MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES MT. POLLEY MINE

N. ROSE GEOTECHNICAL INSPECTION OF OPEN PIT, WASTE DUMPS AND TAILINGS DAM JULY 31, 2007

FIELD NOTES AND PHOTOS

MP00029

PROJECT 2715 JULY 2007

GEOTECHNICAL INSPECTION OF MOUNT POLLEY MINE – July 31, 2007

Conducted by: Nick Rose, P.Eng. – Piteau Associates Engineering Ltd. (Contract to MEMPR) Accompanied by: Bruce Milligan – MEMPR Prince George District Health and Safety Inspector

Pre-Inspection Meeting

Prior to the inspection, general discussions were held with Tim Fisch (General Manager), Art Frye (Mine Operations Manager) and Dayle Rusk (Chief of Technical Services) to discuss the status of the mine plan, TSF and areas of instability. A summary of items discusses is as follows:

Wight Pit

- o Southeast overburden Al Chance of Golder to provide final slope design report.
- Four prisms recently placed on west wall due to instability (baseline monitoring was not established last fall following last inspection as per order)
- Seven more prisms installed since instability noticed and all 11 are being monitored daily with monitoring spreadsheets sent to Al Chance weekly. Slope distance providing best indicator of movement.
- Perimeter ditching blasted in rocky sections water channeling into ground from diversion.
- o BAT construction from Kamloops being contracted to install horizontal drainholes.
- May need offload cut if movements increase.
- Single benching or stepout may be required.
- o Wireline extensometer(s) to be installed at crest as alternate monitoring.

Bell Pit

- Offloaded west wall behind east dipping fault 41° IRA down to 2 benches from pit floor.
- Upper east wall being monitored, but not moving.

Springer Pit

- Golder going to do geotechnical drilling and ATV/OTV borehole surveys.
- Golder to prepare pit designs
- Bigger pit to be planned and dumps for permit application.
- o Interim mining will use north and east Bell dumps.

Inspection Notes Corresponding to Station Locations Shown on attached Figs. 1 to 3

- Station 1: Photo of pioneering of upper benches in Springer Pit.
- Station 2: Photo of offload cut that was implemented to stabilize slope displacements on west wall (behind east dipping structure observed during last inspection).
- Station 3: Inspected area of proposed crest of Springer pit marked with stakes.
- Station 4: Panorama of Bell Pit. Notice northwest dipping structure in west wall and location of southwest offload cut. Previous instability on upper east wall is resulting in filled catch berms. Sloughing on bench above shovel related to steeply dipping north trending fault. Intermediate west dipping joint set on east wall shall be mapped to determine possible impacts on bench designs. Bench crests shall be scaled with the shovel bucket and toes cleared during excavation to improve catchment for potential rockfalls. Extra precaution shall be taken while operating near the highwall in this area.

- Station 5: The location of the Heap Leach test pad and proposed heap leach pad was inspected.

 Baseline monitoring of possible waste dump settlements shall be implemented and provided to the heap leach design consultant.
- Station 6: Photo of East dump toe lifts to flatten overall slope for heap leach construction and to achieve flatter reclamation angle. Panorama of Southeast Zone Pit area from Northeast Dump. Notice new Northeast Zone Dump Extension stockpiling overburden for reclamation.
- Station 7: Photo of TSF haulroad access and access to dump extension. Measured 12° to TSF Haulroad with clinometer.
- Station 8: Wight Pit: Panorama from 912.5m Level.
 - Need Golder design for final southeast overburden slope.
 - o Prisms currently located on 900 and 972m Levels.
 - If safe access available, prism monitoring shall be established on the 924m Bench, north of east-west trending dyke.
 - Dykes/faults to be located on a map and correlated with area of current instability to determine if additional prism monitoring is required.
 - Seepage noted on southeast wall below current overburden contact.
 - southeast pumps on timer, 15 hp and 5 hp pumps. Probes close together to cycle on-off.
- Station 9: Wight Pit inspection of west wall pit crest area.
 - Major cracks behind pit crest following trend of dykes/faults.
 - Need monitoring to delineate bounds of current movement (i.e., prisms located on outside of major structures as well as within).
 - o The pit crest area shall be inspected regularly for changes in slope conditions.
 - Slope monitoring is being conducted daily during mining and is being reviewed weekly by the design consultant.
 - Extensometers/crack monitors to be implemented as supplementary means of manual monitoring.
 - Movement rate thresholds and operational response procedures shall be developed for the west wall instability and submitted to the Ministry within 15 days of receipt of this report.
- Station 10: Additional tension cracks observed beyond the limits observed by mine personnel and design consultant. Crack locations to be surveyed and plotted on a plan map and correlated with faults/dykes. Additional prisms to be located within and outside tension cracks.
- Station 11: Water ditching may be concentrating surface runoff in headscarp area. Alternate diversion of surface water should be considered.
- Station 12: Approximately 10 to 15cm of downward displacement noticed on east-west trending fault on southern portion of instability.
- Station 13: North bounding fault on northwest wall forms dyke on northeast wall east-west trend.

Meeting with Ron Martel 2pm Regarding TSF

A meeting was held with Ron Martel (Environmental Superintendent) prior to inspection of the TSF with pertinent discussions summarized as follows:

- A permit application was submitted to Chris Carr for the North Boundary Road, but no response was received prior to Chris leaving MEMPR.
- Approximately 4Mt of face rock has been placed on the downstream shell.
- Dam Safety Review by AMEC:
 - Freeboard and beach management were brought up as important issues in AMEC's opinion.

