Diamond Drill Incident – 90 Day Investigative Report
Valentine Gold Mine
Calibre Mining Corporation

December 15, 2024

Submitted to:

Impact Assessment Agency of Canada
22nd Floor, Place Bell
160 Elgin Street
Ottawa, ON
K1A 0H3

1.0 Introduction

Calibre Mining Corporation (Calibre) has prepared this 90 Day Investigative Report following an uncontrolled release of drill cuttings from the associated drill sump in the Marathon Pit area, which was observed during the Impact Assessment Agency of Canada (IAAC) compliance inspection at its Valentine Gold Mine (VGM) on October 1-4, 2024, and as requested in a follow-up email received from IAAC on October 9, 2024,

1.1 Background

On October 2, 2024, during the IAAC compliance inspection, it was discovered that drill cuttings from an exploration diamond drill, were escaping the temporary retention pit (the sump) in place and exiting into the surrounding terrestrial environment. There was no discharge to a receiving water body. It was agreed that the adverse effects of the sludge release on the environment were difficult to define, as the area is designated to be stripped and excavated as part of the Marathon pit development.

Given the unknown variable of the timing of the stripping and excavation of the area, it was agreed upon to implement the Accident and Malfunctions measures. Initial notification to IAAC was completed at the time of inspection on October 2, 2024

VGM immediately shut down drilling operations at the time of inspection. Immediate corrective actions were implemented including excavation of drill cuttings outside of containment, repairs to drill sump including higher banks and defined spillway, deployment of oil absorbent boom into the sump to skim any potential residual hydrocarbons, and realignment of the site ditching directing drill water flow into the main sump. Valentine Gold proceeded to collect grab samples for both water and soil from the sump for analytical testing.

1.2 Site Description

The drill cuttings release occurred at approx. 48°23'49.96"N, 57° 5'53.69"W in the northeast end of Marathon Pit.

Based on existing surficial and bedrock geology information for the area of the occurrence, the principle natural overburden material is a discontinuous layer of glacial till of variable thickness, which directly overlies bedrock. The characteristic permeability of these soils is considered moderate. Bedrock consists of Precambrian granitoid rocks of the Valentine Lake Intrusive Suite.

2.0 Investigation Findings

The findings on the impact of the release on the surrounding environment are discussed in Section 2.

2.1 Lab Results

The results from the samples are displayed in tables 1 and 2. The water sample results in Table 1 are compared against the Canadian Drinking Water Quality Guidelines – Freshwater Aquatic Life (CWQG-FAL), the Newfoundland and Labrador Environmental Control Water and Sewage Regulations, and the Metal and Diamond Mining Effluent Regulations (MDMER) Effluent Criteria for Final Discharge Points.

Table 1. Water Sample Results Compared to Applicable Regulations and Guidelines

Parameters	Units	Reportable Detection Limit (RDL)	CWQG-FAL Guidelines		Newfoundland and Labrador ECWSR	MDMER Effluent Criteria at Final Discharge Points			Marathon Drill Water 2024-10-02
			Short-term	Long-term		Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration in a Composite Sample	Maximum Authorized Concentration in a Grab Sample	
Metal and Diamond Mine Effluent Regulation (MDMER) Schedule 4, Table 1									
Total Arsenic (As)	mg/L	0.001	ND	0.005	MDMER	0.1	0.15	0.2	0.001250
Total Copper (Cu)	mg/L	0.001	ND	0.002	MDMER	0.1	0.15	0.2	0.014000
Total Cyanide (CN Total)	mg/L	0.01	ND	ND	MDMER	0.5	0.75	1	-
Total Lead (Pb)	mg/L	0.0005	ND	0.001	MDMER	0.08	0.12	0.16	0.000342
Total Nickel (Ni)	mg/L	2	ND	Equation [a]	MDMER	0.25	0.38	0.5	0.003420
Total Zinc (Zn)	mg/L	0.005	Narrative [b]	Narrative [b]	MDMER	0.4	0.6	0.8	0.101000
Total Suspended Solids (TSS)	mg/L	1	ND	Narrative [c]	MDMER	15	22.5	30	86.000000
Radium 226	Bq/L	0.005	ND	ND	MDMER	0.37	0.74	1.11	<0.010
Un-ionized Ammonia (as N) [1] (NH3 UN as N)	mg/L	NA	ND	0.016	MDMER	0.5	NA	1	-
Total Ammonia (as N) (NH3 Tot as N)	mg/L	0.05	ND	Table [d]	2	-	-	-	ND
Field pH	-	NA	ND	6.5 – 9	MDMER	6.5 – 9.5			-
Field Temperature	°C	±0.5	-	-	<32	-	-	-	-
MDMER EFFLUENT CHARACTERIZATION									
Total Aluminum (Al)	µg/L	5	ND	Narrative [e]	-				1.020000
Total Cadmium (Cd)	µg/L	0.017	Equation [f]	Equation [g]	50				ND
Chloride (Cl)	mg/L	60	640	120	-				0.005800
Total Chromium (Cr)	µg/L	1	ND	(III) – 8.9; (VI) - 1 [h]	50[a]				0.009680
Total Cobalt (Co)	µg/L	1.25	ND	ND	-				0.001020
Total Iron (Fe)	µg/L	50	ND	300	10,000				2.770000
Total Manganese (Mn)	µg/L	2	Equation [i]	Variable [j]	-				0.467000
Total Mercury (Hg)	µg/L	0.013	ND	0.026	5				-
Total Molybdenum (Mo)	µg/L	36.5	ND	73	-				0.016400
Nitrate (as N) (NO_3-N)	µg/L	50	124,000	3,000	10				0.001100
Total Phosphorus (as P) (TP)	µg/L	4	ND	Guidance Framewo[k]	-				0.000054
Total Selenium (Se)	µg/L	0.5	ND	1	10				0.000046
Total Thallium (Tl)	µg/L	0.4	ND	0.8	-				0.000005
Total Uranium (Ur)	µg/L	0.1	33	15	-				0.000121
Dissolved Oxygen (DO)	mg/L	0.05	-	Narrative [l]	-				-
Alkalinity	mg/L	2	-	-	-				82
Hardness	mg/L	1	-	-	-				79.4
Field Conductivity	µS/cm	1	-	-	-				200

