

**G I A N T**  
**YELLOWKNIFE MINES LIMITED**

**MEMO TO:** J.S. McAlpine  
**CC:** S.E. El-Alfy; G. Doerksen; D. Bartlett; B. Cross  
**FROM:** D. Cooper  
**DATE:** November 08, 1988  
**SUBJECT:** TRP - PLANT MONTH END REPORT - OCTOBER 1988

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**GENERAL OPERATIONS**

Temperatures on October 1 fell below freezing with lows of -2 to -5°C and daytime highs of about +7°C. These temperatures were characteristic of the first week. A warming trend during the second week of the month resulted in record daytime highs of about 15°C. On October 17 daytime highs were about -3°C and lows of -7°C were reached. On October 18 daytime highs were about -9 °C and lows were -16°C. Nighttime lows of -10 to -20°C were characteristic of the rest of the month. On October 23 the daytime high was -16°C.

At least one D8 Cat was used pushing unfrozen tailings to feed the monitors for most of this month with the objective of maximizing throughput to achieve maximum recovered gold ounces. All limitations on feed rate were removed with the exception of not allowing the trash and safety screens to flood over.

Once the temperature dropped below -5°C severe icing conditions occurred on the trash and safety screens. Problems in this area became progressively worse. Below -10°C exposed nozzles at hose stations and spray water nozzles froze as well as gland water lines to the CIL feed pump and the safety screen Oversize Return Pump. Exposed tank and pumpbox nozzles such as pumpbox dump nozzles and CIL tank dump nozzles froze. Launder screens in the CIL tanks began icing severely. Leach air lines carrying compressed air to the bottom of the CIL tanks froze due to the entrained moisture carried in the Air system. The potable water system froze for the third time on October 17.

Monthly Weather Summary  
Yellowknife "A", N.W.T.  
OCTOBER 1988

Date	Maximum	Minimum	Rain (mm)	Snow (cm)	Precipitation (mm)
1	5.4	-1.4		tr	tr
2	3.9	-3.9			
3	8.4	3.2			
4	11.7	5.0			
5	19.0*	6.2			
6	16.4*	5.2			
7	15.2*	7.1			
8	13.9	3.3			
9	8.0	2.9			
10	8.4	1.4			
11	10.0	2.3	tr		tr
12	7.1	2.9	0.2		0.2
13	5.6	3.9	1.0		1.0
14	5.1	-0.2	12.6		12.6*
15	0.0	-3.5		tr	tr
16	-0.5	-3.5		0.4	0.4
17	0.0	-2.6		0.2	tr
18	-2.4	-7.2		1.8	1.1
19	-5.6	-9.0		tr	tr
20	-6.6	-9.9		tr	tr
21	-8.4	-14.1		tr	tr
22	-7.3	-13.3		tr	tr
23	-6.5	-11.8			
24	-4.0	-8.7		tr	tr
25	-4.3	-9.3		tr	tr
26	-8.4	-12.8		tr	tr
27	-10.3	-15.6		0.8	tr
28	-8.9	-13.8		1.4	0.6
29	-11.5	-17.1			
30	-8.2	-14.1		2.4	2.4
31	-7.0	-10.4		3.2	3.4

\* Indicates new record - Records have been retained since 1943

	<u>October 1988</u>	<u>Normal</u>
Mean Daily Maximum	1.2	1.2
Mean Daily Minimum	-4.5	-4.4
Mean Daily Temperature	-1.7	-1.6
Rainfall (mm)	13.8	12.8
Snowfall (cm)	10.2	23.1
Total Precipitation (mm)	21.7	34.5
Heating Degree Days	609.4	611.1
Bright Sunshine (hours)	111.1	58.0

