



01 September 2010 Project No. 10-1373-0066

Mr. John Witteman Agnico Eagle Mines Ltd. 601 - 2 Street Canmore, AB T1W 2K2

MELIADINE WEST ALL WEATHER ACCESS ROAD - NAVIGABILITY PERMITTING SUPPORT MATERIALS

Dear Mr. Witteman,

Drawings attached to this letter provide information to support decisions of navigability for stream crossings at the proposed Meliadine West All Weather Access Road (AWAR), as specified in our proposal dated 21 July 2010. Each drawing provides:

- Crossing location coordinates. These were provided by Agnico Eagle Mines Ltd. (AEM) (AEM 2010) and extracted from the 2008 fisheries baseline report for the Meliadine Gold Project (Golder Associates Ltd. (Golder) 2008).
- Crossing location photographs (AEM 2010; Golder 2008; Golder 2009).
- An aerial photograph showing the proposed crossing location and approximate road alignment. These were extracted from Golder (2008).
- An inset providing contour mapping at the proposed crossing location. These were extracted from the 2010 All Weather Access Road feasibility level design draft report (Golder 2010a).
- A representative cross-section at the crossing. These were extracted from profiles presented by Golder (2010a) with channel features extracted from Golder (2008, 2009).
- Crossing location hydrology details, including drainage area, design discharge, and channel bankfull width, bankfull depth and mean depth:
 - For crossings M3.9, M5.0 and M8.6, design discharges and corresponding water levels were derived by Golder (2010b) based on the 1:25 year peak rainfall.
 - For crossings M3.0, M6.7, M11.5, M13.3, M22.6 and M23.7, design discharges were derived by Golder (2010b) based on the 1:25 year peak rainfall, but corresponding water levels were not determined.



These water levels were derived using a 1-D flow model based on the channel cross-section and design discharge.

For the Meliadine River crossing (M2.1), design discharges were estimated by extending the record of peak flows from the crossing location by comparison with data from the regional Water Survey of Canada hydrometric stations 06NC001 Diana River near Rankin Inlet and 06NB002 Ferguson River below O'Neil Lake. Corresponding high water levels were derived based on the design discharges and a 1-D flow model calibrated to water depths measured at the crossing location (Golder 2009).

A summary of discharge and channel characteristics for the Meliadine West AWAR is provided in Table 1.

Table 1: Meliadine West All Weather Access Road - Summary of Channel Characteristics

Crossing	Drainage Area (km²)	Design Discharge ^a (m ³ /s)	Bankfull Width (m)	Bankfull Depth (m)	Design Depth (m)
M2.1	796	81	60	1.20	1.58
M3.0	2.77	1.50	2.5	0.12	0.24
M3.9	1.82	4.70	2.5	0.10	0.62
M5.0	11.02	9.10	10.0	0.20	0.81
M6.7	0.82	3.10	1.0	0.05	0.24
M8.6	1.40	4.00	3.9	0.16	0.57
M11.5	1.38	1.20	1.5	0.26	0.41
M13.3	0.16	0.40	3.75	0.20	0.27
M22.6	0.97	0.50	0.9	0.13	0.21
M23.7	3.62	0.50	3.2	0.25	0.31

⁽a) 1:25 year flood.

Please contact the undersigned if you have any questions regarding this information.

Best regards,

GOLDER ASSOCIATES LTD.

Signature in Original Document

Nathan Schmidt, Ph.D., P.Eng. Principal, Senior Water Resources Engineer

NS/bh

Attachments: Figures 1 to 10

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References

- Agnico Eagle Mines Ltd. 2010. Photographs and GPS Coordinates for Proposed Meliadine West All Weather Access Road. Provided by John Witteman, Agnico Eagle Mining Ltd., July 2010.
- Golder. 2008. Meliadine West Gold Project: Fisheries Baseline Studies 2008. Prepared for Comaplex Minerals Corporation by Golder Associates Ltd., Edmonton, Project 07-1373-0055. November 2008, 53 p. + 5 appendices.
- Golder. 2009. Draft report on Meliadine Gold Project Aquatic Baseline Synthesis Report. Prepared for Comaplex Minerals Corporation by Golder Associates Ltd., Edmonton, Project 09-1373-0010.4000, Version C. November 2009, 317 p. + 7 appendices.
- Golder. 2010a. Draft report on All Weather Access Road, Meliadine Gold Project, Feasibility Level Design. Prepared for Comaplex Minerals Corporation by Golder Associates Ltd., Vancouver, Project 09-1426-0015.4700, Document No. 085 Version C. June 2010, 24 p. + 12 figures + 3 appendices.
- Golder. 2010b. Technical Memorandum on Proposed Channel Crossing Structures, Meliadine All Weather Road, Meliadine Gold Project, Nunavut. Prepared for Comaplex Minerals Corporation by Golder Associates Ltd., Vancouver, Project 09-1426-0015.4700, April 30, 2010, 4 p. + 4 figures.





