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Zinc - Gold

in Decayed Vegetation

SE of Kamiskotia Lake

Robb Township, Ontario

on unpatented mining claims

515967, 515968, 515969, 515970, 522468, 522469, 522470

within respective cells

42A12A124, 144, 104, 084, 143, 123, 103

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

Timmins, 2 February 2020

Introduction

The 92 samples of decayed vegetation (K or M) I collected from my 7 claims 515967-970 and 522468 - 470 between 28 July 2018 to 30 September 2018 show an elevated background for zinc and gold throughout, seven of them with significant gold from 11 - 22 ppb. These are initial prospecting averages over 30 - 50 m, and require more detailed sampling.

Historically several attempts with geophysics had no success here and no soil sampling was tried. A row of overburden drilling reported continuous interesting gold values in basal till along the dirt trail between my claims 515969 - 970 (OM88-5-I-262). The three diamond drill holes there were poorly planned. The region was promoted for gold and much hope had been placed in the trondhjemite (quartz-albite porphyry) south of the trail, which recurs as several outcrops including tonalite and aplite on the claims, and where present gold values also are higher. Others are basalt, gabbro, norite, even magnetic pyroxenite.

Nearby significant occurrences are gold-bearing quartz-sphalerite veins in the SW corner of Jamieson township, which reflect as clear Zn-Au anomalies in decayed vegetation (2.47250). The quartz-vein with visible gold at the old highway (2.37111, T-5631) also has a halo of gold in decayed vegetation. None of these would be detectable by geophysics, and even the gold-bearing pyrite cubes lining some veins are coated with quartz and are non-conductive. Further infill-sampling may show any such occurrences on my claims distinctly, rather than possibly causing the elevated Zn-Au background.

The topography varies from flat to steep to swamps, mostly with mature mixed forest. The overburden also varies between clay to silt and sand. Its thickness seems to vary considerably, as even on high elevations the surface changes between rugged to sand flats to swamps. The decayed vegetation from 0 - 6 cm depth (K) or deep black swamp muck (M) were readily available, but the latter is known not to be suitable for Zn, Au, Pb, Mn. I took these for completeness in case there is a copper occurrence, which seems not the case.

Access is easy at about 25 km westnorthwest of Timmins on Highway 576, on a dirt trail eastward from NAD83 - 454460 E - 5379280 N opposite Martineau Ave, or from Highway 576 via the old highway and powerline in the south.

Present Work

The present decayed vegetation sampling differs from any humus sampling as all inorganic dilution or contamination is removed during the rather lengthy sample preparation, which I therefore did myself. Any obvious sand and silt is removed by dry swirling the sievings in a gold pan and skimming off the wanted organics. After homogenizing, any remaining sand, silt, or clay content is noted. Basically the resulting sievings are condensed vegetation and therefore are suitable for vegetation analyses with the necessary very low detection limits. The analyses were done by Activation Laboratories Ltd., Ancaster, Ontario. Please refer to the attached lecture handout describing details about the method.

The samples of dense black muck from the noted depth in swamps are annotated with (M) and should be ignored for gold and even zinc. The following samples were taken to show these differences of K and M from the same spots (7553M-7554, 7598M-7723, 7599M-7701, 7725M-7726), as M does not collect gold at these levels.

Gold is reliable only by neutron activation - code 2B - vegetation - double irradiation time at extra cost, which does not show copper and whereby zinc may not be reliable at these levels. Therefore I selected 48 samples for reruns by Ultratrace 2 - aqua regia - ICP/MS - 0.5 g aliquots. Values for zinc thereby were often much higher and are plotted in two colours to show the separate methods. Gold was plotted only from neutron activation values. Results of gold and zinc were annotated for comparison only.

Copper values, regardless K or M, are not plotted and with the exception of the somewhat elevated 63 and 55 ppm Cu in black swamp muck 7552 and 7553 from 1 m depth, they are quite normal monotonous background. The coincidence with the 3.26 and 4.99 ppm Mo may be notable, however, the elevated Li, Al, V, Cr, Ni, Y, La, Ce, Nd, Sm, U, of 7552 are typical of clay contamination which here is estimated at 25%. Reruns of further samples just for copper can be done with the recommended infill-samples.

To show that weathering since glaciation did not concentrate gold, I analyzed the <125 micron leftovers of 7574 with 30 % silt as 7738. The original sample was surface black earth along fractures in bare tonalite outcrop, from which I sieved the 125-250 micron fraction and concentrated its organics as 7574 by swirling and skimming them off the top. Any gold particles would have fallen into 7738 and none were found in wet panning the leftover 125-250 micron sand. Results were 9.2 ppb Au in 7574 versus 6.6 ppb Au in 7738, proving that this 30 % silt diluted and did not contaminate. Obviously the gold did not collect from that barren outcrop, which as per Ca : Na in 7738 is a trondhjemite. Noticeable here is also the black humus-clay content with its increased La, Ce, Nd, in addition to much Hf and Yb from trondhjemite silt.

Rock Samples

I also collected six rock samples, RB 1 to RB6, and had them analyzed extensively. Please refer to their attached descriptions and annotated results. Repeat analyses for AuPtPd by ALS Canada Ltd. left only tonalite RB5 with 4 ppb Au. Panning 200 g pulp of each also revealed no gold. Gabbro RB3 with 1% pyrite returned 4 ppb Au by neutron activation and 97 ppm Cu by near-total ICP.

Conclusions and Recommendations

Decayed vegetation when cleaned from all inorganic material will show excessive mineralization in the rock below, as demonstrated for several elements in several areas around Timmins. The local overburden is no obstacle, because the method has worked over 20 m till and clay, and over 60 m sand and silt.

Knowledgeable interpretation matters, but the present frequent values <22 ppb Au and <266 ppm zinc can come only from the rock below. The emphasis should now be on 100 - 200 new systematic infill samples in pursuit of possibly elusive gold-bearing quartz-sphalerite veins, in any rock type. The averaging of the present sampling, often over 50 m per sample to cover more ground, may not have reached individual veins that may not spread their elements widely because of thin overburden. The elevated gold background could also come from a very deep occurrence. Please study the attached maps from that viewpoint, and read the lecture handout to understand the method. A video about collecting a K-sample can be seen on Youtube, https://youtu.be/zHgkvo0wSI0.

Respectfully submitted,

Timmins, 2 February 2020 Hermann Daxl, M.Sc.(Minex)

Rock Samples RB1 - RB7 (field descriptions) **:**

RB1 **Trondhjemite ?** as per low Ca. Pale pinkish beige, aphanitic, H=6, no fizz, nonmagnetic, 15 % to locally 40 % hornblende, barren, <10 cm slabs 140/90, near contact to gabrbro in NE , at 7573.
4 ppb Au.

RB2 **Trondhjemite ?** as nearby RB1 but not cleaved.
<2 ppb Au.

RB3 **Gabbro - 1 % py**, coarse grained, 10 % aplite contact infiltration, no fizz, locally weakly magnetic, 1% pyrite as <1mm cubes or very fine in chlorite-muscovite-epidote veinlets or pockets, at 7710.
4 ppb Au, 2.9 ppm As, 97 ppm Cu, 60 ppm V, 6.35% Fe, 0.47% S.

RB4 **Gabbro - barren,** no pockets, else like RB3 of same outcrop.
3 ppb Au.

RB5 **Tonalite - Aplite ?** pale gray, pinkish weathering, aphanitic, trace dark-green 1mm specks, rare fizz, nonmagnetic, barren, some greenish to rusty fractures; intruded and assimilated coarse gabbro, at 7717.
5 ppb Au.

RB6 **Gabbro pegmatite,** 5 % aplite dikelet <1 cm, no fizz, nonmagnetic, barren, at NAD 83 - 455220 E - 5378700 N, near 7706.
3 ppb Au.

Other Rocks :

Tonalite, where aplite turned phaneritic.

Norite, mesocratic, medium-grained, very dark pyroxene weathering brown, moderately magnetic, 1 % pyrite, 50 m round knob probably a dike, 455517 E - 5378280 N.

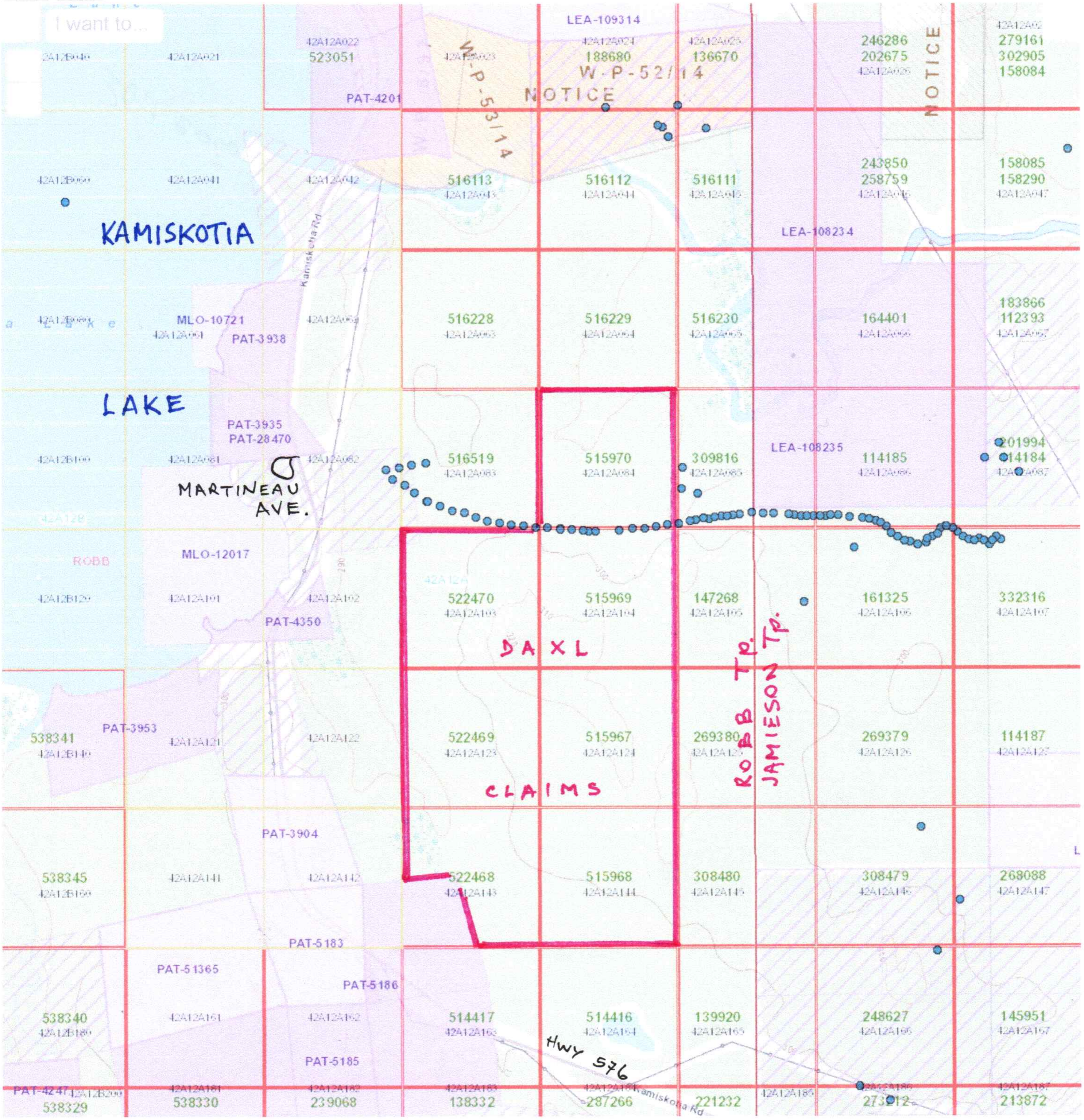
Basalt, very fine, moderately magnetic, dike margin, near 7722.

Pyroxenite (PX) **,** greenish black, weathers brown without crust, medium-grained acicular, H=6, moderately to strongly magnetic, barren, near 7595, likely a dike.

Panning the Pulps :

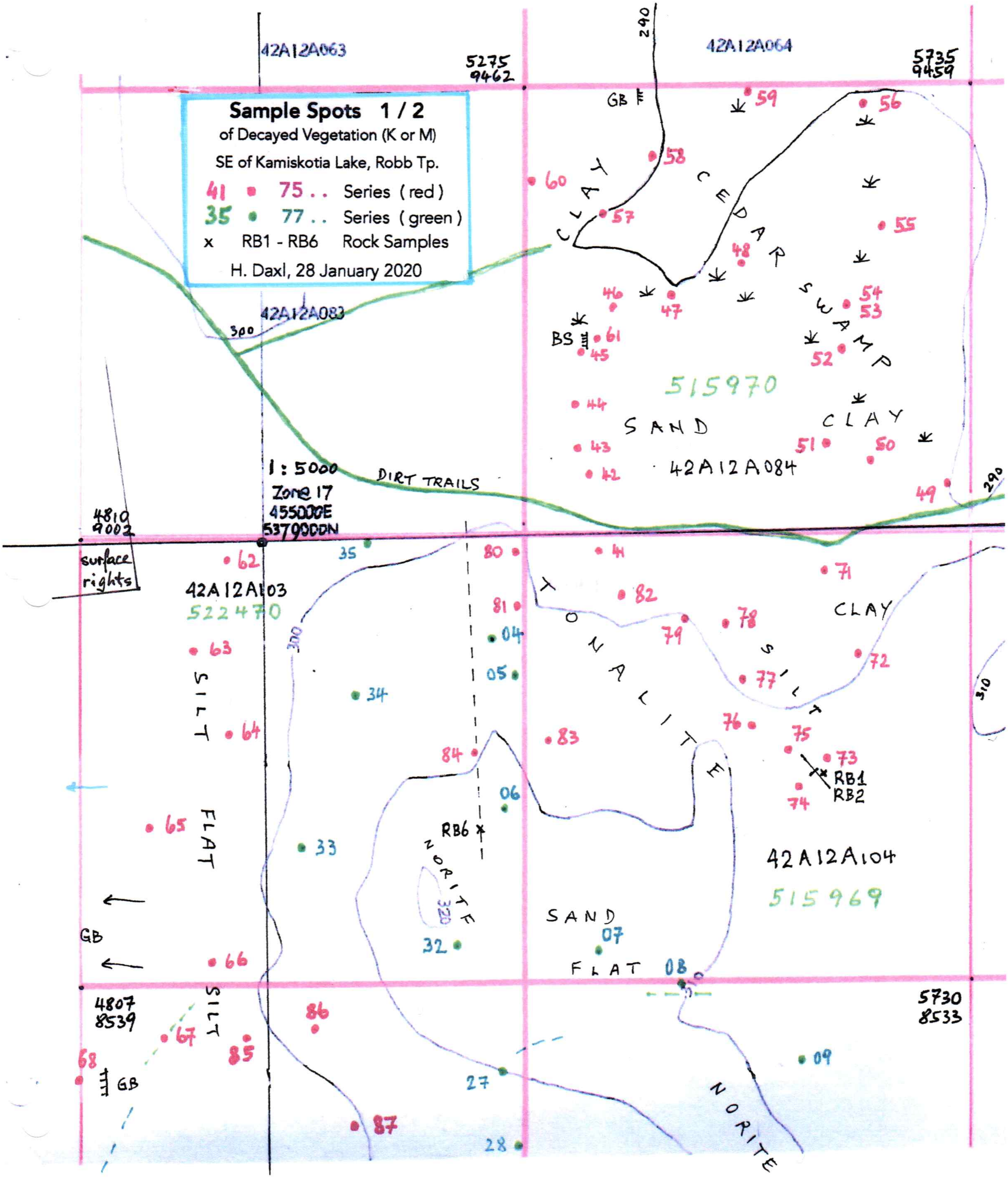
The <100 micron pulps were prepared by Actlabs. I panned about 200 g of each and checked the pan residue with a handlens, but found no gold.

