

MEMO TO: Don Cooper  
COPY TO: Doug Bartlett  
FROM: Bryan Cross  
DATE: November 5, 1988  
SUBJECT: TRP TANK PROFILES.

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Attached are the CIL Tank Profiles for the 1988 operating season. The upper table on each page was reported with the daily metallurgical balance reports, the lower table was just added to get a look at the inventories in each vessel. Due to the Assay Lab workload and the number of launder screens requiring changing by the operators, etcetera, the amount of data available is limited. The data seems to indicate that we had wide swings in the grade of material mined. Looking at the results for September 24th to the 28th you can see the Surge Tank grade change ie 0.057, 0.045, 0.051, 0.059, and 0.052 oz Au/ton on the solids. The solutions also showed a similar behavior ie 0.0028, 0.0037, 0.0048, 0.0035, and 0.0037. We may want to take samples from each tank on a shift basis next year having the Met Balance as a moving inventory of ounces in process and on carbon. That would be much more difficult to do but the data may be more realistic. I cannot determine from this data if more leach tanks would be economic. The Pilot Plant data tells a definite no to further leach vessels. TRP tailings recyanidation shows further leaching but that was only a few tests. More lab leaches are required for a decision of this magnitude.

# CIL TANK PROFILE

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AUG. 31, 1988

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l
SURGE			10.12		42.00	8.40
1	0.0630	0.0080	9.75	0.05	42.00	6.80
2	0.0510	0.0080	10.09	0.20	39.00	10.20
3	0.0500	0.0080	10.17	0.30	39.00	10.40
4	0.0500	0.0080	10.34	0.50	39.00	10.30
5	0.0480	0.0070	10.20	0.50	38.50	10.50
6	0.0470	0.0070	10.15	0.40	41.00	10.20
TAILS						

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE						
1	1675.4	2312.1	105.552	18.497	124.048	100.00
2	1517.5	2367.4	77.394	18.939	96.333	77.66
3	1517.5	2367.4	75.877	18.939	94.816	76.43
4	1517.5	2367.4	75.877	18.939	94.816	76.43
5	1494.3	2375.9	71.726	16.632	88.358	71.23
6	1619.8	2332.5	76.131	16.328	92.459	74.53
TAILS						

CIL TANK PROFILE

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SEPT. 4, 1988

TANK FEED	ASSAY oz Au/TON SOLIDS	SOLUTION	pH	CN lb/ton	% SOLIDS
SURGE	0.1050	0.0069	10.99		37.80
1	0.0610	0.0057	10.25	0.200	34.00
2	0.0620	0.0059	10.24	0.200	34.00
3	0.0590	0.0057	10.39	0.400	34.00
4	0.0580	0.0065	10.36	0.400	38.00
5	0.0570	0.0045	10.20	0.500	37.50
6	0.0580	0.0030	10.19	0.400	36.00
TAILS	0.0580	0.0041	10.22	0.300	

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE	1466.0	2389.6	153.930	16.488	170.418	186.44
1	1268.5	2461.0	77.381	14.027	91.408	100.00
2	1268.5	2461.0	78.649	14.520	93.169	101.93
3	1268.5	2461.0	74.844	14.027	88.871	97.22
4	1466.0	2389.6	85.028	15.532	100.560	110.01
5	1466.0	2389.6	83.562	10.753	94.315	103.18
6	1363.7	2427.4	79.094	7.282	86.376	94.50
TAILS						

CIL TANK PROFILE

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SEPT. 13, 1988

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l
SURGE	0.0800	0.0030	8.96	0.050	36.00	11.10
1	0.0820	0.0033	9.86	0.050	30.00	10.60
2	0.0760	0.0047	9.97	0.050	29.00	12.20
3	0.0700	0.0053	9.94	0.100	30.00	13.00
4	0.0690	0.0030	9.95	0.150	30.00	12.60
5	0.0680	0.0021	9.87	0.150	33.00	13.20
6	0.0680	0.0022	9.87	0.150	34.00	12.60
TAILS	0.0660	0.0013	9.81	0.150	34.00	11.80

