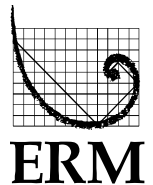
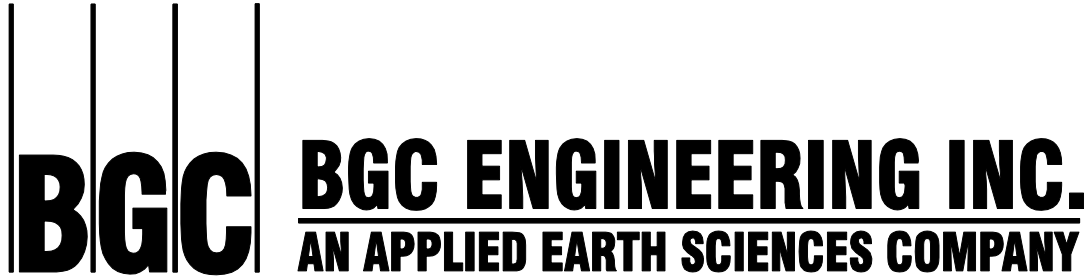


BRUCEJACK GOLD MINE PROJECT
Application for an Environmental Assessment Certificate /
Environmental Impact Statement

Appendix 5-J
Brucejack Lake Outlet Stability





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BGC Project Memorandum

To:	Pretium Resources Inc.	Doc. No:
Attention:	Ian Chang	cc:
From:	Hamish Weatherly	Date: June 9, 2014
Subject:	Brucejack Lake Outlet Stability	
Project No:	1008-010	

1.0 INTRODUCTION

Pretium Resources Inc. (Pretium) is currently undertaking an Environmental Assessment Study (EA) of the Brucejack gold-silver deposit located in the Coast Mountains of northwest British Columbia, approximately 60 km north of Stewart, BC. The Brucejack Project is situated at 56°28'20"N latitude by 130°11'31"W longitude in the high alpine in the Sulphurets District of the Iskut River region, approximately 30 km west of Bowser Lake and near the western extent of Pretium's claims in the area. The project area lies within the drainage basin of the Unuk River.

One of the Application Information Requirements (AIR) for the project is a discussion of the stability of the natural outlet of the lake with an illustrated comparison of the maximum elevation of the waste rock and tailings with the minimum elevation of the outlet. This memorandum provides a discussion of the stability of the lake outlet with respect to the proposed development in the area, including a weir, turbidity curtain and laydown area. For the last several years, BGC Engineering Inc. (BGC) has been providing geotechnical, hydrotechnical and hydrogeological input to the project.

2.0 SITE LAYOUT

Drawing 01 shows a plan and profile view of the project and lake outlet, while Drawing 02 shows several cross-sections based on a combination of LiDAR topography and a 2013 bathymetric survey. The LiDAR data were collected in 2012 by Eagle Mapping, while the bathymetric survey was conducted in 2013 (ERM Rescan, 2013).

As shown by Drawing 01, the lake outlet is rather elongated and gradually shallows over a distance of about 400 m before becoming channelized. Infrastructure of relevance includes the laydown area and extension of submerged waste rock, a sediment control curtain to the immediate northeast and a weir further to the west.

Photographs 1 to 3 show the lake outlet from various vantages. Photo 1 is a view of the lake outlet looking north at the location of the proposed sediment control curtain. Photo 2 was taken looking up the lake outlet (east) from the vicinity of the proposed weir, while Photo 3 is a downstream view of the creek where it becomes channelized. This last photograph as taken in the vicinity of the proposed road crossing to the explosives storage.



Photo 1. View looking north toward the lake outlet at the approximate location of the proposed sediment control curtain. BGC photograph of August 7, 2012.



Photo 2. Upstream view of lake outlet looking to the east. BGC photograph of August 7, 2012.



Photo 3. Downstream (west) view of Brucejack Creek below the lake outlet. BGC photograph of August 7, 2012.