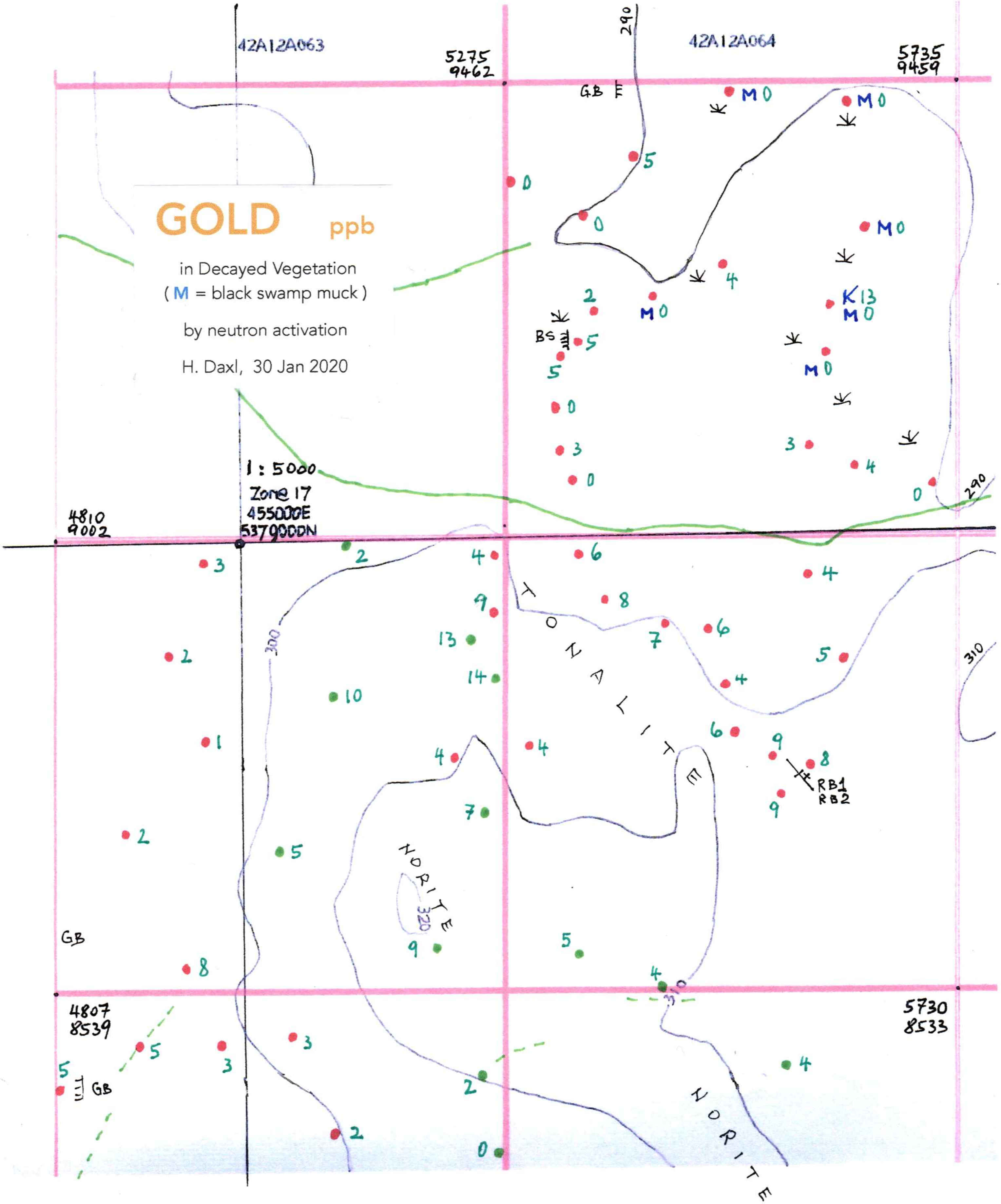
RB1	Dry greenish light beige. Few splinters of iron, rare hardly visible yellow specks.
RB2	Dry greenish light beige. Several tiny iron specks, none yellow.
RB3	Dry light beige. Many <100-micron pyrite cubes, some floating sericite. Much purplish black magnetite.
RB4	Dry greenish light beige. Similar to RB3 but no sericite and less pyrite, same magnetite.
RB5	Dry grayish white. Minor magnetite only. Pale purplish plagioclase as orthogonal agglomerates overlying double the amount of finer yellowish quartz.
RB6	Dry medium olive beige. Only few of the predomant purplish black grains are magnetite, several iron grains but one sliver appeared rather heavy and gray. The lesser medium-beige plagioclase did not agglomerate (unlike in RB5).

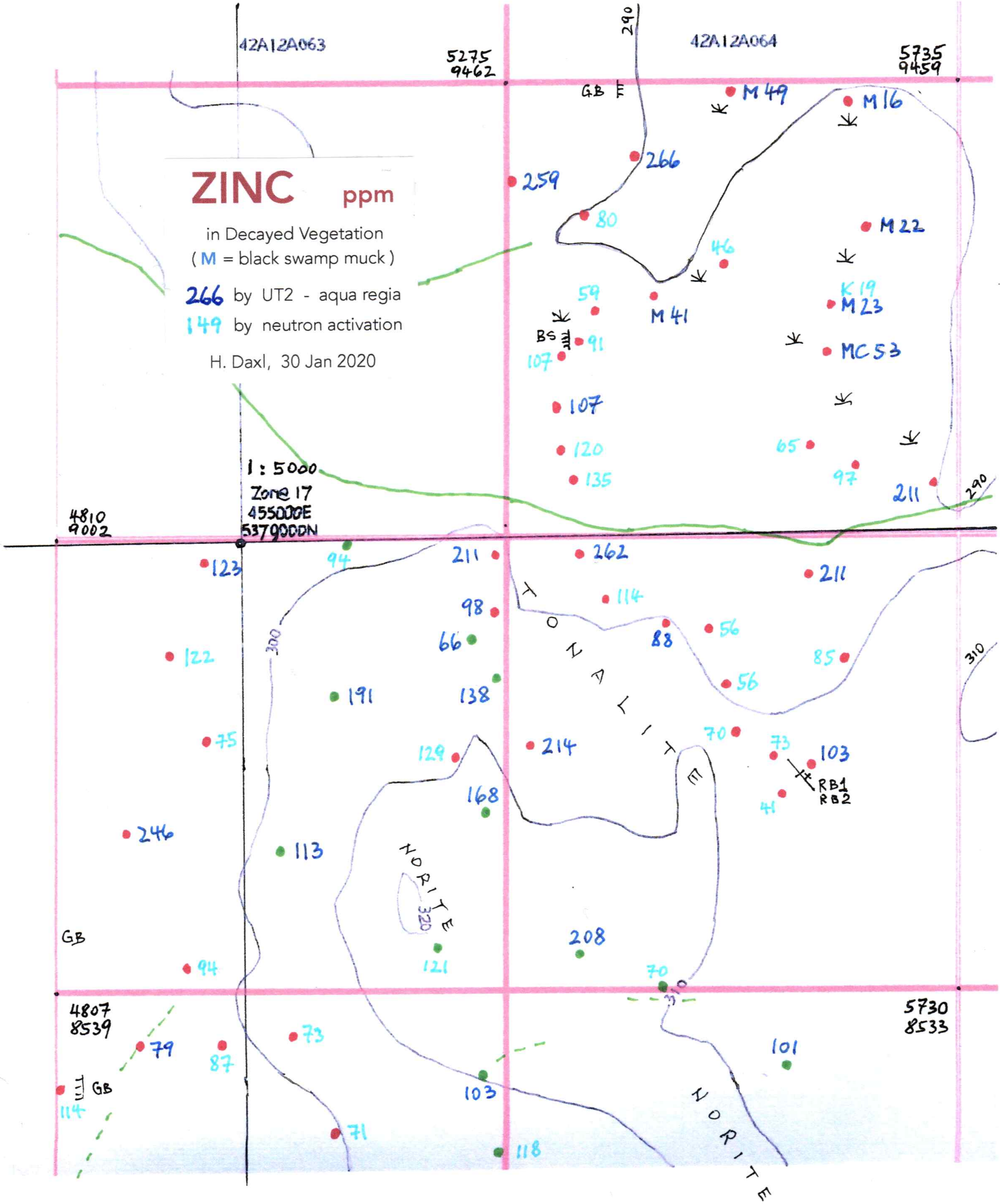


30 JAN 2020

0 0.15 0.3km


Sample Spots 1 / 2
of Decayed Vegetation (K or M)
SE of Kamiskotia Lake, Robb Tp.
41 • 75 . . Series (red)
35 • 77 . . Series (green)
x RB1 - RB6 Rock Samples
H. Daxl, 28 January 2020
42A12A063
42A12A064
42A12A083
42A12A084
42A12A103
42A12A104
515970
522470
515969
1 : 5000
Zone 17
455000E
5379000N
DIRT TRAILS
CEDAR SWAMP
CLAY
SAND
SILT
FLAT
TONALITE
NORITE
surface rights
GB
BS
RB1
RB2
RB6
5275 9462
5735 9459
4810 9002
4807 8539
5730 8533


GOLD ppb
in Decayed Vegetation
(M = black swamp muck)
by neutron activation
H. Daxl, 30 Jan 2020
42A12A063
42A12A064
5275
9462
5735
9459
4810
9002
4807
8539
5730
8533
1 : 5000
Zone 17
455000E
5379000N
TONALITE
NORITE
NORITE
RB1
RB2
GB
BS
290
300
310
320


ZINC ppm
in Decayed Vegetation
(M = black swamp muck)
266 by UT2 - aqua regia
149 by neutron activation
H. Daxl, 30 Jan 2020
42A12A063
42A12A064
5275 9462
5735 9459
4810 9002
4807 8539
5730 8533
1 : 5000
Zone 17
455000E
5379000N
TONALITE
NORITE
NORITE
GB
BS
RB1
RB2
290
300
310
320
M49
M16
M22
M41
M23
K19
MC53
266
259
80
46
59
91
107
107
120
135
65
97
211
123
94
211
262
211
114
98
88
56
66
85
122
56
138
191
70
75
129
214
73
103
168
41
246
113
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208
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87
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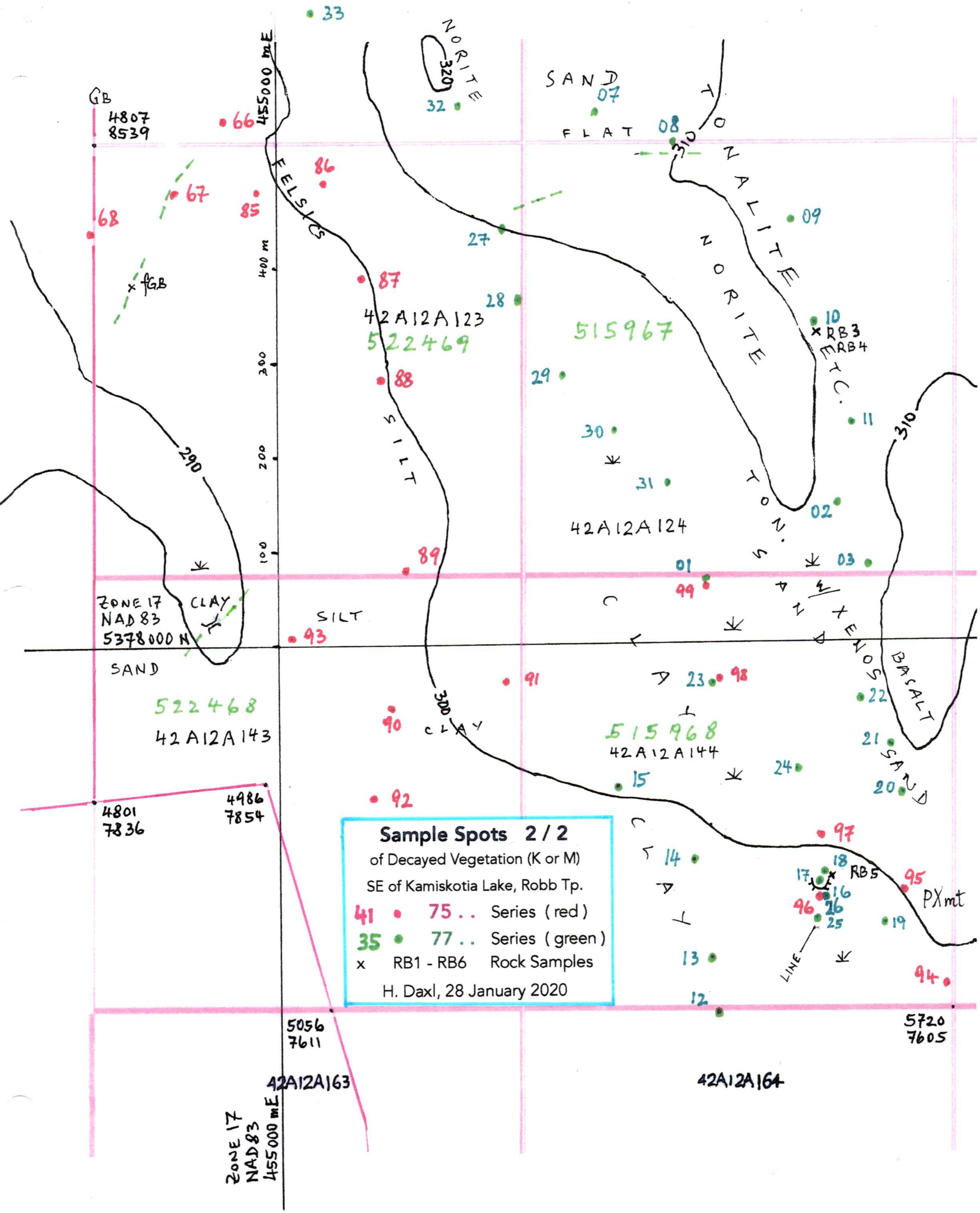
101
114
103
71
118



Sample Spots 2 / 2
of Decayed Vegetation (K or M)
SE of Kamiskotia Lake, Robb Tp.
41 • 75 . . Series (red)
35 • 77 . . Series (green)
x RB1 - RB6 Rock Samples
H. Daxl, 28 January 2020
455000 mE
GB
4807
8539
NORITE
320
SAND
FLAT
TONALITE
NORITE
310
FELSICS
xfGB
42A12A123
522469
515967
RB3
RB4
ETC.
SILT
290
300
400 m
300
200
100
42A12A124
TON.
SAND
XENOS
BASALT
ZONE 17
NAD 83
5378000 N
CLAY
SILT
SAND
522468
42A12A143
CLAY
515968
42A12A144
4801
7836
4986
7854
RB5
PXmt
LINE
5056
7611
5720
7605
42A12A163
42A12A164
ZONE 17
NAD83
455000 mE
33
32
07
08
66
86
67
85
68
09
27
87
28
10
29
88
11
30
31
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89
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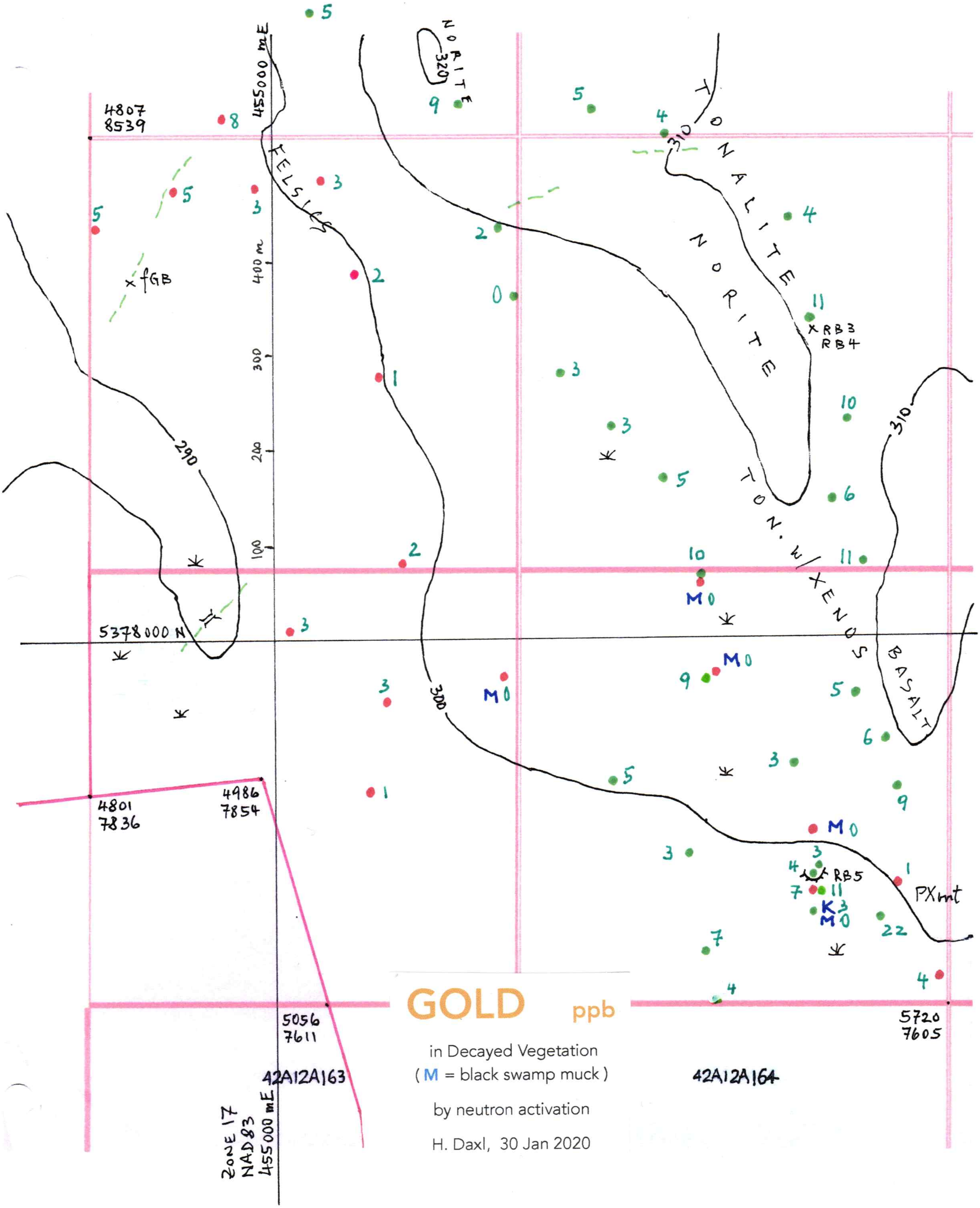
94
12