- A buttress design may be required on final design to provide increased stability for lacustrine deposits.
- AMEC felt that the dam design is robust and well managed.
- Lake Excavating is being contracted for construction works.
- Stage 6 design report being submitted to Ministry.
- Station 14: Photo of borrow pit area south of TSF. Panorama of Main Dam and impoundment. Upstream (U) Zone, 8m till core zone. Till zone is able to be narrowed to 5m if building all zones simultaneously at same height. This is included in Stage 6 permit application. Main Dam at 950m to 951m in 6 weeks. Should be able to manage pond levels until next spring at 951m crest.
- Station 15: Photo of piezometers on Main embankment.
- Station 16: Photo of South embankment filter and transition zones, compaction.
- Station 17: Seepage collection pond at toe of Main Dam. Discharge permit in place, but not discharging to environment.

Knight-Piesold staff engineer Eric Coffin indicated that 700 nuclear densometer tests have been taken this year, every 50m. Grain size analyses and other QA/QC indicate specifications being met.

Close-out Meeting

Attendees: Tim Fisch, Art Frye, Dayle Rusk, Bruce Milligan (MEMPR District Inspector).

Bell Pit

- Lower east wall intermediate dipping joint set to be mapped and assessed with respect to potential influence on bench designs.
- Extra caution shall be taken while operating below east raveling slope.

Wight Pit

- Design report required for southeast overburden slope.
- Monitoring threshold and operational response criteria required for west wall instability.
- Monitoring (daily) and inspection of crest area to be conducted regularly.
- Surface water control to reduce infiltration.

Tailings Storage Facility

- Supervision appears adequate.
- Monitoring as per OMS manual.





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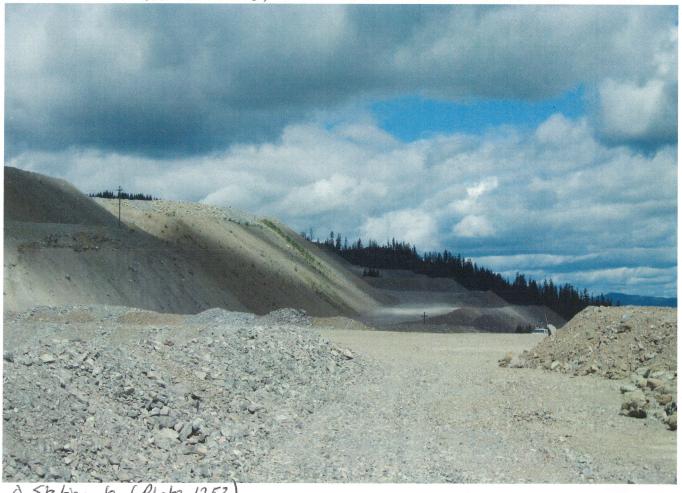


1 Station 2 (Photos 1235-1236)





2) Station 4 (Photo 1245)



D Station to (Photo 1253)



DSPatron 6 (Photos 1246 1252)



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D Station 9 (Photo 1272)



a Station 9 (Photo 1273)





D Station 10 (Photo 1280)



A Station 11 (Photo 1281)



D Station 11a (Photo 1262)



1 Station 11 (Photo 1283)



D Station 12 (Photo 1284)



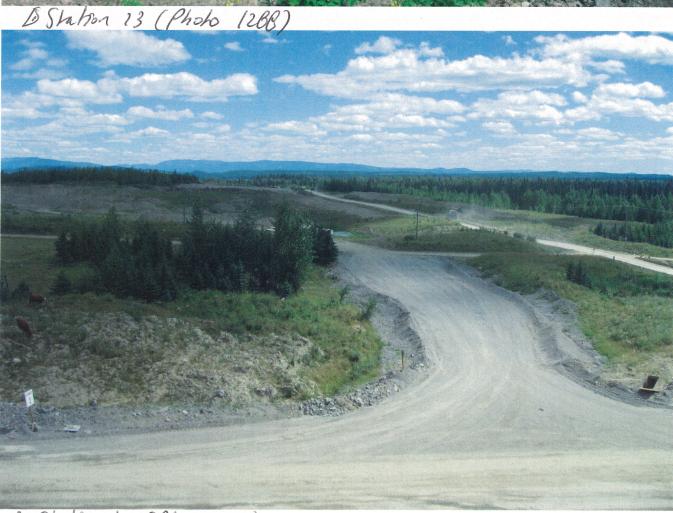
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& Station 13a (Photo 1797)

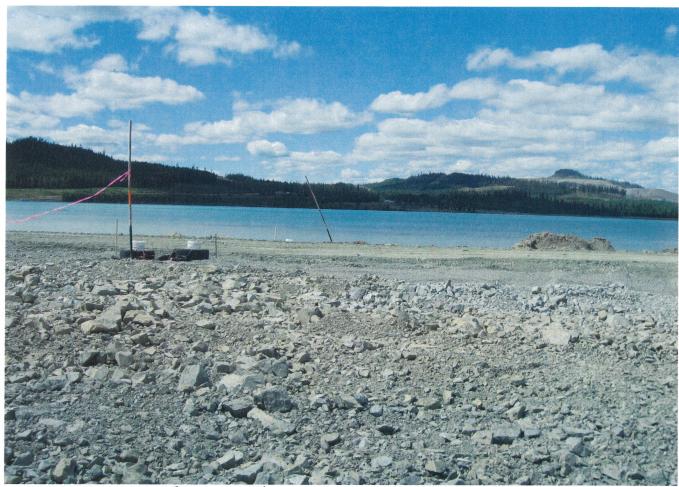




& Station 14 (Photo 1289)



12 Station 14 (Photos 1290-1296)



@ Shahim 15 (Photo 1297)



