
413	15	1300	451	15	95
414	40	insuffic- ient sample	452	20	80
415	85	295	453	5	45
416	10	345	454	5	35
417	5	185	455	5	60
418	10	545	456	5	55
			457	5	55

026

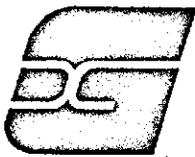
885026

<u>Sample No's.</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
18/69/ 458 C	10	40
459	10	50
460	5	35
461	5	40
462	<5	35
471	<5	35
472	<5	10
473	<5	10
474	<5	10
475	<5	10



027

885027



# GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

17th March, 1971.

Job No.        71/ 154

Attention:     Mr. M. Rangott.

**RECEIVED**  
DATE 19-3-71

E. A. Webb & Associates Pty. Ltd.,  
152 Little Lonsdale Street,  
MELBOURNE.        3000

Your Order No.    AS    0204

<u>Sample No's.</u>	<u>Mo ppm</u>	<u>Sample No's.</u>	<u>Mo ppm</u>
18/69/ 180 B	4	18/69/ 202 B	3
181	<del>7</del>	203	3
182	4	204	3
183	3	205	3
184	4	206	3
185	<del>2</del>	207	2
186	<2	208	3
187	4	209	3
188	3	210	3
189	3	211	4
190	T/F	212	4
191	3	213	3
192	3	214	2
193	3	215	2
194	3	216	2
195	3	217	2
196	3	218	3
197	<del>2</del>	219	2
198	3	220	3
199	3	221	3
200	3	222	3
201	2	223	3

028

RECEIVED  
DATE 19-3-71

<u>Sample No's.</u>	<u>Mo ppm</u>	<u>Sample No's.</u>	<u>Mo ppm</u>
18/69/ 224 B	3	18/69/ 261 B..	2
225	3	262	3
226	<2	263	3
227	3	264	3
228	3	265	2
229	2	266	2
230	2	267	2
231	3	268	3
232	2	269	2
233	2	270	<2
234	3	271	4
235	2	272	3
236	3	273	3
237	2	274	3
238	<2	275	3
239	2	276	4
240	2	277	3
241	3	278	9
242	2	279	3
243	2	280	<2
244	2	281	2
245	2	282	2
246	3	283	3
247	2	284	2
248	3	285	<2
249	2	286	<2
250	<2	287	<2
251	<2	288	<2
252	2	289	2
253	2	290	2
254	3	291	3
255	3	292	2
256	3	293	3
257	2	294	3
258	2	295	2
259	3	296	3
260	2	297	2

029

RECEIVED  
DATE 19-3-71

<u>Sample No's.</u>	<u>Mo ppm</u>	<u>Sample No's.</u>	<u>Mo ppm</u>
18/69/ 298 B	2	18/69/ 336 B	2
299	2	337	2
300	<2	338	2
301	2	339	<2
302	<2	340	<2
303	<2	341	2
304	2	342	3
305	<2	343	2
306	<2	344	2
307	<2	345	<2
308	<2	346	2
309	<2	347	3
310	3	348	3
311	2	349	3
312	2	350	3
313	2	351	3
314	2	352	<2
315	<2	353	3
316	2	354	3
317	2	355	3
318	2	360	10
319	<2	361	2
320	<2	362	7
321	3	363	3
322	2	364	<2
323	2	365	<2
324	3	366	2
325	2	367	2
326	3	368	3
327	2	369	4
328	2	370	2
329	2	371	3
330	2	372	3
331	3	373	2
332	2	374	2
333	2	375	2
334	3	376	3
335	2	377	2

030

RECEIVED  
DATE 19-5-71

Sample No's.

Mo ppm

Sample No's.

Mo ppm

18/69/ 379 B 2  
 380 2  
 381 2  
 382 2  
 383 2  
 384 2  
 385 2  
 386 2  
 387 2  
 388 2  
 389 2  
 390 2  
 391 3  
 392 2  
 393 2  
 394 2  
 395 2  
 396 <2  
 397 <2  
 398 2  
 399 2  
 400 2  
 401 2  
 402 2  
 403 2  
 404 3  
 405 2  
 406 2  
 407 2  
 408 2  
 409 3  
 410 2  
 411 3  
 412 2  
 413 2  
 414 <2

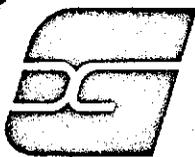
18/69/ 415 B <2  
 416 <2  
 417 <2  
 418 <2  
 419 <2  
 420 <2  
 421 <2  
 422 4  
 423 <2  
 424 <2  
 425 2  
 426 <2  
 427 <2  
 428 3  
 429 <2  
 430 <2  
 431 3  
 432 <2  
 433 3  
 434 3  
 435 2  
 436 <2  
 437 2  
 438 2  
 439 2  
 440 3  
 441 3  
 442 3  
 443 3  
 444 <2  
 445 <2  
 446 2  
 447 <2  
 448 3  
 449 <2  
 450 <2

031

<u>Sample No's.</u>	<u>Mo ppm</u>	<u>Sample No's.</u>	<u>Mo ppm</u>
18/69/ 451 B	2		
452	2		
453	<2		
454	2		
455	2		
456	2		
457	<2		
458	2		
459	2		
460	2		
461	<2		
462	<2		
471	<2		
472	T/F		
473	2		
474	<2		
475	<2		

RECEIVED  
 DATE 11-3-71

885032



GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.


 REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 42 4706 42 4707 TELELEX: 31961 CABLES: GRINLABS MELBOURNE

18th February, 1971.

Job No. 71/ 88Attention: Mr. M. Rangott.

RECEIVED

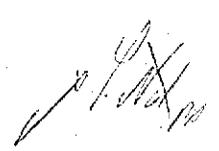
DATE 19-2-71

 E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
MELBOURNE. 3000
Your Order No. AS 0202

<u>Sample No's.</u>	<u>W ppm</u>	<u>Cu ppm</u>
18/ 69/ 128	8	405
129	2	55
158	5	50
159	5	230

METHODS.

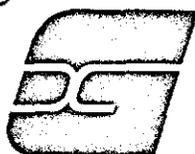
W = Colorimetric Dithiol.

Cu = Atomic Absorption  $\pm$  15 % Relative Accuracy.
  
 I. Hopper (Mrs.)  
GENERAL MANAGER.

 c.c. International Mining Corporation,  
 276 Pitt Street,  
 SYDNEY. N.S.W. 2000

ASSAYERS — ANALYTICAL CHEMISTS — SAMPLERS

OFFICES IN: JAPAN — FAR EAST — EUROPE — NORTH AMERICA


**GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.**

 REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 424706 424707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

 INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

Job No: 71/155

16th March, 1971.

E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
Melbourne.                      3000

**RECEIVED**

 DATE 17-3-71
Your Order No: AS 0205  
Sheet No:                      1167

<u>Samples Nos:</u>	<u>W ppm</u>	<u>Sample Nos:</u>	<u>W ppm</u>
18/69/190B	18	18/69/200B.	2
191	4	271	18
192	7	272	8
193	4	273	14
194	2	274	25
195	4	275	< 2
196	6	276	4
197	5	277	3
198	8	278	28
199	3	279	4
		331	8

Method: Colorimetric Dithiol

*J. Hopper*  
 I. Hopper (Mrs.)  
GENERAL MANAGER.

c.c. to International Mining Corporation. Sydney.

034

885034

RECEIVED

DATE 23.3.71



# GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
TELEPHONE: 424706 424707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

Job No: 71/162

22nd March, 1971.

E. A. Webb & Associates Pty. Ltd.,  
152 Little Lonsdale Street,  
Melbourne.                      3000

Your Order No: AS 0206

Sheet No:                      1171

70

<u>Samples Nos:</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
18/69/500C	25	130
501C	20	220
502C	20	230

035

885035

RECEIVED

DATE 23.3.71



GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
TELEPHONE: 424706 424707    TELEX: 31961    CABLES: GRINLABS MELBOURNE  
INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

Job No: 71/161

22nd March, 1971.

E. A. Webb & Associates Pty. Ltd.,  
152 Little Lonsdale Street,  
Melbourne.                      3000

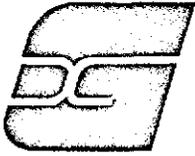
Your Order No: AS 0207

Sheet No:                      1170

<u>Samples Nos:</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
18/69/R194	45	80
R195	5	55
18/69/R273	15	25
R299	40	15
R328	140	70
R391	20	90
R395	15	70
18/69/R408	20	85
R409	5	35
R410	40	45
18/69/R473	5	25
R474	5	170
18/69/R500	5	40
R501	15	40
R502	5	20

036

885036


**GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.**

 REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

 INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

 RECEIVED  
 DATE 16.4.71

JOB NO : 71/154.

