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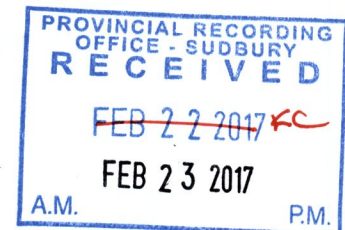
2.57569

Decayed Vegetation Sampling

East of Kamiskotia Lake

Claim P 4281937
Jamieson Township, Lot 11, Con 2-3

(Southeast of Jameland Mine, NW of Timmins, Ontario)



Report by Hermann Daxl, M.Sc. (Minex), Claim Holder

10 February 2017

Introduction

Preliminary sampling of decayed vegetation on my staked 3-unit claim P4281937 found no specific anomalies, but the method was appropriate and some values possibly confirm the potential for zinc and gold in these regional volcanic rocks. The historic zinc-copper mines Kam-Kotia and Jameland respectively lie 3 km and 1 km northwest along strike. Quartz-veins with sphalerite, chalcopyrite and gold are known in the southwest of Jamieson Township. I found no record of any previous exploration work at MNDM and the airborne map shows no conductor on my claim.

My same type of sampling (19 Mar 2012) on my 4 claims adjacent to the Jameland mine (westward 3017223, 4241021 - 22, southward 4241024) had similar results, except near the mill site and especially southward possibly emanating from mill site effluent. The strongest sample there had 1980 ppm Zn and 288 ppm Cu, although no direct contamination was visible. This confirms that the method works well.

At about 25 km from Timmins on highway 576, from NAD83-454460 E-5379280N near the west shore of Kamiskotia Lake, a non-drivable dirt trail leads 3 km eastward to my claim (see map). The whole area is of mature mixed forest, without buildings. A power line to the Kam-Kotia mine site crosses the claims. The coincident surface rights are privately owned under PIN 65357-0001 to 0003 (LT), in Jamieson Township Lot 11, namely Concession 2 NW 1/4 of N 1/2 and Concession 3 - S 1/2 of S 1/2.

The 29 samples 7501 -7529 are all of decayed vegetation, namely from surface to 6 cm depth of humus, each collected from multiple spots, from 16 to 27 October 2016. Their location and values for zinc, gold and copper are plotted on the 4 attached maps. The lab certificates are also enclosed.

Present Work

This type of soil sampling has long been known but little applied. Prospecting with a gardening claw and GPS location works especially well in these boreal forests, as one can select dry areas, brush aside surface debris, and grab handfuls of the maze of little rootlets, decomposing leaves or needles, mold, avoiding deeper muck and sand, from several spots per sample. Drying takes 48 hours on paper towels. After rubbing and sieving, the dry <250 micron fraction can be swirled in a gold pan, whereby any diluting sand collects at the bottom and the organics must be skimmed off the top for analyses. Silt or clay cannot be removed thereby and coincide here with higher Li, Al, Fe, Mg, Ga, Y, Zr, Ce, Nd, V, Cr, Ti; which therefore are not significant here. I packed the vials myself; any heavier content (mass g) indicates unavoidable but still tolerable dilution by silt and clay.

Each sample was analyzed by Activation Laboratories Ltd. using the only suitable methods, namely for gold neutron activation, code 2B-vegetation, compressed into vials, with special double irradiation time; and for base metals Ultratrace 2, aqua regia, whereby gold values are not reliable.

Results

No significant anomalies were found in the 29 samples which all were of decayed vegetation. Nevertheless, element maps of zinc, copper, and gold are attached. Direct evaluation rather than statistical treatment is recommended. I suggest that significant values would have to be >200 ppm Zinc, >100 ppm copper, >20 ppb gold, so that none were resampled here. However, there is room for infill sampling.

The elevated Ga-Li-Ce-Y in samples 7517-19, 7528, are attributed to the minor silt contamination of these samples. Gallium does otherwise not seem to concentrate in decayed vegetation at all. Some of the high Mn values seem to coincide with the proximity of basalt bedrock, like a direct manganese halo, in addition to being taken up by trees.

The topography of the 3 claim units is rather flat, rising gently to a higher plateau around sample 7520 where bedrock is covered by only 10 cm humus. The few sparse outcrops encountered are basalt flows (see map). The overburden below the humus was noted only in the northeast. It varies from clay to silt to sorted sand, being glaciolacustrine with sandy channels. The whole area is covered by mainly mature trees, varying from mostly poplars to mostly pine, which however does not affect values.

Recommendations

This lack of an anomaly does not rule out an ore deposit, although it makes it less likely. About 50 infill-samples could still be taken. Also the thin overburden around samples 7520 - 22 and even 7524, or around outcrop areas, allows the bedrock to be scanned with the Beep Mat for conductors, which then could be dug up by hand.

Respectfully submitted,



Timmins, 10 Feb 2017

Hermann Daxl, M.Sc. (Minex), Claim Holder

Date / Time of Issue: Wed Apr 14 13:22:06 EDT 2010

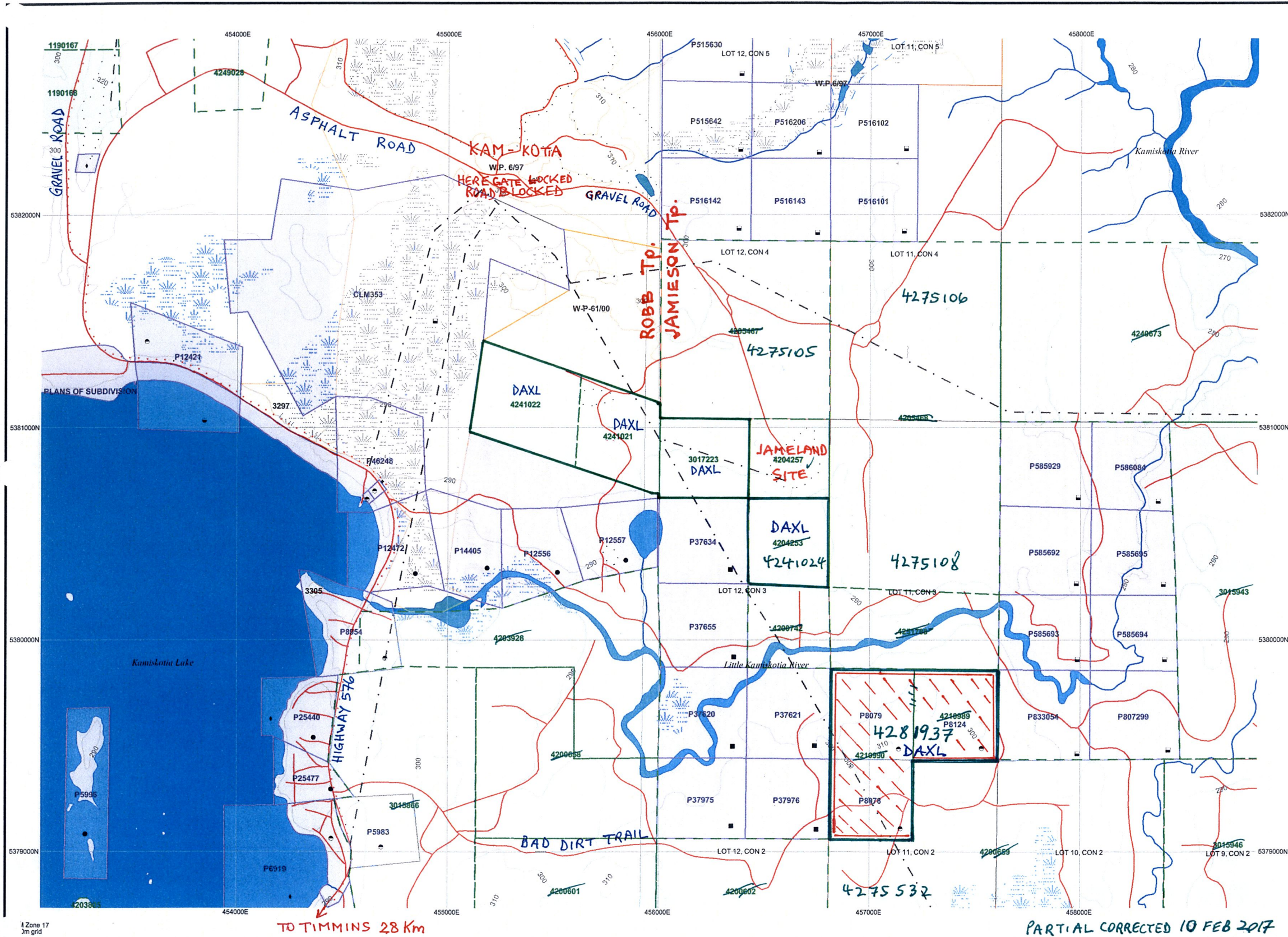
TOWNSHIP / AREA
JAMIESON

PLAN
G-3986

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division
Land Titles/Registry Division
Ministry of Natural Resources District

Porcupine
COCHRANE
TIMMINS



TOPOGRAPHIC

- Administrative Boundaries
- Township
- Concession, Lot
- Provincial Park
- Indian Reserve
- Cliff, Pit & Pile
- Contour
- Mine Shafts
- Mine Headframe
- Railway
- Road
- Trail
- Natural Gas Pipeline
- Utilities
- Tower

