

To R.J. McLeod
From P. Slattery
Subject Arsenic Suppression - Interim Report

Date April 7, 1967
Ref. PS/DP

(a) Wash Thickener Overflow Arsenic Treatment

<u>Test 10</u>	<u>lbs. As. per day</u>		<u>lbs. As. per day</u>
Dorrco W.T.Overflow	63.6	Calcine Residue repulped	5.3
Mill W.T. Overflow	29.3	with Calcine Barren	
H.C.D. W.T.Overflow	153.9		

The test was carried out to confirm extrapolations of tests 6 & 8, a moderate change in the arsenic balance is noted above.

<u>lb. per ton Lime</u>	<u>% Reduction in Arsenic</u>	<u>lb. Arsenic Remaining</u>
Nil	20.3	193.0
1	72.9	65.6
2	87.6	29.9
3	96.2	9.1
7½	98.5	3.6

(b) H.C.D. Residue Treatment

Test 10 & 11

H.C.D. Residue pulp	52.5	lb. As. per day	Test 10
	44.9	lb. As. per day	Test 11

Test work to date indicates that straight lime additions to the H.C.D. Residue had no constructive effect on reducing the Arsenic in Solution.

The addition of a small quantity of iron, as 10% Ferric Sulphate - 5% Sulphuric Acid solution, followed by lime removed the arsenic from solution. Much larger quantities are required before dissolution of the solids appears inhibited, and the arsenic suppressed.

The problems of the wash thickener overflow arsenic is mainly one of working with a precipitate from a solution, settling and aging the precipitate before pumping to tailings.

With H.C.D. Residue pulp however the basic problem is in treating the solids and not in just treating the solution. Further work is being carried out on this and the dilution problems.

P. Slattery
P. Slattery
Junior Mill Engineer