On October 19 the loaded carbon screen froze preventing further transfer of carbon to the processing plant. The Polishing Pond was shutdown on this day. On October 19 the trommel screen cloth froze preventing passage of slurry. The trommel screen underflow pump froze during the time it was shutdown to remove screens from the trommel. This pump was replaced with a spare pump. From this point on the trommel screen was removed from service as a screening facility. The surface material being pushed into the mining area by the Cat was freezing quickly as was the water in the Toyo sumps. At noon on October 28 the tailings line froze somewhere in the section of pipe past the location of the "Y". At this time the tailings line was broken apart and drained. The process water system from the Northwest Pond was also shutdown and the pipeline drained. An attempt to pump out the surge tank was made but the CIL feed pump discharge line froze. After two days of steaming out the pipeline it was cleared and pumping from the surge tank resumed. The overflow pipeline from No. 6 CIL tank to the safety screens froze on October 29. A 5 X 4 pump was installed at the base of No. 6 CIL to drain this tank into No. 1. The surge tank was drained on October 29 to the mining area. On October 29 the potable water line froze solid and work was commenced to install the insulated, heat traced pipeline. In addition to the above 15 ft. X 30 ft. diameter process water tank became seriously frozen and a steam truck was called in to break up the bulk of the ice. No carbon could be transferred since October 18 and the stripping circuit has been shut down following Batch 88-40.

The barge at the South Pond was removed on October 29 and brought into the plant building to thaw. Preparations for removal of the barge at the Northwest Pond were underway by month end.

On October 31 No. 1 CIL tank agitator began tripping out. It was found that the leach air lines were frozen and a considerable amount of submerged ice was hitting the impellers causing the agitator to jump and finally trip out. The air lines were cleared and the agitator was again running normally. This unit however was drawing considerably more amperage than all remaining agitators. It was found that the tank density was in excess of 50% solids. This had to have resulted from pumping out from the bottom of No. 6 tank which is a further indication of inadequate mixing since at the time the feed was shut off all tanks showed densities of 25 to 30% solids.

The current plan to allow removal of loaded carbon and drain the CIL system is as follows:

1. Hoard in loaded carbon screen - complete October 31.
2. Install heat traced and insulated potable water line - complete November 05.
3. Install heat traced, insulated pipeline from South Pond for process water requirements - pre-insulated pipe ordered November 03.
4. Hoard in potable water tank.
5. Overflow potable water tank to process water tank to allow transfer of carbon from No. 6 CIL to Plant. This should allow No. 6 to be emptied and readied to accept stripped carbon while working on Item 3 above.
6. Order bags to allow removal of carbon from the CIL system if all else fails or if serious agitator problems occur.
7. Drain tanks in the following order No. 6, 1, 2, 3, 4, 5.
8. Each tank will be pumped from the bottom to the loaded carbon screen with the screen underflow returning to the same tank until the amount of carbon reporting to the screen decreases significantly. This will indicate that the bulk of the carbon has been removed. The screen underflow will then be routed to waste and the tank level allowed to drop. The tank will then be pumped out completely. This method should prevent large amounts of carbon from settling in the tanks when the agitators are shut off.

It was found this year that the best technique for shutting down would be to pump water into the system as soon as the feed is shut off. Flushing out the slurry would have some benefits in pumping the carbon out of the system. Another possibility would be to run only low grade material to the system for two days prior to shutdown allowing as much carbon as possible to be advanced forward to the CIL system.

9. With No. 6 tank empty, regenerated carbon could be returned to this tank. It would be preferable to screen the carbon being returned but may not be possible. If water is flushed through the system on start up next year most of the fines could be removed.
10. There is some risk of having all the carbon in tank No. 6 as in 1988 but as long as sufficient compressed air is available to ensure good mixing and good solids densities can be achieved early no major problems should occur.

#### METALLURGY

1. On October 5 the 0.85 mm opening urethane cloths on the east trash screen were replaced with the following:

Feed panel - 0.50 mm opening

Centre panel - 0.50 mm opening

Discharge panel - 40 mesh wire cloth with backing wire

The west screen remained with the 0.85 mm opening panels. Samples were taken on the screen underflow from both screens and screened through a 60 mesh laboratory sieve. It was only possible to do a visual inspection of the dried material due to the quantity of oversize sand entrained with the wood. Wood fibres passing the 0.85 mm screens were 1/4 to 1/2 inch in length and about 1/8 inch in width. There was a large proportion of these along with many smaller pieces.

