Cyprus Minerals Australia Company

PROJECT A-84-109

FINAL REPORT

MOUNT OWEN EL 52/83

WEST COAST TASMANIA

P JONES
CONSULTANT TO CYPRUS MINERALS

JUNE 1986

REPORT 491

CYPRUS

999002

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SUMMARY AND CONCLUSIONS

It is recommended Cyprus relinquish title to Mount Owen EL 52/83. No field work was undertaken during the period due to problems associated with the joint venture between Cyprus Minerals and EZ Exploration. EZ withdrew from the venture and a substitute partner was sort to commence exploration.

No substitute partner was found and the management decided to cancel the licence tenure.

RECOMMENDATIONS

It is recommended Cyprus relinquish the title to EL 52/83 prior to its renewal date.

EXPLORATION TARGET

The tenement was staked to cover the remaining portion of prospective Gordon Limestone west of Cyprus' Governor River Licence. The carbonate sequence was considered to have potential for hosting an Irish style or carbonate/shale hosted lead-zinc deposit.

There is subordinate potential for base metal and gold deposits being associated with the Cambrian Mount Read calc-alkaline volcanic suite immediately to the west of the Ordovician sediments.

DESCRIPTION OF THE PROPERTY AND OWNERSHIP

Cyprus Minerals Australia Company applied for a 40 square kilometer exploration licence (EL 52/83) embracing potential host rocks for Irish style lead-zinc mineralization. The licence was granted to Cyprus for a period of 12 months from July 20, 1985. A description of the property is as follows:

> Commencing at the south west angle of the area whose grid co-ordinates are 384500 meters E 5314000 meters N thence grid north to 5331000 meters N grid east to 385000 meters E again grid north to 5337000 meters N again grid east to 385500 meters E again grid north to 5339500 meters N again grid east to 388025 meters E grid south to 5335770 meters N grid west to 385785 meters E again grid south to 5332050 meters N again grid east to 386000 meters E again grid south to 5314000 meters N aforesaid thence again grid west to the point of commencement

The tenement was immediately incorporated into the existing Cyprus (formerly Amoco) EZ joint venture and was to be explored concurrently with other existing Cyprus licences (including Governor River and Princess River). However the licence area included 25 square kilometers vested in the Hydro Electric Commission (HEC) of Tasmania over which the Mines Department had no jurisdiction. On this basis no work was to be undertaken prior to the problem of mineral rights and exploration rights being resolved. A ten square kilometer portion of the licence lies within the South West Conservation Area (SWCA) requiring detailed programs of exploration to be approved by a committee (Mines Department, National Parks and Wildlife, Forestry and the Department of the Environment) prior to any ground work.

LOCATION AND ACCESS

The Mount Owen licence lies approximately five kilometers south-east of Gormanston, near Queenstown. It extends as far south as South Darwin Peak and is roughly centered on the new HEC township of Crotty.

Access within the tenement is good as the road into Crotty has been significantly upgraded and four wheel drive tracks into both the volcanics and sediments are trafficable.

HISTORY AND PREVIOUS EXPLORATION

The volcanic portion of the tenement has received moderate attention from turn of the century prospectors to more recent investigations by Goldfields Exploration under EL 9/66. Only minor copper and gold mineralization has been discovered generally as vein style and/or disseminations within the eastern volcanic suite of Corbett. No recorded production has been documented at the Mines Department. Similarly there has been no recorded production from within the Gordon Limestone sequence. The limestone has however been quarried possibly as a flux for the defunct Crotty smelters of the North Lyell Mining Syndicate.

REGIONAL GEOLOGY AND MINERALIZATION

The regional geological setting is related to Paleozoicvolcanic and sedimentary processes in a linear trough (the Dundas Trough) along the western margin of the Precambrian Tyennan nucleus composed of metamorphosed siltstones and quartzites. Early Cambrian sedimentation includes sandstone, shale and carbonates (Success Creek Group) followed by mudstones, greywacke and basic volcanics (Crimson Creek Formation) and in the middle to late Cambrian mudstones, conglomerate and minor volcanics of the Dundas Group. The associated calc-alkaline Mount Read Volcanics developed on the shallow water eastern margin of the trough sediments adjacent to the Precambrian nucleus. The volcanics interfinger with or are faulted against the Cambrian sediments (Upper Dundas Group) to the west and are composed of rhyolite, dacite, intermediate rocks and basalt in the form of lava flows, breccias, tuffs and plugs.