Land Tenure

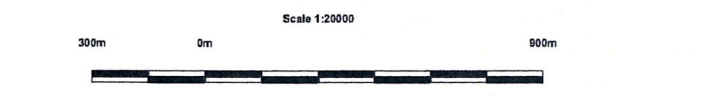
- Freehold Patent**
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Leasehold Patent**
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Licence of Occupation**
 - Uses Not Specified
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
 - Land Use Permit
 - Order In Council (Not open for staking)
 - Water Power Lease Agreement

MOBERLY	THORBURN	REID	GARNEGIE
BYERS	LOVELAND	MACDIARMID	KIDD
COTE	ROBB	JAMIESON	JESSOP
MASSEY	TURNBULL	GODFREY	MOUNTJOY
WHITESIDES	CARSCALLEN	BRISTOL	OGDEN

LAND TENURE WITHDRAWALS

- Areas Withdrawn from Disposition
- Mining Acts Withdrawal Types
 - Wsm Surface And Mining Rights Withdrawn
 - Ws Surface Rights Only Withdrawn
 - Wm Mining Rights Only Withdrawn
- Order In Council Withdrawal Types
 - Wsm Surface And Mining Rights Withdrawn
 - Ws Surface Rights Only Withdrawn
 - Wm Mining Rights Only Withdrawn

IMPORTANT NOTICES



LAND TENURE WITHDRAWAL DESCRIPTIONS (list may not be complete)

Identifier	Type	Date	Description
3297	Wsm	Jan 1, 2001	PROPOSED SURFACE RIGHTS DISPOSITION UNDER P.L.A. NOTICE RECEIVED MARCH 7, 1991
3305	Wsm	Jan 1, 2001	M.N.R. RESERVE
W.P.-61/00	Wsm	Dec 7, 2000	http://www.mndm.gov.on.ca/mines/lands/withreop/orders-2000/wp61-00_s.asp W.P.-61/00 MNS withdrawal S.35 Mining Act RSO 1999, December 7, 2000 Click to link to withdrawal order->P
W.P. 6/97	Wsm	Apr 28, 1997	MINING AND SURFACE RIGHTS WITHDRAWN UNDER SECTION 35 OF THE MINING ACT, R.S.O. 1990 ORDER NO. W.P. 6/97 NER DATED APR. 28/97
W.P. 6/97	Wsm	Apr 28, 1997	MINING AND SURFACE RIGHTS WITHDRAWN UNDER SECTION 35 OF THE MINING ACT, R.S.O. 1990 ORDER NO. W.P. 6/97 NER DATED APR 28/1997

Those wishing to stake mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources.

The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Northern Development and Mines web site.

General Information and Limitations
 Contact Information:
 Provincial Mining Recorders' Office
 Willet Green Miller Centre 933 Ramsey Lake Road
 Sudbury ON P3E 6B5
 Home Page: www.mndm.gov.on.ca/MNDM/MINES/LANDS/mlsmnpgp.htm

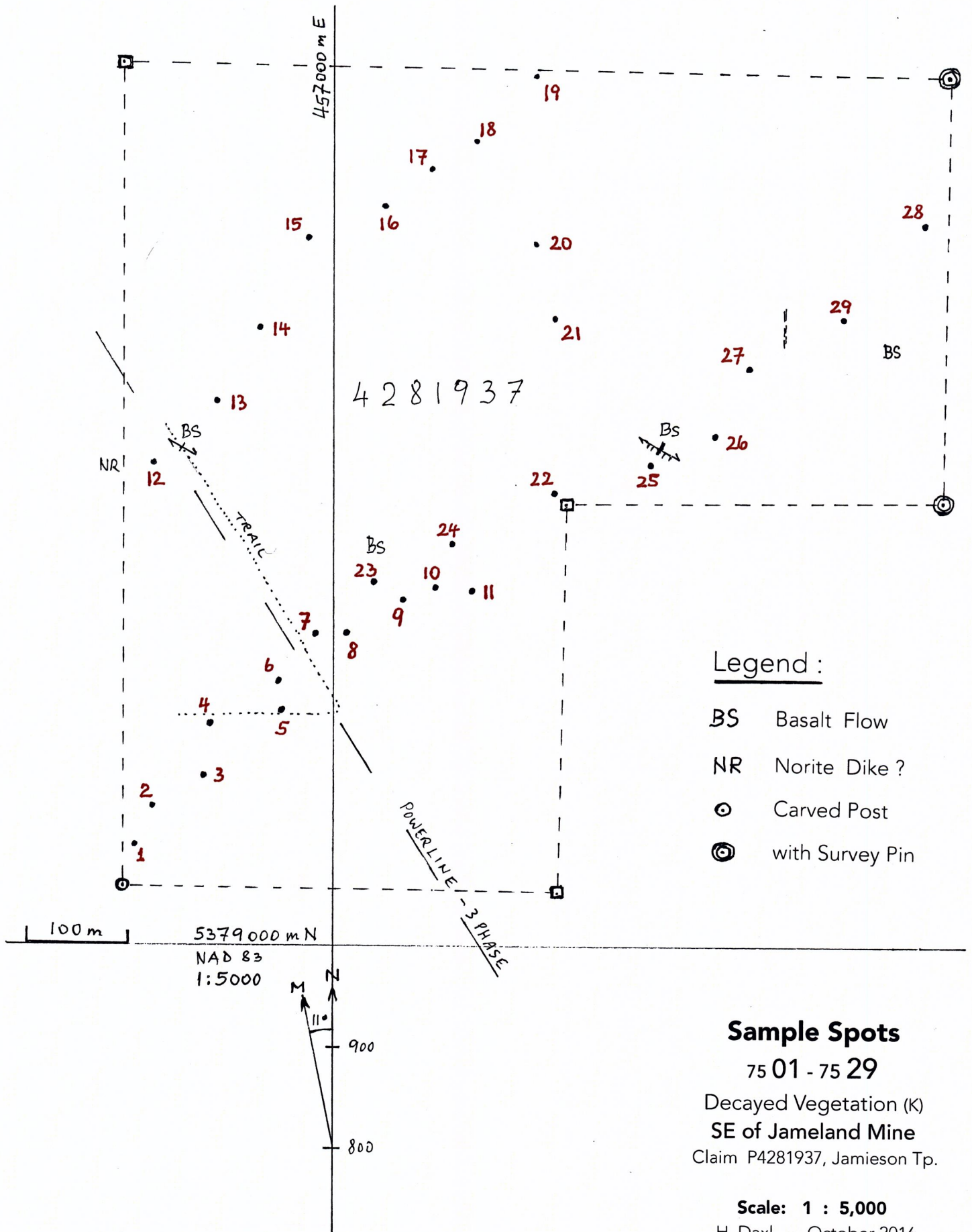
Toll Free
 Tel: 1 (888) 415-9845 ext 5742
 Fax: 1 (877) 670-1444

Map Datum: NAD 83
 Projection: UTM (6 degree)
 Topographic Data Source: Land Information Ontario
 Mining Land Tenure Source: Provincial Mining Recorders' Office

This map may not show unregistered land tenure and interests in land including certain patents, leases, easements, right of ways, flooding rights, licences, or other forms of disposition of rights and interest from the Crown. Also certain land tenure and land uses that restrict or prohibit free entry to stake mining claims may not be illustrated.

Location
 WORK DONE ON CLAIM
 4281937





Legend :