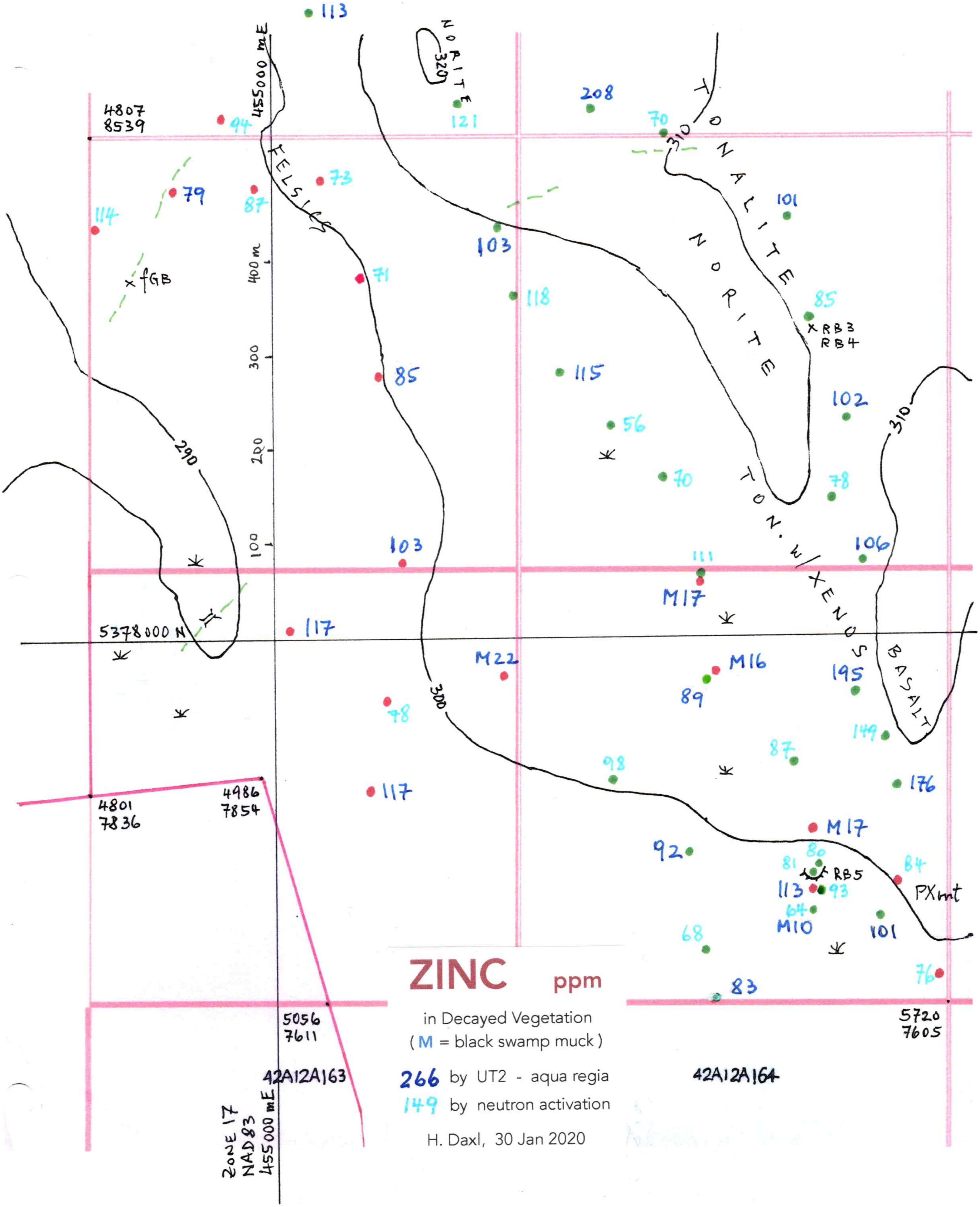


GOLD ppb

in Decayed Vegetation
(M = black swamp muck)

by neutron activation

H. Daxl, 30 Jan 2020


ZINC ppm
in Decayed Vegetation
(M = black swamp muck)
266 by UT2 - aqua regia
149 by neutron activation
H. Daxl, 30 Jan 2020
42A12A163
42A12A164
ZONE 17
NAD83
455000 mE
5378000 N
4807 8539
4801 7836
4986 7854
5056 7611
5720 7605
FELSICS
NORITE 320
TONALITE
NORITE
TON. w/ XENOS
BASALT
PXmt
fGB
RB3
RB4
RB5
290
300
310
400 m
300
200
100
113
121
208
70
94
79
87
73
114
101
103
71
118
85
115
102
56
70
78
103
106
111
M17
117
M22
M16
89
195
78
149
87
98
176
117
M17
92
80
81
84
113
93
64
M10
101
68
83
76

Grab some dirt - find a mine

Yes, you can find a mine on one claim unit in a few days work, if there is one !

You can also qualify and prioritize your drill targets.

This lecture is not about the vast science of soil sampling, but about the very specific method of **decayed vegetation sampling that works for gold and base metals in the Timmins region.** I would not completely rule out gold, if there is none in a sample, but if there really is, it can only be from rock within 50 m horizontally. Therefore 30 chosen samples can adequately cover a claim unit in just two days. I have tested the method, which I learned during my M.Sc. studies at Queen's University (Neil O'Brian), over six gold occurrences, also zinc and copper, and perfected it to work extremely well. However, to convince yourself, try it yourself over your known zones, gold or base metals, whereby you can also test your work. If it does not work for you, tell me.

The scientific name of the **decayed vegetation** I sample is mor, which I had never heard before. I call it the **decay horizon** or **K,** because that is were most decay of organics happens. It is quite apparent in the forests around Timmins, where the humus usually rests on fine sand. On clay it may be very thin, so greater care is necessary. **After brushing aside the loose debris, there is an interwoven carpet of rootlets, mold, fungi, decayed leaves and needles, from 0 to 6 cm depth, which you just grab and rip up** (`https://youtu.be/zHgkvo0wSI0`). One such small handful from each of 5 - 10 dry spots within a 10 - 20 m radius make a good-size sample. Avoid sand, silt, clay, charcoal, sticks, or greens. Seeds can stay in. There usually are no insects nor worms. Rings, watches, bracelets, or necklaces must never be worn when handling any samples.

This therefore is not a so-called humus sample, because humus has two more parts below it, moder and mull, and usually contains sand, silt, or clay. Also, I have never had high values in the usually underlying white leached sand nor the enriched brown B-horizon which other methods sample. So I am not surprised of their poor reputation.

It helps to envisage the hypothesis, that metal ions tend to migrate to surface, and also are taken up by rootlets and end up in leaves. This all fits my observations. Some metals (gold, zinc, copper, nickel, chromium, manganese, molybdenum, etc.) get therefore concentrated in these organics. I had repeated samples of <1500 ppb Au above a quartz-vein that ran 17000 ppb (17 g/t), which proves also direct migration. This and other veins had a halo of 25m, <100 ppb Au, which can be attributed only to fallen leaves and needles, because the underlying swamp muck had no gold. **I have proven this simple method for gold, copper, nickel, zinc, molybdenum, bismuth, cesium, arsenic. It even worked over 20 m thick clay or 60 m sand overburden.**

Favorable sample spots are where water can evaporate, even some 2m wide humps, or higher ground around trees. Possibly small valley floors may be better than ridges, however, flowing groundwater may intercept and dissipate the migrating metal ions, and not allow later concentration. The center of a sample is plotted with GPS, as selected sites are preferable to systematic sampling at line pickets. No statistical treatment is required; elements occur where you find them. Notes can be limited to peculiarities to remember the location, as discoveries need further work anyway.

Sample preparation requires special care and is best done in-house. Even if a lab listens, and follows special instructions, you will have to live with short-cuts. So here is my method. I spread the samples without delay on paper towels on 10-inch square paper plates, which I change whenever they are getting too damp. The lower towels can be dried and re-used. This takes two days, which is less than in open paper envelopes even in a car in the sun, as air circulation is necessary. An oven would have to be less than 50 degrees Celsius, and likely is too small. Then a sample needs to be rubbed or rolled with a glass bottle in a glass bowl to loosen enough fine organics for sieving <250 micron with a 1/4 mm plastic coffee filter. This work is fine-dusty and needs to be done outside or with a good exhaust fan. Any obvious sand or charcoal must not be crushed but removed before by swirling the bowl.

After sieving, if still some sand is visible, further dry swirling in a plastic gold pan will bring the organics to the top like scum which can be skimmed off clean. The rest can be panned with water, but is pretty useless. Bracket sieving to 125-250 micron may also help to remove silt or clay, but clay dries very hard and even finely crushed it may not release the wanted organics. Maceration by a lab also needs special attention, but then how do you get the details for further adjustment in evaluation. Also coarser organics have somewhat lower values due to dilution with wood. The homogenized sievings need to be checked with a hand lens to estimate final sand and also silt content. Clay may show only as color and weight. Careful collection can usually safe such extra work.

It is also very important to homogenize the sievings by rolling and overlapping using a bent sheet of paper, like labs used to do with pulps on a mat. Tightly packed samples stay homogenized. Keep left-overs in sachets, do not shake them. Collecting a heaped double-handful of such decayed vegetation, will yield the necessary 5 - 10 g of sievings.

The only reliable analysis for gold in such samples is by neutron activation, which however is not suitable for some base metal anomalies (e.g. nickel), and does not show copper. As samples are basically organics, I use Actlabs INAA, code 2B, vegetation, but fill their medium vials (7cm3 like a pinkie finger) myself to press as much as possible into them. I submit the varying tara (vial, stopper, label) for each, and weigh also each full vial so I can check for mix-up. They report the net weight (mass) from which one also can estimate roughly, whether a sample is diluted by silt or clay. The method is usually for 15-g briquettes, so that special double irradiation time has to be ordered for vials, for which they charge extra. Sandy samples or low inorganic standards are recognized and tolerated by the lab. They use organic standards. A lab order and shipment best include warnings, "very low-grade vegetation - keep away from rock pulps". Still contamination may happen, but all values >10 ppb Au need to be investigated further anyway. For base metals in such samples I send 2 - 4 g densely packed in a sachet to Actlabs for Ultratrace 2 - aqua regia ICP-OES/MS, but any values for gold thereby are admittedly not reliable for various reasons. Similar vegetation analyses include platinum, which may be worth a try.

Prospecting must include swamps and swampy areas where the described decayed vegetation may not exist. I therefore bring a Dutch auger in the bush, also useful as a walking stick, a weapon against bears, and to at least occasionally probe the deeper overburden. Bedrock is sometimes near enough to be scanned with the Beep Mat.

I use the auger in swampy areas to sample the deeper dense black muck, which works well for copper, nickel, chromium, but not so well for gold, zinc, lead, manganese. Water movement may flush out elements, therefore I try for the deepest and densest muck, but stay clear above any inorganic bottom. A closed two-handful from one auger hole will do, noting the sample depth. I wrap this ball with paper towels and squeeze out the water, before letting it dry with the decay samples.

Sampling the lake bottom sludge may be the only way to explore lakes, from a canoe or best on the ice in late March - early April in just above freezing weather. A 16 cm (6 inch) diameter hand ice auger will do. A bomb will not reach the dense sludge which works well for sulfur and base metals, but I had no occasion to test it for gold yet. A soil auger with extensions may be necessary, but water is usually shallow, so a dry 5m wooden pole makes it easier with less than 4 m of water. Sludge can be 10 m thick, but I got similar values throughout. I use a strong plastic bottle with the bottom cut off and a strong insulated cable tied around near the bottom to pull on one side. I push it 1 m into the sludge, then remove the pole before pulling. The bottle will tilt and scoop up a good lump. I remove the stopper from the bottle to drain the water, then dump the lump on the snow to drain further and collect it on my return.

Decay, muck, and sludge, have different concentration levels, and must be plotted as such. I suggest to add K, M, L to the values. Sample preparation and analyses are the same for all three. Notes of consistency (woody, fibrous, grainy, sticky, smeary), crushablility, color, of M and L may be revealing.

So before you drill, do your shareholders a favor. Or before you lose a claim, grab some dirt. It takes a week to get a batch to the lab, then it takes at least 3-4 weeks to get the results for gold. A follow up again takes as much time, but a report for assessment credit is simple (see map). The best time to sample is May and October-November, like any work in the bush. In summer you raise clouds of flies from humus, and visibility for choosing sample spots may be difficult. Allow for some drying after a rain, but I doubt that seasons affects the metals. The gardening claw is in your hand now, but you can still phone me for help or advice, for set-up, organizing, or training, including field work.
Hermann Daxl, M.Sc. (Minex), 705-264-4929.

Quality Analysis ... Actlabs *Innovative Technologies*

Date Submitted:	13-Aug-18
Invoice No.:	A18-10801
Invoice Date:	12-Sep-18
Your Reference:	ROB-NA1

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

ATTN: Hermann Daxl

CERTIFICATE OF ANALYSIS

Decayed in medium vials (~7 cm³) 7541 - 7570

30 Vegetation samples were submitted for analysis.

The following analytical package(s) were requested: Code 2B-~~15~~g Vegetation INAA(INAAGEO), double irradiation time. see mass

REPORT **A18-10801**

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:

Emmanuel Eseme , 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

Decayed vegetation 0–6 cm depth (K) except as marked black muck (M) in swamps, all sieved < 250 µm

Results **Activation Laboratories Ltd.** **Report: A18-10801**

by neutron activation – Code 2 B – vegetation – medium vials – double irradiation time

Vol% sand silt (dilution)	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
	7541		5.6	< 0.3	2.05	180	8.70	2.25	3.0	7.9	< 0.05	0.310	0.21	0.36	< 0.1	1.47	< 0.05	752	< 2	< 1	0.220	0.80
	7542		< 0.1	< 0.3	1.60	179	8.53	2.38	3.5	10.7	< 0.05	0.570	0.15	0.73	< 0.1	1.27	< 0.05	1510	< 2	< 1	0.210	1.48
	7543		2.7	< 0.3	1.08	157	7.55	1.32	2.0	5.1	< 0.05	0.230	< 0.05	< 0.05	< 0.1	1.69	< 0.05	598	< 2	< 1	0.170	0.58
3	7544		< 0.1	< 0.3	1.74	325	7.35	1.83	4.4	13.3	0.26	0.640	0.20	1.77	< 0.1	0.80	< 0.05	3990	< 2	< 1	0.340	1.84
3	7545		4.9	< 0.3	2.49	100	9.91	3.17	2.8	8.5	< 0.05	0.610	< 0.05	0.53	< 0.1	1.42	< 0.05	1030	< 2	< 1	0.280	1.39
	7546		1.8	< 0.3	1.51	< 5	10.70	1.89	1.8	5.3	< 0.05	0.190	0.10	< 0.05	< 0.1	1.49	< 0.05	333	< 2	< 1	0.210	0.44
	7547	M at 95 cm	< 0.1	< 0.3	1.25	133	17.90	2.53	4.0	18.4	0.81	0.810	< 0.05	0.75	< 0.1	0.68	0.80	890	< 2	< 1	< 0.005	2.73
	7548		3.9	< 0.3	2.13	74	10.30	1.85	1.9	5.1	< 0.05	0.330	0.10	< 0.05	< 0.1	0.83	0.93	352	< 2	< 1	0.180	0.52
	7549		< 0.1	< 0.3	1.13	115	6.92	1.28	0.9	3.1	< 0.05	0.140	< 0.05	< 0.05	< 0.1	1.58	< 0.05	737	< 2	< 1	0.090	0.44
	7550		3.9	< 0.3	1.39	126	10.00	2.01	2.4	6.9	< 0.05	0.340	< 0.05	< 0.05	< 0.1	1.70	0.96	724	< 2	< 1	0.230	0.84
clay	7551		3.1	< 0.3	1.07	67	8.37	1.52	1.2	3.9	< 0.05	0.160	0.09	< 0.05	< 0.1	1.54	1.66	432	< 2	< 1	0.150	0.44
25	7552	M at 100 cm	< 0.1	< 0.3	2.09	400	16.80	< 0.01	6.9	43.9	1.83	1.590	< 0.05	1.53	< 0.1	< 0.01	7.39	3580	< 2	< 1	0.080	6.71
	7553	M at 100 cm	< 0.1	< 0.3	1.61	141	33.90	2.90	< 0.1	14.7	< 0.05	0.550	< 0.05	0.58	< 0.1	1.18	4.77	563	< 2	< 1	< 0.005	2.56
	7554	=7736	13.3 (3.7)	< 0.3	1.49	< 5	12.80	3.17	1.6	6.2	< 0.05	0.340	0.12	< 0.05	< 0.1	1.65	1.89 (8)	413	< 2	< 1	0.240	0.59
	7555	M at 90 cm	< 0.1	< 0.3	0.55	28	31.00	3.95	1.9	4.1	< 0.05	0.210	< 0.05	< 0.05	< 0.1	1.02	2.08	373	< 2	< 1	< 0.005	1.14
	7556	M at 90 cm	< 0.1	< 0.3	0.45	93	20.30	3.24	< 0.1	5.4	< 0.05	0.240	< 0.05	0.31	< 0.1	1.36	< 0.05	280	< 2	< 1	0.050	0.86
2	7557		< 0.1	< 0.3	1.25	125	9.30	1.63	3.0	9.2	< 0.05	0.450	0.17	0.63	< 0.1	1.10	< 0.05	1720	< 2	< 1	0.140	1.08
1	7558		4.9	< 0.3	1.89	175	11.00	2.08	2.7	7.5	< 0.05	0.240	0.15	0.36	< 0.1	1.45	< 0.05	890	< 2	< 1	0.250	0.70
	7559	M at 100 cm	< 0.1	< 0.3	0.95	116	16.10	3.13	2.0	3.7	< 0.05	0.290	< 0.05	0.23	< 0.1	1.25	0.50	214	< 2	< 1	0.070	0.58
1	7560		< 0.1	< 0.3	1.43	233	8.96	2.75	4.8	10.9	0.77	0.590	< 0.05	0.53	< 0.1	1.16	< 0.05	1390	< 2	< 1	0.150	1.39
3	7561		5.2	< 0.3	1.55	77	7.21	1.00	1.6	6.8	< 0.05	0.190	0.18	0.25	< 0.1	1.65	< 0.05	502	< 2	< 1	0.200	0.54
2	7562		2.8	< 0.3	1.40	< 5	9.73	1.33	2.5	5.6	0.47	0.150	0.10	< 0.05	< 0.1	1.35	1.14	491	< 2	< 1	0.190	0.47
2	7563		1.9	< 0.3	1.97	138	7.31	1.66	3.6	11.2	0.28	0.350	< 0.05	0.51	< 0.1	1.89	< 0.05	1260	< 2	< 1	0.350	0.91
	7564		1.2	< 0.3	1.44	< 5	7.06	0.75	< 0.1	4.7	< 0.05	0.140	0.11	< 0.05	< 0.1	1.39	< 0.05	387	< 2	< 1	0.160	0.38
	7565		2.3	< 0.3	0.60	116	7.43	1.52	1.1	2.8	< 0.05	0.130	< 0.05	< 0.05	< 0.1	1.49	< 0.05	392	< 2	< 1	0.150	0.38
2	7566		7.8	< 0.3	2.01	< 5	8.75	1.11	3.4	4.0	< 0.05	0.240	< 0.05	< 0.05	< 0.1	1.48	< 0.05	472	< 2	< 1	0.290	0.57
	7567		4.8	< 0.3	2.46	95	8.26	1.47	4.4	10.7	0.69	0.480	< 0.05	0.49	< 0.1	1.66	< 0.05	912	< 2	< 1	0.410	1.26
1	7568		5.1	< 0.3	1.33	226	8.81	2.08	2.8	6.3	< 0.05	0.370	0.12	0.37	< 0.1	1.10	0.74	1270	< 2	< 1	0.280	0.95
	7569	= 7856	~~17.9~~ (14.5)	~~< 0.3~~	~~1.65~~ (1.8)	~~343~~	~~4.94~~ (5.3)	~~< 0.01~~	~~2.4~~	~~14.9~~ (1.8)	~~< 0.05~~	~~0.600~~	~~0.15~~	~~2.10~~ (2.67)	~~< 0.1~~	~~1.19~~	~~< 0.05~~	~~7050~~	~~< 2~~	~~< 1~~	~~0.160~~ (0.3)	~~1.89~~ (2.36)
	7570	OREAS 45P	~~53.4~~	~~< 0.3~~	~~8.94~~ (13.4)	~~278~~	~~9.01~~	~~< 0.01~~	~~102.0~~	~~818.0~~ (1103)	~~1.23~~	~~16.400~~ (19.2)	~~< 0.05~~	~~5.91~~	~~< 0.1~~	~~< 0.01~~	~~< 0.05~~	~~774~~	~~< 2~~ (385)	~~< 1~~	~~0.670~~ (0.92)	~~55.70~~

