



July 31<sup>st</sup>, 2017

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Manager of Licensing  
Nunavut Water Board  
P.O Box 119  
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Shanley Thompson  
Technical Advisor II  
Nunavut Impact Review Board  
Cambridge Bay, NU

**Re: Water License 2AM-MEL1631 Part D, Item 3 / NIRB Project Certificate 11MN034**  
**Condition 18 - Submission of Construction Summary Report for Channel 2**

Madam, Sir,

Channel 2 was constructed in 2015. At that time, no Part D Items 1&2 application package was provided to the NWB. In accordance with Water License 2AM-MEL1631, Part D, Item 3 and Schedule D, and Project Certificate 11MN034 Condition 18, please find enclosed with this letter, a copy of the Construction Summary Report for Channel 2.

The construction of Channel 2 generally followed the design drawing, except for the following:

- The alignment of the channel remained the same, while the length was increased by 1.5m.
- The average depth of the excavation for the channel is shallower than the proposed channel by 0.167m.
- The average bottom width of the channel was wider by 0.257m. The largest bottom width is 1.533m at 0+200, and the smallest is 0.781m at 0+140.
- The average side slope of the riprap is 1V:1.82H while the plans specified a slope of 1V:2.5H.
- The average thickness of riprap is 0.277m which is lower than the minimum specified amount of 0.3m. The lowest depth of riprap is 0.196m at 0+160, while the highest depth is 0.425m at 0+200.

Should you have any questions regarding this submission, do not hesitate to contact me.

Regards,

**Agnico Eagle Mines Limited – Meliadine Division**

A handwritten signature in blue ink, appearing to read "Manon Turmel", with a stylized flourish at the end.

Manon Turmel  
Environmental Compliance Counselor  
manon.turmel@agnicoeagle.com  
819-759-3555 x8136

# CONSTRUCTION SUMMARY (AS-BUILT) REPORT FOR CHANNEL2 MELIADINE PROJECT, NUNAVUT



PRESENTED TO  
**Agnico Eagle Mines Ltd.**

JULY 2017  
ISSUED FOR USE  
TETRA TECH PROJECT NUMBER: 28920  
AGNICO EAGLE DOCUMENT NUMBER: 6515-C-230-005-230-REP-003

## EXECUTIVE SUMMARY

Tetra Tech was retained by Agnico Eagle Mines Limited (Agnico Eagle) to prepare a construction summary (as-built) report for Channel2 at the Meliadine Gold Project, Nunavut. Tetra Tech previously prepared the design drawing for construction of Channel2 in September 2015.

Tetra Tech was not involved in the construction of Channel2. The information presented in this report was provided by Agnico Eagle.

The construction of Channel2 was completed in 2015. The construction monitoring was managed by Agnico Eagle.

This report summarizes the construction as-built information for Channel2.

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## 1.0 INTRODUCTION

Agnico Eagle Mines Limited (Agnico Eagle) retained the services of Tetra Tech to carry out the planning and design works associated with the Water and Environment and the Civil Works components of the Meliadine Project, a gold mine located approximately 25 km north from Rankin Inlet, and 80 km southwest from Chesterfield Inlet in the Kivalliq Region of Nunavut. Tetra Tech previously prepared the design drawing for construction of Channel2 in September 2015. Channel2 is located around a UTM (NAD83, Zone 15) coordinate of 538,950E and 6,990,387N. As part of the scope of work, Agnico Eagle asked Tetra Tech to:

- Conduct a detailed design for the channel, as part of the 2015 civil work construction schedule;
- Produce construction drawings and specifications for the channel;
- Prepare design and construction summary reports of the channel.

As required by the Water Licence A, this report summarizes the construction work of Channel2 north of the industrial site which diverts water away from the industrial pad. Included in this report is:

- A summary of the characteristics of the channel;
- Documentation on field decisions that deviate from original plans;
- As-built drawings;
- A survey drawing conducted after the construction of Channel2;
- Photographs of channel2.





## 2.3 Channel characteristics

The channel characteristics and estimated in-place quantities are presented in the table below. For erosion control purposes, riprap was installed in the bottom of the channel.