3 August 2010 - View upstream from left downstream bank at proposed crossing.



3 August 2010 - View downstream from left downstream bank at proposed crossing.



3 August 2010 - Aerial view downstream towards the proposed crossing. Approximate crossing location shown with red line.

Drainage Area 796 km²

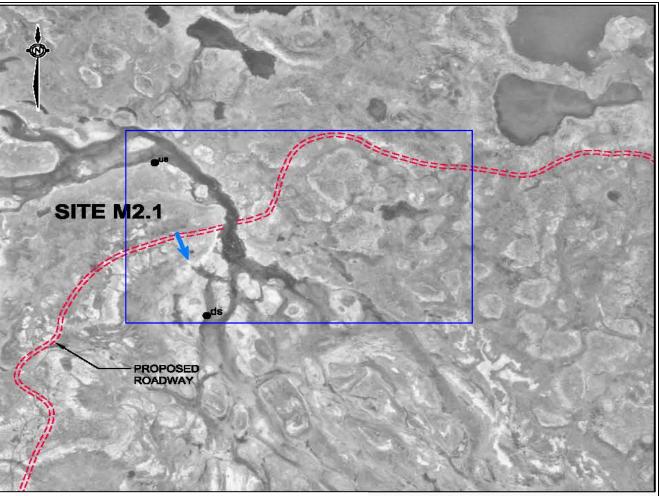
Design Discharge 116 m³/s

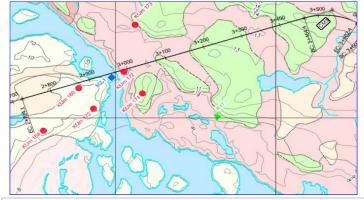
Bankfull Width 60 m

Bankfull Depth 1.20 m

Mean Depth 0.57 m

The channel width is variable through the bedrock constriction. Channel dimensions shown above are at the crossing location.



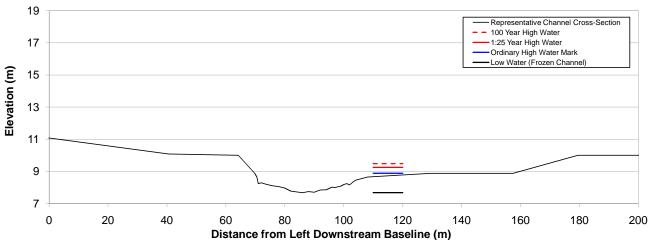




Above: Aerial Photograph

Left: Contour Map (Blue Outline Shows Coverage on Aerial Photo)

Below: Representative Cross-Section at Watercourse Crossing





10 August 2007 - View of left downstream bank from right downstream bank at proposed crossing.



10 August 2007 - View of right downstream bank from left downstream bank at proposed crossing.

CROSSING LOCATION

	Upstream (us on map)	Crossing Location	Downstream (ds on map)
UTM Easting (NAD83 Zone 15V)	544 595	544 790	544 731
UTM Northing (NAD83 Zone 15V)	6 971 835	6 971 714	6 971 455
Latitude (d-m-s)		62° 52' 21.8"	
Longitude (d-m-s)		92° 07' 10.4"	

DESCRIPTION

This major river is bounded by bedrock at the crossing location. It is a single channel upstream and a broad delta downstream. The bed material is predominantly boulder and cobble.

ROJECT

AGNICO EAGLE MINES LTD. MELIADINE WEST ALL WEATHER ACCESS ROAD

NAVIGABLE WATERS PROTECTION ACT NAVIGABILITY DECISION DRAWING FOR SITE M2.1



	REVIEW		DRAFT				
0	CHECK				FIGUR	RE: 1	
	CADD						
	DESIGN	NPS	27-Aug-10	SCALE	AS SHOWN	REV. 0	
	PROJECT 10-137	3-0066		FILE No.			



 $3\ \mbox{August}\ 2010$ - View upstream from left downstream bank at proposed crossing.



 $3\ \mbox{August}$ 2010 - View downstream from left downstream bank at proposed crossing.



