APPENDIX R24

2011 Aerial Survey of Moose Distribution

Victoria GOLD CORP

Stantec

EAGLE GOLD PROJECT

Technical Data Report: 2011 Aerial Survey of Moose Distribution

FINAL REPORT

Prepared for:

Victoria Gold Corp.
Suite 584 – Bentall Four
1055 Dunsmuir Street
PO Box 49215
Vancouver, BC V7X 1K8

Prepared by:

Stantec Consulting Ltd.
4370 Dominion Street, Suite 500
Burnaby, BC V5G 4L7
Tel: (604) 436-3014 Fax: (604) 436-3752

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1 INTRODUCTION

This report presents results of the first aerial survey of moose distribution conducted for the Eagle Gold Mine Project (the Project). Victoria Gold Corp.'s (VIT) committed in its Eagle Gold Project Proposal, (Stantec 2011) to conduct aerial mapping of winter moose distribution. Commitment 35 states:

> VIT will implement annual aerial mapping of winter moose distribution within 5 km of the access road and mine site and in adjacent control areas. This will be conducted before construction (in 2011 and 2012), during construction, and during mine operations, to allow for assessment of displacement and population reduction resulting from mine activities, and adaptive management measures if negative effects occur.

Aerial surveys will initially be conducted for a total of five years: pre-construction phase (two years), the construction phase (two years) and the first year of operations. If no effects are observed after five years of monitoring, the frequency of this monitoring could be reduced (pers. comm. O'Donoghue, M., e-mail, August 5, 2010) during subsequent years of the Project. Data obtained from the surveys will be used to inform adaptive management measures if negative effects occur.

2 METHODS

This year's survey collected the first year of data (pre-construction phase) on the distribution of moose in the vicinity of the Project. Analysis for this first survey were limited to compiling and mapping the locations of moose observations including information on number, sex, and whether single animals or calf-cow pairs were seen. Snow accumulation data were also reviewed and incorporated into this report due to the potential effect that snow depth can have on the distribution of moose. Snow data will continue to be incorporated as a component of the ongoing moose distribution monitoring program.

2.1 Survey Area

The survey area was 1,130 km^2 and included the proposed mine site, the South McQuesten and Haggart Creek access road to the site, and a 10 km buffer extending in all directions from the road and the center of the mine site (Figure 2.1-1).

2.2 Survey Procedures

A fixed-wing Cessna 206 was used to conduct the survey over three days during March 7 – 9, 2011. Two Stantec personnel (a Registered Professional Biologist (British Columbia) and Registered Professional Forester (British Columbia)) and the aircraft's pilot participated in the survey all three days. A member of the First Nation of Na-Cho Nyäk Dun (NND) joined the survey team the second and third day.

Forty transects, spaced 1 km apart, were flown (Figure 2.1-1). Transects were flown at a speed of 120 – 150 km/hr at a range of 100 – 400 m above ground. Aircraft speed, height-above-ground, and ability to fly "true" to transect lines were variable due to the rolling and mountainous terrain of the area. When spotted, moose were typically circled 1 – 2 times to identify sex and age, and to locate other moose potentially in the vicinity. However, given aircraft speed and landscape topography, circling was not always possible. The area of ground observed was variable within and between transects given the variation in the aircraft's height-above-ground due to topography.

All observed moose were recorded. In this report, an "observation" refers to moose observed within the survey area. Incidental moose observations were also recorded. Incidental observations are observations occurring outside the survey area.

2.3 Survey Conditions

Weather conditions were generally stable over the three-day survey period. At the Mayo Airport, 45 km south of Project location, morning temperatures were approximately -35°C, warming to -17°C by early afternoon. Snow depth at the airport was 55 cm. No new snow had been reported for at least two weeks prior to the survey. Each day skies were clear with good ground lighting conditions until mid- to late-afternoon when high-ceiling cloud cover created flat light conditions which reduced observation conditions. In general, morning wind speeds were low (0 – 10 km/hr), increasing to 10 – 25 km/hr by mid- to late-afternoon.