31st March, 1971.

 E.A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
MELBOURNE.            VIC.            3000.

Your Order Nos:    AS 0209  
                               AS 0204

Your Sheet No's: 1165  
                               1166

<u>Sample No's</u>	<u>Mo pom.</u>
472    B	25
18/69/190B	3

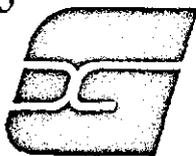
Method :    Atomic Absorption + 15% relative accuracy

Previously reported as T/F (To Follow)

 c.c. International Mining Corporation,  
 276 Pitt Street,  
SYDNEY.    N.S.W.            2000.

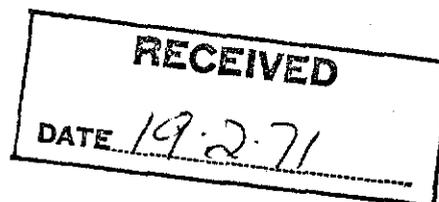
 I. Hopper  
 I. Hopper (Mrs).,  
GENERAL MANAGER.

037


**GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.**

 REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

17th February, 1971.

Job No.      71/ 88Attention:      Mr. M. Rangott.
 E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
MELBOURNE.      3000
Your Order No.      AS 0202

<u>Sample No's.</u>	<u>Mo ppm</u>
18/ 69/ 128 B	3
129	5
158	2
159	3

METHOD.      Atomic Absorption  $\pm$  15 % Relative Accuracy.

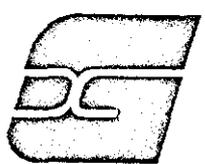

 I. Hopper (Mrs.)  
GENERAL MANAGER.

 c.c.      International Mining Corporation,  
 276 Pitt Street,  
 SYDNEY.    N.S.W.      2000

ASSAYERS — ANALYTICAL CHEMISTS — SAMPLERS

OFFICES IN: JAPAN — FAR EAST — EUROPE — NORTH AMERICA

038



# GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
TELEPHONE: 42 4706 42 4707 TELEX: 31961 CABLES: GRINLABS MELBOURNE

17th February, 1971.

Job No. 71/ 88

Attention: Mr. M. Rangott.

E. A. Webb & Associates Pty. Ltd.,  
152 Little Lonsdale Street,  
MELBOURNE. 3000

**RECEIVED**  
DATE 19.2.71

Your Order No. AS 0202

<u>Sample No's.</u>	<u>Zn ppm</u>
18/ 69/ 128 C	135
129	25
158	45
159	95

METHOD. Atomic Absorption  $\pm$  15 % Relative Accuracy.

I. Hopper (Mrs.)  
GENERAL MANAGER.

c.c. International Mining Corporation,  
276 Pitt Street,  
SYDNEY. N.S.W. 2000

039


**GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.**


REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE  
 INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068, TELEPHONE 31 8533

RECEIVED  
 DATE 26.3.71

Job No: 71/161

24th March, 1971.

E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
Melbourne.            3000

Your Order No: AS 0207    Sheet No: 1170

<u>Sample Nos:</u>	<u>Mo ppm</u>	<u>Sample Nos:</u>	<u>Mo ppm</u>
18/69/R194	6		
R195	6		
R273	4		
R299	3		
R328	4		
R391	10		
R408	2		
R409	2		
R410	3		
R473	2		
R474	2		
R500	5		
R501	2		
R502	4		

Method: Atomic Absorption + 12% relative

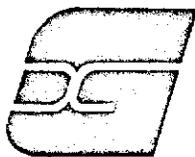
c.c. to International Mining Corporation,  
 276 Pitt Street,  
Sydney.            2000

I. Hopper (Mrs.),  
GENERAL MANAGER.

*I. Hopper*

RECEIVED

DATE 1-4-71



## GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 42 4706 42 4707 TELEX: 31961 CABLES: GRINLABS MELBOURNE

INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 -5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

Job No: 71/154

29th March, 1971.

E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
 Melbourne. 3000

Your Order Nos: AS 0209  
 AS 0204

<u>Sample Nos:</u>	<u>Pb ppm</u>	<u>Sample Nos:</u>	<u>Pb ppm</u>
201C	60	18/69/272C	25
202C	40	273C	35
203C	30	274C	30
204C	20	275C	20
205C	50	276C	30
206C	40	277C	30
18/69/246C	35	278C	25
247C	20	279C	40
248C	30	18/69/331C	35
249C	25	332C	65
250C	45	333C	55
251C	30	334C	60
252C	30	335C	45
253C	25	336C	60
254C	20	337C	45
255C	25	338C	60
256C	20	339C	40
257C	25	18/69/391C	60
258C	30	392C	60
259C	45	393C	95
260C	55	394C	50
261C	40	395C	60
262C	25	396C	10
263C	40	397C	35
264C	45	398C	20
265C	30	399C	45
266C	55	400C	20
267C	30	401C	30
268C	50	402C	50
269C	45	403C	25
270C	25	404C	20
271C	45	405C	25

.... / 2

041


**GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.**

 REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

 INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

.... / 2

<u>Sample Nos:</u>	<u>Pb ppm</u>	<u>Sample Nos:</u>	<u>Pb ppm</u>
18/69/406C	20	18/69/416C	40
407C	35	417C	25
408C	60	418C	15
409C	125	419C	20
410C	90	420C	50
411C	85	421C	140
412C	135	422C	95
413C	50	423C	55
414C	insufficient sample	424C	5
415C	25	425C	30

Method: Atomic Absorption  $\pm$  15% relative accuracy

c.c. to International Mining Corporation,  
 276 Pitt Street,  
Sydney.                      2000                      N.S.W.

*J. Hopper*  
 I. Hopper (Mrs.),  
GENERAL MANAGER

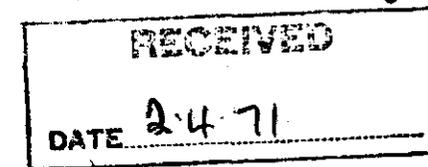
# spectrometer services pty. ltd.

29-31 Cobden Street, North Melbourne, 3051

Phones: 30 3910  
30 3960

M71/262TM

ANALYSIS DIVISION:  
NEWLANDS ROAD, COBURG, 3058  
Phones: 350 1766  
350 1309



## SPECTROGRAPHIC AND CHEMICAL ANALYSTS

**ANALYSIS REPORT FOR:**

• E.A. Webb & Associates Pty. Ltd.,  
• 152 Lt. Lonsdale Street  
• MELBOURNE. 3000

PURCHASE ORDER No. No 0/No. Rec'd.  
Sheet 1172  
DATE 1st. April 1971.

Sample	Cu	Pb	Zn	Ni	Co	Sn	W	Mo	Bi	As	Sb	Be	Mn	Cr	V	Fe	Nb	Ag
R404	300	150	100	10	∠5	2000	∠15	5	100	>1%	∠30	∠2	1000	500	30	>1%	∠15	5
R407	5	10	2000	50	100	∠5	∠15	10	∠5	∠30	∠30	∠2	>1%	∠10	30	>1%	∠15	10
R499	10	700	3000	5	∠5	3000	∠15	5	5	∠30	∠30	∠2	5000	200	30	>1%	∠15	5
R1537	10	10	300	2	20	300	∠15	5	∠5	∠30	∠30	∠2	8000	∠10	30	>1%	∠15	5

NOTE: All results in PPM, unless otherwise indicated.



This laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full.

SPECTROMETER SERVICES PTY. LTD.

BY Wey

885042

APPENDIX II

Analytical Data Relevant to Detailed Stream Sediment Survey  
of the Upper Forth Valley.

885044

044

<u>Sample No's.</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
18/69/1331 C	20	85
32	20	45
33	20	55
34	20	35
35	10	45
36	20	40
37	15	45
38	40	55
39	10	35
40	10	45
41	20	45
42	10	30
43	5	75
44	35	80
45	45	110
46	<5	10
47	5	25
48	5	20
49	5	35

RECEIVED  
DATE 17.3.71

1031	40	100
1322	30	115
23	15	30
24	25	75
25	35	205
26	20	50
27	15	40
28	15	40
29	30	55
30	50	85

METHOD. Atomic Absorption  $\pm$  15 % Relative Accuracy.

