

YMIP GRASSROOTS GRANT 12-32

**ROCK, SOIL & STREAM SEDIMENT GEOCHEMISTRY
CARRIED OUT ON THE COLBY & TRACEY CLAIMS
NTS SHEET 105H-9**

By:

Timothy Liverton & Alex Black

2nd. December 2012

INTRODUCTION

The Tracey and Colby claims are held by Alex Black of Watson Lake. During the summer of 2012 he and assistant Jackie Jimmy collected stream sediment, soils and rock samples as suggested in the application for a YMIP grassroots grant. The claims are in the Little Hyland River valley and are immediately south of Northern Tiger's Srogge property. Aben Resources Ltd. hold ground to the east where this summer they reported both skarn gold and sheeted-vein gold mineralization. The Northern Tiger property contains gold in quartz veins with a visible association of arsenopyrite.

The Tracey and Colby claims are underlain by Neoproterozoic Hyland Group (Yuseyu Formation) coarse clastic sediments, with phyllite outcropping in the south. Many cm to metre-scale quartz veins have been observed on the property by Alex Black, but without attitude data it cannot be deduced whether these have a preferred orientation and whether they form a sheeted vein system.

PROSPECTING

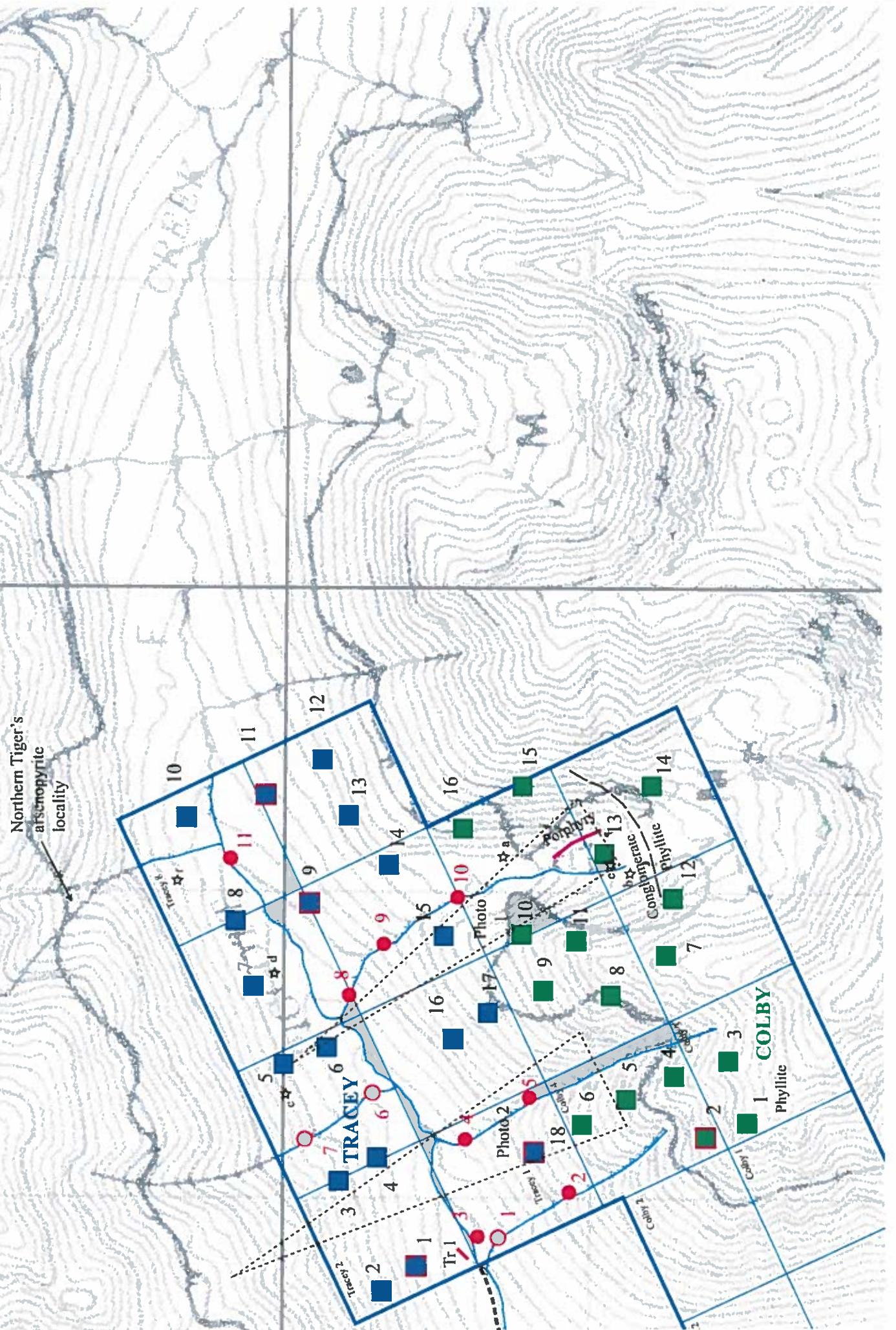
Prospector Alex Black and assistant Jackie Jimmy walked the claim block in the summer of 2012, collecting stream sediment, soil down spurs and rock specimens. Localities are shown in Fig. 1, geochemical results in Fig. 2 and two photographs of the terrain are included (location shown on Fig.1). In addition, one short trench was dug by excavator on the Tracey 2 claim. This was sited at a locality where much quartz veining is seen in the quartzite sub-outcrop. No mineralization was noted from the trench.

