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IOS Services Géoscientifiques

REGIONAL TILL SAMPLING PROGRAM
BADEN PROJECT
Matachewan, Ontario
NTS 42A02

Presented to

Mr. Michael Rosatelli

Val-d'Or Mining corp.

By

Donald Burden, P.Geo.

And

Réjean Girard, P.Geo.

Date: December 2nd, 2021
Project: 1483
Numerical copy

Ville de Saguenay

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF MAPS

LIST OF APPENDICES

INTRODUCTION

The Baden project is located at the southwestern end of the Abitibi greenstone belt and encompasses a mineral property acquired by Val-d'Or Mining Corp. It covers 6,967.8 hectares and is located approximately 11 km northwest of Matachewan, Ontario. This region hosts numerous gold occurrences, including the Young-Davidson mine (Alamos Gold), first discovered in 1916-17, Matachewan Consolidated (1917) and Ashley Gold Mine (1932-1936) gold deposits.

IOS Services Géoscientifiques Inc. has been mandated by Val-d'Or Mining corp. to conduct a systematic glacial sediment sampling program over the Baden property. The survey aimed to delineate gold exploration targets based upon gold grain dispersion in the secondary environment. The glacial drift overlying the Baden project consists predominantly of a thin and patchy glacial sediment blanket or till veneer surrounded by large bogs, glaciolacustrine and glaciofluvial sediments.

The current report describes this regional till sampling program, including a description of the collected samples, a chemical analysis using portable XRF and a brief interpretation. Processing for gold grain counting using the ARTGold™ automated gold grain counting process is provided in separate report.

TERM OF REFERENCE

Val-d'Or Mining Corp., represented by Michael Rosatelli, contracted IOS Services Géoscientifiques Inc. to conduct a regional till sampling program in order to detect mineralized occurrences on their Baden property.

The services regarding the glacial sediment sampling included:

1. Providing the client with a sampling pattern and planning of the field intervention.
2. Providing technical and professional staff members to carry on a glacial sediment sampling program according to the industry standards.
3. Providing tools, equipment, transportation and all required logistical support to its staff so as to ensure the timely execution of the Program.
4. Perform a portable XRF analysis using an aliquot of till sample.
5. Processing, the samples for automated mineralogy according to ARTGold™ technology within the time constrains agreed with the client.
6. Providing reports in a format acceptable for assessment filing, including a procedure description and an interpretation of the results.

Geological information has been obtained from the Geology Ontario database and from the Ontario Geological Survey, and includes geology, quaternary geology maps and assesment files. The digital elevation models (DEM) were taken from the website of the Ontario Geological Survey (**OGSEarth**).

The till sampling survey initially included 71 sampling sites distributed through the west and southeast part of property. The survey configuration considers the access roads, property boundaries, based on quaternary map from OGS and on satellite images.

IOS was involved with the planning of the program, glacial landform interpretation, selection of the sampling sites and logistic organization. The regional till survey was lead by Donald Burden P.Geo. Samples are currently been processed in IOS facilities using ARTGold™ automated gold grain counting using a SEM-based automated technology.

The current report includes only HH-XRF analyses of the till samples, gold grain counting being currently pending at the laboratory and to be submitted in a separate report.

IOS has no interest or partnerships with Val d'Or Mining corp., other than a service agreement on a daily or per sample fee basis. IOS is an independent entity and is not financially involved in the process of acquiring or developing this project. The current report is not written in accordance to NI-43-101 instructions and shall not be used for financial purposes.

DESCRIPTION OF THE PROPERTY

GEOGRAPHIC LOCATION

The Baden project is located between approximately 10 and 20 kilometres north-west of Matachewan, Ontario (***figure 1***). It is found on the 42A02 NTS map sheet and covers the southwest two-thirds of Baden Township, and small areas of the adjoining Robertson, Argyle and Powell townships. It lies between latitudes 47°58'37,484"N and 48°6'35,629"N and longitudes 80°37'5,41"W and 80°49'15,627"W.

ACCESS AND INFRASTRUCTURE

The Baden project is located in an area which is mostly accessible by forestry trails. It can be accessed from Matachewan by driving west on highway 566 (***figure 2***).

1:6 500 000

1483	Project: Baden

FIGURE 1: PROJECT LOCATION

Geology from Ontario Geological Survey 2021. 1:250 000 scale bedrock geology of Ontario; Ontario Geological Survey, Miscellaneous Release –Data 126 - Revision 1. Topographic background data from canadian government WMS

