

# MEMORANDUM

To H.E. Pawson; M.E. Lane; File  
From W.L. Richardson  
Subject Cyanide and Arsenic Reduction

Date March 29, 1972  
Ref.

A test was conducted to see what the effect of mixing Barren solution and Dorrco Wash Thickener Overflow solution in equal parts volume to volume had on the reduction of cyanide and arsenic.

Tabulated results follow. It was noted that a reduction of cyanide and arsenic was effected by just mixing the two solutions in equal parts. The reduction of cyanide and arsenic was reduced to a greater degree by the addition of soluble iron as was shown in earlier tests, but the thing that was particularly noted was that cyanide and arsenic reduction was affected as to when the soluble iron was added.

*in many hands, full, when...!!)*

	<u>pH</u>	<u>CN</u> <u>ppm</u>	<u>% CN</u> <u>Reduction</u>	<u>As</u> <u>ppm</u>	<u>% AS</u> <u>Reduction</u>
Barren Solution	11.3	730			
D.W.T.O. Solution	6.3	8.2			
200ml DWT0 + 200ml Barren	9.0	169	54.20		49.80
200ml DWT0 + 200ml Barren + 1 lb/ton FeCl <sub>2</sub>	6.4*	91	75.34		70.16
200ml DWT0 + 1 lb/ton FeCl <sub>2</sub> + 200ml Barren	6.1*	70	81.03		59.26

\*The ferrous chloride solution used in these tests was very acidic, consequently the pH would be adversely affected and the acidity of the salt would also affect cyanide reduction.

When a fresh lot of ferrous salts arrives these tests will be tried again.

*W.L. Richardson*

W.L. Richardson  
Mill Chemist

WLR/mw