- BS Basalt Flow
- NR Norite Dike ?
- ⊙ Carved Post
- ⊙ with Survey Pin

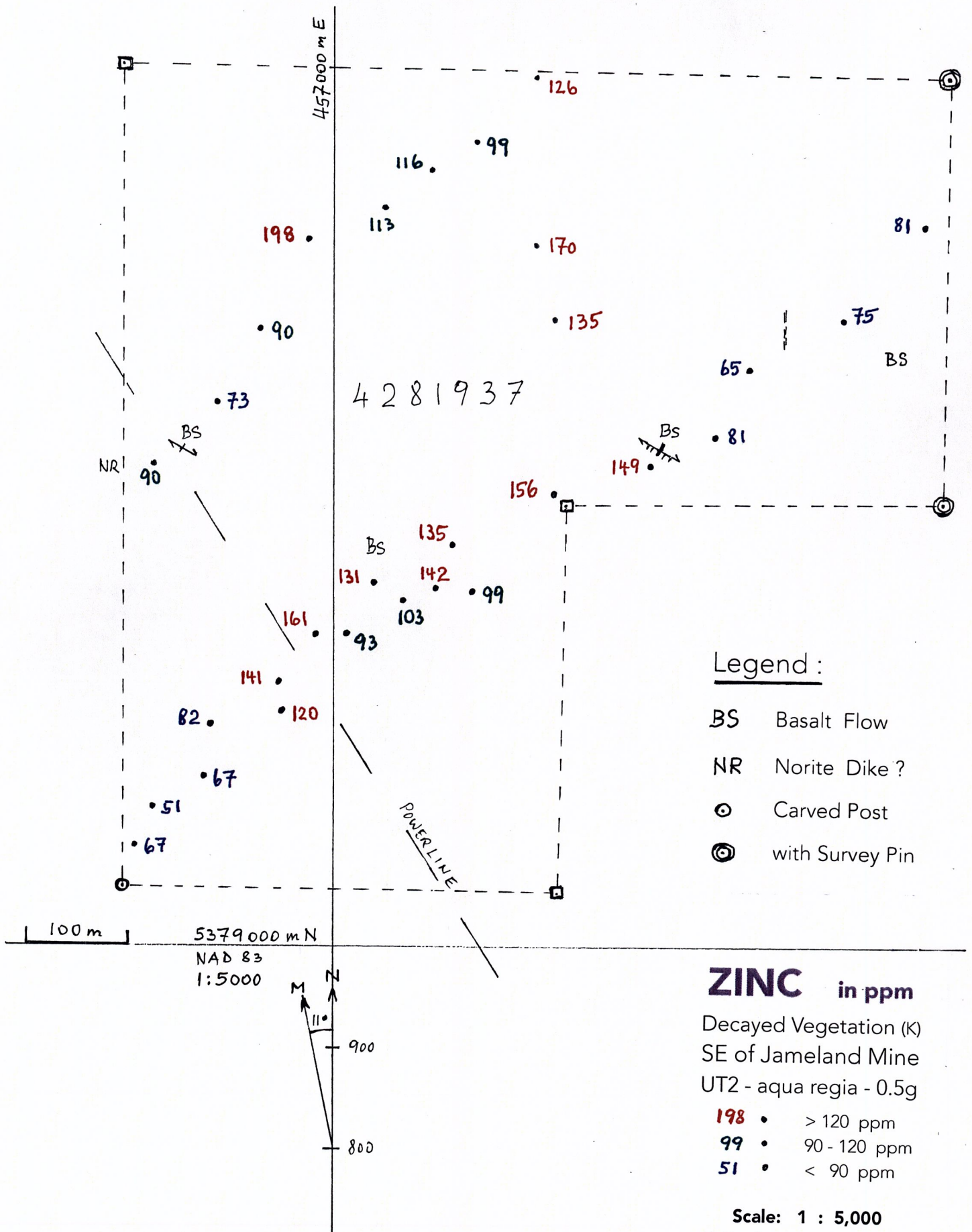
Sample Spots

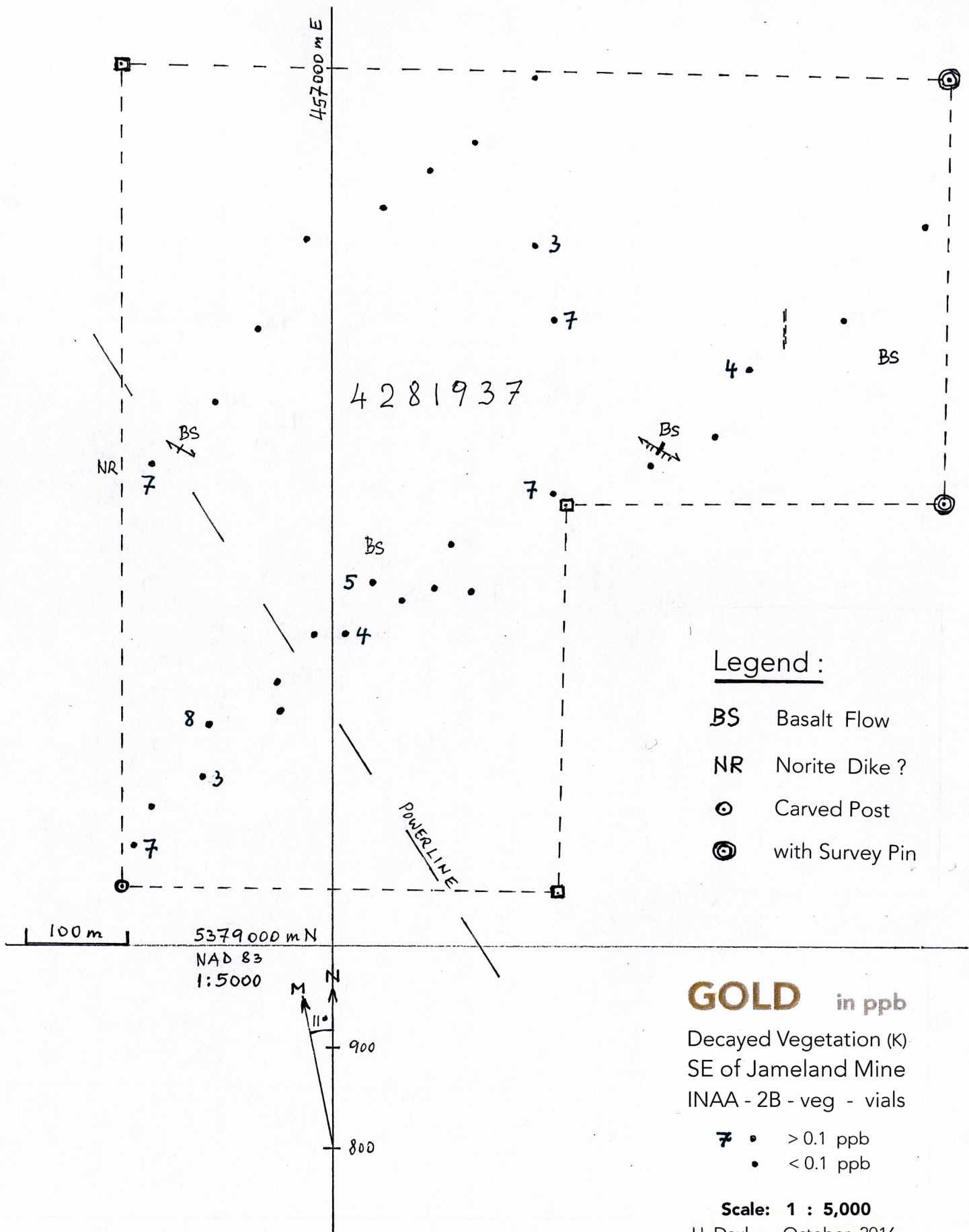
75 01 - 75 29

Decayed Vegetation (K)
 SE of Jameland Mine
 Claim P4281937, Jamieson Tp.

Scale: 1 : 5,000

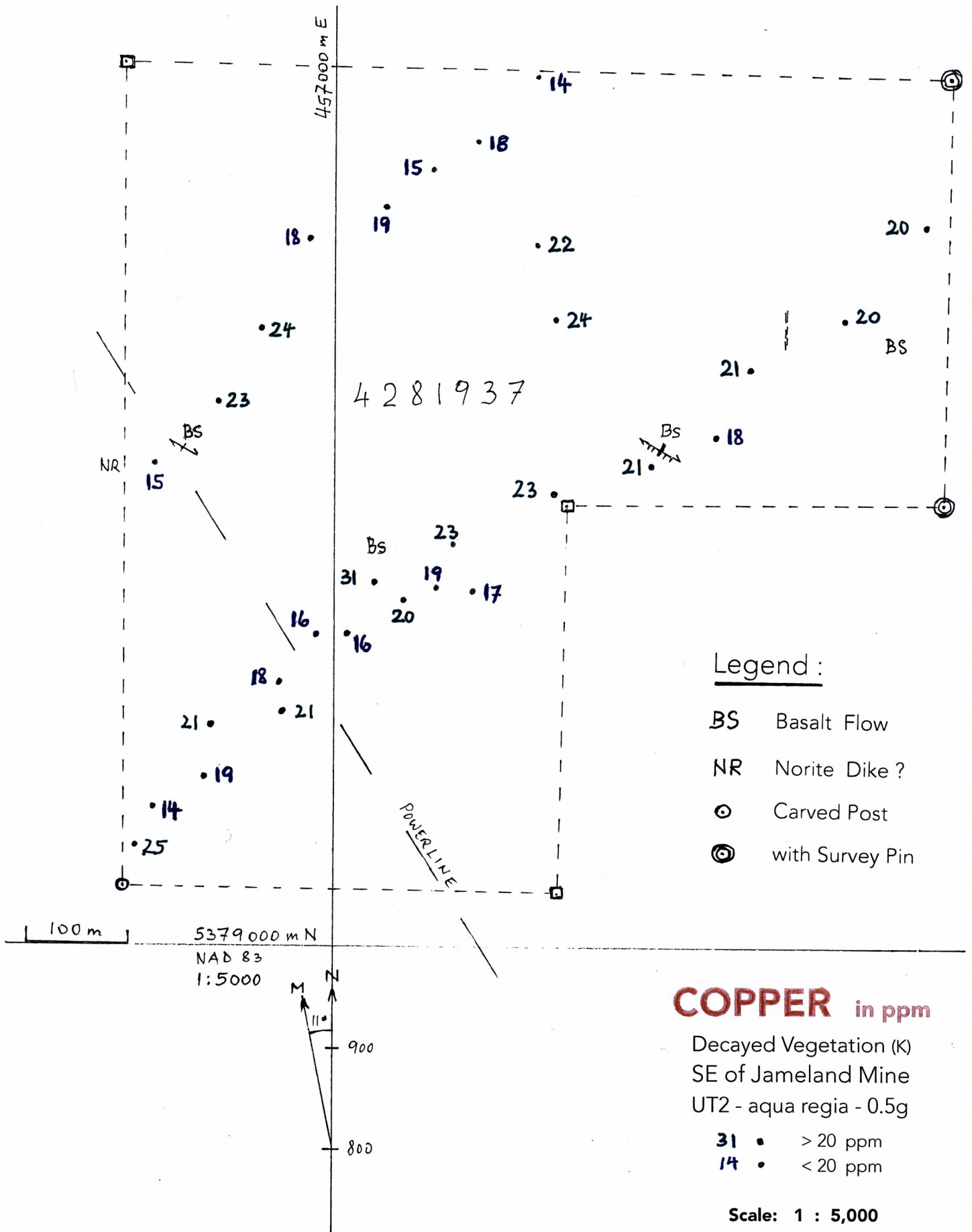
H. Daxl - October 2016





Legend :

- BS Basalt Flow
- NR Norite Dike ?
- ⊙ Carved Post
- ⊙ with Survey Pin



Legend :

- BS Basalt Flow
- NR Norite Dike ?
- ⊙ Carved Post
- ⊙ with Survey Pin

Quality Analysis ...