*J. Hopper*  
I. Hopper (Mrs.)  
GENERAL MANAGER.

c.c. International Mining Corporation N.L.,  
276 Pitt Street,  
SYDNEY. N.S.W. 2000

<u>Sample No's.</u>	<u>Mo ppm</u>	<u>Sample No's.</u>	<u>Mo ppm</u>
		18/69/1326 B	2
		1327	<2
		1328	<2
		1329	3
		1330	<del>6</del>
		1331	<2
		1332	2
		1333	2
		1334	2
		1335	<2
		1336	3
		1337	2
		1338	2
		1339	2
		1340	2
		1341	2
		1342	3
		1343	2
		1344	2
		1345	3
		1346	<2
		1347	2
		1348	3
		1349	<2
1031	2		
1322	3		
1323	2		
1324	2		
1325	3		

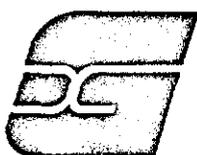
METHOD: Atomic Absorption  $\pm$  15 % Relative Accuracy.

*I. Hopper*  
I. Hopper (Mrs.)  
GENERAL MANAGER.

c.c. International Mining Corporation N.L.,  
276 Pitt Street,  
SYDNEY. N.S.W. 2000

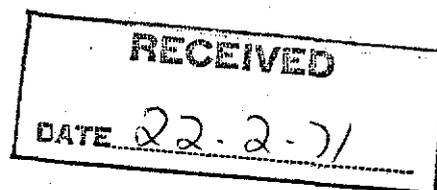
046

885046


**GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.**

 REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

19th February, 1971.

Job No.        71/ 89Attention:     Mr. M. Rangott.
 E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
MELBOURNE.        3000
Your Order No.        AS    0150

<u>Sample No's.</u>	<u>W ppm</u>	<u>Sample No's.</u>	<u>W ppm</u>
R    162	16	R    1122	2
1030	<2	1125	2
1032	<2	1135	2
1035	<2	1138	5
1039	6	1139	4
1051	<2	1140	2
1055	<2	1141	2
1057	<2	1142	<2
1059	4	1145	3
1076	<2	1190	<2
1080	5	1272	3
1090	<2	1280	<2
1119	3	1298	<2

METHOD.        Colorimetric Dithiol.


 I. Hopper (Mrs.)  
GENERAL MANAGER.

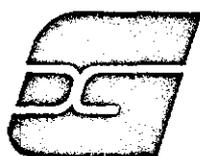
 c.c.    International Mining Corporation N.L.,  
 276 Pitt Street,  
 SYDNEY.    N.S.W.        2000

ASSAYERS — ANALYTICAL CHEMISTS — SAMPLERS

OFFICES IN: JAPAN — FAR EAST — EUROPE — NORTH AMERICA

047

885047



# GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

19th February, 1971.

Job No.    71/ 89

**RECEIVED**  
DATE 22-2-71

Attention:    Mr. M. Rangott.

E. A. Webb & Associates Pty. Ltd.,  
152 Little Lonsdale Street,  
MELBOURNE.    3000

Your Order No.    AS 0150

<u>Sample No's.</u>	<u>Cu ppm</u>	<u>Mo ppm</u>	<u>Sample No's.</u>	<u>Cu ppm</u>	<u>Mo ppm</u>
R 162	15	4	R 1119	35	3
1030	35	3	1122	10	3
1032	15	4	1125	20	2
1035	25	3	1135	15	<2
1039	105	6	1138	10	4
1051	10	<2	1139	15	4
1055	140	3	1140	10	3
1057	20	3	1141	60	2
1059	15	3	1142	60	3
1076	60	3	1145	15	4
1080	5	3	1190	85	3
1090	15	3	1272	30	<2
			1280	10	4
			1298	35	3

Method.    Atomic Absorption ± 15 %    Relative Accuracy.

*I. Hopper*  
I. Hopper (Mrs.)  
GENERAL MANAGER.

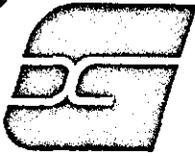
c.c.    International Mining Corporation N.L.,  
276 Pitt Street,  
SYDNEY.    N.S.W.    2000

048

885048

RECEIVED

DATE 23.3.71



# GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
TELEPHONE: 424706 424707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

Job No: 71/162

22nd March, 1971.

E. A. Webb & Associates Pty. Ltd.,  
152 Little Lonsdale Street,  
Melbourne.                    3000

Your Order No: AS 0206

Sheet No:                    1171

70

<u>Samples Nos:</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
---------------------	---------------	---------------

18/69/1500C	10	118
1501C	20	320
1502C	25	295
1503C	10	295
1504C	35	260
1505C	10	55
1506C	25	30
1507C	45	10
1508C	45	15
1509C	5	Insufficient sample
1510C	45	45
1511C	45	10
1512C	45	15
1513C	5	20
1514C	45	30
1515C	45	30
1516C	20	45
1517C	45	265
1518C	25	50

.... / 2

ASSAYERS — ANALYTICAL CHEMISTS — SAMPLERS

OFFICES IN: JAPAN — FAR EAST — EUROPE — NORTH AMERICA

049


**GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.**

 REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

 INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

.... / 2

<u>Sample Nos:</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
18/69/1519C	20	30
1520C	15	70
1521C	25	65
1522C	20	60
1523C	15	40
1524C	20	85
1525C	25	100
1526C	35	155
1527C	35	140
1528C	45	265
1529C	35	80
1530C	225	150
1531C	120	T/F
1532C	90	130
1533C	130	200
1534C	90	165
1535C	50	120
1536C	50	240
1537C	80	155
1538C	25	T/F
1539C	35	85
1540C	65	60
1541C	55	100

Method: Atomic Absorption  $\pm$  15% relative accuracy.

c.c. to International Mining Corporation,  
 276 Pitt Street,  
Sydney.                      N.S.W.      2000

I. Hopper (Mrs.), GENERAL MANAGER.

ASSAYERS — ANALYTICAL CHEMISTS — SAMPLERS

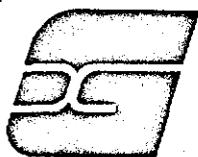
OFFICES IN: JAPAN — FAR EAST — EUROPE — NORTH AMERICA

885050

RECEIVED

050

DATE 23.3.71



GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

Job No: 71/161

22nd March, 1971.

E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
Melbourne.                      3000

Your Order No: AS 0207Sheet No: 1170

<u>Samples Nos:</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
---------------------	---------------	---------------

1

1

1

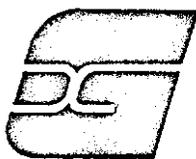
1

1

18/69/R1031	5	80
R1032	65	20
R1033	95	70
R1242	40	10
R1321	10	30
R1347	10	15
R1348	5	15

051

885051



# GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

.... / 2

<u>Samples Nos:</u>	<u>Cu ppm</u>	<u>Zn ppm</u>
18/69/R1504	25	10
R1512	5	10
R1525	5	10
R1528	10	120
R1529	40	55
R1530	160	65
R1535	170	60
R1536	60	125
R1503	30	15

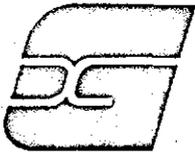
Method: Atomic Absorption  $\pm$  15% relative accuracy.

I. Hopper (Mrs.),  
GENERAL MANAGER.

c.c. to International Mining Corporation,  
276 Pitt Street,  
Sydney.                      N.S.W.                      2000

052

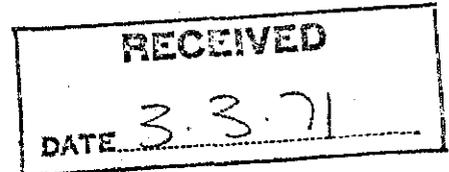
885052


**GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.**

 REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 424706 424707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

 INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 318533

26th February, 1971.

Job No.      71/ 79Attention:      Mr. M. Rangott.
 E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
MELBOURNE.      3000
Your Order No.      AS 0148Sample No.Mo ppm

18/ 64/ 1242 B

23

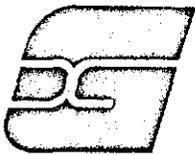
METHOD.      Atomic Absorption  $\pm$  7 % Relative Accuracy.
*J. H. Hopper*  
 I. Hopper (Mrs.)  
GENERAL MANAGER.

 c.c.      International Mining Corporation,  
 276 Pitt Street,  
 SYDNEY.      N.S.W.      2000

053

885053

DATE 15-4-71



GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
TELEPHONE: 424706 424707 TELEX: 31961 CABLES: GRINLABS MELBOURNE

INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

Job No : 71/79.

April 13th, 1971.

E.A. Webb & Associates. Pty. Ltd.,  
152 Little Lonsdale Street,  
MELBOURNE. VIC. 3000.

