



# Mount Polley Mining Corporation

an Imperial Metals company

Box 12 • Likely, BC V0L 1N0 • T 250.790.2215 • F 250.790.2613

January 14, 2016

Ministry of Environment  
Mining Operations Environmental Protection  
2080 Labieux Road  
Nanaimo, BC  
V9T 6J9

WEEKLY UPDATE REPORT – JANUARY 8 TO JANUARY 14, 2016

## Water Management

---

### Springer Pit

The total volume of tailings deposited in the Springer Pit as of January 12, 2016 is 2,035,854 tonnes (1,475,256 m<sup>3</sup> including water retained in tailings).

Water elevations are recorded daily at the Springer Pit and the surrounding groundwater wells and presented here in Table 1.

Monthly water quality monitoring is conducted at Springer Pit and the surrounding groundwater wells. All results are reported to Ministry of Environment each quarter, and monthly results are included here as they become available. Results were last reported in the January 7<sup>th</sup> report which is available on the Imperial Metals website [here](#). The wells were purged and sampled again this week and the results will be reported when available.

A map of the groundwater well locations is included as Figure 1 of the July 23<sup>rd</sup> weekly report available here: <http://www.imperialmetals.com/assets/docs/mt-polley/07.23.15.weekly-update-SEC.pdf>

Note that the suffix “a” indicates the deep well in the pair, and the suffix “b” indicates the shallow well in the pair.

On January 6<sup>th</sup> it was noted that there may have been a couple days in early January where exfiltration from Springer Pit to ground may have occurred in an isolated area. This was reported to the Director at Ministry of Environment. A separate report is being developed with an update of water elevations and quality included.

### Water Treatment and Discharge

Water discharge continued this week, with discharge rates averaging 0.19 m<sup>3</sup>/s.

# Rehabilitation Work

---

## Hazeltine Creek Rehabilitation

Roads were opened into reach three of Hazeltine Creek this week to allow access for work to continue on rehabilitation. A small blockage was discovered in reach three that was causing water to flow up onto the flood plain and around the creek. It is likely this was the cause of some increased turbidity observed in lower Hazeltine the previous week.

Work began to place rip rap around slopes at the new Ditch Road Bridge. Installation of a temporary boat launch was completed. A turbidity curtain was used in the construction area in the lake and this project was monitored by DWB Consulting.

# Environmental Monitoring Program

---

## Water Quality Monitoring

All water quality monitoring as required by Permit 11678 is current. The sampling schedule is now in full winter mode which means that samples were not collected on Quesnel Lake. Samples were collected at end of pipe at the water treatment plant (station HAD-03) and throughout Hazeltine Creek. Table 2 shows new data collected HAD-03 on December 22<sup>nd</sup> and 29<sup>th</sup> compared to the permit requirements. Though not all parameters are shown here, all were below the permit guidelines. Results collected in the first week of January were not available prior to reporting. Table 3 shows new data collected at the edge of the initial dilution zone in Quesnel Lake (QUL-58) on December 21<sup>st</sup> and 30<sup>th</sup>. Though not all parameters are shown here, all were below the aquatic guidelines or at background levels.

For previous results see the January 7, 2016 report available on the imperial metals website.  
<http://www.imperialmetals.com/assets/docs/mt-polley/01.07.16.weekly-report.pdf>

A map of monitoring stations is available on the Imperial Metals website.  
<http://www.imperialmetals.com/assets/docs/mt-polley/12.03.15.weekly-update.pdf>

Figure 1 shows field parameter profile results for turbidity and temperature at station QUL-58 in Quesnel Lake (station 100m from the Hazeltine Creek outflow diffusers, at the edge of the initial dilution zone).

Figure 2 shows field turbidity readings for upper, middle and lower Hazeltine Creek.

Figure 3 shows a time series graph of turbidity readings at site QUR-1 in the upper Quesnel River.