GEOCHEMICAL RESULTS

All samples were submitted to acme Labs for analysis by aqua regia digestion and ICPMS finish. Analytical results are appended.

Stream Sediment

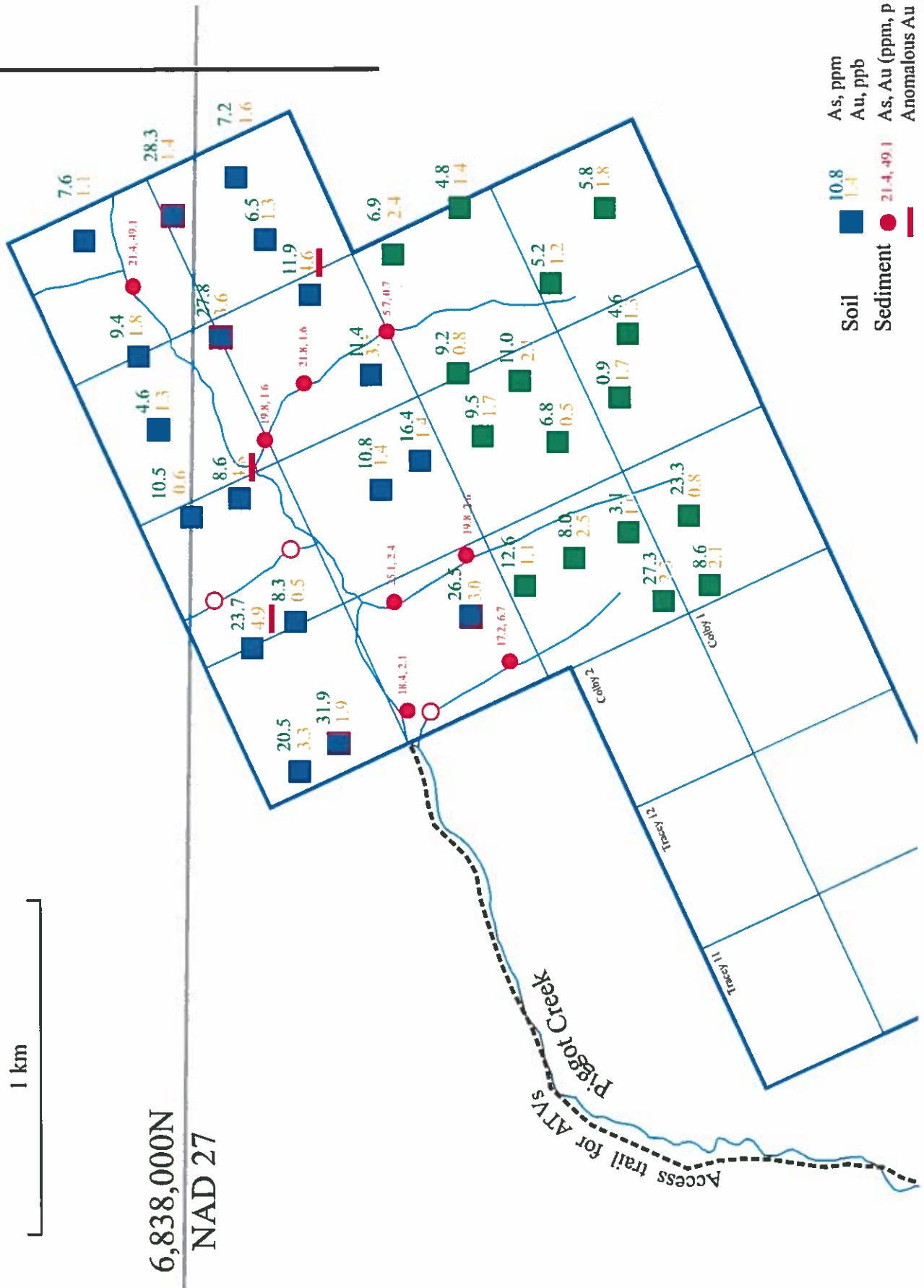
The eleven stream sediment samples returned arsenic values of from 5.7 to 25.1 ppm and gold from 0.7 to 49.1 ppb for the minus 80 mesh fraction. Three samples had insufficient fines for analysis. The highest gold value did not correlate with arsenic. Base metals show no particularly anomalous values. The northernmost sample taken from Piggot Creek on the Tracey 8 claim demonstrated obviously elevated gold content (49.1 ppb). This anomaly may have been derived from the known arsenopyrite locality on the Northern Tiger property at the head of the northern tributary of the creek.