Your Order No : AS 0148.

Check Analysis.

<u>Sample No's.</u>	<u>Zn ppm</u>	<u>Cu ppm</u>
18/69 12420	30	30
18/69 12430	45	

Method : Atomic Absorption  $\pm$  15% Relative Accuracy.

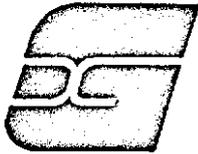
c.c. International Mining Corp.,  
276 Pitt Street,  
SYDNEY. N.S.W. 2000.

J. Hopper  
J. Hopper (Mrs) .,  
GENERAL MANAGER.

ASSAYERS — ANALYTICAL CHEMISTS — SAMPLERS

OFFICES IN: JAPAN — FAR EAST — EUROPE — NORTH AMERICA

054


**GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.**

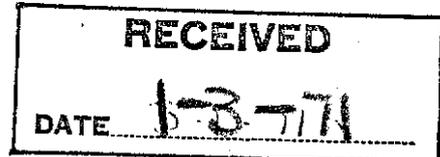
 REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 424706 424707    TELEX: 31961    CABLES: GRINLABS MELBOURNE

 INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

AS 0150

Job No: 71/89

26th February, 1971.

 E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
Melbourne.                      3000
Attention: Mr. Owen.

<u>Sample Nos:</u>	<u>Bi ppm</u>	<u>Sample Nos:</u>	<u>Bi ppm</u>
R 162	25	R 1122	65
R 1030	100	R 1125	65
R 1032	75	R 1135	75
R 1035	50	R 1138	20
R 1039	125	R 1139	75
R 1051	65	R 1140	20
R 1055	65	R 1141	75
R 1057	125	R 1142	50
R 1059	115	R 1145	75
R 1076	110	R 1190	115
R 1080	110	R 1272	60
R 1090	55	R 1280	20
R 1119	60	R 1298	60

Method: Atomic Absorption  $\pm$  7% relative accuracy.
*I. Hopper*  
 (Mrs.) I. Hopper,  
General Manager.

 C. C. to: International Mining Co., N.L.,  
 276 Pitt Street,  
Sydney.                      N.S.W.                      2000

RECEIVED

DATE 26-3-71



## GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 424706 424707 TELEEX: 31961 CABLES: GRINLABS MELBOURNE

INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

Job No: 71/161

24th March, 1971.

E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
Melbourne. 3000

Your Order No: AS 0207 Sheet No: 1170

<u>Sample Nos:</u>	<u>Mo ppm</u>	<u>Sample Nos:</u>	<u>Mo ppm</u>
		18/69/R1032	2
		R395	4
		R1033	14
		R1242	3
		R1321	2
		R1347	2
		R1348	2
		R1504	2
		R1512	2
		R1525	2
		R1528	2
		R1529	2
		R1530	2
		R1535	4
		R1536	2
		R1503	2
R1031	2		

Method: Atomic Absorption  $\pm$  15% relative accuracy.

c.c. to International Mining Corporation,  
 276 Pitt Street,  
Sydney. 2000

I. Hopper (Mrs.),  
GENERAL MANAGER.

ASSAYERS — ANALYTICAL CHEMISTS — SAMPLERS

OFFICES IN: JAPAN — FAR EAST — EUROPE — NORTH AMERICA



# GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
TELEPHONE: 42 4706 42 4707    TELEX: 31961    CABLES: GRINLABS MELBOURNE  
INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
5 BISHOP'S PLACE, KENSINGTON, S.A., 5068, TELEPHONE 31 8533

Job No : 71/79 : 71/162.

7th April, 1971.

E.A. Webb & Associates Pty. Ltd.,  
152 Little Lonsdale Street,  
MELBOURNE.                    VIC.                    3000.

**RECEIVED**  
DATE *14.4.71*

Attention : Mr. M. Rangott..

Your Order No : AS 0149/0148.

CHECK ANALYSIS.

<u>Sample No's.</u>	<u>Zn ppm</u>	<u>Cu ppm.</u>
79    1243	T/F	45
1244	70	60
162   1510	20	<5
1511	25	<5
1512	25	<5
1513	20	5
1514	30	<5
1515	30	<5

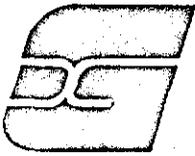
METHOD :            Atomic Absorption  $\pm$  15% Relative Accuracy.

c.c. International Mining Corporation,  
276 Pitt Street,  
SYDNEY.    N.S.W.            2000.

*I. Hopper*  
I. Hopper (Mrs).,  
GENERAL MANAGER.

RECEIVED

DATE 26-3-71



GRIFFITH-INTECO (AUSTRALIA) PTY. LTD.



REGISTERED OFFICE: 4-8 GWYNNE STREET, RICHMOND, VICTORIA, AUSTRALIA, 3121  
 TELEPHONE: 424706 424707 TELE: 31961 CABLES: GRINLABS MELBOURNE

INCORPORATING THE PRACTICE OF R. J. GLUYAS & CO.  
 5 BISHOP'S PLACE, KENSINGTON, S.A., 5068. TELEPHONE 31 8533

Job No: 71/162

24th March, 1971.

E. A. Webb & Associates Pty. Ltd.,  
 152 Little Lonsdale Street,  
Melbourne. 3000

Your Order No: As 0206 Sheet No: 1168

<u>Samples Nos:</u>	<u>Mo ppm</u>	<u>Sample Nos:</u>	<u>Mo ppm</u>
18/69/B500	5	18/69/1519B	2
B501	4	1520B	2
B502	5	1521B	3
B1500	3	1522B	5
B1501	4	1523B	2
B1502	3	1524B	2
B1503	5	1525B	2
B1504	2	1526B	3
B1505	2	1527B	2
B1506	2	1528B	4
B1507	2	1529B	4
B1508	2	1530B	3
B1509	2	1531B	4
B1510	2	1532B	2
B1511	2	1533B	3
B1512	4	1534B	3
B1513	2	1535B	4
B1514	2	1536B	3
B1515	3	1537B	2
B1516	3	1538B	2
B1517	2	1539B	2
B1518	2	1540B	2
		1541B	2

Method: Atomic Absorption + 15% relative accuracy.

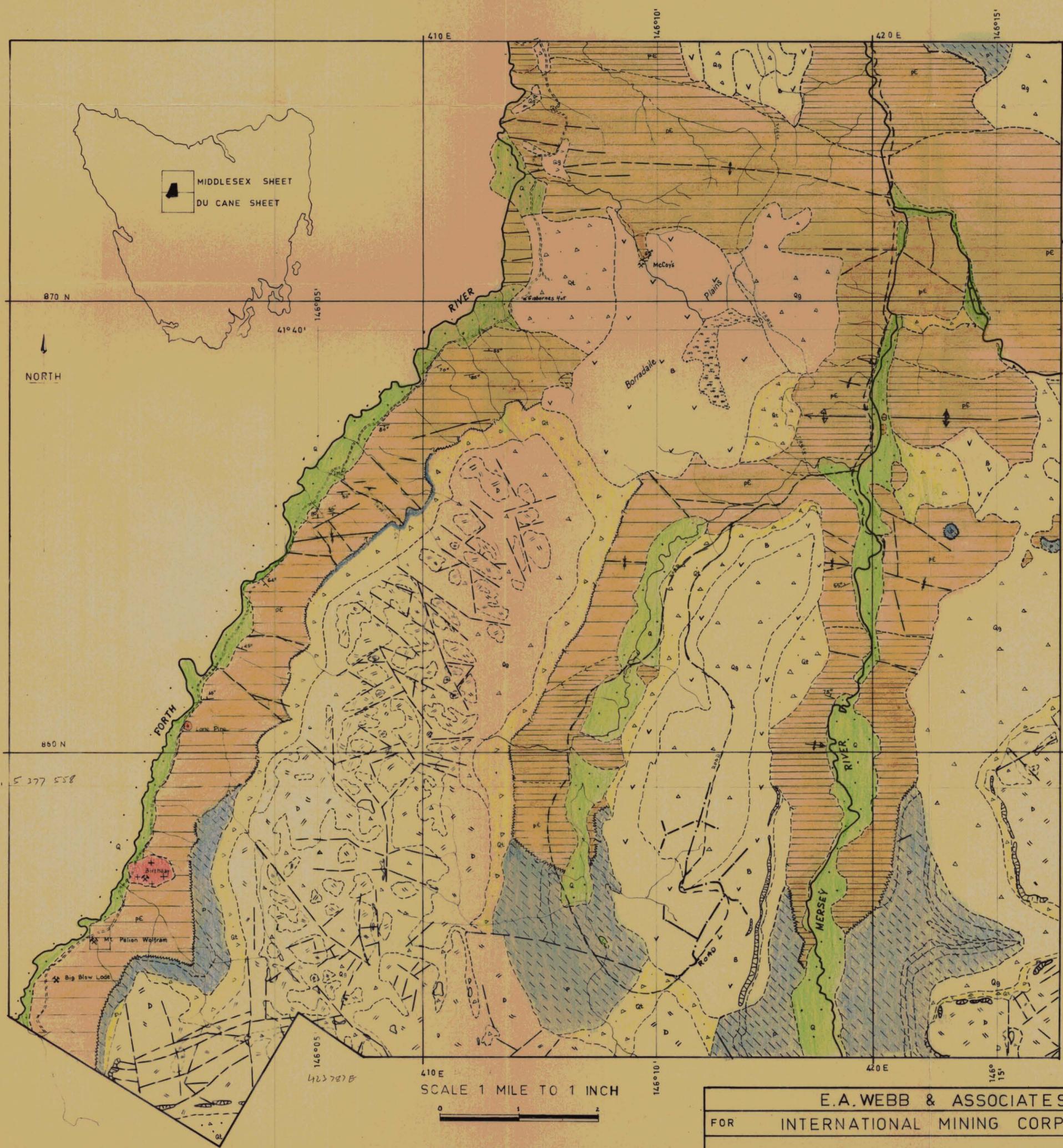
c.c. to International Mining Corporation,  
 276 Pitt Street,  
Sydney. N.S.W. 2000

