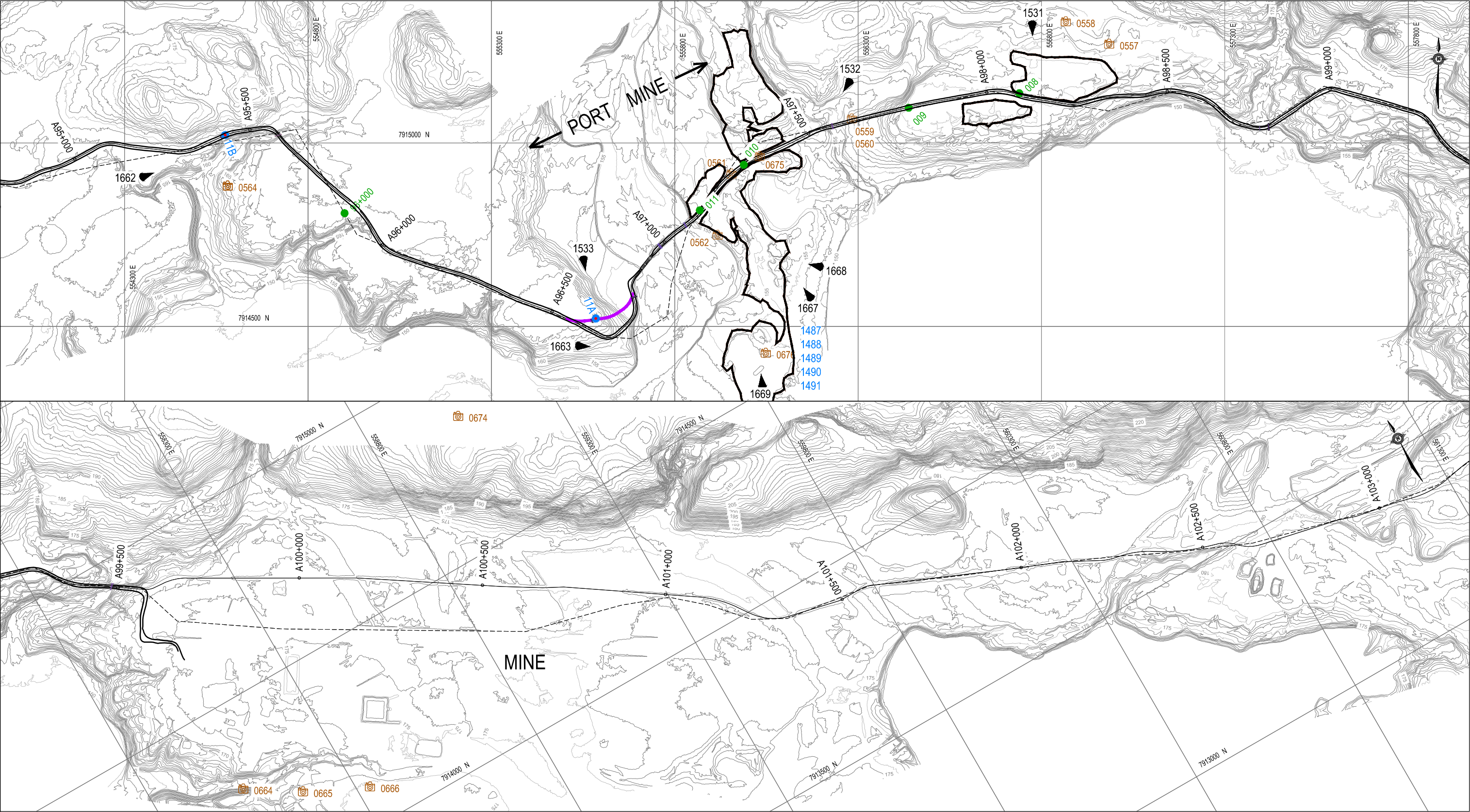


Q:\Edmonton\Drafting\PROJECTS\E141\E14103210-01\Acad\E14103210-01_Figure 1 thru 13.dwg [FIGURE 13] November 07, 2014 - 4:06:05 pm (BY: RICHMOND, BOB)



LEGEND:

- 2009 AERIAL PHOTOGRAPH LOCATION

- 2014 AERIAL PHOTOGRAPH LOCATION (SHOWING DIRECTION OF VIEW)

- 2009 WAYPOINT / BORROW LOCATION

- 2014 WAYPOINT LOCATION

- NEW OR BORROW SOURCE NOT REPORTED ON, IN 2009

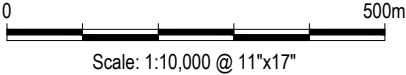
0720 - 2009 GROUND PHOTO LOCATION (0720 - REPORT PHOTO)

1680 - 2014 GROUND PHOTO LOCATION (1680 - REPORT PHOTO)