Innovative Technologies

Date Submitted: 05-Jan-17
Invoice No.: A17-00102
Invoice Date: 01-Feb-17
Your Reference: JAM-INAA 2B

Hermann Daxl
39-630 Riverpark Road
Timmins Ontario P4P 1B4
Canada

ATTN: Hermann Daxl

CERTIFICATE OF ANALYSIS

30 medium vials filled with < 250 micron decayed vegetation (see mass in gram)
~~36~~ Vial samples were submitted for analysis.

The following analytical package(s) were requested:

Code 2B-~~1g~~ Vegetation INAA (INAAGEO)

but doubled irradiation time to 40-50 min. total.

REPORT **A17-00102**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style and is positioned above a horizontal line.

Emmanuel Esemé, Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5
TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

All of decayed vegetation (K, 0-6 cm depth)
 sieved < 250 µm, pressed into medium vials (7cm³)

Activation Laboratories Ltd. Neutron Activation Report: A17-00102

Code 2B - Vegetation -
 but doubled irradiation time

Analyte Symbol	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hg	Hf	Ir	K	Mo	Na	Ni	Rb	Sb	Sc
Unit Symbol	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	%	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.3	0.01	5	0.01	0.01	0.1	0.3	0.05	0.005	0.05	0.05	0.1	0.01	0.05	1	2	1	0.005	0.01
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
7501	6.5	<0.3	2.70	<5	9.44	<0.01	1.7	4.7	<0.05	0.173	0.30	<0.05	<0.1	1.41	<0.05	453	<2	3	0.343	0.65
7502	<0.1	1.4	1.20	<5	10.50	0.55	1.8	4.6	<0.05	0.118	<0.05	<0.05	<0.1	1.87	<0.05	399	<2	<1	0.304	0.50
7503	3.4	<0.3	2.27	<5	10.60	0.47	0.7	<0.3	<0.05	0.132	<0.05	<0.05	<0.1	1.76	<0.05	357	<2	<1	0.349	0.50
7504	7.9	<0.3	3.12	98	10.30	1.18	3.1	10.1	1.21	0.423	0.61	0.74	<0.1	1.26	<0.05	1620	<2	<1	0.629	1.62
7505	<0.1	<0.3	1.22	<5	7.51	1.63	1.0	5.3	<0.05	0.175	0.06	<0.05	<0.1	1.40	<0.05	299	<2	3	0.240	0.59
7506	<0.1	<0.3	1.13	<5	7.68	1.94	1.8	3.4	0.54	0.120	1.29	<0.05	<0.1	1.55	<0.05	262	<2	<1	0.229	0.45
7507	<0.1	<0.3	1.52	155	7.92	1.56	2.8	5.2	<0.05	0.254	0.44	0.36	<0.1	1.84	<0.05	871	<2	<1	0.360	1.00
7508	4.3	<0.3	1.73	96	5.95	1.57	2.7	10.0	<0.05	0.286	<0.05	0.80	<0.1	1.42	<0.05	2480	<2	8	0.441	1.43
7509	<0.1	<0.3	2.32	259	7.45	2.26	4.9	16.5	4.17	0.452	0.18	1.16	<0.1	1.31	<0.05	4200	<2	18	0.655	2.39
7510	<0.1	<0.3	2.01	169	9.43	2.05	4.6	5.7	<0.05	0.251	0.69	<0.05	<0.1	1.26	<0.05	1140	<2	<1	0.325	0.97
7511	<0.1	2.1	1.61	<5	7.54	1.18	2.9	7.4	<0.05	0.200	<0.05	<0.05	<0.1	1.89	<0.05	1000	<2	<1	0.253	0.84
7512	7.2	<0.3	1.08	<5	8.45	0.91	2.3	3.0	<0.05	0.121	<0.05	<0.05	<0.1	1.61	<0.05	226	<2	<1	0.259	0.41
7513	<0.1	<0.3	2.69	<5	8.66	0.50	2.3	5.7	<0.05	0.193	<0.05	<0.05	<0.1	2.17	<0.05	468	<2	3	0.588	0.71
7514	<0.1	<0.3	3.37	147	12.50	1.41	5.8	15.8	<0.05	0.401	<0.05	<0.05	<0.1	2.23	<0.05	901	<2	11	0.634	1.81
7515	<0.1	<0.3	1.78	144	10.20	2.11	2.9	5.3	<0.05	0.195	0.50	0.21	<0.1	1.75	<0.05	725	<2	<1	0.336	0.83
7516	<0.1	<0.3	2.19	190	10.80	2.03	2.9	7.2	<0.05	0.446	<0.05	<0.05	<0.1	1.40	<0.05	591	<2	23	0.416	1.73
7517 10% silt	<0.1	<0.3	1.51	314	6.49	1.92	4.4	23.9	1.11	0.701	<0.05	1.86	<0.1	1.20	<0.05	4840	<2	29	0.240	2.98
7518 10% silt	<0.1	<0.3	1.64	184	7.07	1.34	5.4	22.8	0.58	0.681	<0.05	1.52	<0.1	1.38	<0.05	3690	<2	25	0.451	2.71
7519 10% silt	<0.1	<0.3	2.41	256	7.48	2.40	5.8	21.5	<0.05	0.889	<0.05	1.83	<0.1	1.35	<0.05	6030	<2	14	0.148	3.01
7520	2.8	<0.3	2.50	136	10.80	2.16	5.2	5.5	0.48	0.206	0.67	<0.05	<0.1	1.73	<0.05	535	<2	<1	0.402	0.74
7521	6.9	<0.3	1.90	170	10.70	1.65	2.5	5.5	1.05	0.161	0.59	<0.05	<0.1	1.93	<0.05	332	<2	<1	0.355	0.55
7522	7.1	<0.3	2.08	<5	9.26	1.52	1.7	4.4	<0.05	0.128	<0.05	<0.05	<0.1	1.75	<0.05	492	<2	<1	0.518	0.55
7523	5.4	<0.3	2.78	239	9.83	1.32	3.2	11.1	<0.05	0.350	<0.05	0.82	<0.1	1.79	<0.05	3050	<2	13	0.475	1.75
7524	<0.1	<0.3	1.86	<5	7.84	1.43	2.0	2.4	<0.05	0.115	0.16	<0.05	<0.1	1.58	<0.05	303	<2	9	0.265	0.42
7525	<0.1	<0.3	2.01	150	7.95	0.51	2.3	7.4	<0.05	0.159	0.51	<0.05	<0.1	1.31	<0.05	602	<2	<1	0.368	0.68
7526	<0.1	<0.3	2.41	90	9.09	0.25	2.1	7.4	<0.05	0.198	<0.05	0.63	<0.1	2.10	<0.05	1190	<2	<1	0.497	0.89
7527	4.4	<0.3	3.29	<5	10.00	0.39	2.1	2.5	<0.05	0.199	<0.05	0.14	<0.1	1.71	<0.05	409	<2	7	0.537	0.70
7528 10% silt	<0.1	<0.3	2.84	197	7.07	1.30	2.6	10.4	<0.05	0.427	0.40	1.03	<0.1	1.28	<0.05	3480	<2	15	0.355	1.81
7529	<0.1	<0.3	2.72	82	9.43	1.01	2.1	8.8	0.92	0.271	0.52	0.57	<0.1	1.45	<0.05	2440	<2	<1	0.356	1.18
7530 OREAS 42P	28.7	<0.3	98.40	502	2.08	<0.01	55.8	1230.0	18.10	7.560	<0.05	6.11	<0.1	0.20	4.53	1140	521	96	11.900	17.30
	vs. 91		vs. 618							vs. 81				vs. 96	vs. 1400		vs. 61			

Results

Activation Laboratories Ltd.