*J. Hopper*  
 I. Hopper (Mrs.),  
GENERAL MANAGER.

LEGEND

- QUATERNARY**
  - △ qt △ D. scree and B. talus
  - Q □ Till and alluvium
  - △ Qs △ Talus, till and marsh deposits
- PERMIAN**
  - ▨ Permian Groups
- Pre-cambrian**
  - ▨ PE Quartzites and schists
- IGNEOUS ROCKS**
  - ▽ B ▽ TERTIARY Basalt
  - ▨ D ▨ JURASSIC Dolerite
  - ▨ + G + DEVONIAN? Granite

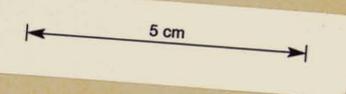
- GEOLOGICAL BOUNDARY
- ~ UNCONFORMITY
- FAULT
- STRIKE & DIP
- X PROSPECT
- MERSEY-ARM R. AREA
- UPPER FORTH R. AREA



MIDDLESEX SHEET  
DU CANE SHEET

NORTH

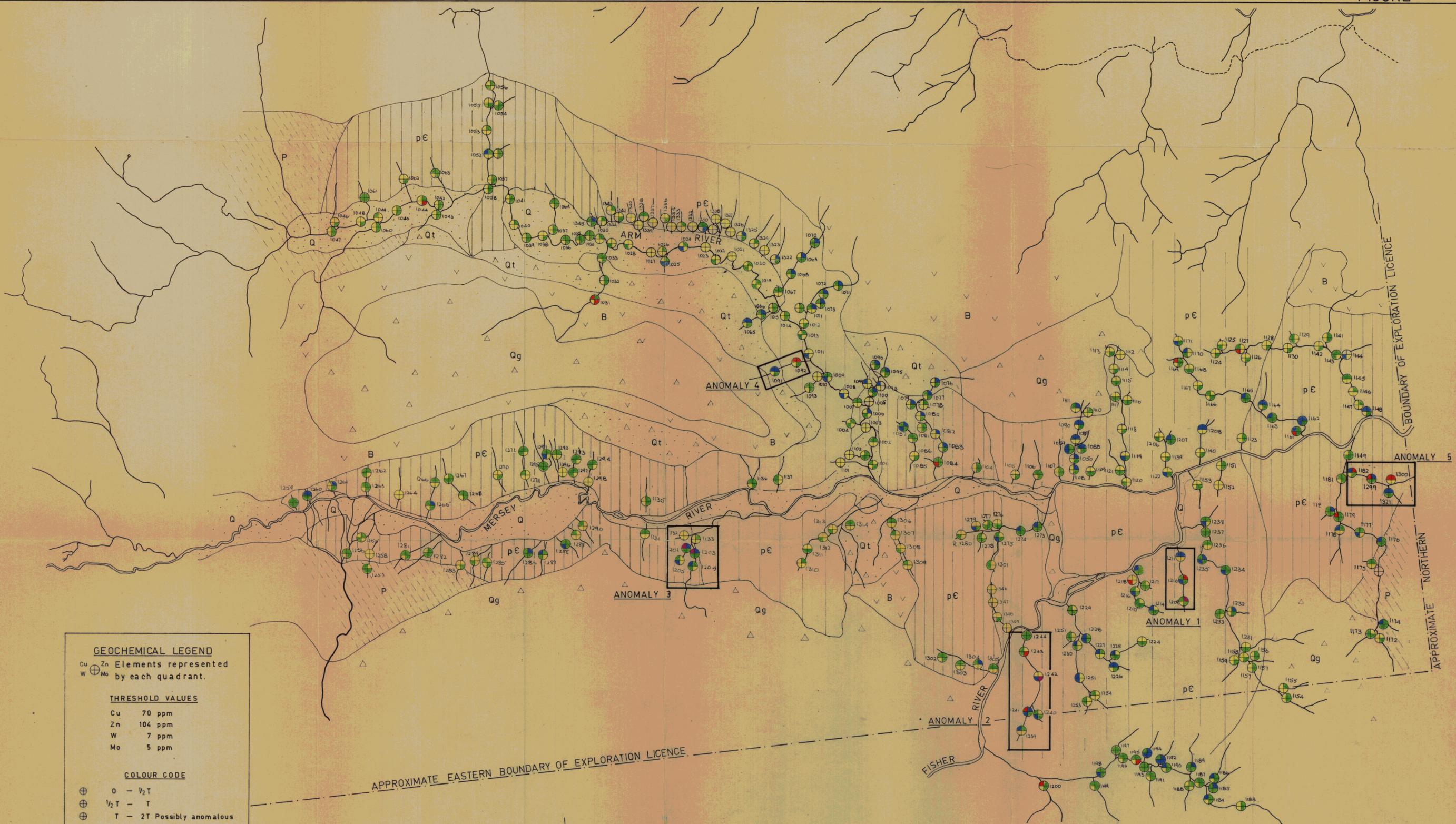
885058



71-755

SCALE 1 MILE TO 1 INCH

E.A. WEBB & ASSOCIATES PTY LTD  
FOR INTERNATIONAL MINING CORPORATION N. L.  
GEOLOGICAL MAP OF E.L. 18 / 69 1013



**GEOCHEMICAL LEGEND**

Cu ⊕ Zn Elements represented by each quadrant.  
W ⊕ Mo

**THRESHOLD VALUES**

Cu 70 ppm  
Zn 104 ppm  
W 7 ppm  
Mo 5 ppm

**COLOUR CODE**

⊕ 0 - 1/2 T  
⊕ 1/2 T - T  
⊕ T - 2T Possibly anomalous  
⊕ 2T - 4T Probably anomalous  
⊕ 4T Definitely anomalous

**LEGEND**

Qt Dolerite scree & Basalt talus  
Q Till & Alluvium  
Qg Talus, Till & Marsh Deposits

PERMIAN P Permian Groups

PRE-CAMBRIAN pE Quartzites & Schists

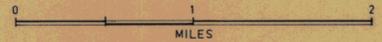
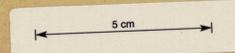
IGNEOUS ROCKS

TERTIARY B Basalt

— GEOLOGICAL BOUNDARY (Approx)

