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Memorandum

To	Karyn Lewis (Bonito Capitals)	**Project #**	948-2
CC	Sara Wilkins (Norwest)	**Date**	November 30, 2017
From	Jim McKinley, Ph.D., P.Eng.		
Subject	2017 Ulu Project Water and Soil Sampling		

Introduction

The Ulu Gold Project (Ulu) is an advanced exploration project that is currently in care and maintenance status, covered under Water License 2BM-ULU1520 (Water License) issued to Bonito Capital Corporation (Bonito), a wholly owned subsidiary of Mandalay Resources Corporation. The project is situated in the Kitikmeot tundra region of Nunavut about 150 km north of the Lupin Mine. The project site is an underground exploration site with an airstrip, camp and supporting facilities. The surrounding landscape is dominated by treeless arctic tundra with exposed weathered bedrock and glacial features. Norwest Corporation (Norwest) was retained by Bonito to address several concerns raised by the Water License inspector as part of the 2017 compliance inspection. This report contains the methodology and results of the activities employed by Norwest to address those concerns. The report does not include any commentary on fuel storage, waste or water management practices. All figures and tables are included as Attachment 1.

Scope of Work

The 2017 Ulu Water License compliance inspection conducted by Eva Paul identified several outstanding requirements that necessitated additional water and soil sampling. Section 3, Requirement B of the compliance inspection report specifies:

> *"Conduct sampling of the portal water to verify compliance with discharge criteria, and undertake discharge (with notification to the Inspector) before the end of this season."*

This requirement contradicts the terms of the Water License, which state that "*All Minewater and Water from the portal entrance, should it be encountered, shall be directed to the Retention Pond or as otherwise approved by the Board in writing*". Per the Water License, water from the portal is not allowed to be discharged directly to the environment without written approval from the Board. Nevertheless, to address the requirement, water samples were collected from the mine portal and retention pond and analyzed for the constituents outlined in the Water License. At the time of the sampling event, the water level in the portal did not appear to be in danger of exceeding containment.

Section 3, Requirements D and E, specify:

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> *"Immediately discontinue use of the apron beside the tank farm that has been used for barrel storage. Contaminated soil is to be removed and managed according to the SCP. Further contamination resulting from this facility is unacceptable; any water ponding on the pad should be treated as contaminated and not allowed to flow off the pad."*
>
> *"A spill report addressing the issue of contamination on the apron and the resulting downslope flow is to be filed by **July 31, 2017**. It should fully describe the scope of the issue, which clearly pre-dates my first inspection in 2012, and the action to be taken. Soil sampling to determine the full extent of the impacted area is to be conducted immediately, and should inform the remediation efforts. Numerous small stains around the entire site should also be shovelled up as soon as practically possible."*

To address a portion of these requirements, soil samples were collected from under the stained (and removed) soil areas downslope of the apron, and from drainage channels downslope of the stained areas. Water samples were also collected from the downgradient East Lake to determine if there was any migration of hydrocarbon-impacted water into the natural surface water body. The sampling was not intended to determine the full extent of the impacted area; instead, it was meant to act as a preliminary sampling event to guide future hydrocarbon delineation study and remediation efforts.

Sampling Methodology

Discharge Water Quality

Two water samples were collected from the mine portal and two from the retention pond. The samples were then analyzed to determine compliance with the discharge limits identified in the Water License. The names, times, locations, and descriptions of the mine discharge samples are provided in Table 1 and on Figure 1.

Hydrocarbon Impacts

Six soil samples were collected downgradient of the apron beside the tank farm and analyzed for potential hydrocarbon impacts. Three soil samples were collected from under the stained (and removed) soil areas downslope of the apron, and three samples were collected from drainage channels downslope of the stained areas. The top 6 to 12 inches of the sampled area were mixed with a shovel and sampled; the shovel was cleaned with degreaser, Alconox, and deionized water between sampling locations. Additionally, two water samples were collected from the East Lake and analyzed for potential hydrocarbon impacts. The names, times, locations, and descriptions of the soil and water hydrocarbon samples are provided in Table 2 and on Figure 1.

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Results

Discharge Water Quality

The mine discharge water quality results are presented in Table 3 and compared to the limits outlined in the Water License. None of the samples exceeded any of the limits outlined in the Water License.

Hydrocarbon Impacts

The soil hydrocarbon results are presented in Table 4 and compared to the CCME Tier 1 Levels for industrial coarse-grained soil. None of the soil samples exceeded the Tier 1 limits for any of the hydrocarbon fractions. The water hydrocarbon results are presented in Table 5; none of the samples contained hydrocarbon concentrations above detection limits.

Closure

This report has been prepared for Bonito Capital Corporation. The text contained herein presents documentation of the soil and water sampling carried out by Norwest at the Ulu Gold Project, located in Nunavut, Canada. This report represents the opinion of Norwest based on information provided by Bonito and observations made during limited site visits.