Results **Activation Laboratories Ltd.** **Report: A18-10801**

Vol.% Sand silt	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	Environment
	7541		< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	152	7.21	8.0	3.4	0.490	< 0.05	< 0.1	0.030	0.090	3.03	
	7542		< 0.1	100	< 0.05	1.8	< 0.01	< 0.05	135	13.40	15.7	6.5	1.120	0.16	< 0.1	0.070	0.230	3.18	
	7543		< 0.1	< 100	< 0.05	0.7	< 0.01	< 0.05	120	4.87	6.0	2.5	0.360	< 0.05	< 0.1	0.020	0.060	2.85	
3	7544		< 0.1	< 100	< 0.05	1.9	0.51	< 0.05	98	10.80	13.2	4.3	0.820	0.21	< 0.1	0.060	0.280	3.27	
3	7545		< 0.1	< 100	< 0.05	1.6	0.42	< 0.05	107	13.90	16.4	9.0	1.010	0.19	< 0.1	0.060	0.290	3.14	
	7546		< 0.1	< 100	< 0.05	0.5	< 0.01	< 0.05	59	10.00	10.8	4.9	0.630	0.17	< 0.1	0.030	0.140	2.88	
	7547	M at 95 cm	< 0.1	< 100	< 0.05	4.2	1.39	< 0.05	42	45.30	46.8	21.3	3.270	0.68	< 0.1	0.220	0.590	3.11	– cedar swamp
	7548		< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	46	5.39	5.1	6.3	0.430	< 0.05	< 0.1	0.020	0.110	2.88	– " "
	7549		< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	159	2.54	3.2	< 0.3	0.230	0.06	< 0.1	< 0.001	< 0.005	2.72	
	7550		< 0.1	< 100	< 0.05	1.0	0.73	< 0.05	97	10.80	9.6	7.2	0.800	0.13	< 0.1	0.030	0.150	2.84	
	7551		< 0.1	< 100	< 0.05	0.4	< 0.01	< 0.05	65	3.10	4.4	2.8	0.270	< 0.05	< 0.1	0.030	0.070	2.99	
clay 25	7552	M at 100 cm	< 0.1	< 100	< 0.05	7.6	7.57	< 0.05	56	107.00	104.0	70.9	11.800	2.37	2.0	0.930	2.660	3.84	– 25% clay
	7553	M at 100 cm	< 0.1	< 100	< 0.05	3.2	3.93	< 0.05	< 2	35.50	32.7	41.3	4.180	0.72	0.5	0.410	1.100	3.37	
	7554	= 7736	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	19	7.31	6.3	10.3	0.670	0.10	< 0.1	0.040	0.190	2.93	
	7555	M at 90 cm	< 0.1	< 100	< 0.05	1.1	1.83	< 0.05	16	5.79	7.0	9.9	0.750	0.13	< 0.1	0.100	0.320	3.48	
	7556	M at 90 cm	< 0.1	< 100	< 0.05	1.3	0.22	< 0.05	< 2	4.58	6.4	8.4	0.530	0.11	< 0.1	0.060	0.220	3.13	– pine swamp
2	7557		< 0.1	< 100	< 0.05	1.0	< 0.01	< 0.05	80	12.00	18.2	7.7	0.940	0.17	< 0.1	0.070	0.180	3.01	– 15 cm humus on clay
1	7558		< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	166	5.31	8.6	6.8	0.480	< 0.05	< 0.1	0.030	0.140	3.03	
	7559	M at 100 cm	< 0.1	< 100	< 0.05	0.9	0.72	< 0.05	29	7.93	8.7	6.5	0.630	0.09	< 0.1	0.060	0.170	2.85	– cedar swamp
1	7560		< 0.1	< 100	< 0.05	1.2	< 0.01	< 0.05	137	11.70	17.0	10.6	0.940	0.21	< 0.1	0.060	0.280	3.18	– 10 cm humus on clay
3	7561		< 0.1	< 100	< 0.05	0.4	< 0.01	< 0.05	91	2.65	3.6	5.6	0.240	< 0.05	< 0.1	0.030	0.050	2.84	
2	7562		< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	84	3.40	5.4	4.0	0.300	0.08	< 0.1	0.030	0.110	2.95	
2	7563		< 0.1	< 100	< 0.05	0.9	< 0.01	< 0.05	122	5.54	6.0	5.2	0.490	0.09	< 0.1	0.050	0.170	2.90	– 10 cm humus on sand or rock
	7564		< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	75	2.14	2.8	< 0.3	0.190	< 0.05	< 0.1	< 0.001	< 0.005	2.63	– 30 cm humus on clay
	7565		< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	148	2.14	3.9	5.8	0.170	< 0.05	< 0.1	< 0.001	< 0.005	2.82	– 40 cm humus on silt
2	7566		< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	94	5.27	7.6	4.9	0.440	0.08	< 0.1	0.040	0.110	2.83	– 40 cm humus on silt-clay
	7567		< 0.1	< 100	< 0.05	1.2	0.81	< 0.05	58	6.62	9.5	< 0.3	0.530	0.16	< 0.1	0.060	0.120	2.91	
1	7568		< 0.1	< 100	< 0.05	1.0	< 0.01	< 0.05	114	7.15	9.6	8.5	0.640	0.15	< 0.1	0.040	0.150	3.21	– 10 cm humus on silt
	7569	= 7856	~~< 0.1~~ 12.7	~~< 100~~	~~< 0.05~~	~~1.5~~ 2.1	~~< 0.01~~ 1.45	~~< 0.05~~	~~46~~	~~9.48~~ 7.29	~~14.3~~ 11.2	~~6.5~~	~~0.970~~	~~0.30~~	~~< 0.1~~	~~0.060~~	~~0.260~~ 0.142	~~3.35~~	– TEST Dalton Road
	7570	OREAS 45P	~~< 0.1~~	~~< 100~~	~~< 0.05~~	~~8.3~~	~~1.48~~	~~< 0.05~~	~~112~~ 141	~~36.10~~	~~46.2~~	~~17.0~~	~~4.040~~	~~1.72~~	~~< 0.1~~	~~0.410~~	~~2.340~~	~~8.04~~	– STANDARD

Quality Control | Activation Laboratories Ltd. | Report: A18-10801

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
Au 30ppb Meas	31.0																			
Au 30ppb Cert	30.0																			
Au 30ppb Meas	28.6																			
Au 30ppb Cert	30.0																			
OREAS 905 (INAA) Meas	372.0		34.50	2660		< 0.01	14.6		7.44	4.030		6.91		2.74				2	1.530	
OREAS 905 (INAA) Cert	391.0		36.20	2800		0.61	15.3		7.10	4.230		7.26		2.94				137	1.960	
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: A18-10801

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
Au 30ppb Meas																
Au 30ppb Cert																
Au 30ppb Meas																
Au 30ppb Cert																
OREAS 905 (INAA) Meas		< 100	< 0.05	14.0	4.76	< 0.05	145	45.70	91.4	38.5	7.270	1.53	< 0.1		0.800	
OREAS 905 (INAA) Cert		159	1.38	14.7	5.00	3.02	139	48.00	96.0	40.5	7.640	1.46	0.8		0.760	
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 ... **Actlabs** Innovative Technologies

Date Submitted:	23-Aug-18
Invoice No.:	A18-11450
Invoice Date:	12-Sep-18
Your Reference:	ROB-NA2

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

ATTN: Hermann Daxl

CERTIFICATE OF ANALYSIS

Decayed 7571 - 7600
30 Vegetation samples were submitted for analysis. in medium vials (~7cm³)

The following analytical package(s) were requested: Code 2B-~~15~~g Vegetation INAA(INAAGEO) neutron activation, double irradiation time
see mass

REPORT **A18-11450**

Notes:

Footnote: INAA data may be suppressed due to high concentrations of some analytes.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

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

Decayed vegetation 0-6 cm depth (K) except M (black muck in swamps)
Sieved <250 micron except 7574

Results **Activation Laboratories Ltd.** **Report: A18-11450**
by neutron activation – Code 2B – vegetation – medium vials – double irradiation time

Vol.% sand or θ	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
1	7571	4.0	< 0.3	1.70	99	11.30	1.08	3.1	6.3	0.44	0.250	0.18	0.20	< 0.1	0.94	0.37	467	< 2	2	0.310	0.74
1	7572	4.5	< 0.3	1.95	56	12.80	1.03	1.1	4.8	< 0.05	0.170	0.21	< 0.05	< 0.1	0.90	0.69	319	< 2	< 1	0.360	0.54
3	7573	7.7	< 0.3	1.01	63	8.48	< 0.01	1.3	7.1	0.84	0.180	0.15	0.44	< 0.1	0.91	0.49	567	< 2	3	0.340	0.60
2	7574 [KH at 5-10 cm	9.2	< 0.3	9.37	181	19.50	< 0.01	2.3	18.1	< 0.05	1.020	< 0.05	5.07	< 0.1	1.03	1.27	3170	< 2	< 1	1.420	2.51
1	7575 [125-250 µm = 7739	9.4 6.5	< 0.3	3.46	143	11.70	0.41	1.6	5.5	0.91	0.280	0.28	0.63	< 0.1	0.89	< 0.05	727	< 2	< 1	0.550	0.93
	7576	5.6	< 0.3	1.99	99	10.80	0.41	0.9	6.1	< 0.05	0.300	0.33	0.55	< 0.1	0.86	< 0.05	739	< 2	2	0.440	0.84
	7577	3.8	< 0.3	2.00	105	9.76	< 0.01	1.4	5.7	< 0.05	0.180	0.11	0.37	< 0.1	0.80	< 0.05	584	< 2	< 1	0.380	0.75
5	7578	6.4	< 0.3	2.73	178	7.05	< 0.01	2.0	14.2	0.95	0.390	< 0.05	1.24	< 0.1	0.64	< 0.05	2760	< 2	26	0.470	1.59
	7579	6.5	< 0.3	2.70	106	9.06	0.48	1.7	10.0	< 0.05	0.270	0.11	0.50	< 0.1	0.86	0.57	767	< 2	15	0.540	0.92
	7580	4.4	< 0.3	2.36	167	8.35	0.69	5.6	8.4	0.78	0.300	0.30	0.65	< 0.1	0.92	< 0.05	825	< 2	8	0.590	1.02
	7581 = 7740	8.8 6.5	< 0.3	2.62	105	8.17	0.27	2.8	7.4	< 0.05	0.290	0.18	0.42	< 0.1	1.00	< 0.05	628	< 2	< 1	0.560	0.91
	7582	7.9	< 0.3	2.57	95	8.42	0.72	2.1	7.2	< 0.05	0.290	0.25	0.32	< 0.1	1.21	0.24	863	< 2	7	0.550	0.96
	7583	4.1	< 0.3	1.99	83	11.20	1.67	3.5	3.7	< 0.05	0.240	0.19	< 0.05	< 0.1	0.74	< 0.05	311	< 2	< 1	0.410	0.66
	7584	3.6	< 0.3	2.22	150	9.70	0.66	2.7	7.3	0.57	0.240	0.14	0.40	< 0.1	0.73	< 0.05	575	< 2	8	0.490	0.76
2	7585	2.9	< 0.3	1.09	78	8.02	0.60	< 0.1	4.7	< 0.05	0.200	< 0.05	0.37	< 0.1	0.88	< 0.05	977	< 2	< 1	0.320	0.81
2	7586	3.3	< 0.3	1.97	198	8.61	0.71	4.4	10.9	1.81	0.410	0.19	0.75	< 0.1	0.44	0.54	2100	< 2	8	0.480	1.52
	7587	1.5	< 0.3	2.00	60	8.58	0.79	1.2	4.3	< 0.05	0.180	0.22	0.32	< 0.1	1.00	< 0.05	379	< 2	< 1	0.540	0.63
	7588	1.2	< 0.3	1.45	39	10.40	1.22	1.5	4.7	< 0.05	0.170	0.21	0.25	< 0.1	0.70	< 0.05	262	< 2	< 1	0.230	0.54
	7589	2.2	< 0.3	1.21	88	9.18	0.59	0.6	4.9	< 0.05	0.150	0.07	< 0.05	< 0.1	0.82	< 0.05	287	< 2	< 1	0.240	0.47
	7590	3.4	< 0.3	1.90	< 5	11.10	0.68	1.0	4.8	< 0.05	0.130	0.16	0.34	< 0.1	0.69	< 0.05	332	< 2	< 1	0.370	0.53
	7591 M at 30 cm	< 0.1	< 0.3	1.28	136	19.80	2.33	2.1	12.6	2.02	0.560	< 0.05	0.54	< 0.1	0.55	0.23	840	< 2	< 1	0.230	1.84
	7592	1.3	< 0.3	1.88	81	15.40	0.69	1.1	4.3	< 0.05	0.190	0.13	0.28	< 0.1	0.72	< 0.05	396	< 2	< 1	0.390	0.64
	7593	2.7	< 0.3	2.07	62	10.10	0.60	0.7	5.2	0.49	0.160	0.23	0.21	< 0.1	0.68	< 0.05	410	< 2	< 1	0.460	0.61
	7594	4.4	< 0.3	1.28	80	9.76	< 0.01	1.4	5.7	< 0.05	0.160	0.17	0.29	< 0.1	0.78	< 0.05	441	< 2	8	0.300	0.60
	7595	1.3	< 0.3	0.99	90	9.32	0.30	1.5	3.5	0.53	0.130	< 0.05	0.25	< 0.1	1.03	< 0.05	350	< 2	9	0.320	0.49
	7596 contamin.?	~~199.0~~ 6.6	< 0.3	0.94	63	10.50	0.34	0.7	4.9	< 0.05	0.160	< 0.05	0.30	< 0.1	0.91	< 0.05	416	< 2	7	0.290	0.57
	7597 M at 50 cm	< 0.1	< 0.3	0.68	49	15.40	2.65	1.9	5.7	< 0.05	0.450	< 0.05	0.28	< 0.1	0.83	0.16	231	< 2	< 1	0.120	1.01
	7598 M at 40 cm	< 0.1	< 0.3	1.19	< 5	13.20	2.36	2.4	10.9	< 0.05	0.440	< 0.05	0.26	< 0.1	0.68	0.46	310	< 2	< 1	0.240	1.55
	7599 M at 40 cm	< 0.1	< 0.3	1.19	90	12.10	2.31	1.5	16.0	< 0.05	0.650	0.16	0.51	< 0.1	0.52	0.14	834	< 2	< 1	0.160	2.13
	7600 OREAS 45 P	35.5	< 0.3	11.30	387	10.90	< 0.01	109.0	1130.0	2.19	18.400	< 0.05	6.60	< 0.1	< 0.01	< 0.05 1.48	690	< 2 385	13	0.860	69.10