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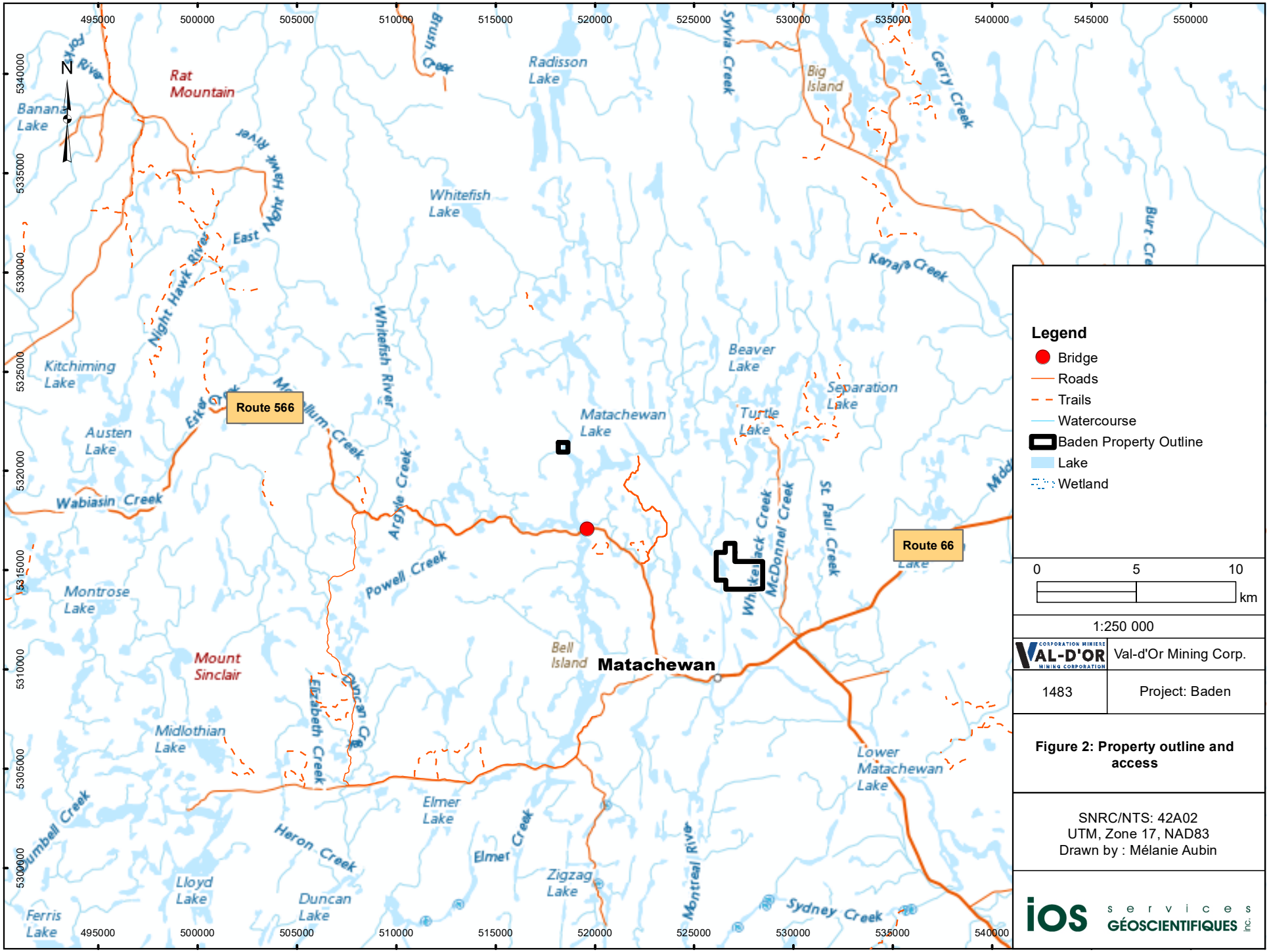

Legend

- Bridge
- Roads
- Trails
- Watercourse
- Baden Property Outline
- Lake
- Wetland

0 5 10 km

1:250 000

Val-d'Or Mining Corp.

1483 | Project: Baden

Figure 2: Property outline and access

SNRC/NTS: 42A02
UTM, Zone 17, NAD83
Drawn by : Mélanie Aubin

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LAND TENURE

The Baden Property contains two blocs: the main one is 306 claims covering 6,600.7 hectares and the second bloc has 17 claims covering 367 hectares upon which Val-d'Or Mining Corporation is the claims holder (***map 1***).

CLIMATE AND PHYSIOGRAPHY

The Baden project is located in the Lake Abitibi ecological region (3E) (Crins et *al.,* 2009) and Foleyet (3E-5) ecodistrict (Wester et *al.,* 2018). The Montreal River, located to the east and south of the property, is the major river watershed in the area.

Elevations on the property range from 310 m to 420 m. The highest relief is found at the southeast corner of the property. Bedrock drift complex, till and bedrock cover much of the property, but areas covered by eolian sand and glaciofluvial deposits are present along the east and north edge of the property, bounding the Montreal River.

The bioclimatic domain is the Humid Mid-Boreal Ecoclimatic Region (Ecoregions Working Group 1989) (Crins et *al.,* 2009). The forest landscape is dominated by mixed and coniferous forests including black spruce and jack pine, but is also associated with different species such as birch, tamarack, balsam fir and poplar (Wester et *al.,* 2018). Mean annual precipitation ranges between 652 and 1029 mm, and mean summer rainfall is 220 to 291 mm (Crins et *al.,* 2009).

PREVIOUS WORK

The current report is not meant to be a compilation of all relevant exploration history of the Baden Property. Exploration in the Matachewan mining camp has been ongoing since before 1916-1917 when Young and Davidson discovered gold, followed by Matachewan Consolidated in 1917 and Ashley Gold mines operating between 1932 and 1936. The region has also been assessed for Cu-Zn and U mineralization.

Over 150 documents that reference exploration work performed on the Baden claims or on exploration properties formerly overlapping the current property boundary. The earliest documents related to the Baden property date back to 1947 and exploration has been ongoing in this area since then. Work reports from over forty companies reference work done including line cutting, stripping and trenching, mapping and prospecting, diamond drilling, magnetics, IP-resistivity, EM, VLF, radiometrics, gravity and geochemistry. Abundant evidence of these exploration campaigns are found across the property.

