

TRD-147-149  
**R. 308**

## MOINA TUNGSTEN-TIN MINING CO., N.L.

### EXAMINATION OF COARSE MILL TAILING

#### Sample

A sample of coarse dump tailings was obtained on the 7th February, 1957. The sample was obtained from west to east and over the dump assayed approximately 0.1% of tin and 0.02% of  $WO_3$ . The approximate weight of the sample obtained from 24 places was 700 lb.

## Sizing Analysis

	%
+ 4-mesh B.S. ....	38.5
+ 8-mesh B.S. ....	36.6
+ 22-mesh B.S. ....	18.2
- 22-mesh B.S. ....	6.7
	100.0

## Investigation

The company considered that an investigation was desirable to determine the amount of recoverable values by sizing and gravity concentration by jigging and tabling. Losses were evident in water channels and in the creek bed, and although these losses could have occurred by spillage, after concentration, the examination was undertaken to determine the extent of recoverable values from the tailing dump.

## Summary

Sizing and test jig and table concentration tests show recoverable values as free and composite wolfram and cassiterite amounting to 0.0475 mixed unit per ton of tailings which at a nominal value of 200s. per mixed unit has a value of 9s. 6d.

Sizing followed by jig and table concentration.

The plus 4-mesh fraction did not contain any free wolfram or cassiterite.

The plus 8-mesh fraction contained several pieces of free wolfram, and both fractions contained a few composites of quartz and wolfram.

The plus 22-mesh fraction contained several pieces of free wolfram and cassiterite but no composites with these minerals were observed.

The - 22-mesh fraction contained free wolfram and cassiterite.

In the two coarser fractions the jig beds were included in concentrates.

	Percent			Percent Distribution
	Weight	$WO_3$	Sn	Sn
+ 4 Mesh Jig Bed .. . . .	2.2	0.05	0.46	11.2
+ 8 Mesh Jig Bed+hutch ..	0.23	1.2	1.81	4.6
+ 22 Mesh Jig hutch Conc. . .	0.05	0.73	1.38	0.8
- 22 Mesh Table Conc. . . .	0.22	7.05	5.8	14.2
Table Concentrate . . . . .	2.7	0.73	1.03	..

+ 4 Mesh Jig Tailing	..	36.3	Trace	0.08
+ 8 Mesh Jig Tailing	..	36.4	Trace	Trace
+22 Mesh Jig Tailing	..	18.1	Trace	0.16
-22 Mesh Table Tailing	..	6.5	Trace	0.07
Composite Tailing	.. ..	100.0	0.02	0.09

(Under 0.05 percent shown as Trace)

**Sizing Analysis**

			<i>Percent</i>
+ 4 Mesh	..	..	3.85
+ 8 Mesh	..	..	36.6
+22 Mesh	..	..	18.2
-22 Mesh	..	..	6.7
			<hr/>
			100.0