2.4 Snow Accumulation

Climate data collection was renewed in the study area beginning in August 2007. A climate station was installed at Potato Hills (1,420 m asl) in August 2007, and a second station was installed near the camp (823 m asl) in August 2009 (Figure 2.1-1). The second station was installed based on the findings of a snow survey undertaken in April 2009 at the Potato Hills station and at the Camp station location. The snow survey demonstrated large differences in snow accumulation between the two sites. Therefore two stations were necessary to characterize climatic conditions in the upper and lower elevations of the study area, which exhibit significant variability due to elevation and physiography. Please refer to the Eagle Gold Project Proposal (Stantec 2011) for further detail related to climate data collection.

Snow accumulations at both the Potato Hills and Camp stations were recorded during the March 2011 baseline aerial-moose survey. The Ungulate Winter Range Technical Advisory Team (2005) reviewed data from a number of published studies and identified the following snow depth categories for moose: "nominal" (snow depth does not inhibit movement) <60 cm; "inhibiting" (snow inhibits movement) 60 – 90 cm; and "critical" (snow severely restricts movement) >90 cm.

Snow accumulation data, available at the time of the March 2011 survey, was noted, categorized as per the snow depth categories above and compared to where moose were observed, or potentially concentrated, versus where they were not. The surveys represent a "snapshot in time" of where moose are distributed throughout the survey area on a given day in mid- to late-winter. Snow accumulation data will be available monthly from both stations and will be an important parameter to

consider as further understandings of moose winter habitat use are established in subsequent survey years. As example, in a given month if snowfall accumulations are deemed abnormally “high”, the increased presence of moose on access roads can be attributed to this heavy snowfall. Access roads potentially become preferred travel routes, facilitating easy movement and reduced energy expenditures for moose under these conditions.

3 RESULTS

3.1 Survey Observations

A total of 30 moose—seven cow/calf pairs, three cows, one bull, and 12 adults of undetermined sex—were observed in the survey area (Figure 2.1-1 and Appendix A) over the three-day survey period.

On March 7, a three-person crew (Stantec personnel and pilot) observed seven moose while surveying transects 1 – 9. Two cow/calf pairs, one female adult, and two adult moose of undetermined sex were observed. These transects were surveyed in the afternoon between 15:22 – 17:25 hours.

On March 8, while surveying transects 10 – 30, a four-person crew (Stantec personnel, NND member, and pilot) observed 17 moose—one bull, three cow/calf pairs, two female adult, and eight adult moose of undetermined sex. Five individuals were observed in the vicinity of an old forest fire, 11 in open spruce and aspen stands, and one on a seismic line. Transects 10 – 19 were flown between 09:50 – 13:04 hours. Transects 20 – 30 were flown between 14:36 – 17:31 hours on March 8.

On March 9, a four-person crew (Stantec personnel, NND member, and pilot) observed six moose while surveying transects 31 – 40. Two cow/calf pairs and two adult moose of undetermined sex, were observed. Five individuals were observed in the vicinity of an old forest fire and one individual was located within an open spruce stand. Transects 31 – 40 were flown 09:43 – 11:28 hours.

3.2 Snow Accumulation

Snow survey results for the survey area were compared to snow survey data collected in late winter 2009 through spring 2011 (March, April, and May) from two other nearby regional stations located in Calumet and Mayo (Stantec 2011b)(Table 3.2-1). Regionally, maximum snow depths occurred in April, suggesting that the surveys were conducted close to the time of maximum snow depth.

Table 3.2-1: Snow Depth Survey Data Summary, 2009 – 2011

Site	Mar-09		Apr-09				May-09	
	Calumet	Mayo	Calumet	Mayo	Study Area		Calumet	Mayo
					Potato Hills	Valley		
Depth (cm)	86.0	50.0	103.0	59.0	126.0	69.0	98.0	0.0
Site	**Mar-10**				**Apr-10**		**May-10**	
	Calumet	Mayo	Study Area		Calumet	Mayo	Calumet	Mayo
			Potato Hills	Camp				

Depth (cm)	68.0	45.0	103.0	50.0	77.0	0.0	57.0	0.0
Site	**Mar-11**				**Apr-11**		**May-11[#]**	
	Calumet	**Mayo**	**Study Area**		**Calumet**	**Mayo**	**Calumet**	**Mayo**
			Potato Hills	**Camp**				
Depth (cm)	88.0	55.0	105.0	55.0	84.0	23.0	nm	nm

