-300 µm, producing the fractions + 170 µm, + 76 µm, + 53 µm and - 53 µm. The + 170 µm fraction was then subjected to magnetite separation on an Eriez drum type wet magnetite separator. The resulting non-magnetic fraction was then gravity concentrated on a laboratory Deister table and the concentrate produced was subjected to sulphide flotation. The flotation tailing was then dried and fed to a Rapid high intensity dry magnetic separator. This total process was repeated for each size fraction together with its appropriately sized and reground table tailing and Eriez magnetics. Thus by successive stages, the ore was concentrated at the following particle sizes.

Primary section	- 300 µm	+ 170 µm
Secondary section	- 170 µm	+ 75 µm
Tertiary section	- 75 µm	+ 53 µm
Quaternary section	- 53 µm	

Results

Full results in are Appendix 31 in the report entitled Comalco Limited - Moina wrigglite, R 745, dated 9th May 1978.

Both scheelite and cassiterite were difficult to recover. Scheelite overall recovery by tabling was only 33% producing a concentrate of only 22.7% WO_3. The problems are presence of scheelite-magnetite composites and that 39% of the overall WO_3 present was finer than 16 µm and unrecoverable by gravity concentration methods. (Furthermore 26% of the over-all WO_3 was finer than 9 µm!).

Recovery of tin in table concentrate was only 7%, producing a concentrate of only 7% Sn. This grade was raised to 21% Sn after dry magnetic separation, but recovery was then only 4% overall. 53% of the original tin was found to be in the sample in smaller than 16 µm particle size and 19% is locked in magnetite in a - 50 µm cleaner magnetics product.

A magnetite concentrate was produced which contained 82.5% magnetics (Davis Tube determination) and 63% HCl soluble iron. This could approach specifications suitable for coal washery purposes - (See Appendix 32 for such specifications)

Fluorite flotation was not attempted. 87% of the original fluorite was contained in the - 53 micron final gravity tailings.

Conclusion

These results are disappointing, but in view of the fine grain size of the wrigglite, not surprising. Considering