Item	Channel2
Excavation	1 114 m <sup>3</sup>
Riprap	569 m <sup>3</sup>
Geotextile	1 636 m <sup>2</sup>
Length	268 m
Bottom Width	1 m
Side Slope	1V:2.5H
Riprap Minimum Thickness	0.3 m

## 2.4 Drawings and photographs

As-built drawings are presented in Appendix A.

A survey drawing conducted after the construction of Channel2 can be found in Appendix B.

Aerial Photographs of the location of Channel2 after construction is shown in Appendix C.

## 3.0 DOCUMENTATION ON FIELD DECISIONS THAT DEVIATE FROM ORIGINAL PLANS

The construction of Channel2 generally followed the design drawing, except for the following:

- The alignment of the channel remained the same, while the length was increased by 1.5m.
- The average depth of the excavation for the channel is shallower than the proposed channel by 0.167m.
- The average bottom width of the channel was wider by 0.257m. The largest bottom width is 1.533m at 0+200, and the smallest is 0.781m at 0+140.
- The average side slope of the riprap is 1V:1.82H while the plans specified a slope of 1V:2.5H.
- The average thickness of riprap is 0.277m which is lower than the minimum specified amount of 0.3m. The lowest depth of riprap is 0.196m at 0+160, while the highest depth is 0.425m at 0+200.

The channel geometry and characteristics were adjusted to site conditions. The table below presents the changes between the proposed work and the actual work.



Item	Proposed	Actual	Deviations
Length	268 m	269.5 m	+ 1.5 m
Depth (avg.)	1.956 m	1.789 m	- 0.167 m
Bottom Width (avg.)	1.0 m	1.257 m	+ 0.257 m
Side Slope (avg.)	1V:2.5H (40%)	1V:1.82H (55%)	Steeper
Riprap Thickness (avg.)	0.3 m	0.277 m	- 0.023 m

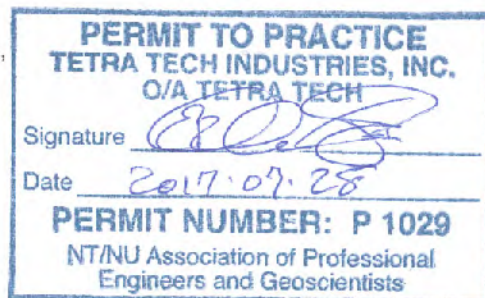
## 4.0 LIMITATIONS OF REPORT


This report and its contents are intended for the sole use of Agnico Eagle Mines Ltd. and their agents. Tetra Tech does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Agnico Eagle Mines Ltd., or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in Tetra Tech's Services Agreement.

## 5.0 CLOSURE

We trust this report meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,  
Tetra Tech



 28.07.2017  
Prepared by: •  
Christopher Morin, Jr. Eng.  
Direct Line: 514.257.2427 x3240  
Christopher.Morin@tetrattech.com



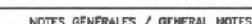
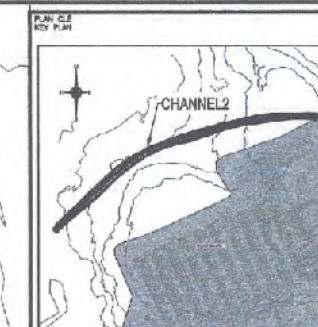
Reviewed by:  
Josée Alarie, P.Eng.  
Direct Line: 514.257.2427 x3323  
Josee.Alarie@tetrattech.com



# **APPENDIX A**

## As-built drawings



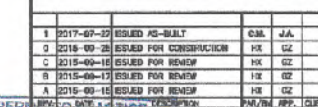


TEL QUE CONSTRUIT  
AS BUILT

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DESSINS EN REFERENCE / REFERENCE DRAWING

TITLE / TITLE		# BMS
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102		102
103		103
104		104



PERMIT NO. 1029  
TETRA TECH INDUSTRIES, INC.  
REVISIONS  
Signature: [Signature]  
Date: 2/17/78  
PERMIT NUMBER: P 1029  
NTNUA  
Production of 1 Geological  
Survey and Geotechnical