1 Station 16 (Photo 129B)



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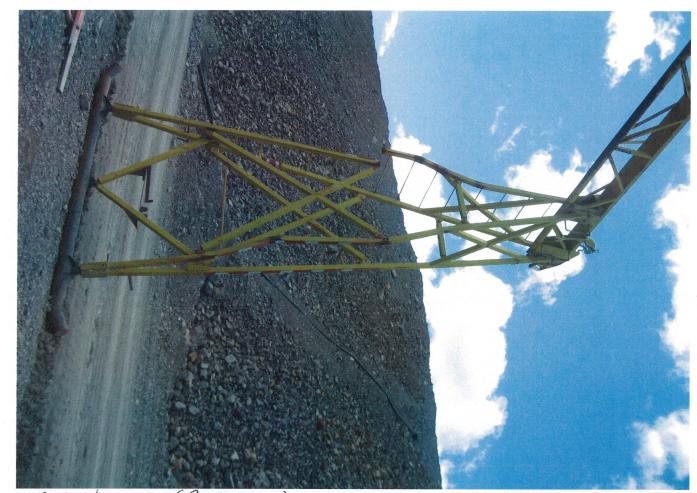
16 (Pholo 1300)



2 Station 17 (Photos 1301 to 1305)



15 Station 17 (Pholos 1306-1311)



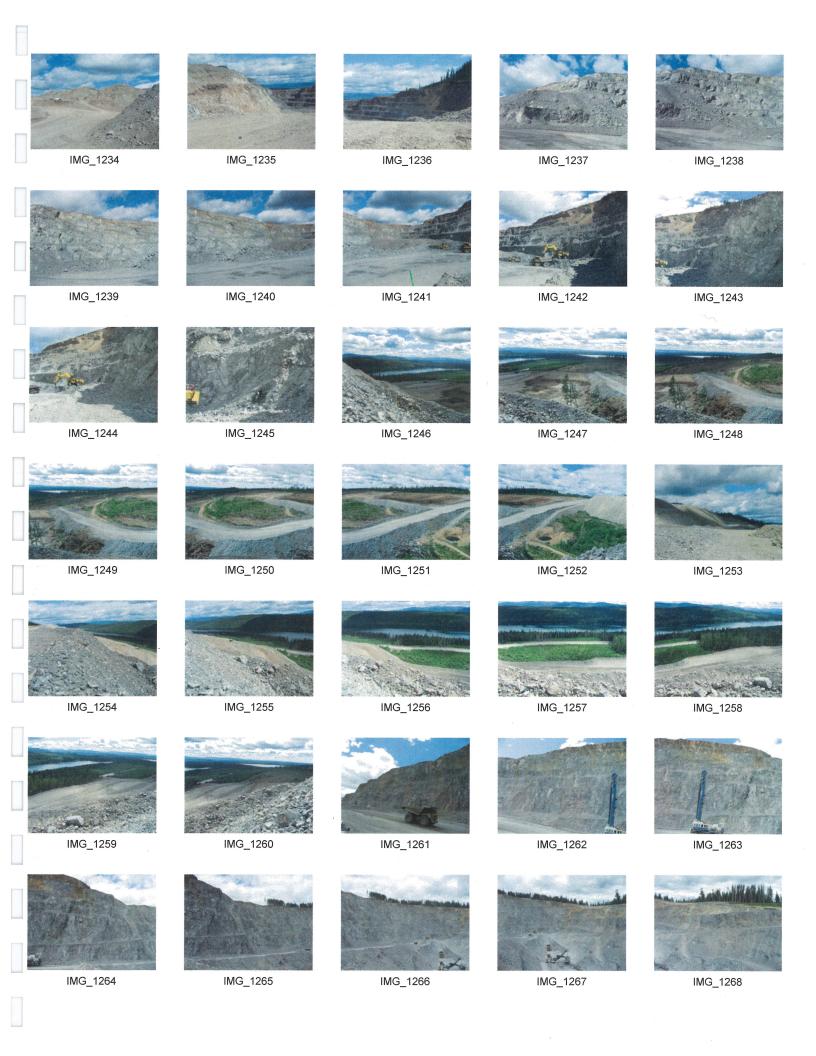
DStation 17 (Photo 1312)



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D Station 17 (Photo 13 H)









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July 3/107

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KP Mount Polley Mine Field Office Tel: +1 (250) 790 2215 (Ext.171)

MOUNT POLLEY MINE TSF STAGE 5 EXPANSION SITE MEMORANDUM

TO: Knight Piésold Ltd.

DATE: July 31, 2007

ATTN: Les Galbraith, KP Vancouver

FILE NO: VA101-1/14.F01,F02,F05.F08

CC: Ken Brouwer, KP Vancouver / Ron Martel, MPMC / Matt Silbernagel, MPMC / Carolyn Grisé, KP Vancouver

SUBJECT:

TAILINGS STORAGE FACILITY STAGE 5 EXPANSION WEEKLY PROGRESS REPORT – JULY 23 to 29, 2007

1.0 **GENERAL**

This weekly report covers the period between July 23 and July 29, 2007.

1.1 PERSONNEL

The Knight Piésold Ltd. (KP) personnel on site for this reporting period include:

Eric Coffin, Staff Engineer, E.I.T.

The Mount Polley Mining Corp. (MPMC) personnel on site for this reporting period include:

- Tim Fisch, Mine Manager
- Art Frye, Manager of Operations
- Ron Martel, Environmental Superintendent
- Matt Silbernagel, Project Coordinator
- · Roy Rich, Tailings Dam Foreman
- Kelly Rimmer, Tailings Dam Foreman
- Bob McGaw, Tailings Dam Foreman

1.2 **WEATHER**

This reporting period consisted of temperatures reaching the low 30's with overnight lows hovering around 10 degrees Celsius. No rain fell during this period.

2.0 **SAFETY**

During this period, the heat and dry conditions resulted in large dust clouds to form in areas of high traffic. Circulation of the water truck was essential, to minimize the dusting and enhance visibility for vehicle traffic in these areas.

Necessary safety precautions were performed during all activities on site.

3.0 ENVIRONMENTAL / GROUND CONDITIONS

Before the placement of Zone S material on the Perimeter Embankment, it was important for the water truck to make a pass over the already placed Zone S material as it had dried up and began to dust. This remains to be a delicate procedure as too much water can cause the Zones S material to become too soft and have too much moisture, which then can create compaction problems.