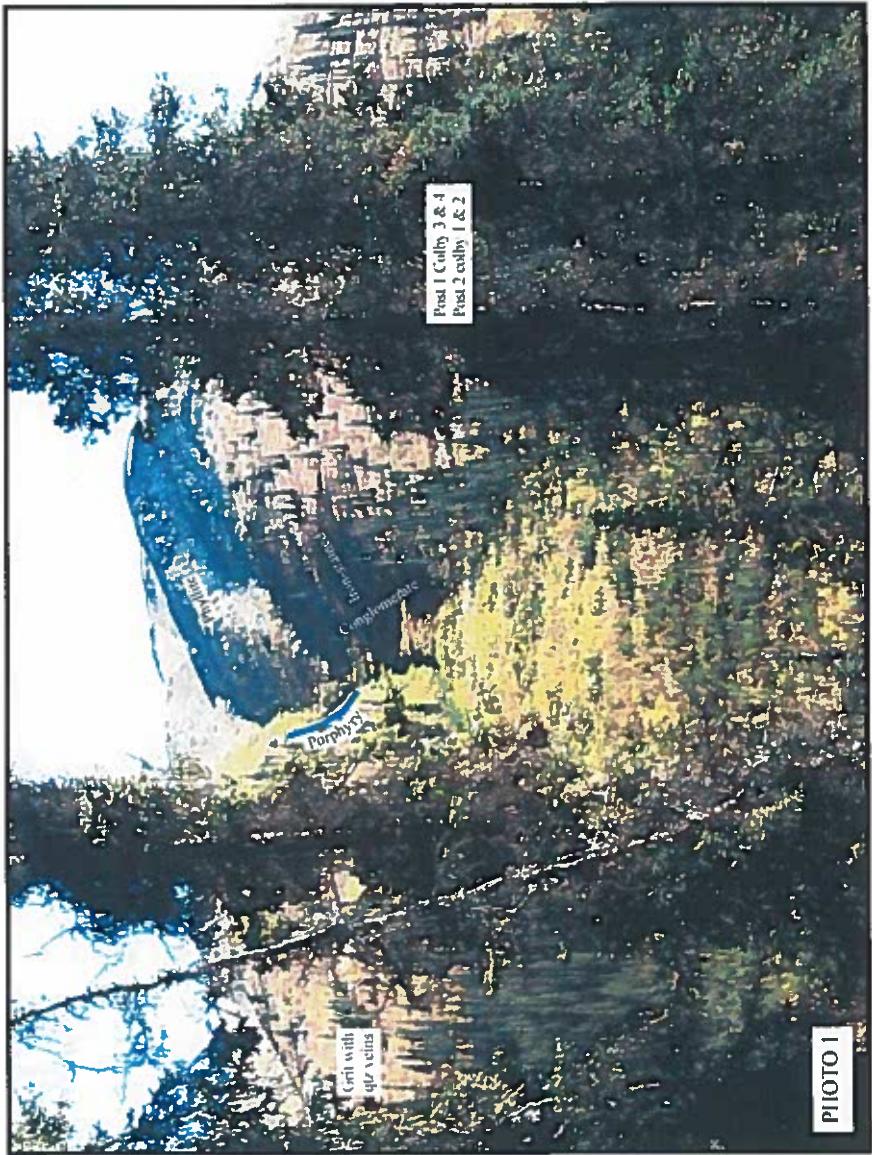


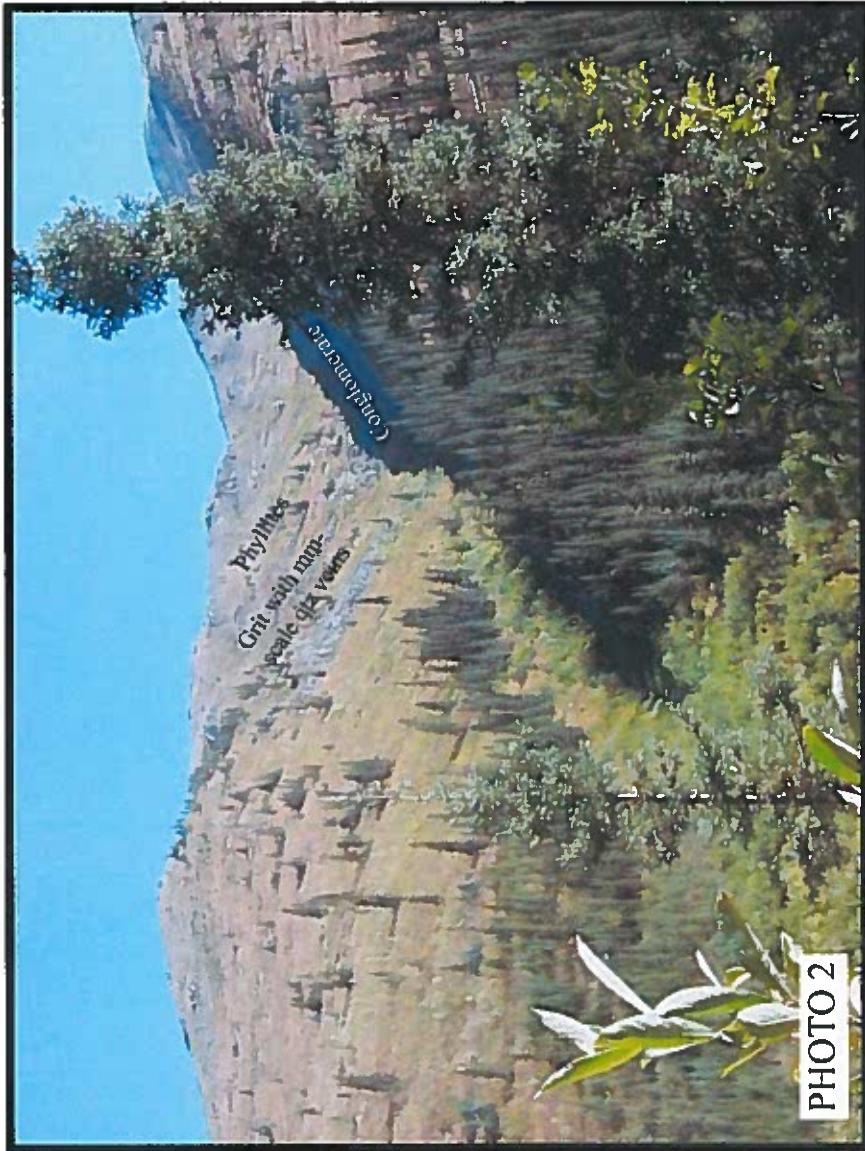
**TRACEY & COLBY CLAIMS
GEOCHEMICAL SAMPLING
AND GEOLOGY**