- APPROXIMATE ROAD REALIGNMENT

- HISTORIC ORIGINAL ALIGNMENTS NOT USED

NOTES
BASED ON DRAWING DATA PROVIDED BY
KNIGHT PIESOLD CONSULTING
BASE DATA: 1:10 000



CLIENT

Baffinland Iron
Mines Corporation



Mary River Tote Road Quarry Reclamation
Mary River, Baffin Island

PLAN PHOTO LOCATIONS
SHEET 13 OF 13

PROJECT NO. E14103210-01	DWN BR	CKD KJ	REV 0
OFFICE EDM	DATE November 2014		

Figure 13

PHOTOGRAPHS

Photo 1 (1612)	Priority C Pit at km 6.6 (Figure 1) on Gravel Terrace with Ice Wedge Polygons
Photo 2 (1585)	Pit at km 20.7 (Figure 2), Linear Sinkholes from Ice Wedge Melt Out
Photo 3 (1697)	Pit at km 20.7 (Figure 3), Threatening Stability of the Road Embankment
Photo 4 (1645)	Pit at km 71.6 (Figure 10), Typical Settlement from Thaw of Segregated Ice
Photo 5 (DWH 593)	Pit at km 61.7 (Figure 8), Taken in 2009 (Comparison)
Photo 5A (1637)	Pit at km 61.7 (Figure 8), Taken in 2014, Extensive Settlement in Southern Portion
Photo 6 (1712)	Cut Made Beside Road Embankment at km 89.3 (Figure 12) Exposing Massive Ground Ice
Photo 7 (1576)	Pit at km 32.4 (Figures 4 and 5), Typical Priority C Pit in Thaw Stable Soils
Photo 8 (1547)	Pit at km 72.3 (Figure 10), Showing Exposed Massive Ice
Photo 9 (1640)	Pits at km 63.0 and 64.0 (Figure 9), Pits Excavated in Very Ice-Rich Material that has Settled Significantly
Photo 9A (1553)	Pits at km 63.0 to 63.4 (Figure 9), Recent Cracking Evident in Embankment Side Slopes
Photo 10 (1710)	Pit at km 52.2 (Figure 7), Extensive Additional Settlement Since 2009
Photo 11 (1707)	Pit at km 29.4 (Figure 4), Pit Not Reported in 2009, May be a New Pit
Photo 12 (1696)	Pit at km 20.7 (Figure 3), Cracking on Road Embankment Side Slope
Photo 13 (1689)	Pit at km 19.7 (Figure 3), Extensive Melt Out of Massive Ice Since 2009
Photo 14 (1595)	New Pit at km 7.2 (Figure 2), New Road Alignment has Initiated Significant Thaw
Photo 14A (1679)	New Pit at km 7.2 (Figure 2), Extensive Evidence of Settlement between Original and New Road Embankments



Photo 1 (1612):

Priority C pit at km 6.6 (Figure 1) lies on a gravel terrace with well-established ice wedge polygons. Removal of material from the active layer in the pit has initiated thaw and ponding but it has not changed since 2009 and remarkably is not currently impacting the embankment.



Photo 2 (1585):

Pit at km 20.7 (Figure 2), linear sinkholes from ice wedge melt out, see also Photo 3



Photo 3 (1697):

Pit at km 20.7 (Figure 3) is threatening the stability of the road embankment as thermal erosion of water is occurring through the ice wedges exposed in the adjacent pit.



Photo 4 (1645):

Pit at km 71.6 (Figure 10), typical settlement from thaw of segregated ice common in finer-grained lacustrine soils



Photo 5 (DWH 593):

Pit at km 61.7 (Figure 8) in 2009, compare to Photo 5A

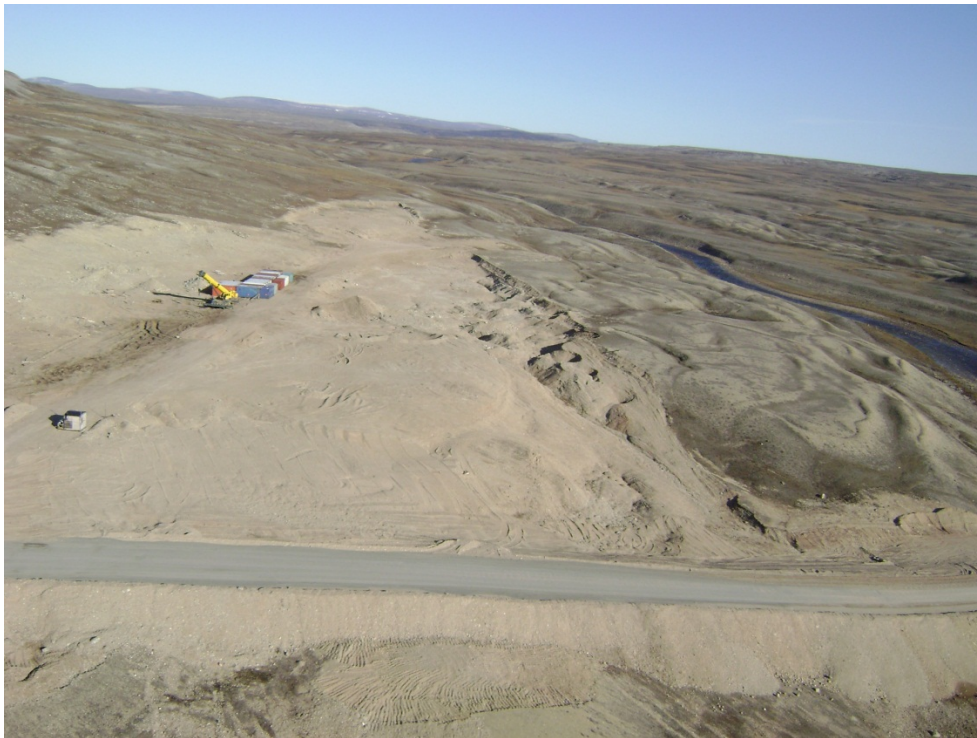


Photo 5A (1637):

Pit at km 61.7(Figure 8), in 2014, note extensive settlement in southern portion (right side) of the developed pit indicative of the presence of massive ice in portions of this deposit.



Photo 6 (1712):

Cut made beside road embankment at km 89.3 (Figure 12) only a day or two before the 2014 site reconnaissance has exposed massive ground ice. Unless protected against thaw by placing cover material, significant development of a thermokarst depression should be expected.



Photo 7 (1576):

Pit at km 32.4 (Figures 4 and 5), typical Priority C pit in thaw stable soils that only requires regrading.