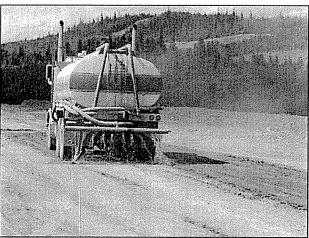


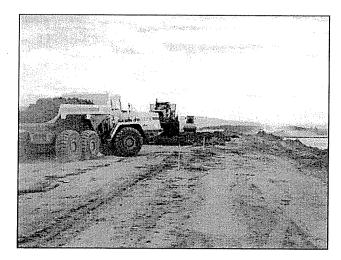
Photo 1 & 2: Water placed on the Zone S material to add moisture to the top layer of till

4.0 CONSTRUCTION ACTIVITIES - MPMC / LAKE EXCAVATING

Mount Polley and Lake Excavating worked together to place Zone S, F, T, and FT in the areas that were provided in the TSF weekly plan. They will continue to work together until further contract revisions.

4.1 ZONE S CONSTRUCTION PROGRESS

• Zone S material was extracted from Borrow Area #3, hauled to the Perimeter Embankment, placed with the D9 CAT and compacted with a 10 tonne vibratory roller. The procedure for placing the Zone S material on . Perimeter Embankment has been to place 0.3 m lifts for approximately 200 m until an approximate elevation of 950.1 m. The width of the Zone S placement has been modified to achieve a 5 meter width at the 951 m elevation as per the design change on June 27th, 2007. This will build up the Zone S material approximately 1.2 m higher then the placed F and T which will allow for 2 lifts of Zone F and T to be placed against the Zone S material. Placement of Zone S material has reached CH. 37+00 to elevation 950.1 and will continue along the Perimeter Embankment until CH. 46+00. See table 2.2 for total Zone S placed.



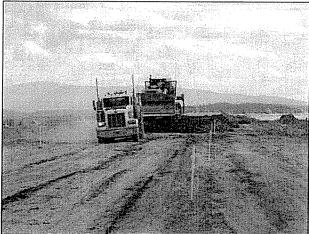


Photo 3: Zone S placement on the PE

Photo 4: Zone S placement on PE

4.2 ZONE F AND T CONSTRUCTION PROGRESS

- Zone F and T was placed on the South Embankment between CH 9+50 and CH. 10+75 in 0.6 m lifts from 948.0 m to 950.5 m. Before material could be placed the till needed to be cut back to competent material. Zone F was brought to the same elevation as the Zone S material which is at approximately 950.5 m. Material was placed at a minimum width of 1 m. See table 2.2 for total Zone F and T placed.
- Zone T was placed from CH 6+00 to 6+50 on top of the Zone FT material. Material was placed in 1.0 m lift and compacted.
- The stockpile for the Zone F material has been depleted. The last filter run produced approximately 14,000 tonnes of Zone F material and records show that 4,600 tonnes was hauled to the TSF. The TSF is currently waiting for more filter material to be crushed by MPMC to be able to continue on with Zone F placement.

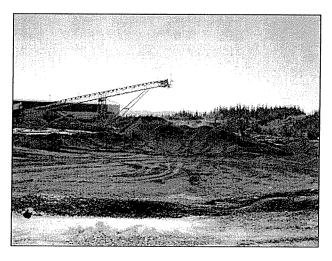


Photo 5: Zone F stockpile depleted (July 25th)

4.3 ZONE U / SAND CELL CONSTRUCTION PROGRESS

- No Zone U was hauled or placed during this reporting period.
- Sand cell preparation began on the South Embankment late in the period. Rock was laid as a foundation
 for the first cell and the sand berms were built. The first cells dimensions are approximately 150 m long by
 15 m wide. The sand cells are expected to begin early in the next reporting period.

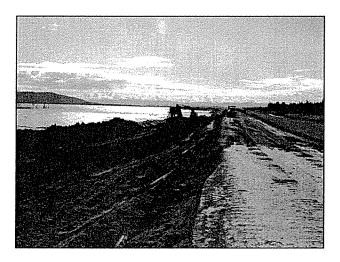


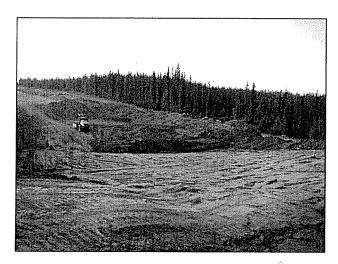
Photo 6: Sand cell preparation on South Embankment

4.4 ZONE C CONSTRUCTION PROGRESS

 Zone C was placed on the South Embankment between CH. 7+00 and 7+25 in a 2 m lift. Zone C was only hauled to the TSF on Monday, July 23rd. Rock will have to hauled more frequently in order to keep pace with the placement of the other TSF materials. See table 2 for total Zone C placed.

4.5 ZONE FT CONSTRUCTION PROGRESS

Zone FT was placed on the South Embankment from CH 6+00 to 6+50. Material was placed 0.3 m in
depth and compacted with a 10 tonne vibratory roller. Before the material was placed the surface was
cleared of any organics and topsoil. A certificate of acceptance of the subgrade surface was signed by the
engineer and the TSF foreman and filed on site.



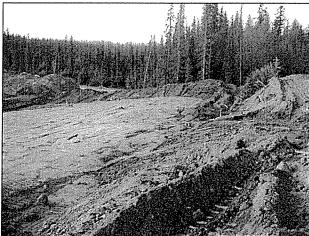


Photo 7 & 8: Foundation preparation on the SE

4.6 FOUNDATION DRAIN CONSTRUCTION PROGRESS

During the last few days of the reporting period the foundation drain on the South Embankment was
extended up the abutment from CH 6+00 to 6+50. The ditch was excavated 1.2 m in depth up the existing
slope and 0.2 m of Zone F was placed and packed with a 2 tonne vibratory hand packer. Next, a 6"
perforated pipe was laid and connected to the existing foundation drain pipe. Zone F was then placed on
top of the pipe and compacted in two separate lifts.