Notes:
- no value
NA not applicable
ND no data
MDMER Metal and Diamond Mining Effluent Regulation
1 Un-ionized ammonia is calculated using the following equation: A (1/(1 + 10pKa-pH)) where A is the concentration of total ammonia — which is the sum of un-ionized ammonia (NH3) and ionized ammonia (NH4+) — expressed in mg/L as nitrogen (N); pH is the pH of the effluent sample; and pKa is a dissociation constant calculated in accordance with the following formula: 0.09018 + 2729.92/T where T is the temperature of the effluent sample in kelvin. (MDMER 12(4))
a Ni equation: Hardness ≤60 mg calcium carbonate (CaCO3)·L-1, CWQG-FAL is 0.025 mg/L, Hardness >60 to ≤180 mg CaCO3·L-1 use equation e{0.76[ln(hardness)]+1.06}, Hardness >180 mg CaCO3·L-1, CWQG-FAL is 0.15 mg/L
b Zn (dissolved) equation: short-term = exp(0.833[ln(hardness mg·L-1)] + 0.240[ln(DOC mg·L-1)] + 0.526 for hardness 13.8 and 250.5 mg CaCO3·L−1 & DOC 0.3 and 17.3 mg·L−1, long-term = exp(0.947[ln(hardness mg·L-1)] - 0.815[pH] + 0.398[ln(DOC mg·L-1)] + 4.625) for hardness 23.4 and 399 mg CaCO3·L−1, pH 6.5 and 8.13 and DOC 0.3 to 22.9 mg·L−1
c TSS narrative "clear flow: Maximum increase of 25 mg/L from background levels for any short-term exposure (e.g., 24-h period). Maximum average increase of 5 mg/L from background levels for longer term exposures (e.g., inputs lasting between 24 h and 30 d)."
d Total Ammonia as N table is temperature and pH dependent. Measurements of total ammonia in the aquatic environment are often expressed as mg/L total ammonia-N. The present guideline values (mg/L NH3) can be converted to mg/L total ammonia-N by multiplying the corresponding guideline value by 0.8224. Consult the CWQG-FAL factsheet for specific table.
e Al CWQG = 5 µg/L if pH <6.5, 100 µg/L if pH ≥6.5
f Cd short-term: 0.11 µg/L if hardness 0 to <5.3 mg CaCO3·L-1, 10{1.016(log[hardness]) – 1.71 } if hardness ≥5.3 mg CaCO3·L-1 to ≤360 mg CaCO3·L-1, 7.7 µg/L if hardness >360 mg CaCO3·L-1
g Cd long-term: 0.04 µg/L if hardness 0 to <17 mg CaCO3·L-1, 10{0.83(log[hardness]) – 2.46} if hardness ≥17 to ≤280 mg CaCO3·L-1, 0.37 µg/L if hardness >280 mg CaCO3·L-1
h Chromium, trivalent (Cr(III)) = 8.9 µg/L; Chromium, hexavalent (Cr(VI)) = 1 ug/L; Chromium, total = no guideline
i Mn (dissolved) short-term: benchmark calculator in Appendix B of Scientific Criteria Document for the Development of the Canadian Water Quality Guidelines for the Protection of Aquatic Life: Manganese
j Mn (dissolved) long-term: CWQG calculator in Appendix B of the Scientific Criteria Document for the Development of the Canadian Water Quality Guidelines for the Protection of Aquatic Life: Manganese.
k TP narrative = Trigger Ranges for Total Phosphorus (mg/L) (see Guidance Framework for Phosphorus factsheet): ultra-oligotrophic <0.004, oligotrophic 0.004-0.01, mesotrophic 0.01-0.02, meso-eutrophic 0.02-0.035, eutrophic 0.035-0.1, hyper-eutrophic >0.1.
l DO Narrative = Lowest acceptable DO concentrations for the protection of freshwater organisms; 6 mg/L or greater for early life stages of warmwater species, 5.5 mg/L or greater for other life stages of warmwater species, 9.5 mg/L or greater for early life stages of coldwater species, and 6.5 mg/L or greater for other life stages of coldwater species
m Sulphate guideline value is from British Columbia Ministry of Environment and Climate Change Strategy for the protection of aquatic life (Guideline: 128 mg/L for hardness 0 to 30 mg CaCO3·L-1; 218 mg/L for hardness 31 to 75 mg CaCO3·L-1, 309 mg/L for hardness 76 to 180 mg CaCO3·L-1, 429 for hardness 181 to 250 mg CaCO3·L-1) (Meays and Nordin 2013)
n if water is abstracted from a watercourse, used, treated and subsequently returned to the same watercourse, these solids data mean that the effluent should not contain 1000 mg TDS/L or 30 mg TSS/L more than was in the water originally abstracted (adapted from ECWSR)
o at 15°C ± 1°C
p The mean absorbance of filtered water samples at 456 nm shall not be significantly higher than seasonally adjusted expect value for the system under consideration.
q Cu long-term: 2 µg/L if hardness 0 to <82 mg CaCO3·L-1, 0.2*e{0.8545[ln(hardness)]-1.465} if hardness ≥82 to ≤180 mg CaCO3·L-1, 4 µg/L if hardness >180 mg CaCO3·L-1
r Pb long-term: 1 µg/L if hardness 0 to <60 mg CaCO3·L-1, e{1.273[ln(hardness)]-4.705 } if hardness ≥60 to ≤180 mg CaCO3·L-1, 7 µg/L if hardness >180 mg CaCO3·L-1

The soil sample results in Table 2 are compared against the Atlantic RBCA - Ecological Tier I Environmental Quality Standards (EQS) for Soil – Commercial/Industrial Criteria.