515000 520000 525000 530000

5325000 5320000

N

Nokomis Lake
Belt Creek
Belt
Powell Creek
Ashley Lake
Beaudin Lake
Mistiniko Lake
Robb Lake
Baptiste Creek
Clearwater Lake
Baptiste Lake
Hawley Creek
Narrow Lake
Whiskeyjack Lake
McDonnel Creek
McNaughton Lake
Matachewan 72
Island Lake
Turtle Lake
Beaver Lake
Bird Lake
Jackson Lake
Chief Creek
Tent Creek
Tent Lake
Blackburn Lake
Bastian Lake
Separation Lake
Little Chief Lake
Matachewan Lake

				510695												
				510694	510706											
				510708	137104											
			510697	510703	510704	220834	156646	255932	300490	547171						
			510701	510698	510693	183914	268411	207290	243791	547172						
		510699	510700	510707	510705	510702	510696	177884	183915	295332	282760	259832	144499			
		553161	553162	553163	553106	553107	553108	325102	248079	120594	178597	139002	510428	510430	510434	
		553164	553165	553166	553109	553110	553111	150282	253072	232429	299100	145003	510432	510429	510433	510431
		553167	553168		553112		553113	108645	186241	327689	260295	239741	553122	553123	553124	
		553169	553170				553114	553115	553116	553117	553118	553119	553125	553126	553127	
		553189	553190	553191	553192		553120	553121	335221	211115	205734	282744	198384	553128	553129	553130
		553193	553194	553195	553196	244976	198362	301568	265032	257844	205735	150267	133601	553131	553132	553133	510124	510115
		553197	553198	553199	553200	205195	289524	178798	178797	133061	327690	119225	340084	553134	553135	553136	510125	510114	510113
						265033	178799	205196	253024	108612	184626	327691	340085	553149	553150	553151	550010	550011	510112
						133062	265034	282199	104484	278447	119226	232430	553137	553138	553139	553140		510126	510119
						152642	167318	167317	104485	222469	269140		553141	553142	553143	553144		550012	510116	510122	510117
						152643	318475	331195	192559	338074	163662	297060	325704	553145	553146			510123	510121	510118	154242
						318476	149159	264511	104486	325705	157085	157084	222470	553147	553148			510120		124963	274110
				509140	509135	332694	111193	318477	222471	104487	297061	129146	119762			251864	318376	322840	274111	200072	302566	100020
				509119	509148	509129	509122	509149	509151	509137	509147	509134	509139			152044	318396	148533	286251	322841	100021	141456	170798
					509125	509128	509130	509126	509143	509144	509146	509127				153344	111377	333054	154772	109962	345212	276408	172978	159218	240391
							509141	509121	509131	509153	509124	509133				205938	271962	271961	154773	239658	239657	109963	345213	204449	335864	112015
							509120	509123	509142	509152	509145	509138				149852	253188	133768	154774	138419	306945	203729	144402	139655	260450	211742
								509154	509150	509136		509132				133769	205939	271963	207921	138420	345214	326432	306946			
																							210512			
																	209289	209288								
																	136590	255922								

			556371	
		244373	301056	
318404	318403	271889	186528	264660
321257	205377	186530	186529	149786
111320	149787	301761	271890	

556371

Legend

- Roads
- Trails
- Watercourse
- Designated claim cells
- Lake
- Wetland
- Baden Property Outline

0 1 2 km

1:50 000

Val-d'Or Mining Corp.	
1483	Project: Baden

Map 1: Designated claims cells

SNRC/NTS: 42A02
UTM, Zone 17, NAD83
Drawn by : Mélanie Aubin

Donald Burden, P. Geo.

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Only limited systematic geochemical surveying, typically soil and humus, has been collected on small grids. Gold-in-till analysis has not been performed on the complete Baden property, but a small sector of the property was sampled for gold grains in a larger 1994-1995 survey by Cameco covering portions of Powell, Bannockburn, Baden and Argyle townships (Koziol et *al.*, 1995).

REGIONAL GEOLOGY

The Baden project is located in the southwestern Abitibi sub-province. The volcanic stratigraphy underlying the project belongs to the Archean-aged intermediate, mafic and ultramafic rocks and metasediments (Faber et *al.,* 1997) of the Blake River Group, which hosts numerous gold and base metal deposits in the Noranda, Quebec area (Cullen, 2005). Locally, the volcanics are folded into a broad synclinal structure which plunges easterly (Cullen, 2005). The Baden stratigraphy is located on the northern limb of the fold and the volcanic series is subsequently intruded by granite bodies, and both are cut by the regionally ubiquitous north-trending diabase dykes of the Matachewan swarm (Cullen, 2005).

Two periods of regional deformation are readily interpreted in the area. The earliest is deformation of the Blake River volcanics which includes regional folding, northeasterly-trending foliation, shearing and faulting likely related to events in the Abitibi sub-province which also gave rise to the Cadillac-Larder Lake deformation zone (CLLDZ) (Cullen, 2005, Zhang et *al.,* 2013).