1 km

6,838,000N
NAD 27







Soils

Soil analyses returned values between 0.9 and 31.9 ppm for As and from < 0.5 to 4.9 ppb for Au. If arithmetical mean plus two standard deviations are chosen as threshold for anomaly, then only one of the arsenic values reaches the 29.3 ppm level (Tracey 1 specimen on Tracey 2 claim at 31.9 ppm), but gold exceeds the 4.4 ppb level in three specimens: 4.9 ppb for sample T3 (Tracey 2 claim); 4.8 ppb for T6 (Tracey 4 claim) and 4.6 ppb for sample T14 (Tracey 5 claim). Whether these three first-order anomalies represent any continuous mineralization cannot be judged without further geological information. The SE corner of the property (Colby 5, 6, 7, & 8 claims) returned lowest values of As in soils, likely reflecting the outcrop of phyllite above.

Rock

The rock analyses (which correspond to soil sample sites) did not return any strikingly anomalous values. The highest values of Cu, Pb, Zn and As were obtained from sample Tracey 4 (129.1, 22.2, 85, 25 ppm respectively). Gold at 3.6 ppb in this specimen was not the highest, that being 5.2 ppb from Colby 1. Neither of these gold values are obviously anomalous for rock.

DISCUSSION AND RECOMMENDATIONS FOR FUTURE WORK

- a) The most prospective rocks in this district are likely to be the quartzite, grit and conglomerate since these rheologically competent rocks are expected to host sheeted vein systems. Any further exploration should start with mapping the contact of the grit/conglomerate with the phyllite to the south. Quartz veins should be documented (number, width and orientation).
- b) It is uncertain whether As is entirely suitable as a pathfinder element in soils in this region. Any detrital arsenopyrite or scorodite within the soil would be detected, but whether the element is capable of being transported any distance and adsorbed onto clays is not certain. Gold will produce a dispersion trail downslope and with modern ICPMS analysis is well within detection range. Follow-up around the three soil gold anomalies is possible using close-spaced soil sampling, especially if care is taken to sample the bottom of the B-horizon or C-horizon material. Soil grid sampling could be oriented normal to strike directions of quartz veins, provided mapping shows these to have any consistency, or if GPS positioning is used sampling along contours may be adequate. Prospecting around the Tracey 1 locality is also warranted.
- c) The geochemical results are not exactly exciting at first glance, but identification of three localities with weak Au anomalies deserve follow-up, considering the wide sample spacing (150+ metres down spurs). With that spacing, there is room for a significant vein system to crop out.



Timothy Liverton Ph.D, C.Geol, F.G.S.

DESCRIPTION OF ROCK SAMPLES

Trench 1

Phyllite host rock, quartz with limonite staining. No arsenopyrite.

Sample a

Feldspathic sandstone: feldspars to 3mm long ($\approx 10\%$), quartz < 0.5mm.

Sample b

Quartz pebble conglomerate. Rounded qtz clasts to 20mm long. Quartz matrix < 1mm grainsize. One 2mm thick quartz vein \perp bedding.

Sample c

Grit: quartz grains to 0.5mm. With 5cm quartz vein.

Sample d

Grit, as above with 9mm thick quartz vein.

Sample e

Arkose (?). Has $\approx 15\%$ (?) kaolinized feldspars to 5mm long in a < 0.5mm quartz matrix.

Sample f

Grit, quartz grains < 0.7mm. Shows seven 0.5-4mm thick parallel quartz veins over 14cm.



AcmeLabs
Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmeland.com

CERTIFICATE OF ANALYSIS

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number
Number of Samples: 5

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	5	Crush, split and pulverize 250 g rock to 200 mesh			WHI
IDX2	5	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS

Invoice To:

Alex Black
Box 823-104, Finlayson Ave.
Watson Lake Yukon Y0A 1C0
Canada

CC:



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signatures indicates final approval; preliminary reports are unsigned and should be used for reference only.
All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

Client: **Alex Black**
Box 823-104, Finlayson Ave.
Watson Lake Yukon Y0A 1C0 Canada

Submitted By: **Alex Black**
Receiving Lab: Canada-Whitehorse
Received: September 19, 2012
Report Date: October 05, 2012
Page: 1 of 2

WHI120000886.1



1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716

Acme Analytical Laboratories (Vancouver) Ltd.