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE	1363.7	2427.4	109.095	7.282	116.378	119.52
1	1085.6	2529.5	89.022	8.347	97.369	100.00
2	1039.4	2546.5	78.992	11.968	90.961	93.42
3	1085.6	2529.5	75.994	13.406	89.401	91.82
4	1085.6	2529.5	74.908	7.589	82.497	84.73
5	1221.2	2479.0	83.040	5.206	88.246	90.63
6	1268.5	2461.0	86.260	5.414	91.675	94.15
TAILS						

CIL TANK PROFILE  
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SEPT. 16, 1988

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l
SURGE	0.093	0.0034	8.63	0.020	33.00	11.50
1	0.0820	0.0041	8.73	0.010	36.00	11.00
2	0.0730	0.0054	9.41	0.100	35.00	13.00
3	0.0620	0.0044	9.74	0.150	36.00	13.20
4	0.0600	0.0030	10.00	0.240	36.00	13.20
5	0.0570	0.0016	10.12	0.260	36.00	13.40
6	0.0580	0.0010	10.12	0.260	36.00	13.00
TAILS	0.0580	0.0013	10.10	0.230	37.00	12.50

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE	1221.2	2479.0	113.570	8.429	121.998	100.18
1	1363.7	2427.4	111.823	9.952	121.775	100.00
2	1315.3	2446.5	96.017	13.211	109.227	89.70
3	1363.7	2427.4	84.549	10.680	95.229	78.20
4	1363.7	2427.4	81.822	7.282	89.104	73.17
5	1363.7	2427.4	77.731	3.884	81.614	67.02
6	1363.7	2427.4	79.094	2.427	81.522	66.94
TAILS						

# CIL TANK PROFILE

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SEPT. 22, 1988

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l	TEMPERATURE DEG C
SURGE	0.041	0.0025	12.16	0.001	37	11.80	5.0
1	0.0440	0.0042	10.54	0.005	36.00	10.40	8.0
2	0.0380	0.0058	10.51	0.145	36.00	11.80	10.0
3	0.0400	0.0047	10.46	0.215	30.00	11.60	10.5
4	0.0400	0.0029	10.45	0.295	30.00	11.80	11.0
5	0.0410	0.0022	10.51	0.295	29.00	11.60	10.5
6	0.0370	0.0018	10.38	0.300	34.00	12.00	10.5
TAILS	0.0390	0.0013	10.26	0.170		12.10	9.5

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE						
1	1363.7	2427.4	60.003	10.195	70.197	100.00
2	1363.7	2427.4	51.820	14.079	65.899	93.88
3	1085.6	2529.5	43.425	11.889	55.314	78.80
4	1085.6	2529.5	43.425	7.336	50.761	72.31
5	1039.4	2546.5	42.614	5.602	48.216	68.69
6	1268.5	2461.0	46.936	4.430	51.366	73.17
TAILS						

# CIL TANK PROFILE

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SEPT. 24, 1988

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l	TEMPERATURE DEG C
SURGE	0.057	0.0028	9.95	0.010		11.80	11.5
1	0.0600	0.0046	10.06	0.130	36.50	10.40	10.0
2	0.0540	0.0048	10.38	0.200	36.00	11.80	9.5
3	0.0520	0.0037	10.44	0.270	36.00	11.60	10.0
4	0.0520	0.0019	10.48	0.290	35.00	11.80	10.0
5	0.0580	0.0011	10.45	0.340	34.50	11.60	10.5
6	0.0470	0.0008	10.37	0.260	35.00	12.00	10.0
TAILS	0.0490	0.0016	10.32	0.210		12.10	10.0

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE						
1	1389.0	2416.8	83.337	11.117	94.454	100.00
2	1363.7	2427.4	73.639	11.651	85.291	90.30
3	1363.7	2427.4	70.912	8.981	79.893	84.58
4	1315.3	2446.5	68.395	4.648	73.044	77.33
5	1292.1	2455.0	74.942	2.700	77.642	82.20
6	1315.3	2446.5	61.819	1.957	63.776	67.52
TAILS						