NOTES:
Calumet and Mayo data from Yukon Environment
Study Area data from on-site data collection
Source: (Stantec 2011)

Snow depth at the Camp station, located in the lower Dublin Gulch valley within the proposed mine site and centrally located to transect over flights, ranged between 50 and 69 cm during the 2009 – 2011 surveys, suggesting that moose movement would have been inhibited at lower elevations in at least some years. As noted in Table 3.2-1, snow depth was measured at 55 cm at the Camp Station during the month of March when the moose aerial survey was completed. This measurement was consistent with snow depth measurements at the Mayo airport. At this nominal depth (< 60 cm) it is not expected that moose movements in the lower Dublin Gulch valley were impeded during the March, 2011 survey. Snow depth measurements at the higher elevation Potato Hills station were over one meter during March 2011 (Table 3.2-1) which is the critical depth where snow severely restricts moose movement. This finding is consistent with the results of the aerial survey which found the majority of moose at mid to low elevations, with little usage of higher elevation habitat.

Snow depth will continue to be monitored in the survey area as per previous years (Stantec 2011). However, as of October 2011 snow sensors have been installed at both the Potato Hills and Camp Stations, to collect monthly snow depth data. In the absence of monthly winter aerial surveys addressing moose distribution, monthly snow data will continue to be monitored. Wildlife observation forms, completed and reported by staff working at the mine site and travelling the access road, will be useful in establishing moose use over the winter months in the area of the Project. Evidence of increased moose sightings in these areas may be attributable to snow depths elsewhere in the area that cause moose to seek out areas without deep snow to provide travel corridors and more efficient means to avoid/escape from predators such as wolves. Should these trends of increased moose usage of the access road and adjacent habitats be identified, adaptive management strategies can be put in place. These may include increased signage addressing speed limits and increased frequency of plowed “exit” points to allow moose greater access to exits off the road when confronted by traffic.

3.3 Incidental Observations and Notes

Moose were the only mammals observed during the survey (Appendices A and B).

On March 7, five moose—two cow/calf pairs and one female adult— adjacent to the survey area were observed while surveying transects 1 – 9. On March 8, while surveying transects 10 – 30, two adults were observed adjacent to the survey area.

Sixty-four ptarmigan (*Lagopus* spp.) (Appendix B) were flushed during transects over subalpine areas. A few forest-dwelling birds were flushed during transect over lower elevation areas, but were unidentifiable and not recorded.

The South McQuesten and Haggart Creek access roads were plowed of snow. No wildlife or traffic (vehicular or pedestrian) were observed on the access roads during aerial surveys, nor was there any sign of snowmobile activity.

Moose were observed in close proximity to the Village of Mayo (i.e., three moose were observed in a forest clearing within 200 m of the Mayo airport). Numerous old and recent moose tracks were also observed adjacent to the Mayo airport. The Mayo airport is located approximately 2.5 km north of the center of Mayo and 45 km south of the Project area.

4 DISCUSSION AND CONCLUSIONS

Observed moose were scattered throughout the survey area (Figure 2.1-1) with the majority of animals occurring at mid to lower elevations east and south-east of the mine site between Lynx Creek and the South McQuesten River. Only one moose was observed within the proposed mine site area. This is consistent with habitat suitability findings (Stantec 2011a) which indicated that the majority of preferred habitat for moose is found outside of the proposed mine site footprint. No moose were observed directly on the existing access roads; though three moose were noted adjacent to the northern end of the Haggart Creek access road, near the south-western boundary of the proposed mine site. Four moose were also observed adjacent to the eastern section of the South McQuesten access road just off of Highway 11.

