

**KENO HILL PROPERTY**  
**REVEGETATION TRIALS - GALENA HILL WASTE ROCK**  
**DUMPS**

**2008**

**Prepared for:**



**by:**

**S. P. WITHERS**

**DRAFT**  
**JANUARY 2008**

# Revegetation Trials - Galena Hill Waste Rock Dumps

## 1.0 Background

In order to establish effective measures for revegetating the discontinued waste rock dumps in the Elsa area, three revegetation test sites were established on Galena Hill in 2007. The selected sites include two waste rock dumps and one control site.

A preliminary assessment of these sites was carried out on July 31, 2007. This included an evaluation of the sites' physical characteristics and an inventory of the naturally occurring revegetation. Soil and vegetation samples were collected from the surfaces of the Simes and Hector waste rock dumps prior to recontouring.

Recontouring of the sites and test plot layout took place on September 5, 2007. Seed and fertilizer was applied to the three test plots on September 6, 2007.

## 2.0 Soil Sample Analyses

Composited soil samples were collected from the upper surfaces of the Simes and Hector waste rock dumps prior to recontouring and scarification.

As was anticipated, the level of available nitrogen was very low at both sites. Available phosphorous was moderate at the Simes dump and low at the Hector dump, while available potassium was low at both sites. Available sulfate was moderate at the Simes dump and very high at the Hector dump.

The percent organic matter was very low at both sites. The soil texture was medium, the cation exchange capacity low, and the C:N ratio moderate at both sites.

The analytical report for these samples is attached.

## 3.0 Seed and Fertilizer Applications

Two seed mixes were applied to the Galena Hill test plots:

**Brewery Creek Seed Mix** – acquired for the Brewery Creek Mine in 2006 – pre-mixed by Pickseed Canada.

Species	% by weight
Violet Wheatgrass	36
Ticklegrass	15
Sheep Fescue	14
Rocky Mountain Fescue	14
Glaucous Bluegrass	11
Alfalfa	10

**Minto Mine Seed Mix** – includes three species of grass seeds acquired for the Minto Mine from Brett-Young Seeds in 2007 – mixed on-site at the Galena Hill test plots.

Species	% by weight
Violet Wheatgrass	50
Sheep Fescue	30
Fowl Bluegrass	20

Both seed mixes were applied to all three test plot sites at a rate of approximately 50 kg/ha.

Fertilizer (24-3-12) was applied to all three test plot sites at a rate of approximately 100 kg/ha.

## **4.0 Revegetation Test Plots**

### **4.1 Simes Waste Rock Dump**

UTM coordinates: E 0482265  
N 7088816

The existing upper surface of the waste rock dump is near-level, compacted and of medium-coarse granular texture.

The very little naturally occurring revegetation (< 5% cover) on the waste rock dump's upper surface consists of:

Paper birch	<i>Betula papyrifera</i>
Dwarf birch	<i>Betula glandulosa</i>
Trembling aspen	<i>Populus tremuloides</i>
Balsam poplar	<i>Populus balsamifera</i>
White spruce	<i>Picea glauca</i>
Felt-leaf willow	<i>Salix alaxensis</i>
Grey-leaf willow	<i>Salix glauca</i>
Fireweed	<i>Epilobium angustifolium</i>
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>
Trisetum	<i>Trisetum spicatum</i>
Ticklegrass	<i>Agrostis scabra</i>
Squirrel-tail barley	<i>Hordeum jubatum</i>

The surrounding vegetation is sub-alpine forest consisting of:

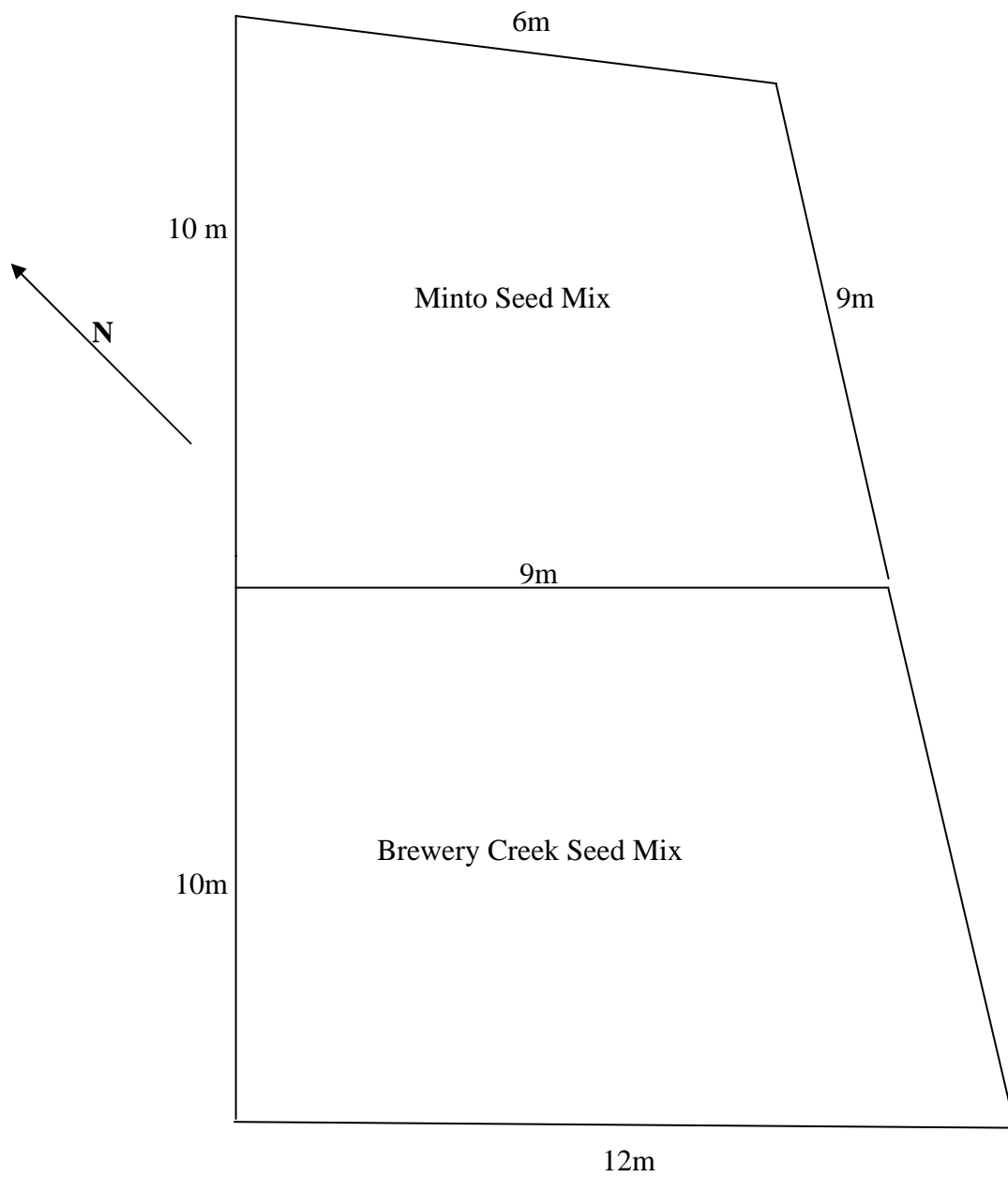
Paper birch	<i>Betula papyrifera</i>
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Dwarf birch	<i>Betula glandulosa</i>
White spruce	<i>Picea glauca</i>
Felt-leaf willow	<i>Salix alaxensis</i>
Grey-leaf willow	<i>Salix glauca</i>
Labrador tea	<i>Ledum groenlandicum</i>
Bog blueberry	<i>Vaccinium uliginosum</i>
Crowberry	<i>Empetrum nigrum</i>
Feathermoss	<i>Pleurozium shreberi</i>
Reindeer lichen	<i>Cladina</i> sp.

The Simes waste rock test plot was contoured to an approximately 2:1 slope with a NE aspect. The lower portion of the plot (see diagram) was seeded with the Brewery Creek seed mix and the upper portion was seeded with the Minto seed mix. In addition, seeds from the following nearby naturally occurring wild species were collected and applied to a narrow strip along the upper portion of the test plot:

Ticklegrass	<i>Agrostis scabra</i>
Fireweed	<i>Epilobium angustifolium</i>
Bluejoint reedgrass	<i>Calamagrostis Canadensis</i>

**Simes Waste Rock Dump Test Plot**



## 4.2 Hector Waste Rock Dump

UTM coordinates: E 0480031  
N 7088215

The existing upper surface of the waste rock dump is near-level, compacted and of medium granular texture.

The upper surface of the waste rock dump is void of naturally occurring revegetation except for a little felt-leaf willow, ticklegrass and tufted hairgrass occurring around the edges.