The finer screen wood fibres were much like cotton batten and there was a much reduced quantity compared to the other screen. The open area of the 0.50 mm panels was about 32%. Since this test new panels have been made with about a 43% open area which is nearly identical with the 0.85 mm panels. These new panels were purchased for trial but the plant was shut down before they could be installed. One significant difference between the new panels and the old was the central ribbing. Two more ribs were fabricated which shortened the length of the slot and should prevent wood from forcing its way through. The combination of shorter slots and finer openings with greater open area should make this a very useful panel for this operation.

2. On October 8 the cyanide addition was put on a fixed flow rate. It was no longer controlled by feed tonnage or feed flow. This was done due to the wide variations in both and the reduced cyanide inventory. The cyanide flow rate was fixed to give about 14 USGPM. Cyanide concentration was equivalent to 0.4275 lbs of NaCN per US gallon of cyanide solution on 1 bin (3000 lbs) mixed per batch. The addition rate was about 8,000 to 9,000 lbs of cyanide per day.
3. During October the screen cloth on the CIL launder screens was wearing out almost as fast as they were changed. This made it difficult to maintain controllable carbon densities in the CIL tanks. The possibility of installing urethane panels will be investigated this winter and they may be tested on No. 6 tank first.
4. A six inch Krebs cyclone was installed on October 14 on the loaded carbon line feeding the acid wash tank. The cyclone was placed on its side to permit the underflow to access the acid wash tank without cutting holes in the ventilation hood. Only a couple of batches were actually tried but the cyclone worked well on wood removal. Entrained sand still passed to the cyclone underflow. About 70% of the wood in the feed reported to the cyclone overflow while no visible carbon was found. The cyclone was fed by the loaded carbon eductor located on the CIL tanks and enough pressure was provided to operate the cyclone effectively.
5. Bullion produced to October 1988:

<u>Bar No.</u>	<u>Gold</u>	<u>Assay Silver</u>	<u>Total</u>
TRP-001	745.01	187.49	932.50
002	745.23	185.48	930.71
003	664.13	161.63	825.76
004	669.04	166.32	835.36
005	676.40	262.22	938.62
006	684.30	243.38	927.68
007	688.72	247.91	936.63
008	688.93	245.98	934.91
009	645.86	299.29	945.15
010	645.63	295.81	941.44
011	643.19	297.47	940.66
012	591.43	357.57	949.00
013	591.80	354.71	946.51

The above shows a trend in the gold/silver ratio which as yet must be investigated. The total fineness has increased while the silver content of the bars has increased from less than 20% to over 35%. A general comment might be that gold/silver ratio is decreasing in the North Pond or that the Polishing Pond may have some effect on the ratio.

## MAINTENANCE

### A) Mechanical

1. Repairs to Toyo pumps.
2. Repairs to Toy pump discharge pipelines.
3. Repaired slurry recirculation line on pH control system.
4. Installation of framework for loaded carbon screen shelter.
5. Supports for monitors.
6. Repairs made to carbon fines removal screen on No. 6 CIL.
7. Moved second DSM screen from Pilot Plant to No. 6 CIL.
8. Building stairs for access to Monitor Water pumps.
9. New screen cloth installed on all spare launder screen frames.
10. New mechanical seal with water flush for Toyo.

### B) Electrical

1. Lighting.
2. Toyo pumps.
3. Air dryer installation and instrument air lines.
4. Motors:
  - changed 10 h.p. acid wash area sump pump motor - October-
  - changed 200 h.p. trash screen U/F pump motor - October 8.
  - changed motor on carbon fines removal screen on CIL #6.
  - Cyanide mix tank - agitator motor showing ground fault - motor replaced.
5. North Pond memory unit cable.
6. Power supply for electrowinning cells.
7. Lime system PLC.
8. Installed new High/Low Fire switch on Volcano unit.
9. High cyanide gas alarms installed in Shift Office.
10. Vehicle plug-ins installed.

### C) Instrumentation

1. Cyanide addition valves at CIL cleaned - installed new ball valves.
2. Calibrated electrowinning cell flowmeters.
3. Rebuilt caustic addition valve to acid wash surge tank.
4. Repairs ti No. 3 cyanide addition flowmeter.
5. Rewired strip vessel feed flowmeter.
6. Installed switch to change cyanide addition control from feed flow to feed tonnage basis.
7. Worked on Volcano modulating controller.