The CLLDZ is considered to be one of the most important crustal-scale structures in the Abitibi Greenstone belt (Zhang et *al*., 2013). This structural corridor, which extends some 20 kilometers southwest towards the Shining Tree area, and past Kirkland Lake to the east, is mapped as an extension of this break (Powell, 1991; and Jensen, 1996).

Rock units within this deformation zone have been subjected to variable degrees of carbonitization, sericitization, talc alteration, albitization, chloritization and silicification (Faber *et* al., 1997). Importantly, the CLLDZ is the host to a number of gold occurrences as well as former and present multi-million ounce gold producers (e.g., Kerr-Addison, Macassa, Young-Davidson) (Faber et *al*., 1997, Zhang et *al*., 2013).

The second major structural event is represented by broad northwesterly-trending fault structures, including the Montreal River fault, which runs along the length of the Matachewan Lake at the east end of the property (Cullen, 2005). These faults cross and displace Archean lithologies and structures (Cullen, 2005).

LOCAL GEOLOGY

The general geology of the Matachewan area was first described in 1967 by H.L. Lovell of the Ontario Geological Survey (G.R. Map 2110) and the geology of the Baden property is shown on ***figure 3*** and based upon the Geological compilation of the Matachewan area, Abitibi greenstone belt; Ontario by Ayer et *al*., 2003 (Map P. 3527).

The Matachewan area has a long history of exploration and mining dating back to 1906 (Keast, 1999). Between the period of 1934 to 1957, in excess of 950,000 ozt of gold were produced in the Matachewan camp (Keast, 1999). The majority of this production came from two mines, the Young-Davidson Mine and the Matachewan Consolidated Mine (Keast, 1999).

The property geology is composed primarily of intermediate to felsic metavolcanic rocks including massive and amygdaloidal, and hyaloclastic flows and breccias, tuffs, lapilli tuffs and pyroclastic breccias, and massive and pillowed mafic volcanic rocks. Northeast of the intermediate volcanic rocks is interpreted to be a lobe of the Cairo stock, a felsic to intermediate suite of tonalite, trondhjemite, granodiorite, granite, quartz monzodiorite and quartz diorite (Ayer et *al.*, 2003).

MINERAL OCCURRENCES

Twelve (12) gold occurrences are indicated on the Geology Ontario mineral occurrence database within the property (***figures 3*** and ***4***). Historic descriptions taken from Geology Ontario.