Report: A17-00102

Analyte Symbol	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Lu	Yb	Mass
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Detection Limit	0.1	100	0.05	0.1	0.01	0.05	2	0.01	0.1	0.3	0.001	0.05	0.1	0.001	0.005	
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
7501	<0.1	<100	<0.05	0.5	<0.01	<0.05	84	1.54	2.8	<0.3	0.199	<0.05	<0.1	0.007	<0.005	2.74
7502	<0.1	<100	<0.05	0.5	<0.01	<0.05	56	1.27	2.7	<0.3	0.151	<0.05	<0.1	<0.001	<0.005	2.48
7503	<0.1	<100	<0.05	0.5	<0.01	<0.05	95	1.16	1.7	<0.3	0.164	<0.05	<0.1	<0.001	<0.005	2.52
7504	<0.1	<100	<0.05	1.1	<0.01	<0.05	69	6.39	8.4	1.3	0.749	<0.05	<0.1	<0.001	0.313	2.80
7505	<0.1	<100	<0.05	0.6	<0.01	<0.05	91	5.05	5.4	<0.3	0.462	0.06	<0.1	<0.001	0.070	3.08
7506	<0.1	<100	<0.05	0.2	<0.01	<0.05	127	2.07	2.2	<0.3	0.244	<0.05	<0.1	<0.001	<0.005	2.86
7507	<0.1	<100	<0.05	0.9	<0.01	<0.05	181	4.37	5.9	<0.3	0.523	<0.05	<0.1	<0.001	0.134	2.68
7508	<0.1	<100	<0.05	1.2	<0.01	<0.05	99	3.88	5.4	<0.3	0.508	<0.05	<0.1	0.008	0.221	3.23
7509	<0.1	<100	<0.05	1.8	<0.01	<0.05	121	8.36	11.4	3.5	0.963	0.09	<0.1	0.048	0.410	3.19
7510	<0.1	<100	<0.05	0.9	<0.01	<0.05	146	4.17	6.7	<0.3	0.596	0.10	<0.1	<0.001	0.204	2.85
7511	<0.1	<100	<0.05	0.7	<0.01	<0.05	133	4.69	7.0	<0.3	0.555	0.13	<0.1	0.002	0.087	2.64
7512	<0.1	<100	<0.05	0.4	<0.01	<0.05	90	1.32	2.2	<0.3	0.176	<0.05	<0.1	<0.001	<0.005	2.69
7513	<0.1	<100	<0.05	0.5	<0.01	<0.05	88	2.23	4.0	<0.3	0.358	<0.05	<0.1	0.031	0.080	2.39
7514	<0.1	<100	<0.05	1.5	<0.01	<0.05	99	14.90	23.0	8.7	2.310	0.38	<0.1	0.109	0.662	2.65
7515	<0.1	<100	<0.05	0.9	<0.01	<0.05	210	4.72	6.8	<0.3	0.592	<0.05	<0.1	0.049	0.173	2.90
7516	<0.1	<100	<0.05	1.3	<0.01	<0.05	140	18.70	23.8	6.4	2.340	0.27	<0.1	0.012	0.420	2.85
7517 10% silt	<0.1	<100	<0.05	2.1	<0.01	<0.05	133	9.53	14.1	5.2	1.430	0.27	<0.1	0.090	0.424	3.56
7518 10% silt	<0.1	<100	<0.05	1.9	<0.01	<0.05	85	9.72	15.1	2.6	1.280	0.25	<0.1	0.079	0.432	3.67
7519 10% silt	<0.1	<100	<0.05	2.1	<0.01	<0.05	112	9.19	14.3	4.5	1.380	0.28	<0.1	0.079	0.443	3.58
7520	<0.1	<100	<0.05	0.6	<0.01	<0.05	186	2.68	2.8	<0.3	0.316	<0.05	<0.1	<0.001	<0.005	2.58
7521	<0.1	<100	<0.05	0.4	<0.01	<0.05	132	7.94	6.1	3.8	0.616	0.08	<0.1	0.023	0.053	2.54
7522	<0.1	<100	<0.05	0.3	<0.01	<0.05	183	2.35	3.9	<0.3	0.256	<0.05	<0.1	<0.001	<0.005	2.56
7523	<0.1	<100	<0.05	0.7	<0.01	<0.05	142	4.38	5.9	<0.3	0.575	<0.05	<0.1	0.011	0.125	2.98
7524	<0.1	<100	<0.05	0.2	<0.01	<0.05	118	1.16	2.6	<0.3	0.172	<0.05	<0.1	<0.001	<0.005	2.85
7525	<0.1	<100	<0.05	0.5	<0.01	<0.05	124	1.93	4.9	<0.3	0.274	<0.05	<0.1	0.016	0.131	2.84
7526	<0.1	<100	<0.05	1.0	<0.01	<0.05	103	2.38	3.7	<0.3	0.314	<0.05	<0.1	0.011	<0.005	2.51
7527	<0.1	<100	<0.05	0.4	<0.01	<0.05	85	4.73	10.4	<0.3	0.876	0.06	<0.1	0.113	0.156	2.71
7528 10% silt	<0.1	<100	<0.05	1.5	<0.01	<0.05	75	4.87	8.5	<0.3	0.707	0.12	<0.1	0.024	0.249	3.46
7529	<0.1	<100	<0.05	0.9	<0.01	<0.05	103	2.78	4.8	<0.3	0.436	<0.05	<0.1	<0.001	0.124	2.66
7530 DREAS 42 P	<0.1	<100	<0.05	14.3	4.09	24.60	483	41.40	70.5	24.0	7.980	1.03	<0.1	0.650	2.820	7.76 STANDARD

45.32 45.65

Quality Control

Activation Laboratories Ltd.

Report: A17-00102

Analyte Symbol	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hg	Hf	Ir	K	Mo	Na	Ni	Rb	Sb	Sc
Unit Symbol	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	%	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.3	0.01	5	0.01	0.01	0.1	0.3	0.05	0.005	0.05	0.05	0.1	0.01	0.05	1	2	1	0.005	0.01
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
LKSD-1 Meas	5.0	< 0.3	40.00	430	9.90	8.00	11.0	31.0	2.00	2.800		3.60		0.91	9.95	14800	< 2	24	1.200	9.00
LKSD-1 Cert	5.0	0.6	40.00	430	11.00	7.72	11.0	31.0	1.50	2.800		3.60		0.91	10.00	14800	16	24	1.200	9.00
LKSD-3 Meas	3.0	< 0.3	27.00	680	16.00		30.0	8.5	2.30	4.000		4.80			2.00		< 2	78	1.300	13.00
LKSD-3 Cert	3.0	2.7	27.00	680	16.00		30.0	87.0	2.30	4.000		4.80			2.00		47	78	1.300	13.00
Au 30ppb Meas	30.9																			
Au 30ppb Cert	30.0																			
Method Blank	< 0.1	< 0.3	< 0.01	< 5	< 0.01	< 0.01	< 0.1	< 0.3	< 0.05	< 0.005	< 0.05	< 0.05	< 0.1	< 0.01	< 0.05	< 1	< 2	< 1	< 0.005	< 0.01

Quality Control

Activation Laboratories Ltd.

Report: A17-00102

Analyte Symbol	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Lu	Yb	Mass
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Detection Limit	0.1	100	0.05	0.1	0.01	0.05	2	0.01	0.1	0.3	0.001	0.05	0.1	0.001	0.005	
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
LKSD-1 Meas		< 100	< 0.05	2.2	9.70	< 0.05	331	16.00	27.0	16.0	4.000	0.90	0.6	0.400	2.000	
LKSD-1 Cert		250	0.30	2.2	9.70	2.00	331	16.00	27.0	16.0	4.000	0.90	0.6	0.400	2.000	
LKSD-3 Meas		< 100	< 0.05	11.4	4.60	< 0.05	152	52.00	90.0	44.0	8.000	1.50	1.0	0.400	2.700	
LKSD-3 Cert		240	0.70	11.4	4.60	2.00	152	52.00	90.0	44.0	8.000	1.50	1.0	0.400	2.700	
Au 30ppb Meas																
Au 30ppb Cert																
Method Blank	< 0.1	< 100	< 0.05	< 0.1	< 0.01	< 0.05	< 2	< 0.01	< 0.1	< 0.3	< 0.001	< 0.05	< 0.1	< 0.001	< 0.005	10.00

Quality Analysis ...



Innovative Technologies

Date Submitted: 24-Nov-16
Invoice No.: A16-12628
Invoice Date: 16-Dec-16
Your Reference: JAM-K-UT2

Hermann Daxl
39-630 Riverpark Road
Timmins Ontario P4P 1B4
Canada

ATTN: Hermann Daxl

CERTIFICATE OF ANALYSIS

Decayed vegetation sieved < 250 μ m

30 ~~grams~~ samples were submitted for analysis.

The following analytical package(s) were requested:

Code UT-2-0.5g Aqua Regia ICP-ICP/MS

Ultratrace 2 - Aqua Regia

REPORT **A16-12628**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Assays are recommended for values above the upper limit. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended.

CERTIFIED BY:

Emmanuel Esemé, Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.

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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

All decayed vegetation (K)

< 250 μm Activation Laboratories Ltd.