DOWNTIME RECORD

OCTOBER 1988

<u>DATE</u>	<u>HOURS</u>	<u>EXPLANATION</u>
Oct. 1	4.30	Low feed - North Pond Toyo down - electrical changed pump. Polishing Pond - repiping slurry line to trommel.
2	9.50	Low feed (as above).
	0.20	Cleaning safety screens.
3	2.50	Low feed - Polishing Pond still down for piping repairs.
4	0.50	Low feed.
5	3.00	Low feed - Polishing Pond - advancing monitor. - North Pond - Toyo tripped on overload, repairs to Flexhose.
8	4.90	Trash screen U/F pump motor changed, bearings shot.
10	2.40	Increased angle on safety screen, cleaning screens.
12	0.40	Low feed - moving crane, North Pond; broken pipeline Polishing Pond.
	0.90	Cleaning trash/safety screens.
13	0.30	Cleaning screens.
	0.60	Repairs to CIL feed pump gland.
14	0.10	Cleaning trash/safety screens.
	0.80	Changed 2 panels on No. 2 safety screen.
	0.60	Low feed - North Pond Toyo plugged.
15	0.50	Low feed - Repairs to slurry return line, pH control system.
19	19.60	Trommel screen, slurry lines, trommel U/F pump frozen.
20	10.50	Replaced trommel U/F pump.
22	8.50	Shut down plant at 3:40 p.m. for season.
23 to 31 to October 31.	24.00	24.00 hrs down per day - budgeted for operating
<hr/>		
	286.10	TOTAL
	457.90	Operating Hours
	61.55%	Availability



## DOWNTIME ANALYSIS

### 1. Summary

June to October	- Operating Hours (Budget)	3672.00
	Operating Hours (Actual)	3152.17
	Availability (%)	85.84
	Downtime Hours	519.83
	Downtime (%)	14.16

### 2. Breakdown

	<u>Total Downtime Hours</u>	<u>% of Total Downtime Hours</u>	<u>% Contribution to Downtime</u>
Plant - Electrical	8.00	1.54	0.22
Mechanical	29.72	5.72	0.81
Instrumentation	---	---	---
Operating	28.13	5.41	0.76
Modifications(1)	22.68	4.36	0.62
Mining	135.80	26.12	3.70
Water Supply	9.08	1.75	0.25
Power Failure	31.82	6.12	0.87
Early Winter Shutdown	224.50	43.19	6.11
Frozen Equipment	<u>30.10</u>	<u>5.79</u>	<u>0.82</u>
TOTAL	519.83	100.00	14.16

Don Cooper  
TRP Plant Superintendent

**REAGENT CONSUMPTION**

OCTOBER 1988

REAGENT	MONTH		YEAR TO DATE	
	LBS *(LITRES)	LBS/TON *(LITRES/TON)	LBS	LBS/TON
PROPANE*	100,290	0.643	272,359	0.273
CARBON	45,194	0.290	216,064	0.216
LIME	96,400	0.618	701,869	0.702
MURIATIC ACID	997	0.006	7,474	0.008
CAUSTIC SODA	17,861	0.114	135,426	0.136
SODIUM CYANIDE <sup>1</sup>	105,000	0.673	957,682	0.958
STEEL WOOL	30	0.0002	170	0.0002

<sup>1</sup> Sodium cyanide consumption for October was actually 162,000 lbs but it was reduced by 57,000 lbs to adjust for an error in the quantity reported as consumed in October.

TRP METALLURGICAL BALANCE  
(C.I.L.)

DATE: OCT. 31, 1988

DAY  
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RECOVERIES (%)	COMBINED GRADES oz/Ton Au.	AVAILABILITY (HRS/%)
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SOLIDS		
DISSOLUTION      0.00	HEADS              0.000	OP.HRS.(BUDG)      24.0
ADSORPTION       0.00	TAILS              0.000	OP.HRS.(ACT)       0.0
TOTAL              0.00	CIL RECOVERY	AVAIL.(%)           0.0
	TO CARBON          0.000 oz.	DOWNTIME(HRS)      24.00
SHUT DOWN FOR SEASON AT 3:40 PM. OCT. 22, 1988.		
CIL FEED SOLUTION ASSAY:      0.0000		