Photo 9 & 10: Foundation drain on the SE

5.0 TAILINGS DISCHARGE LOCATION

 The tailings discharge location remained on the North end of the South Embankment for this reporting period.

6.0 TSF POND ELEVATION

Recent tailings pond water elevations are shown in Table 1:

Table 1 - Recent tailings pond water elevations

Date	Water Elevation (m)	
02-July-07	946.97	
09-Jul-07	947.03	
16-Jul-07	947.08	
22-Jul-07	947.09	
28-Jul-07	947.09	

7.0 TSF CONSTRUCTION VOLUMES

TSF construction material volumes placed over the course of this reporting period are shown in Table 2.0. Also shown is the total volume placed in the month of July in table 2.1.

Table 2.0 - Volume of materials placed between July 23 and 29, 2007

	Volume (m³)		
Material	Perimeter Embankment	South Embankment	
Zone F	0	300	
Zone T	0	1600	
Zone C	0	1200	
Zone S	4970	0	
Zone FT	0	550	

Table 2.1 - Volume of materials placed between July 2 and July 29, 2007

	Volume (m³)			
Material	Perimeter Embankment	South Embankment	Main Embankment	TOTAL
Zone F	2,000	300	200	2,500
Zone T	5,200	1,600	400	7,200
Zone C	4,000	3,900	0	7,900
Zone S	7,200	13,700	0	20,900
Zone U	3,400	0	4,500	7,900
Zone FT	0	550	0	550

Volumes listed in Table 2 were computed using basic 3D geometric shapes, with dimensions derived from GPS survey methods.

8.0 **CONSTRUCTION CONTRACTING**

Lake Excavating Ltd. continued to help various TSF construction activities.

The KODE crusher is currently crushing ore for the Heap Leach Pad.

9.0 **ENGINEERING RELATED ISSUES/PROJECTS**

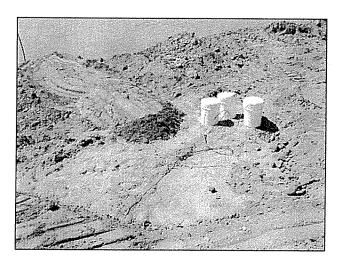
Frequent inspection was necessary prior to and during the placement of TSF construction material along the Perimeter and South Embankments. Zone F lift extents were marked with spray paint to indicate lift heights. Zone T material was inspected for clusters of boulders greater than six inches in diameter. Packing was monitored periodically to ensure four passes were being conducted on Zone F and T material. Existing Zone S material was inspected prior to the placement of new material adjacent to it. All construction materials were inspected for consistency. Zone S compaction was tested upon completion of every 0.3 m lift.

9.1 **PIEZOMETER INSTALLATIONS**

Piezometers were installed on the Perimeter Embankment on three planes, G, D, and H. A total of 10 piezometers were installed on Saturday and Sunday at the end of the reporting period. Initial readings were taken before the installation and will be inputted into excel on the site computer. Piezometers were installed in areas according to design and the exact location of each piezometer was surveyed with the GPS. Upon completion of installation, the piezometer wires were placed in 5 gallon pails and blocked off with flagging tape.

Notes:

- Piezometer cables do not run completely through the Zone S material.
- Filter cloth was not placed around the wires in the Zone S material.