# CIL TANK PROFILE

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SEPT. 25, 1988

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l	TEMPERATURE DEG C
SURGE	0.045	0.0037	10.70	0.020		11.40	7.0
1	0.0480	0.0049	10.35	0.030	36.50	10.40	8.0
2	0.0450	0.0052	10.53	0.260	36.00	12.90	8.0
3	0.0470	0.0042	10.57	0.420	36.00	12.80	8.0
4	0.0490	0.0029	10.63	0.520	35.00	12.70	8.0
5	0.0480	0.0017	10.52	0.510	34.50	13.20	8.0
6	0.0580	0.0012	10.49	0.420	35.00	13.30	7.0
TAILS	0.0550	0.0009	10.42	0.310		13.80	7.0

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE						
1	1389.0	2416.8	66.670	11.842	78.512	100.00
2	1363.7	2427.4	61.366	12.622	73.989	94.24
3	1363.7	2427.4	64.094	10.195	74.289	94.62
4	1315.3	2446.5	64.450	7.095	71.544	91.13
5	1292.1	2455.0	62.021	4.173	66.194	84.31
6	1315.3	2446.5	76.287	2.936	79.223	100.91
TAILS			0.000	0.000	0.000	0.00



# CIL TANK PROFILE

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SEPT. 26, 1988

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l	TEMPERATURE DEG C
SURGE	0.051	0.0048	10.98	0.060		10.35	9.0
1	0.0580	0.0062	10.40	0.070	36.50	11.50	8.0
2	0.0470	0.0058	10.60	0.370	37.00	13.00	8.0
3	0.0430	0.0049	10.63	0.570	36.00	13.45	8.0
4	0.0420	0.0033	10.70	0.630	36.50	12.80	8.0
5	0.0420	0.0026	10.61	0.670	36.00	13.20	8.0
6	0.0420	0.0014	10.55	0.550	36.50	12.70	8.0
TAILS	0.0440	0.0011	10.51	0.380			8.0

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE						
1	1389.0	2416.8	80.559	14.984	95.543	100.00
2	2407.3	1416.0	113.142	8.213	121.355	127.02
3	1363.7	2427.4	58.639	11.894	70.533	73.82
4	1389.0	2416.8	58.336	7.975	66.311	69.40
5	1363.7	2427.4	57.275	6.311	63.586	66.55
6	1389.0	2416.8	58.336	3.383	61.719	64.60
TAILS			0.000	0.000	0.000	0.00

# CIL TANK PROFILE

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SEPT. 27, 1988

TANK FEED	ASSAY oz Au/TON SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l	TEMPERATURE DEG C
SURGE	0.059	0.0035	9.74	0.010		11.40	9.0
1	0.0650	0.0040	10.32	0.020	37.00	11.30	8.0
2	0.0540	0.0059	10.50	0.180	36.50	12.30	7.0
3	0.0510	0.0045	10.55	0.290	36.00	13.80	8.0
4	0.0520	0.0033	10.69	0.580	35.50	12.60	9.0
5	0.0510	0.0018	10.63	0.540	35.00	12.80	9.0
6	0.0490	0.0011	10.55	0.460	34.50	12.60	9.0
TAILS	0.0450	0.0008	10.58	0.380		12.20	9.0

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE						
1	1416.0	2446.0	92.043	9.784	101.827	100.00
2	1389.0	2416.8	75.003	14.259	89.262	87.66
3	1363.7	2427.4	69.548	10.923	80.472	79.03
4	1339.2	2437.3	69.636	8.043	77.679	76.29
5	1315.3	2446.5	67.080	4.404	71.484	70.20
6	1291.1	2453.1	63.263	2.698	65.962	64.78
TAILS			0.000	0.000	0.000	0.00

CIL TANK PROFILE

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SEPT. 28, 1988

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l	TEMPERATURE DEG C
SURGE	0.052	0.0037	10.14	0.010		11.40	9.0
1	0.0610	0.0042	10.21	0.010	38.00	11.40	8.0
2	0.0570	0.0059	10.50	0.310	39.00	13.20	8.0
3	0.0530	0.0055	10.59	0.460	40.00	13.00	8.0
4	0.0500	0.0033	10.68	0.570	36.00	13.30	8.0
5	0.0510	0.0025	10.61	0.640	37.00	14.00	8.0
6	0.0490	0.0009	10.57	0.630	36.00	13.70	9.0
TAILS	0.0500	0.0006	10.51	0.600		13.60	10.0