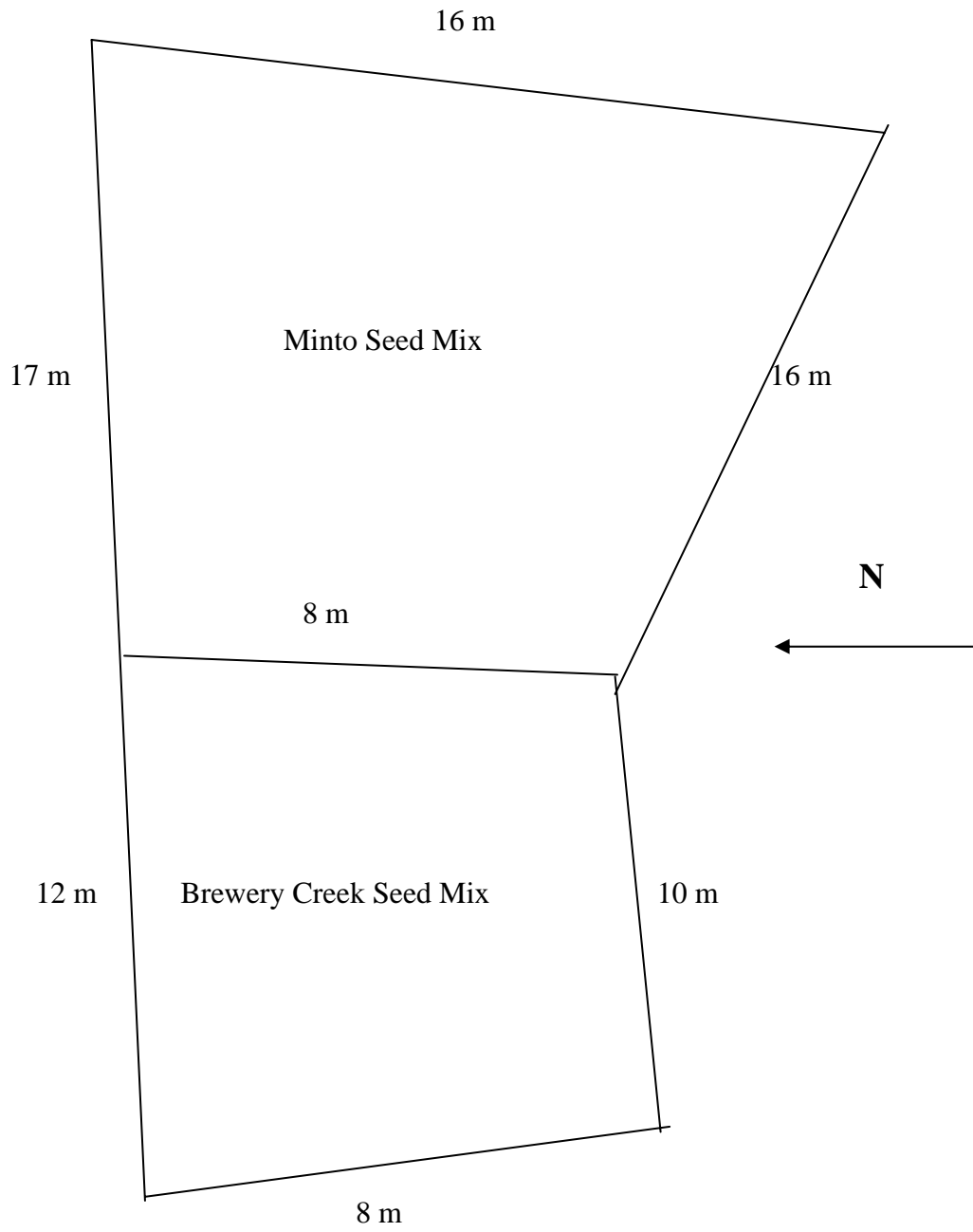
The surrounding vegetation is sub-alpine forest consisting of:

Mountain alder	<i>Alnus crispa</i>
Felt-leaf willow	<i>Salix alaxensis</i>
Grey-leaf willow	<i>Salix glauca</i>
Crowberry	<i>Empetrum nigrum</i>
Alaskan knotweed	<i>Polygonum alaskanum</i>
Beauverd's spiraea	<i>Spiraea beauverdiana</i>
Fireweed	<i>Epilobium angustifolium</i>
Sedge	<i>Carex</i> sp.
Hairgrass	<i>Deschampsia brevifolia</i>
Ticklegrass	<i>Agrostis scabra</i>
Violet wheatgrass	<i>Agropyron violaceum</i>
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>
Wood rush	<i>Luzula parviflora</i>

The Hector waste rock test plot was contoured to an approximately 2:1 slope with a NW aspect. The lower portion of the plot (see diagram) was seeded with the Brewery Creek seed mix and the upper portion was seeded with the Minto seed mix. In addition, seeds from the following nearby naturally occurring wild species were collected and applied to a narrow strip along the upper portion of the test plot:

Bluejoint reedgrass	<i>Calamagrostis canadensis</i>
Hairgrass	<i>Deschampsia brevifolia</i>
Wood rush	<i>Luzula parviflora</i>
Alaskan knotweed	<i>Polygonum alaskanum</i>
Beauverd's spiraea	<i>Spiraea beauverdiana</i>

**Hector Waste Rock Dump Test Plot**



### 4.3 Control Site

UTM coordinates: E 0481547  
N 7089384

The existing surface of the control site is an approximate 2:1 slope, moderately compacted and of medium granular texture.