**Table 1. Water elevations for Springer Pit and groundwater wells**

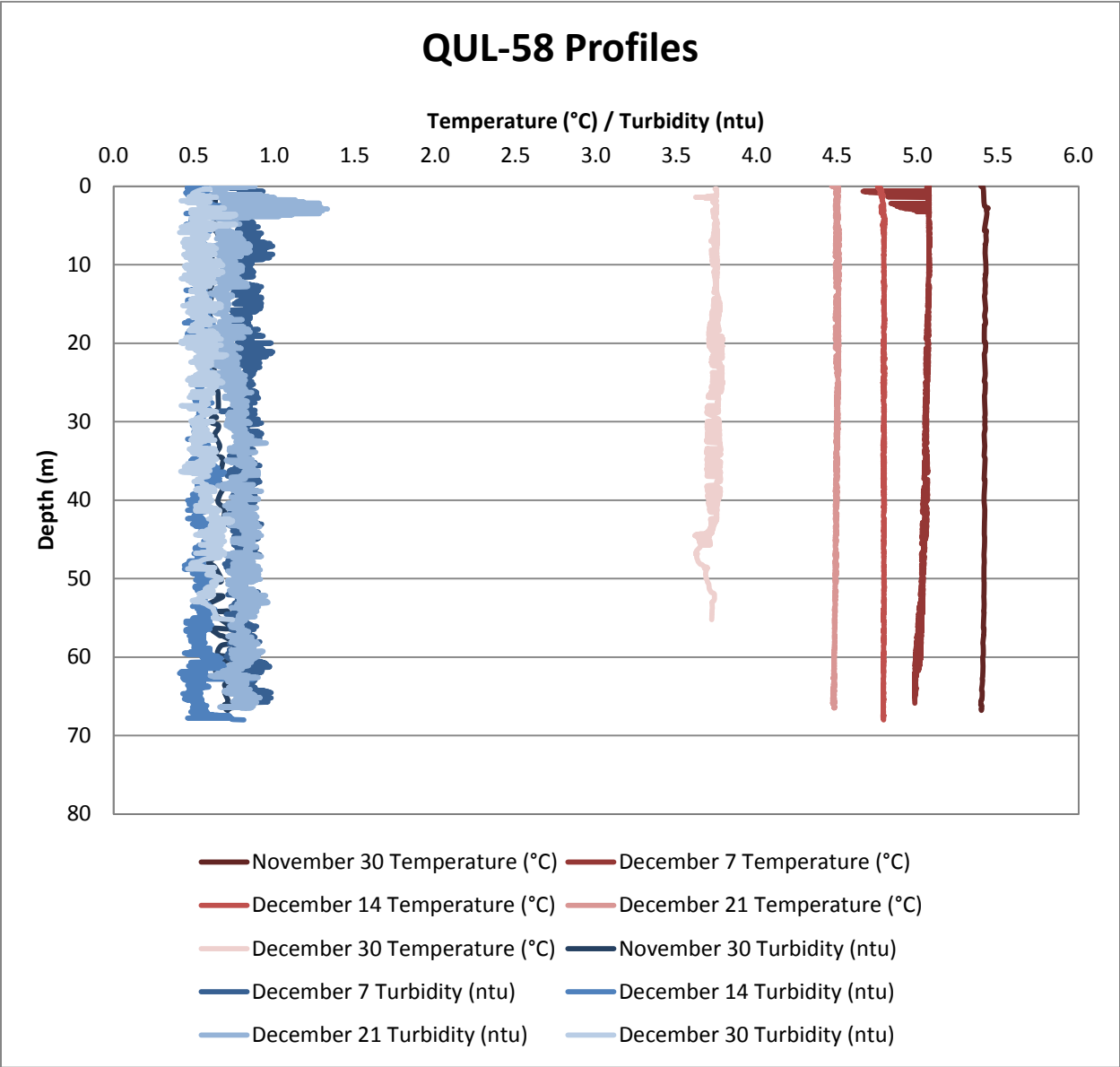
	Last Week	This Week	Change
	7-Jan-16	13-Jan-16	(m)
Springer	1025.29	1025.32	0.03
GW12-2a	1015.26	1015.38	0.12
GW12-2b	1015.69	1015.80	0.11
GW15-1a	1025.63	1025.71	0.08
GW15-1b	1025.59	1025.25	-0.34
GW15-2a	1025.21	1026.02	0.81
GW15-2b	1025.96	1025.32	-0.64

