

Ms. Rebecca Studer-Halbach, P.Eng.  
Project Manager  
Public Services and Procurement Canada – Western Region  
Environmental Services and Contaminated Sites  
Management  
Government of Canada  
5th Floor, ATB Place, 10025 Jasper Avenue  
Edmonton, Alberta T5J 1S6  
**Error! Reference source not found.**

**Date**  
October 15, 2021

**Project #**  
60608868

Dear Rebecca,

**Subject: Kwetj paà (Rayrock) Remediation Project  
2021 Field Investigation Summary – Winter Road Crossing Imagery**

AECOM Canada Ltd. (AECOM) is pleased to provide Public Services and Procurement Canada (PSPC) these results of aerial photo collection at two potential winter road crossings associated with the Rayrock remediation project.

Remediation activities are proposed to be undertaken at Rayrock and the associated project sites in 2022. Winter road construction is required to mobilize equipment to the site. A component of winter road construction includes the construction of winter river crossings over either the Emile River or the Marian River. The purpose of the 2021 imagery collection was to obtain data that would facilitate an understanding of the crossing locations for potential project bidders.

Data collected included:


- Sub-Arctic Surveys Ltd. used a drone to collect aerial imagery and ground topographic information of both river crossings. This data is provided as Figures 1 and 2 in **Appendix A**.
- Figures 1 and 2 identify the approximate location of the historical winter roads with the approximate width of the rivers identified at the crossing locations.
- Photographs collected at each site are provided in **Appendix B**.

We trust this submission meets your requirements. Please contact the undersigned should you have any questions regarding this submission.