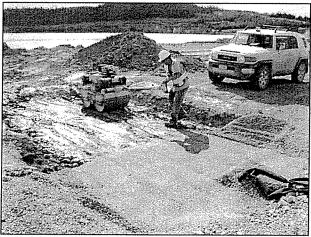
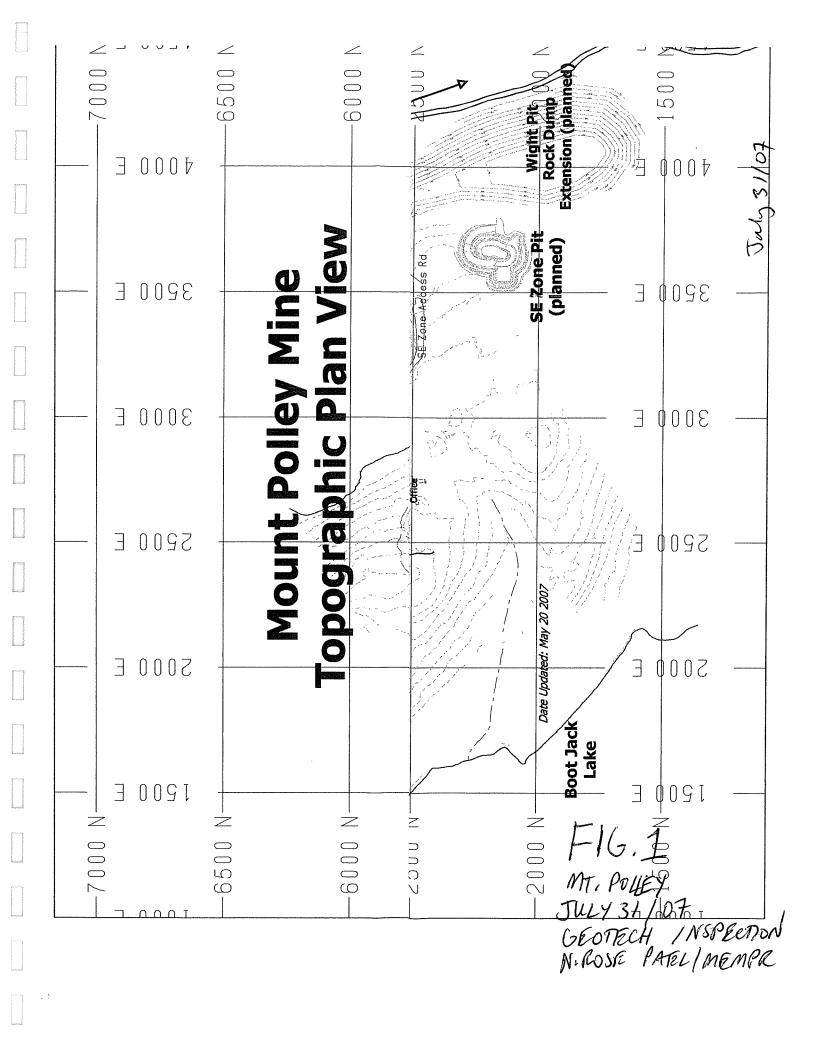
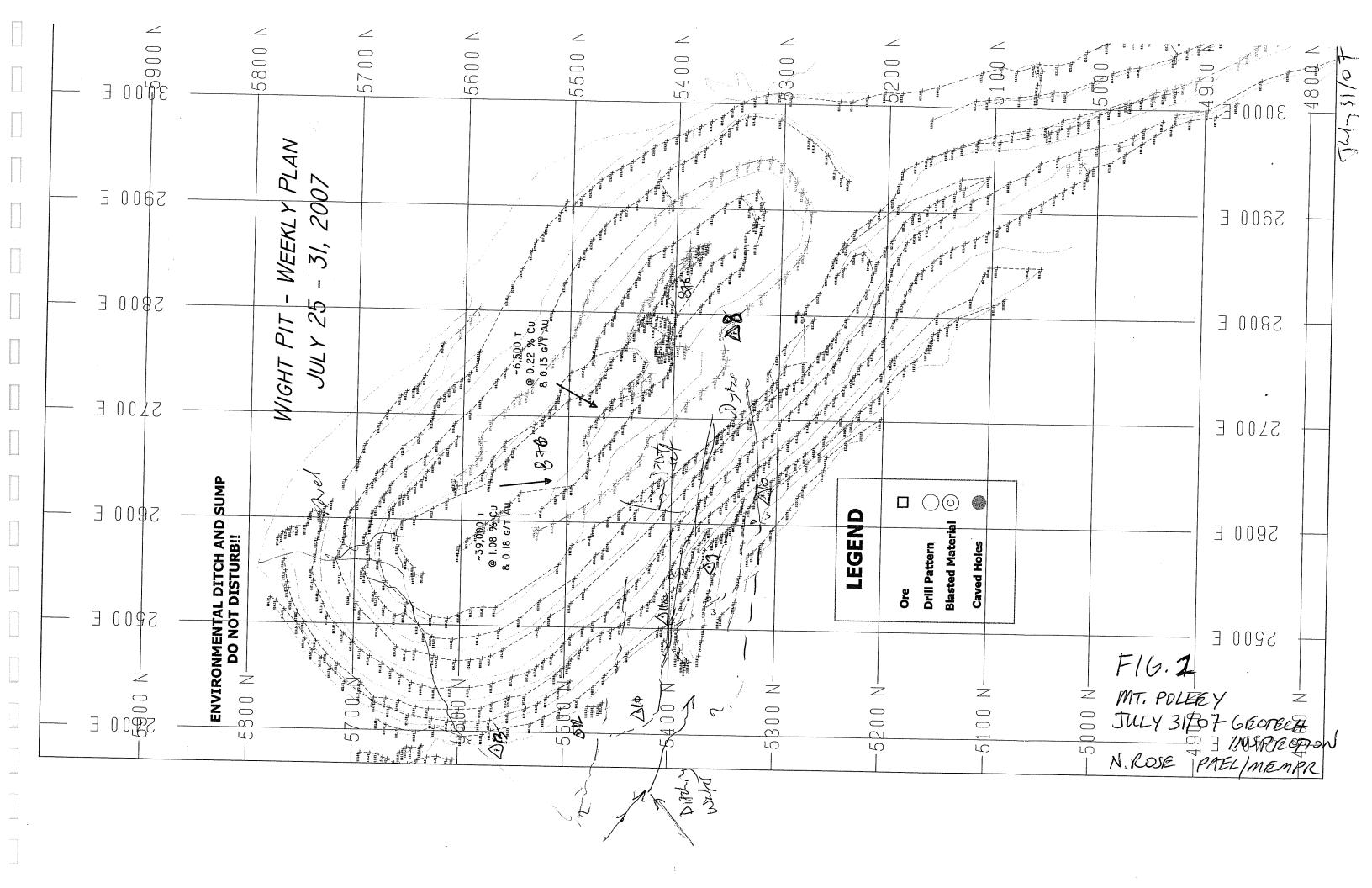
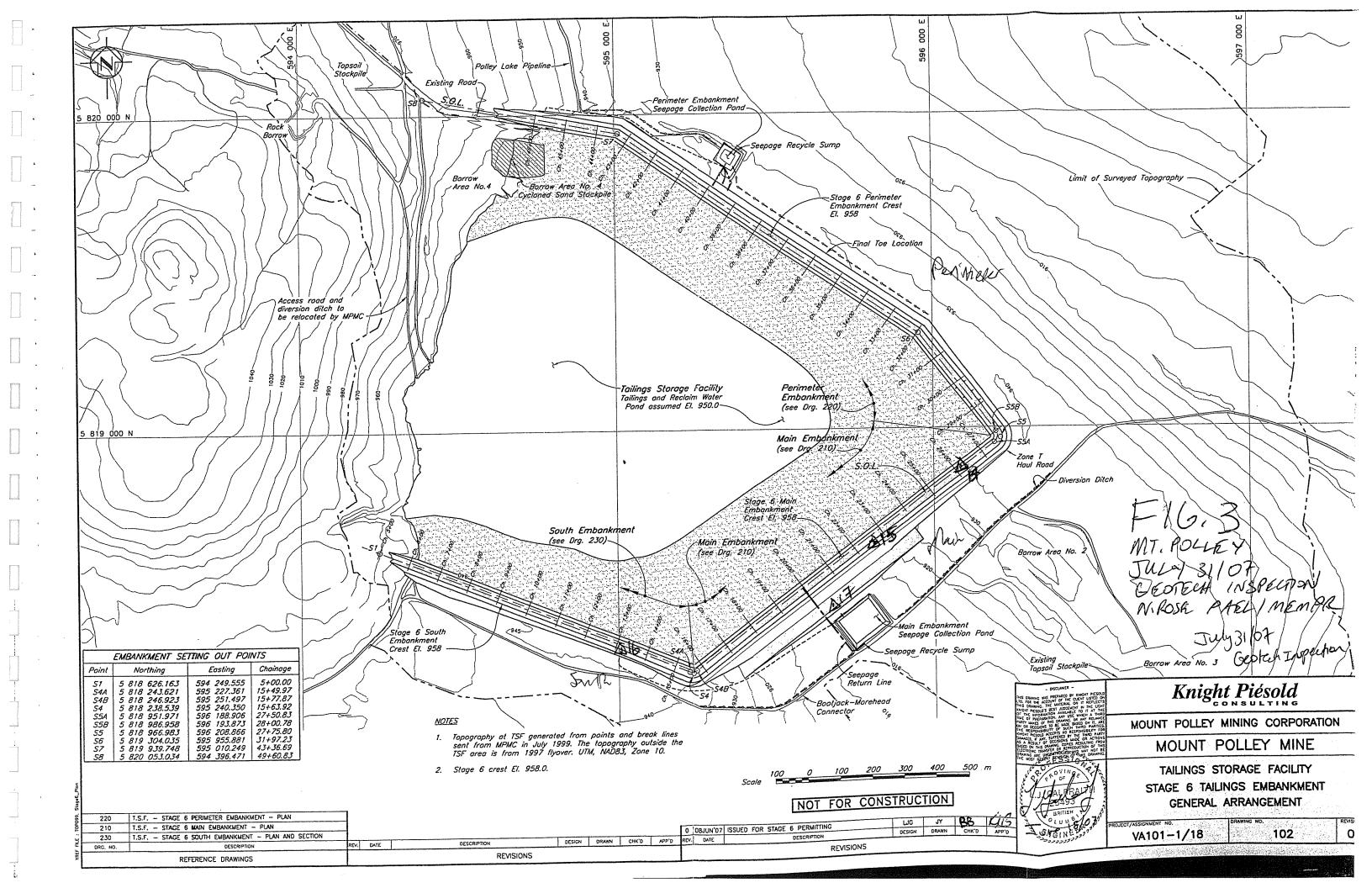