**Table 2. Sample analysis results for HAD-03 (end of pipe from the water treatment plant)**

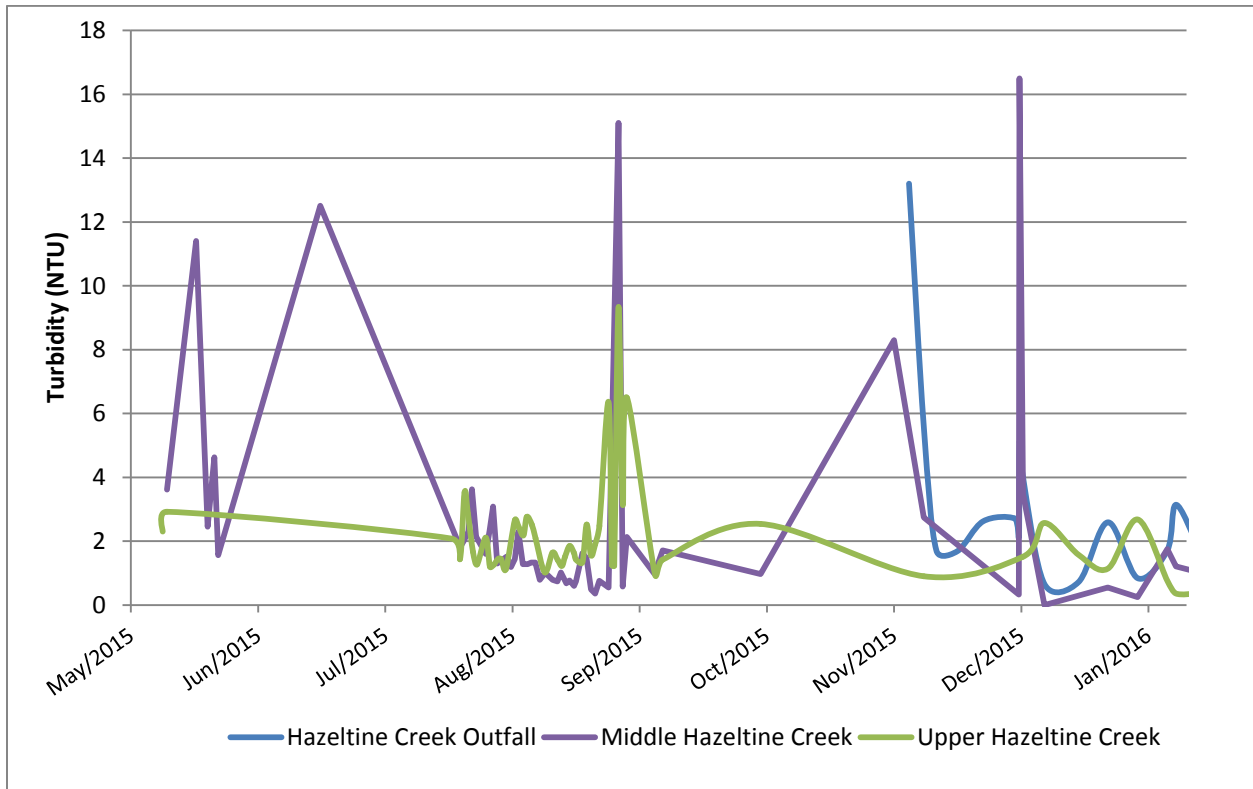
	Lab Analysis Results for HAD-03		Permit 11678
	22/12/2015 12:33	29/12/2015 12:33	mg/L
Total Suspended Solids (mg/L)	6.4	11.9	15
Nitrate (as N) (mg/L)	7.34	7.29	9.7
Copper (Cu)-Total (mg/L)	0.00326	0.00380	0.012
Molybdenum (Mo)-Total (mg/L)	0.152	0.154	0.41
Selenium (Se)-Total (mg/L)	0.0295	0.0309	0.06
Sulphate (mg/L)	533	516	720
Cadmium (Cd)-Total (mg/L)	<0.000050	<0.000040	N/A