Baden #6 Vein

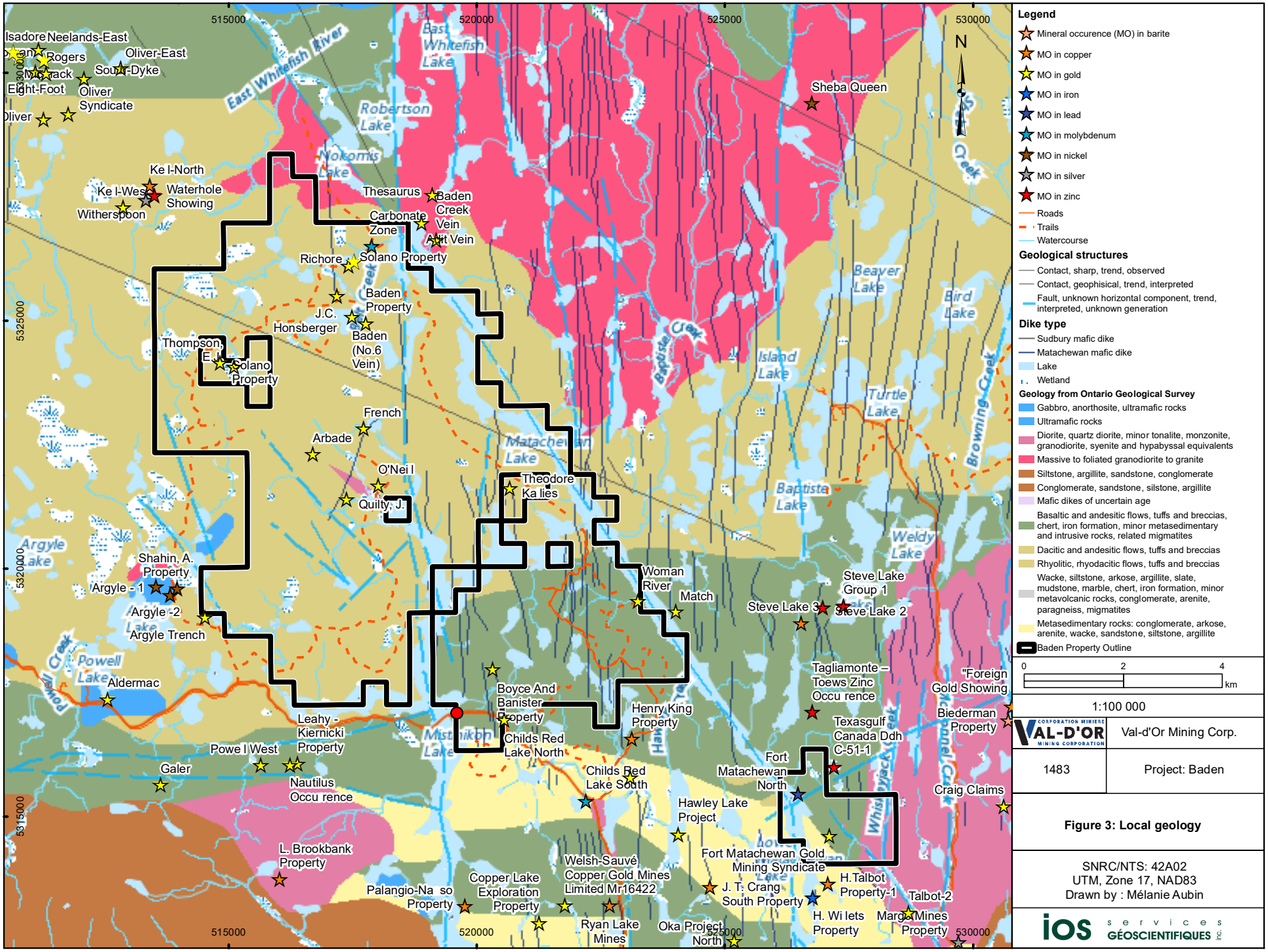
UTM (NAD83Z17) 517487mE, 5325084 mN

2004: Golden Valley Mines Ltd: diamond drilling to test induced polarization (I.P.) anomalies; re-sampling of the old shafts and trenches. 1988: Gunnar Gold Inc: diamond drilling. 1964: Val-Nor Exploration Ltd: property optioned to Val-Nor, diamond drilling of 7 holes. 1961: J.C. Honsberger: acquired the property from E.J. Thompson. Mid 1940's: E.J. Thompson: acquired the property. 1932-35: Baden Syndicate: discovery of nine auriferous quartz veins in 1932 just east of Belt Lake; trenching, pitting, and 30-foot (9.1 m) shaft on No. 6 vein. 1920's: Baden Syndicate: staking of claim.

Baden #6 Property

UTM (NAD83Z17) 517760 mE, 5324950 mN

2004: Golden Valley Mines Ltd: diamond drilling to test induced polarization (I.P.) anomalies; re-sampling of the old shafts and trenches. 1988: Gunnar Gold Inc: diamond drilling. 1964: Val-Nor Exploration Ltd: property optioned to Val-Nor, diamond drilling of 7 holes. 1961: J.C. Honsberger: acquired the property from E.J. Thompson. Mid 1940's: E.J. Thompson: acquired the property. 1932-35: Baden Syndicate: discovery of nine auriferous quartz veins in 1932 just east of Belt Lake; trenching, pitting, and 30-foot (9.1 m) shaft on No. 6 vein. Diamond drilling of three holes. 1920's: Baden Syndicate: staking of claim.



Legend

- Mineral occurence (MO) in barite
- MO in copper
- MO in gold
- MO in iron
- MO in lead
- MO in molybdenum
- MO in nickel
- MO in silver
- MO in zinc
- Roads
- Trails
- Watercourse

Geological structures

- Contact, sharp, trend, observed
- Contact, geophisical, trend, interpreted
- Fault, unknown horizontal component, trend, interpreted, unknown generation

Dike type

- Sudbury mafic dike
- Matachewan mafic dike
- Lake
- Wetland

Geology from Ontario Geological Survey

- Gabbro, anorthosite, ultramafic rocks
- Ultramafic rocks
- Diorite, quartz diorite, minor tonalite, monzonite, granodiorite, syenite and hypabyssal equivalents
- Massive to foliated granodiorite to granite
- Siltstone, argillite, sandstone, conglomerate
- Conglomerate, sandstone, silstone, argillite
- Mafic dikes of uncertain age
- Basaltic and andesitic flows, tuffs and breccias, chert, iron formation, minor metasedimentary and intrusive rocks, related migmatites
- Dacitic and andesitic flows, tuffs and breccias
- Rhyolitic, rhyodacitic flows, tuffs and breccias
- Wacke, siltstone, arkose, argillite, slate, mudstone, marble, chert, iron formation, minor metavolcanic rocks, conglomerate, arenite, paragneiss, migmatites
- Metasedimentary rocks: conglomerate, arkose, arenite, wacke, sandstone, siltstone, argillite
- Baden Property Outline

0 2 4 km

1:100 000

Val-d'Or Mining Corp.

1483

Project: Baden

Figure 3: Local geology

SNRC/NTS: 42A02
UTM, Zone 17, NAD83
Drawn by : Mélanie Aubin

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JC Honsberger Property

UTM (NAD83Z17) 517184 mE, 5325507 mN

2004: Golden Valley Mines Ltd: diamond drilling to test induced polarization (I.P.) anomalies; re-sampling of the old shafts and trenches. 1964: Val-Nor Exploration Ltd: property optioned to Val-Nor, diamond drilling 1961: J.C. Honsberger: acquired the property from E.J. Thompson Mid 1940's: E.J. Thompson: acquired the property 1935: Baden Gold Mines Ltd: sinking of two shallow shafts and diamond drilling 1920's: Baden Syndicate: staking of claim

Solano Property

UTM (NAD83Z17) 517420 mE, 5326103 mN

2004: J. Forbes: trenching and sampling 1989: Queenston Mining Inc: magnetometer and induced polarization surveys 1988: Strike Minerals Inc: surface stripping, trenching, mapping and sampling 1986: Premier Explorations Inc: airborne magnetic and VLF electromagnetic surveys 1934: Central Matachewan Mining Corporation Ltd: claim acquisition and trenching

Carbonate Zone

UTM (NAD83Z17) 517889 mE, 5326500 mN

1990: Queenston Mining Inc: surface mapping, trenching, and diamond drilling 1989: Strike Minerals Inc: power stripping, mapping and sampling; diamond drilling 1986: Premier Explorations Inc: airborne magnetic and VLF electromagnetic surveys.