Acme Ana

1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone: 604-325-2450 Fax: 604-325-1746

www.acme.com

Project: None Given **Report Date:** October 05, 2012

CERTIFICATE OF ANALYSIS

Method	WGHT	1DX15																			
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Mn	Co	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%											
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001		
JULY15QUARTZ-COLBY1	Rock	0.39	0.3	1.7	16.4	18	0.1	2.5	0.9	366	0.84	1.2	<0.5	0.7	1018	<0.1	0.2	<0.1	<2	7.53	0.006
HARDROCK-COLBY1	Rock	0.41	0.2	2.5	10.9	8	<0.1	4.0	3.8	340	0.63	1.8	5.2	6.4	<1	<0.1	<0.1	<2	0.08	0.029	
ROCK-TRACEY1	Rock	0.78	<0.1	1.0	5.1	35	<0.1	7.8	1.9	292	1.43	<0.5	3.1	0.6	285	<0.1	<0.1	<0.1	4	31.7	0.019
ROCK-TRACEY4	Rock	0.56	2.9	129.1	22.2	85	0.5	38.4	4.9	76	2.17	250	3.6	0.1	3	0.7	10	0.2	47	0.04	0.010
TRACEY&ROCK	Rock	0.71	<0.1	16.0	9.8	52	<0.1	10.6	4.3	198	2.03	0.6	0.8	1.4	70	<0.1	<0.1	<0.1	5	1.24	0.016

Saint Lucia indicated final annual preliminary returns, are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

CERTIFICATE OF ANALYSIS

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	ppm	ppm
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2		
JULY15QUARTZ-COLBY1 Rock	3	4	0.06	7	<0.001	<1	0.05	0.008	0.01	<0.1	<0.01	0.7	<0.1	<0.05	<1	<0.5	<0.2		
HARDROCK-COLBY1 Rock	15	3	0.02	27	<0.001	1	0.15	0.014	0.05	<0.1	<0.01	0.5	<0.1	<0.05	<1	<0.5	<0.2		
ROCK-TRACEY1 Rock	1	3	0.30	5	<0.001	<1	0.63	0.002	0.01	<0.1	<0.01	0.7	<0.1	<0.05	2	<0.5	<0.2		
ROCK-TRACEY4 Rock	<1	7	0.31	19	0.002	<1	0.29	0.010	<0.01	<0.1	<0.01	1.4	<0.1	<0.05	3	2.2	<0.2		
TRACEY8-ROCK Rock	3	6	0.43	10	<0.001	<1	0.73	0.005	0.03	<0.1	0.01	0.8	<0.1	<0.05	2	<0.5	<0.2		

WHI120000886.1

Client:
Alex Black
Box 823-104, Finlayson Ave.
Watson Lake Yukon Y0A 1C0 Canada

Project:
None Given
Report Date:
October 05, 2012

Part: 2 of 1

Page: 2 of 2



AcmeLabs
Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

QUALITY CONTROL REPORT

WHi 120000886.1																				
Method	Wght	1DX15																		
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%								
MDL	0.01	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	
Pulp Duplicates																				
TRACEY8-ROCK	Rock	0.71	<0.1	16.0	9.8	52	<0.1	10.6	4.3	198	2.03	0.6	0.8	1.4	70	<0.1	<0.1	5	1.24	0.016
REP TRACEY8-ROCK	QC	0.1	16.3	9.4	53	<0.1	10.8	4.3	201	2.03	0.7	<0.5	1.4	68	<0.1	<0.1	<0.1	6	1.24	0.016
Reference Materials																				
STD DS9	Standard	13.8	106.9	125.2	317	1.8	40.5	7.5	602	2.32	25.4	121.6	6.4	67	2.2	5.4	6.2	41	0.75	0.078
STD DS9 Expected		12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<1	<0.1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<2	<0.01	<0.01	<0.001
Prep Wash																				
G1-WHI	Prep Blank	<0.1	1.5	2.7	47	<0.1	3.7	4.5	603	2.02	<0.5	<0.5	4.7	57	<0.1	<0.1	<0.1	41	0.45	0.071



Client:

Alex Black

Box 823-104, Finlayson Ave.
Watson Lake Yukon Y0A 1C0 Canada

Acme Analytical Laboratories (Vancouver) Ltd.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmela.com

Project:
Report Date:

None Given

October 05, 2012

QUALITY CONTROL REPORT

Page: 1 of 1
Part: 2 of 1
WHI120000886.1

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Tc
Unit	ppm	ppm	%	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	
MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.1	0.01	0.1	0.01	0.1	0.05	1	0.5	
Pulp Duplicates																	
TRACEY-B-ROCK	3	6	0.43	10	<0.001	<1	0.73	0.005	0.03	<0.1	0.01	0.8	<0.1	<0.05	2	<0.5	
REP TRACEY-B-ROCK	3	6	0.42	9	<0.001	<1	0.74	0.005	0.04	<0.1	<0.01	0.9	<0.1	<0.05	2	<0.5	
Reference Materials																	
STD DS9	13	126	0.64	299	0.114	3	0.98	0.085	0.40	3.1	0.22	2.5	5.6	0.16	5	5.0	
STD DS9 Expected	13.3	121	0.6165	295	0.1108	0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02	
BLK	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2	
Prep Wash																	
G1-WHI	8	8	0.60	223	0.111	<1	0.90	0.059	0.46	<0.1	<0.01	2.1	0.3	<0.05	5	<0.5	
Prep Blank																	
	8	8	0.60	223	0.111	<1	0.90	0.059	0.46	<0.1	<0.01	2.1	0.3	<0.05	5	<0.5	