Report: A16-12628 Ultratrace 2 - Aqua Regia

Analyte Symbol	Li	Be	B	Na	Mg	Al	P	S	K	Ca	V	Cr	Ti	Mn	Fe	Co	Ni	Cu	Zn	Ga	
Unit Symbol	ppm	ppm	ppm	%	%	%	%	%	%	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	
Detection Limit	0.1	0.1	1	0.001	0.01	0.01	0.001	0.001	0.01	0.01	1	1	0.01	1	0.01	0.1	0.1	0.01	0.1	0.02	
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-ICP	AR-ICP	AR-MS	AR-MS	AR-MS	AR-MS	AR-ICP	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	
7501	0.3	<0.1	6	0.017	0.05	0.08	0.075	0.143	0.06	0.55	2	2	<0.01	449	0.11	0.7	3.7	24.70	66.8	<0.02	
7502	0.2	<0.1	4	0.015	0.05	0.06	0.074	0.143	0.06	0.37	2	1	<0.01	174	0.08	0.5	1.8	14.30	50.8	<0.02	
7503	0.2	<0.1	5	0.014	0.07	0.06	0.071	0.154	0.08	0.53	2	1	<0.01	275	0.09	0.7	2.1	19.50	67.2	<0.02	
7504	1.8	<0.1	6	0.014	0.09	0.26	0.076	0.121	0.09	0.92	6	4	<0.01	744	0.25	2.3	5.0	20.50	81.6	0.16	
7505	0.9	<0.1	10	0.014	0.14	0.15	0.088	0.167	0.10	1.65	3	2	<0.01	232	0.14	1.5	3.2	20.70	120.0	0.07	
7506	0.4	<0.1	8	0.014	0.11	0.08	0.089	0.158	0.09	1.58	2	1	<0.01	294	0.08	1.1	2.4	17.50	141.0	<0.02	
7507	1.7	<0.1	9	0.015	0.12	0.19	0.091	0.135	0.10	1.43	5	3	<0.01	834	0.18	1.7	3.2	16.00	161.0	<0.02	
7508	0.6	<0.1	6	0.017	0.07	0.11	0.080	0.128	0.08	0.86	4	3	<0.01	516	0.15	1.7	2.7	16.40	92.8	<0.02	
7509	1.4	<0.1	6	0.016	0.10	0.27	0.086	0.121	0.09	1.09	7	4	0.01	1320	0.22	3.7	5.1	19.90	103.0	0.08	
7510	0.6	<0.1	9	0.017	0.09	0.13	0.090	0.141	0.08	1.64	3	2	<0.01	1310	0.13	3.4	3.6	19.30	142.0	<0.02	
7511	0.5	<0.1	14	0.016	0.09	0.11	0.093	0.151	0.06	1.20	2	2	<0.01	509	0.11	2.1	2.5	17.30	98.7	<0.02	
7512	0.2	<0.1	5	0.016	0.06	0.06	0.082	0.149	0.09	0.81	2	<1	<0.01	516	0.07	1.4	1.3	14.50	90.4	<0.02	
7513	0.3	<0.1	6	0.015	0.04	0.09	0.084	0.147	0.08	0.47	3	2	<0.01	461	0.12	1.3	3.2	22.70	73.4	<0.02	
7514	0.8	<0.1	6	0.014	0.08	0.30	0.104	0.180	0.06	1.26	5	4	<0.01	964	0.29	4.7	6.0	23.80	90.1	<0.02	
7515	0.8	<0.1	9	0.015	0.10	0.14	0.102	0.173	0.09	1.90	3	2	<0.01	400	0.13	1.7	3.1	17.80	198.0	<0.02	
7516	3.0	<0.1	10	0.014	0.20	0.39	0.095	0.161	0.09	2.02	6	6	<0.01	215	0.30	2.4	6.1	18.70	113.0	0.18	
7517	10% silt	4.7	<0.1	8	0.018	0.17	0.46	0.081	0.127	0.08	1.34	12	11	0.03	288	0.49	2.9	5.6	15.10	116.0	0.68
7518	10% silt	4.2	<0.1	7	0.018	0.19	0.57	0.092	0.137	0.08	1.23	12	10	0.02	620	0.50	4.9	7.3	18.30	99.4	1.13
7519	10% silt	5.9	<0.1	8	0.017	0.17	0.54	0.076	0.112	0.08	1.27	13	11	0.03	571	0.61	4.1	5.9	13.90	126.0	0.86
7520	0.5	<0.1	5	0.016	0.10	0.11	0.113	0.170	0.08	1.22	3	3	<0.01	2140	0.13	4.7	10.9	22.20	170.0	<0.02	
7521	0.4	<0.1	8	0.019	0.10	0.09	0.086	0.169	0.06	1.53	2	2	<0.01	812	0.11	1.6	2.8	23.50	135.0	<0.02	
7522	0.3	<0.1	10	0.017	0.11	0.08	0.092	0.160	0.09	1.35	3	2	<0.01	929	0.10	1.4	2.9	23.00	156.0	<0.02	
7523	0.7	<0.1	8	0.018	0.06	0.18	0.098	0.132	0.09	0.95	5	3	<0.01	1370	0.18	2.1	6.2	31.00	131.0	<0.02	
7524	0.3	<0.1	7	0.016	0.05	0.08	0.091	0.141	0.09	1.50	2	2	<0.01	1110	0.09	1.6	3.4	23.40	135.0	<0.02	
7525	0.4	<0.1	5	0.017	0.06	0.10	0.117	0.134	0.10	0.72	3	2	<0.01	2030	0.13	1.8	3.9	21.40	149.0	<0.02	
7526	0.5	<0.1	4	0.016	0.07	0.12	0.080	0.142	0.07	0.58	3	2	<0.01	316	0.13	1.5	3.0	18.40	81.4	0.02	
7527	0.4	<0.1	4	0.015	0.09	0.16	0.084	0.153	0.05	0.87	3	2	<0.01	256	0.15	1.1	3.8	21.30	64.6	<0.02	
7528	10% silt	2.4	<0.1	6	0.015	0.16	0.25	0.070	0.138	0.07	1.14	7	6	0.02	242	0.30	1.8	4.8	20.20	80.6	0.41
7529	0.8	<0.1	5	0.016	0.08	0.12	0.078	0.162	0.06	0.74	4	3	<0.01	741	0.15	1.1	2.8	19.60	75.4	<0.02	
7530	OREAS 42P ✓	13.2	1.3	20	0.070	0.31	2.42	0.030 ✓	0.023 ✓	0.39	0.53	56	759	0.01	408 ✓	8.10	60.8	433.0 ✓	411.00 ✓	632.0 ✓	4.80

ALL decayed vegetation (K) <250µm

Activation Laboratories Ltd.