The proposed weir shown on Drawing 01 is intended to be a low profile control structure that would be used to accurately measure outflows and water quality discharging from the lake during operations and closure.

3.0 ASSESSMENT

A potential issue during operations and closure is that the stability of the lake outlet may be compromised as a result of the proposed infrastructure. Proposed infrastructure includes:

- the laydown area, submerged waste rock and tailings;
- the turbidity curtain (which is a contingency measure against potential TSS issues);
and
- a low level weir to measure lake outlet streamflows during operations.

One potential mechanism by which the stability of the outlet could potentially be impacted is the waste rock reducing the cross-sectional area available for outflow. A reduced cross-section would result in increased flow velocities and potentially lead to scour and erosion concerns. As illustrated by the section profile on Drawing 01, however, the waste rock will be deposited in a relatively deep portion of the lake where generally slack water conditions will be encountered. Therefore, the waste rock as proposed does not represent a hydraulic constriction. The geotechnical stability of the waste rock is discussed under separate cover (BGC 2014a).

The turbidity curtain is also not expected to impact flows at the lake outlet, as flow depths are relatively deep at this location. The photo below shows a turbidity curtain employed for waste rock deposition in a lake. At Brucejack Lake, outflows will pass through and under the curtain, and not impact the stability of the lake outlet.



Photo 4. Silt curtain employed in a lake for waste rock deposition. Photograph courtesy of Pretium.

The same is true for the proposed weir, which will be a low level concrete control structure. A detailed design for the weir has not yet been prepared, but it will likely consist of a low-level rectangular or trapezoidal outlet in which to measure flows with a wider section on top to convey peak flows. The weir will not be configured with a drop configuration, which could potentially induce channel degradation or scour.

The lake outlet itself is naturally resistant to downcutting as the outlet is elongated and has a low channel gradient that is not susceptible to major scour or channel degradation due to low channel velocities (Drawing 01). Bedrock is also encountered at shallow depths. For example in the vicinity of Section D (Drawing 02), bedrock was encountered at relatively shallow depths of 1.2 m to 3.7 m at five drillholes. Furthermore, the mining operations are expected to have a minimal impact on streamflows, as the disturbed footprint of the operations is small (BGC, 2014b).

In summary, the stability of the lake outlet is not expected to be compromised as a result of the proposed development.

4.0 CLOSURE

BGC Engineering Inc. (BGC) prepared this document for the account of Pretium Resources Inc.. The material in it reflects the judgment of BGC staff in light of the information available to BGC at the time of document preparation. Any use which a third party makes of this document or any reliance on decisions to be based on it is the responsibility of such third parties. BGC accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this document.

As a mutual protection to our client, the public, and ourselves, all documents and drawings are submitted for the confidential information of our client for a specific project. Authorization for any use and/or publication of this document or any data, statements, conclusions or abstracts from or regarding our documents and drawings, through any form of print or electronic media, including without limitation, posting or reproduction of same on any website, is reserved pending BGC's written approval. If this document is issued in an electronic format, an original paper copy is on file at BGC and that copy is the primary reference with precedence over any electronic copy of the document, or any extracts from our documents published by others.

Yours sincerely,

BGC ENGINEERING INC.
per:

Hamish Weatherly, M.Sc., P.Geo.
Senior Hydrologist

Reviewed by:

Trevor Crozier, M.Eng., P.Eng.

