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North American Tungsten Corporation #1540 – 1188 West Georgia Street Vancouver, BC V6E 4A2

Attention: Mr. Wade Stogran, VP Environmental and Corporate Affairs

Subject: Mactung Property - Summary of Late Winter Sheep Surveys,

April 7 and 13, 2009

#### 1.0 INTRODUCTION

May 29, 2009

EBA Engineering Consultants Ltd. (EBA) conducted a late winter aerial sheep survey in the area of the proposed Mactung project site for North American Tungsten Corporation (NATC). This survey was conducted to provide the Yukon Environmental and Socioeconomic Assessment Board (YESAB) with additional information regarding late winter habitat use by Dall's Sheep (Ovis dalli) in the proposed project area and along the proposed access road corridor.

Three Wildlife Key Areas (WKA) for Dall's Sheep late winter habitat, one of which is based on historic sheep observations, have been identified within close proximity to the proposed project site (YG 2009), as indicated in Figure 1, attached. Late winter surveys conducted in previous years have also identified sheep using the area. AMAX (1976) observed sheep during both aerial (n=3) and ground-based surveys (n=12) conducted on March 20, 1976 and March 24, 1976 respectively. EBA (2007, 2008a, 2008b) notes that the historically observed small year-round sheep population in the Mactung area appears to have been reduced.

# 2.0 METHODS

EBA conducted a late winter aerial sheep survey on April 7 and April 13, 2009. This survey focused on identifying winter range use by Dall's Sheep within the vicinity of the proposed project mine site and along the proposed access road. Survey blocks were defined by WKAs for Dall's Sheep late winter habitat, topographic features (i.e. alpine peaks vs. valley bottoms) and by proximity to potential disturbance. The survey region was classified into three strata: high (1), medium (2) and low (3) priority areas (Figure 1). High priority strata were those areas identified as WKAs for Dall's Sheep winter habitat by the Yukon Government. Medium priority strata were those areas with sheep winter habitat potential that may be directly affected by disturbance from the mine and associated infrastructure.

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Low priority strata were areas with potential winter habitat for sheep which were not within close proximity to potential disturbance. Each stratum was then further divided into survey blocks. In total, nine survey blocks were identified (priority 1 = 3 survey blocks, priority 2 = 4 blocks and priority 3 = 2 blocks). Survey methods were reviewed Yukon Government prior to commencing the survey.

A Robinson R44 Raven II helicopter was used for the survey with the navigator/surveyor positioned front left and a second surveyor/recorder positioned back left. Mountain blocks were systematically surveyed in a counter-clockwise direction at an altitude between 1,800 – 2,000 m a.s.l. at a slow speed (~50 km/h). All observations of sheep and sheep tracks were recorded. Incidental observations of other wildlife sign were also recorded. When possible, the pilot contributed to wildlife observations. Survey blocks were navigated using the pilot's GPS with quality control by the front navigator. Track lines and locations of observations were recorded using a Garmin Colorado 300 GPS. Habitat characteristics were photo documented, attached.

# 3.0 RESULTS

### 3.1 SURVEY INFORMATION

# 3.1.1 Conditions

Weather conditions during the April 7, 2009 survey were acceptable at the beginning of the survey but then quickly deteriorated, with the cloud cover dropping and impairing visibility and navigation, therefore the weather conditions no longer met survey or safety standards. This survey commenced at 09:51 and was terminated at 12:29 with a total of 97 minutes of survey time.

Weather was monitored daily until the next window of opportunity. On April 13, weather conditions were ideal for conducting aerial surveys and surveys were conducted. No clouds were present during the survey. Wind was minimal. The survey commenced at 09:16 and was completed at 13:42 with a total of 174 minutes of survey time.

# 3.1.2 Area Surveyed

During the two-day survey, a total linear distance of 393.9 km was covered, within the combined survey area of 24,174 ha. The distance covered and the size of each survey block is listed in Table 1 below. The track log showing the actually path flown is depicted in Figure 2, attached.