Sincerely,  
**AECOM Canada Ltd.**



Joël Nolin, P.Eng.  
Senior Project Manager  
joel.nolin@aecom.com

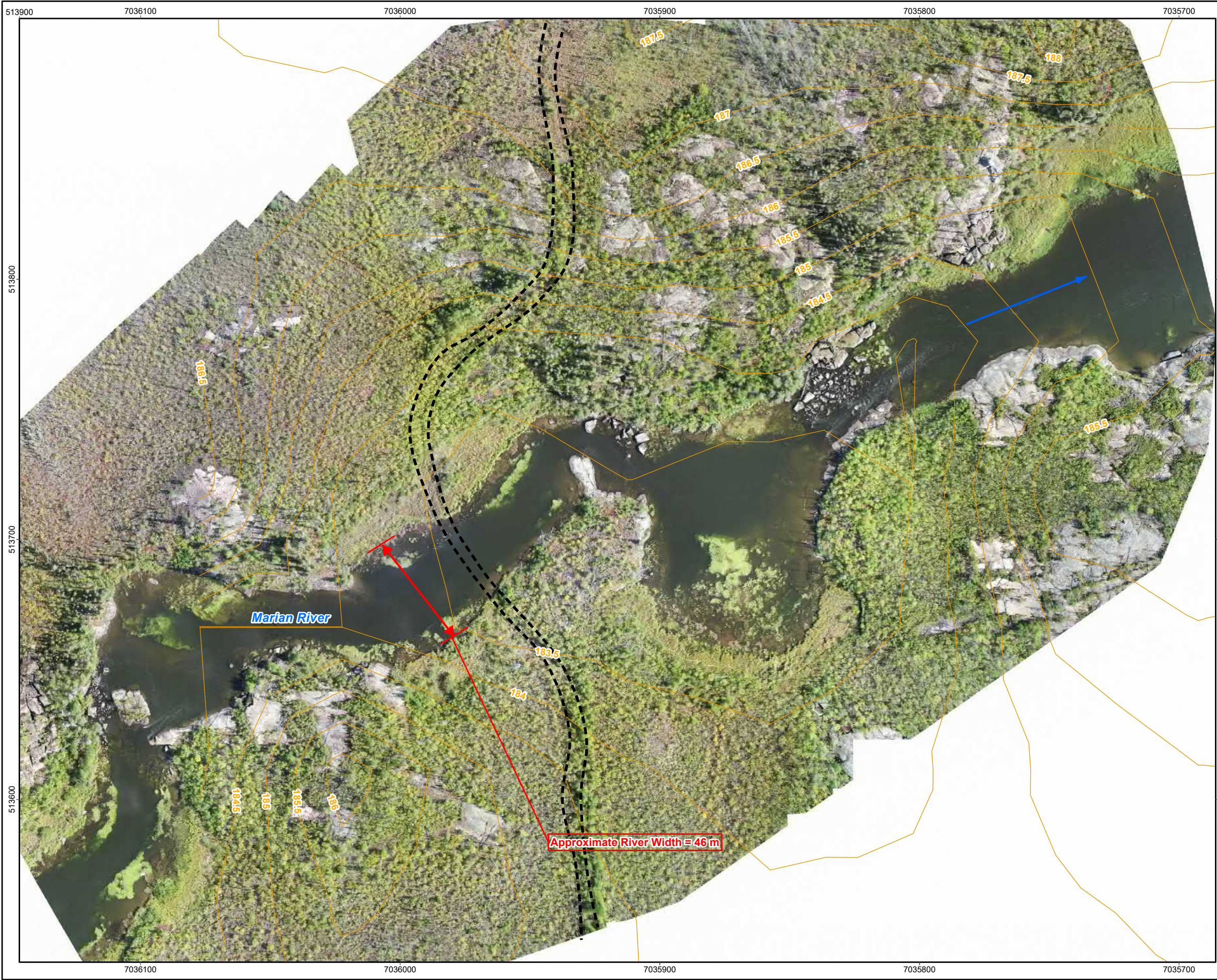


Mike Gunderson, B.Sc.  
Environmental Scientist  
mike.gunderson@aecom.com

# Appendix **A**



Last saved by: PAIGE CROSSMAN (2021-10-15)  
File name: L:\CALGARY\CAD\LEGACY\LEGACY\500\1\PROJ\PROJECTS\60608868\000\CAD\_GIS\2020\_028\_GIS\_GRAPHICS\02\_MXD\2021\_RIVER\_CROSSING\_REPORT\FIG01\_60608868\_MARIANRIVERCROSSING.MXD  
Project Management Initials: Designer: Checked: Approved: ANS/B 279.4mm x 431.8mm



**Legend**

- Topographic Contours (0.5 m)
- Suspected Historical Winter Road Alignment
- Flow Direction