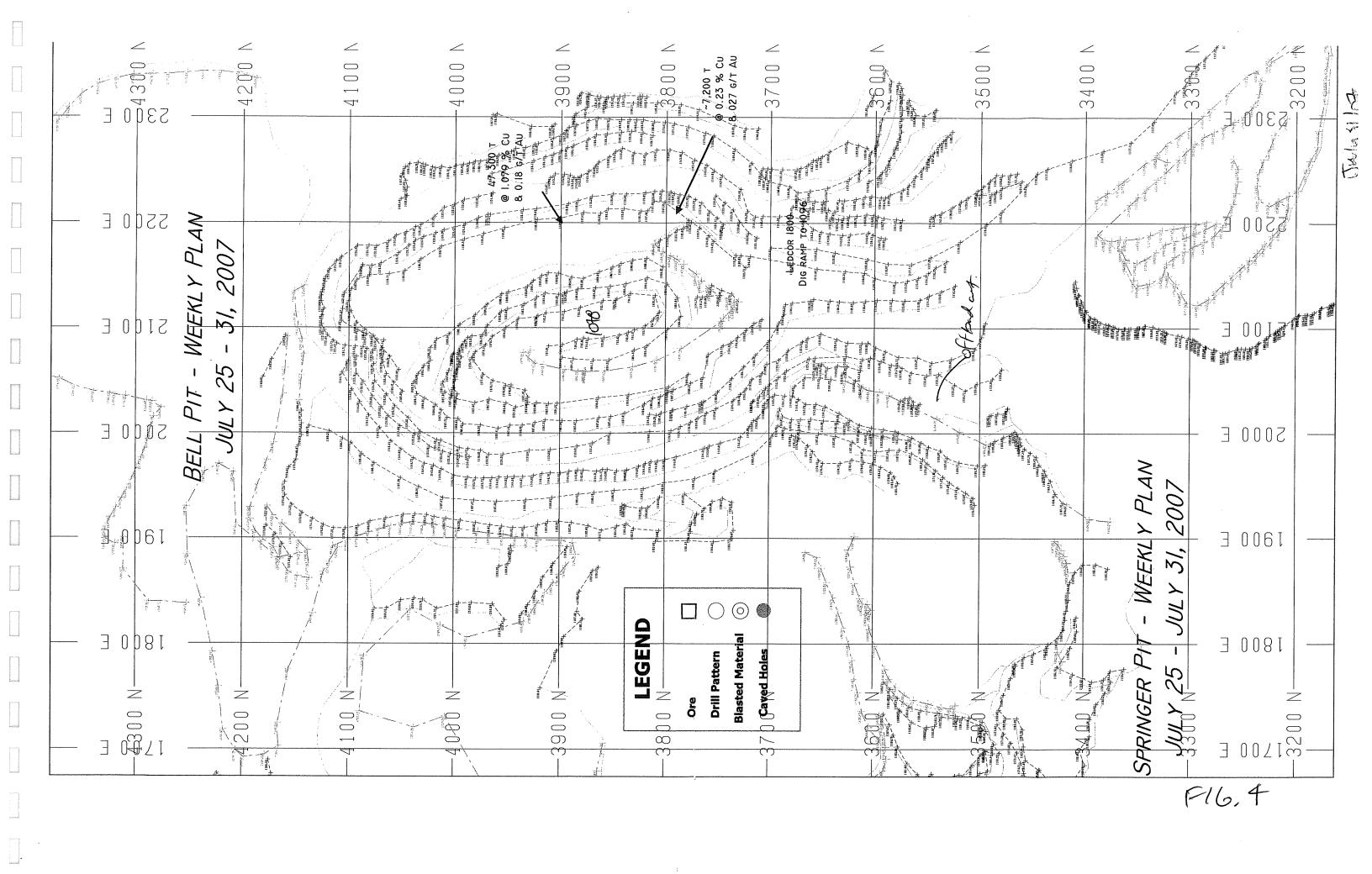
Photo 11 & 12: Piezometer installation on the Perimeter Embankment