TABLE 1. TRANSECT DISTANCE AND SIZE OF SURVEY BLOCKS FLOWN FOR THE 2009 LATE WINTER SHEEP SURVEY AT MACTUNG.			
Survey Block	Strata	Transect Distance within Block (km)	Size of Survey Block (ha)
1A	Н	51.7	3540.8
1B	Н	77.2	6065.0
1C	Н	65.8	3208.5
2A	M	74.5	3921.2
2B	M	20.6	1051.5
2C	M	25.4	1075.4
2D	M	34.8	2850.9
3A	L	11.6	717.5
3B	L	32.2	1716.8
Total	-	393.9	24, 147.4

#### 3.2 OBSERVATIONS

## 3.2.1 Sheep

During the survey conducted on April 7, 2009, one full curl ram was observed along a ridgeline, with rock outcrops, within Survey Block 1A, approximately 4 km from the proposed mine site (Figure 2). This ram was observed again during the April 13 survey within close proximity to the April 7 observation. No other observations of sheep or their sign were recorded on either survey day. The location of this observation was outside of the identified sheep winter WKA.

# 3.2.2 Other Species

Observations of wolverine (*Gulo gulo*) tracks were recorded in seven locations over the two-day survey period. The majority of these observations were on upper slopes and along ridgelines. One observation of wolverine tracks surrounding a small den was observed. The den was located on the upper slope in alpine habitat. EBA was unable to identify the den type.

Two observations of golden eagles (Aquila chrysaetos) were documented and numerous raptor tracks on peaks and along ridgelines were observed during the two-day survey period.

#### 4.0 CONCLUSION

During the late winter two-day survey conducted in the Mactung project area in April of 2009, a total of one ram was observed on two occasions. Sheep observations during

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previous baseline studies included one ram during the summer of 2007, a single sheep track along the North Canol road in 2007 and Dall's sheep sign in 2006 (EBA 2008). Gill (1978) reported Dall's Sheep wintering approximately 3 km northwest of camp. Population declines were observed by AMAX (1983)

Based on the late winter aerial sheep survey conducted on April 7 and April 13, 2009, from data collected during previous aerial ungulate surveys (EBA 2005-2008) and historical surveys (Gill 1978, AMAX 1983), Dall's Sheep are present in the study area, but occur at very low densities. Conditions for winter survival are present, but sheep do not appear to be using the area or are limited for unknown reasons.

The presence of Dall's Sheep on the mountain block adjacent to the proposed mine site indicates that limited habitat is available for over winter survival of sheep. Historically, higher numbers of sheep were documented in the area but have not been observed during EBA's baseline studies at Mactung. The reason for the decline of sheep is not known. Potential factors that may have influenced the decline of sheep in the area could be that winter conditions have changed to be less suitable (i.e. increased snow depth), human presence in the area has increased, or hunting pressures have increased.



# 5.0 CLOSURE

EBA is pleased to present North American Tungsten Corporation with this 2009 late winter aerial sheep survey report. This report provides information regarding the abundance, distribution, and habitat use of Dall's Sheep within the Mactung project area. It has been prepared according to current professional standards and incorporates and is subject to the EBA Environmental Report General Conditions (attached). We trust that this report meets your requirements at this time. If you have any questions or require additional information, please contact the undersigned.

Respectfully submitted,

EBA Engineering Consultants Ltd.

Prepared by:

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#### ENVIRONMENTAL REPORT - GENERAL CONDITIONS

This report incorporates and is subject to these "General Conditions".

#### 1.0 USE OF REPORT AND OWNERSHIP

This report pertains to a specific site, a specific development, and a specific scope of work. It is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site or proposed development would necessitate a supplementary investigation and assessment.

This report and the assessments and recommendations contained in it are intended for the sole use of EBA's client. EBA does not accept any responsibility for the accuracy of any of the data, the analysis or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than EBA's Client unless otherwise authorized in writing by EBA. Any unauthorized use of the report is at the sole risk of the user.

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Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA's instruments of professional service), only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by EBA shall be deemed to be the original for the Project.

Both electronic file and hard copy versions of EBA's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. The Client warrants that EBA's instruments of professional service will be used only and exactly as submitted by EBA.

Electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

#### 3.0 NOTIFICATION OF AUTHORITIES

In certain instances, the discovery of hazardous substances or conditions and materials may require that regulatory agencies and other persons be informed and the client agrees that notification to such bodies or persons as required may be done by EBA in its reasonably exercised discretion.

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#### 6.0 REFERENCES

- AMAX. 1983. AMAX Northwest Mining Company Limited. 1983. Initial Environmental Evaluation MacTung Project Yukon and Northwest Territories.
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- Gill, D. 1978. Large Mammals of the Macmillan Pass Area, Northwest Territories and Yukon. AMAX Northwest Mining Company, Ltd. Vancouver, British Columbia. 59 pp.
- Government of Yukon (YTG) 2009. Wildlife Key Areas Maps. Accessed through digital format (shapefile) available from Geomatics Yukon.

# **FIGURES**



