

Surveillance Network Program Report for MV2020L2-0002, Sixty North Gold Mines Ltd.

October 31, 2024

This report according to Annex A- Surveillance Network Program for MV2020L2-0002 issued to Sixty North Gold Mines Ltd. for the Mon Gold Project.

Summary

The camp commenced shutdown in late August and final crews departed September 3. There have been no activities on site since September 3, 2024.

1. The effective date of this Surveillance Network Program report is November 30, 2024.

a. Electronic summary attached in xlsx format.

Table 1. Summary of SNP Program activities

SNP STN	Date	Data	Collected
SNP-01			No discharge
SNP-02			No DST
SNP-03a			No DST
SNP-04			Inaccessible
SNP-05			No water
SNP-06			No water
SNP-07			No water
SNP-08			Inactive
SNP-09			Down Slope Waste
SNP-10			No ore
SNP-11			No water
SNP-12			Low water
SNP-13			No activities
SNP-14			No activities
SNP-15			No activities
SNP-16			No activities
SNP-17			No activities
SNP-18			No activities
SNP-19			No activities
SNP-20			No activities
SNP-21			No water
SNP-22			No water

QA/QC

c) Actions taken in response to any exceedances.

No further samples collected. Operations suspended.

d) Calibration and status of meters and devices referred to in Part B Condition 18 of this license.

Volumes are measured during filling using volume calculations on 1 cubic metre cubic containers.

3) Coordinates of all SNP sites that were established including an updated map identifying all the SNP sites.

Table 2. Location of all SNP sites (from Groundwater and Water Management Plan).

SNP	Easting	Northing	Description	Rationale
SNP-01	635811.5376	6977310.049	Sewage Treatment Plant Effluent	To monitor the quality and quantity of treated Sewage being disposed from the Sewage Treatment System
SNP-02	635719.9015	6977561.717	Monitoring trench, immediately downstream of the Dry Stack Tailings Facility	To monitor the quality of Seepage and surface Water downstream of the Dry Stack Tailings Facility
SNP-03a	635482.7263	6977466.707	Monitoring trench, down slope of Dry Stack Tailings Facility – First Narrows	To monitor the quality of Seepage and surface Water downstream of the Dry Stack Tailings Facility
SNP-03b	635469.9287	6977469.056	Monitoring trench, down slope of Dry Stack Tailings Facility – Culvert	To monitor the quality of Seepage and surface Water downstream of the Dry Stack Tailings Facility
SNP-04	635716.5372	6977560.698	Seepage from the Dry Stack Tailings Facility	To monitor the quality and quantity of Seepage from the Dry Stack Tailings Facility
SNP-05	635621.5286	6977632.123	Background Well - Upgradient of the Dry Stack Tailings Facility	To establish background water quality before operation of the Dry Stack Tailings Facility and to monitor upgradient Water quality once the Dry Stack Tailings Facility is operational.

SNP-06a	635727.6526	6977502.42	Monitoring Well – Downgradient of the Dry Stack Tailings Facility	To establish background water quality before and during operation of the Dry Stack Tailings Facility
SNP-06b	635491.1453	6977464.347	Monitoring Well – Downgradient of the Dry Stack Tailings Facility	To establish background water quality before and during operation of the Dry Stack Tailings Facility
SNP-07			Underground Minewater Sump(s)	To monitor the quantity and quality of groundwater and mine Water collected in the underground sump prior to discharge to the surface
SNP-08	635781.5557	6977103.871	Minewater holding tank or pond	To monitor the quantity and quality of mine Water prior to discharge to the Receiving Environment
SNP-09	635813.5578	6977130.145	Seepage from Waste rock pile(s)	To monitor the quality and quantity of Seepage from the Waste rock pile(s)
SNP-10	635841.5194	6977074.557	Seepage from ore stockpile(s)	To monitor the quality and quantity of Seepage from the ore stockpile(s)
SNP-11	635917.6533	6977045.243	Freshwater in Discovery Lake	To monitor water use
SNP-12	635932.5783	6977101.731	Discovery Lake	To monitor impacts of runoff and Discharge from the Project on Water quality in Discovery Lake
SNP-13	642894.9157	6947940.977	Prosperous Lake	To monitor water use
SNP-14	638774.8301	6973931.416	Sito Lake	To monitor water use
SNP-15	641258.1981	6953048.757	Bluefish Lake	To monitor water use
SNP-16	639085.2532	6964534.219	Quayta Lake	To monitor water use
SNP-17	636024.7339	6974998.439	Lake A (T-Bone)	To monitor water use
SNP-18	636145.2634	6974985.342	Lake B (Bone)	To monitor water use
SNP-19	636136.8196	6975393.639	Lake C (565)	To monitor water use