Report: A16-12628 Ultratrace 2 - Aqua Regia

Analyte Symbol	Ge	As	Se	Rb	Sr	Y	Zr	Sc	Pr	Gd	Dy	Ho	Er	Tm	Nb	Mo	Ag	Cd	In	Sn	
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Detection Limit	0.1	0.1	0.1	0.1	0.5	0.01	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.01	0.002	0.01	0.02	0.05	
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	
7501	<0.1	1.1	<0.1	3.0	26.2	0.31	0.3	<0.1	0.2	0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.08	0.059	0.37	0.06	0.60	
7502	<0.1	1.1	<0.1	4.1	21.4	0.32	0.3	<0.1	0.3	0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.05	0.032	0.32	0.02	0.52	
7503	<0.1	1.5	<0.1	3.7	28.9	0.19	0.5	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.19	0.104	0.49	0.02	0.49	
7504	<0.1	2.0	<0.1	7.3	27.5	1.07	1.6	0.2	0.8	0.3	0.2	<0.1	0.1	<0.1	0.2	0.28	0.129	0.68	0.06	1.18	
7505	<0.1	0.9	<0.1	4.9	22.6	1.01	0.9	<0.1	0.7	0.3	0.2	<0.1	0.1	<0.1	0.1	0.26	0.085	0.72	0.03	0.72	
7506	<0.1	0.8	<0.1	3.2	27.6	0.48	0.1	<0.1	0.3	0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.16	0.053	0.64	0.03	0.69	
7507	<0.1	0.5	<0.1	8.0	24.2	0.65	0.9	<0.1	0.5	0.2	0.1	<0.1	0.1	<0.1	0.1	0.12	0.049	0.84	0.02	0.59	
7508	<0.1	0.5	<0.1	6.4	24.4	0.52	0.7	<0.1	1.1	0.3	0.1	<0.1	<0.1	<0.1	0.2	0.22	0.079	0.74	0.02	0.88	
7509	<0.1	1.2	<0.1	8.0	31.1	0.93	0.2	0.1	0.8	0.4	0.2	<0.1	0.1	<0.1	0.2	0.26	0.117	0.73	0.05	1.37	
7510	<0.1	1.0	<0.1	4.3	44.2	0.73	0.4	<0.1	0.5	0.3	0.2	<0.1	0.1	<0.1	0.1	0.12	0.072	0.86	0.05	0.71	
7511	<0.1	0.4	<0.1	3.7	24.3	0.68	0.4	<0.1	0.5	0.2	0.1	<0.1	0.1	<0.1	0.1	0.08	0.086	0.91	<0.02	0.59	
7512	<0.1	0.6	<0.1	3.7	9.9	0.34	0.5	<0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.19	0.108	0.42	0.02	0.44	
7513	<0.1	1.4	<0.1	4.7	10.4	0.57	0.5	<0.1	0.3	0.2	0.1	<0.1	<0.1	<0.1	0.1	0.23	0.081	0.53	0.04	0.84	
7514	<0.1	1.5	<0.1	3.6	32.2	4.13	0.8	0.2	2.4	1.3	0.9	0.1	0.4	0.1	0.2	0.27	0.123	0.95	0.05	0.99	
7515	<0.1	0.8	<0.1	5.9	35.6	1.00	0.9	<0.1	0.6	0.3	0.2	<0.1	0.1	<0.1	0.1	0.17	0.087	0.83	0.03	0.81	
7516	<0.1	0.7	<0.1	7.8	41.3	3.51	2.3	0.3	2.7	1.1	0.7	0.1	0.4	<0.1	0.3	0.17	0.073	0.78	0.02	0.73	
7517	10% silt	<0.1	1.1	<0.1	9.2	26.7	2.14	1.8	0.5	1.6	0.8	0.5	0.1	0.2	<0.1	0.8	0.16	0.055	0.60	0.02	0.73
7518	10% silt	<0.1	1.3	<0.1	11.6	26.9	2.07	1.4	0.4	1.6	0.7	0.4	0.1	0.2	<0.1	0.6	0.31	0.164	0.70	0.03	0.93
7519	10% silt	<0.1	0.7	<0.1	6.7	28.5	1.81	1.3	0.4	1.5	0.7	0.4	0.1	0.2	<0.1	0.7	0.24	0.075	0.48	0.02	0.68
7520	<0.1	1.2	<0.1	6.7	21.5	0.49	0.3	<0.1	0.4	0.1	0.1	<0.1	<0.1	<0.1	0.1	0.26	0.210	1.09	0.04	0.85	
7521	<0.1	9.9	<0.1	4.8	37.3	1.11	2.0	<0.1	1.0	0.3	0.2	<0.1	0.1	<0.1	0.1	0.55	0.193	0.84	0.04	0.77	
7522	<0.1	2.4	<0.1	7.1	34.3	0.29	0.9	<0.1	0.3	0.1	0.1	<0.1	<0.1	<0.1	0.1	0.26	0.102	0.83	0.04	0.96	
7523	<0.1	2.1	<0.1	8.0	40.3	0.76	0.5	<0.1	0.5	0.2	0.1	<0.1	0.1	<0.1	0.1	0.28	0.206	1.22	0.06	1.21	
7524	<0.1	1.7	<0.1	4.5	32.7	0.38	0.9	<0.1	0.2	0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.14	0.090	0.86	0.05	0.64	
7525	<0.1	1.9	<0.1	6.7	22.4	0.47	0.2	<0.1	0.3	0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.20	0.124	0.77	0.05	1.05	
7526	<0.1	1.0	<0.1	5.8	14.9	0.42	0.7	<0.1	0.3	0.1	0.1	<0.1	<0.1	<0.1	0.1	0.22	0.100	0.45	0.03	0.97	
7527	<0.1	1.7	<0.1	3.4	31.8	1.38	0.9	<0.1	0.9	0.5	0.3	0.1	0.2	<0.1	0.1	0.28	0.042	0.78	0.06	0.78	
7528	10% silt	<0.1	1.8	<0.1	6.2	22.6	1.05	1.7	0.3	0.8	0.3	0.2	<0.1	0.1	<0.1	0.4	0.29	0.058	0.52	0.04	1.10
7529	<0.1	1.8	<0.1	4.8	18.0	0.52	0.8	<0.1	0.4	0.2	0.1	<0.1	0.1	<0.1	0.1	0.17	0.031	0.63	0.04	0.70	
7530	OREAS 42P	<0.1	96.5	<0.1	27.8	35.2	8.55	3.2	7.5	9.2	3.9	2.3	0.4	1.1	0.1	<0.1	8.14	0.165	0.13	0.04	1.50

All decayed vegetation (K) < 250 μm

Activation Laboratories Ltd.

Report: A16-12628 Ultratrace 2 - Aqua Regia

Analyte Symbol	Sb	Te	Cs	Ba	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Bi	
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	
Detection Limit	0.02	0.02	0.02	0.5	0.5	0.01	0.02	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.02	
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	
7501	0.07	<0.02	0.21	76.4	0.6	1.30	0.64	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.07	15.30	0.27	
7502	0.06	<0.02	0.21	34.9	1.1	2.34	1.12	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.05	6.01	0.13	
7503	0.06	0.10	0.19	44.6	<0.5	0.82	0.42	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.06	8.04	0.18	
7504	0.25	0.05	0.42	74.4	2.9	6.29	2.87	0.5	0.1	<0.1	0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.09	24.50	0.28	
7505	0.14	<0.02	0.17	38.9	3.3	4.65	2.51	0.4	0.1	<0.1	0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.04	15.90	0.15	
7506	0.12	<0.02	0.12	60.8	1.0	1.76	0.90	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.03	11.10	0.14	
7507	0.10	0.02	0.26	103.0	2.0	3.55	1.82	0.3	0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.10	17.90	0.19	
7508	0.19	<0.02	0.41	68.9	4.8	9.20	3.58	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.06	20.40	0.22	
7509	0.25	<0.02	0.57	100.0	3.5	6.80	3.05	0.4	0.1	0.1	0.1	<0.1	<0.1	<0.05	<0.1	0.001	<0.5	0.13	34.20	0.27	
7510	0.10	<0.02	0.30	119.0	1.9	4.04	1.89	0.3	0.1	<0.1	0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.12	16.30	0.19	
7511	0.09	<0.02	0.22	61.6	2.1	3.95	1.86	0.3	0.1	<0.1	0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.06	14.20	0.14	
7512	0.05	0.11	0.18	41.0	0.6	1.15	0.53	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.06	6.92	0.13	
7513	0.24	0.03	0.32	59.3	1.1	2.20	1.08	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	1.9	0.09	14.10	0.25	
7514	0.28	<0.02	0.30	89.7	8.4	18.30	8.98	1.8	0.3	0.2	0.3	<0.1	<0.1	<0.05	0.1	<0.001	<0.5	0.09	26.00	0.26	
7515	0.16	<0.02	0.18	84.0	2.3	4.21	2.14	0.4	0.1	<0.1	0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.04	18.60	0.18	
7516	0.17	<0.02	0.31	81.8	9.9	17.40	9.63	1.5	0.3	0.1	0.3	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.05	14.60	0.16	
7517	10% cilt	0.11	<0.02	0.45	83.6	5.5	12.50	5.92	1.1	0.2	0.1	0.2	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.07	12.70	0.14
7518	10% silt	0.20	<0.02	0.58	84.3	5.7	13.10	5.71	0.9	0.2	0.1	0.2	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.09	24.10	0.22
7519	10% silt	0.11	<0.02	0.46	96.5	5.2	11.40	5.29	0.9	0.2	0.1	0.2	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.09	10.20	0.19
7520	0.13	0.10	0.40	102.0	1.4	2.88	1.25	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.12	18.30	0.26	
7521	0.13	0.03	0.29	98.3	4.9	3.62	3.13	0.5	0.1	<0.1	0.1	<0.1	0.1	<0.05	0.1	<0.001	<0.5	0.18	13.30	0.22	
7522	0.16	<0.02	0.44	116.0	1.2	1.69	0.90	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.17	20.20	0.22	
7523	0.24	0.03	0.50	148.0	2.1	3.65	1.73	0.3	<0.1	<0.1	0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.12	33.90	0.33	
7524	0.11	<0.02	0.24	105.0	0.7	1.36	0.72	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.12	14.40	0.20	
7525	0.25	<0.02	0.28	112.0	1.2	2.15	1.06	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.10	22.80	0.29	
7526	0.15	<0.02	0.30	50.4	1.1	2.22	1.06	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.06	16.50	0.20	
7527	0.17	<0.02	0.16	57.8	2.8	6.35	3.27	0.7	0.1	0.1	0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.07	18.90	0.23	
7528	10% silt	0.23	<0.02	0.28	64.1	2.7	6.06	2.68	0.5	0.1	<0.1	0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.07	27.00	0.25
7529	0.16	<0.02	0.33	64.8	1.2	2.79	1.32	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.08	13.10	0.21	
7530	ORAS 42P	7.49	0.03	2.82	145.0	29.1	64.50	32.50	6.3	0.9	0.5	1.0	0.1	<0.1	<0.05	15.3	<0.001	73.6 ¹⁵² _{al}	0.38	159.00	0.43

All decayed vegetation (K) < 250 μm

Activation Laboratories Ltd.

Report: A16-12628 Ultratrace 2 - Aqua Regia

Analyte Symbol	Th	U	Hg
Unit Symbol	ppm	ppm	ppb
Detection Limit	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS

7501	0.1	<0.1	250
7502	0.1	0.1	210
7503	0.1	<0.1	250
7504	0.2	0.2	280
7505	0.2	0.1	150
7506	0.1	<0.1	150
7507	0.2	0.3	160
7508	0.8	0.1	190
7509	0.3	0.2	170
7510	0.1	0.1	190
7511	0.1	0.1	130
7512	0.1	<0.1	220
7513	0.1	0.1	290
7514	0.1	0.2	260
7515	0.1	0.1	190
7516	0.3	0.3	140
7517	10% silt	0.3	120
7518	10% silt	0.1	160
7519	10% silt	0.3	130
7520	0.1	0.1	250
7521	0.2	0.1	180
7522	0.1	0.1	200
7523	0.1	0.1	250
7524	0.1	<0.1	260
7525	0.1	0.1	280
7526	0.1	0.1	180
7527	0.1	0.3	180
7528	10% silt	0.4	180
7529	0.2	0.1	200
7530	DREAS 42P	8.9	2.4 <10

- on clay flat

- on clay flat

Note: Only 7517-19 needed swirling to remove fine sand, but any silt or clay cannot be removed and shows as higher Li, Ga, Al, Ce, Nd, Fe, V, Cr, here.