Results **Activation Laboratories Ltd.** **Report: A18-11450**

Vol.% Sand or θ	Analyte Symbol		Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Lu	Yb	Mass	✱ = swamp with trees
	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	OTHER OVERBURDEN
1	7571		< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	160	5.40	7.5	5.8	0.600	< 0.05	< 0.1	< 0.001	0.200	2.85	
1	7572		< 0.1	< 100	< 0.05	0.4	< 0.01	< 0.05	85	6.49	6.8	5.5	0.540	0.07	< 0.1	0.020	0.160	2.89	– 25 cm humus on clay
3	7573		< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	89	2.15	5.1	< 0.3	0.230	< 0.05	< 0.1	0.010	0.180	2.78	– 10 cm " on silt
2	7574	KH at 5-10 cm	< 0.1	< 100	< 0.05	4.3	1.23	< 0.05	41	28.80	54.7	19.7	4.500	0.80	2.3	0.900	5.890	3.20	black earth along fractures
1	7575	125-250 μm	< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	73	3.69	6.2	3.0	0.420	0.09	< 0.1	0.030	0.330	2.73	on bare tonalite, also 7738.
	7576	= 7739	< 0.1	< 100	< 0.05	0.7	0.32	< 0.05	70	2.39	5.3	< 0.3	0.550	0.11	< 0.1	0.130	1.020	2.69	
	7577		< 0.1	< 100	< 0.05	0.7	< 0.01	< 0.05	56	4.88	6.9	5.5	0.600	0.13	< 0.1	0.060	0.430	2.79	– 20 cm humus on fine sand
5	7578		0.3	< 100	< 0.05	1.1	0.27	< 0.05	56	4.84	7.9	3.1	0.520	0.16	< 0.1	0.040	0.340	3.11	– K on fine sand
	7579		< 0.1	< 100	< 0.05	0.7	0.15	< 0.05	51	4.96	8.7	7.0	0.610	0.14	< 0.1	0.040	0.380	2.86	– K " " "
	7580		1.3	< 100	< 0.05	0.8	< 0.01	< 0.05	168	4.14	6.5	6.8	0.410	0.09	< 0.1	0.040	0.210	2.99	
	7581	= 7740	< 0.1	< 100	< 0.05	0.8	0.87	< 0.05	90	3.12	4.8	1.5	0.300	< 0.05	< 0.1	0.040	0.240	2.74	
	7582		< 0.1	< 100	< 0.05	0.9	< 0.01	< 0.05	114	2.93	4.6	3.8	0.330	0.11	< 0.1	0.030	0.180	2.98	– 20 cm humus on silt
	7583		< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	173	4.88	8.9	5.3	0.610	0.10	< 0.1	0.080	0.320	2.96	– 20 cm " " "
	7584		< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	129	2.43	4.1	< 0.3	0.280	< 0.05	< 0.1	0.030	0.170	2.84	– 10 cm " on rock or sand
2	7585		< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	87	2.25	4.0	< 0.3	0.260	< 0.05	< 0.1	0.020	0.150	2.81	
2	7586		< 0.1	200	< 0.05	1.0	< 0.01	< 0.05	73	5.18	9.3	7.0	0.630	0.12	< 0.1	0.060	0.300	3.05	
	7587		< 0.1	< 100	< 0.05	0.7	< 0.01	< 0.05	71	1.79	3.4	< 0.3	0.230	< 0.05	< 0.1	0.010	0.130	2.99	– 10 cm humus on rock
	7588		< 0.1	< 100	< 0.05	0.7	< 0.01	< 0.05	43	4.61	7.4	4.1	0.450	0.09	< 0.1	< 0.001	0.130	2.97	– 40 cm humus on silt
	7589		< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	78	2.31	3.7	< 0.3	0.230	0.06	< 0.1	< 0.001	0.100	2.85	– 20-40 cm " silt or sand
	7590		< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	78	2.09	5.5	< 0.3	0.220	0.07	< 0.1	0.010	0.130	2.76	– 20 cm humus on clay
	7591	M at 30 cm	2.4	< 100	< 0.05	2.1	0.81	< 0.05	< 2	9.22	15.2	10.0	1.070	0.29	< 0.1	0.080	0.420	3.70	– clay top at 50 cm
	7592		< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	90	2.51	3.6	3.4	0.280	< 0.05	< 0.1	0.030	0.100	2.88	
	7593		< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	96	1.86	3.3	< 0.3	0.230	0.08	< 0.1	< 0.001	0.130	2.94	– 10 cm humus on rock or silt
	7594		< 0.1	< 100	< 0.05	0.4	< 0.01	< 0.05	76	1.86	3.6	< 0.3	0.240	0.06	< 0.1	0.020	0.160	2.71	
	7595		< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	84	1.52	2.3	< 0.3	0.170	< 0.05	< 0.1	< 0.001	0.060	2.85	– 10 cm humus on rock
	7596		< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	79	1.54	4.1	< 0.3	0.200	< 0.05	< 0.1	< 0.001	< 0.005	2.85	– 40 cm M on clay
	7597	M at 50 cm	< 0.1	< 100	< 0.05	1.0	0.74	< 0.05	27	3.17	5.0	5.1	0.460	0.14	< 0.1	0.070	0.370	3.05	– clay top at 70 cm
	7598	M at 40 cm	< 0.1	< 100	< 0.05	1.4	1.58	< 0.05	17	8.80	13.4	10.8	1.050	0.24	0.3	0.050	0.570	3.18	– top sand-clay at 60 cm ✱
	7599	M at 40 cm	< 0.1	100	< 0.05	2.6	2.84	< 0.05	31	13.80	20.4	10.7	1.350	0.32	< 0.1	0.090	0.560	3.46	– clay top at 60 cm ✱
	7600	OREAS 45P	~~< 0.1~~	~~< 100~~	~~< 0.05~~	~~8.6~~	~~1.81~~	~~< 0.05~~	~~152~~	~~25.60~~	~~50.5~~	~~17.1~~	~~3.480~~	~~1.50~~	~~< 0.1~~	~~0.350~~	~~2.330~~	~~8.98~~	STANDARD

Quality Control **Activation Laboratories Ltd.** **Report: A18-11450**

Analyte Symbol	Au	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Mo	Na	Ni	Rb	Sb	Sc	Sr	Ta	Th	U
Unit Symbol	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.01	5	0.01	0.01	0.1	0.3	0.05	0.005	0.05	0.05	1	2	1	0.005	0.01	100	0.05	0.1	0.01
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
STSD-1 Meas		21.90	600	38.10	2.72	17.1	63.8	1.71	4.480	5.81	2.09	10800	< 2	29	3.140	13.30	< 100	< 0.05	3.5	7.61
STSD-1 Cert		23.00	630	40.00	2.60	17.0	67.0	1.80	4.700	6.10	2.00	13300	24	30	3.300	14.00	170	0.40	3.7	8.00
Au 30ppb Meas	29.6																			
Au 30ppb Cert	30.0																			

Quality Control **Activation Laboratories Ltd.** **Report: A18-11450**

Analyte Symbol	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Lu	Yb
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	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
STSD-1 Meas	< 0.05	186	28.60	48.5	27.9	5.710	1.67	1.1	0.630	3.810
STSD-1 Cert	2.00	178	30.00	51.0	28.0	6.000	1.60	1.2	0.600	4.000
Au 30ppb Meas										
Au 30ppb Cert										

Quality Analysis ... Actlabs **Innovative Technologies**

Date Submitted:	29-Oct-18
Invoice No.:	A18-16056
Invoice Date:	20-Nov-18
Your Reference:	ROB-NA3

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

ATTN: Hermann Daxl

CERTIFICATE OF ANALYSIS

41 ~~40~~ Vegetation samples were submitted for analysis. Samples 7701 - 7735, also repeats, ROBB Tp. decayed vegetation in ~7 cm^3 vials (medium)

The following analytical package(s) were requested: Code 2B-~~15~~g Vegetation INAA(INAAGEO) neutron activation see mass double irradiation time

REPORT **A18-16056**

Notes:

Footnote: INAA data may be suppressed due to high concentrations of some analytes.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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Decayed vegetation (K) sieved < 250 µm from 0-6 cm depth - except 7725 and dilution as marked in volume %.

Results **Activation Laboratories Ltd.** **Report: A18-16056**

by neutron activation – Code 2B vegetation – medium vials (~7 cm^3) – double 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
7701		10.4	< 0.3	2.62	40	15.20	1.09	0.8	7.4	< 0.05	0.180	0.20	< 0.05	< 0.1	1.78	< 0.05	505	< 2	< 1	0.250	0.56
7702		5.5	< 0.3	3.01	89	12.20	1.39	1.9	< 0.3	< 0.05	0.270	0.14	0.35	< 0.1	1.77	< 0.05	818	< 2	12	0.400	0.79
7703		10.6	< 0.3	2.17	71	12.10	0.47	2.6	13.1	< 0.05	0.280	0.15	0.50	< 0.1	1.50	< 0.05	737	< 2	< 1	0.300	0.72
7704		12.9	< 0.3	4.04	< 5	13.90	< 0.01	2.3	< 0.3	< 0.05	0.320	0.10	0.38	< 0.1	1.84	< 0.05	948	< 2	< 1	0.520	0.95
7705		13.9	< 0.3	3.97	100	10.80	1.74	4.0	11.7	1.29	0.370	0.15	0.39	< 0.1	1.31	< 0.05	988	< 2	8	0.470	1.04
7706		6.8	< 0.3	3.06	67	8.31	0.33	1.8	5.2	< 0.05	0.260	0.12	0.68	< 0.1	1.82	< 0.05	1280	< 2	< 1	0.390	0.92
7707		5.4	< 0.3	3.16	106	11.10	0.51	2.9	< 0.3	< 0.05	0.250	0.22	0.45	< 0.1	1.43	< 0.05	1160	< 2	< 1	0.320	0.75
7708		4.1	< 0.3	3.13	56	12.60	1.91	2.3	4.1	< 0.05	0.310	0.57	0.42	< 0.1	1.62	< 0.05	748	< 2	15	0.440	0.75
7709		3.5	< 0.3	4.13	47	15.90	0.35	4.7	8.3	< 0.05	0.400	0.16	< 0.05	< 0.1	1.69	< 0.05	772	< 2	< 1	0.390	1.19
7710		10.6	< 0.3	2.45	81	13.10	0.30	2.8	4.0	1.77	0.240	0.12	0.27	< 0.1	1.87	< 0.05	686	< 2	< 1	0.330	0.70
7711		10.1	< 0.3	< 0.01	40	12.40	1.06	2.1	11.7	< 0.05	0.240	0.15	0.34	< 0.1	1.68	< 0.05	413	< 2	< 1	0.280	0.49
7712		4.3	< 0.3	3.48	< 5	13.30	< 0.01	< 0.1	< 0.3	< 0.05	0.240	0.11	< 0.05	< 0.1	1.77	< 0.05	558	< 2	11	0.270	0.56
7713		7.1	< 0.3	3.22	47	14.10	0.74	1.2	6.5	< 0.05	0.220	0.17	< 0.05	< 0.1	1.75	0.99	404	< 2	< 1	0.250	0.51
7714	1% sand	3.3	< 0.3	2.20	< 5	14.60	1.42	1.3	< 0.3	< 0.05	0.210	0.12	< 0.05	< 0.1	1.69	< 0.05	444	< 2	5	0.260	0.54
7715	1% sand	5.1	< 0.3	1.71	< 5	15.70	2.23	0.9	4.4	< 0.05	0.210	0.32	0.15	< 0.1	1.75	< 0.05	460	< 2	< 1	0.260	0.55
7716	3% sand-silt	10.8	< 0.3	4.29	90	15.90	0.49	1.6	7.1	< 0.05	0.500	0.17	0.83	< 0.1	1.74	< 0.05	2530	< 2	< 1	0.430	1.08
7717		4.3	< 0.3	3.58	< 5	16.70	< 0.01	1.8	10.4	< 0.05	0.290	0.15	0.73	< 0.1	1.48	< 0.05	1050	< 2	< 1	0.410	0.97
7718		2.7	< 0.3	2.13	41	16.10	1.38	1.4	3.6	< 0.05	0.300	0.23	< 0.05	< 0.1	1.75	< 0.05	509	< 2	< 1	0.270	0.58
7719		22.5	< 0.3	1.23	34	15.90	1.30	< 0.1	< 0.3	< 0.05	0.230	0.20	< 0.05	< 0.1	1.71	< 0.05	479	< 2	< 1	0.100	0.51
7720		9.1	< 0.3	3.00	138	12.00	0.49	2.5	< 0.3	2.53	0.400	0.23	0.45	< 0.1	1.80	< 0.05	1130	< 2	17	0.390	0.97
7721		6.0	< 0.3	< 0.01	138	11.20	0.81	4.8	< 0.3	1.29	0.340	0.25	0.83	< 0.1	1.49	< 0.05	1270	< 2	15	0.180	0.96
7722		5.0	< 0.3	4.36	115	13.20	1.85	6.2	13.7	1.06	0.390	0.22	0.41	< 0.1	1.66	< 0.05	978	< 2	15	0.510	0.95
7723		9.1	< 0.3	3.94	< 5	18.40	1.23	< 0.1	< 0.3	< 0.05	0.260	0.15	< 0.05	< 0.1	1.71	< 0.05	580	< 2	8	0.320	0.66
7724		3.0	< 0.3	< 0.01	< 5	25.10	0.31	1.3	< 0.3	< 0.05	0.230	0.32	< 0.05	< 0.1	1.58	< 0.05	520	< 2	< 1	0.250	0.58
7725	black muck at 60 cm	< 0.1	< 0.3	0.85	49	14.40	2.73	1.8	12.7	< 0.05	0.730	0.21	< 0.05	< 0.1	1.61	< 0.05	713	< 2	< 1	0.080	3.21
7726	K	3.2	< 0.3	< 0.01	46	15.30	0.47	1.6	2.6	< 0.05	0.300	0.20	0.26	< 0.1	1.57	< 0.05	567	< 2	< 1	0.370	0.66
7727	4% sand	2.0	< 0.3	< 0.01	124	9.49	0.59	3.9	12.2	0.84	0.420	< 0.05	0.92	< 0.1	1.67	2.03	2340	< 2	25	0.130	1.41
7728		< 0.1	< 0.3	< 0.01	56	11.60	0.66	2.3	4.1	< 0.05	0.260	0.18	< 0.05	< 0.1	1.39	< 0.05	590	< 2	6	0.280	0.67
7729		2.9	< 0.3	3.06	< 5	10.80	0.84	1.8	7.5	< 0.05	0.240	0.09	< 0.05	< 0.1	1.78	< 0.05	747	< 2	< 1	0.270	0.73
7730		2.7	< 0.3	2.85	< 5	17.10	1.85	< 0.1	< 0.3	< 0.05	0.260	0.21	0.27	< 0.1	1.52	< 0.05	419	< 2	9	0.360	0.56

Results **Activation Laboratories Ltd.** **Report: A18-16056**

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
7731	4.6	< 0.3	1.99	40	13.70	1.68	1.6	5.1	< 0.05	0.170	0.42	0.12	< 0.1	1.05	< 0.05	494	< 2	< 1	0.240	0.56
7732 1% sand	8.8	< 0.3	1.17	118	10.40	0.94	4.3	9.8	0.71	0.330	0.12	0.69	< 0.1	1.27	< 0.05	1850	< 2	< 1	0.340	1.26
7733	5.3	< 0.3	0.69	73	11.00	< 0.01	2.1	5.7	0.60	0.220	0.14	< 0.05	< 0.1	1.08	< 0.05	681	< 2	< 1	0.270	0.82
7734	10.1	< 0.3	1.67	86	10.50	1.46	1.1	3.2	< 0.05	0.120	0.10	0.10	< 0.1	1.22	< 0.05	430	< 2	< 1	0.270	0.52
7735	2.0	< 0.3	0.54	43	11.70	0.58	1.2	1.8	< 0.05	0.140	0.14	0.18	< 0.1	1.32	< 0.05	419	< 2	< 1	0.220	0.58
7736 = 7554	3.7	< 0.3	1.36	< 5	16.20	2.98	1.4	4.8	< 0.05	0.280	0.47	< 0.05	< 0.1	1.24	< 0.05	443	< 2	< 1	0.260	0.74
7737 2nd rub 7596	4.4	< 0.3	0.39	50	9.94	0.35	< 0.1	2.2	< 0.05	0.130	< 0.05	< 0.05	< 0.1	1.12	< 0.05	439	< 2	< 1	0.230	0.50
<125 7738 30% silt of 7574	6.6	< 0.3	6.62	189	17.60	< 0.01	2.3	30.6	< 0.05	1.130	< 0.05	16.70	< 0.1	0.80	5.62	11000	< 2	< 1	0.970	2.71
7739 = 7575	6.5	< 0.3	3.43	51	12.60	0.33	1.8	5.1	< 0.05	0.270	0.17	0.22	< 0.1	1.39	< 0.05	911	< 2	< 1	0.450	0.98
7740 = 7581	6.5	< 0.3	2.07	49	9.06	1.33	3.1	9.0	< 0.05	0.300	0.10	0.14	< 0.1	1.44	< 0.05	849	< 2	< 1	0.620	1.03
7741 OREAS 45 P	49.8	< 0.3	9.12	102	9.67	< 0.01	112.0	998.0	1.69	15.800	< 0.05	6.19	< 0.1	0.14	< 0.05	815	1030	< 1	0.630	62.50

7738 versus 7574, 6.6 vs. 9.2 ppb Au, could be due to dilution from local tonalite silt. Gold is only in the organics.

No gold in black muck even when gold in decayed vegetation in swamps, M vs. K:
7553 nil versus 7554 of 13.3 and 7736 of 3.7 ppb Au.
7599 nil versus 7701 of 10.4, and 7725 nil versus 7726 of 3.2 ppb Au.
Black muck in swamps does not show gold also as per other claims, but overlying K (0-6cm) will.