The naturally occurring vegetation on the control plot (prior to scarification) and the surrounding sub-alpine forest consists of:

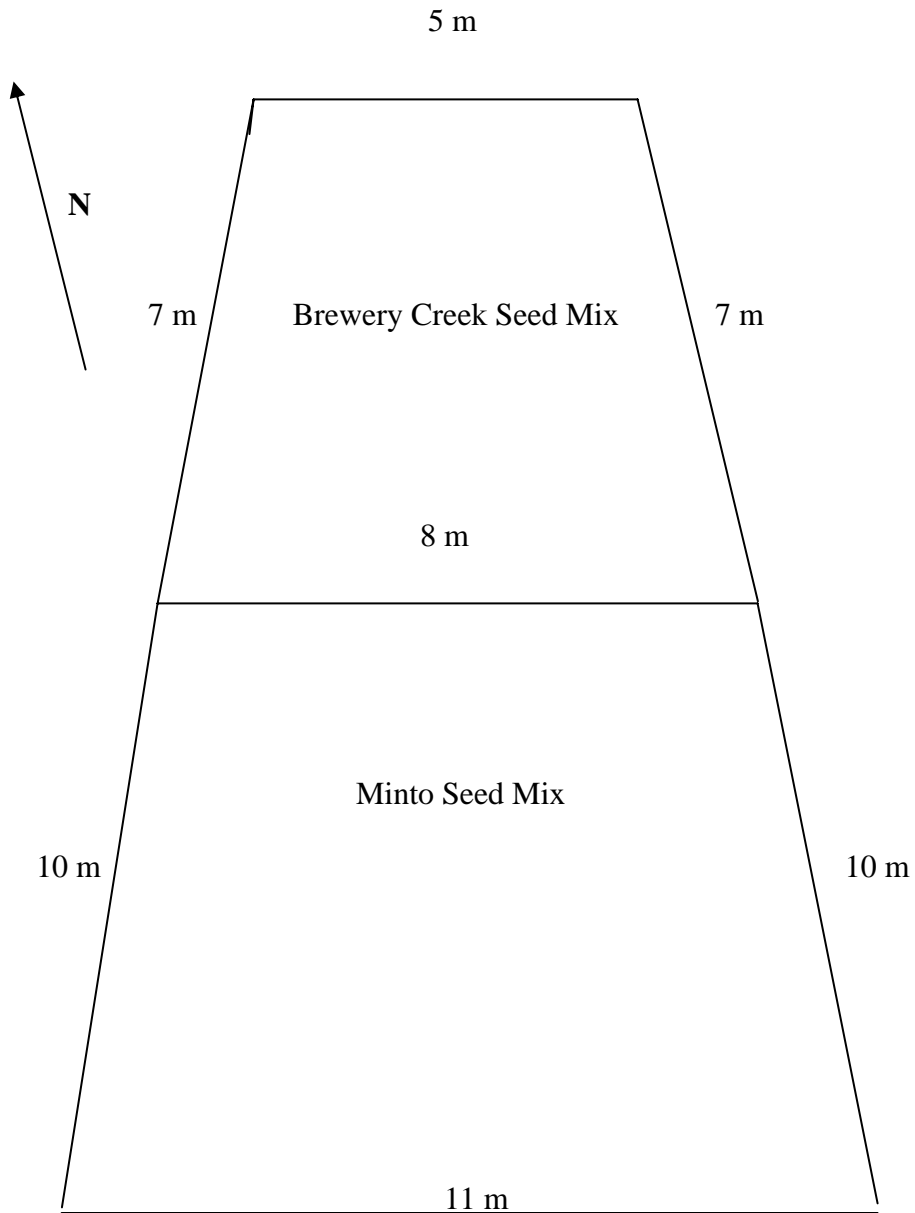
Paper birch	<i>Betula papyrifera</i>
Dwarf birch	<i>Betula glandulosa</i>
White spruce	<i>Picea glauca</i>
Mountain alder	<i>Alnus crispa</i>
Felt-leaf willow	<i>Salix alaxensis</i>
Grey-leaf willow	<i>Salix glauca</i>
Fireweed	<i>Epilobium angustifolium</i>
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>
Slender wheatgrass	<i>Agropyron trachycaulum</i>

The control site test plot was recontoured to an approximately 2:1 slope with a NE aspect. The lower portion of the plot (see diagram) was seeded with the Brewery Creek seed mix and the upper portion was seeded with the Minto seed mix. In addition, seeds from the following nearby naturally occurring wild species were collected and applied to a narrow strip along the upper portion of the test plot:

Mountain alder	<i>Alnus crispa</i>
Fireweed	<i>Epilobium angustifolium</i>
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>
Slender wheatgrass	<i>Agropyron trachycaulum</i>