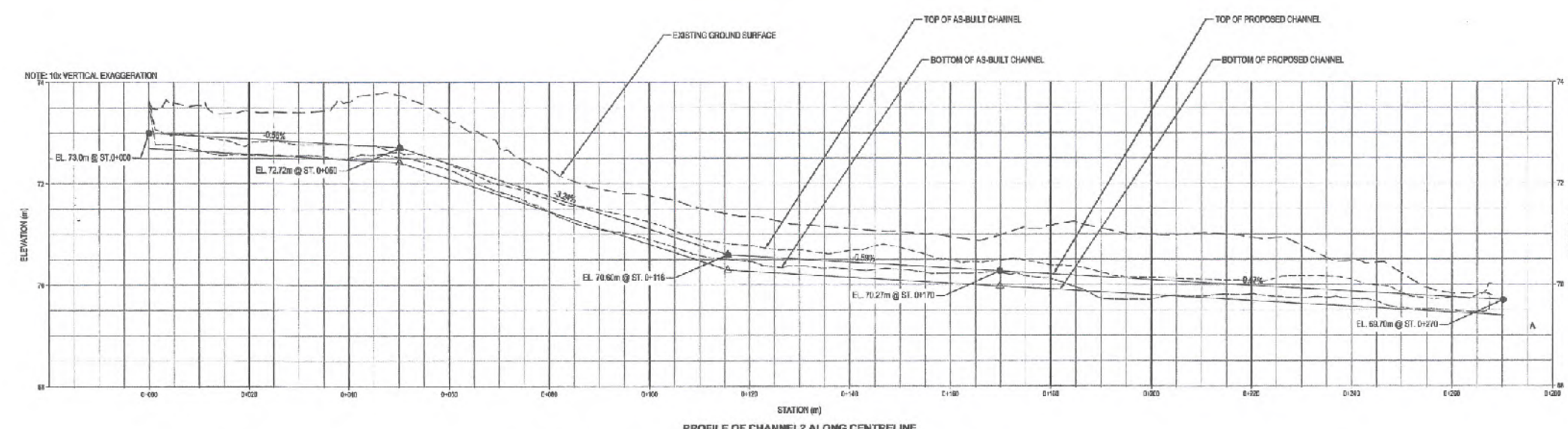
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 AGNICO EAGLE MELIADINE GOLD PROJECT  
 CHANNEL2 DESIGN PROFILE AND LAYOUT  
 FOR 2015 CONSTRUCTION

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WIRING FOR CHECKED BY	GZ		2015-09
APPROVE FOR APPROVED BY	KJ		2015-09