Table 2. Soil Samples Compared to Applicable Guidelines

Parameters	Units	Reportable Detection Limit (RDL)	Commercial / Industrial		MARATHON DRILL SOIL 2024-10-02
			Fine	Coarse	
Atlantic RBCA - Ecological Tier I Environmental Quality Standards (EQS) for Soil - All Land Use (mg/kg)					
Benzene	mg/kg	0.005	310	180	ND
Toluene	mg/kg	0.05	330	250	ND
Ethylbenzene	mg/kg	0.01	430	300	ND
Total Xylenes	mg/kg	0.05	230	350	ND
C6 - C10 (less BTEX)	mg/kg	2.50	320	320	ND
>C10-C16 Hydrocarbons	mg/kg	10.00	260	260	61
>C16-C21 Hydrocarbons	mg/kg	10.00	-	-	140
F3 (C16-C34)	mg/kg		2500	1700	-
>C21-<C32 Hydrocarbons	mg/kg	15.00	-	-	250
F4 (C34-C50)	mg/kg		6600	3300	-
Modified TPH (Tier1)	mg/kg	15.00	-	-	450
Reached Baseline at C32	mg/kg	N/A	-	-	No
Hydrocarbon Resemblance	mg/kg	N/A	-	-	COMMENT (1)
(1) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. One product in fuel / lube range. Lube oil fraction.					

The complete laboratory results are presented in Appendix A.

2.2 Interpretation of Results

The water quality results indicate all parameters were below the MDMER discharge limits apart from Total Suspended Solids (TSS) which had a result of 86 mg/L. This elevated TSS result is expected due to the characteristics of a drill sump which is designed to contain the fine grained drill cuttings from drilling operations. The soil sample results show that all parameters are below the Atlantic RBCA Environmental Quality Standards (EQS) for soil.

Through review of the laboratory results, it is determined that there was trace amounts of petroleum hydrocarbons identified in the soil sample, which is identified in comment (1) in Table 2. However, it should be noted that interference of non-petrogenic organic material may have spiked the sample results. The impact on the surrounding environment is determined to be negligible.

It was noted by laboratory personnel that during sample receipt and processing, the soil sample was regarded as “messy”, meaning that there was a large presence of non-petrogenic organic matter.

After discussing internally, VGM acknowledges the potential of residual amounts of hydrocarbons present in the sump even though the sample results were questionable. As such, corrective actions will be implemented.

3.0 Modified/Additional Mitigation Measures

In accordance with Condition 10.5 of the Accidents and Malfunctions Plan, the mitigation measures described below have been implemented.

An Exploration drilling procedure has been developed to include proper guidelines for drill sump construction, drill water management, and drill site reclamation. The procedure is included in Appendix B

Valentine Gold has implemented an Inspection frequency and Environmental Inspection Checklist tailored to drill rig sites which will be completed at active drill rig sites. The checklist is presented in Appendix C.

A requirement to cover all inactive drill sumps with native material will be enforced at VGM to prevent future occurrences. See photo below associated with the recovered sump at the Marathon Pit.

Photo 3.1 – Recovered Drill Sump at the Marathon Pit

4.0 Conclusion

The release of material from the drill sump discovered during the IAAC Compliance Inspection was contained to a reasonable extent, and the drill sump has been reclaimed. The results of the samples collected have demonstrated that there is potentially some residual hydrocarbon material inside the drill sump, however the amount is below applicable guidelines for soil quality.

Mitigation measures including an exploration drilling procedure, a drill rig tailored environmental site inspection checklist, and a requirement to remediate inactive drill sumps, have been implemented to prevent future occurrences.

Appendix A – Lab Certificates

Your Project #: SG0018-02
Your C.O.C. #: N/A

Attention: Reporting Team

Marathon Gold Corporation
7 Queensway
Grand Falls - Windsor, NL
CANADA A2B 1K9

Report Date: 2024/10/18
Report #: R8366554
Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4V3863
Received: 2024/10/07, 09:34

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
TEH in Soil (PIRI) (1)	1	2024/10/11	2024/10/11	ATL SOP 00111	Atl. RBCA v3.1 m
Moisture	1	N/A	2024/10/10	ATL SOP 00001	OMOE Handbook 1983 m
ModTPH (T1) Calc. for Soil	1	N/A	2024/10/15	N/A	Atl. RBCA v3.1 m
VPH in Soil (PIRI) - Field Preserved (2)	1	N/A	2024/10/12	ATL SOP 00119	Atl. RBCA v3.1 m