HW/TC/bb

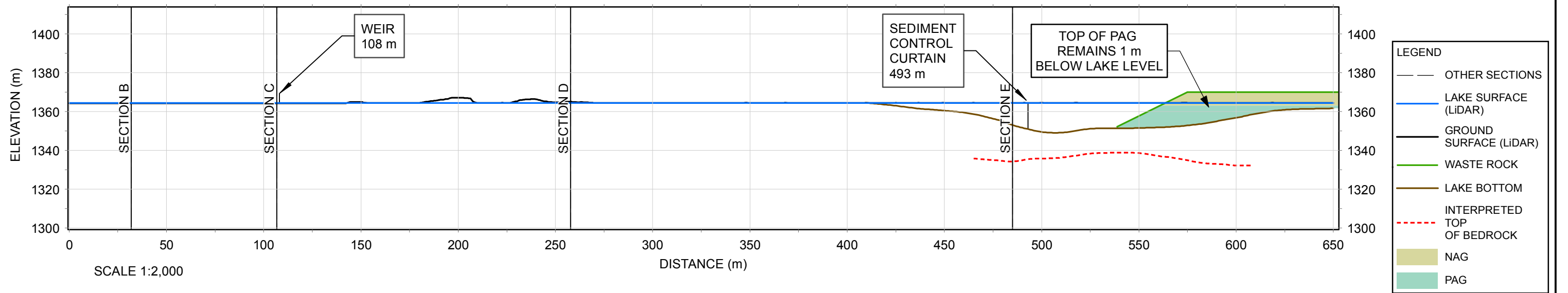
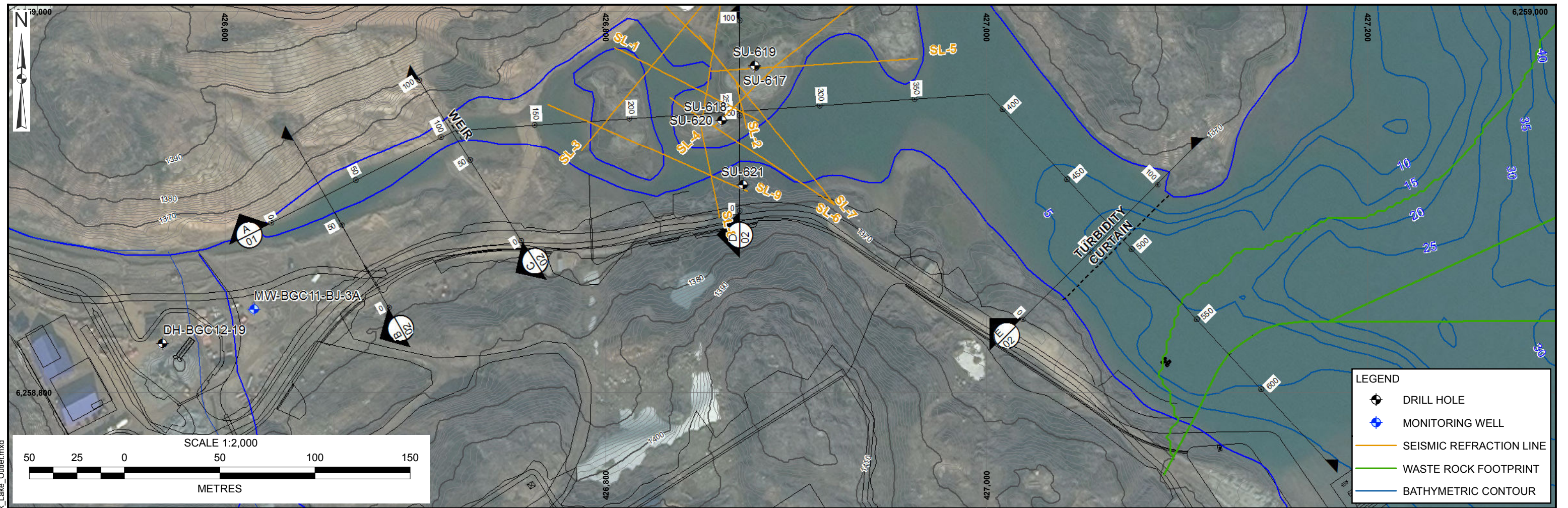
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BGC Engineering Inc. 2014a. Geotechnical Stability Assessment of Waste Rock Deposition in Brucejack Lake. Report issued to Pretium Resources Inc. on April 30, 2014.