3 August 2010 - Aerial view downstream from above left downstream bank at proposed crossing.

Drainage Area 2.77 km²

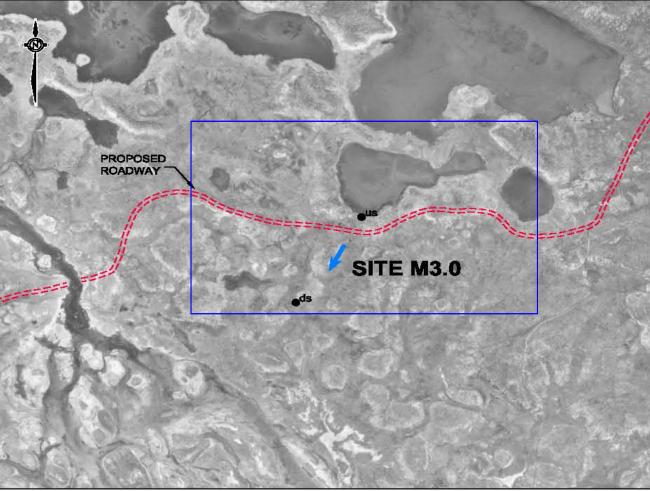
Design Discharge 1.50 m³/s

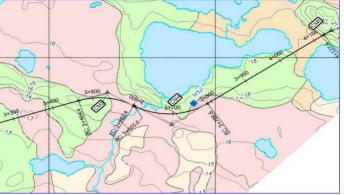
Bankfull Width 2.5 m

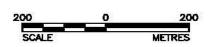
Bankfull Depth 0.12 m

Mean Depth 0.08 m

Flow is through a poorly defined, vegetated channel. The dimensions above are representative only.



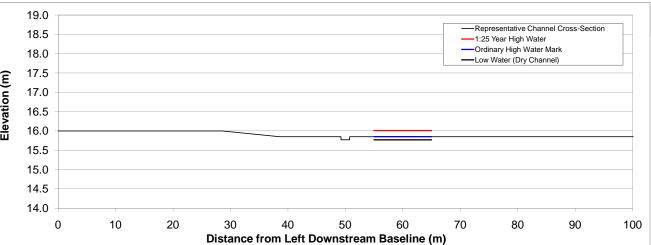




Above: Aerial Photograph

Left: Contour Map (Blue Outline Shows Coverage on Aerial Photo)

Below: Representative Cross-Section at Watercourse Crossing





20 June 2008 - View upstream near the proposed crossing.



20 June 2008 - View downstream near the proposed crossing.

CROSSING LOCATION

	Upstream (us on map)	Crossing Location	Downstream (ds on map)	
UTM Easting (NAD83 Zone 15V)	545477	545 548	545319	
UTM Northing (NAD83 Zone 15V)	6971897	6 971 874	6971656	
Latitude (d-m-s)		62° 52' 26.6"		
Longitude (d-m-s)		92° 06' 16.6"		

DESCRIPTION

This watercourse has poorly defined bed and banks and flow is mainly overland through a flat valley area. The bed material is predominantly fines and detritus.

ROJECT

AGNICO EAGLE MINES LTD. MELIADINE WEST ALL WEATHER ACCESS ROAD

ITLE

NAVIGABLE WATERS PROTECTION ACT NAVIGABILITY DECISION DRAWING FOR SITE M3.0



	PROJECT 10-137	3-0066		FILE No.			
	DESIGN	NPS	27-Aug-10	SCALE	AS SHOWN	REV. 0	
	CADD						
	CHECK				FIGUF	RE: 2	
6	DEMENT		DDAFT				



3 August 2010 - View upstream from left downstream bank at proposed crossing.



3 August 2010 - View downstream from left downstream bank at proposed crossing.



3 August 2010 - Aerial view downstream from above left downstream bank at proposed crossing.

Drainage Area 1.82 km²

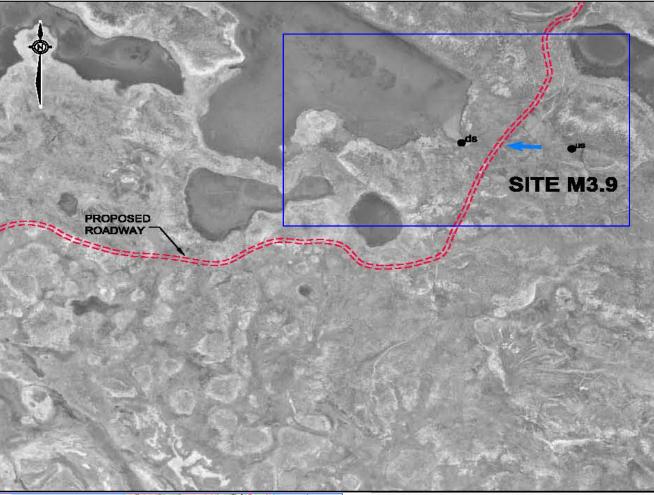
Design Discharge 4.70 m³/s

Bankfull Width 2.5 m

Bankfull Depth 0.10 m

Mean Depth 0.07 m

Individual channel widths at this watercourse are highly variable from 0.85 to 6.4 m. The channel is ill-defined and bounded by flooded vegetation.