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MONTH TO DATE  
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RECOVERIES (%)	COMBINED GRADES oz/Ton Au..	AVAILABILITY (HRS/%)
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SOLIDS		
DISSOLUTION      26.71	HEADS              0.065	OP.HRS.(BUDG)      744
ADSORPTION       90.70	TAILS              0.048	OP.HRS.(ACT)       457.9
TOTAL              26.60	CIL RECOVERY	AVAIL.(%)           61.5
	TO CARBON          2694.14 oz.	DOWNTIME(HRS)      286.1

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YEAR TO DATE  
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RECOVERIES (%)	COMBINED GRADES oz/Ton Au..	AVAILABILITY (HRS/%)
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SOLIDS		
DISSOLUTION      29.82	HEADS              0.076	OP.HRS.(BUDG)      4416
ADSORPTION       72.32	TAILS              0.059	OP.HRS.(ACT)       3772.17
TOTAL              23.18	CIL RECOVERY	AVAIL.(%)           85.4
	TO CARBON          17695.52 oz.	DOWNTIME(HRS)      643.83

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TRP METALLURGICAL BALANCE  
(C.I.L.)

DAY  
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DATE: OCT. 31, 1988

FEED :				RECLAIM SOLUTION			TOTAL
Tons	Percent Solids	Ounces Au/Ton	Ounces Au.	Tons	Ounces Au/Ton	Ounces Au.	Ounces Au.
0	0.00	0.000	0.00	0.0	0.0000	0.00	0.00
TAILS :				TAILS SOLUTION			TOTAL
0	0.00	0.000	0.00	0.0	0.0000	0.00	0.00

MONTH TO DATE  
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FEED :				RECLAIM SOLUTION			TOTAL
Tons	Percent Solids	Ounces Au/Ton	Ounces Au.	Tons	Ounces Au/Ton	Ounces Au.	Ounces Au.
156044.8	38.80	0.063	9766.35	246149.7	0.0015	361.89	10128.24
TAILS :				TAILS SOLUTION			TOTAL
156044.8	38.80	0.046	7157.79	246149.7	0.0011	276.31	7434.10

YEAR TO DATE  
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FEED :				RECLAIM SOLUTION			TOTAL
Tons	Percent Solids	Ounces Au/Ton	Ounces Au.	Tons	Ounces Au/Ton	Ounces Au.	Ounces Au.
999339.1	33.34	0.074	73903.58	1997644.9	0.0012	2430.13	76333.71
TAILS :				TAILS SOLUTION			TOTAL
999339.1	33.34	0.052	51866.28	1997644.9	0.003	6771.91	58638.19

TRP METALLURGICAL BALANCE  
(STRIP CIRCUIT)

DAY BATCH No.88-41 IN PROCESS.

DATE: OCT 31, 1988.

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TONS OF CARBON (EST.)	LOADED CARBON		STRIPPED CARBON		CATHODE RECOVERED
	oz Au/TON	oz Au	oz Au/TON	oz Au	oz Au
0.000	0.000	0.000	0.000	0.000	0.000

STRIP CIRCUIT RECOVERY: ERR  
MONTH ( BATCH Nos.88-31 TO 88-40)  
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TONS OF CARBON (EST.)	LOADED CARBON		STRIPPED CARBON		CATHODE RECOVERED
	oz Au/TON	oz Au	oz Au/TON	oz Au	oz Au
43.282	53.698	2324.148	1.345	58.235	2265.913

STRIP CIRCUIT RECOVERY: 97.49

YEAR ( BATCH Nos.88-01 TO 88-40)  
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TONS OF CARBON (EST.)	LOADED CARBON		STRIPPED CARBON		CATHODE RECOVERED
	oz Au/TON	oz Au	oz Au/TON	oz Au	oz Au
176.587	50.428	8904.996	2.376	419.532	8488.212

STRIP CIRCUIT RECOVERY: 95.31  
TRP BULLION PRODUCED

OCTOBER 1988 ( BAR Nos. TRP-009 TO TRP-013)

TOTAL WEIGHT ozs.	ASSAY FINENESS		TROY OUNCES	
	GOLD	SILVER	GOLD	SILVER
3,642.680	628.517	319.119	2,289.485	1,162.450

YEAR TO DATE ( BAR Nos. TRP-001 TO TRP-013 )