- K on rock, flat top of gentle hill (Mn where close to basalt rock)

- rock at 20 cm

- rock at 20 cm

- down from basalt flows.

- on 50 cm gray sand to silt, on rock.

- just south of 2m basalt cliff

-> 1m sand to silt

- swampy with larch, humus on clay.

- on silt

- on fine sand, NW of large basalt outcrop.

- STANDARD

Quality Control

Activation Laboratories Ltd.

Report: A16-12628

Analyte Symbol	Li	Be	B	Na	Mg	Al	P	S	K	Ca	V	Cr	Ti	Mn	Fe	Co	Ni	Cu	Zn	Ga
Unit Symbol	ppm	ppm	ppm	%	%	%	%	%	%	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.1	1	0.001	0.01	0.01	0.001	0.001	0.01	0.01	1	1	0.01	1	0.01	0.1	0.1	0.01	0.1	0.02
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-ICP	AR-ICP	AR-MS	AR-MS	AR-MS	AR-MS	AR-ICP	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	7.5	0.7	12	0.075	0.14	0.58	0.040	0.178	0.03	0.86	82	6	< 0.01	902	23.40	7.8	33.3	1200.00	772.0	4.44
GXR-1 Cert	8.2	1.2	15	0.052	0.22	3.52	0.065	0.257	0.05	0.96	80	12	0.04	852	23.60	8.2	41.0	1110.00	760.0	13.80
GXR-1 Meas							0.043	0.201					< 0.01							
GXR-1 Cert							0.065	0.257					0.04							
DH-1a Meas																				
DH-1a Cert																				
GXR-4 Meas	9.2	1.4	3	0.153	1.56	2.70	0.116	1.727	1.55	0.90	92	59	0.13	140	3.17	14.3	36.5	7930.00	71.7	11.60
GXR-4 Cert	11.1	1.9	5	0.564	1.66	7.20	0.120	1.770	4.01	1.01	87	64	0.29	155	3.09	14.6	42.0	6520.00	73.0	20.00
GXR-4 Meas							0.119	1.679					0.13							
GXR-4 Cert							0.120	1.770					0.29							
GXR-6 Meas	25.7	0.7	4	0.087	0.37	7.46	0.031	0.060	1.06	0.15	190	82		1150	5.62	13.9	22.5	71.30	123.0	9.95
GXR-6 Cert	32.0	1.4	10	0.104	0.61	17.70	0.035	0.016	1.87	0.18	186	96		1010	5.58	13.8	27.0	66.00	118.0	35.00
GXR-6 Meas							0.031	0.013												
GXR-6 Cert							0.035	0.016												
OREAS 45d (Aqua Regia) Meas	16.5			0.046	0.14	5.78			0.11	0.10	199	500		446	13.60	27.7	187.0	366.00	32.1	17.40
OREAS 45d (Aqua Regia) Cert	11.9			0.031	0.14	4.86			0.10		201	467		400	13.65	26.2	176.0	345.00	30.6	17.90
SdAR-M2 (U.S.G.S.) Meas	13.1	5.2									20	10				13.2	45.6	274.00	818.0	2.84
SdAR-M2 (U.S.G.S.) Cert	17.9	6.6									25	50				12.4	48.8	236.00	760.0	17.60
7516 Orig	3.0	< 0.1	10	0.014	0.20	0.42	0.098	0.167	0.09	2.08	6	6	< 0.01	216	0.30	2.4	6.1	18.90	114.0	0.14
7516 Dup ✓	2.9	< 0.1	11	0.014	0.20	0.37	0.092	0.155	0.09	1.96	6	5	< 0.01	214	0.29	2.4	6.0	18.60	111.0	0.22
7528 Orig	2.4	< 0.1	6	0.015	0.16	0.25	0.069	0.140	0.07	1.13	7	6	0.02	242	0.30	1.9	4.9	19.70	80.4	0.43
7528 Dup ✓	2.4	< 0.1	7	0.016	0.16	0.25	0.071	0.136	0.07	1.16	7	6	0.02	242	0.30	1.8	4.7	20.80	80.8	0.39
Method Blank							< 0.001	< 0.001					< 0.01							
Method Blank	< 0.1	< 0.1	< 1	0.010	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	< 0.01	< 1	< 1	< 0.01	< 1	< 0.01	< 0.1	< 0.1	0.01	< 0.1	< 0.02
Method Blank							< 0.001	< 0.001					< 0.01							
Method Blank							< 0.001	< 0.001					< 0.01							

Quality Control

Activation Laboratories Ltd.

Report: A16-12628

Analyte Symbol	Sb	Te	Cs	Ba	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Bi
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm
Detection Limit	0.02	0.02	0.02	0.5	0.5	0.01	0.02	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.02
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	74.10	11.90	2.82	132.0	4.6	9.46	6.18	2.1	0.4	0.6	1.8	0.3	0.2	<0.05	123.0		3870.0	0.33	855.00	1460.00
GXR-1 Cert	122.00	13.00	3.00	750.0	7.5	17.00	18.00	2.7	0.7	0.8	1.9	0.3	1.0	0.18	164.0		3300.0	0.39	730.00	1380.00
GXR-1 Meas																				
GXR-1 Cert																				
DH-1a Meas																				
DH-1a Cert																				
GXR-4 Meas	3.00	1.05	2.49	17.9	41.7	83.30	36.30	6.2	1.1	0.5	0.8	0.1	0.2	<0.05	11.0		547.0	2.70	48.60	18.10
GXR-4 Cert	4.80	0.97	2.80	1640.0	64.5	102.00	45.00	6.6	1.6	0.4	1.6	0.2	6.3	0.79	30.8		470.0	3.20	52.00	19.00
GXR-4 Meas																				
GXR-4 Cert																				
GXR-6 Meas	1.55	<0.02	3.87	986.0	9.1	27.10	10.70	2.3	0.5	0.2	0.7	0.1	0.2	<0.05	<0.1		70.2	1.79	104.00	0.16
GXR-6 Cert	3.60	0.02	4.20	1300.0	13.9	36.00	13.00	2.7	0.8	0.4	2.4	0.3	4.3	0.49	1.9		95.0	2.20	101.00	0.29
GXR-6 Meas																				
GXR-6 Cert																				
OREAS 45d (Aqua Regia) Meas				86.1	9.1	21.90											8.6		17.40	0.31
OREAS 45d (Aqua Regia) Cert				80.0	10.0	24.80											21.0		17.00	0.30
SdAR-M2 (U.S.G.S.) Meas			0.95	122.0	34.4	78.90	34.50	5.9	0.5	0.6	1.6	0.2	0.2	<0.05	0.9				947.00	1.01
SdAR-M2 (U.S.G.S.) Cert			1.82	990.0	46.6	98.80	39.40	7.2	1.4	1.0	3.6	0.5	7.3	1.80	2.8				808.00	1.05
7516 Orig	0.18	<0.02	0.31	84.9	10.2	18.00	9.90	1.6	0.3	0.1	0.3	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.06	14.90	0.16
7516 Dup	0.16	<0.02	0.32	78.7	9.6	16.80	9.36	1.5	0.3	0.1	0.2	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.05	14.30	0.15
7528 Orig	0.25	<0.02	0.28	63.9	2.8	6.21	2.75	0.4	0.1	<0.1	0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.07	27.10	0.25
7528 Dup	0.22	<0.02	0.28	64.2	2.6	5.91	2.62	0.5	0.1	<0.1	0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	0.07	27.00	0.25
Method Blank																				
Method Blank	<0.02	<0.02	<0.02	6.6	<0.5	0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.001	<0.5	<0.02	<0.01	<0.02
Method Blank																				
Method Blank																				

MS is not suitable for gold

Quality Control

Activation Laboratories Ltd.

Report: A16-12628

Analyte Symbol	Th	U	Hg
Unit Symbol	ppm	ppm	ppb
Detection Limit	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS
GXR-1 Meas	1.9	31.9	960
GXR-1 Cert	2.4	34.9	3900
GXR-1 Meas			
GXR-1 Cert			
DH-1a Meas	> 200	2780.0	
DH-1a Cert	910.0	2629.0	
GXR-4 Meas	14.5	5.2	< 10
GXR-4 Cert	22.5	6.2	110
GXR-4 Meas			
GXR-4 Cert			
GXR-6 Meas	3.8	1.4	80
GXR-6 Cert	5.3	1.5	68
GXR-6 Meas			
GXR-6 Cert			
OREAS 45d (Aqua Regia) Meas	8.2	1.6	
OREAS 45d (Aqua Regia) Cert	11.3	1.6	
SdAR-M2 (U.S.G.S.) Meas	9.1	1.8	1360
SdAR-M2 (U.S.G.S.) Cert	14.2	2.5	1440
7516 Orig	0.3	0.3	150
7516 Dup	0.2	0.3	130
7528 Orig	0.4	0.2	180
7528 Dup	0.5	0.2	180
Method Blank			
Method Blank	< 0.1	< 0.1	30
Method Blank			
Method Blank			