SNP-20	636689.1345	6975138.341	Lake D (SZ)	To monitor water use
SNP-21	635970	6976850	Explosives Mag	To monitor waters draining EM
SNP-22	635630	6977240	Road	To monitor drainage from road

Date	Camp	Other	Comment	Total	Cumulative
2024-11-01				0	0
2024-11-02				0	0
2024-11-03				0	0
2024-11-04				0	0
2024-11-05				0	0
2024-11-06				0	0
2024-11-07				0	0
2024-11-08				0	0
2024-11-09				0	0
2024-11-10				0	0
2024-11-11				0	0
2024-11-12				0	0
2024-11-13				0	0
2024-11-14				0	0
2024-11-15				0	0
2024-11-16				0	0
2024-11-17				0	0
2024-11-18				0	0
2024-11-19				0	0
2024-11-20				0	0
2024-11-21				0	0
2024-11-22				0	0
2024-11-23				0	0
2024-11-24				0	0
2024-11-25				0	0
2024-11-26				0	0
2024-11-27				0	0
2024-11-28				0	0
2024-11-29				0	0
2024-11-30				0	0
2024-11-31				0	0
Totals	0	0	0	0	0

f) A tabular summary of cumulative water usage in cubic metres.

mn = mine, cmp = camp

ABA Samples

Two rock samples were collected from the mine representing the two rock types observed. Both were very low sulphide and minimally altered.

Sample	Description
J089414	Unaltered gabbro in main ramp at 120m down from portal
J089415	Weakly altered gabbro in main ramp at 120m down from portal

Both samples have very low sulphur and were analysed at Bureau Veritas Laboratories, an independent certified laboratory.

BV Labs Sample No		CWC408	CWC409		
Sample ID	Units	J089414	J089415	Detection Limits	Bureau Veritas SOP #
Paste pH	pH Units	9.00	9.18	N/A	BBY0SOP-00016
Total S	wt%	0.09	0.12	0.02	LECO
HCl Extractable Sulphate Sulphur	wt%	<0.01	0.01	0.01	BBY ARD-00009
Sulphide Sulphur (by diff.)	wt%	0.09	0.11	0.02	BBY WI-00033
Acid Generation Potential	Kg CaCO ₃ /T	2.8	3.4	0.6	BBY WI-00033
Mod. ABA Neutralization Potential	Kg CaCO ₃ /T	2.7	7.5	N/A	BBY0SOP-00020
Fizz Rating	N/A	NONE	NONE	N/A	BBY0SOP-00020 / BBY0SOP-00023

Net Neutralization Potential					
	Kg CaCO3/T	-0.1	4.1	<i>N/A</i>	<i>BBY WI-00033</i>
Neutralization Potential Ratio					
	N/A	1.0	2.2	<i>0.1</i>	<i>BBY WI-00033</i>

Sample J089414 has only trace sulfur (0.09%) and therefore a very limited to no acid generating capacity that is essentially equal to its acid consuming potential. It's NNP is slightly negative and should be monitored, however no actions will be recommended due to its very low sulfur content and elevated calcium and magnesium silicate content.

Sample J089415 likewise has very low sulfur (0.12%) that is matched by a higher acid consuming capacity characterized by a NNP of 4.1.



Table 1: ABA Test Results for project SIXTY NORTH GOLD MINING

BV Labs Sample No	Sample ID	Paste pH	Total S	HCl Extractable Sulphate Sulphur	Sulphide Sulphur (by diff.)	Acid Generation Potential	Mod. ABA Neutralization Potential	Fizz Rating	Net Neutralization Potential	Neutralization Potential Ratio
	Units	pH Units	wt%	wt%	wt%	Kg CaCO3/T	Kg CaCO3/T	N/A	Kg CaCO3/T	N/A
CWC408	J089414	9.00	0.09	<0.01	0.09	2.8	2.7	NONE	-0.1	1.0
CWC409	J089415	9.18	0.12	0.01	0.11	3.4	7.5	NONE	4.1	2.2
<i>Detection Limits</i>		<i>N/A</i>	<i>0.02</i>	<i>0.01</i>	<i>0.02</i>	<i>0.6</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>0.1</i>
<i>Bureau Veritas SOP #</i>		<i>BBY0SOP</i>	<i>LECO</i>	<i>BBY ARD-00009</i>	<i>BBY WI-00033</i>	<i>BBY WI-00033</i>	<i>BBY0SOP-00020</i>	<i>OP-00020 / BBY0SOP</i>	<i>BBY WI-00033</i>	<i>BBY WI-00033</i>