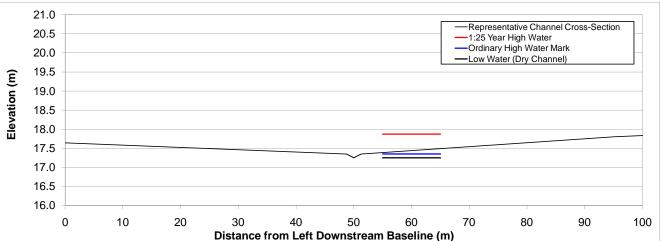




Above: Aerial Photograph

Left: Contour Map (Blue Outline Shows Coverage on Aerial Photo)

Below: Representative Cross-Section at Watercourse Crossing





18 June 2008 - View upstream near the proposed crossing.



18 June 2008 - Downstream view near the proposed crossing.

CROSSING LOCATION

	Upstream (us on map)	Crossing Location	Downstream (ds on map)
UTM Easting (NAD83 Zone 15V)	546349	546 167	546084
UTM Northing (NAD83 Zone 15V)	6972176	6 972 178	6972193
Latitude (d-m-s)		62° 52' 36.2"	
Longitude (d-m-s)		92° 05' 32.5"	

DESCRIPTION

This watercourse flows through a broad, flat valley bottom and the channel is ill-defined channel. The bed material is predominantly fines with gravel and cobble in better-defined segments.

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AGNICO EAGLE MINES LTD. MELIADINE WEST ALL WEATHER ACCESS ROAD

ITLE

NAVIGABLE WATERS PROTECTION ACT NAVIGABILITY DECISION DRAWING FOR SITE M3.9



REVIEW	-	DRAFT				
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CADD						
DESIGN	NPS	27-Aug-10	SCALE	AS SHOWN	REV. 0	
PROJECT 10-137	3-0066		FILE No.			



 $3 \ \text{August} \ 2010$ - View upstream from right downstream bank at proposed crossing.



 $3 \ \mbox{August}$ 2010 - View downstream from right downstream bank at proposed crossing.



3 August 2010 - Aerial view downstream from above left downstream bank at proposed crossing.

Drainage Area 11.02 km²

Design Discharge 9.10 m³/s

Bankfull Width 10.0 m

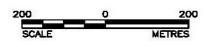
Bankfull Depth 0.2 m

Mean Depth 0.1 m

The channel in this location is ill-defined with variable geometry. The dimensions shown above are representative of site conditions. Extreme high water at this crossing will be governed by the downstream lake water surface elevation.



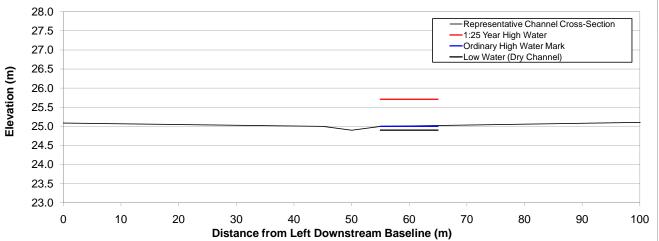




Above: Aerial Photograph

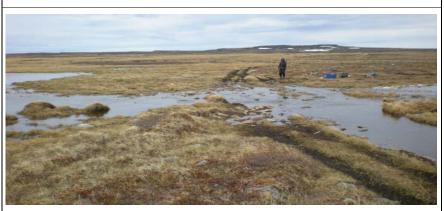
Left: Contour Map (Blue Outline Shows Coverage on Aerial Photo)

Below: Representative Cross-Section at Watercourse Crossing





18 June 2008 - View downstream from right downstream bank at proposed crossing.



18 June 2008 - View across channel from right downstream bank at proposed crossing.

CROSSING LOCATION

	Upstream (us on map)	Crossing Location	Downstream (ds on map)
UTM Easting (NAD83 Zone 15V)	546623	546 634	546644
UTM Northing (NAD83 Zone 15V)	6973136	6 973 123	6973126
Latitude (d-m-s)		62° 53' 06.5"	
Longitude (d-m-s)		92° 04' 58.5"	

DESCRIPTION

This watercourse is a very short flow path between two lakes, with an ill-defined channel flowing across an area disturbed by an all terrain vehicle track. The bed material is predominantly cobble and gravel.