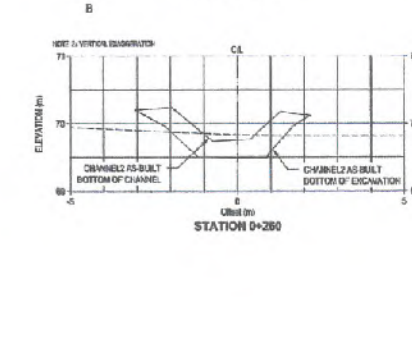
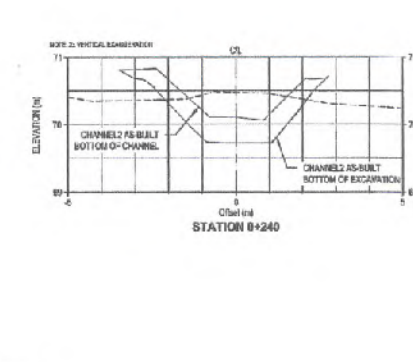
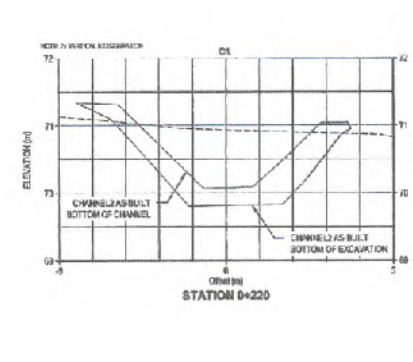
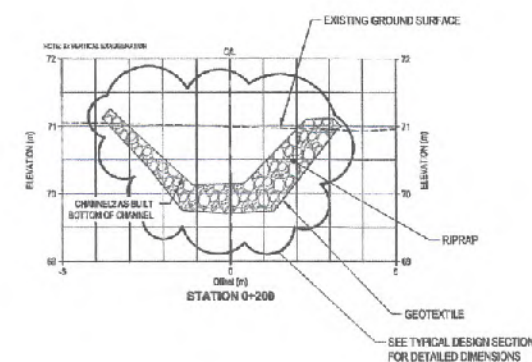
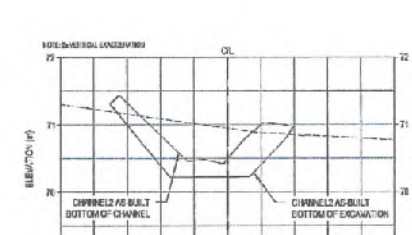
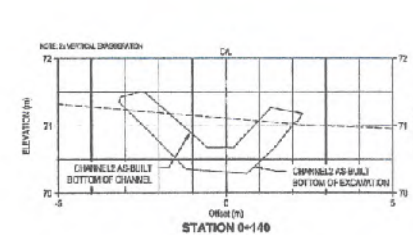
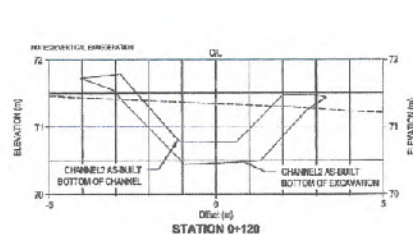
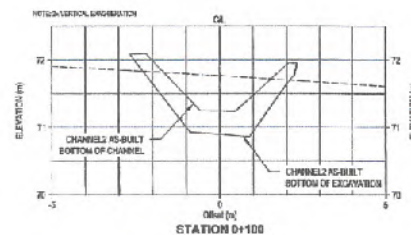
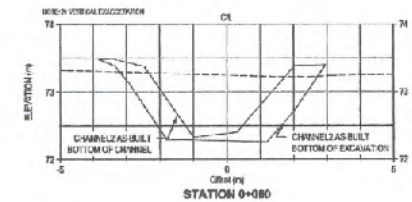
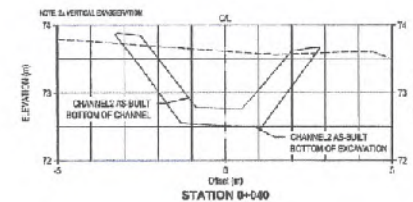
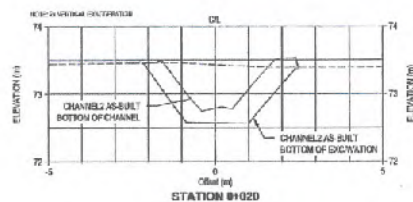
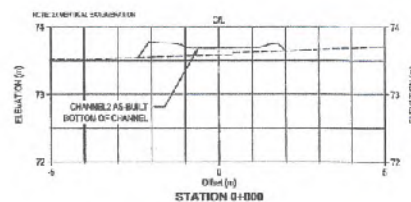
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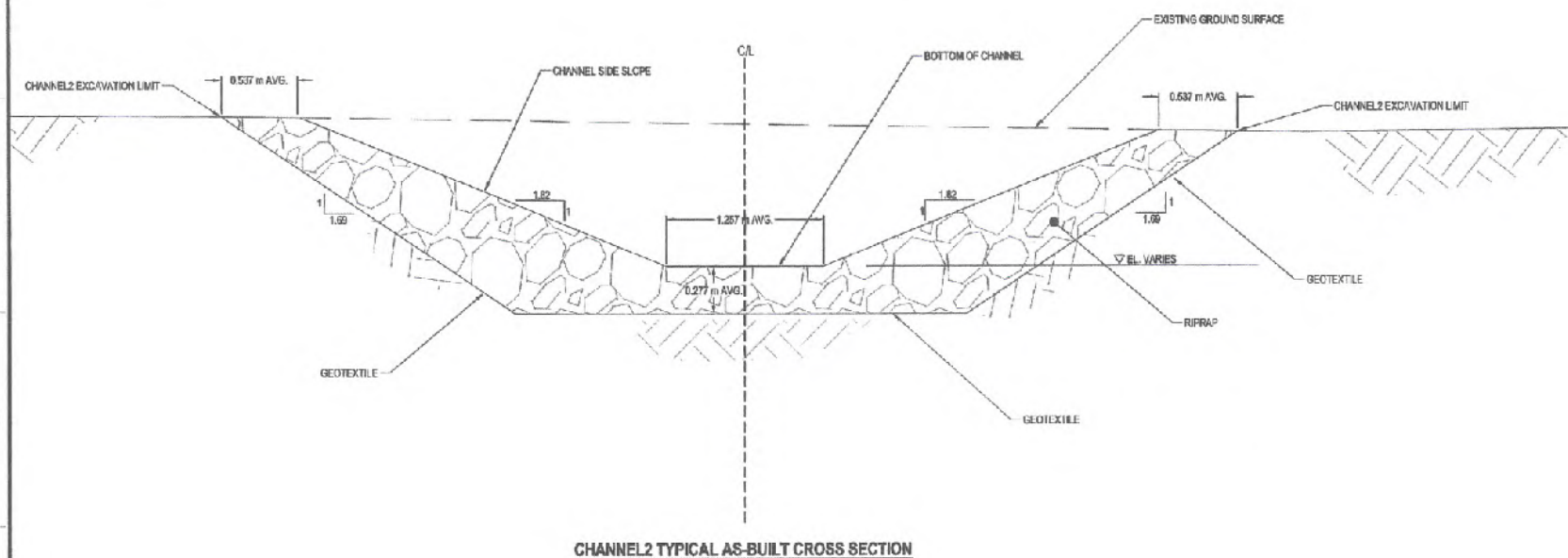
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CHANNEL2 DESIGN CROSS SECTIONS