Richore Prospect

UTM (NAD83Z17) 517184 mE, 5325507 mN

2004: Golden Valley Mines Ltd: diamond drilling to test induced polarization (I.P.) anomalies; re-sampling of the old shafts and trenches. 1964: Val-Nor Exploration Ltd: property optioned to Val-Nor, diamond drilling 1961: J.C. Honsberger: acquired the property from E.J. Thompson Mid 1940's: E.J. Thompson: acquired the property 1935: Baden Gold Mines Ltd: sinking of two shallow shafts and diamond drilling 1920's: Baden Syndicate: staking of claim

French Showing

UTM (NAD83Z17) 517725 mE, 5322820 mN

1973: Ronda Copper Mines Ltd: ground magnetic survey; diamond drilling of 8 holes totalling 1,623 feet. 1934: Hollinger Consolidated Gold Mines Ltd: diamond drilling of six holes

Arbade Mine

UTM (NAD83Z17) 516695 mE, 5322306 mN

1983: Shiningtree Gold Resources Inc: ground magnetic and VLF electromagnetic surveys 1938: Lake Shore Mines Ltd: diamond drilling 1936-37: Arbade Gold Mines Ltd: the vertical, 2 compartment shaft was deepened to 215 feet and levels established at 125 and 200 feet. 56 feet of cross-cutting was done in the upper level. 1935: Arbade Gold Mines Ltd: trenching, stripping, some diamond drilling, erection of a small mining plant. 1933: Arbade Gold Mines Ltd: sinking of a shaft (reaching 56 feet by end of year 1933). 1931: Arno Mines Ltd: diamond drilling.

O'Neill Occurrence

UTM (NAD83Z17) 518019 mE, 5321678 mN

1976: Manitou Lake Gold Mine Inc: diamond drilling 1938: Lake Shore Mines Ltd: diamond drilling of 10 holes totalling 3,007 feet.

Quilty Occurrence

UTM (NAD83Z17) 517378 mE, 5321398 mN

1976: Manitou Lake Gold Mine Inc: diamond drilling; nothing of interest was encountered.

Woman River Occurrence

UTM (NAD83Z17) 523245 mE, 5319350 mN

1985: Hanson Mineral Exploration Ltd: diamond drilling of three holes (no commercial values obtained) 1984: Hanson Mineral Exploration Ltd: ground geophysical surveys (magnetic and VLF electromagnetic). No major zones were outlined. 1971: Melville Mines and Industries Ltd: geological mapping, magnetic and electromagnetic surveys 1957: Geophysical Engineering and Surveys Ltd: electrical resistivity and self potential survey (no significant anomalies revealed on the property) 1936: Woman River Gold Mines: acquired the claim; diamond drilling of four holes 1935: Dyer: described a gold occurrence on the claim 1934: W.T. Robson: he saw visible gold in a lens 2 ft long in an irregular quartz stringer 40 ft long on the claim; much trenching and pitting

Boyce and Bannister Occurrence

UTM (NAD83Z17) 520325 mE, 5317972 mN

1998-99: Boyce and Banister: line cutting, grid mapping, VLF Electromagnetic survey, prospecting, stripping, drilling, blasting, trenching and sampling, IP survey. 2006: Golden Valley Mines Ltd. - IP, magnetometer