Sedimentation continued in the late Cambrian to Ordovician with deposition of siliceous sands and gravels (Owen Conglomerate) then shallow water limestones and shales (Gordon Limestone). In the Silurian and Devonian sandstones and siltstones of the Eldon Group were deposited.

Folding and faulting of the above sequences and post tectonic granitoid intrusives occurred during the mid Devonian Tabberabberan Orogeny.

All known metal mines and prospects in the region occur in late Precambrian to late Devonian rocks. Base metal and gold production is dominated by the Mount Lyell, Rosebery and Que River mines (Table 1).

TABLE 1 BASE METAL AND GOLD PRODUCTION - TASMANIA WEST COAST

Mine	Gross Reserves (million tonnes)	Grade
Rosebery	18.4	5.6% Pb, 18.2% Zn, 0.7% Cu, 187 g/t Ag, 3.4 g/t Au
Mt Lyell	147	1.5% Cu, 8 g/t Ag, 0.4 g/t Au
Que River	6	7% Pb, 12.5% Zn, 0.4% Cu, 171 g/t Ag, 3.5 g/t Au
Hellyer	25+	7% Pb, 14.0% Zn, 0.3% Cu, 180 g/t Ag, 2.5 g/t Au

These are volcanogenic massive sulfide deposits hosted by the central parts of the Cambrian Mount Read Volcanics, a sequence of felsic breccias, tuffs and lavas with minor siltstone. The deposits are characterized by large tonnage and area and are finely layered with generally high zinc-copper ratios. Typical mineral assemblage is pyrite, sphalerite, galena and chalcopyrite with silica and barite gangue minerals.

WORK CONDUCTED BY CYPRUS

No ground work was undertaken on the licence during the period. This was primarily due to the late granting of the licence (pegged in 1983) and the subsequent withdrawal of EZ from exploration for carbonate hosted lead-zinc deposits in the EL's surrounding Goldfields EL 9/66. Exploration at this stage had returned little promise from the Gordon Limestone, however EZ as managers of the venture considered the thin slice of acid volcanics to the west as warranting a cursory examination. To this end EZ submitted a proposed program to the Working Group overseeing exploration conducted in the SWCA. The program of dump sampling, rock chip sampling of known mineralization and reconnaissance geological mapping surveys was approved by the Group.

At this juncture EZ withdraw from the venture and Cyprus endeavored to attract further participation from other companies. With most companies cutting back on ground work in Tasmania

little enthusiasm was received and management decided to cancel the licence (Appendix 1). This decision was reinforced by the future flooding of the King River of which the licence acts as part of the catchment.

EXPLORATION POTENTIAL

The tenement is considered to have little potential in hosting a significant carbonate hosted lead-zinc deposit. Furthermore should a mineralized zone be discovered the impending flooding of the King River will mean there is a negligible chance of extraction.

Possible potential for gold and base metals within the volcanic pile to the west of the sediments remains, however a 'deposit' would lie within the catchment. Access would also be a problem with most of the tracks being inundated before reaching the rugged volcanics.

Signed _____ FOR

Phil Jones - Consultant to Cyprus Minerals

CYPRUS MINERALS AUSTRALIA COMPANY

EXPENDITURE FOR THE PERIOD ENDED JUNE 30, 1986

MOUNT OWEN EL 52/83

Salaries and Wages	200
Supplies	
Supplies - maps	
Field Office Rent	
Field Supplies - General	
Field Supplies - Diesel	
Freight	
Aircraft Charter	
Travel	
Communications	
Geophysics	
Consultants/Contractors	
Drilling	
Assays	
Legal Fees	
Equipment Rental	
Equipment Operation & Maintenance	
Property Payments	
Outside Services	
	200
Overhead	20
	$ 220

Minor expenditure relating to this tenement is included in reports prepared by Electrolytic Zinc Company of Australia Limited on EL 39/83 (Governor) the Exploration Licences abutting one another.

T.J. CONQUEST
ACCOUNTANT

APPENDIX 1

Cyprus Minerals Australia Company

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May 22, 1986

Director of Mines
Department of Mines
Post Office Box 56
ROSNY PARK TAS 7018

Dear Sir,

re: EXPLORATION LICENCES NO 30/83, GOVERNOR RIVER AND 52/83 OWEN

Following withdrawal of Electrolytic Zinc Company from exploration as the operating joint venture partner for these licences, Cyprus has reassessed the exploration potential for the area. We have concluded that futher exploration is not warranted due to the future extensive flooding of the King River Dam, and therefore request that Exploration Licence Nos 30/83 and 52/83 be cancelled.

Yours faithfully,

B G Roxburgh
Senior Geologist

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CYPRUS