An important factor potentially influencing moose abundance and distribution in the survey area, and not related to mine activities, is snowfall accumulation during the winter months. Moose are known to migrate between seasonal ranges (e.g., Keystone Bio-research 1991; Keystone Wildlife Research 1995; MacCracken *et al.* 1997). Several authors have reported that moose winter habitat selection appears to be more influenced by food availability than by snow cover (Collins and Helm 1997; Romito *et al.* 1999; Serrouya and D'Eon 2002); however, there is widespread consensus that snow depth plays an important role. Deep snow (>90 cm) severely restricting moose movement can also have implications related to predation on moose from wolves where moose are unable to effectively escape. Consistent with pre–survey assumptions and supported by extensive literature (Keystone Wildlife Research 1995; MacCracken *et al.* 1997), moose were located outside of high alpine habitats and were consistently distributed at lower elevations during March, 2011.

Monitoring of moose distribution via aerial moose-surveys provides a snapshot-in-time comparison of moose distribution data collected pre-construction to distribution data collected during the construction and initial operational phases of the Project. The 2011 survey represents the first survey

(baseline – pre-construction) upon which subsequent surveys will be compared for changes in moose distribution and abundance in the survey area. Population-estimate survey methods will be designed if it has been determined that Project activities are affecting moose distribution within the survey area.

Communication with and sharing of knowledge with the local First Nation of Na-Cho Nyäk Dun, Yukon Environment, area hunters, and guide outfitters will aid in assessing influences external to the Project on moose distributions and abundance. This may include such information as increased observations of wolves in the vicinity of the project, which in particular could exert strong influences on moose habitat selection during winter.

5 CLOSURE

Stantec has prepared this report for the sole benefit of Victoria Gold Corp. Without the express written consent of Stantec and Victoria Gold Corp., the report may not be relied upon by any other person or entity, other than for its intended purposes. Any use of this report by a third party, or any reliance on decisions made based upon it, are the responsibility of such third parties.

The information provided in this report was compiled from existing documents and field data obtained during aerial moose-surveys conducted March 7 – 9, 2011 by Stantec. The report represents the best professional judgment of Stantec personnel available at the time of its preparation. Stantec reserves the right to modify the contents of this report, in whole or in part, to reflect any new information that becomes available. If any conditions become apparent that differ significantly from our understanding of conditions as presented in this report, we request that we be notified immediately to reassess the conclusions provided herein.

Respectfully submitted,

Stantec Consulting, Ltd.

Reviewed by:

Original signed by:

Bruce Catton, M.Sc., RPF
Ecologist

BC/JB/mp

Original signed by:

Jeffrey J. Brokaw, Ph.D.
Senior Associate

6 REFERENCES

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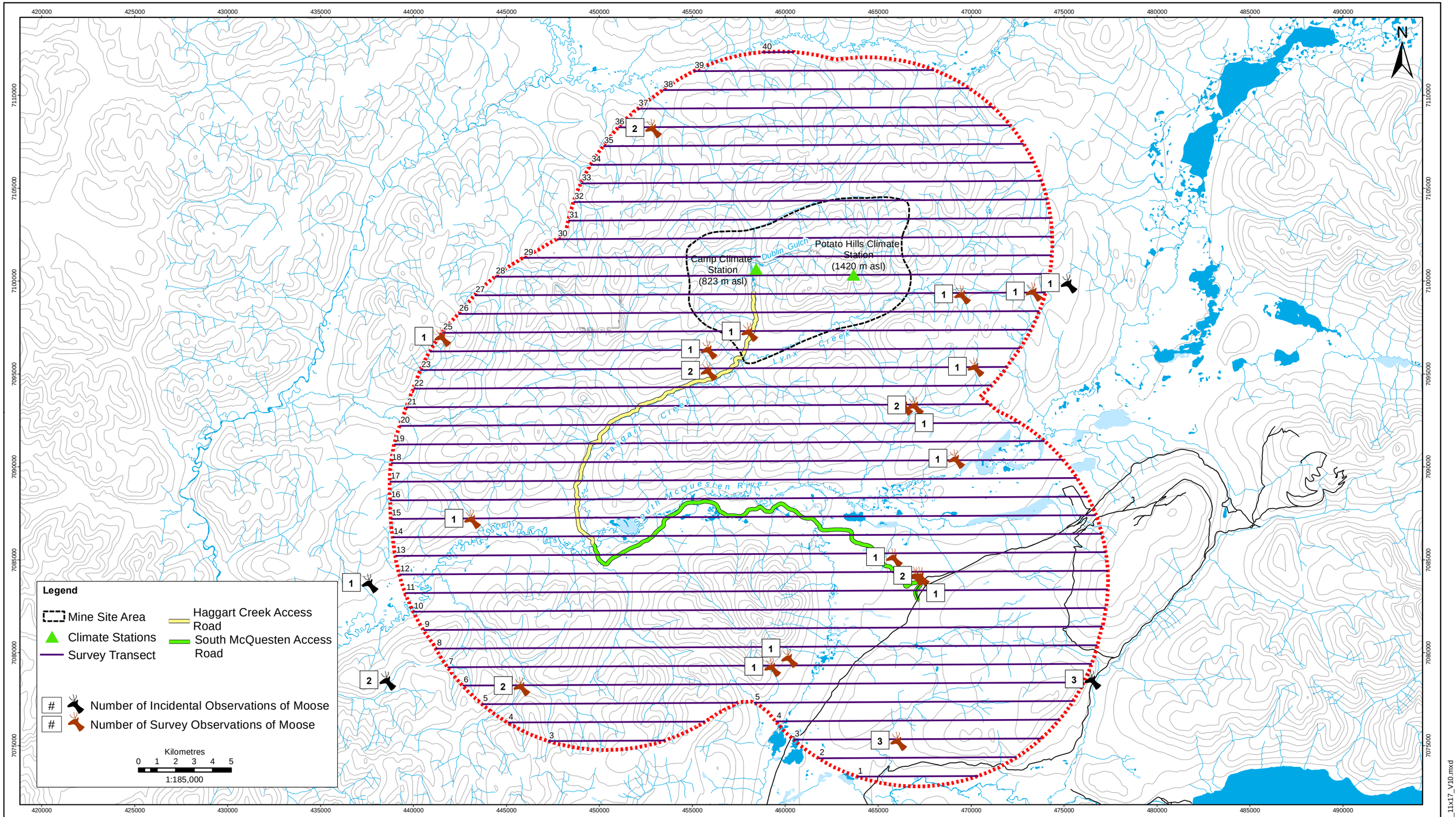

Stantec
4370 Dominion Street
Burnaby, British Columbia
V5G 4L7
Tel. (604) 436 3014
Fax. (604) 436 3752

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AERIAL SURVEY - MOOSE DISTRIBUTION SURVEY TRANSECTS AND ASSOCIATED OBSERVATIONS OF MOOSE – MARCH 2011

EAGLE GOLD PROPERTY
YUKON TERRITORY

PROJECTION: UTM - ZONE 8	DRAWN BY: MW
DATUM: NAD 83	CHECKED BY: BC
DATE: 08- November-2011	FIGURE NO.: 2.1-1

1053550_000_MooseTransects_11x17_V10.mxd

APPENDIX A

Aerial-Survey Moose Distribution Observations, 2011

Table A1: Aerial-Moose Distribution Survey Observations, 2011

Waypoint	Number of Individuals	Latitude	Longitude
1	3	N63 48.181	W135 41.257
2	2	N63 49.613	W136 06.015
4	1	N63 50.554	W135 48.479
5	1	N63 50.280	W135 49.590
7	1	N63 52.967	W135 40.222
8	2	N63 52.965	W135 39.890
10	1	N63 53.495	W135 41.676
11	1	N63 54.434	W136 09.445
12	1	N63 56.369	W135 37.652
13	1	N63 57.894	W135 41.097
14	2	N63 57.896	W135 40.389
15	2	N63 58.828	W135 54.019
16	1	N63 59.036	W135 36.426
17	1	N63 59.454	W135 54.045
18	1	N63 59.692	W136 11.629
20	1	N63 59.963	W135 59.210
21	1	N63 59.982	W135 51.378
22	1	N64 01.131	W135 37.368
26	2	N64 01.479	W135 30.338
27	1	N64 01.682	W135 29.728
29	1	N64 04.256	W135 49.873
32	2	N64 05.839	W135 57.925