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity (3)	1	N/A	2024/10/10	CAM SOP-00448	SM 24 2320 B m
Carbonate, Bicarbonate and Hydroxide	1	N/A	2024/10/10	N/A	SM 24 4500-CO2 D
Chloride	1	N/A	2024/10/10	ATL SOP 00014	SM 24 4500-Cl- E m
Colour	1	N/A	2024/10/10	ATL SOP 00020	SM 24 2120C m
Organic carbon - Diss (DOC) (7)	1	N/A	2024/10/08	ATL SOP 00203	SM 24 5310B m
Conductance - water	1	N/A	2024/10/09	ATL SOP 00004	SM 24 2510B m
Mercury - Total (CVAA,LL)	1	2024/10/10	2024/10/11	ATL SOP 00026	EPA 245.1 R3 m
Ion Balance (% Difference)	1	N/A	2024/10/16	N/A	Auto Calc.
Anion and Cation Sum	1	N/A	2024/10/16	N/A	Auto Calc.
Cyanide WAD (weak acid dissociable) (4)	1	N/A	2024/10/15	CAL SOP-00270	SM 24 4500-CN m
Hardness Total (calculated as CaCO3) (5, 8)	1	N/A	2024/10/15	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (total) (5)	1	N/A	2024/10/15	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total) (5)	1	N/A	2024/10/15	BBY7SOP-00002	EPA 6020b R2 m
Nitrogen Ammonia - water	1	N/A	2024/10/10	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	1	N/A	2024/10/10	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	1	N/A	2024/10/09	ATL SOP 00017	SM 24 4500-NO2- B m
Nitrogen - Nitrate (as N)	1	N/A	2024/10/10	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (3)	1	N/A	2024/10/15	CAM SOP-00444	OMOE E3179 m
pH (9)	1	N/A	2024/10/09	ATL SOP 00003	SM 24 4500-H+ B m
Phosphorus - ortho	1	N/A	2024/10/10	ATL SOP 00021	SM 24 4500-P E m
Radium Isotopes by Alpha Spectrometry (6, 10)	1	N/A	2024/10/17	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry
Sat. pH and Langelier Index (@ 20C)	1	N/A	2024/10/16	ATL SOP 00049	Auto Calc.

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvna.com

Your Project #: SG0018-02
Your C.O.C. #: N/A

Attention: Reporting Team

Marathon Gold Corporation
7 Queensway
Grand Falls - Windsor, NL
CANADA A2B 1K9

Report Date: 2024/10/18
Report #: R8366554
Version: 3 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4V3863
Received: 2024/10/07, 09:34

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sat. pH and Langelier Index (@ 4C)	1	N/A	2024/10/16	ATL SOP 00049	Auto Calc.
Reactive Silica	1	N/A	2024/10/09	ATL SOP 00022	EPA 366.0 m
Sulphate by Automated Turbidimetry (3)	1	N/A	2024/10/11	CAM SOP-00464	SM 24 4500-SO42- E m
Sulphide (3)	1	N/A	2024/10/09	CAM SOP-00455	SM 24 4500-S G m
Total Dissolved Solids (TDS calc)	1	N/A	2024/10/16	N/A	Auto Calc.
Organic carbon - Total (TOC) (7)	1	N/A	2024/10/09	ATL SOP 00203	SM 24 5310B m
Total Phosphorus (Colourimetric) (3)	1	2024/10/15	2024/10/15	CAM SOP-00407	SM 24 4500-P I
Total Suspended Solids	1	2024/10/08	2024/10/11	ATL SOP 00007	SM 24 2540D m
Turbidity	1	N/A	2024/10/10	ATL SOP 00011	EPA 180.1 R2 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) No lab extraction date is given for C6-C10/BTEX and VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.
(3) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvna.com

Your Project #: SG0018-02
Your C.O.C. #: N/A

Attention: Reporting Team

Marathon Gold Corporation
7 Queensway
Grand Falls - Windsor, NL
CANADA A2B 1K9

Report Date: 2024/10/18
Report #: R8366554
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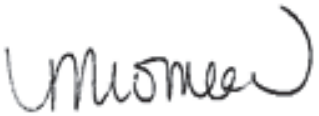
CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4V3863

Received: 2024/10/07, 09:34

(4) This test was performed by Bureau Veritas Calgary., 4000-19th Street North-East , Calgary, AB, T2E 6P8
(5) This test was performed by Bureau Veritas Burnaby, 4606 Canada Way , Burnaby, BC, V5G 1K5
(6) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Road, Unit 4 , Mississauga, ON, L5N 5L9
(7) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.
(8) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(9) The APHA Standard Method requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(10) Radium-226 results have not been corrected for blanks.

Encryption Key



Maryann Comeau
Customer Experience Supervisor/PM
18 Oct 2024 13:46:00

Please direct all questions regarding this Certificate of Analysis to:
Maryann Comeau, Customer Experience Supervisor/PM
Email: Maryann.COMEAU@bureauveritas.com
Phone# (902)420-0203 Ext:298

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RBCA HYDROCARBONS IN SOIL (FIELD PRES.)

Bureau Veritas ID		AFAN72		
Sampling Date		2024/10/02 17:05		
COC Number		N/A		
	UNITS	MARATHON DRILL SOIL	RDL	QC Batch
Petroleum Hydrocarbons				
Benzene	mg/kg	ND	0.0050	9696371
Toluene	mg/kg	ND	0.050	9696371
Ethylbenzene	mg/kg	ND	0.010	9696371
Total Xylenes	mg/kg	ND	0.050	9696371
C6 - C10 (less BTEX)	mg/kg	ND	2.5	9696371
>C10-C16 Hydrocarbons	mg/kg	61	10	9696513
>C16-C21 Hydrocarbons	mg/kg	140	10	9696513
>C21-<C32 Hydrocarbons	mg/kg	250	15	9696513
Modified TPH (Tier1)	mg/kg	450	15	9687946
Reached Baseline at C32	mg/kg	No	N/A	9696513
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	9696513
Surrogate Recovery (%)				
Isobutylbenzene - Extractable	%	71		9696513
n-Dotriacontane - Extractable	%	91		9696513
Isobutylbenzene - Volatile	%	120		9696371

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

N/A = Not Applicable

(1) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. One product in fuel / lube range. Lube oil fraction.

