

TR2-153-154
R. 318

STOREY'S CREEK TIN MINING CO.

MAGNETIC PRODUCT—WOLFRAM-SIDERITE

Sample

A sample of magnetic product consisting mainly of wolfram and siderite, together with some quartz and pyrite, was obtained for investigation of alternative treatment.

On occasions when siderite contaminates the wolfram concentrates the material is separated hydraulically or tabled.

The sample contained 42.4% of tungstic oxide, and approximately 35% of siderite.

Sizing Analysis

Treatment.—Siderite is soluble in dilute boiling sulphuric acid with negligible effect on the wolfram, and such treatment was used for comparative purposes with current practice.

Following preliminary trials the following test was selected as typical of optimum results.

The sample was boiled with dilute acid for two hours, filtered and washed.

Ratio ore to concentrated acid. 1 : 0.4.

Acid dilute to 20% strength.

Results

Product	% Wght.	% WO_3	% Sn
Residue	66.8	63.3	0.35
Before treatment	100.0	42.4	0.23

99.7% of the wolfram remained in the residue. The residue contained 4% of siderite, and some quartz and pyrite.