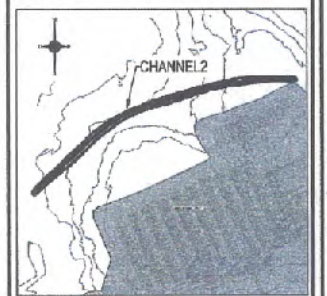


CHANNEL2 TYPICAL AS-BUILT CROSS SECTION

Summary of In-Place Quantities for Channel2 Construction		
Item	Estimated Quantities <sup>(a)</sup>	Actual Quantities
Total Excavation	1,114 m <sup>3</sup>	944 m <sup>3</sup>
Riprap	569 m <sup>3</sup>	628 m <sup>3</sup>
Geotextile <sup>(b)</sup>	1,636 m <sup>2</sup>	1,601 m <sup>2</sup>

<sup>(a)</sup> Material quantities were estimated based on the assumption of 1.5H to 1V excavation side slope

<sup>(b)</sup> Material quantities for geotextile does not include overlaps or excess



NOTES GÉNÉRALES / GENERAL NOTES

TEL QUE CONSTRUIT  
AS BUILT  
DATE : 2017-07-27

AGNICO EAGLE

DESIGNS EN RÉFÉRENCE / REFERENCE DRAWINGS	DATE / DATE	BY / PAR



REV.	DATE	DESCRIPTION	BY	CHK.
1	2017-07-27	ISSUED AS-BUILT	CM	J.A.
2	2015-08-25	ISSUED FOR CONSTRUCTION	HK	GZ
3	2015-08-18	ISSUED FOR REVIEW	HK	GZ
4	2015-08-17	ISSUED FOR REVIEW	HK	GL
5	2015-08-15	ISSUED FOR REVIEW	HK	GZ

PERMIT TO PRACTICE REVISIONS

TETRA TECH

Signature: [Signature]