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvna.com

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AFAN72		
Sampling Date		2024/10/02 17:05		
COC Number		N/A		
	UNITS	MARATHON DRILL SOIL	RDL	QC Batch
Inorganics				
Moisture	%	27	1.0	9690804

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvna.com

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AFAN71		
Sampling Date		2024/10/02 17:10		
COC Number		N/A		
	UNITS	MARATHON DRILL WATER	RDL	QC Batch
Calculated Parameters				
Anion Sum	me/L	2.00	N/A	9687780
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	81	1.0	9687775
Calculated TDS	mg/L	110	1.0	9687785
Carb. Alkalinity (calc. as CaCO3)	mg/L	ND	1.0	9687775
Cation Sum	me/L	2.03	N/A	9687780
Ion Balance (% Difference)	%	0.740	N/A	9687779
Langelier Index (@ 20C)	N/A	-0.491		9687783
Langelier Index (@ 4C)	N/A	-0.742		9687784
Nitrate (N)	mg/L	1.0	0.050	9687781
Saturation pH (@ 20C)	N/A	8.06		9687783
Saturation pH (@ 4C)	N/A	8.31		9687784
Inorganics				
Dissolved Chloride (Cl-)	mg/L	5.8	1.0	9693353
Colour	TCU	18	5.0	9690403
Weak Acid Dissoc. Cyanide (CN)	mg/L	ND	0.00050	9702845
Nitrate + Nitrite (N)	mg/L	1.1	0.050	9693357
Nitrite (N)	mg/L	0.029	0.010	9693358
Nitrogen (Ammonia Nitrogen)	mg/L	ND	0.050	9690851
Dissolved Organic Carbon (C)	mg/L	6.1	0.50	9688563
Total Organic Carbon (C)	mg/L	7.1	0.50	9688567
Orthophosphate (P)	mg/L	ND	0.010	9693356
pH	pH	7.56		9690479
Phenols-4AAP	mg/L	0.0015	0.0010	9700707
Total Phosphorus	mg/L	0.054	0.004	9702077
Reactive Silica (SiO2)	mg/L	4.9	0.50	9693355
Total Suspended Solids	mg/L	86	2.5	9687811
Dissolved Sulphate (SO4)	mg/L	6.0	1.0	9692809
Sulphide	mg/L	ND	0.020	9690806
Turbidity	NTU	110	1.0	9693409
Alkalinity (Total as CaCO3)	mg/L	82	1.0	9691694
Conductivity	uS/cm	200	1.0	9690482

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AFAN71		
Sampling Date		2024/10/02 17:10		
COC Number		N/A		
	UNITS	MARATHON DRILL WATER	RDL	QC Batch
Metals				
Total Aluminum (Al)	ug/L	1020	0.50	9704711
Total Antimony (Sb)	ug/L	0.151	0.020	9704711
Total Arsenic (As)	ug/L	1.25	0.020	9704711
Total Barium (Ba)	ug/L	607	0.020	9704711
Total Beryllium (Be)	ug/L	0.019	0.010	9704711
Total Bismuth (Bi)	ug/L	0.0172	0.0050	9704711
Total Boron (B)	ug/L	11.7	5.0	9704711
Total Cadmium (Cd)	ug/L	ND	0.0050	9704711
Total Chromium (Cr)	ug/L	9.68	0.10	9704711
Total Cobalt (Co)	ug/L	1.02	0.0050	9704711
Total Copper (Cu)	ug/L	14.0	0.050	9704711
Total Iron (Fe)	ug/L	2770	1.0	9704711
Total Lead (Pb)	ug/L	0.342	0.0050	9704711
Total Lithium (Li)	ug/L	1.75	0.50	9704711
Total Manganese (Mn)	ug/L	467	0.050	9704711
Total Molybdenum (Mo)	ug/L	16.4	0.050	9704711
Total Nickel (Ni)	ug/L	3.42	0.020	9704711
Total Phosphorus (P)	ug/L	50.8	2.0	9704711
Total Silicon (Si)	ug/L	3790	50	9704711
Total Selenium (Se)	ug/L	0.046	0.040	9704711
Total Silver (Ag)	ug/L	1.87	0.0050	9704711
Total Strontium (Sr)	ug/L	62.7	0.050	9704711
Total Thallium (Tl)	ug/L	0.0053	0.0020	9704711
Total Tin (Sn)	ug/L	ND	0.20	9704711
Total Titanium (Ti)	ug/L	4.48	0.50	9704711
Total Uranium (U)	ug/L	0.121	0.0020	9704711
Total Vanadium (V)	ug/L	1.12	0.20	9704711
Total Zinc (Zn)	ug/L	101	0.10	9704711
Total Zirconium (Zr)	ug/L	ND	0.10	9704711
Total Calcium (Ca)	mg/L	24.1	0.050	9704710
Total Magnesium (Mg)	mg/L	4.68	0.050	9704710
Total Potassium (K)	mg/L	1.45	0.050	9704710
Total Sodium (Na)	mg/L	7.06	0.050	9704710
Total Sulphur (S)	mg/L	ND	3.0	9704710

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AFAN71		
Sampling Date		2024/10/02 17:10		
COC Number		N/A		
	UNITS	MARATHON DRILL WATER	RDL	QC Batch
RADIONUCLIDE				
Radium-226	Bq/L	<0.010	0.010	9697554

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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MERCURY BY COLD VAPOUR AA (WATER)

Bureau Veritas ID		AFAN71		
Sampling Date		2024/10/02 17:10		
COC Number		N/A		
	UNITS	MARATHON DRILL WATER	RDL	QC Batch
Metals				
Total Mercury (Hg)	ug/L	ND	0.013	9690803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		AFAN71		
Sampling Date		2024/10/02 17:10		
COC Number		N/A		
	UNITS	MARATHON DRILL WATER	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	79.4	0.50	9704709

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.7°C

Results relate only to the items tested.