Results **Activation Laboratories Ltd.** **Report: A18-16056**

* = swamp with trees

OTHER OVERBURDEN

Analyte Symbol	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Lu	Yb	Mass	Notes
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	
7701	< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	111	1.86	4.1	3.4	0.220	< 0.05	< 0.1	< 0.001	< 0.005	2.76	
7702	< 0.1	< 100	< 0.05	0.9	0.68	< 0.05	78	2.73	4.1	< 0.3	0.280	< 0.05	< 0.1	< 0.001	0.140	2.83	
7703	< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	77	2.26	3.6	< 0.3	0.240	< 0.05	< 0.1	< 0.001	0.150	2.87	
7704	< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	64	2.58	4.5	< 0.3	0.370	< 0.05	< 0.1	0.020	0.130	2.71	– at Beep Mat conductor
7705	< 0.1	< 100	< 0.05	1.1	< 0.01	< 0.05	116	3.50	5.4	3.3	0.550	< 0.05	< 0.1	< 0.001	0.280	2.91	
7706	< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	140	2.59	3.4	< 0.3	0.340	< 0.05	< 0.1	0.040	0.240	2.82	
7707	< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	133	2.20	4.5	< 0.3	0.280	< 0.05	< 0.1	< 0.001	0.190	2.95	– sand at 5>50 cm, flat
7708	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	70	2.37	4.9	< 0.3	0.310	< 0.05	< 0.1	< 0.001	0.110	2.83	
7709	< 0.1	< 100	< 0.05	1.0	< 0.01	< 0.05	66	6.65	9.1	5.5	1.080	0.32	< 0.1	0.030	0.340	2.88	
7710	< 0.1	< 100	< 0.05	0.7	< 0.01	< 0.05	85	2.29	3.5	< 0.3	0.300	< 0.05	< 0.1	< 0.001	0.180	2.86	
7711	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	82	2.61	4.0	< 0.3	0.280	< 0.05	< 0.1	< 0.001	0.130	3.01	
7712	< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	52	1.59	1.9	2.7	0.220	< 0.05	< 0.1	< 0.001	0.060	2.76	– sand at 15 cm
7713	< 0.1	< 100	< 0.05	0.4	< 0.01	< 0.05	68	1.47	3.2	< 0.3	0.180	< 0.05	< 0.1	< 0.001	< 0.005	2.71	– clay at 40 cm, swampy.
7714 1% sand	< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	70	1.59	1.9	4.7	0.240	< 0.05	< 0.1	< 0.001	< 0.005	2.85	– clay at 20 or 40 cm, "
7715 1% sand	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	98	1.51	1.9	< 0.3	0.230	< 0.05	< 0.1	< 0.001	< 0.005	2.94	– clay at 70 cm, *
7716 3% sand-silt	< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	93	3.56	6.7	7.5	0.520	< 0.05	< 0.1	0.010	0.200	2.78	
7717	< 0.1	< 100	< 0.05	0.7	0.31	< 0.05	81	2.56	3.7	< 0.3	0.330	0.15	< 0.1	0.010	0.250	2.80	– on outcrops
7718	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	80	1.72	2.8	< 0.3	0.230	< 0.05	< 0.1	< 0.001	0.090	2.62	– clay at 70 cm, *
7719	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	65	1.47	2.5	2.4	0.210	< 0.05	< 0.1	< 0.001	< 0.005	2.70	– clay at 30 cm
7720	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	114	3.00	4.4	4.0	0.380	< 0.05	< 0.1	0.010	0.260	2.84	– on bedrock
7721	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	149	5.09	5.4	3.8	0.520	< 0.05	< 0.1	0.010	0.190	2.99	
7722	< 0.1	< 100	< 0.05	0.4	< 0.01	< 0.05	162	3.86	5.0	< 0.3	0.450	< 0.05	< 0.1	0.020	0.160	2.85	– on bedrock
7723	< 0.1	< 100	< 0.05	0.4	< 0.01	< 0.05	76	1.66	3.6	< 0.3	0.250	< 0.05	< 0.1	< 0.001	0.080	2.72	– greenish clay top at 80 cm, *
7724	< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	87	1.65	3.7	2.3	0.240	< 0.05	< 0.1	< 0.001	0.130	2.65	– " " " at 90 cm, *
7725 black muck at 60 cm	< 0.1	< 100	< 0.05	2.2	0.77	< 0.05	< 2	12.90	23.3	22.8	2.060	0.53	< 0.1	0.040	0.610	3.32	– beige clay top at 70 cm, *
7726 K	< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	64	1.81	3.0	< 0.3	0.280	< 0.05	< 0.1	0.030	0.170	2.83	– from 10 m radius around 7725
7727 4% sand	< 0.1	< 100	< 0.05	1.3	< 0.01	< 0.05	82	4.35	9.1	< 0.3	0.610	< 0.05	< 0.1	0.010	0.190	2.91	– on 15 cm sand on bedrock
7728	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	118	2.22	4.3	< 0.3	0.290	< 0.05	< 0.1	< 0.001	< 0.005	3.02	– on sand or rock
7729	< 0.1	< 100	< 0.05	0.3	< 0.01	< 0.05	99	2.04	5.0	< 0.3	0.250	< 0.05	< 0.1	< 0.001	0.110	2.84	– on sand or rock
7730	< 0.1	< 100	< 0.05	0.4	< 0.01	< 0.05	56	1.72	2.9	< 0.3	0.240	< 0.05	< 0.1	< 0.001	0.080	2.86	– cedar swamp to rock at 10-50 cm

Results **Activation Laboratories Ltd.** **Report: A18-16056**

Analyte Symbol	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Lu	Yb	Mass	✱ = swamp with trees
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	OTHER OVERBURDEN
7731	< 0.1	< 100	< 0.05	0.5	< 0.01	< 0.05	70	1.74	1.8	< 0.3	0.220	< 0.05	< 0.1	0.020	0.110	2.86	– sand, clay, or rock at 20-50 cm, ✱
7732 1% sand	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	121	4.15	7.3	7.0	0.420	< 0.05	< 0.1	0.040	0.210	2.86	– rock at 10 cm
7733	< 0.1	< 100	< 0.05	0.6	< 0.01	< 0.05	124	2.46	5.2	< 0.3	0.300	< 0.05	< 0.1	0.010	0.130	2.85	– rock at 10 cm
7734	< 0.1	< 100	< 0.05	0.5	< 0.01	< 0.05	161	1.95	1.4	< 0.3	0.190	< 0.05	< 0.1	< 0.001	0.090	2.97	– boulders at 20 cm
7735	< 0.1	< 100	< 0.05	0.5	< 0.01	< 0.05	94	2.65	7.1	< 0.3	0.240	< 0.05	< 0.1	0.010	0.080	2.72	– clay or rock at 20 cm
7736 = 7554	< 0.1	< 100	< 0.05	0.5	< 0.01	< 0.05	39	5.16	5.9	4.8	0.610 ✓	0.12	< 0.1	< 0.001	0.310	2.91 ✓	
7737 2nd rub 7596	< 0.1	< 100	< 0.05	0.2	< 0.01	< 0.05	105	1.46	2.7	< 0.3	0.180	< 0.05	< 0.1	0.010	0.080	2.95	
<125 7738 30% silt of 7574	3.8	< 100	< 0.05	5.5	3.64 (1.23)	< 0.05	< 2	25.90 ✓	63.0 ✓	19.4 ✓	4.880 ✓	1.47	5.4 (2.3)	1.630	12.600 (5.89)	4.11	– Local silt of tonalite outcrop.
7739 = 7575	< 0.1	< 100	< 0.05	0.8	< 0.01	< 0.05	78 ✓	3.36 ✓	6.9 ✓	< 0.3	0.440 ✓	0.15	< 0.1	0.040	0.360 ✓	2.75 ✓	
7740 = 7581	< 0.1	< 100	< 0.05	0.8	0.36	< 0.05	75 ✓	2.88 ✓	4.7 ✓	2.7	0.390	0.06	< 0.1	< 0.001	0.220 ✓	2.71 ✓	
7741 OREAS 45 P	< 0.1	< 100	< 0.05	9.1	0.74	< 0.05	129	24.40	44.5	17.1	3.690	1.76	< 0.1	0.270	1.770	8.58	= Standard ✓

7738 Yb seems to confirm tonalite silt, also Lu, Hf, Na : Ca. See rocks; RB1 – RB2 have no gold.
Its 125-250 fraction is 7574, swirled to only 2% sand, had 9.2 ppb Au, therefore gold is only in organics, widely spread.
Conversely, it had 5.89 ppm Yb so that this silt would have 4 times as much ytterbium as the organics.
The sample is from thin humus along cracks of the flat bare tonalite. Panning the extracted pinkish brown sand yielded gray plagioclase, 5% black mafics, a trace of magnetite, but no visible gold.

Quality Control   Activation Laboratories Ltd.   Report: A18-16056

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
OREAS 45e (INAA) Meas	50.5			258		< 0.01	56.2	1040.0	1.14	25.300		6.01		0.72	3.09	660	481	20		87.60
OREAS 45e (INAA) Cert	53.0			246		0.06	59.0	1070.0	1.20	24.200		6.31		0.34	2.95	580	459	21		91.00
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: A18-16056

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
OREAS 45e (INAA) Meas		< 100	< 0.05	12.5	2.42	< 0.05		10.60	22.4	9.9	2.030	0.52	< 0.1	0.240	1.410	
OREAS 45e (INAA) Cert		16	0.63	13.0	2.54	1.06		11.10	23.5	9.5	2.130	0.55	0.4	0.230	1.480	
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 ... Actlabs *Innovative Technologies*

Date Submitted:	23-Apr-19
Invoice No.:	A19-05763
Invoice Date:	30-Apr-19
Your Reference:	R1-50

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

ATTN: Hermann Daxl

CERTIFICATE OF ANALYSIS

50 Vegetation samples were submitted for analysis. sieved < 250 μm

The following analytical package(s) were requested: Code UT-2-0.5g Aqua Regia ICP-ICP/MS
ULTRATRACE 2 - Aqua Regia - 0.5 g

REPORT **A19-05763**

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 Eseme , Ph.D.
Quality Control

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Decayed vegetation 0-6 cm depth (K) except M as marked
all < 250 μm

Results — Activation Laboratories Ltd.

ULTRATRACE 2 – aqua regia – 0.5 g
Report: A19-05763 (see also neutron activation)

Analyte Symbol (at cm ↓)	Li	Be	B	Na	Mg	Al	P	S	K	Ca	V	Cr	Ti	Mn	Fe	Co	Ni	Cu	Zn	Ga	* Zn by INAA
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	0.2	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	
R1 OREAS 45P	9.4	0.6	7	0.029	0.15	3.72	0.037	0.026	0.05	0.24	182	818✓	0.27	1110	17.30	111.0✓	317.0✓	740.0	126.0	16.50	129
R2 = 7541	1.6	0.2	15	0.021	0.16	0.16	0.123	0.199	0.07	2.02	5	6	< 0.01	836	0.24	2.2	5.2	22.3	262.0	0.45	152
R3 = 7544	2.7	0.2	9	0.020	0.16	0.29	0.085	0.151	0.06	1.42	11	9	0.03	612	0.43	2.9	6.1	23.9	107.0	1.43	98
R4 = 7547 M 95 cm	7.4	0.5	13	0.025	0.32	0.91	0.084	0.355	0.06	2.85	23	21	0.03	274	0.80	3.0	14.4	36.0	40.8	1.86	42
R5 = 7549 100 cm	0.4	0.1	12	0.021	0.12	0.06	0.102	0.166	0.05	1.44	2	4	< 0.01	385	0.10	0.7	2.1	20.3	211.0	0.05	159
R6 = 7552 M 25% C	19.9	1.0	11	0.031	0.48	2.16	0.097	0.317	0.08	2.29	43	47	0.05	1170	1.45	8.0	25.6	63.3	53.2	4.05	56
R7 = 7553 M 100 cm	3.3	0.5	10	0.022	0.29	0.70	0.082	0.448	0.02	3.96	17	16	0.02	520	0.52	2.6	10.5	55.3	22.6	1.04	0
R8 = 7555 M 90 cm	0.5	0.3	18	0.028	0.25	0.21	0.052	0.341	0.01	4.86	4	6	< 0.01	151	0.22	0.7	5.3	18.8	21.7	0.35	16
R9 = 7556 M 90 cm	0.5	0.2	13	0.022	0.25	0.19	0.034	0.255	< 0.01	4.23	3	6	< 0.01	244	0.24	0.9	5.7	13.3	16.2	0.31	0
R10 = 7558	1.6	0.2	27	0.023	0.22	0.14	0.116	0.201	0.07	2.51	5	6	< 0.01	809	0.22	2.7	5.6	31.2	266.0	0.17	166
R11 = 7559 M 100 cm	0.4	0.3	17	0.023	0.24	0.18	0.036	0.276	< 0.01	4.14	6	5	< 0.01	179	0.34	1.2	4.6	19.8	49.1	0.19	29
R12 = 7560	5.6	0.2	19	0.023	0.27	0.42	0.131	0.178	0.09	2.26	12	13	0.02	983	0.57	5.2	9.0	25.0	259.0	1.21	137
R13 = 7562	0.5	< 0.1	10	0.021	0.17	0.08	0.092	0.188	0.04	1.59	3	4	< 0.01	454	0.13	1.6	3.0	21.4	123.0	0.22	84
R14 = 7563	1.3	0.2	10	0.019	0.17	0.21	0.105	0.174	0.06	1.62	6	7	< 0.01	303	0.29	3.3	4.7	24.8	164.0	0.69	122
R15 = 7565	0.4	< 0.1	11	0.020	0.13	0.06	0.110	0.187	0.05	1.46	3	4	< 0.01	249	0.11	1.2	2.8	22.2	246.0	0.14	148
R16 = 7567	2.6	0.2	9	0.020	0.16	0.30	0.126	0.188	0.06	1.08	9	8	0.01	495	0.42	4.4	5.2	23.8	78.9	1.10	58
R17 = 7571	1.6	0.2	15	0.021	0.20	0.15	0.116	0.209	0.06	2.25	4	6	< 0.01	533	0.22	3.0	4.7	28.3	211.0	0.41	160
R18 = 7573	0.4	0.1	5	0.020	0.07	0.08	0.087	0.159	0.06	0.58	3	4	< 0.01	274	0.15	0.8	3.9	25.8	103.0	0.22	89
R19 = 7579	0.8	0.1	5	0.021	0.07	0.14	0.093	0.155	0.06	0.69	5	5	< 0.01	557	0.23	1.5	6.2	31.0	87.6	0.37	51
R20 = 7580	1.3	0.1	9	0.022	0.11	0.18	0.141	0.177	0.07	1.13	6	6	< 0.01	2400	0.29	7.0	6.6	29.4	211.0	0.40	168
R21 = 7581 = 7740	0.7	0.1	5	0.021	0.06	0.13	0.111	0.155	0.06	0.52	5	5	< 0.01	472	0.26	2.8	7.8	29.8	98.3	0.42	90
R22 = 7583	0.6	< 0.1	13	0.022	0.09	0.13	0.087	0.187	0.04	2.31	4	4	< 0.01	881	0.20	4.0	4.5	32.5	214.0	0.19	173
R23 = 7588	0.9	0.1	11	0.020	0.17	0.14	0.095	0.198	0.05	1.73	4	5	< 0.01	213	0.19	1.6	4.8	23.5	84.5	0.24	43
R24 = 7589	0.4	< 0.1	8	0.020	0.10	0.08	0.083	0.174	0.05	0.96	3	4	< 0.01	143	0.14	0.6	3.8	25.7	103.0	0.04	78
R25 = 7591 M 30 cm	2.4	0.2	9	0.022	0.32	0.46	0.070	0.231	0.02	3.79	8	11	0.02	187	0.51	2.1	5.8	17.9	22.4	1.24	0
R26 = 7592	0.7	0.1	8	0.021	0.10	0.10	0.074	0.181	0.05	1.00	4	5	< 0.01	146	0.18	0.9	3.9	26.3	117.0	0.29	90
R27 = 7593	0.5	< 0.1	7	0.019	0.09	0.10	0.094	0.176	0.06	0.74	4	5	< 0.01	189	0.17	0.8	4.2	27.6	117.0	0.20	96
R28 = 7597 M 50 cm	0.4	0.1	10	0.023	0.24	0.23	0.050	0.451	< 0.01	3.90	12	6	< 0.01	224	0.46	1.8	5.0	34.2	17.4	0.25	27
R29 = 7598 M 40 cm	1.4	0.3	9	0.024	0.23	0.46	0.068	0.347	0.02	3.35	12	8	< 0.01	146	0.43	2.1	7.4	32.8	15.6	0.77	17
R30 = 7599 M 40 cm	4.0	0.3	12	0.023	0.33	0.51	0.054	0.272	0.03	3.49	19	12	0.02	56	0.66	1.5	8.9	29.5	16.6	1.30	31