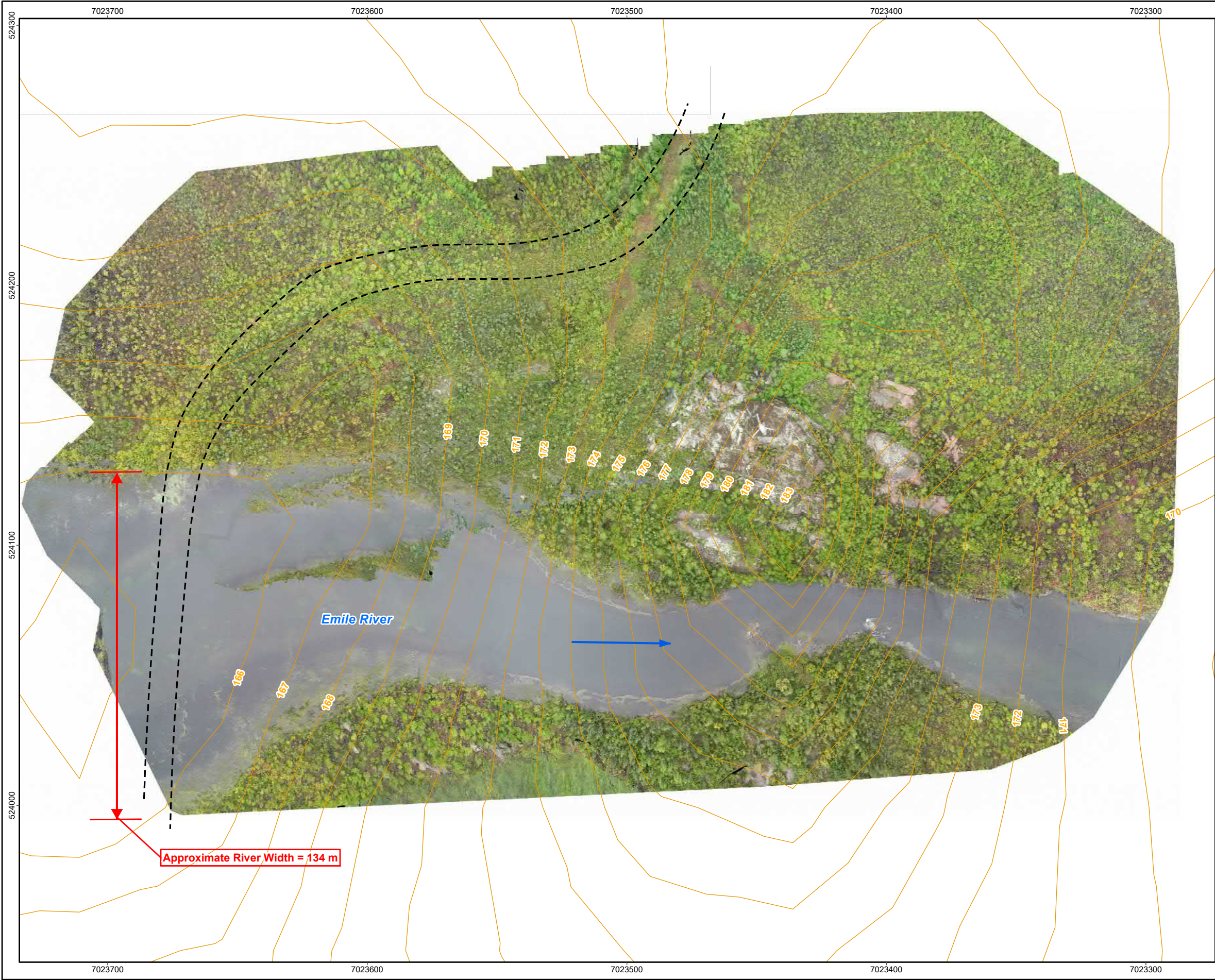
Scale: 1:1,500  
NAD 1983 UTM Zone 11N

North Arrow

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Project Management Initials: Designer: Checked: Approved:  
ANSI B 279.4mm x 431.8mm



**Legend**

- Topographic Contours (0.5 m)
- Suspected Historical Winter Road Alignment
- Flow Direction

**Scale:** 1:1,500  
NAD 1983 UTM Zone 11N

**North Arrow:** N, E, S, W

**Scale Bar:** 20 10 0 20 40 60 m

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# Appendix **B**

<b>Client Name:</b>	<b>Site Location</b>	<b>Project No.</b>
Public Services and Procurement Canada	Emile River Crossing, Near the former Rayrock Mine, NWT	60608868


Photo No. <b>1</b>	Date 8/28/2021	 <p><b>Lutselk'e, NT X0E 1A0, Canada</b></p> <p>☉ 18°N (T) ☉ 11N 524128 7023439 ±7 m ▲ 148 m</p> <p>28 Aug 2021, 15:35:10</p>
Direction Photo Taken North		
Description East side of Emile River facing north.		

Photo No. <b>2</b>	Date 8/28/2021	 <p>NW 300 330 N 0 NE 30 60 E 90</p> <p>☉ 5°N (T) ☉ 63.339789, -116.518163 ±4 m ▲ 145 m</p> <p>28 Aug 2021, 16:27:36</p>
Direction Photo Taken North		
Description East side of Emile River facing north.		



