

Complete Record of Leaching Tests
Made at the Blaud Mill
on the Lone Star Ore.

Leaching Charge No. 1.

Scheme: Wet crushed through $\frac{25}{100}$ mesh screen. The slimes overflowed from the intermediate settling tank, were treated in the Blaud Chlorine tank, while the sand from intermediate tank was loaded into a wheelbarrow and dumped direct into leaching tank, which the loaded contained 9.1 tons dry wt. The lime was uniform of mesh through charge to not very acidic in test. The old metal came from 1870 level at the mine.

Screen Analysis:

	30	40	60	80	100	Over
Headings	1.0	2.2	4.5	7.6	12.1	11.1
Fineings	1.0	2.2	4.5	7.6	12.1	11.1
Extraction	1.0	2.2	4.5	7.6	12.1	11.1

Heavy Record

Description	Sample Values		Extraction
	Fe	Al	
Headings	1.0	2.2	11.1
Middlings	1.0	2.2	11.1
Fineings	1.0	2.2	11.1

Tank Record

Date	Sample	Fe	Al	Remarks
1/1	1.0	2.2	11.1	
1/2	1.0	2.2	11.1	
1/3	1.0	2.2	11.1	
1/4	1.0	2.2	11.1	
1/5	1.0	2.2	11.1	
1/6	1.0	2.2	11.1	
1/7	1.0	2.2	11.1	
1/8	1.0	2.2	11.1	
1/9	1.0	2.2	11.1	
1/10	1.0	2.2	11.1	

Calculation Record

Description	Sample Values		Extraction
	Fe	Al	
Headings	1.0	2.2	11.1
Middlings	1.0	2.2	11.1
Fineings	1.0	2.2	11.1

Leaching Charge No. 2.

Scheme: Same as Ch. 1, excepting leaching tank contained only 8.1 tons dry wt., thereby enabling a more rapid penetration of solution through the charge and consequently a higher percentage of extraction obtained. The charge was Ch. 1. The solution was a bluish green in color, and the loading the charge as well as in Ch. 1, was packed and was treated in the Blaud tank.

Screen Analysis:

	30	40	60	80	100	Over
Headings	1.0	2.2	4.5	7.6	12.1	11.1
Fineings	1.0	2.2	4.5	7.6	12.1	11.1
Extraction	1.0	2.2	4.5	7.6	12.1	11.1

Heavy Record

Description	Sample Values		Extraction
	Fe	Al	
Headings	1.0	2.2	11.1
Middlings	1.0	2.2	11.1
Fineings	1.0	2.2	11.1

Tank Record

Date	Sample	Fe	Al	Remarks
1/1	1.0	2.2	11.1	
1/2	1.0	2.2	11.1	
1/3	1.0	2.2	11.1	
1/4	1.0	2.2	11.1	
1/5	1.0	2.2	11.1	
1/6	1.0	2.2	11.1	
1/7	1.0	2.2	11.1	
1/8	1.0	2.2	11.1	
1/9	1.0	2.2	11.1	
1/10	1.0	2.2	11.1	

Leaching Charge No. 3.

Scheme: Wet crushed through $\frac{25}{100}$ mesh screen. Pulp run direct to square intermediate tank, discharging at four different places, while slimes overflowed into adjacent settling tank. After intermediate tank was loaded with sand the battery was run up and tank allowed to drain for 24 hours. The sand was then discharged through bottom doors into a wheelbarrow from which mixture of heavy samples were taken. The weight and sample of leaching tank. The lime was uniform of mesh through charge, and the slimes were packed out of intermediate tank and allowed to drain. The solution was a bluish green in color, and the loading the charge as well as in Ch. 1, was packed and was treated in the Blaud tank.

Screen Analysis:

	30	40	60	80	100	Over
Headings	1.0	2.2	4.5	7.6	12.1	11.1
Fineings	1.0	2.2	4.5	7.6	12.1	11.1
Extraction	1.0	2.2	4.5	7.6	12.1	11.1

Heavy Record

Description	Sample Values		Extraction
	Fe	Al	
Headings	1.0	2.2	11.1
Middlings	1.0	2.2	11.1
Fineings	1.0	2.2	11.1

Tank Record

Date	Sample	Fe	Al	Remarks
1/1	1.0	2.2	11.1	
1/2	1.0	2.2	11.1	
1/3	1.0	2.2	11.1	
1/4	1.0	2.2	11.1	
1/5	1.0	2.2	11.1	
1/6	1.0	2.2	11.1	
1/7	1.0	2.2	11.1	
1/8	1.0	2.2	11.1	
1/9	1.0	2.2	11.1	
1/10	1.0	2.2	11.1	

Leaching Charge No. 4.

Scheme: Wet crushed through $\frac{25}{100}$ mesh screen. Pulp run from battery to round intermediate tank, capacity 11 tons, equipped with filter bottom and in Blaud Distribution. Slimes were allowed to overflow. Intermediate tank located directly over leaching tank. After leaching intermediate tank was allowed to drain 12 hours and sand was then discharged into leaching tank through bottom door. The charge contained 9.1 tons dry wt. and 1 lb. lime. The solution was a bluish green in color, and the loading the charge as well as in Ch. 1, was packed and was treated in the Blaud tank.

Screen Analysis:

	30	40	60	80	100	Over
Headings	1.0	2.2	4.5	7.6	12.1	11.1
Fineings	1.0	2.2	4.5	7.6	12.1	11.1
Extraction	1.0	2.2	4.5	7.6	12.1	11.1

Heavy Record

Description	Sample Values		Extraction
	Fe	Al	
Headings	1.0	2.2	11.1
Middlings	1.0	2.2	11.1
Fineings	1.0	2.2	11.1

Tank Record

Date	Sample	Fe	Al	Remarks
1/1	1.0	2.2	11.1	
1/2	1.0	2.2	11.1	
1/3	1.0	2.2	11.1	
1/4	1.0	2.2	11.1	
1/5	1.0	2.2	11.1	
1/6	1.0	2.2	11.1	
1/7	1.0	2.2	11.1	
1/8	1.0	2.2	11.1	
1/9	1.0	2.2	11.1	
1/10	1.0	2.2	11.1	

Leaching Charge No. 5.

Scheme: This charge contained 35 tons dry wt., being sand left over in intermediate tank, loading Ch. 4. This Ch. was treated under same conditions as Ch. 1, but owing to the small amount of sand more rapid solution was obtained than in the other charges. This fact alone accounts for high extraction in preliminary testings. The amount of lime was added in this charge.

Screen Analysis:

	30	40	60	80	100	Over
Headings	1.0	2.2	4.5	7.6	12.1	11.1
Fineings	1.0	2.2	4.5	7.6	12.1	11.1
Extraction	1.0	2.2	4.5	7.6	12.1	11.1

Heavy Record

Description	Sample Values		Extraction
	Fe	Al	
Headings	1.0	2.2	11.1
Middlings	1.0	2.2	11.1
Fineings	1.0	2.2	11.1

Tank Record

Date	Sample	Fe	Al	Remarks
1/1	1.0	2.2	11.1	
1/2	1.0	2.2	11.1	
1/3	1.0	2.2	11.1	
1/4	1.0	2.2	11.1	
1/5	1.0	2.2	11.1	
1/6	1.0	2.2	11.1	
1/7	1.0	2.2	11.1	
1/8	1.0	2.2	11.1	
1/9	1.0	2.2	11.1	
1/10	1.0	2.2	11.1	