ROJECT

AGNICO EAGLE MINES LTD. MELIADINE WEST ALL WEATHER ACCESS ROAD

ITLE

NAVIGABLE WATERS PROTECTION ACT NAVIGABILITY DECISION DRAWING FOR SITE M5.0



	PROJECT 10-137	3-0066		FILE No.			
	DESIGN	NPS	27-Aug-10	SCALE	AS SHOWN	REV. 0	
	CADD						
	CHECK				FIGUR	RE: 4	
9	DEV/IEVA/		DDAET				



 $3\ \mbox{August}\ 2010$ - View upstream from left downstream bank at proposed crossing.



 $3 \ \mbox{August}$ 2010 - View downstream from left downstream bank at proposed crossing.



3 August 2010 - Aerial view downstream from above left downstream bank at proposed crossing.

Drainage Area 0.82 km²

Design Discharge 3.10 m³/s

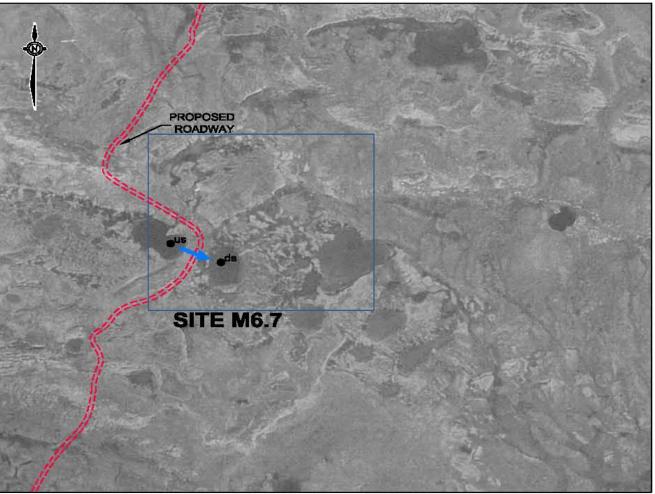
Bankfull Width 1 m

Bankfull Depth 0.05 m

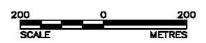
Bankfull Depth 0.05 m

Mean Depth 0.02 m

The channel at this watercourse is braided/dispersed and affected by all terrain vehicle damage.



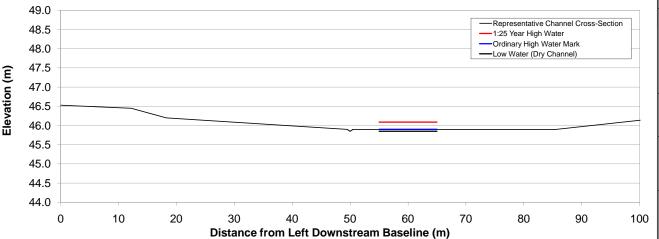




Above: Aerial Photograph

Left: Contour Map (Blue Outline Shows Coverage on Aerial Photo)

Below: Representative Cross-Section at Watercourse Crossing





18 June 2008 - View downstream near proposed crossing location.



18 June 2008 - View of upstream from downstream lake.

CROSSING LOCATION

	Upstream (us on map)	Crossing Location	Downstream (ds on map)
UTM Easting (NAD83 Zone 15V)	547366	547 380	547457
UTM Northing (NAD83 Zone 15V)	6974560	6 974 493	6974507
Latitude (d-m-s)		62° 53' 50.4"	
Longitude (d-m-s)		92° 04' 04.3"	

DESCRIPTION

This watercourse flows through a shallow valley between two nearby lakes. The bed material is predominantly fines and detritus.

PROJECT

AGNICO EAGLE MINES LTD.
MELIADINE WEST ALL WEATHER ACCESS ROAD

NAVIGABLE WATERS PROTECTION ACT NAVIGABILITY DECISION DRAWING FOR SITE M6.7



PROJECT 10-137	3-0066		FILE No.			
DESIGN	NPS	27-Aug-10	SCALE	AS SHOWN	REV. 0	
CADD						
CHECK				FIGUF	RE: 5	
REVIEW/		DRAFT	1			



3 August 2010 - View upstream from left downstream bank at proposed crossing.



 $3 \ \mbox{August}$ 2010 - View downstream from left downstream bank at proposed crossing.