APPENDIX B

Incidental Wildlife Observations, 2011

Table B1: Incidental Wildlife Observations, 2011

Waypoint	Species	Number of Individuals	Latitude	Longitude
P01	Ptarmigan spp.	4	N63 49.502	W135 35.469
3	Moose	3	N63 50.011	W135 28.569
6	Moose	2	N63 49.709	W136 14.813
9	Moose	1	N63 52.513	W136 16.101
17	Ptarmigan spp.	3	N63 59.454	W135 54.045
19	Ptarmigan spp.	3	N63 59.825	W136 03.863
23	Moose	1	N64 01.231	W135 32.639
24	Ptarmigan spp.	12	N64 02.159	W135 47.655
25	Ptarmigan spp.	10	N64 02.509	W135 58.880
28	Ptarmigan spp.	5	N64 04.286	W135 38.469
30	Ptarmigan spp.	25	N64 04.738	W135 48.379
31	Ptarmigan spp.	2	N64 05.412	W135 51.802

APPENDIX R30

Figures from Project Proposal Appendix 28

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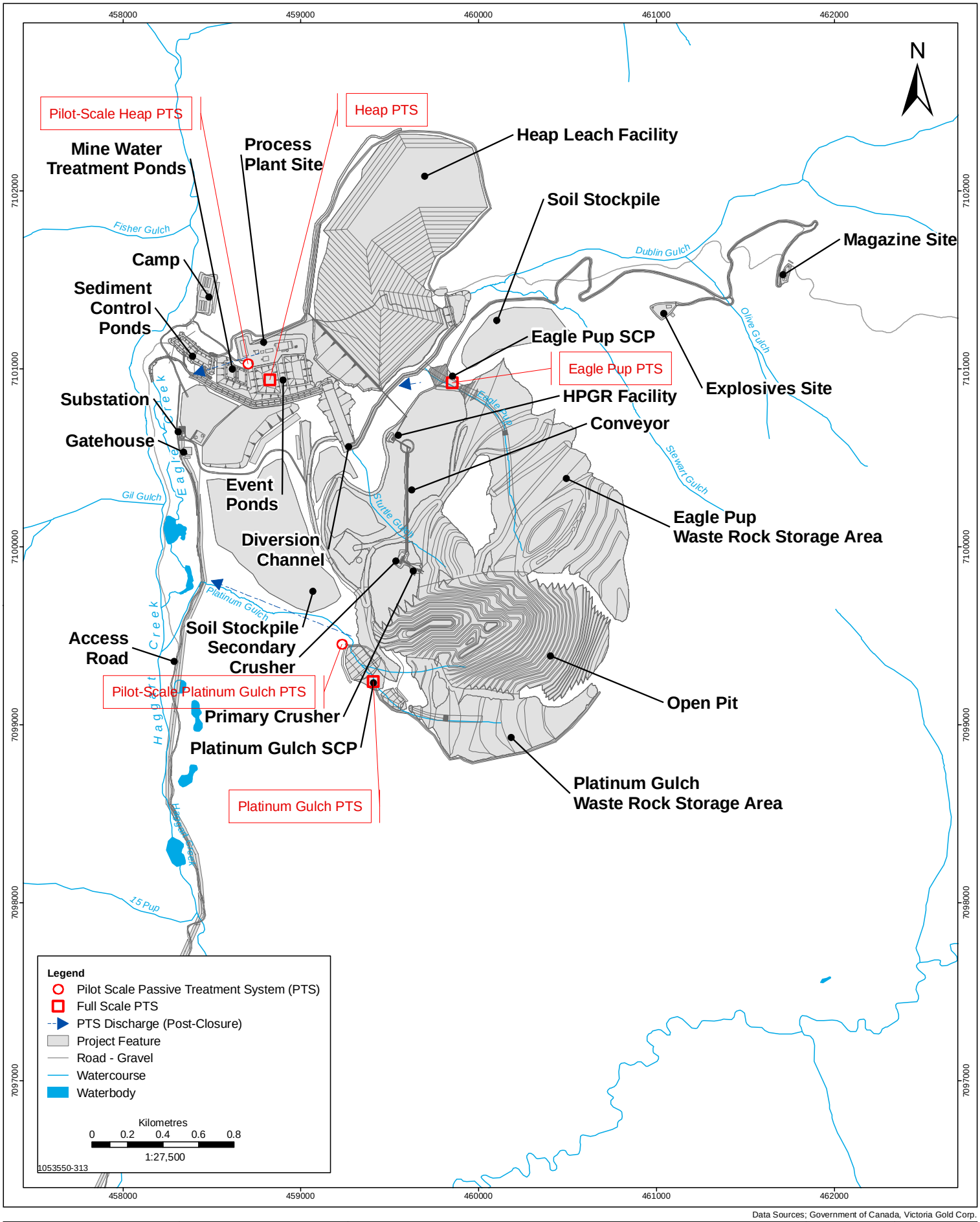


Data Sources; Government of Canada, Victoria Gold Corp.