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE						
1	1466.0	2389.6	89.426	10.036	99.462	100.00
2	1517.5	2367.4	86.500	13.967	100.467	101.01
3	1568.0	2352.0	83.106	12.936	96.042	96.56
4	1363.7	2427.4	68.185	8.010	76.195	76.61
5	1416.0	2446.0	72.218	6.115	78.333	78.76
6	1363.7	2427.4	66.821	2.185	69.006	69.38
TAILS			0.000	0.000	0.000	0.00

CIL TANK PROFILE

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OCT. 8, 1988

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l	TEMPERATURE DEG C
SURGE							
1	0.0620	0.0058	10.81		41.82		
2	0.0630	0.0104	10.56	0.477	39.00	9.20	12.0
3	0.0630	0.0110	10.64	0.479	39.00	10.10	12.0
4	0.0610	0.0060	10.68	0.478	38.00	9.30	12.0
5	0.0580	0.0042	10.69	0.484	40.00	11.10	12.0
6	0.0590	0.0028	10.62	0.476	40.00	11.10	12.0
TAILS	0.0550	0.0011					

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE						
1	1675.4	2312.1	103.876	13.410	117.286	100.00
2	1517.5	2367.4	95.605	24.621	120.225	102.51
3	1517.5	2367.4	95.605	26.041	121.646	103.72
4	3093.3	2389.6	188.688	14.337	203.026	173.10
5	1568.0	2352.0	90.946	9.879	100.824	85.96
6	1568.0	2352.0	92.514	6.586	99.100	84.49
TAILS						

CIL TANK PROFILE

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OCT. 12, 1988

TANK FEED	ASSAY oz Au/TON SOLIDS	SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l	TEMPERATURE DEG C
SURGE							
1	0.0550	0.00500			39.60		
2	0.0510	0.00800	10.90	0.200	39.00	10.40	7.0
3	0.0510	0.00780	9.39	0.270	37.00	10.40	7.0
4	0.0490	0.00500	9.61	0.360	36.50	10.30	7.5
5	0.0470	0.00310	9.61	0.350	39.00	10.60	7.5
6	0.0470	0.00210	9.58	0.370	37.00	10.50	7.0
TAILS	0.0430	0.00140					

SAMPLES TAKEN AT MIDNIGHT ON THE 12TH,

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE						
1	1563.3	2345.0	85.984	11.725	97.709	100.00
2	1517.5	2367.4	77.394	18.939	96.333	98.59
3	1416.0	2407.3	72.218	18.777	90.995	93.13
4	1389.0	2416.8	68.059	12.084	80.143	82.02
5	1517.5	2367.4	71.324	7.339	78.663	80.51
6	1416.0	2407.3	66.554	5.055	71.609	73.29
TAILS			0.000	0.000	0.000	0.00

CIL TANK PROFILE

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OCT. 13, 1988

TANK FEED	ASSAY SOLIDS	oz Au/TON SOLUTION	pH	CN lb/ton	% SOLIDS	D.O. mg/l
SURGE						
1	0.0475	0.0047			39.60	
2	0.0440	0.0069	10.90	0.2	39.00	10.40
3	0.0400	0.0064	9.39	0.27	37.00	10.40
4	0.0390	0.0046	9.61	0.36	36.50	10.30
5	0.0380	0.0032	9.61	0.35	39.00	10.60
6	0.0370	0.0018	9.58	0.37	37.00	10.50
TAILS	0.0380	0.0012				

TANK FEED	TONS SOLIDS	TONS SOLUTION	ozs Au SOLIDS	ozs Au SOLUTION	TOTAL ozs Au	PERCENT OF #1
SURGE						
1	1568.0	2352.0	74.481	11.055	85.536	100.00
2	1517.5	2367.4	66.772	16.335	83.106	97.16
3	1416.0	2407.3	56.642	15.407	72.048	84.23
4	1389.0	2416.8	54.169	11.117	65.286	76.33
5	1517.5	2367.4	57.666	7.576	65.242	76.27
6	1416.0	2407.3	52.394	4.333	56.727	66.32
TAILS						