Results **Activation Laboratories Ltd.** **Report: A19-05763**

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	Zn
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	0.2	0.1	0.02	by
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	INAA
R31 = 7703	0.5	0.1	5	0.019	0.06	0.10	0.086	0.170	0.05	0.72	4	4	< 0.01	512	0.17	1.5	6.7	27.8	106.0	0.13	77
R32 = 7704	0.6	0.1	5	0.021	0.06	0.11	0.123	0.146	0.06	0.41	4	5	< 0.01	227	0.23	1.2	12.3	33.7	66.1	0.33	64
R33 = 7705	0.7	< 0.1	8	0.018	0.08	0.13	0.130	0.162	0.08	1.34	5	5	< 0.01	1300	0.22	3.3	6.5	23.7	138.0	0.28	116
R34 = 7706	0.6	< 0.1	5	0.021	0.06	0.12	0.119	0.137	0.07	0.59	4	5	< 0.01	834	0.18	1.3	5.1	25.9	168.0	0.26	140
R35 = 7707	0.7	< 0.1	9	0.019	0.08	0.10	0.130	0.175	0.08	1.09	4	5	< 0.01	1780	0.18	1.9	6.1	27.8	208.0	< 0.02	133
R36 = 7709	0.5	0.2	4	0.022	0.06	0.20	0.107	0.205	0.05	0.73	4	5	< 0.01	317	0.32	3.4	6.3	32.4	101.0	0.32	66
R37 = 7711	0.3	< 0.1	7	0.019	0.08	0.06	0.101	0.192	0.04	1.15	3	4	< 0.01	867	0.10	1.2	2.8	22.8	102.0	0.04	82
R38 = 7712	0.3	< 0.1	4	0.023	0.08	0.06	0.084	0.186	0.05	0.52	3	4	< 0.01	225	0.12	0.5	3.1	22.5	82.8	0.16	52
R39 = 7714	0.4	0.1	6	0.021	0.09	0.07	0.074	0.197	0.04	1.20	3	4	< 0.01	174	0.13	0.5	3.1	24.7	92.0	0.20	70
R40 = 7719	0.3	< 0.1	5	0.017	0.06	0.06	0.078	0.160	0.06	0.60	3	4	< 0.01	236	0.12	0.4	3.6	31.8	101.0	0.11	65
R41 = 7720	0.7	< 0.1	7	0.020	0.08	0.13	0.148	0.171	0.07	0.92	4	5	< 0.01	2240	0.20	2.2	6.9	29.0	176.0	< 0.02	114
R42 = 7722	0.7	0.1	8	0.018	0.10	0.13	0.146	0.197	0.07	1.32	4	5	< 0.01	1630	0.20	5.4	6.3	28.7	195.0	0.05	162
R43 = 7723	0.4	< 0.1	6	0.021	0.07	0.06	0.075	0.167	0.04	0.83	3	4	< 0.01	105	0.13	0.4	3.3	26.7	89.4	0.14	76
R44 = 7725 M 60 cm	2.9	0.3	7	0.024	0.27	0.83	0.095	0.253	0.03	3.00	10	11	0.02	21	0.72	1.7	7.6	17.9	10.4	1.70	-0-
R45 = 7727	1.0	< 0.1	6	0.021	0.10	0.16	0.119	0.168	0.06	0.88	5	5	< 0.01	868	0.22	3.8	3.9	19.8	103.0	0.45	82
R46 = 7729	0.4	0.1	5	0.020	0.07	0.09	0.094	0.153	0.06	0.59	3	4	< 0.01	462	0.14	1.1	4.9	23.2	115.0	0.21	99
R47 = 7733	0.5	0.1	5	0.019	0.06	0.14	0.119	0.171	0.07	0.52	4	4	< 0.01	551	0.19	1.8	7.0	27.9	113.0	0.20	124
R48 = 7734	0.3	< 0.1	8	0.017	0.10	0.07	0.089	0.167	0.05	1.22	3	4	< 0.01	510	0.12	0.6	2.8	22.3	191.0	0.03	161
R49 = 7737 (2:7596)	0.3	< 0.1	6	0.021	0.07	0.06	0.080	0.162	0.05	0.75	3	4	< 0.01	256	0.11	0.5	3.1	24.0	113.0	0.09	105
R50 OREAS 45 P	9.4	0.5	7	0.027	0.15	3.70	0.036	0.026	0.06	0.24	177	824	0.25	1070	17.10	110.0	317.0	753.0	134.0 ✓	16.60	112

* Zinc by AR-MS here is generally higher than by INAA which at these levels is less reliable.

Results **Activation Laboratories Ltd.** **Report: A19-05763**

Analyte Symbol at	Ge	As	Se	Rb	Sr	Y	Zr	Sc	Pr	Gd	Dy	Ho	Er	Tm	Nb	Mo	Ag	Cd	In	Sn
Unit Symbol cm	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
R1 OREAS 45 P	< 0.1	4.1 ✓	0.9	8.2	16.9	9.07	23.4	49.9	3.9	2.8	2.6	0.4	1.2	0.1	0.1	1.68	0.264	0.03	0.10	1.83
R2 = 7541	< 0.1	1.7	0.8	4.6	32.5	0.84	0.9	0.4	0.5	0.3	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.53	0.089	1.35	0.03	0.70
R3 = 7544	< 0.1	2.4	1.0	6.5	28.4	1.14	1.2	0.7	0.8	0.4	0.2	< 0.1	0.1	< 0.1	0.2	0.60	0.124	0.78	0.04	0.95
R4 = 7547 M 95	< 0.1	0.6	1.2	6.1	39.2	10.90	6.4	1.5	4.8	2.4	1.9	0.3	1.0	0.1	0.2	1.16	0.089	0.66	< 0.02	0.57
R5 = 7549 100	< 0.1	0.9	0.9	2.9	23.2	0.31	0.3	0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.62	0.038	0.77	0.03	0.51
R6 = 7552 M 25% C	< 0.1	0.4	2.7	10.3	33.8	45.30	6.5	3.5	13.8	10.6	8.2	1.4	4.4	0.5	0.5	3.26	0.098	0.45	0.03	0.69
R7 = 7553 M 100	< 0.1	1.4	2.1	3.0	41.3	20.40	6.7	1.5	4.9	4.0	3.3	0.6	1.7	0.2	0.1	4.99	0.047	0.24	< 0.02	0.40
R8 = 7555 M 90	< 0.1	0.8	1.3	0.9	55.8	3.44	4.0	0.9	0.8	0.6	0.6	0.1	0.3	< 0.1	< 0.1	2.47	0.010	0.16	< 0.02	0.34
R9 = 7556 M 90	< 0.1	0.7	1.0	0.6	56.6	1.63	3.3	0.6	0.5	0.3	0.3	< 0.1	0.2	< 0.1	< 0.1	0.63	0.019	0.16	< 0.02	0.34
R10 = 7558	< 0.1	2.3	1.0	6.1	40.6	0.96	0.9	0.4	0.6	0.3	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.35	0.102	1.23	0.04	0.71
R11 = 7559 M 100	< 0.1	1.2	0.9	0.4	50.4	2.15	2.0	0.4	0.9	0.4	0.4	< 0.1	0.2	< 0.1	< 0.1	0.81	0.040	0.66	< 0.02	0.31
R12 = 7560	< 0.1	1.6	0.7	9.3	44.0	2.30	1.9	0.7	1.4	0.7	0.4	< 0.1	0.2	< 0.1	0.2	0.31	0.089	1.30	0.03	0.78
R13 = 7562	< 0.1	1.4	0.6	3.1	19.2	0.61	0.5	0.2	0.3	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.45	0.045	1.09	0.05	0.70
R14 = 7563	< 0.1	1.7	0.6	5.8	22.0	0.67	0.8	0.5	0.4	0.2	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.57	0.110	1.43	0.04	0.94
R15 = 7565	< 0.1	1.1	0.4	2.3	24.3	0.27	0.2	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.29	0.058	0.87	0.03	0.61
R16 = 7567	< 0.1	2.3	1.1	4.9	22.1	1.17	1.4	0.5	0.7	0.3	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.66	0.126	0.63	0.04	0.96
R17 = 7571	< 0.1	1.8	0.9	4.4	33.2	1.25	0.8	0.2	0.8	0.4	0.3	< 0.1	0.1	< 0.1	< 0.1	0.75	0.115	1.71	0.04	0.74
R18 = 7573	< 0.1	1.8	0.6	3.8	13.4	0.40	0.3	0.2	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.43	0.054	0.81	0.04	0.79
R19 = 7579	< 0.1	2.8	0.8	4.0	14.4	1.99	0.5	0.3	0.7	0.5	0.3	< 0.1	0.2	< 0.1	< 0.1	0.52	0.083	0.71	0.05	1.13
R20 = 7580	< 0.1	2.3	0.8	6.8	22.9	0.81	0.4	0.4	0.5	0.3	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.49	0.135	1.53	0.04	0.97
R21 = 7581 = 7740	< 0.1	1.8	0.5	3.2	7.8	0.88	0.4	0.4	0.3	0.2	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.48	0.155	0.67	0.06	1.21
R22 = 7583	< 0.1	2.5	1.1	2.2	23.6	2.74	0.5	0.4	0.8	0.5	0.5	< 0.1	0.2	< 0.1	< 0.1	0.44	0.103	1.16	0.05	0.87
R23 = 7588	< 0.1	1.3	1.0	4.0	32.8	1.09	0.5	0.3	0.7	0.3	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.38	0.057	0.75	0.03	0.67
R24 = 7589	< 0.1	2.0	0.6	2.2	25.8	0.48	0.4	0.2	0.3	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.34	0.040	0.61	0.05	0.72
R25 = 7591 M 30 cm	< 0.1	1.6	1.7	2.2	45.8	2.91	2.9	0.6	1.5	0.7	0.6	< 0.1	0.3	< 0.1	0.1	0.44	0.073	0.39	< 0.02	0.41
R26 = 7592	< 0.1	1.8	0.8	2.6	25.4	0.57	0.6	0.2	0.3	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	4.43	0.032	0.56	0.04	0.68
R27 = 7593	< 0.1	2.1	0.7	3.3	18.3	0.37	0.4	0.3	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.37	0.069	0.70	0.07	0.95
R28 = 7597 M 50cm	< 0.1	1.0	0.9	0.6	37.2	2.32	2.0	0.6	0.6	0.4	0.4	< 0.1	0.2	< 0.1	< 0.1	0.67	0.041	0.52	< 0.02	0.37
R29 = 7598 M 40 cm	< 0.1	1.1	1.1	1.1	55.8	4.54	3.2	0.9	1.5	0.8	0.8	0.1	0.4	< 0.1	< 0.1	0.55	0.096	0.54	< 0.02	0.40
R30 = 7599 M 40 cm	< 0.1	0.6	0.9	3.2	55.1	4.25	5.4	1.1	2.1	1.0	0.7	0.1	0.4	< 0.1	0.1	0.30	0.066	0.52	< 0.02	0.43

Results **Activation Laboratories Ltd.** **Report: A19-05763**

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
R31 = 7703	< 0.1	2.3	0.4	3.2	19.1	0.40	0.3	0.2	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.35	0.052	0.77	0.05	0.85
R32 = 7704	< 0.1	2.5	1.2	3.5	4.9	0.63	0.4	0.2	0.3	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.41	0.290	0.62	0.07	1.01
R33 = 7705	< 0.1	1.7	0.4	4.8	20.4	1.06	0.3	0.4	0.4	0.3	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.43	0.115	0.76	0.05	1.05
R34 - 7706	< 0.1	1.7	1.0	2.6	7.5	0.50	0.1	0.2	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.33	0.106	0.92	0.05	0.92
R35 - 7707	< 0.1	1.7	0.4	6.1	28.5	0.36	0.2	0.2	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.27	0.109	0.77	0.05	0.75
R36 - 7709	< 0.1	2.7	1.1	3.1	18.8	3.31	0.2	0.2	1.0	0.7	0.7	0.1	0.3	< 0.1	< 0.1	0.43	0.062	1.00	0.04	0.81
R37 - 7711	< 0.1	1.4	0.6	2.2	22.5	0.62	0.2	0.2	0.3	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.26	0.061	0.65	0.04	0.58
R38 - 7712	< 0.1	1.7	0.7	2.9	13.0	0.26	0.3	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.34	0.012	0.51	0.04	0.66
R39 = 7714	< 0.1	1.6	1.0	2.5	22.3	0.34	0.2	0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.41	0.023	0.51	0.04	0.70
R40 = 7719	< 0.1	1.5	0.5	2.7	13.7	0.32	0.3	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.26	0.028	0.66	0.06	0.58
R41 - 7720	< 0.1	2.0	0.9	6.2	31.1	0.60	0.1	0.1	0.3	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	1.77	0.125	1.26	0.06	1.00
R42 = 7722	< 0.1	2.4	1.1	4.9	29.9	0.68	0.4	0.2	0.4	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.45	0.179	1.17	0.06	1.11
R43 - 7723	< 0.1	1.4	0.8	2.6	30.5	0.31	0.4	0.2	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1.61	0.018	0.37	0.06	0.65
R44 = 7725 M 60cm	< 0.1	0.8	1.1	2.1	37.1	6.58	2.7	1.7	2.6	1.8	1.3	0.2	0.6	< 0.1	0.1	0.34	0.057	0.23	< 0.02	0.51
R45 - 7727	< 0.1	1.3	0.6	5.3	27.6	0.68	0.3	0.3	0.5	0.3	0.2	< 0.1	< 0.1	< 0.1	< 0.1	0.33	0.224	0.77	0.03	0.77
R46 = 7729	< 0.1	2.1	0.9	5.4	18.5	0.31	0.2	0.2	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.27	0.108	0.58	0.03	0.80
R47 = 7733	< 0.1	2.3	0.5	5.1	14.4	0.57	0.1	0.2	0.3	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.30	0.111	0.56	0.05	0.81
R48 - 7734	< 0.1	1.2	0.8	3.5	18.7	0.31	0.3	0.2	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.29	0.044	0.69	0.04	0.74
R49 = 7737 (2:7596)	< 0.1	1.2	0.8	3.1	18.0	0.30	0.3	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.26	0.024	0.49	0.05	0.69
R50 OREAS 45P	0.1	3.8 ✓	0.7	8.2	16.2	9.08	22.9	48.5	3.9	3.1	2.6	0.4	1.2	0.1	0.1	1.59	0.272	0.02	0.09	1.81

Results **Activation Laboratories Ltd.** **Report: A19-05763**

Analyte Symbol (at cm ↓)	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	0.1	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
R1 OREAS 45P	0.38 ✓	< 0.02	1.05	179.0	18.6	38.90	15.80	2.6	0.7	0.4	1.1	0.1	0.4	< 0.05	< 0.1	< 0.001	45.4 ✓ (49)	0.13	18.8 ✓	0.16 ✓
R2 = 7541	0.14	< 0.02	0.22	118.0	3.1	5.23	1.92	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.2	< 0.001	< 0.5 (5.6)	0.08	23.2	0.21
R3 = 7544	0.18	< 0.02	0.35	82.2	4.4	8.46	3.16	0.4	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.2	< 0.001	< 0.5 ✓	0.11	31.6	0.28
R4 = 7547 M 95	< 0.02	< 0.02	0.46	84.7	26.4	40.00	18.30	2.6	0.5	0.3	1.0	0.1	< 0.1	< 0.05	0.1	0.002	< 0.5 ✓	0.10	3.1	0.06
R5 = 7549 100	0.07	< 0.02	0.11	75.8	0.9	1.55	0.66	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.1	< 0.001	3.0 (0)	0.04	9.2	0.12
R6 = 7552 M 25% C	0.03	< 0.02	0.76	139.0	63.9	85.50	59.70	10.6	1.7	1.3	4.0	0.6	< 0.1	< 0.05	0.2	0.002	< 0.5 ✓	0.23	5.4	0.11
R7 = 7553 M 100	< 0.02	< 0.02	0.26	59.6	22.4	26.90	20.40	3.9	0.6	0.5	1.7	0.3	< 0.1	< 0.05	< 0.1	0.005	< 0.5 ✓	0.13	1.8	0.03
R8 = 7555 M 90	< 0.02	< 0.02	0.11	39.7	3.0	4.70	3.45	0.6	0.1	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5 ✓	0.03	1.1	< 0.02
R9 = 7556 M 90	< 0.02	< 0.02	0.10	52.3	2.1	3.53	2.12	0.4	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5 ✓	< 0.02	0.9	< 0.02
R10 = 7558	0.12	< 0.02	0.18	140.0	2.7	5.29	2.03	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.0 (4.9)	0.08	25.2	0.25
R11 = 7559 M 100	< 0.02	< 0.02	0.06	60.5	4.5	7.52	3.28	0.6	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.05	< 0.1	0.002	< 0.5 ✓	0.03	0.7	< 0.02
R12 = 7560	0.09	< 0.02	0.35	143.0	7.2	15.20	4.89	0.8	0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	0.7 (0)	0.08	16.5	0.18
R13 = 7562	0.13	< 0.02	0.14	47.5	1.3	2.49	0.98	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.1	< 0.001	< 0.5 (2.8)	0.07	20.0	0.23
R14 = 7563	0.19	< 0.02	0.26	56.6	2.1	4.24	1.53	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.2	< 0.001	14.5 (1.9)	0.08	27.6	0.30
R15 = 7565	0.10	< 0.02	0.09	61.9	0.7	1.30	0.49	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5 (2.3)	0.06	15.8	0.18
R16 = 7567	0.23	< 0.02	0.32	54.7	3.5	7.05	2.62	0.4	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.9 (4.8)	0.08	21.1	0.23
R17 = 7571	0.15	< 0.02	0.17	66.2	3.9	6.17	3.06	0.4	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.0 (4.0)	0.06	28.0	0.22
R18 = 7573	0.20	< 0.02	0.15	63.2	1.1	2.10	0.81	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.2	< 0.001	5.9 (7.7)	0.07	17.9	0.25
R19 = 7579	0.29	< 0.02	0.21	76.5	3.7	7.31	2.89	0.5	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.05	0.1	< 0.001	1.7 (6.5)	0.11	28.9	0.38
R20 = 7580	0.25	< 0.02	0.28	152.0	2.6	5.25	1.85	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	6.1 (4.4)	0.15	38.6	0.33
R21 = 7581 = 7740	0.32	< 0.02	0.25	64.8	1.7	3.30	1.42	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.2	< 0.001	1.0 (8.8)	0.09	24.3	0.37
R22 = 7583	0.21	< 0.02	0.20	81.3	3.8	7.25	3.14	0.3	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.9 (4.1)	0.10	33.0	0.29
R23 = 7588	0.15	< 0.02	0.13	64.7	3.7	6.88	2.48	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.1	< 0.001	< 0.5 (1.2)	0.07	17.8	0.20
R24 = 7589	0.16	< 0.02	0.09	83.0	1.7	3.12	1.12	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5 (2.2)	0.05	18.4	0.23
R25 = 7591 M 30 cm	0.07	< 0.02	0.28	61.0	7.2	13.50	5.40	1.1	0.1	< 0.1	0.3	< 0.1	< 0.1	< 0.05	< 0.1	0.001	< 0.5 ✓	0.05	4.2	0.06
R26 = 7592	0.14	< 0.02	0.08	54.4	1.5	2.87	1.18	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.1 ✓	0.04	21.7	0.24
R27 = 7593	0.25	< 0.02	0.13	73.2	1.1	2.18	0.83	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.1	< 0.001	< 0.5 (2.7)	0.07	26.5	0.31
R28 = 7597 M 50 cm	0.02	< 0.02	0.09	39.5	2.6	3.88	2.28	0.4	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.05	< 0.1	0.002	< 0.5 ✓	0.04	1.8	0.02
R29 = 7598 M 40 cm	0.07	< 0.02	0.12	53.1	7.5	12.50	5.91	1.2	0.2	0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.003	< 0.5 ✓	0.04	5.3	0.07
R30 = 7599 M 40 cm	0.04	< 0.02	0.27	54.9	11.3	18.60	7.82	1.1	0.2	0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.002	< 0.5 ✓	0.05	3.3	0.05