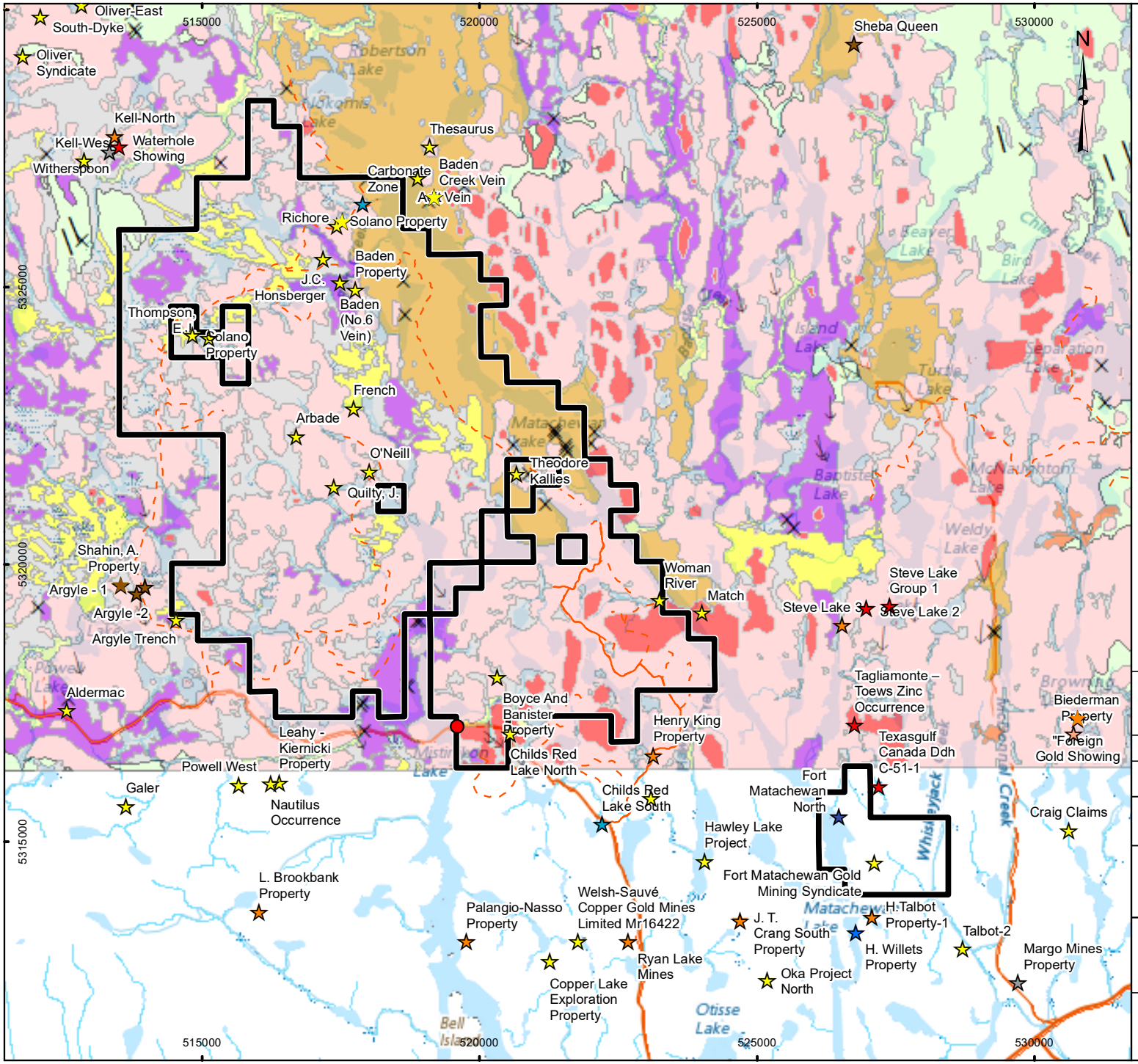
QUATERNARY GEOLOGY

A regional quaternary geology map is available for the area (Bajc, A.F. and Paterson, J.T., 2000) (***figure 4***). Topography of the area is dominated by rolling hills with some steep hills in the east and northeast. The property is mostly covered by a thin blanket of glacial drift (till) with some minor glaciofluvial material deposited along the north-east edge of the property.

The glacial landscape of the Kirkland Lake region was modeled during the last deglaciation of the Laurentian Ice Sheet during the Late Wisconsinan (***figure 4***). Orientations of profiled glacial landforms and bedrock's striae exhibit different ice-flow directions:

- A south-west flow likely associated with the main phase of the Laurentide ice-sheet.
- A southward ice-flow to the end of deglaciation.
- During the final stage of deglaciation, the glacial ice-flow finally shifted toward south-east.

These three phases of ice-flow are all associated with the deposition of the Matheson till (Veillette and McClenaghan, 1996), which experienced a clockwise migration through time. The last ice-flow direction is oriented SSE according to striae and glacial landforms over the Baden property.



Legend

- Mineral occurence (MO) in barite
- MO in copper
- MO in gold
- MO in iron
- MO in lead
- MO in molybdenum
- MO in nickel
- MO in silver
- MO in zinc
- Drumlin
- Outcrop
- Glacial stria, known direction
- Roads
- Trails
- Watercourse

Surficial deposits (OGS)

- Alluvial deposits
- Eolian Deposits
- Swamp and Organic Deposits
- Glaciolacustrine deposits
- Glaciofluvial deposits
- Ice-Contact Stratified Deposits
- Till
- Bedrock Drift Complex
- Bedrock
- Lake
- Wetland
- Baden Property Outline

0 2 4 km

1:100 000

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Figure 4: Local surficial deposits

SNRC/NTS: 42A02
UTM, Zone 17, NAD83
Drawn by : Mélanie Aubin

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Surficial geology in the project area consists of a variety of glacial sediments including a thin, discontinuous till. In general, the till is < 2 m thick and is sand and silt supported. The clasts, which form 10% to 50% are largely angular to sub-angular and locally derived.

