

NOTE.—All communications on Departmental business to be addressed to the Chief Chemist and Metallurgist, Mines Office, Launceston.



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Tasmania.

Department of Mines Laboratory,

Launceston, 14 th. January 1943.

N^o 81

INVESTIGATION 952/42.

Wolfram Ore, Interview River.

Sample.

A sample of several pounds weight was received from Mr. J.J.D. Hood on the 17th. December 1942. Examination of the sample showed that it contained a high percentage of Wolfram and minor quantities of Scheelite, arsenopyrite and pyrite. The major gangue mineral was quartz. The sample did not contain tin.

Purpose of the Investigation.

The sample was received to test the recovery obtainable solely by jig concentration and determination of grade of concentrate and impurities for which buyer's penalties would be deducted.

Jig Concentration.

The ore was stage crushed to pass an 8 mesh screen and concentrated in a Denver Laboratory Mineral Jig with the following results.

<u>Product.</u>	<u>Weight</u> <u>Percent.</u>	<u>Percent</u> <u>WO₃.</u>	<u>Distribution</u> <u>Percent WO₃.</u>	<u>Percent</u> <u>Arsenic.</u>
Jig Con- -centrate.	38.5	75.0	83.5	0.35
Jig Tail- -ings.	61.5	9.3	16.5	----

Summary.

Jig concentration resulted in a recovery of 83.5 percent of the tungsten minerals and the concentrate contained 75 Percent of Tungstic Acid and 0.35 percent of Arsenic.

Market Value.

The present basis for purchase of Wolfram is 110/- per unit of Tungstic Acid (WO₃) at railhead for concentrates of 65% WO₃ or over. Penalties are deducted for Arsenic in excess of 0.2 percent.

FROM Department of Mines Laboratory,
Launceston, Tasmania.

TO.....

The jig concentrate containing 75 percent WO_3 and 0.35 percent arsenic would have the following value per ton.

75 units WO_3 @ 110/-	----	£412-10-0
(Arsenic Penalty) 75 x 11½d.	----	<u>3-10-8</u>
		<u>£408-19-8</u>

Wolfram concentrates containing Tin are penalized as follows. In excess of 1.5 % Tin a penalty of 2½d. per unit WO_3 for each 0.1 % in excess. A mixture of Tin-Wolfram ore is magnetically separated for a charge of £10 per ton and each concentrate is purchased separately.

W. St. C. Manson.

CHIEF CHEMIST AND METALLURGIST.