**Control Site Test Plot**



## 5.0 Recommendations

- A visual examination of the test plots should take place in mid-summer 2008. This should include a documentation of species occurrence and an estimate of vegetative cover. An evaluation of species vigour and health (evidence of discoloration) should also be made.
- It is recommended that soil samples from the recontoured test plots and tissue samples from the seeded grass and legume species (if enough plant material is available) be collected during mid-summer of 2008 at both of the waste rock dumps and the control site (no soil samples were collected from the control site in the summer of 2007 as the site had not yet been selected at the time of sampling). Soil and vegetation samples should be analyzed for metal concentrations, while soil samples should also be texture-classified and analyzed for available nutrients, pH, cation exchange capacity, carbon-nitrogen ratio and the per cent of organic matter.
- It is anticipated that a further application of fertilizer will be required in the fall of 2008. This may consist of a combination of both slow and quick release fertilizers.
- Evidence of soil erosion at the test plots should be noted during the 2008 site visits.

## **Appendix A      Results of Soil Sample Analysis**



NOTE Proper completion of this form is required in order to proceed with analysis
See reverse for contacting your nearest Norwest location and proper sampling protocol

Billing Address, Report To, Copy of Report To, Copy of invoice, Company, Address, Attention, Phone, Fax, Cell, Email, QA/QC Report, Report Result, Mail, Courier, Email

Information to be included on Report and Invoice, Project ID, Project Name, Project Location, Legal Location, PO#, Proj. Acct. Code, Agreement ID

RUSH Please contact the laboratory to confirm rush dates and times before submitting samples. Upon filling out this section, client accepts that surcharges will be attached to this analysis Required on: all analyses or as indicated

Sample Custody (Please Print), Sampled by, Date, Company, Signature, Relinquished by, Date, Waybill number, Received by, Date, Processed by, Date

Special Instructions/Comments

Table with columns for Number of Containers, ICP Metal Analysis (T18), Nutrients (F10), pH EC (S00), Texture (PS60), TOC (CL30), C:N Ratio (CL41), CEC (CL11), Total Nitrogen (CL50), Metals (T157)

Main data table with columns: Sample Identification, Location, Depth, Date/Time Sampled, Matrix, Sampling Method, and various test results (checkmarks)

Bill To: ELSA Reclamation and	Project:	Lot ID: <b>564838</b>
Report To: Access Mining Consultants Ltd.	ID: ALEX-07-ESP-01B	Approval Status: Approved
# 3 Calcite Business Centre	Name: Keno Valley-Veg Study	Invoice Frequency: by Lot
151 Industrial Road	Location: Keno	COD Status:
Whitehorse, YT, Canada	LSD:	Control Number:
Y1A 2V3	P.O.:	Date Received: Aug 7, 2007
Attn: Dave Desmarais	Acct code:	Date Reported: Aug 28, 2007
Sampled By: Stu Withers		Report Number: 1032151
Company: ACG		

Contact	Company	Address
Dave Desmarais	Access Mining Consultants Ltd.	# 3 Calcite Business Centre, 151 Industrial Road Whitehorse, YT Y1A 2V3 Phone: (867) 668-6463 Fax: (867) 667-6680 Email: dave@accessconsulting.ca

	Copies	Delivery	Format
M	1	Post	
	1	Email - Multiple Reports	PDF
	1	Email - Multiple Reports	Standard Crosstab

\_\_\_\_\_ PAGES IN THIS TRANSMISSION

**Notes To Clients:****Reports associated with this Lot**

<u>Id/Format/Report Date</u>	<u>Id/Format/Report Date</u>	<u>Id/Format/Report Date</u>
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**Sample Custody**

Bill To: ELSA Reclamation and	Project:	Lot ID: <b>564838</b>
Report To: Access Mining Consultants Ltd.	ID: ALEX-07-ESP-01B	Control Number:
# 3 Calcite Business Centre	Name: Keno Valley-Veg Study	Date Received: Aug 7, 2007
151 Industrial Road	Location: Keno	Date Reported: Aug 28, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1032151
Y1A 2V3	P.O.:	
Attn: Dave Desmarais	Acct code:	
Sampled By: Stu Withers		
Company: ACG		

**Sample Disposal Date: September 27, 2007**

All samples will be stored until this date unless other instructions are received. Please indicate other requirements below and return this form to the address or fax number on the bottom of this page.