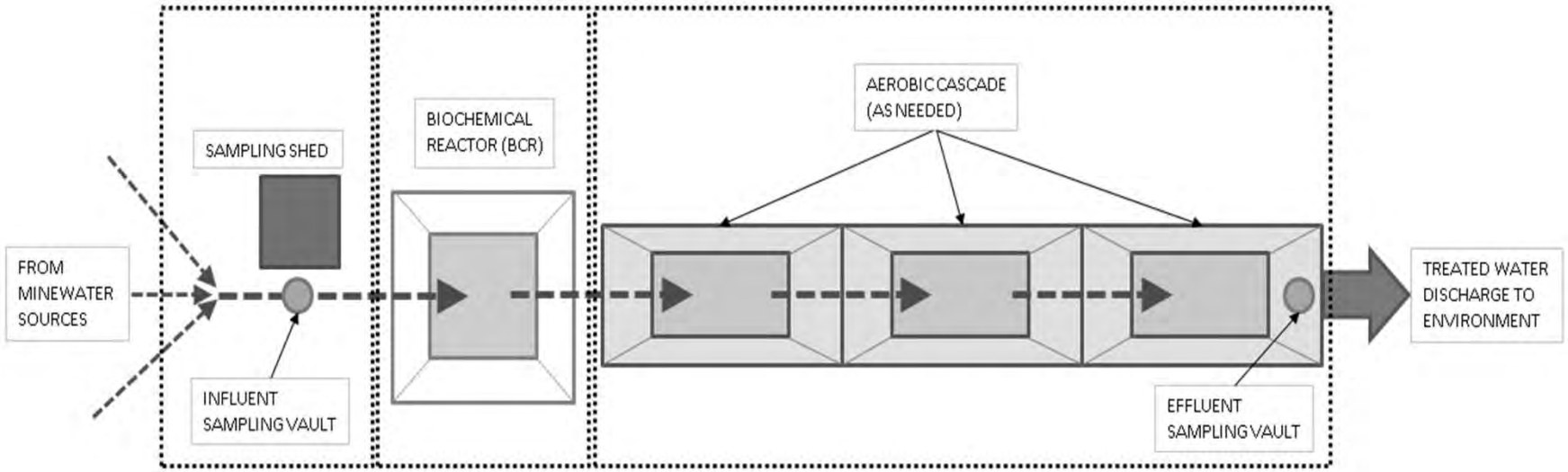
Stantec
4370 Dominion Street
Burnaby, British Columbia
V5G 4L7
Tel. (604) 436 3014
Fax. (604) 436 3752

Victoria GOLD CORP

PASSIVE TREATMENT SYSTEMS

EAGLE GOLD PROPERTY
YUKON TERRITORY

PROJECTION	DRAWN BY
UTM - ZONE 8	RS
DATUM	CHECKED BY
NAD 83	GB
DATE	FIGURE NO.
11-May-2011	1



NOTES:
1. CONCEPTUAL PASSIVE TREATMENT SYSTEM (PTS) SCHEMATIC.
2. NOT TO SCALE.
3. SCHEMATIC IS APPLICABLE TO PILOT-SCALE AND FULL-SCALE OPERATIONS PTS.

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	17MAY'11	ISSUED WITH LETTER VA11-00695	CA	GJS	KJB

VICTORIA GOLD CORP.

EAGLE GOLD PROJECT

CONCEPTUAL PASSIVE TREATMENT SYSTEM SCHEMATIC

Knight Piésold CONSULTING

P/A NO. VA101-290/5

REF. NO. VA11-00695

FIGURE 2

REV 0