

## Section 10

### High Cyanide Addition Test

The plant high cyanide addition test was conducted during the week starting September 23, 1988. The set point for cyanide addition was increased from 1.0 to 2.0 lb NaCN/ton dry feed solids.

The enclosed graphs show that relative to the background trending of % gold extraction, this variable did not respond sharply to the increased cyanide. Tailings residual cyanide measurements were not accurate during the test due to an error (new Staff Member) in titrant solution preparation. Cumulative data indicates that there was at least 0.6 lb NaCN/ton solution (300 ppm) present in tailings compared to the norm for 1988 of 0.3 lb/ton.

Cyanide addition is the foremost operating variable from process and operating cost viewpoints. The execution of the plant testwork must be improved on the following points:

- o Maintenance of cyanide addition to target.
- o Take increased cyanide concentration profile data (interstage).
- o Ensure accuracy in solution titration procedures.

Cyanide optimization testwork will continue on a plant scale in 1989. Increased data analysis and depth of technical reporting will be undertaken.

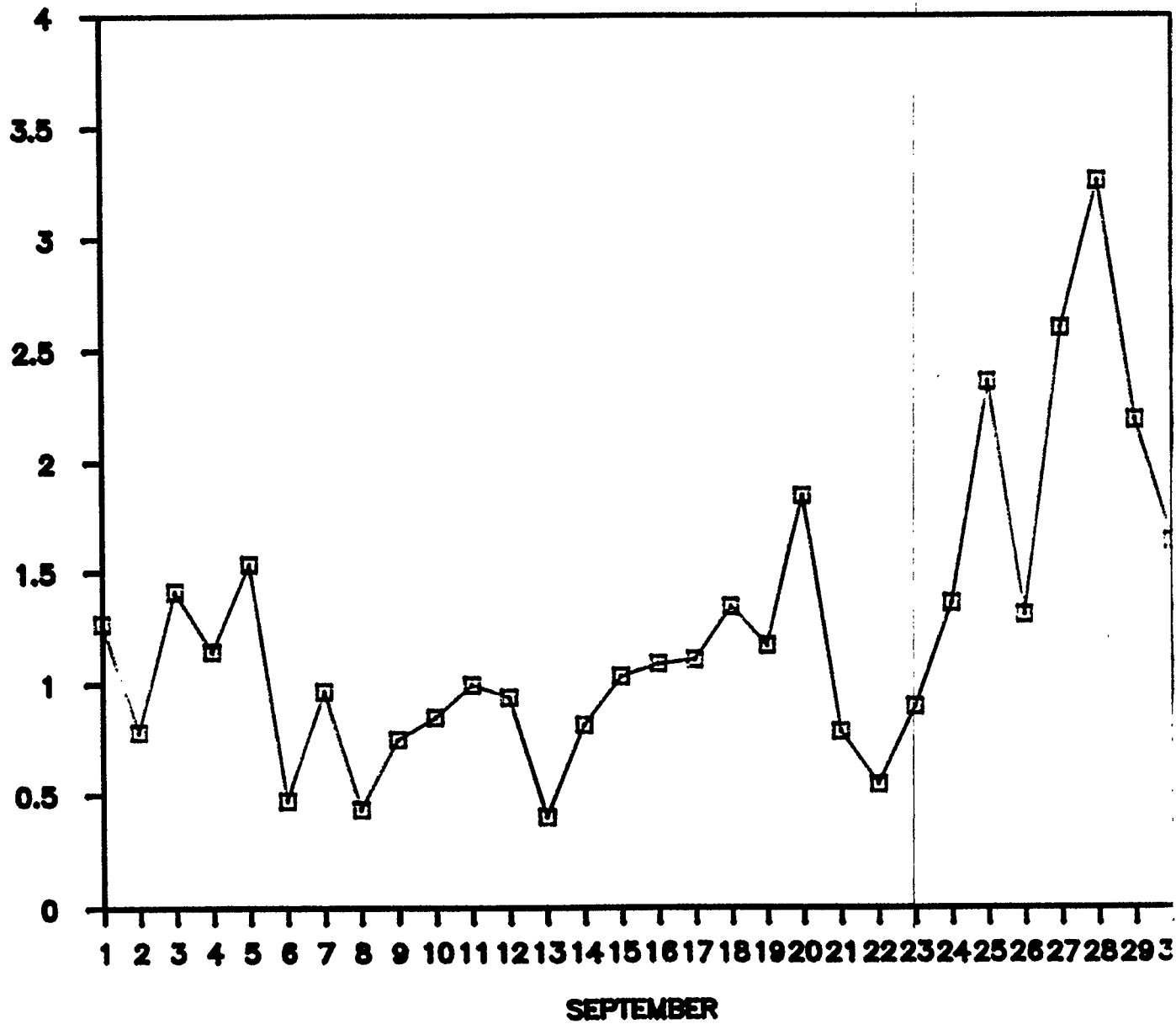
#### Laboratory Simulation

The data of Dan Kivari in Section 6 suggests that increased cyanide addition by itself may not result in significantly increased gold extraction. Following are the results of 24 hour bottle roll testwork using samples of fresh TRP tailings slurry:

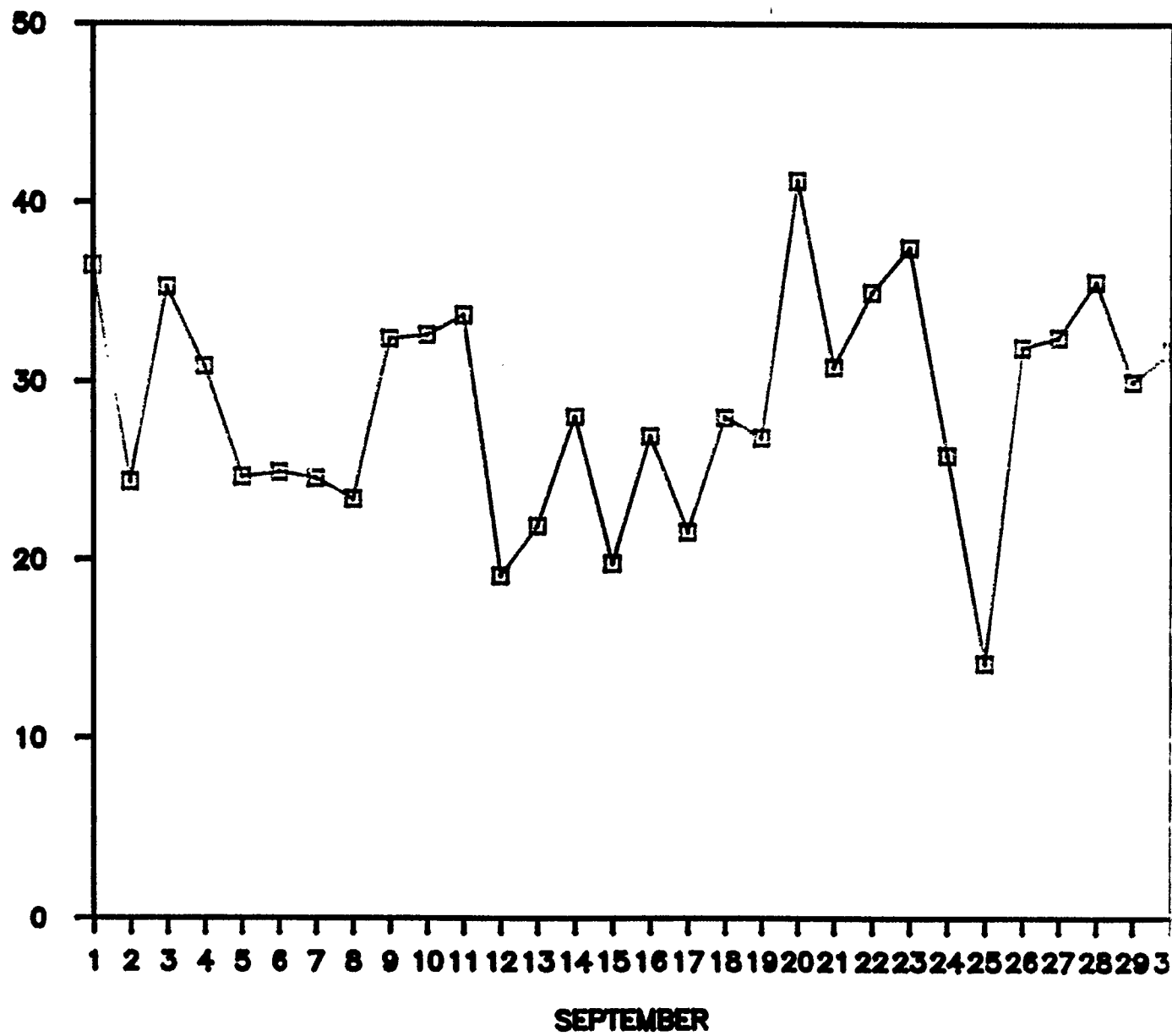
Day	Tailings Solids Assay After 24 hours	Incremental Cyanide lb/ton feed	Residual Free NaCN lb/ton Solution
Oct. 12	0.040	0	0.34
	0.040	0.5	0.60
Oct. 13	0.037	0	0.37
	0.036	0.5	0.42
Oct. 14	0.039	0	0.20
	0.040	0.5	0.31
Oct. 15	0.033	0	0.27
	0.033	0	0.38
Oct. 16	0.038	0	0.31
	0.038	0.5	0.53

D.R. Bartlett  
November 7, 1988

# SEPTEMBER CIL CYANIDE CONSUMED lb/ton



## SEPTEMBER CIL RECOVERIES



CIL TANK PROFILE  
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SEPT. 24 to 28, 1988 AVERAGES

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS
SURGE	0.0528	0.0037	10.30	0.022	
1	0.0584	0.0048	10.27	0.052	36.90
2	0.0514	0.0055	10.50	0.264	36.90
3	0.0492	0.0046	10.56	0.406	36.80
4	0.0490	0.0029	10.64	0.518	35.60
5	0.0500	0.0019	10.56	0.540	35.40
6	0.0490	0.0011	10.51	0.464	35.40
TAILS	0.0486	0.0010	10.47	0.376	

Bryan Cross  
Nov 15/88