All the information contained herein has been interpreted by Jim McKinley, Ph.D., P.Eng., and has been reviewed by Sara Wilkins, P.Geol.

Author:

Jim McKinley, Ph.D., P.Eng.
Senior Hydrogeologist

Reviewed by:

Sara Wilkins, P.Geol.
Manager – Water Resources

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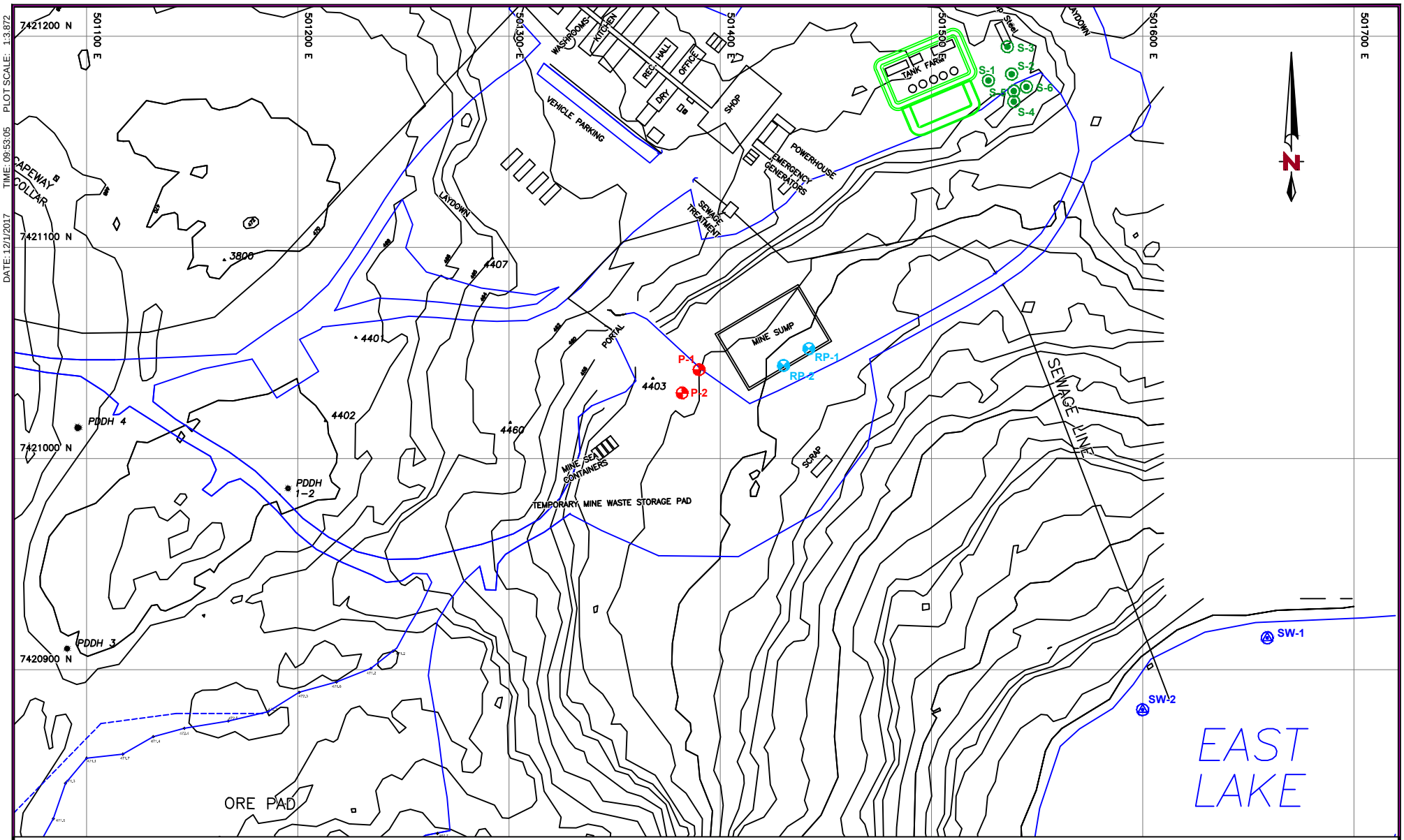
Attachment 1
Figures and Tables



DATE: 12/1/2017 TIME: 09:53:05 PLOT SCALE: 1:3,872

FILENAME: T:\948-1_ULU\DISC\DRAFTING\04.2017 SAMPLE LOCATIONS_REVB.DWG
XREF FILE(S):
IMAGE FILE(S):

LEGEND

- S-1 — HYDROCARBON SOIL SAMPLING LOCATION
- SW-1 — HYDROCARBON WATER SAMPLING LOCATION
- P-1 — PORTAL SAMPLING LOCATION
- RP-1 — RETENTION POND SAMPLING LOCATION
- MINE PAD AND ROAD OUTLINE

50m 0 50 100m

SCALE 1:2500

SCALES INDICATED BASED ON AN 8.5"x11" PLOT CONFIGURATION

REV#	DATE	DESCRIPTION	KM	KM	JM	AT
REV.	DATE	DESCRIPTION	DWN	DSG	CHK	APR
0	Nov 30	Issued for Report				

BONITO CAPITAL CORP.