TOTAL WEIGHT ozs.	ASSAY FINENESS		TROY OUNCES	
	GOLD	SILVER	GOLD	SILVER
9,468.938	659.320	253.195	6,243.059	2,397.489

CATHODES CURRENTLY CONTAIN (ozs Au): 2245.153

ESTIMATED CIL CARBON GOLD INVENTORY  
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DATE:  
OCT. 31, 1988

DAY

FROM INVENTORY	TO INVENTORY		NET CHANGE
CARBON TO STRIP oz Au	CIL RECOVERY TO CARBON oz Au	STRIPPED CARBON oz Au	PLUS (MINUS) oz Au
0.000	0.000	0.000	0.000

MONTH

FROM INVENTORY	TO INVENTORY		NET CHANGE
CARBON TO STRIP oz Au	CIL RECOVERY TO CARBON oz Au	STRIPPED CARBON oz Au	PLUS (MINUS) oz Au
2324.148	2694.16	58.235	428.247

YEAR

FROM INVENTORY	TO INVENTORY		NET CHANGE
CARBON TO STRIP oz Au	CIL RECOVERY TO CARBON oz Au	STRIPPED CARBON oz Au	PLUS (MINUS) oz Au
8905	17695.55	419.532	9269.547

CURRENT CIL CARBON GOLD INVENTORY oz Au: 9269.547

ADJUSTMENTS WITH ROYAL CANADIAN MINT ON REFINED DORE  
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MONTH : OCTOBER 1988

BAR NUMBERS	GOLD ozs	SILVER ozs
TRP001 to 002	(2.185)	2.62
TRP003 to 004	2.204	8.50
TRP005 to 008	(1.072)	2.14
NET	(1.053)	13.26

The above numbers were applied to the October Production data.

TRP METALLURGICAL BALANCE  
(C.I.L.)

DATE: OCT. 22, 1988

DAY  
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RECOVERIES (%)		COMBINED GRADES oz/Ton Au.		AVAILABILITY (HRS/%)	
SOLIDS					
DISSOLUTION	23.19	HEADS	0.054	OP.HRS.(BUDG)	24.0
ADSORPTION	85.39	TAILS	0.041	OP.HRS.(ACT)	15.5
TOTAL	24.49	CIL RECOVERY		AVAIL.(%)	64.6
		TO CARBON	26.526 oz.	DOWNTIME(HRS)	8.50
SHUT DOWN FOR SEASON AT 3:40 PM.					
CIL FEED SOLUTION ASSAY: 0.0023					

MONTH TO DATE  
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RECOVERIES (%)		COMBINED GRADES oz/Ton Au..		AVAILABILITY (HRS/%)	
SOLIDS					
DISSOLUTION	26.71	HEADS	0.065	OP.HRS.(BUDG)	528
ADSORPTION	90.70	TAILS	0.048	OP.HRS.(ACT)	457.9
TOTAL	26.60	CIL RECOVERY		AVAIL.(%)	86.7
		TO CARBON	2694.14 oz.	DOWNTIME(HRS)	70.1

YEAR TO DATE  
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RECOVERIES (%)		COMBINED GRADES oz/Ton Au..		AVAILABILITY (HRS/%)	
SOLIDS					
DISSOLUTION	29.82	HEADS	0.076	OP.HRS.(BUDG)	4200
ADSORPTION	72.32	TAILS	0.059	OP.HRS.(ACT)	3772.17
TOTAL	23.18	CIL RECOVERY		AVAIL.(%)	89.8
		TO CARBON	17695.52 oz.	DOWNTIME(HRS)	427.83



TRP METALLURGICAL BALANCE  
(C.I.L.)