Extend Sample Storage Until \_\_\_\_\_ (MM/DD/YY)

The following charges apply to extended sample storage:

Storage for 1 to 5 samples per month	\$ 10.00
Storage for 6 to 20 samples per month	\$ 15.00
Storage for 21 to 50 samples per month	\$ 30.00
Storage for 51 to 200 samples per month	\$ 60.00
Storage for more than 200 samples per month	\$ 110.00

Return Sample, collect, to the address below via:

Greyhound

Loomis

Purolator

Other (specify) \_\_\_\_\_

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

Signature \_\_\_\_\_

## Analytical Report

Bill To: ELSA Reclamation and	Project:	Lot ID: <b>564838</b>
Report To: Access Mining Consultants Ltd.	ID: ALEX-07-ESP-01B	Control Number:
# 3 Calcite Business Centre	Name: Keno Valley-Veg Study	Date Received: Aug 7, 2007
151 Industrial Road	Location: Keno	Date Reported: Aug 28, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1032151
Y1A 2V3	P.O.:	
Attn: Dave Desmarais	Acct code:	
Sampled By: Stu Withers		
Company: ACG		

		Reference Number	564838-1	564838-2	
		Sample Date	Jul 31, 2007	Jul 31, 2007	
		Sample Location			
		Sample Description	Hector	Simes	
		Matrix	Soil	Soil	
Analyte	Units	Results	Results	Results	Detection Limit
<b>Available Nutrients</b>					
Nitrate - N	Available	mg/kg	<1	1	1
Phosphorus	Available	mg/kg	<5	10	5
Potassium	Available	mg/kg	20	20	10
Sulfate-S	Available	mg/kg	489	9	1
Ammonium - N	Available-dry basis	mg/kg	0.8	1.1	0.3
<b>Classification</b>					
C:N Ratio			9	8	
Organic Matter		%	0.93	0.86	0.09
Nitrogen	Total	%	0.05	0.05	0.03
Carbon	Total Organic	%	0.47	0.43	0.05
Cation Exchange Capacity		meq/100g	2.7	2.3	
Texture			Medium	Medium	
<b>Metals Strong Acid Digestion</b>					
Aluminum	Strong Acid Extractable	ug/g	5620	5940	20
Antimony	Strong Acid Extractable	ug/g	79.0	142	0.2
Arsenic	Strong Acid Extractable	ug/g	622	225	0.2
Barium	Strong Acid Extractable	ug/g	38	35	1
Beryllium	Strong Acid Extractable	ug/g	0.2	0.2	0.1
Bismuth	Strong Acid Extractable	ug/g	<0.5	2.2	0.5
Cadmium	Strong Acid Extractable	ug/g	78.7	25.3	0.01
Chromium	Strong Acid Extractable	ug/g	15.7	10.2	0.5
Calcium	Strong Acid Extractable	ug/g	1400	500	200
Cobalt	Strong Acid Extractable	ug/g	4.7	2.3	0.1
Copper	Strong Acid Extractable	ug/g	356	264	1
Iron	Strong Acid Extractable	ug/g	55900	27100	100
Lead	Strong Acid Extractable	ug/g	29300	18800	0.1
Magnesium	Strong Acid Extractable	ug/g	<100	500	100
Manganese	Strong Acid Extractable	ug/g	7880	1630	10
Molybdenum	Strong Acid Extractable	ug/g	1	1	1
Nickel	Strong Acid Extractable	ug/g	20.2	9.3	0.5
Phosphorus	Strong Acid Extractable	ug/g	1210	800	30
Selenium	Strong Acid Extractable	ug/g	4.1	1.7	0.3
Silicon	Strong Acid Extractable	ug/g	450	540	50
Silver	Strong Acid Extractable	ug/g	740	340	0.1
Strontium	Strong Acid Extractable	ug/g	10	13	1
Thallium	Strong Acid Extractable	ug/g	0.71	0.16	0.05
Tin	Strong Acid Extractable	ug/g	8	15	1
Titanium	Strong Acid Extractable	ug/g	97.8	53.6	0.5

## Analytical Report

Bill To: ELSA Reclamation and	Project:	Lot ID: <b>564838</b>
Report To: Access Mining Consultants Ltd.	ID: ALEX-07-ESP-01B	Control Number:
# 3 Calcite Business Centre	Name: Keno Valley-Veg Study	Date Received: Aug 7, 2007
151 Industrial Road	Location: Keno	Date Reported: Aug 28, 2007
Whitehorse, YT, Canada	LSD:	Report Number: 1032151
Y1A 2V3	P.O.:	
Attn: Dave Desmarais	Acct code:	
Sampled By: Stu Withers		
Company: ACG		

	Reference Number	564838-1	564838-2		
	Sample Date	Jul 31, 2007	Jul 31, 2007		
	Sample Location				
	Sample Description	Hector	Simes		
	Matrix	Soil	Soil		
Analyte	Units	Results	Results	Results	Detection Limit
<b>Metals Strong Acid Digestion - Continued</b>					
Vanadium	Strong Acid Extractable	ug/g	17.1	12.1	0.1
Zinc	Strong Acid Extractable	ug/g	8140	1100	1
<b>Salinity</b>					
pH	Saturated Paste	pH	6.0	6.4	
Electrical Conductivity	Saturated Paste	dS/m at 25 C	4.33	0.16	0.01