APPROXIMATE EASTERN BOUNDARY OF EXPLORATION LICENCE

BOUNDARY OF EXPLORATION LICENCE  
APPROXIMATE NORTHERN



885059

1014

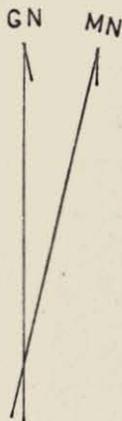
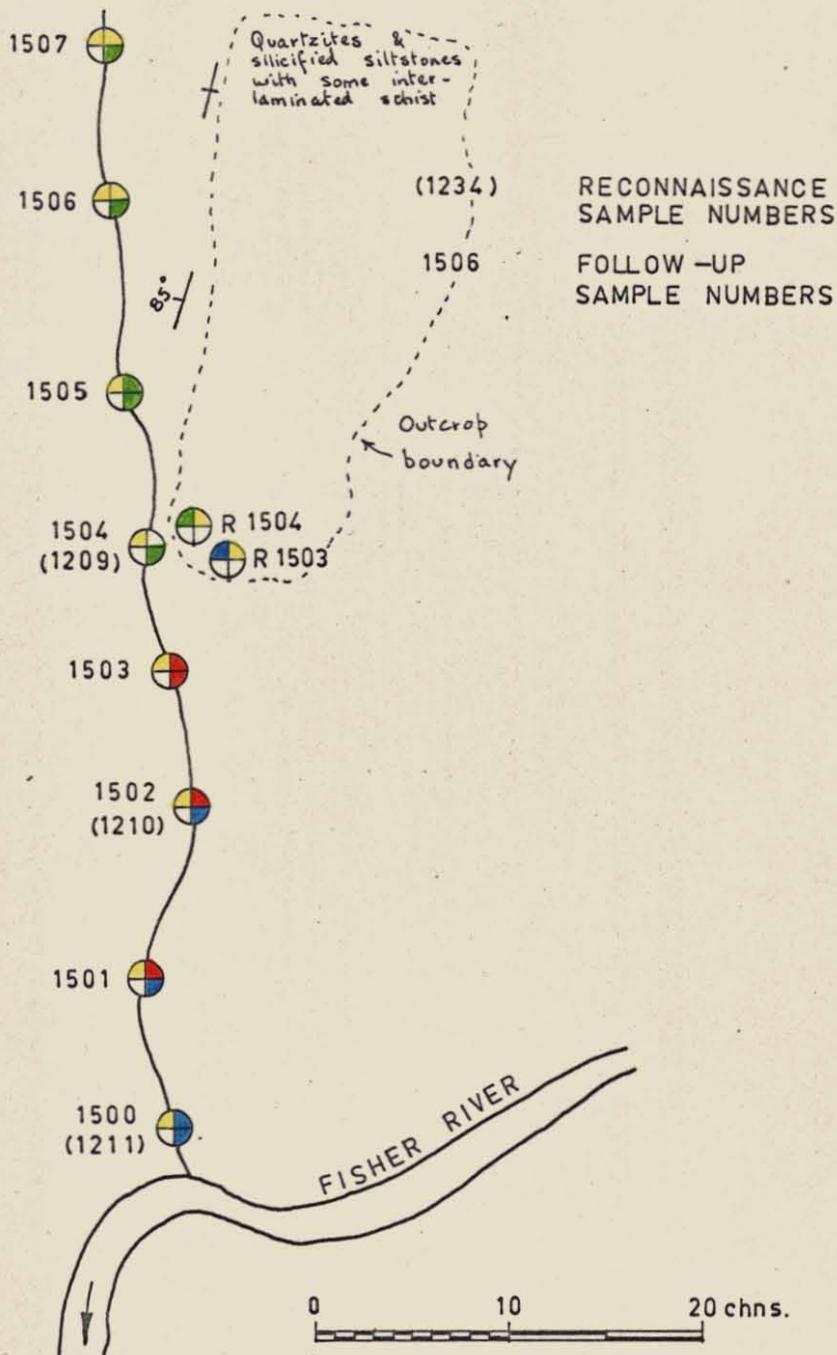
E. A. WEBB & ASSOCIATES PTY. LTD.  
for  
INTERNATIONAL MINING CORP.

E. L. 18/69  
RECONNAISSANCE STREAM  
SEDIMENT SURVEY  
MERSEY & ARM RIVER VALLEYS

Prepared by [Signature] Drawn by [Signature]  
Checked by [Signature] Date 20-4-71  
Drawing No. A1-46 Project No. E.L. 18/69-11.

ANOMALY 1

Cu Zn  
W ⊕ Mo



E. A. WEBB & ASSOCIATES PTY. LTD.  
for  
INTERNATIONAL MINING CORP.

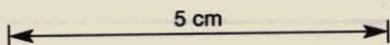


MERSEY & ARM RIVER  
TRIBUTARIES

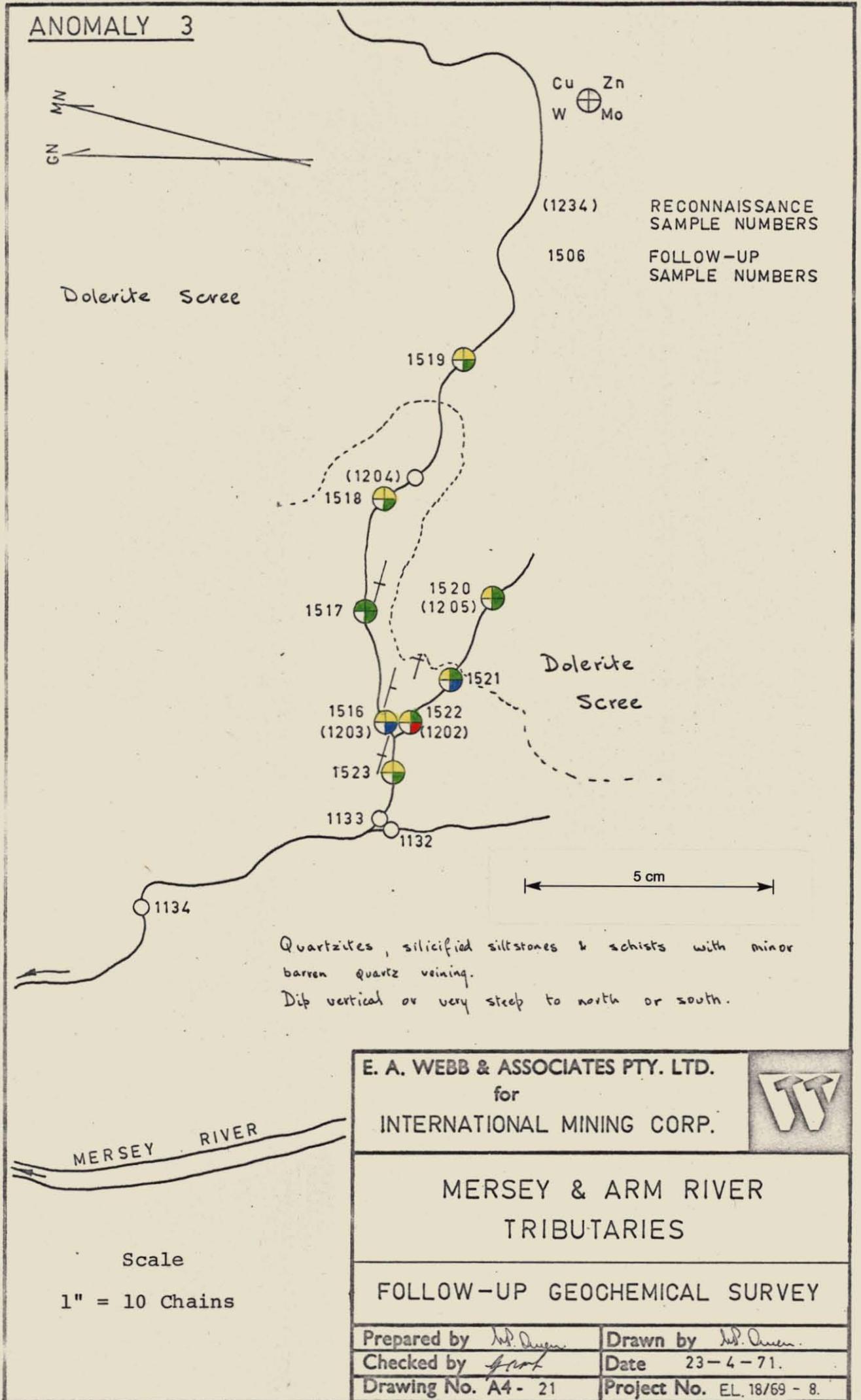
FOLLOW-UP GEOCHEMICAL SURVEY

885060

Prepared by <i>W. Owen</i>	Drawn by <i>W. Owen</i>
Checked by <i>W. Owen</i>	Date <i>23-4-71</i>
Drawing No. A4-19	Project No. E.L.18/69-6