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			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9696371	Isobutylbenzene - Volatile	2024/10/11	103	60 - 130	98	60 - 130	100	%				
9696513	Isobutylbenzene - Extractable	2024/10/11	94	60 - 130	97	60 - 130	93	%				
9696513	n-Dotriacontane - Extractable	2024/10/11	100	60 - 130	97	60 - 130	96	%				
9687811	Total Suspended Solids	2024/10/11					ND, RDL=1.0	mg/L	0	20	98	80 - 120
9688563	Dissolved Organic Carbon (C)	2024/10/08	100	85 - 115	99	80 - 120	ND, RDL=0.50	mg/L	7.9	15		
9688567	Total Organic Carbon (C)	2024/10/08	97	85 - 115	99	80 - 120	ND, RDL=0.50	mg/L	6.2	15		
9690403	Colour	2024/10/10			100	80 - 120	ND, RDL=5.0	TCU	NC	20		
9690479	pH	2024/10/09			99	97 - 103			0.47	N/A		
9690482	Conductivity	2024/10/09			100	80 - 120	ND, RDL=1.0	uS/cm	0.28	10		
9690803	Total Mercury (Hg)	2024/10/11	98	80 - 120	99	80 - 120	ND, RDL=0.013	ug/L	NC	20		
9690804	Moisture	2024/10/10							1.3	25		
9690806	Sulphide	2024/10/09	106	80 - 120	103	80 - 120	ND, RDL=0.020	mg/L	6.8	20		
9690851	Nitrogen (Ammonia Nitrogen)	2024/10/10	102	80 - 120	104	80 - 120	ND, RDL=0.050	mg/L	NC	20		
9691694	Alkalinity (Total as CaCO3)	2024/10/10			98	85 - 115	ND, RDL=1.0	mg/L	0.34	20		
9692809	Dissolved Sulphate (SO4)	2024/10/11	NC	75 - 125	96	80 - 120	ND, RDL=1.0	mg/L	2.6	20		
9693353	Dissolved Chloride (Cl-)	2024/10/10	NC	80 - 120	93	80 - 120	ND, RDL=1.0	mg/L	0.55	20		
9693355	Reactive Silica (SiO2)	2024/10/09	90	80 - 120	94	80 - 120	ND, RDL=0.50	mg/L	NC	20		
9693356	Orthophosphate (P)	2024/10/10	94	80 - 120	94	80 - 120	ND, RDL=0.010	mg/L	NC	20		
9693357	Nitrate + Nitrite (N)	2024/10/10	97	80 - 120	96	80 - 120	ND, RDL=0.050	mg/L	NC	20		
9693358	Nitrite (N)	2024/10/09	107	80 - 120	107	80 - 120	ND, RDL=0.010	mg/L	NC	20		
9693409	Turbidity	2024/10/10			101	80 - 120	ND, RDL=0.10	NTU	1.2	20	101	80 - 120
9696371	Benzene	2024/10/11	75	60 - 130	92	60 - 140	ND, RDL=0.0050	mg/kg	NC	50		
9696371	C6 - C10 (less BTEX)	2024/10/11					ND, RDL=2.5	mg/kg	NC	50		
9696371	Ethylbenzene	2024/10/11	90	60 - 130	96	60 - 140	ND, RDL=0.010	mg/kg	NC	50		
9696371	Toluene	2024/10/11	78	60 - 130	94	60 - 140	ND, RDL=0.050	mg/kg	NC	50		

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			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9696371	Total Xylenes	2024/10/11	87	60 - 130	96	60 - 140	ND, RDL=0.050	mg/kg	NC	50		
9696513	>C10-C16 Hydrocarbons	2024/10/11	108	30 - 130	111	60 - 130	ND, RDL=10	mg/kg	NC	50		
9696513	>C16-C21 Hydrocarbons	2024/10/11	104	30 - 130	106	60 - 130	ND, RDL=10	mg/kg	2.1	50		
9696513	>C21-<C32 Hydrocarbons	2024/10/11	72	30 - 130	78	60 - 130	ND, RDL=15	mg/kg	2.7	50		
9697554	Radium-226	2024/10/17			88	85 - 115	ND, RDL=0.010	Bq/L	NC	N/A		
9700707	Phenols-4AAP	2024/10/15	99	80 - 120	100	80 - 120	ND, RDL=0.0010	mg/L	NC	20		
9702077	Total Phosphorus	2024/10/16	96	80 - 120	103	80 - 120	ND, RDL=0.004	mg/L	0.42	20	104	80 - 120
9702845	Weak Acid Dissoc. Cyanide (CN)	2024/10/15	111	80 - 120	105	80 - 120	ND, RDL=0.00050	mg/L				
9704711	Total Aluminum (Al)	2024/10/15	87	80 - 120	88	80 - 120	ND, RDL=0.50	ug/L				
9704711	Total Antimony (Sb)	2024/10/15	NC	80 - 120	99	80 - 120	ND, RDL=0.020	ug/L				
9704711	Total Arsenic (As)	2024/10/15	101	80 - 120	98	80 - 120	ND, RDL=0.020	ug/L				
9704711	Total Barium (Ba)	2024/10/15	95	80 - 120	94	80 - 120	ND, RDL=0.020	ug/L				
9704711	Total Beryllium (Be)	2024/10/15	110	80 - 120	104	80 - 120	ND, RDL=0.010	ug/L				
9704711	Total Bismuth (Bi)	2024/10/15	96	80 - 120	96	80 - 120	ND, RDL=0.0050	ug/L				
9704711	Total Boron (B)	2024/10/15	111	80 - 120	110	80 - 120	ND, RDL=10	ug/L				
9704711	Total Cadmium (Cd)	2024/10/15	96	80 - 120	98	80 - 120	ND, RDL=0.0050	ug/L				
9704711	Total Chromium (Cr)	2024/10/15	92	80 - 120	94	80 - 120	ND, RDL=0.10	ug/L				
9704711	Total Cobalt (Co)	2024/10/15	94	80 - 120	98	80 - 120	ND, RDL=0.0050	ug/L				
9704711	Total Copper (Cu)	2024/10/15	85	80 - 120	93	80 - 120	ND, RDL=0.050	ug/L				
9704711	Total Iron (Fe)	2024/10/15	103	80 - 120	104	80 - 120	ND, RDL=1.0	ug/L				
9704711	Total Lead (Pb)	2024/10/15	99	80 - 120	100	80 - 120	ND, RDL=0.0050	ug/L				