BGC Engineering Inc. 2014b. Brucejack Project Environmental Assessment – Water Management Plant. Report issued to Pretium Resources Inc. on June 6, 2014.

ERM Rescan. 2013. Brucejack Lake Bathymetry. Memorandum prepared for Pretium Resources Inc., October 25, 2013.

DRAWINGS



NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
2. THIS DRAWING MUST BE READ IN CONJUNCTION WITH BGC'S REPORT TITLED "BRUCEJACK LAKE OUTLET STABILITY," AND DATED JUNE 2014.
3. IMAGERY PROVIDED BY BING, DATED SEPTEMBER 2012. CONTOUR INTERVAL IS 1 m.
4. PROJECTION IS NAD 1983 UTM ZONE 9.
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6. TYPICAL LAKEBED SEDIMENT THICKNESS ESTIMATES OF 15 m BASED ON GEOPHYSICAL SURVEYS. THICKER DEPOSITS UP TO 30 m ENCOUNTERED NEAR THE SHORELINE AND IN DEEPER AREAS OF THE LAKE.

SCALE:	1:2,000
DATE:	JUNE 2014
DRAWN:	MIB-C, STT
CHECKED:	HW
APPROVED:	TC

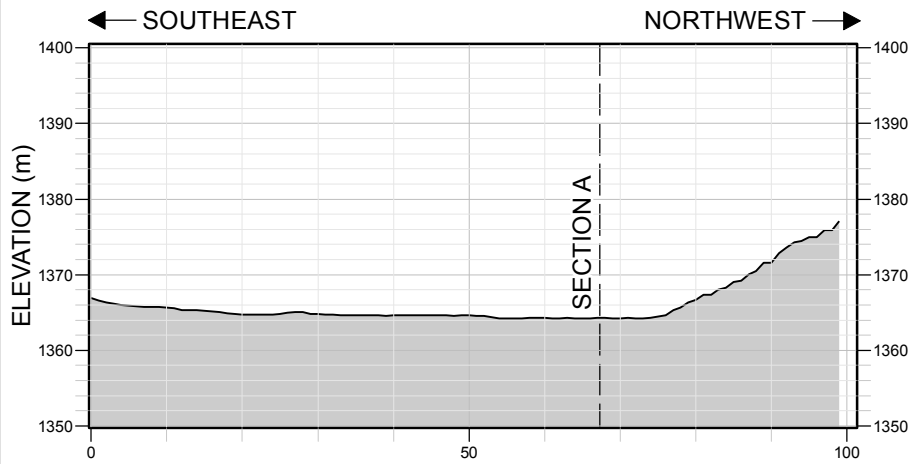
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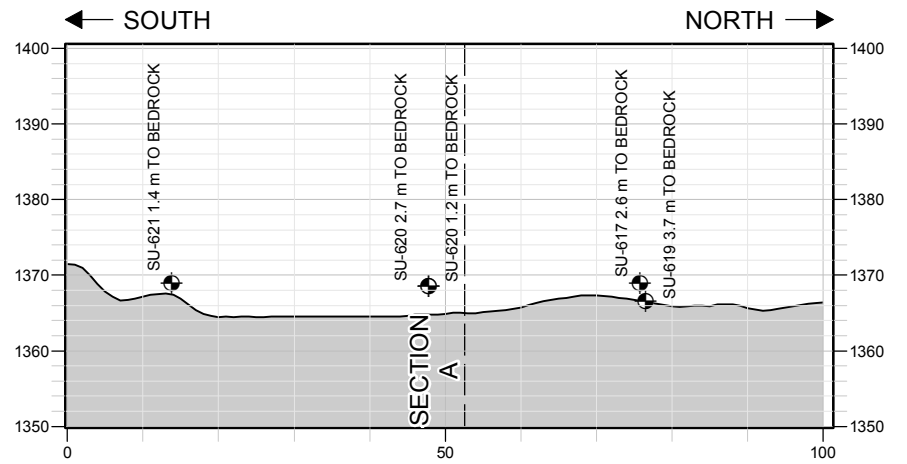
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TITLE:	PLAN AND SECTION VIEW OF BRUCEJACK LAKE OUTLET	
PROJECT No.:	1008010-04	01