3 August 2010 - Aerial view downstream from above left downstream bank at proposed crossing.

Drainage Area 1.40 km²

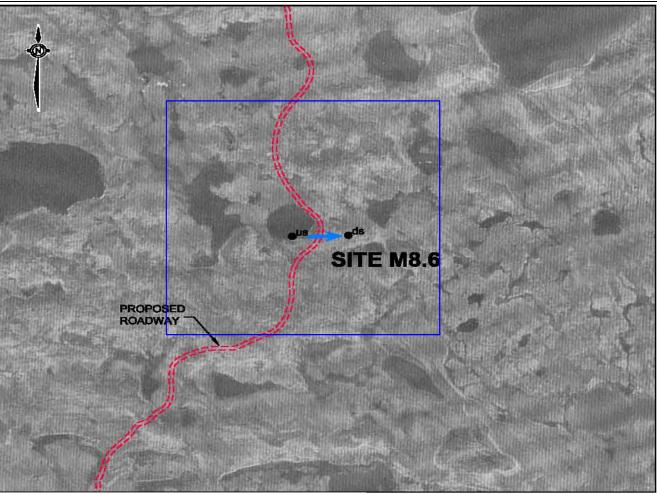
Design Discharge 4.00 m³/s

Bankfull Width 3.9 m

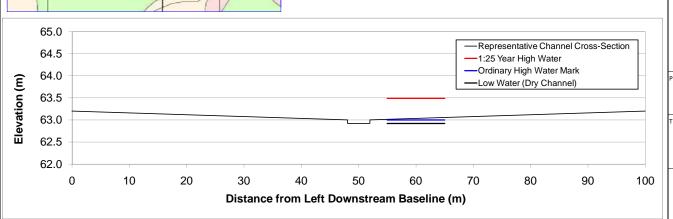
Bankfull Depth 0.16 m

Mean Depth 0.08 m

Flow is mainly dispersed in a vegetated channel, with some areas of bouldery ground. Channel dimensions above are representative of a section of better defined channel.







at Watercourse Crossing



18 June 1008 - View upstream from 30 m upstream from watercourse outlet.



18 June 2008 - View downstream from 120 m upstream from watercourse outlet.

CROSSING LOCATION

	Upstream (us on map)	Crossing Location	Downstream (ds on map)	
UTM Easting (NAD83 Zone 15V)	547855	547 909	547990	
UTM Northing (NAD83 Zone 15V)	6975854	6 975 915	6975857	
Latitude (d-m-s)		62° 54' 36.1"		
Longitude (d-m-s)		92° 03' 25.3"		

DESCRIPTION

This watercourse flows through a poorly-defined valley and the channel is often disconnected. The bed material is predominantly detritus with occasional boulders.

ROJECT

AGNICO EAGLE MINES LTD. MELIADINE WEST ALL WEATHER ACCESS ROAD

NAVIGABLE WATERS PROTECTION ACT NAVIGABILITY DECISION DRAWING FOR SITE M8.6



•	CADD CHECK		FIGURE: 6			
S	REVIEW	DRAFT				



3 August 2010 - View upstream from left downstream bank at proposed crossing.



 $3 \ \mbox{August}$ 2010 - View downstream from left downstream bank at proposed crossing.



3 August 2010 - Aerial view downstream from above left downstream bank at proposed crossing.

Drainage Area 1.38 km²

Design Discharge 1.20 m³/s

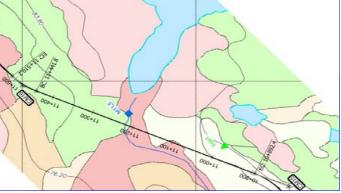
Bankfull Width 1.5 m

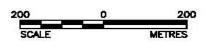
Bankfull Depth 0.26 m

Individual channel widths are highly variable. The width and depth shown above correspond to a section of constricted, single-channel flow.

Mean Depth 0.25 m



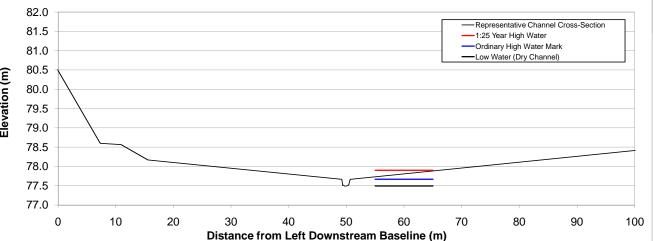




Above: Aerial Photograph

Left: Contour Map (Blue Outline Shows Coverage on Aerial Photo)

Below: Representative Cross-Section at Watercourse Crossing





19 June 2008 - Dispersed flow approximately 300 m downstream from lake outlet.



19 June 2008 - Downstream view, approximately 300 m upstream from watercourse outlet.

CROSSING LOCATION

	Upstream (us on map)	Crossing Location	Downstream (ds on map)	
UTM Easting (NAD83 Zone 15V)	547466	547 445	547377	
UTM Northing (NAD83 Zone 15V)	6978319	6 978 314	6978002	
Latitude (d-m-s)		62° 55' 53.8"		
Longitude (d-m-s)		92° 03' 55.7"		

DESCRIPTION

This watercourse flows through a well-defined valley and includes a braided channel in some locations. The bed material is predominantly boulder and cobble, with detritus and fines in areas of dispersed flow.