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			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9704711	Total Lithium (Li)	2024/10/15	90	80 - 120	88	80 - 120	ND, RDL=0.50	ug/L				
9704711	Total Manganese (Mn)	2024/10/15	NC	80 - 120	91	80 - 120	ND, RDL=0.050	ug/L				
9704711	Total Molybdenum (Mo)	2024/10/15	NC	80 - 120	98	80 - 120	ND, RDL=0.050	ug/L				
9704711	Total Nickel (Ni)	2024/10/15	86	80 - 120	96	80 - 120	ND, RDL=0.020	ug/L				
9704711	Total Phosphorus (P)	2024/10/15	97	80 - 120	92	80 - 120	ND, RDL=2.0	ug/L				
9704711	Total Selenium (Se)	2024/10/15	103	80 - 120	102	80 - 120	ND, RDL=0.040	ug/L				
9704711	Total Silicon (Si)	2024/10/15	101	80 - 120	99	80 - 120	ND, RDL=50	ug/L				
9704711	Total Silver (Ag)	2024/10/15	97	80 - 120	97	80 - 120	ND, RDL=0.0050	ug/L				
9704711	Total Strontium (Sr)	2024/10/15	NC	80 - 120	88	80 - 120	ND, RDL=0.050	ug/L				
9704711	Total Thallium (Tl)	2024/10/15	100	80 - 120	98	80 - 120	ND, RDL=0.0020	ug/L				
9704711	Total Tin (Sn)	2024/10/15	100	80 - 120	100	80 - 120	ND, RDL=0.20	ug/L				
9704711	Total Titanium (Ti)	2024/10/15	97	80 - 120	94	80 - 120	ND, RDL=0.50	ug/L				
9704711	Total Uranium (U)	2024/10/15	123 (1)	80 - 120	118	80 - 120	ND, RDL=0.0020	ug/L				
9704711	Total Vanadium (V)	2024/10/15	94	80 - 120	93	80 - 120	ND, RDL=0.20	ug/L				
9704711	Total Zinc (Zn)	2024/10/15	89	80 - 120	98	80 - 120	ND, RDL=0.10	ug/L				

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			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9704711	Total Zirconium (Zr)	2024/10/15	107	80 - 120	102	80 - 120	ND, RDL=0.10	ug/L				

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Colleen Acker, B.Sc, Scientific Service Specialist

Cristina Carriere, Senior Scientific Specialist

Danish Samad, MSc., C.Chem, Miss.-Kitimat, Laboratory Supervisor

Mauro Oselin, Technician

Phil Deveau, Scientific Specialist (Organics)

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

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VALIDATION SIGNATURE PAGE(CONT'D)

The analytical data and all QC contained in this report were reviewed and validated by:

General Manager responsible for Nova Scotia Environmental laboratory operations.

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Appendix B – Exploration Drilling Procedure

Department Responsible	Date Approved
Exploration	*Nov 26th, 2024*
Target Audience:	**Review Date**
Exploration Drilling Supervisors and Workers	

DOCUMENT #:	
PREPARED BY:	Dylan Abbott, Jon Remedios
APPROVER:	Jon Remedios
APPROVAL SIGNATURE:	Jonathan Remedios

Diamond Drill Sump Construction and Maintenance

SOPs are a detailed, step-by-step guide that outlines the best and safest way to perform a specific task or operation in the workplace. (e.g. Offloading of Cyanide, Calibration of Testing Equipment, etc.). The purpose of an SOP is to ensure consistency, efficiency, and safety by clearly defining procedures that must be followed to minimize risks, prevent accidents, and comply with regulations. SOPs are approved by Superintendents or Supervisors and are reviewed at least every three years.

REVISION HISTORY

REV NO	DESCRIPTION OF CHANGE	COLLATOR	APPROVER
0	Document Creation	Dylan Abbott	Jon Remedios

Table of Contents

1. OBJECTIVE

Advanced exploration activities such as diamond drilling often require the use of water to assist with the process. Water used for diamond drilling is pumped down the hole to lubricate and cool the diamond drill bit. During this process, the water may pick up drill cuttings, or small particles of rock, which cause the water to become cloudy and gritty. Water containing cuttings should not be allowed to enter a waterbody without either allowing the cuttings to settle out or filter through a suitable material. To this end, sumps are often dug proximal to the drill pad to catch drill cuttings and allow them to settle out of the water column. This SOP is to provide instruction on constructing, using, and remediating sumps for exploration activities in order to reduce the risk of contaminating terrestrial or aquatic habitat.

2. SCOPE

This procedure applies to all Calibre employees and contractors at the Valentine Gold Mine that will be working with or around diamond drill sumps.

3. REFERENCES

- Federal Fisheries Act and Regulations
- VGM Operations Environmental Protection Plan
- Applicable Exploration Permits
- VGM Spill Response Procedure
- Environmental Guidelines of Mineral and Quarry Materials Exploration

4. DEFINITIONS

Sump: A small pit designed to collect water.
Remediate: To correct something that is wrong or damaged, or in the Environmental sense; to revert a site back to the natural environment.