<b>Client Name:</b> Public Services and Procurement Canada	<b>Site Location</b> Emile River Crossing, Near the former Rayrock Mine, NWT	<b>Project No.</b> 60608868
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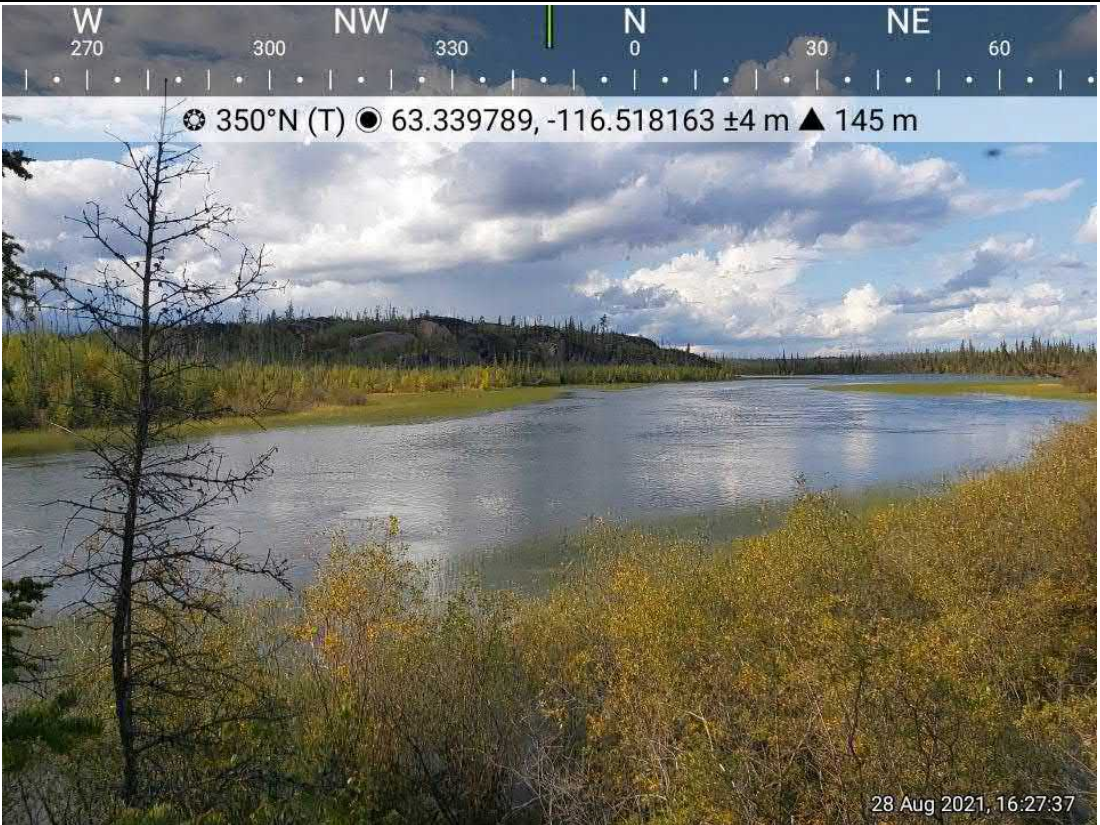
Photo No. <b>3</b>	Date 8/28/2021	
Direction Photo Taken North		
Description East side of Emile River facing north.		

Photo No. <b>4</b>	Date 8/30/2021	
Direction Photo Taken Northwest		
Description East side of Emile River facing northwest.		

<b>Client Name:</b> Public Services and Procurement Canada	<b>Site Location</b> Emile River Crossing, Near the former Rayrock Mine, NWT	<b>Project No.</b> 60608868
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<b>Photo No.</b> <b>5</b>	<b>Date</b> 8/30/2021	
<b>Direction Photo Taken</b> West		
<b>Description</b> Standing on the historical winter road on the east side of Emile River, facing west.		

<b>Photo No.</b> <b>6</b>	<b>Date</b> 8/30/2021	
<b>Direction Photo Taken</b> West		
<b>Description</b> Standing on the historical winter road on the east side of Emile River, overlooking the water to the west.		



<b>Client Name:</b>	<b>Site Location</b>	<b>Project No.</b>
Public Services and Procurement Canada	Emile River Crossing, Near the former Rayrock Mine, NWT	60608868

Photo No. <b>7</b>	Date 8/28/2021	 <p>28 Aug 2021, 09:44:29</p>
Direction Photo Taken Northwest		
Description East side of Marian River facing northwest.		

Photo No. <b>8</b>	Date 8/28/2021	 <p>28 Aug 2021, 12:18:09</p>
Direction Photo Taken North		
Description West side of Marian River, standing near the helicopter landing area facing north.		



<b>Client Name:</b> Public Services and Procurement Canada	<b>Site Location</b> Emile River Crossing, Near the former Rayrock Mine, NWT	<b>Project No.</b> 60608868
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Photo No. <b>9</b>	Date 8/28/2021
Direction Photo Taken Northeast	
Description West side of Marian River, standing near the helicopter landing area facing northeast.	

28 Aug 2021, 12:18:20

Photo No. <b>10</b>	Date 8/28/2021
Direction Photo Taken North	
Description West side of Marian River facing north.	

28 Aug 2021, 12:22:31



<b>Client Name:</b>	<b>Site Location</b>	<b>Project No.</b>
Public Services and Procurement Canada	Emile River Crossing, Near the former Rayrock Mine, NWT	60608868

Photo No. <b>11</b>	Date 8/28/2021	
Direction Photo Taken Northeast		
Description West side of Marian River facing northeast.		

Photo No. <b>12</b>	Date 8/28/2021	
Direction Photo Taken Northeast		
Description West side of Marian River facing northeast.		



<b>Client Name:</b>	<b>Site Location</b>	<b>Project No.</b>
Public Services and Procurement Canada	Emile River Crossing, Near the former Rayrock Mine, NWT	60608868

Photo No. <b>13</b>	Date 8/28/2021	
Direction Photo Taken Northeast		
Description West side of Marian River facing northeast.		

