RIO TINTO FINANCE & EXPLORATION LIMITED

To: Department of Trade and Industry

Application for Mineral Exploration Incentive Grant

1	NAME:	Rio Tinto Finance & Exploration Limited ("Riofinex")									
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2.	PROJECT:	Cilycwm									
3.	<u>SITE</u> :	Creigiau Ladies, l ¹ 2 miles north of Cilycwm, Carmarthenshire									
	ADDRESS:	Exploration is conducted from:									
		Cae'r Ffynnon, Springfield Street, Dolgellau, Merioneth									
	NATIONAL GRID REF:	SN 730460									
	SKETCH MAP:	See Figure 1									
	MINERALS BEING SOUGHT:	Copper, lead and zinc sulphides									

4. <u>GEOLOGY OF THE AREA:</u>

The Cilycwm prospect lies on the northwest flank of the Twyi Anticline, a late Caledonian structure of Ordovician and Silurian rocks, trending northeast to southwest. The Creigiau Ladies site is underlain by lower Silurian shales, with massive grits. These grits may form mineralised "flats". Mineralisation, in the form of mineralised shear zones, and flats, is known to exist in surrounding areas, from which moderate quantities of sulphides, especially galena, and gold, have been produced.

5. OUTLINE OF OVERALL WORK PROGRAMME:

Drainage geochemical surveys have been carried out, and a group of coincident geochemical anomalies have been used to delineate a small exploration target. Soil geochemical work and detailed geological mapping will be carried out, to be followed by geophysical work and/or diamond drilling, as deemed necessary.

It is hoped that this work will lead to the discovery of a syngenetic ore deposit, which may have acted as a source bed for the known mineralisation of the area

6.

(3) Cilycwm

Location

The area is covered by OS 1" Sheet 140. Its centre is 750440, 6 miles NNW of Llandovery.



A reconnaissance geochemical drainage survey involving collection of 122 samples over 61 square miles of the Cilycwm area, Carmarthenshire was undertaken. The area lies on the NW flank of the Towy anticline and the SE flank of the Central Wales Syncline. The area is underlain by Upper Ordovician and Lower Silurian shales, slates and flags with conglomerates and grits interspersed throughout the sequence. The samples were analysed for Cu, Pb, Zn and Mn and two areas with high background and anomalous metal values were outlined and the edge of another possible anomalous area was suggested by an isolated sample on the edge of the survey area. A follow up geochemical drainage survey of 140 samples taken from an area of 80 square miles was carried out in conjunction with reconnaissance geological mapping. Three areas with high metal values were discovered, copper and lead were the most prominent metals then zinc and manganese. Anomalies in the region of Nantymwyn (2 square miles) and Cwm Merchon (1 square mile) were written off as due to contamination from old mine workings and high zinc values in the case of the latter area, which were not thought due to contamination, were disregarded as spurious as they occurred in coincidence with high manganese. The third area Craigian Ladies (1 square mile) showed coincidental high Cu and Pb in three streams with no evidence of any contamination. As the area was underlain by massive grits, a potential location of "flats", a follow up visit was undertaken. However, no visible signs of mineralisation were found and bedrock samples gave very low It was decided the drainage geochemical anomaly was metal values. hydromorphic and the area was written off.

Reports

- MacEwen, E.C., March 1970, Reconnaissance geochemical drainage survey of the Cilycwm area, Carmarthenshire, North Wales.
- Johnson, P.R., Novemeber 1970, A follow-up geochemical drainage survey in the Cilycwm area, Carmarthenshire, Wales.
- Holmes, P.R., February 1972, Summary of Current Work in Wales -General Reconnaissance.
- Johnson, P.R., February 1973, Cilycwm follow up visit (Filed on KW.80).



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4 miles : 1





Location of the Cilycwm Area Carmarthenshire

OUTLINE EDITION

SELE



DUPLINE EDITION

SHEET



Clitheroe Estate HASLINGDEN FOLLOW-UP

Figure 3. Summary of Rock Asnay Data

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STRAT. UNIT	COPPER				LEAD					ZINC					
Rock Type (Rock type quoted in "expected values")	Calculated Mean X	Calculated Standard S	p Lower 90%	on Mean Upper 90% ce limit	Expected Values of Mean (Hawkes & Webb)	x	S) Lower 90% limit	u Upper 90% limit	Expected Values of Mean		S	90%		Expected Values of Mean
COAL MEASURES Shale (Black Shale)	101.0	47.9	71.3	<u>130.7</u>	20-300	43.0	6.7	38.8	47.2	20-400	102.2	31.9	82.4	122.0	100-1000
MILLSTONE GRIT Nough Rock - Erit (Sandstone)	12.0	9.27	0.5	<u>23.5</u>	10-40	16.0	3.7	11.4	20.6	10-40	36.0	11.1	22.2	49.8	5-20
MILLSTONE GRIT Shale (Shale)	35.0	5.0	29.75	<u>40.25</u>	30-150	38 .3	6.9	<u>31.1</u>	45.5	20	113.3	14.9	97.7	129.0	50-300
MILLSTONE GRIT Lower Haslingden flags (Sandstone shale)	21.3	7.8	<u>14.85</u>	21.33	10-40 30-150	18.5	6.0	13.5	23.5	10-40 20	71.25	18.3	<u>56.0</u>	86.5	5-20 50-300

All numerical values are in parts per million.