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AGNICO EAGLE MINES LTD. MELIADINE WEST ALL WEATHER ACCESS ROAD

ITLE

NAVIGABLE WATERS PROTECTION ACT NAVIGABILITY DECISION DRAWING FOR SITE M11.5



	PROJECT 10-1373-0066			FILE No.			
	DESIGN	NPS	27-Aug-10	SCALE	AS SHOWN	REV. 0	
	CADD						
	CHECK				FIGUR	≀E: 7	
Ò	REVIEW		DRAFT				



 $3\ \mbox{August}\ 2010$ - View upstream from left downstream bank at proposed crossing.



 $3 \ \mbox{August}$ 2010 - View downstream from left downstream bank at proposed crossing.

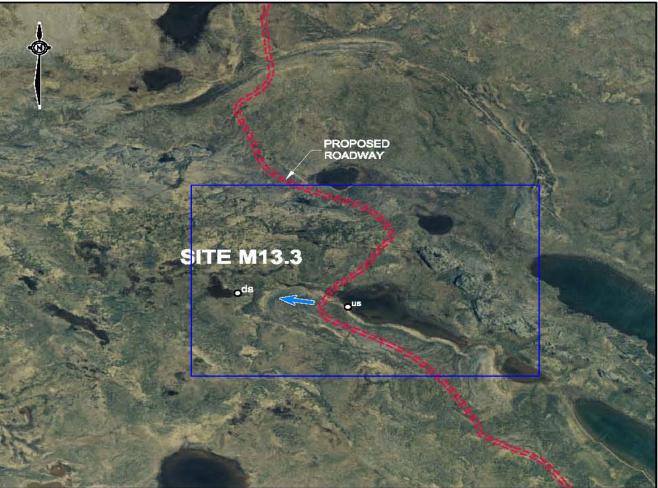


3 August 2010 - Aerial view downstream from above left downstream bank at proposed crossing.

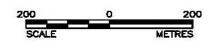
Drainage Area 0.16 km²
Design Discharge 0.40 m³/s
Bankfull Width 3.75 m
Bankfull Depth 0.20 m

Wetted width of channel segments varies from 0.45 to 7.0 m in the central reach of the watercourse, and it is generally shallow with some deeper holes.

Mean Depth 0.10 m



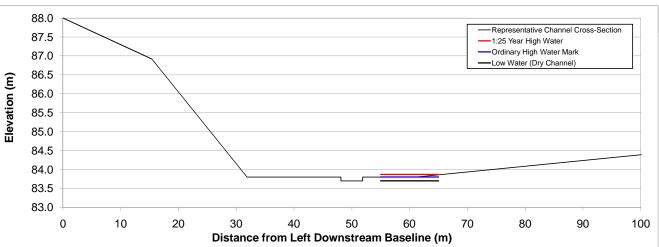




Above: Aerial Photograph

Left: Contour Map (Blue Outline Shows Coverage on Aerial Photo)

Below: Representative Cross-Section at Watercourse Crossing





19 June 2008 - Upstream view near proposed crossing.



19 June 2008 - Downstream view near proposed crossing.

CROSSING LOCATION

	Upstream (us on map)	Crossing Location	Downstream (ds on map)
UTM Easting (NAD83 Zone 15V)	546338	546 287	546073
UTM Northing (NAD83 Zone 15V)	6979514	6 979 542	6979553
Latitude (d-m-s)		62° 56′ 34.0″	
Longitude (d-m-s)		92° 05' 16.6"	

DESCRIPTION

This watercourse flows through a well-defined valley and includes a braided and meandering channel with disconnected segments. The bed material is predominantly fines and detritus.

ROJECT

AGNICO EAGLE MINES LTD. MELIADINE WEST ALL WEATHER ACCESS ROAD

ITLE

NAVIGABLE WATERS PROTECTION ACT NAVIGABILITY DECISION DRAWING FOR SITE M13.3



PROJECT 10-1373-0066			FILE No.				
DESIGN	NPS	27-Aug-10	SCALE	AS SHOWN	REV. 0		
CADD			FIGURE: 8				
CHECK							
DEV/IEVA/		DDAET					



3 August 2010 - View upstream from left downstream bank at proposed crossing.



3 August 2010 - View downstream from left downstream bank at proposed crossing.



3 August 2010 - Aerial view downstream from above left downstream bank at proposed crossing.

Drainage Area 0.97 km²

Design Discharge 0.50 m³/s

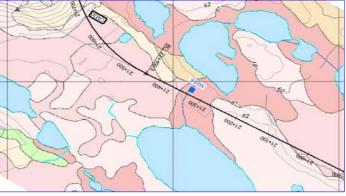
Bankfull Width 0.9 m

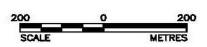
Bankfull Depth 0.13 m

Mean Depth 0.08 m

Individual channel widths vary from 0.39 to 3.2 m in the central reach of the watercourse.