885002

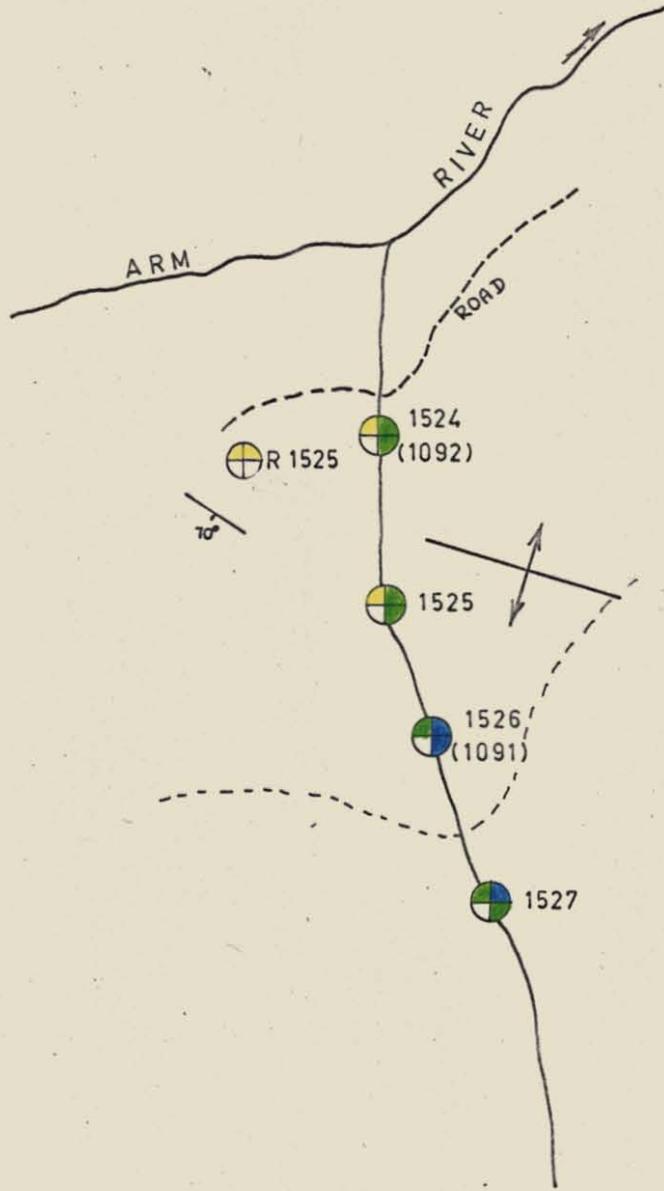
1017

ANOMALY 4

Cu Zn  
W ⊕ Mo

(1234) RECONNAISSANCE  
SAMPLE NUMBERS

1506 FOLLOW-UP  
SAMPLE NUMBERS



Dolerite & Basalt Scree.



Scale 1" = 10 Chains

E. A. WEBB & ASSOCIATES PTY. LTD.  
for  
INTERNATIONAL MINING CORP.



MERSEY & ARM RIVER  
TRIBUTARIES

FOLLOW-UP GEOCHEMICAL SURVEY

Prepared by *J.P. Owen*

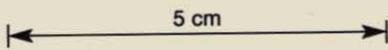
Drawn by *J.P. Owen*

Checked by *Garth*

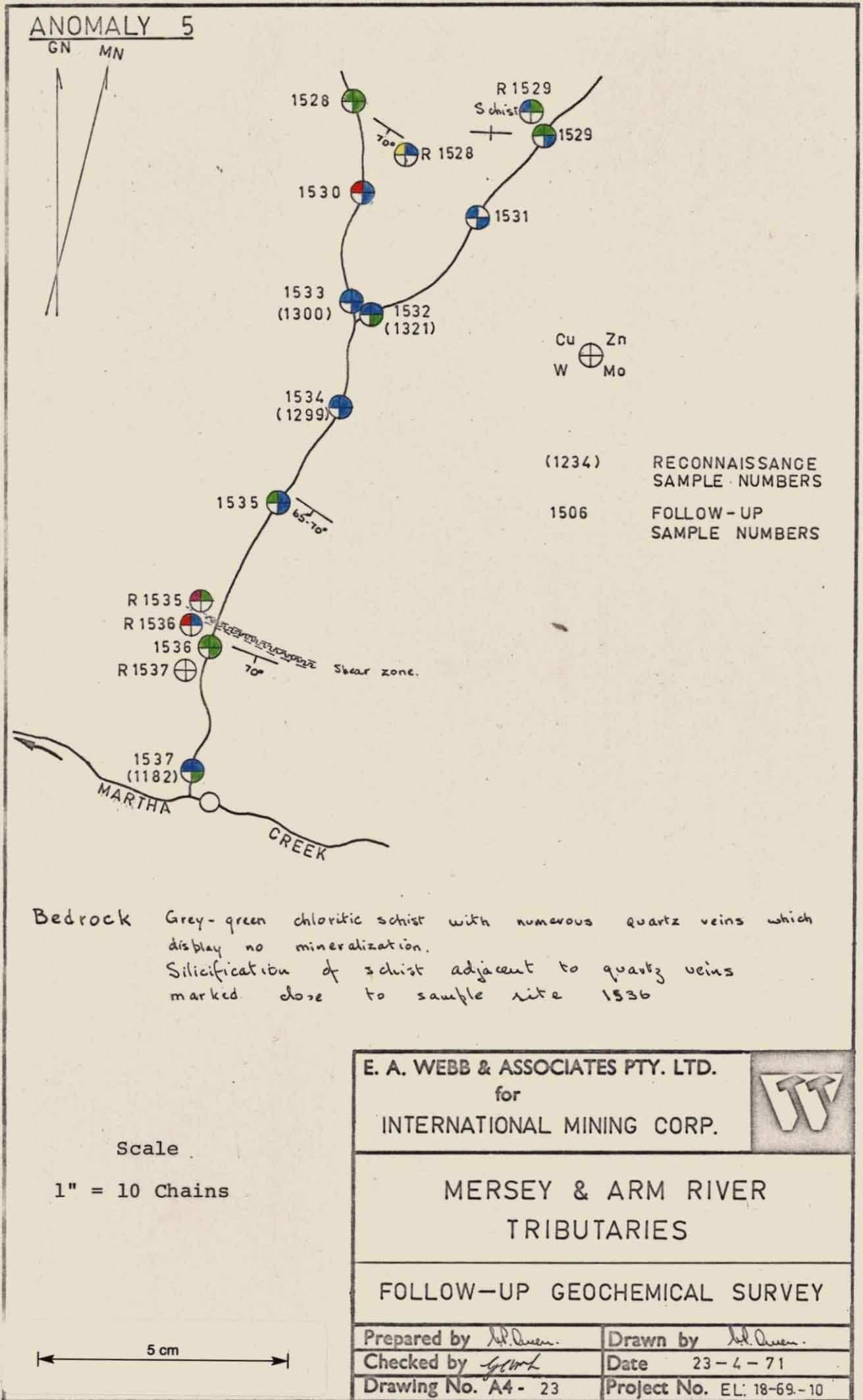
Date 23-4-71

Drawing No. A4- 22

Project No. EL.18/69 - 9.