CERTIFICATE OF ANALYSIS

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number:
Number of Samples: 46

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	46	Dry at 60C		WHI	WHI
SS80	46	Dry at 60C sieve 100g lo -80 mesh		WHI	WHI
1DX2	42	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT-SOIL Immediate Disposal of Soil Reject

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To:

Alex Black
Box 823-104, Finlayson Ave.
Watson Lake Yukon Y0A 1C0
Canada

Alex Black

Box 823-104, Finlayson Ave.
Watson Lake Yukon Y0A 1C0
Canada

CC:



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

All results are considered the confidential property of the client. Acme assumes no liabilities for actual cost of analysis only. Results apply to samples as submitted.

*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

Client: WHI120000888.1

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmeland.com

Alex Black
Box 823-104, Finlayson Ave.
Watson Lake Yukon Y0A 1C0 Canada

Submitted By: Alex Black
Receiving Lab: Canada-Whitehorse
Received: September 19, 2012
Report Date: October 12, 2012
Page: 1 of 3



Acme Analytical Laboratories (Vancouver) Ltd.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

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CERTIFICATE OF ANALYSIS

WHI 120000888.1																	
		Page:			2 of 3						Page:			2 of 1			
Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	Ca
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	P
COLBY1	Soil	0.8	38.6	76.1	142	0.6	49.2	31.4	297.9	6.67	8.6	2.1	14.5	35	0.4	0.2	0.7
COLBY2	Soil	0.2	19.6	30.2	71	<0.1	23.4	10.6	369	2.88	27.3	2.3	8.3	33	0.1	0.7	0.31
COLBY3	Soil	0.1	17.4	27.1	71	<0.1	22.2	10.5	418	2.90	23.3	0.8	9.3	12	0.1	0.7	0.10
COLBY4	Soil	0.5	13.2	11.2	33	<0.1	9.1	3.1	66	1.24	3.1	1.9	3.3	4	<0.1	0.1	0.2
COLBY5	Soil	0.6	17.1	23.8	51	<0.1	13.7	8.0	480	4.27	8.0	2.5	6.6	5	<0.1	0.4	0.4
COLBY6	Soil	0.7	23.7	28.6	111	<0.1	21.9	12.9	572	6.27	12.6	1.1	8.8	6	<0.1	0.4	0.5
COLBY7	Soil	0.2	10.8	2.9	9	<0.1	3.9	1.7	469	0.30	0.9	1.7	0.1	114	<0.1	0.1	5
COLBY8	Soil	0.7	12.3	17.5	66	<0.1	15.9	8.4	242	2.56	6.8	<0.5	6.7	37	<0.1	0.3	16
COLBY9	Soil	0.6	17.9	27.3	71	0.2	19.5	9.9	316	5.47	9.5	1.7	9.3	5	<0.1	0.4	0.5
COLBY10	Soil	0.6	18.7	20.2	90	<0.1	22.3	10.3	382	8.08	9.2	0.8	9.5	6	<0.1	0.4	0.6
COLBY11	Soil	0.6	19.9	35.5	87	<0.1	23.2	12.3	328	5.54	11.0	2.1	10.6	12	0.1	0.4	0.5
COLBY12	Soil	0.5	32.2	47.0	91	0.2	27.6	17.9	688	3.53	4.6	1.3	6.2	57	0.1	0.2	0.5
COLBY13	Soil	0.6	30.8	46.6	88	0.2	28.0	17.1	727	3.60	5.2	1.2	6.5	42	<0.1	0.2	0.6
COLBY14	Soil	0.5	38.0	39.9	97	0.2	33.4	16.8	675	3.79	5.8	1.8	8.7	41	<0.1	0.3	0.5
COLBY15	Soil	0.6	11.3	12.6	43	<0.1	11.2	5.5	165	3.76	4.8	1.4	10.5	4	<0.1	0.3	0.4
COLBY16	Soil	0.7	14.7	21.5	48	<0.1	10.9	5.8	208	3.35	6.9	2.4	7.8	20	<0.1	0.4	0.4
TRACY9-E	Soil	0.3	28.1	44.3	106	0.2	29.8	12.7	361	3.02	27.8	3.6	9.6	53	0.4	0.9	0.4
TRACY11-E	Soil	0.2	17.4	30.9	83	<0.1	23.8	11.1	332	2.93	28.3	1.4	10.1	27	0.2	0.8	0.3
TRACY12-E	Soil	0.5	24.7	32.8	86	<0.1	25.3	13.7	463	3.30	7.2	1.6	8.6	21	<0.1	0.3	0.4
TRACY13-E	Soil	0.6	22.7	22.5	66	<0.1	18.9	9.0	194	2.71	6.5	1.3	4.3	8	<0.1	0.3	11
TRACY14-E	Soil	0.4	16.2	24.3	59	<0.1	23.0	9.2	386	2.88	11.9	4.6	9.5	11	<0.1	0.4	0.3
TRACY15-E	Soil	0.3	15.6	17.0	55	<0.1	19.4	6.7	223	2.51	114	3.5	6.8	20	<0.1	0.3	8
TRACY16-E	Soil	0.4	18.7	21.4	73	<0.1	23.5	9.9	332	3.25	10.8	1.4	9.9	12	<0.1	0.4	0.3
TRACY17-E	Soil	0.1	9.7	23.5	66	<0.1	19.6	6.0	120	2.34	16.4	1.4	10.8	26	0.1	0.5	0.2
TRACY18-E	Soil	0.2	22.1	22.5	53	<0.1	21.6	7.4	163	2.63	26.5	3.0	9.1	4	<0.1	0.5	0.3
TRACY1-WEST	Soil	0.2	21.6	35.6	76	<0.1	26.5	11.7	405	3.03	31.9	1.9	11.9	23	0.2	0.9	0.3
TRACY2-W	Soil	0.3	26.9	21.6	50	0.1	22.3	7.8	209	2.50	20.5	3.3	3.8	196	<0.1	0.4	0.4
TRACY3-W	Soil	0.3	22.9	24.6	64	<0.1	28.3	11.5	334	3.05	23.7	4.9	10.8	64	<0.1	0.5	0.3
TRACY4-W	Soil	0.3	7.8	11.6	31	<0.1	10.5	4.9	327	1.79	8.3	<0.5	4.0	29	<0.1	0.3	0.2
TRACY5-W	Soil	0.3	10.5	13.6	43	<0.1	12.9	6.1	144	2.00	10.5	0.6	6.2	26	<0.1	0.2	14