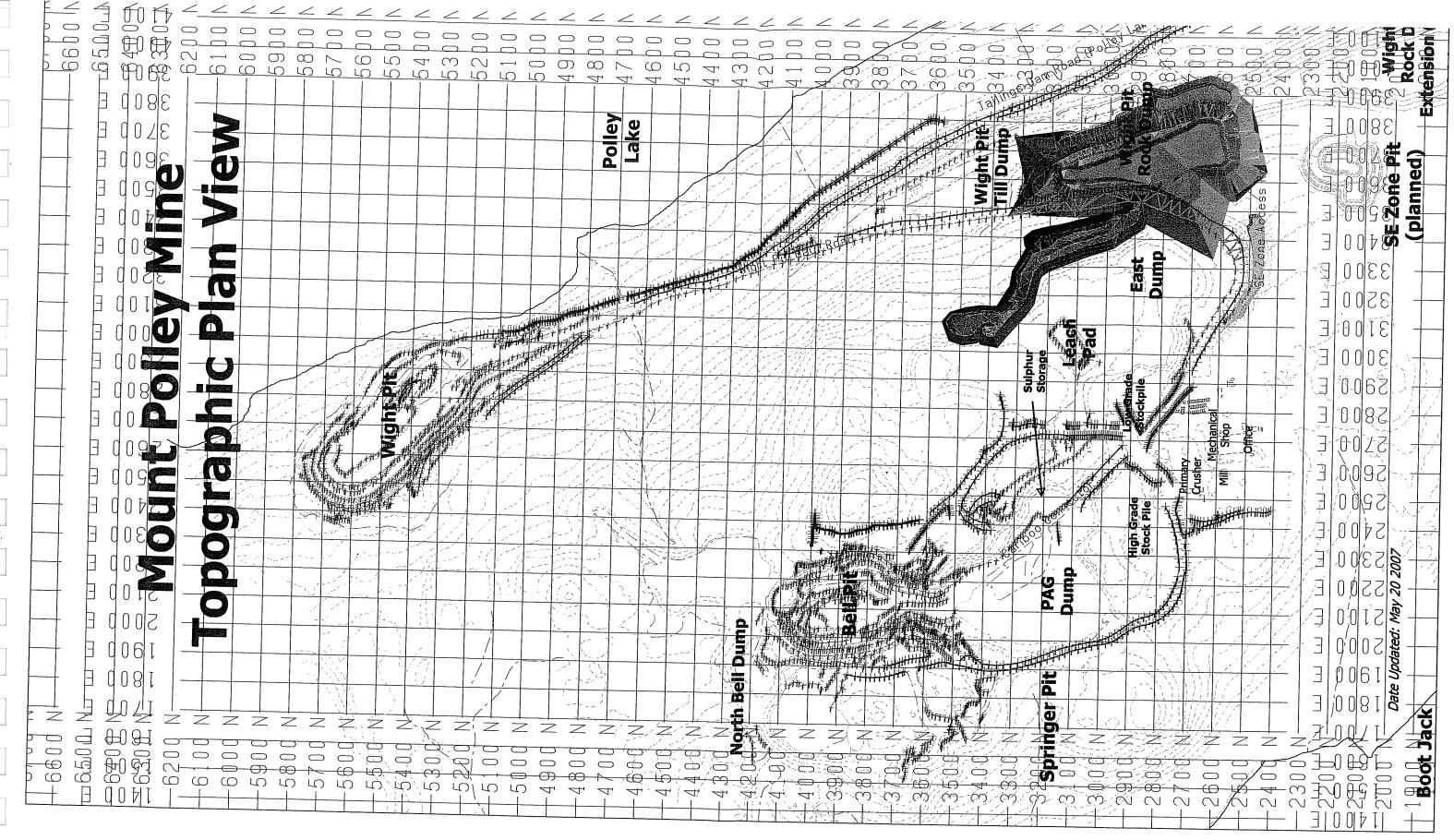
The	e following KP activities were performed during this reporting period:
•	Monitoring of construction material placement along all the embankments.
•	Nuclear densometer readings within Zone S material.
•	Tailings and return pipe line inspections.
•	Coordination with Lake Excavating Ltd. regarding TSF construction.
•	Collection of samples – Zone S, F, U, and FT
•	Monitoring water elevations in the Main and Perimeter Seepage Ponds.
•	Monitoring foundation and toe drain flows. Note: The toe drain flow on the PE is rising. The flow on Jul was 35 lit/min compared to 10.8 lit/min on June 28 th .
•	Installing piezometers on the PE.
•	Collecting piezometer data.
•	Collecting Inclinometer data.
•	Monitoring the construction of the passive treatment ditch adjacent to the ME seepage pond
•	Preparation of daily and weekly reports.
Sut	omitted by,
Sta	c Coffin, E.I.T. ff Engineer ght Piésold Ltd.











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