885063



885064

1019

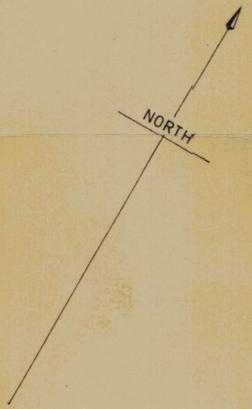
45

**GEOCHEMICAL LEGEND**  
 Cu Zn Elements represented  
 W Mo by each quadrant.

**THRESHOLD VALUES**  
 Cu 27 ppm  
 Zn 97 ppm  
 W 7 ppm  
 Mo 2 ppm

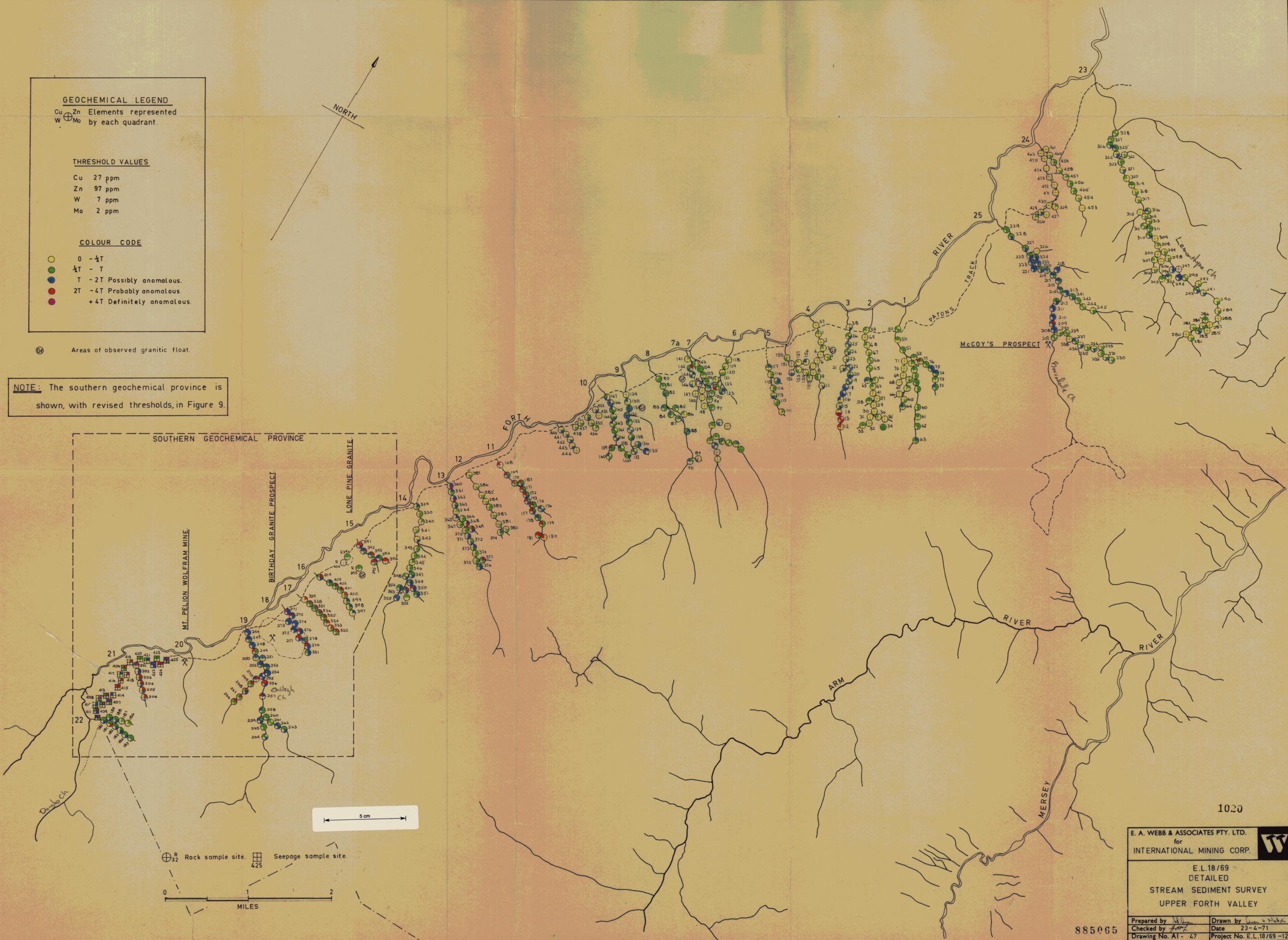
**COLOUR CODE**

- 0 - 1/2T
- 1/2T - T
- T - 2T Possibly anomalous.
- 2T - 4T Probably anomalous.
- +4T Definitely anomalous.



⊕ Areas of observed granitic float.

**NOTE:** The southern geochemical province is shown, with revised thresholds, in Figure 9.



1020

E. A. WEBB & ASSOCIATES PTY. LTD.  
 for  
 INTERNATIONAL MINING CORP.

E.L.18/69  
 DETAILED  
 STREAM SEDIMENT SURVEY  
 UPPER FORTH VALLEY

Prepared by [Signature] Drawn by [Signature]  
 Checked by [Signature] Date 23-4-71  
 Drawing No. AI-47 Project No. E.L.18/69-12

885065

**GEOCHEMICAL LEGEND**

Elements represented by each quadrant  
 Cu ⊕ Zn  
 Pb ⊕ Mo

**THRESHOLD VALUES**

Cu 32 ppm  
 Zn 165 ppm  
 Pb 47 ppm  
 Mo 4 ppm

**COLOUR CODE**

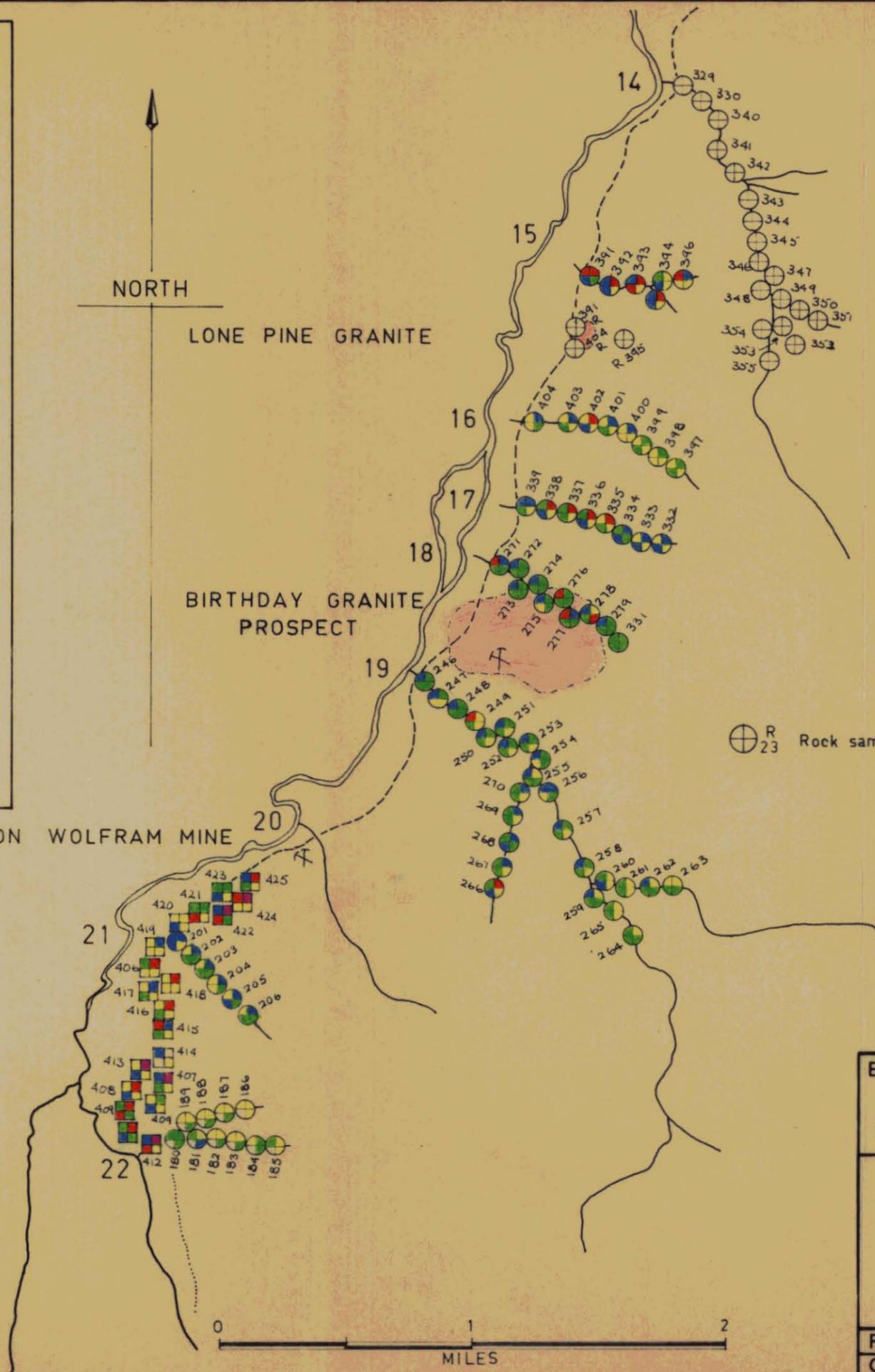
⊕ 0 - 1/2 T  
 ⊕ 1/2 T - T  
 ⊕ T - 2 T Possibly anomalous  
 ⊕ 2 T - 4 T Probably anomalous  
 ⊕ + 4 T Definitely anomalous

NORTH

LONE PINE GRANITE

BIRTHDAY GRANITE PROSPECT

MT. PELION WOLFRAM MINE



⊕ R 23 Rock sample site. ⊕ 423 Seepage sample site

885066 1021

E. A. WEBB & ASSOCIATES PTY. LTD.  
 for  
 INTERNATIONAL MINING CORP.



E.L.18/69  
 SOUTHERN  
 GEOCHEMICAL PROVINCE  
 UPPER FORTH VALLEY

Prepared by <i>R. Owen</i>	Drawn by <i>R. Owen</i>
Checked by <i>R. Owen</i>	Date 23-4-71.
Drawing No. A3 - 17	Project No. E.L.18/69 - 13