## Analytical Report

Bill To: ELSA Reclamation and Report To: Access Mining Consultants Ltd. # 3 Calcite Business Centre 151 Industrial Road Whitehorse, YT, Canada Y1A 2V3 Attn: Dave Desmarais Sampled By: Stu Withers Company: ACG	Project: ID: ALEX-07-ESP-01B Name: Keno Valley-Veg Study Location: Keno LSD: P.O.: Acct code:	Lot ID: <b>564838</b> Control Number: Date Received: Aug 7, 2007 Date Reported: Aug 28, 2007 Report Number: 1032151
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		Reference Number	564838-3	564838-4	564838-5	
		Sample Date	Jul 31, 2007	Jul 31, 2007	Jul 31, 2007	
		Sample Location				
		Sample Description	Hector D brevifolia	Hector S alaxensis	Simes C canadensis	
		Matrix	Tissue	Tissue	Tissue	
Analyte	Units	Results	Results	Results	Detection Limit	
<b>Metals Total</b>						
Aluminum	Total (wet weight)	ug/g	258	72.0	19	1
Antimony	Total (wet weight)	ug/g	8.09	1.5	<0.5	0.5
Arsenic	Total (wet weight)	ug/g	23.0	2.9	<0.2	0.2
Barium	Total (wet weight)	ug/g	8.56	20.8	22.2	0.03
Beryllium	Total (wet weight)	ug/g	0.02	<0.01	<0.02	0.01
Bismuth	Total (wet weight)	ug/g	<0.5	1.3	<0.5	0.5
Cadmium	Total (wet weight)	ug/g	15.6	39.6	2.6	0.05
Calcium	Total (wet weight)	ug/g	2070	29300	1870	2
Chromium	Total (wet weight)	ug/g	1.96	0.12	0.26	0.04
Cobalt	Total (wet weight)	ug/g	0.5	0.3	0.08	0.05
Copper	Total (wet weight)	ug/g	11.3	8.96	7.76	0.05
Iron	Total (wet weight)	ug/g	1520	270	96.4	1
Lead	Total (wet weight)	ug/g	676	86.5	57.0	0.3
Lithium	Total (wet weight)	ug/g	0.74	2.4	0.4	0.1
Magnesium	Total (wet weight)	ug/g	904	4980	504	1
Manganese	Total (wet weight)	ug/g	566	288	580	0.3
Molybdenum	Total (wet weight)	ug/g	0.5	0.97	0.2	0.05
Nickel	Total (wet weight)	ug/g	4.1	3.2	8.84	0.1
Phosphorus	Total (wet weight)	ug/g	856	2550	2040	0.5
Potassium	Total (wet weight)	ug/g	7540	13400	8560	5
Selenium	Total (wet weight)	ug/g	0.4	0.5	0.3	0.3
Silver	Total (wet weight)	ug/g	7.12	1.4	0.4	0.2
Sodium	Total (wet weight)	ug/g	26	12	9.1	1
Strontium	Total (wet weight)	ug/g	8.93	58.8	6.55	0.02
Titanium	Total (wet weight)	ug/g	6.24	1.0	0.3	0.05
Vanadium	Total (wet weight)	ug/g	0.78	<0.1	<0.2	0.1
Zinc	Total (wet weight)	ug/g	1030	1260	122	0.1
Zirconium	Total (wet weight)	ug/g	0.3	<0.05	<0.05	0.05
Thallium	Total (wet weight)	ug/g	2.7	2.2	2.5	0.3

**Analytical Report**


Bill To: ELSA Reclamation and  
 Report To: Access Mining Consultants Ltd.  
 # 3 Calcite Business Centre  
 151 Industrial Road  
 Whitehorse, YT, Canada  
 Y1A 2V3  
 Attn: Dave Desmarais  
 Sampled By: Stu Withers  
 Company: ACG

Project: ALEX-07-ESP-01B  
 ID: Keno Valley-Veg Study  
 Name: Keno  
 Location: Keno  
 LSD:  
 P.O.:  
 Acct code:

Lot ID: **564838**  
 Control Number:  
 Date Received: Aug 7, 2007  
 Date Reported: Aug 28, 2007  
 Report Number: 1032151

**Reference Number** 564838-6  
**Sample Date** Jul 31, 2007  
**Sample Location**  
**Sample Description** Simes S alaxensis  
**Matrix** Tissue