DAY  
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DATE: OCT. 22, 1980

FEED :				RECLAIM SOLUTION			TOTAL
Tons	Percent Solids	Ounces Au/Ton	Ounces Au.	Tons	Ounces Au/Ton	Ounces Au.	Ounces Au.
1995.2	26.51	0.050	100.57	5532.1	0.0014	7.74	108.31
TAILS :				TAILS SOLUTION			TOTAL
1995.2	26.51	0.039	77.25	5532.1	0.0008	4.54	81.79

MONTH TO DATE  
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FEED :				RECLAIM SOLUTION			TOTAL
Tons	Percent Solids	Ounces Au/Ton	Ounces Au.	Tons	Ounces Au/Ton	Ounces Au.	Ounces Au.
156044.8	38.80	0.063	9766.35	246149.7	0.0015	361.89	10128.24
TAILS :				TAILS SOLUTION			TOTAL
156044.8	38.80	0.046	7157.79	246149.7	0.0011	276.31	7434.10

YEAR TO DATE  
\*\*\*\*\*

FEED :				RECLAIM SOLUTION			TOTAL
Tons	Percent Solids	Ounces Au/Ton	Ounces Au.	Tons	Ounces Au/Ton	Ounces Au.	Ounces Au.
999339.1	33.34	0.074	73903.58	1997644.9	0.0012	2430.13	76333.71
TAILS :				TAILS SOLUTION			TOTAL
999339.1	33.34	0.052	51866.20	1997644.9	0.003	6771.91	50638.19

TRP METALLURGICAL BALANCE  
(STRIP CIRCUIT)

DAY BATCH No.88-41 IN PROCESS.  
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DATE: OCT 22, 1988.

TONS OF CARBON (EST.)	LOADED CARBON		STRIPPED CARBON		CATHODE RECOVERED
	oz Au/TON	oz Au	oz Au/TON	oz Au	oz Au
0.000	0.000	0.000	0.000	0.000	0.000

STRIP CIRCUIT RECOVERY: ERR  
MONTH ( BATCH Nos.88-31 TO 88-40)  
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TONS OF CARBON (EST.)	LOADED CARBON		STRIPPED CARBON		CATHODE RECOVERED
	oz Au/TON	oz Au	oz Au/TON	oz Au	oz Au
43.282	53.698	2324.148	1.345	58.235	2265.913

STRIP CIRCUIT RECOVERY: 97.49

YEAR ( BATCH Nos.88-01 TO 88-40)  
\*\*\*\*

TONS OF CARBON (EST.)	LOADED CARBON		STRIPPED CARBON		CATHODE RECOVERED
	oz Au/TON	oz Au	oz Au/TON	oz Au	oz Au
176.587	50.428	8904.996	2.376	419.532	8488.212

STRIP CIRCUIT RECOVERY: 95.31  
TRP BULLION PRODUCED

OCTOBER 1988 ( BAR Nos. TRP-009 TO TRP-011)

TOTAL WEIGHT ozs.	ASSAY FINENESS		TROY OUNCES	
	GOLD	SILVER	GOLD	SILVER
2,532.737	645.124	297.511	1,633.930	753.516

YEAR TO DATE ( BAR Nos. TRP-001 TO TRP-011 )

TOTAL WEIGHT ozs.	ASSAY FINENESS		TROY OUNCES	
	GOLD	SILVER	GOLD	SILVER
8,350.995	668.442	237.894	5,587.504	1,988.555

CATHODES CURRENTLY CONTAIN (ozs Au): 2900.708

ESTIMATED CIL CARBON GOLD INVENTORY  
\*\*\*\*\*

DATE:  
OCT. 22, 1988

DAY

FROM INVENTORY	TO INVENTORY		NET CHANGE
CARBON TO STRIP oz Au	CIL RECOVERY TO CARBON oz Au	STRIPPED CARBON oz Au	PLUS (MINUS) oz Au
0.000	26.526	0.000	26.526

MONTH

FROM INVENTORY	TO INVENTORY		NET CHANGE
CARBON TO STRIP oz Au	CIL RECOVERY TO CARBON oz Au	STRIPPED CARBON oz Au	PLUS (MINUS) oz Au
2324.148	2694.16	58.235	428.247

YEAR

FROM INVENTORY	TO INVENTORY		NET CHANGE
CARBON TO STRIP oz Au	CIL RECOVERY TO CARBON oz Au	STRIPPED CARBON oz Au	PLUS (MINUS) oz Au
8905	17695.55	419.532	9269.547

CURRENT CIL CARBON GOLD INVENTORY oz Au: 9269.547