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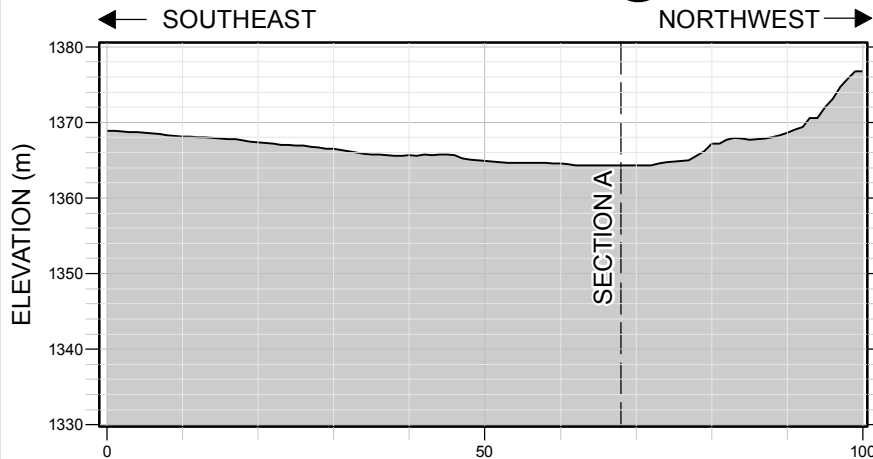
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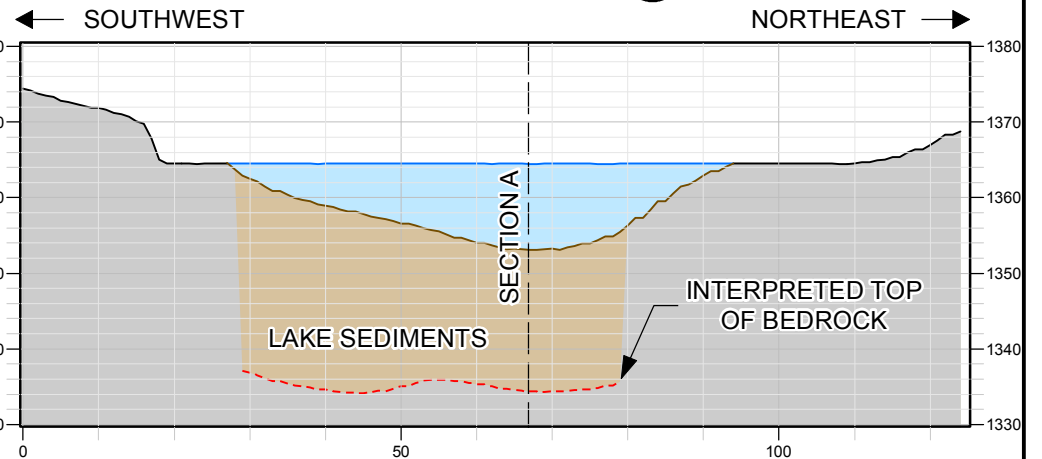
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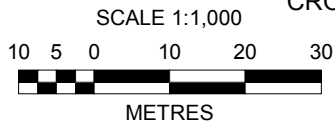
DISTANCE (m) D
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DISTANCE (m) C
CROSS SECTION



DISTANCE (m) E
CROSS SECTION



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PROJECT:	BRUCEJACK LAKE OUTLET STABILITY	
TITLE:	BRUCEJACK LAKE OUTLET SECTIONS	
PROJECT No.:	100810-04	02