Analyte	Units	Results	Results	Results	Detection Limit
<b>Metals Total</b>					
Aluminum	Total (wet weight)	ug/g	45		1
Antimony	Total (wet weight)	ug/g	<0.5		0.5
Arsenic	Total (wet weight)	ug/g	0.4		0.2
Barium	Total (wet weight)	ug/g	37.5		0.03
Beryllium	Total (wet weight)	ug/g	<0.01		0.01
Bismuth	Total (wet weight)	ug/g	<0.5		0.5
Cadmium	Total (wet weight)	ug/g	95.5		0.05
Calcium	Total (wet weight)	ug/g	19800		2
Chromium	Total (wet weight)	ug/g	0.04		0.04
Cobalt	Total (wet weight)	ug/g	0.2		0.05
Copper	Total (wet weight)	ug/g	4.2		0.05
Iron	Total (wet weight)	ug/g	90.2		1
Lead	Total (wet weight)	ug/g	23.5		0.3
Lithium	Total (wet weight)	ug/g	2.6		0.1
Magnesium	Total (wet weight)	ug/g	4990		1
Manganese	Total (wet weight)	ug/g	557		0.3
Molybdenum	Total (wet weight)	ug/g	0.2		0.05
Nickel	Total (wet weight)	ug/g	9.59		0.1
Phosphorus	Total (wet weight)	ug/g	2210		0.5
Potassium	Total (wet weight)	ug/g	11500		5
Selenium	Total (wet weight)	ug/g	1.6		0.3
Silver	Total (wet weight)	ug/g	0.60		0.2
Sodium	Total (wet weight)	ug/g	29		1
Strontium	Total (wet weight)	ug/g	64.6		0.02
Titanium	Total (wet weight)	ug/g	0.57		0.05
Vanadium	Total (wet weight)	ug/g	<0.1		0.1
Zinc	Total (wet weight)	ug/g	600		0.1
Zirconium	Total (wet weight)	ug/g	<0.05		0.05
Thallium	Total (wet weight)	ug/g	2.3		0.3

Approved by:   
 Walter Brandl  
 Operations Manager - Surrey

## Methodology and Notes

Bill To: ELSA Reclamation and Report To: Access Mining Consultants Ltd. # 3 Calcite Business Centre 151 Industrial Road Whitehorse, YT, Canada Y1A 2V3 Attn: Dave Desmarais Sampled By: Stu Withers Company: ACG	Project: ID: ALEX-07-ESP-01B Name: Keno Valley-Veg Study Location: Keno LSD: P.O.: Acct code:	Lot ID: <b>564838</b> Control Number: Date Received: Aug 7, 2007 Date Reported: Aug 28, 2007 Report Number: 1032151
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### Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Ammonium-N (Extractable) in Soil	McKeague	* Nitrate and Ammonium Extractable by 2N KCl, 4.35	15-Aug-07	BTG Edmonton
Carbon, Nitrogen, Sulfur in soil	Agronomy No 9, Part 2	* Organic Matter, 29-4	23-Aug-07	BTG Lethbridge
Carbon, Nitrogen, Sulfur in soil	Agronomy No 9, Part 2	* Total Carbon, Method Using High-Temperature Induction Furnace, 29-2.2.4	23-Aug-07	BTG Lethbridge
Carbon, Nitrogen, Sulfur in soil	Carter	* Total Nitrogen, 22.4	23-Aug-07	BTG Lethbridge
Cation Exchange Capacity (CEC) - Ammonium	McKeague	* CEC and Exchangeable Cations by NH4OAc at pH 7, 3.32	13-Aug-07	BTG Edmonton
Metals (Total) wet weight	US EPA	* Metals & Trace Elements by ICP-AES, 6010B	09-Aug-07	BTG Surrey
Metals ICP-MS (Hot Block) in soil	SW-846	* Acid Digestion of Sediments, Sludges, and Soils, EPA 3050B	10-Aug-07	BTG Edmonton
Nutrients in General Soil	Comm. Soil Sci. Pl. Anal.	* Modified Kelowna Soil Test, Vol 26, 1995	10-Aug-07	BTG Edmonton
Saturated Paste in General Soil	McKeague	* EC of Saturated Soil Paste, 4.13	10-Aug-07	BTG Edmonton
Saturated Paste in General Soil	McKeague	* pH of Saturated Soil Paste, 3.14	10-Aug-07	BTG Edmonton
Sulfate in General Soil	McKeague	* Sulfate Extractable by 0.1M CaCl <sub>2</sub> , 4.47	10-Aug-07	BTG Edmonton
Texture of Soil (by hand)	McKeague	Soil Texture, Hand Method, 4.8	10-Aug-07	BTG Edmonton

*\* Bodycote method(s) based on reference method*

### References

Agronomy No 9,	Methods of Soil Analysis, Part 2
Carter	Soil Sampling and Methods of Analysis
Comm. Soil Sci.	Communications in Soil Science and Plant Analysis
McKeague	Manual on Soil Sampling and Methods of Analysis
SW-846	Test Methods for Evaluating Solid Waste
US EPA	US Environmental Protection Agency Test Methods

### Comments:

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.

## Appendix B    Photographs



Simes Test Plot



**Hector Test Plot**



**Hector Test Plot**



**Hector Test Plot**