Date: 2017-07-27

PERMIT NUMBER: P 1029

Association of Professional Engineers and Geoscientists

AGNICO EAGLE MELADINE GOLD PROJECT

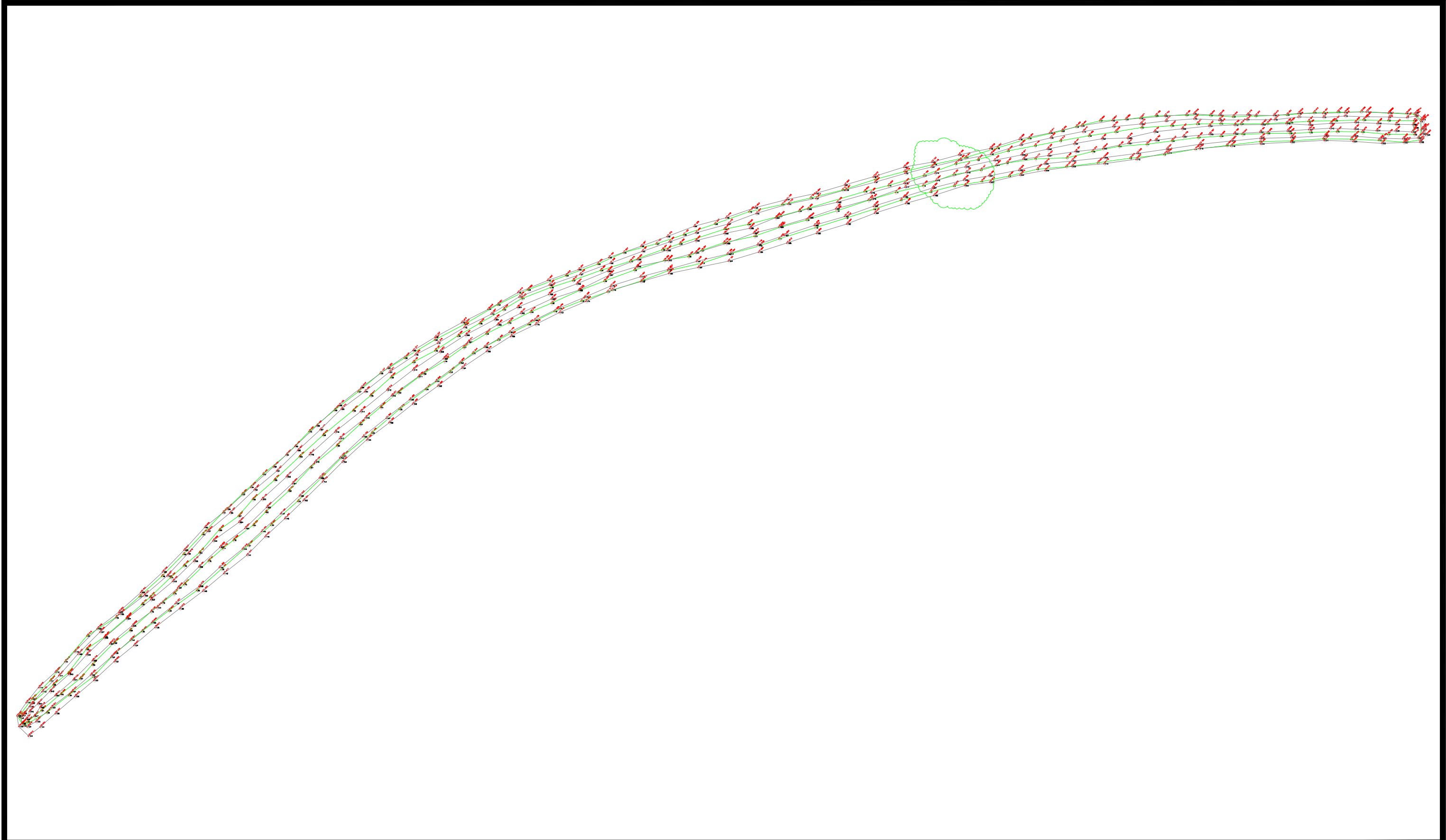
CHANNEL2 DESIGN SECTIONS  
FOR 2015 CONSTRUCTION

DESIGNED BY	HK	DATE	2015-08-25
CHECKED BY	GZ	DATE	2015-08-25
APPROVED BY	KJ	DATE	2015-08-25
EC-SCALE	AS SHOWN	DATE	2015-08-25
PROJECT NO.	65-695-230-201		
PROJECT FILE	6515 / 28920	REVISION	1 / 2