5. ACRONYMS

SOP: Standard Operating Procedure
PPE: Personal Protective Equipment
VGM: Valentine Gold Mine

6. ROLES AND RESPONSIBILITIES

All Employees (Including Contractors):

- Review the SOP when presented by their supervisor and adhere to the SOP in the workplace.

Supervisors/Coaches:

- Ensure employees under their authority are trained on the SOP.

- Ensure tasks assigned to employees are in accordance with the SOP.
- Ensure the SOP is adhered to in the workplace.
- Review, update, and approve the SOP when required.

Departmental Manager (or designate):

- Review and approve the SOP updates when required.

Health, Safety & Environment Department:

- Conduct regular site inspections to confirm that procedures achieve health, safety, and environmental compliance
- Advise accordingly if SOP should be modified to achieve health, safety, and environmental compliance.

7. PROCEDURE

During diamond drilling, rock cuttings are produced and if left unchecked can flow into nearby bodies of water or bogs. These cuttings must be controlled via a sump along the path of flow from the drill site. The following steps outline how to control the cuttings properly.

Before Drilling:

1. When creating a drill pad for a diamond drill, the proximity to water and sensitive areas must be considered. This includes sensitive areas and time periods for fish or other wildlife. A 15 m buffer must be maintained around all waterbodies unless the proper permits have been obtained.
2. Drill sites and water lines must be placed in areas to cause the least amount of disturbance possible and the drill site must be as small as possible while still be safe to work. Access trails should also be kept to a minimum number and length.
3. The location of a sump/settling pond to catch all cuttings must be considered before construction begins and should be in place before drilling starts if possible.
4. All material removed during construction of the drill pad and sump must be stockpiled for remediation after drilling has concluded.

During Drilling:

1. After setting up the drill site, establish which direction the cutting will flow from the drill. If no clear direction is present, create a small trough/path for the water to flow towards the sump.
2. Along this pathway, dig a sump using an excavator to create a basin to catch all water and drill cuttings produced during drilling.
3. Use silt screens or hay bales to filter any water that flows out of the sump/settling pond to prevent these cuttings from entering bogs, rivers, ponds or other waterways. All cuttings should be contained in the sump/settling pond.
4. Utilize absorbent matting or boom at the sump overflow to collect and residual hydrocarbons that may be present.

5. Water flow and sump condition should be inspected throughout the shift by the drill helper to verify adequate operating conditions.
6. Report to the Supervisor and Calibre Environment Team immediately if any cuttings or hazardous materials are released from the sump/settling pond and use hazardous spill containment and clean up equipment provided to follow Spill Response Procedure.

Remediation:

1. Settling ponds or sumps must be properly filled back in with material excavated and stockpiled material produced while constructing the drill site and water containment structure.
2. Once infilled and ground leveled or sloped accordingly, if overburden was removed and stockpiled, it must be replaced over the infilled sump.

8. TRAINING & COMPETENCY REQUIREMENTS

Additional training and competency for this procedure may include:

- Heavy Equipment Operator License (for excavation of sump)
- Ability to judge slopes of natural ground surrounding drill rig
- Erosion and sediment control best management practices training

9. PPE REQUIREMENTS

- Specific PPE requirements include ear protection when working around active drills.

10. COMMUNICATION

A publishing notification via email shall be sent to Valentine Gold Mine mine site and/or the departmental area on all newly published documents by the Document Control Coordinator.

11. CONTINUOUS IMPROVEMENT & PROCEDURE REVIEW

This SOP should be reviewed as required when the referenced standards or regulatory requirements change; a formal review shall be required within three years of the revision date.

12. REVIEW DATE

Date of Last Review: November 26, 2024

13. APPENDICES

Appendix C – Drill Environmental Inspection Checklist

Diamond Drill Environmental Inspection

Calibre VALENTINE GOLD MINE

Drill Site/Hole No.: Date:	Drilling Company:			Drill Rig No:
Supervising Driller On Site:	Yes	No	N/A	Comments
General Site Conditions				
Access to drill pad acceptable				
Equipment positioned appropriately (Drill rig, pumphouse or other equipment is placed and secured on solid even ground)				
Pump shack placed appropriately/in good condition				
Fuel/Oil/Hazardous Material Storage and Use				
Spill kits in place and and fully stocked				
Any leaks or staining observed under equipment				
Fueling procedures followed				
Proper hazardous material handling/storage				
Secondary containment systems in place				
Secondary containment systems in place and free of water/ice/snow				
Adequate ventilation				
Other:				
Erosion Prevention/Water Protection				
No evidence of sediment laden runoff				
Sumps/berms in goood condition				
Sumps/berms have adequate capacity				
Controls measures in place				
Controls still performing as required				
Other:				
Wildlife				
Wildlife or wildlife sign observed				
Food waste properly stored				
Deterents in place and functional				
Employees and contractors know not to feed or interfere with wildlife				
Other:				
Waste storage/disposal				
Proper solid waste sorting/separation and disposal				
Proper hazardous waste storage				
General housekeeping clean/tidy/garbage free				
Other:				
Air Quality				
Dust in area				
Idling trucks				
Other:				
On-Ice Drilling				
Perimeter fencing (with lights or reflective material)				
Ice thickness monitored				
Drill cuttings collected (poly-drill or equivalent)				
Drill cutting sausages on secondary containment				
Open Water Drilling				
Perimeter buoys				
Surrounded by containment boom and turbidity curtain				
Drill cuttings collected (poly-drill or equivalent)				
Drill cutting sausages on secondary containment				
Opportunities for Improvement/Comments				