**Table 3. Sample analysis from the Quesnel Lake initial dilution zone (QUL-58)**

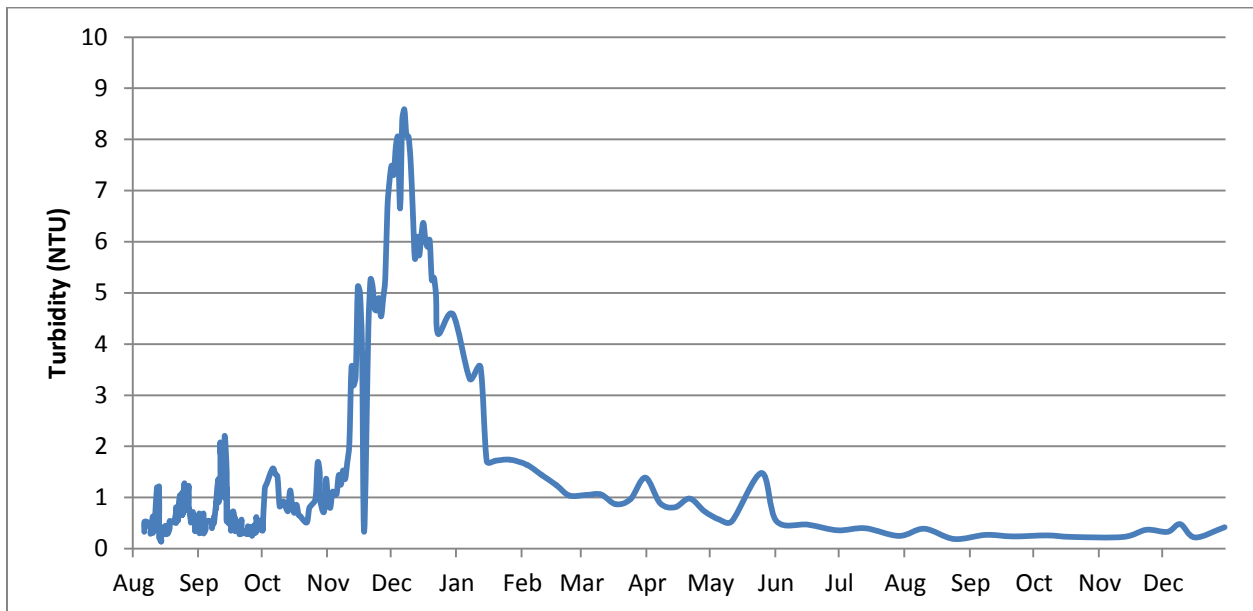
	QUL-58-S 21/12/2015 5 12:15	QUL-58-AP 21/12/2015 5 12:50	QUL-58-MP 21/12/2015 12:31	QUL-58-S 30/12/2015 12:00	QUL-58-Mid 30/12/2015 12:08	QUL-58-B 30/12/2015 12:15
Total Suspended Solids (mg/L)	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Nitrate (as N) (mg/L)	0.116	0.115	0.115	0.116	0.115	0.116
Copper (Cu)-Total (mg/L)	0.00142	0.00161	0.00177	0.00145	0.00149	0.00169
Molybdenum (Mo)-Total (mg/L)	0.000440	0.000455	0.000453	0.000503	0.000471	0.000474
Selenium (Se)-Total (mg/L)	0.000119	0.000114	0.000107	0.000119	0.000107	0.000127
Sulphate (mg/L)	6.82	6.81	6.85	6.80	6.78	6.75
Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050



**Figure 1. Turbidity and temperature profiles at QUL-58 on November 30, December 7, 14, 21 and 30.**



**Figure 2. Time series graph for May 15, 2015 – January 13, 2016 showing turbidity levels at monitoring locations in upper and lower Hazeltine Creek**



**Figure 3. Time series of turbidity readings at site QUR-1 in the upper Quesnel River. Samples are collected every second week from this site.**