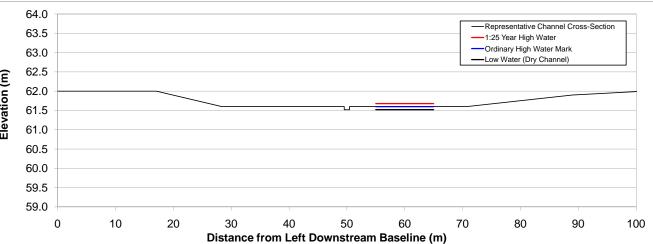




Above: Aerial Photograph

Left: Contour Map (Blue Outline Shows Coverage on Aerial Photo)

Below: Representative Cross-Section at Watercourse Crossing





17 June 2008 - Upstream view, approximately 50 m upstream from watercourse outlet



17 June 2008 - Downstream view, approximately 50 m upstream from watercourse outlet

CROSSING LOCATION

	Upstream (us on map)	Crossing Location	Downstream (ds on map)
UTM Easting (NAD83 Zone 15V)	541223	541 245	541281
UTM Northing (NAD83 Zone 15V)	6985481	6 985 577	6985602
Latitude (d-m-s)		62° 59' 51.2"	
Longitude (d-m-s)		92° 11' 08.8"	

DESCRIPTION

This watercourse flows in a shallow valley with offstream standing water. The bed material is predominantly boulder and cobble (central reach), with fines and detritus (upper and lower reaches).

ROJECT

AGNICO EAGLE MINES LTD. MELIADINE WEST ALL WEATHER ACCESS ROAD

ITLE

NAVIGABLE WATERS PROTECTION ACT NAVIGABILITY DECISION DRAWING FOR SITE M22.6



	PROJECT 10-1373-0066			FILE No.			
	DESIGN	NPS	27-Aug-10	SCALE	AS SHOWN	REV. 0	
0	CADD						
	CHECK			FIGURE: 9			
	REVIEW		DRAFT				



 $3\ \mbox{August}\ 2010$ - View upstream from left downstream bank at proposed crossing.



 $3\ \mbox{August}$ 2010 - View downstream from left downstream bank at proposed crossing.



3 August 2010 - Aerial view downstream from above left downstream bank at proposed crossing.

Drainage Area 3.62 km²

Design Discharge 0.50 m³/s

Bankfull Width 3.2 m

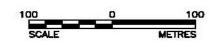
Bankfull Depth 0.25 m

Mean Depth 0.15 m

Individual channel widths vary from 1.2 to 5.2 m away from the lake inlets and outlets.



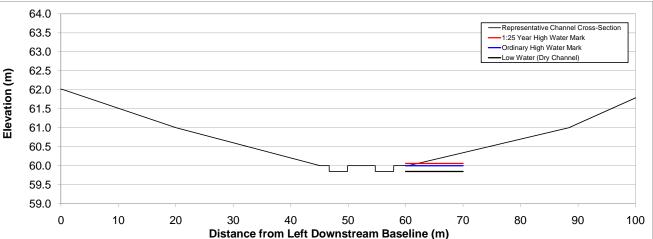




Above: Aerial Photograph

Left: Contour Map (Blue Outline Shows Coverage on Aerial Photo)

Below: Representative Cross-Section at Watercourse Crossing





17 June 2008 - Upstream view, approximately 50 m upstream from watercourse outlet.



17 June 2008 - Downstream view from lake outlet.

CROSSING LOCATION

	Upstream (us on map)	Crossing Location	Downstream (ds on map)	
UTM Easting (NAD83 Zone 15V)	541133	541 188	541192	
UTM Northing (NAD83 Zone 15V)	6986401	6 986 363	6986312	
Latitude (d-m-s)		63° 00' 16.6"		
Longitude (d-m-s)		92° 11' 12.2"		

DESCRIPTION

This watercourse flows through a well-defined valley and includes multiple braided channels. The bed material is predominantly boulder and cobble.

ROJECT

AGNICO EAGLE MINES LTD. MELIADINE WEST ALL WEATHER ACCESS ROAD

NAVIGABLE WATERS PROTECTION ACT NAVIGABILITY DECISION DRAWING FOR SITE M23.7



PROJECT 10-1373-0066				FILE No.		
	DESIGN	NPS	27-Aug-10	SCALE	AS SHOWN	REV. 0
	CADD					
	CHECK				FIGUR	E: 10
5	DEVIEW		DDAET	·		