ULU PROJECT

SCALE:	AS SHOWN
DATE:	2017-11-30
CO-ORD. SYS.:	UTM-NAD83-12
DRW'N BY:	KM
DSG'N BY:	--
REV'D BY:	AT
APP'D BY:	SE

ULU 2017 SAMPLE LOCATIONS

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PROJECT NO.:	FIG. NO.:	REV.:
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Table 1
Water Quality Sample Locations

Sample Name	Easting 4M (m)	Northing 4M (m)	Location Description	Date and Time
P-1	501390	7421042	Portal - East Side	7/30/17 11:57
P-2	501382	7421031	Portal - West Side	7/30/17 12:08
RP-1	501442	7421052	Retention Pond - East Side	7/30/17 11:36
RP-2	501430	7421044	Retention Pond - West Side	7/30/17 11:47

Table 2
Hydrocarbon Sampling Locations

Sample Name	Sample Type	Easting 4M (m)	Northing 4M (m)	Location Description	Date and Time
S-1	Soil	501527	7421179	Downgradient of tank farm - below visually impacted soil	7/30/17 14:50
S-2	Soil	501538	7421182	Downgradient of tank farm - below visually impacted soil	7/30/17 14:36
S-3	Soil	501536	7421195	Downgradient of tank farm - below visually impacted soil	7/30/17 14:24
S-4	Soil	501539	7421169	Downgradient of tank farm - drainage channel beyond visually impacted soil	7/30/17 14:12
S-5	Soil	501539	7421174	Downgradient of tank farm - drainage channel beyond visually impacted soil	7/30/17 14:02
S-6	Soil	501545	7421176	Downgradient of tank farm - drainage channel beyond visually impacted soil	7/30/17 13:49
SW-1	Water	501659	7420915	East Lake - NE Side	7/30/17 12:24
SW-2	Water	501600	7420881	East Lake - NW Side	7/30/17 12:38

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Table 3
Water Quality Results

Parameter	P-1	P-2	RP-1	RP-2	Maximum Average Concentration*	Maximum Concentration of any Grab Sample*
Total Arsenic (mg/L)	0.00113	0.00117	0.00246	0.00245	0.5	1
Total Copper (mg/L)	0.00198	0.00202	0.0047	0.0044	0.3	0.6
Total Lead (mg/L)	0.00016	0.000156	0.000104	0.000077	0.2	0.4
Total Nickel (mg/L)	0.00514	0.00474	0.00073	0.00064	0.5	1
Total Zinc (mg/L)	0.0768	0.0767	<0.006	<0.0030	0.5	1
TSS (mg/L)	<3.0	<3.0	<3.0	<3.0	25	50
pH	6.93	6.94	7.49	7.61	6.0 to 9.5	
Oil and Grease	No Sheen	No Sheen	No Sheen	No Sheen	No Visible Sheen	NA

* as stipulated by Ulu Water License

Table 4
Soil Hydrocarbon Results

Parameter	S-1	S-2	S-3	S-4	S-5	S-6	CCME Tier 1 Level (Industrial Coarse-Grained Soil)
F1 (C6-C10) (ppm)	<10	<10	<10	<10	<10	<10	320
F2 (C10-C16) (ppm)	<20	<20	<20	<20	<20	<20	260
F3 (C16-C34) (ppm)	56	47	153	189	179	80	1700
F4 (C34-C50) (ppm)	<20	<20	<20	33	23	<20	3300
Benzene (ppm)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA
Toluene (ppm)	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	NA
Ethylbenzene (ppm)	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	NA
Xylenes (ppm)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	NA

Table 5
Water Hydrocarbon Results

Parameter	SW-1	SW-2
F1 (C6-C10) (mg/L)	<0.10	<0.10
F2 (C10-C16) (mg/L)	<0.10	<0.10
F3 (C16-C34) (mg/L)	<0.25	<0.25
F4 (C34-C50) (mg/L)	<0.25	<0.25
Benzene (mg/L)	<0.00050	<0.00050
Toluene (mg/L)	<0.00050	<0.00050
Ethylbenzene (mg/L)	<0.00050	<0.00050
Xylenes (mg/L)	<0.00071	<0.00071