## **APPENDIX B**

### Survey drawings



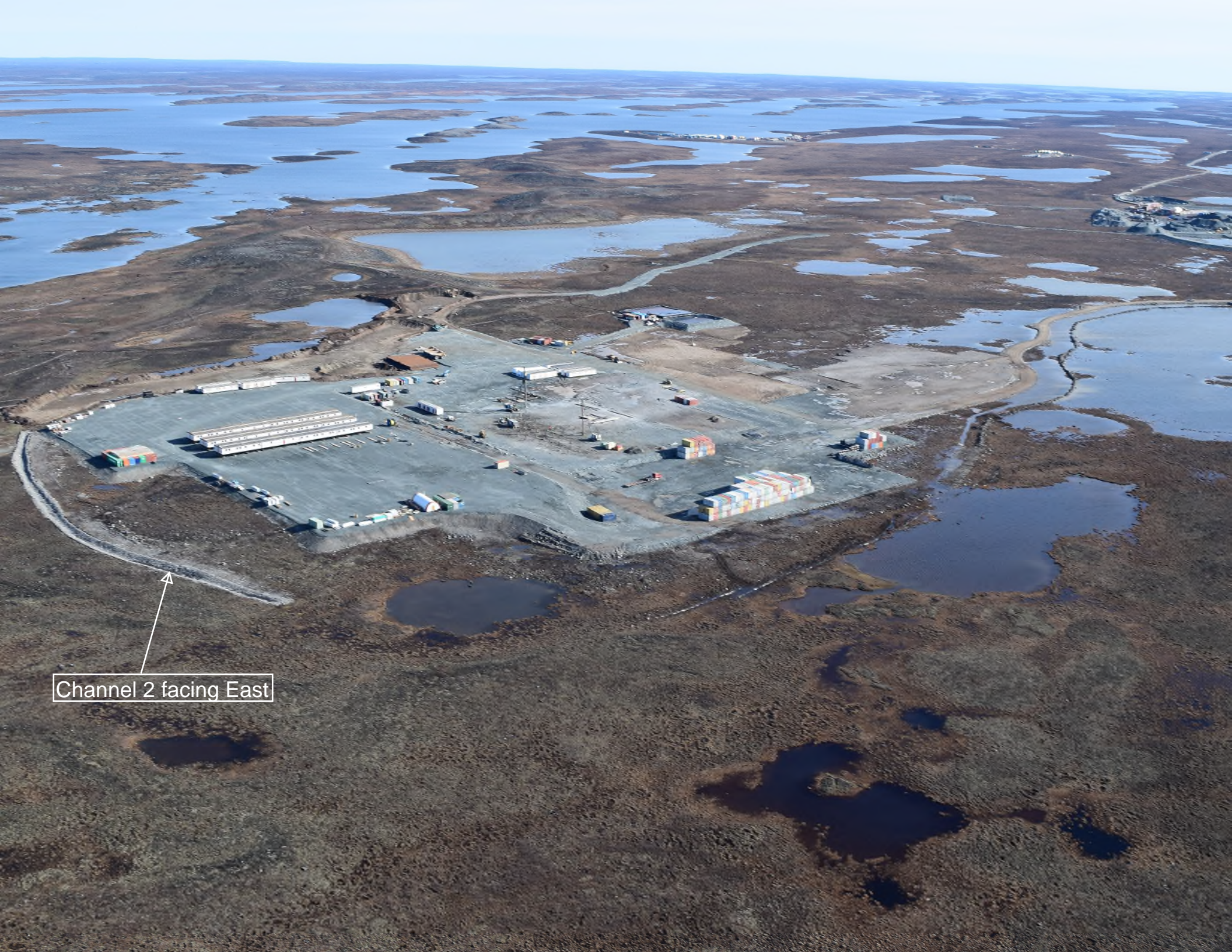


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	Echelle: <i>NA</i>				Date d'envoi : <i>2017-06-01</i>	Approuve par: <i>Hamel arpentage</i>

## **APPENDIX C**

### Photographs of Channel2





Channel 2 facing East





Channel2 facing South