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	0.1	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
R31 = 7703	0.17	< 0.02	0.22	82.3	1.0	2.03	0.78	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.2 10.6	0.11	24.1	0.30
R32 = 7704	0.28	< 0.02	0.27	42.2	1.3	2.57	1.14	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	4.4 12.9	0.11	26.2	0.42
R33 = 7705	0.25	< 0.02	0.34	118.0	2.0	4.13	1.77	0.4	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.1	< 0.001	< 0.5 13.9	0.12	36.9	0.34
R34 = 7706	0.21	< 0.02	0.19	68.6	1.3	2.52	1.03	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.1	< 0.001	1.6 6.8	0.09	22.5	0.31
R35 = 7707	0.17	< 0.02	0.33	169.0	1.1	2.22	0.83	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.0 5.4	0.13	20.4	0.24
R36 = 7709	0.23	< 0.02	0.15	72.3	4.7	8.80	4.16	0.7	0.2	< 0.1	0.3	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5 3.5	0.06	22.9	0.28
R37 = 7711	0.10	< 0.02	0.11	69.4	1.6	2.65	1.10	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.2	< 0.001	2.2 10.1	0.09	14.5	0.18
R38 = 7712	0.15	< 0.02	0.14	41.3	0.7	1.39	0.52	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.9 4.3	0.05	13.0	0.19
R39 = 7714	0.13	< 0.02	0.10	36.2	0.8	1.55	0.52	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5 3.3	0.05	18.9	0.22
R40 = 7719	0.11	< 0.02	0.11	65.5	0.7	1.53	0.67	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.7 22.5	0.05	16.7	0.23
R41 = 7720	0.25	< 0.02	0.33	161.0	1.8	2.63	1.18	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5 9.1	0.19	30.0	0.35
R42 = 7722	0.20	< 0.02	0.35	144.0	2.2	3.26	1.26	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.1	< 0.001	1.3 5	0.15	35.3	0.38
R43 = 7723	0.10	< 0.02	0.11	47.7	0.8	1.52	0.60	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.1	< 0.001	< 0.5 9.1	0.05	15.7	0.22
R44 = 7725 M 60cm	0.03	< 0.02	0.27	48.8	12.6	25.80	10.90	1.5	0.3	0.2	0.6	< 0.1	< 0.1	< 0.05	< 0.1	0.001	< 0.5 ✓	0.05	3.6	0.04
R45 = 7727	0.12	< 0.02	0.27	97.2	2.5	5.81	1.80	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5 2	0.10	20.3	0.19
R46 = 7729	0.16	< 0.02	0.32	76.9	1.1	1.91	0.74	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.6 2.9	0.12	17.5	0.24
R47 = 7733	0.20	< 0.02	0.28	93.7	1.2	2.43	0.97	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.1 5.3	0.14	22.7	0.27
R48 = 7734	0.16	< 0.02	0.15	105.0	1.0	1.72	0.70	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.7 10.1	0.08	22.5	0.24
R49 = 7737 (2:75%)	0.12	< 0.02	0.13	65.4	0.7	1.41	0.54	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5 5.5	0.07	15.9	0.22
R50 OREAS 45 P	0.40 ✓	< 0.02	1.04	181.0	19.0	39.80	16.40	2.7	0.7	0.4	1.1	0.1	0.4	< 0.05	< 0.1	< 0.001	46.1 ✓ 49	0.14	19.2 ✓	0.16 ✓

AR-MS
GOLD
NOT AS
RELIABLE
AS INAA

Results **Activation Laboratories Ltd.** **Report: A19-05763**

Analyte Symbol	at	Th	U	Hg
Unit Symbol	cm	ppm	ppm	ppb
Detection Limit	↓	0.1	0.1	10
Analysis Method		AR-MS	AR-MS	AR-MS
R1 OREAS 45 P		7.1	1.2	40
R2 = 7541		0.2	< 0.1	190
R3 = 7544		0.7	0.2	160
R4 = 7547 M	95	0.9	1.5	90
R5 = 7549	100	0.1	< 0.1	150
R6 = 7552 M	25%C	1.0	8.8	170
R7 = 7553 M	100	1.0	5.5	90
R8 = 7555 M	90	0.6	1.1	80
R9 = 7556 M	90	0.8	0.2	80
R10 = 7558		0.2	< 0.1	210
R11 = 7559 M	100	0.5	0.6	90
R12 = 7560		0.3	0.2	190
R13 = 7562		0.1	0.1	180
R14 = 7563		0.3	0.1	170
R15 = 7565		< 0.1	< 0.1	160
R16 = 7567		0.3	0.4	220
R17 = 7571		0.2	0.2	160
R18 = 7573		< 0.1	< 0.1	180
R19 = 7579		0.2	0.1	250
R20 = 7580		0.2	0.1	250
R21 = 7581 = 7740		0.1	0.1	270
R22 = 7583		0.1	0.1	200
R23 = 7588		0.2	0.2	150
R24 = 7589		0.2	< 0.1	220
R25 = 7591 M 30 cm		0.4	1.0	170
R26 = 7592		0.2	< 0.1	270
R27 = 7593		0.2	< 0.1	210
R28 = 7597 M 50 cm		0.4	0.8	150
R29 = 7598 M 40 cm		0.7	1.3	140
R30 = 7599 M 40 cm		1.0	1.8	110

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
R31 = 7703	< 0.1	< 0.1	270
R32 = 7704	< 0.1	< 0.1	270
R33 = 7705	0.2	0.1	240
R34 = 7706	< 0.1	< 0.1	210
R35 = 7707	0.1	< 0.1	250
R36 = 7709	< 0.1	0.2	220
R37 = 7711	< 0.1	< 0.1	220
R38 = 7712	< 0.1	< 0.1	190
R39 = 7714	0.1	< 0.1	180
R40 = 7719	< 0.1	< 0.1	240
R41 = 7720	< 0.1	< 0.1	270
R42 = 7722	< 0.1	< 0.1	290
R43 = 7723	0.1	< 0.1	250
R44 = 7725 M 60 cm	0.5	0.6	140
R45 = 7727	< 0.1	0.1	190
R46 = 7729	< 0.1	< 0.1	210
R47 = 7733	< 0.1	< 0.1	320
R48 = 7734	< 0.1	< 0.1	220
R49 = 7737 (2:7596)	< 0.1	< 0.1	240
R50 OREAS 45 P	7.4	1.2	50

Quality Analysis ... **Innovative Technologies**

Date Submitted:	26-Nov-18
Invoice No.:	A18-18311
Invoice Date:	22-Jan-19
Your Reference:	RB-ROCKS1

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

ATTN: Hermann Daxl

CERTIFICATE OF ANALYSIS

7 Rock samples were submitted for analysis. RB1 - RB7, as described

The following analytical package(s) were requested:

Code 1C-Exp Fire Assay-ICP/MS 30 g
Code 1D Enh INAA(INAAGEO) ~30 g neutron activation
Code 1F2 Total Digestion ICP(TOTAL)

REPORT **A18-18311**

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Notes:

For values exceeding the upper limits we recommend assays.

Values which exceed the upper limit should be assayed for accurate numbers.

We recommend reanalysis by fire assay Au, Pt, Pd Code 8 if values exceed upper limit.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

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ROCK SAMPLES

Results **Activation Laboratories Ltd.** **Report: A18-18311**

Analyte Symbol		Pd	Pt	Au	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb
Unit Symbol		ppb	ppb	ppb	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	%	ppm	ppm
Detection Limit		1	1	2	2	5	0.5	50	0.5	1	1	5	1	0.01	1	1	5	1	0.01	20	15
Analysis Method		FA-MS	FA-MS	FA-MS	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
RB1	1.45 Kg	< 1	< 1	4	< 2	< 5	< 0.5	< 50	< 0.5	< 1	3	< 5	< 1	3.26	18	< 1	< 5	< 1	3.35	< 20	< 15
RB2	1.50	< 1	< 1	< 2	< 2	< 5	< 0.5	< 50	< 0.5	< 1	< 1	8	< 1	2.02	18	< 1	< 5	< 1	3.77	< 20	< 15
RB3	1.78	< 1	< 1	3	4	< 5	2.9	< 50	< 0.5	< 1	11	9	< 1	6.29	15	< 1	< 5	< 1	3.06	< 20	< 15
RB4	1.30	< 1	< 1	3	< 2	< 5	< 0.5	< 50	< 0.5	< 1	9	< 5	< 1	3.90	14	< 1	< 5	< 1	3.42	< 20	< 15
RB5	~3.0	< 1	< 1	5	< 2	< 5	< 0.5	< 50	< 0.5	2	< 1	13	< 1	1.65	11	< 1	< 5	< 1	4.44	< 20	< 15
RB6	~3.0	< 1	< 1	3	< 2	< 5	1.3	< 50	< 0.5	4	21	< 5	< 1	11.00	7	< 1	< 5	< 1	2.08	< 20	< 15
RB7	OREAS H3	STANDARD			2030	< 5	7.6	< 50	4.8	< 1	18 (22)	165	< 1	5.15	4	< 1	< 5	37 (26)	0.16	< 20	< 15

Total Kg fine crushed < 2 mm, pulped ~ 500 g < 100 μm, mild steel. All nonradioactive.

Results **Activation Laboratories Ltd.** **Report: A18-18311**

Analyte Symbol		Sb	Sc	Se	Sn	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	Ag
Unit Symbol		ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g	ppm
Detection Limit		0.1	0.1	3	0.02	0.05	0.5	0.2	0.5	1	50	0.5	3	5	0.1	0.2	0.5	0.2	0.05		0.3
Analysis Method		INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	TD-ICP
RB1	Trondhjemite	< 0.1	2.0	< 3	< 0.02	< 0.05	< 0.5	7.3	4.0	< 1	< 50	12.9	60	17	6.8	1.3	3.0	25.5	0.96	34.50	1.2
RB2	″	< 0.1	1.5	< 3	< 0.02	< 0.05	< 0.5	6.8	< 0.5	< 1	< 50	10.5	48	7	5.9	1.0	1.8	23.3	0.84	35.10	1.1
RB3	Gabbro 1% py	< 0.1	17.0	< 3	< 0.02	< 0.05	< 0.5	5.4	1.7	< 1	< 50	10.2	38	14	8.3	2.9	1.8	11.9	0.35	35.40	0.7
RB4	Gabbro barren	< 0.1	14.3	< 3	< 0.02	< 0.05	< 0.5	5.2	< 0.5	< 1	< 50	10.8	38	27	8.8	2.5	1.8	11.8	0.37	37.10	< 0.3
RB5	Tonalite-Aplite	< 0.1	5.8	< 3	< 0.02	< 0.05	< 0.5	6.5	< 0.5	< 1	< 50	5.7	17	< 5	1.6	1.2	< 0.5	3.7	0.14	36.00	0.8
RB6	Gabbro Pegm.	< 0.1	37.5	< 3	< 0.02	< 0.05	< 0.5	3.4	< 0.5	< 1	< 50	22.3	56	21	9.8	2.7	0.8	10.9	0.30	36.90	< 0.3
RB7	OREAS H3	14.5	11.4	< 3	< 0.02	< 0.05	< 0.5	7.1	1.5	26	1960	4.3	6	< 5	0.7	< 0.2	< 0.5	0.4	< 0.05	18.90	

Results **Activation Laboratories Ltd.** **Report: A18-18311**

Analyte Symbol	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na	Ni
Unit Symbol	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm
Detection Limit	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01	1
Analysis Method	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
RB1	4.76	< 3	30	2	< 2	0.09	< 0.3	7	12	8	3.01	23	< 1	0.10	0.77	4	108	2	3.15	2
RB2	4.86	< 3	34	3	< 2	0.09	< 0.3	4	49	5	1.95	21	< 1	0.10	0.42	2	95	2	3.56	2
RB3	5.59	5	65	2	4	2.63	< 0.3	12	11	97	6.35	34	< 1	0.12	0.30	< 1	525	3	2.97	13
RB4	5.49	< 3	65	2	3	2.15	< 0.3	10	9	64	3.84	27	< 1	0.10	0.25	< 1	459	< 1	3.42	7
RB5	6.00	< 3	44	< 1	< 2	2.37	< 0.3	2	15	< 1	1.57	22	< 1	0.04	0.23	< 1	227	2	4.23	4
RB6	4.88	< 3	139	1	< 2	4.98	< 0.3	24	8	2	10.30	20	< 1	0.34	1.45	2	1670	< 1	2.11	7

Results **Activation Laboratories Ltd.** **Report: A18-18311**

Analyte Symbol	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Analysis Method	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
RB1	0.004	< 3	< 5	< 0.01	< 4	34	< 2	0.15	< 5	< 10	2	< 5	72	20	460
RB2	0.002	< 3	< 5	< 0.01	< 4	33	< 2	0.15	< 5	< 10	2	< 5	65	11	435
RB3	0.053	< 3	< 5	0.47	19	125	< 2	0.45	< 5	< 10	60	< 5	76	28	250
RB4	0.036	< 3	< 5	0.06	16	97	3	0.42	< 5	< 10	41	< 5	83	24	31
RB5	0.014	< 3	< 5	< 0.01	7	122	< 2	0.21	< 5	10	41	< 5	17	13	291
RB6	0.382	< 3	< 5	< 0.01	37	107	3	0.29	< 5	< 10	18	< 5	65	93	16

Quality Control **Activation Laboratories Ltd.** **Report: A18-18311**

Analyte Symbol	Pd	Pt	Au	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb
Unit Symbol	ppb	ppb	ppb	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	%	ppm	ppm
Detection Limit	1	1	2	2	5	0.5	50	0.5	1	1	5	1	0.01	1	1	5	1	0.01	20	15
Analysis Method	FA-MS	FA-MS	FA-MS	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
OREAS 97 (4 Acid) Meas																				
OREAS 97 (4 Acid) Cert																				
PK2 Meas	6100	4940	5030																	
PK2 Cert	5918	4749	4785																	
OREAS 905 (INAA) Meas				409		37.9	2660		< 1	16		7	4.38	7						143
OREAS 905 (INAA) Cert				391		36.2	2800		1	15		7	4.23	7						137
OREAS 96 (4 Acid) Meas																				
OREAS 96 (4 Acid) Cert																				
CDN-PGMS-29 Meas	648	475	81																	
CDN-PGMS-29 Cert	677	550	88																	
CDN-PGMS-29 Meas	655	552	86																	
CDN-PGMS-29 Cert	677	550	88																	
RB6 Orig																				
RB6 Dup																				
Method Blank				< 2	< 5	< 0.5	< 50	< 0.5	< 1	< 1	< 5	< 1	< 0.01	< 1	< 1	< 5	< 1	< 0.01	< 20	< 15
Method Blank																				
Method Blank	< 1	< 1	< 2																	
Method Blank	< 1	< 1	2																	
Method Blank	< 1	< 1	3																	

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To: HERMANN DAXL
39-630 RIVERPARK RD
TIMMINS ON P4P 1B4

Finalized Date: 12-DEC-2018
Account: DAXHER

CERTIFICATE TM18307667

This report is for 6 Percussion samples submitted to our lab in Timmins, ON, Canada on 3-DEC-2018.

The following have access to data associated with this certificate:

HERMANN DAXL

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight *crushed < 2 mm*
PUL-QC	Pulverizing QC Test
LOG-22	Sample login - Rcd w/o BarCode
PUL-32	Pulverize 1000g to 85% < 75 um *total sample weight*

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-ICP23	Pt, Pd, Au 30g FA ICP *30 g*	ICP-AES

TM18307667 - Finalized
CLIENT : DAXHER - Hermann Daxl
# of SAMPLES : 6
DATE RECEIVED : 2018-12-03
PROJECT :
CERTIFICATE COMMENTS :
PO NUMBER :

SAMPLE DESCRIPTI	PGM-ICP23 Au ppm	PGM-ICP23 Pt ppm	PGM-ICP23 Pd ppm
RB1	-0.001	-0.005	-0.001
RB2	-0.001	-0.005	-0.001
RB3	-0.001	-0.005	-0.001
RB4	-0.001	-0.005	-0.001
RB5	0.004	-0.005	-0.001
RB6	-0.001	-0.005	-0.001

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	PGM-ICP23 Au ppm 0.001	PGM-ICP23 Pt ppm 0.005	PGM-ICP23 Pd ppm 0.001
RB1		0.83	<0.001	<0.005	<0.001
RB2		0.95	<0.001	<0.005	<0.001
RB3		0.76	<0.001	<0.005	<0.001
RB4		0.55	<0.001	<0.005	<0.001
RB5		0.82	0.004	<0.005	<0.001
RB6		0.95	<0.001	<0.005	<0.001

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:
Colin Ramshaw, Vancouver Laboratory Manager