Notes:

Price, W.A. 2009. Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials. MEND Report 1.20.1

Price, WA. MEND Prediction Manual 1.20.1 (2009)EPA 600/2-78-054 p. 47-50

Sobek, A.A., Schuller, W.A., Freeman, J.R. and Smith, R.M. (March 1978), Field and Laboratory Methods Applicable to Overburden and Minesoils, Report EPA-600/2-78-054, U.S. National Technical Information Service Report PB-280 495 pages 46-47.

References:

Acid Generation Potential = Sulphide Sulphur (by diff.)*31.25

Fizz Rating - Reference method used is based on NP method.

HCl Extractable Sulphur is based on a modified version of ASTM Method D 2492-02

Mod. ABA Neutralization Potential - MEND Acid Rock Drainage Prediction Manual, MEND Project 1.16.1b (pages 6.2-11 to 17), March 1991.

Net Neutralization Potential = (Modified ABA Neutralization Potential)-(Acid Generation Potential (S-S by diff))

Neutralization Potential Ratio = (Neutralization Potential)/(Acid Generation Potential)

Paste pH - Field and Laboratory Methods Applicable to Overburdens and Minesoils, (EPA 600 / 2-78-054, March 1978).

Sulphide Sulphur = (Total Sulphur)-(Sulphate Sulphur)

Total Sulphur by Leco done at Bureau Veritas Commodities Canada



Client:

Bureau Veritas Commodities Canada Ltd.

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Table 2: ABA QAQC Test Results for project SIXTY NORTH GOLD MINING

Duplicate QC										
BV Labs Sample No	Sample ID	Paste pH Reported	Paste pH Dup	Total S Reported	HCl Extractable Sulphate Sulphur Reported	HCl Extractable Sulphate Sulphur Dup	Mod. ABA Neutralization Potential Reported	Mod. ABA Neutralization Potential Dup	Fizz Rating Reported	Fizz Rating Dup
Units		pH Units	pH Units	wt%	wt%	wt%	Kg CaCO3/T	Kg CaCO3/T	N/A	N/A
CWC408 Dup	J089414	9.00	9.19		<0.01	<0.01	2.70	3.70	NONE	NONE

Reference Material QC

	Paste pH	Total S Reported	HCl Extractable Sulphate Sulphur Reported	Mod. ABA Neutralization Potential Reported
Units	pH Units	wt%	wt%	Kg CaCO3/T

Reference Material

RMATSS-2022 (B551000) (0.51 wt%)			0.51	
KZK-1ModS Slight (B579327) (58.9 Kg CaCO3/T)				58.1
Paste pH - 8.91 (B583727) (8.91 pH Units)	8.77			
ARD REF MAT GS311-1 (2.35 wt%) (% Recovery)		93.6		

Blank QC

Method Blank			<0.01	
Method Blank (B579327) (0.1N HCl) (+/-2.5 kg CaCO3/T)				-1.0
Method Blank		<0.02		



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Table 3: Sample Summary for project SIXTY NORTH GOLD MINING

Bureau Veritas Commodities Canada Ltd.

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Date Samples Rec'd by BV Labs: 2 samples were rec'd on 23-Sep-24

Sample Prep Conducted by BV Labs: No, sample were rec'd as dry pulps

Date of Analysis: SO4HCLV: 23-Oct-24
PPHARD: 21-Oct-24
NP-MABA: 21/22-Oct-24

Date Reported: 5-Nov-24

Client:	Bureau Veritas Commodities Canada Ltd.
Client Project Name:	SIXTY NORTH GOLD MINING
Client Project No:	VAN24001596A
ARD Project #:	N/A
BV Labs Job No:	C475158
Contact Person:	CLIENT SERVICES: clientservices.minerals@bureauveritas.com
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