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

Client:

Alex Black

Box 822-104, Finlayson Ave.
 Watson Lake Yukon Y0A 1C0 Canada

Project:

None Given

Report Date:

October 12, 2012

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ACME Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716

Some Analytical Observations (Vancouver)

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www.acme-ab.com

CERTIFICATE OF ANALYSIS

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This document contains neither recommendations nor conclusions of the U.S. Environmental Protection Agency. It has been reviewed by the National Health and Environmental Effects Research Laboratory and approved for external distribution.



Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716

www.acmellab.com

CERTIFICATE OF ANALYSIS

		WHI120000888.1															
		Page: 3 of 3			Part: 1 of 1			WHI120000888.1									
		WHI120000888.1															
Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01
TRACY6-W	Soil	0.2	7.2	18.4	47	<0.1	12.0	6.1	280	2.16	8.6	4.8	5.3	17	<0.1	0.2	0.2
TRACY7-W	Soil	0.2	24.1	13.0	26	0.4	12.6	6.7	561	1.33	4.6	1.3	1.5	138	0.1	0.2	0.2
TRACY8-W	Soil	0.4	14.0	16.3	54	<0.1	18.6	8.5	373	2.48	9.4	1.8	4.0	39	0.1	0.3	0.2
TRACY10-W	Soil	0.3	20.0	27.8	63	<0.1	17.3	12.6	616	1.90	7.6	1.1	2.1	222	0.3	0.2	0.2
TRACYSTREAMSILT#1	Silt	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
TRACYSTREAMSILT#2A	Silt	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
TRACYSTREAMSILT#2B	Silt	0.6	16.0	22.8	64	<0.1	25.4	11.1	422	2.87	17.2	6.7	6.5	21	0.1	0.6	0.3
TRACYSTREAMSILT#3	Silt	1.3	20.2	30.5	94	0.1	32.9	13.5	502	3.53	18.4	2.1	7.1	52	0.2	0.6	0.3
TRACYSTREAMSILT#4	Silt	1.1	25.2	28.8	75	0.1	31.5	15.2	485	3.28	25.1	2.4	7.7	61	0.1	0.5	0.4
TRACYSTREAMSILT#5	Silt	0.7	19.1	29.7	72	0.1	30.4	13.9	547	3.36	19.8	2.6	7.5	20	0.2	0.7	0.3
TRACYSTREAMSILT#6	Silt	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
TRACYSTREAMSILT#7	Silt	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
TRACYSTREAMSILT#8	Silt	0.9	15.3	31.9	95	<0.1	25.1	16.9	659	3.16	19.8	1.6	6.3	18	0.2	0.5	0.3
TRACYSTREAMSILT#9	Silt	0.5	18.0	21.4	72	<0.1	26.1	12.9	395	3.31	21.8	1.6	7.7	19	<0.1	0.4	1.0
STREAMTRACY#10	Silt	0.8	10.4	20.6	47	<0.1	12.0	6.7	250	4.18	5.7	0.7	5.7	3	<0.1	0.3	0.4
STREAMTRACY#11	Silt	0.5	17.9	21.0	68	<0.1	25.9	12.7	394	3.23	21.4	49.1	7.6	19	<0.1	0.5	0.9



Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716

www.acmeflab.com

Project:
Report Date:

Alex Black
Box 823-104, Finlayson Ave.
Watson Lake Yukon Y0A 1C0 Canada

None Given

October 12, 2012

CERTIFICATE OF ANALYSIS

Method	1DX15																
Analyte	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	ppm	%	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
TRACY6-W	Soil	13	0.32	52	0.006	<1	1.14	0.007	0.05	0.3	0.02	1.1	<0.1	<0.05	4	<0.5	<0.2
TRACY7-W	Soil	9	0.16	87	0.005	2	0.86	0.010	0.05	<0.1	0.10	1.5	<0.1	0.09	2	<0.5	<0.2
TRACY8-W	Soil	16	0.33	49	0.008	<1	1.05	0.008	0.05	0.2	0.01	1.2	<0.1	<0.05	4	<0.5	<0.2
TRACY10-W	Soil	11	0.26	67	0.003	3	1.00	0.005	0.06	<0.1	0.04	1.2	<0.1	0.10	3	<0.5	<0.2
TRACYSTREAMSILT#1	Silt	I.S.	I.S.														
TRACYSTREAMSILT#2A	Silt	I.S.	I.S.														
TRACYSTREAMSILT#2B	Silt	17	0.39	19	0.001	<1	0.92	0.001	0.04	<0.1	0.01	1.5	<0.1	<0.05	3	<0.5	<0.2
TRACYSTREAMSILT#3	Silt	27	0.43	31	0.002	2	1.16	0.003	0.07	<0.1	0.04	2.6	<0.1	<0.05	3	0.6	<0.2
TRACYSTREAMSILT#4	Silt	25	0.52	41	0.007	1	1.22	0.009	0.07	0.2	0.03	2.8	<0.1	<0.05	3	<0.5	<0.2
TRACYSTREAMSILT#5	Silt	22	0.37	27	0.002	<1	1.08	0.004	0.07	<0.1	0.02	2.0	<0.1	<0.05	3	<0.5	<0.2
TRACYSTREAMSILT#6	Silt	I.S.	I.S.														
TRACYSTREAMSILT#7	Silt	I.S.	I.S.														
TRACYSTREAMSILT#8	Silt	24	0.29	27	0.001	<1	1.08	0.005	0.05	<0.1	0.01	1.4	<0.1	<0.05	3	<0.5	<0.2
TRACYSTREAMSILT#9	Silt	19	0.48	29	0.012	<1	1.04	0.007	0.05	0.9	0.01	2.8	<0.1	<0.05	3	<0.5	<0.2
STREAMTRACY#10	Silt	17	0.19	27	0.005	<1	1.22	0.003	0.03	0.1	0.02	1.0	<0.1	<0.05	7	<0.5	<0.2
STREAMTRACY#11	Silt	18	0.47	29	0.011	2	1.03	0.007	0.05	0.9	0.02	2.8	<0.1	<0.05	3	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
 1020 Cordova St. East Vancouver BC V6A 4A3 Canada
 Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

QUALITY CONTROL REPORT

WHI120000888.1													
Method	1DX15												
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr
Unit	ppm	Sb											
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.5	0.5	0.5	0.1	Cd
Pulp Duplicates													V
COLBY1	0.8	38.6	75.1	142	0.6	49.2	31.4	2979	6.67	8.6	2.1	14.5	35
REP COLBY1	0.6	37.8	72.1	135	0.5	49.9	31.2	2965	6.48	8.6	4.4	14.6	32
TRACY13-E	0.6	22.7	22.5	66	<0.1	18.9	9.0	194	2.71	6.5	1.3	4.3	8
REP TRACY13-E	0.6	21.5	21.0	60	<0.1	18.1	8.2	188	2.55	6.0	<0.5	4.1	8
Reference Materials													Ca
STD DS9	12.7	91.4	121.2	286	1.9	37.6	7.4	559	2.27	20.3	113.9	4.9	56
STD DS9	13.4	111.9	127.2	309	1.8	42.1	7.5	596	2.40	26.2	113.2	7.1	77
STD DS9 Expected	12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6
BLK	<0.1	<0.1	<1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<1
BLK	<0.1	<0.1	<1	<0.1	<0.1	<1	<0.1	<0.1	<0.5	<0.5	<0.1	<1	<0.1

Client:

Alex Black

Box 823-104, Finlayson Ave.
 Watson Lake Yukon Y0A 1C0 Canada

Project:
 Report Date:
 None Given
 October 12, 2012

Page: 1 of 1
 Part: 1 of 1



AcmeLabs
Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

QUALITY CONTROL REPORT

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Tc
Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																
COLBY1	Soil	23	0.37	133	0.014	2	2.63	0.004	0.04	0.2	0.11	10.8	0.1	<0.05	8	<0.5
REP COLBY1	QC	23	0.38	130	0.007	1	2.65	0.004	0.04	0.2	0.08	10.8	0.1	<0.05	7	<0.5
TRACY13-E	Soil	14	0.24	28	0.002	<1	0.78	0.007	0.04	<0.1	0.02	1.4	<0.1	<0.05	4	<0.5
REP TRACY13-E	QC	13	0.23	27	0.002	<1	0.73	0.007	0.04	<0.1	0.02	1.3	<0.1	<0.05	3	<0.5
Reference Materials																
STD DS9	Standard	119	0.62	284	0.085	3	0.90	0.089	0.37	2.9	0.21	2.5	5.4	0.14	4	4.4
STD DS9	Standard	122	0.64	315	0.122	3	1.01	0.089	0.40	3.1	0.20	2.7	5.8	0.15	5	5.3
STD DS9 Expected	Blank	121	0.6165	295	0.1108	0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.05	<1	<0.5	<0.2

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Page: 1 of 1

Part: 2 of 1

Client:

Alex Black

Box 823-104, Finlayson Ave.
Watson Lake Yukon Y0A 1C0 Canada

Acme Analytical Laboratories (Vancouver) Ltd.

1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Report Date:
October 12, 2012

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None Given