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DEPARTMENT OF MINES—TASMANIA

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LAUNCESTON OFFICES
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5th September, 1977

Comalco Exploration Ltd.,
P.O. Box 691,
Devonport. Tas. 7310

R.745: Moina Wrigglite

Dear Sirs,

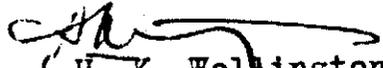
This project has now reached a stage where successive grinding and concentration techniques have reduced the bulk of the 95 kilograms used in this investigation to a particle size of -53µm.

An outline of the concentration process used is as follows: The ore was initially ball mill ground to -300µm, producing the fractions +170µm, +76µm, +53µm and -53µm. The +170µm fraction was then subjected to magnetic separation on an Eriez drum type wet magnetic separator. The non magnetic fraction was then gravity concentrated on a Deister table and the concentrate produced was subjected to sulphide flotation. The flotation tailing was then fed to a Rapid high intensity dry magnetic separator.. This total process was repeated for each sized fraction together with its appropriately sized and reground table tailing and Eriez magnetics. Thus, by successive stages, the ore was concentrated at +170µm, +76µm, +53µm and -53µm.

A condensed summary of the overall treatment result is enclosed as Table I. A tungstic oxide concentrate, at 22.7 percent WO₃ and containing 33 percent of the overall WO₃ in the sample, was obtained. -53µm table tailings (T4T) require a further examination as they retain 44 percent of the overall WO₃, in 66 percent of the original mass at 0.11 percent WO₃. The -53µm cleaner magnetics (M/S 10 M/A) represent 30 percent of the original mass and contain 76 percent of the acid soluble iron in the sample at 54.3 percent acid soluble iron. This product will be further examined to determine the reason for its low, acid soluble iron content.

As the amount of scheelite produced in this investigation was far too small in quantity for scheelite flotation tests, and also as no further quantities of the original wrigglite sample exist, it would be very desirable if a further sample of approximately 1 tonne could be supplied.

Yours faithfully,


(H. K. Wellington),
Chief Chemist & Metallurgist.

Encl.