Photo No. <b>14</b>	Date 8/28/2021	
Direction Photo Taken North		
Description West side of Marian River facing north.		



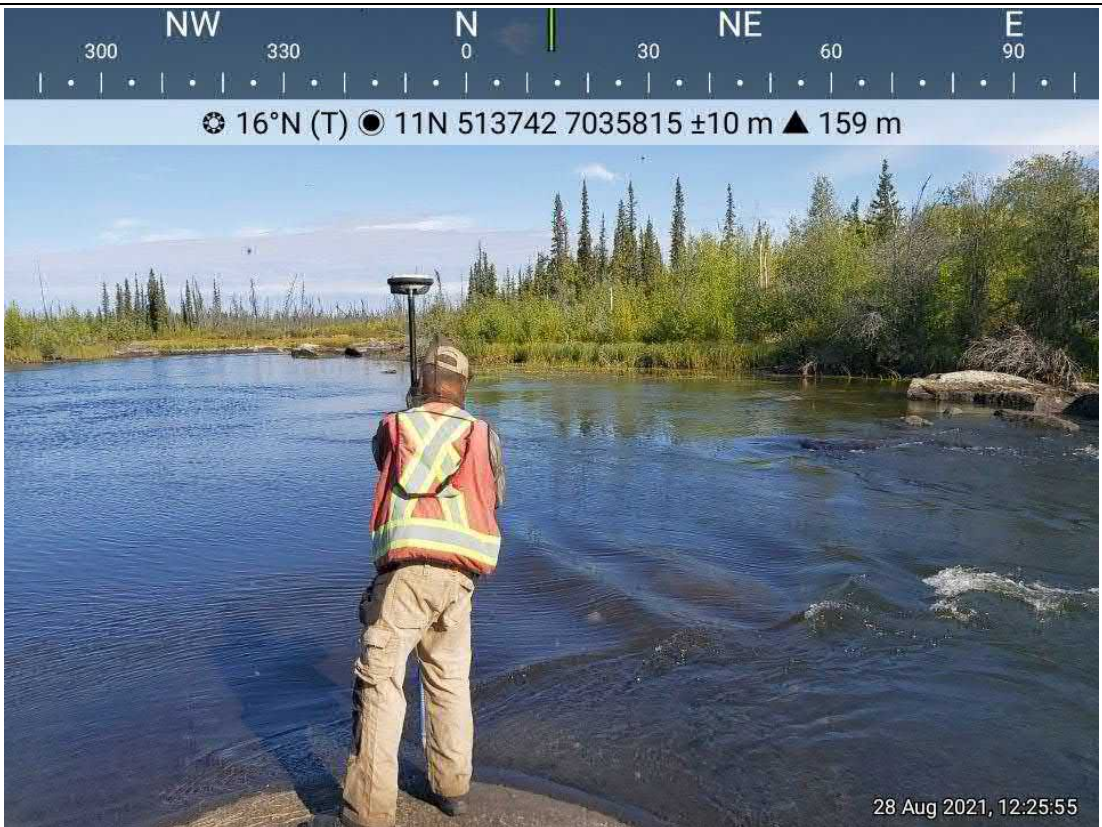
<b>Client Name:</b> Public Services and Procurement Canada	<b>Site Location</b> Emile River Crossing, Near the former Rayrock Mine, NWT	<b>Project No.</b> 60608868
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Photo No. <b>15</b>	Date 8/28/2021
Direction Photo Taken Northwest	
Description West side of Marian River facing northwest.	



W 270 300 NW 330 N 0 30 NE 60  
332°NW (T) 11N 513739 7035812 ±6 m ▲ 185 m  
28 Aug 2021, 12:24:41

Photo No. <b>16</b>	Date 8/28/2021
Direction Photo Taken North	
Description West side of Marian River facing North.	



NW 300 330 N 0 30 NE 60 E 90  
16°N (T) 11N 513742 7035815 ±10 m ▲ 159 m  
28 Aug 2021, 12:25:55



<b>Client Name:</b> Public Services and Procurement Canada	<b>Site Location</b> Emile River Crossing, Near the former Rayrock Mine, NWT	<b>Project No.</b> 60608868
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Photo No. <b>17</b>	Date 8/28/2021
Direction Photo Taken Northeast	
Description West side of Marian River facing northeast.	

Photo No. <b>18</b>	Date 8/28/2021
Direction Photo Taken Northeast	
Description West side of Marian River facing northeast.	