2021 TILL SAMPLING PROGRAM

TILL SAMPLING SURVEY

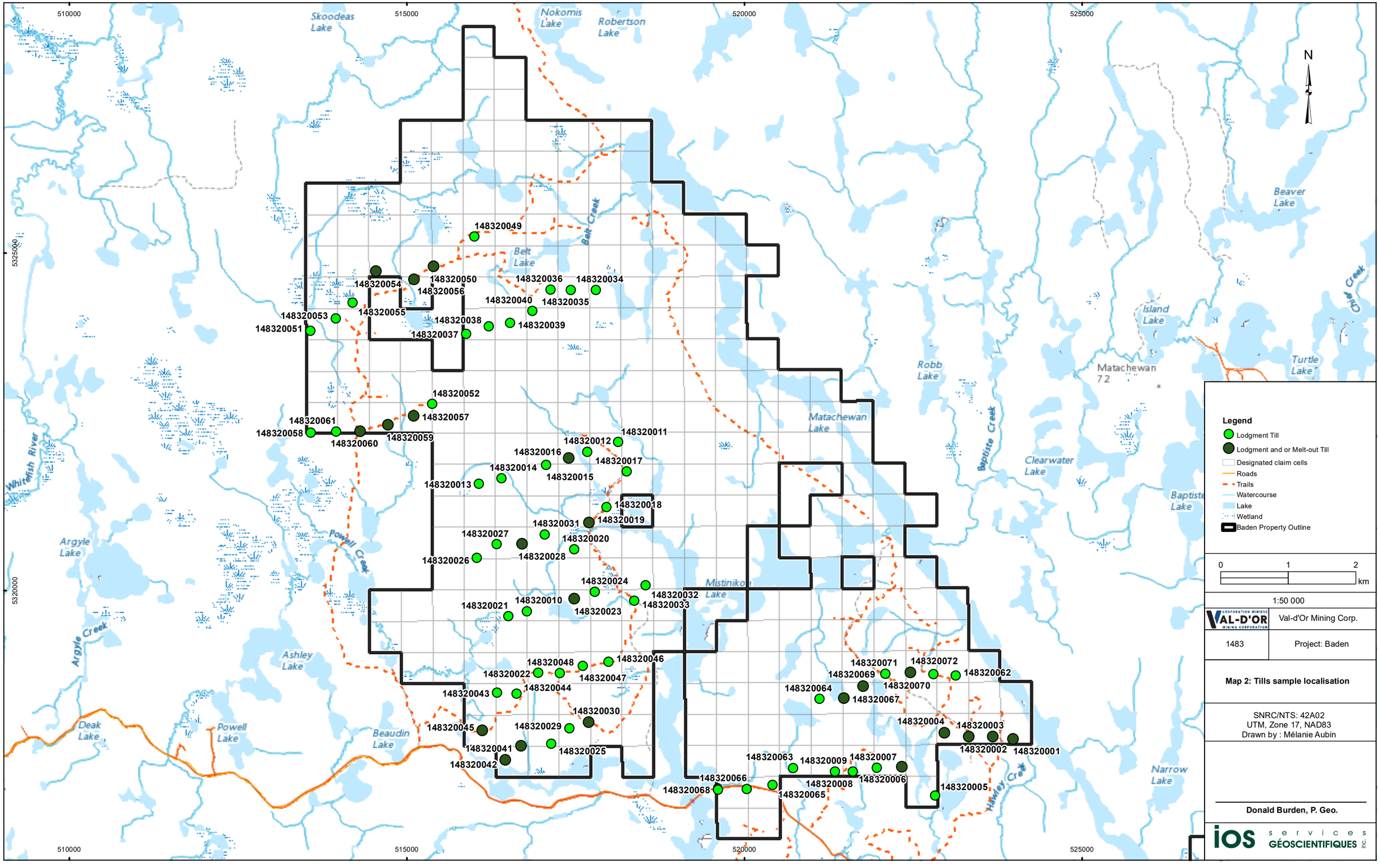
The regional sampling program aimed at evaluating the property's potential for blind gold occurrences based upon gold grain dispersion in the secondary environment. Considering the distribution of known mineral occurrences in the area, the samples can be seen as either down-ice of known showings (orientation), or in areas that have not been tested.

The sampling grid consisted of collecting samples along a series of profiles (OSO-ENE, EO) positioned approximately 1000 m apart and perpendicular to the dominant ice-flow oriented to the south-southeast with a spacing of approximately 300-350 m between each sample. This grid mainly covers the western part of the property as well as two sampling lines to the southeast of the property.

The final sampling sites were selected by field crews according to local landforms, availability of suitable glacial sediments and glacial erosion marks. Sites are aligned along profiles orthogonal to ice-flow direction approximately N160° to 170°. As much as possible, sampling profiles took advantage of existing roads and accesses, as seen on aerial photomosaics and DEM.

The sampling program was conducted by IOS staff, Donald Burden, P.Geo, geologist, and Charles Gilbert-Painchaud, Lars Bennedsen and Patrick Larouche, technicians. The crew stayed at Zzz's N Eats in Matachewan.

A total of 72 till samples were collected between November 2nd and November 7th, 2021 (see daily reports in ***appendix 1***). These included 49 lodgment (basal) tills, and 23 "mixed" or hybrid tills (lodgment and/or melt-out till) (***figure 5*** and ***map 2***). All samples are 10 to 11 kg in weight, free of cobbles. Hand-held XRF chemical analysis was performed on a 90 g aliquot of the sample. The results for the gold grain counting are pending. Sample locations and field descriptions are presented in ***appendix 2***.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Nokomis Lake
Robertson Lake
Belt Creek
Belt Lake
Beaver Lake
Chief Creek
Island Lake
Turtle Lake
Matachewan 72
Robb Lake
Matachewan Lake
Baptiste Creek
Clearwater Lake
Baptiste Lake
Narrow Lake
Hawley Creek
Mistinikon Lake
Whitefish River
Argyle Lake
Argyle Creek
Powell Creek
Ashley Lake
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Legend
Lodgment Till
Lodgment and or Melt-out Till
Designated claim cells
Roads
Trails
Watercourse
Lake
Wetland
Baden Property Outline
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1:50 000
Val-d'Or Mining Corp.
1483
Project: Baden
Map 2: Tills sample localisation
SNRC/NTS: 42A02
UTM, Zone 17, NAD83
Drawn by : Mélanie Aubin
Donald Burden, P. Geo.
ios services GÉOSCIENTIFIQUES inc.

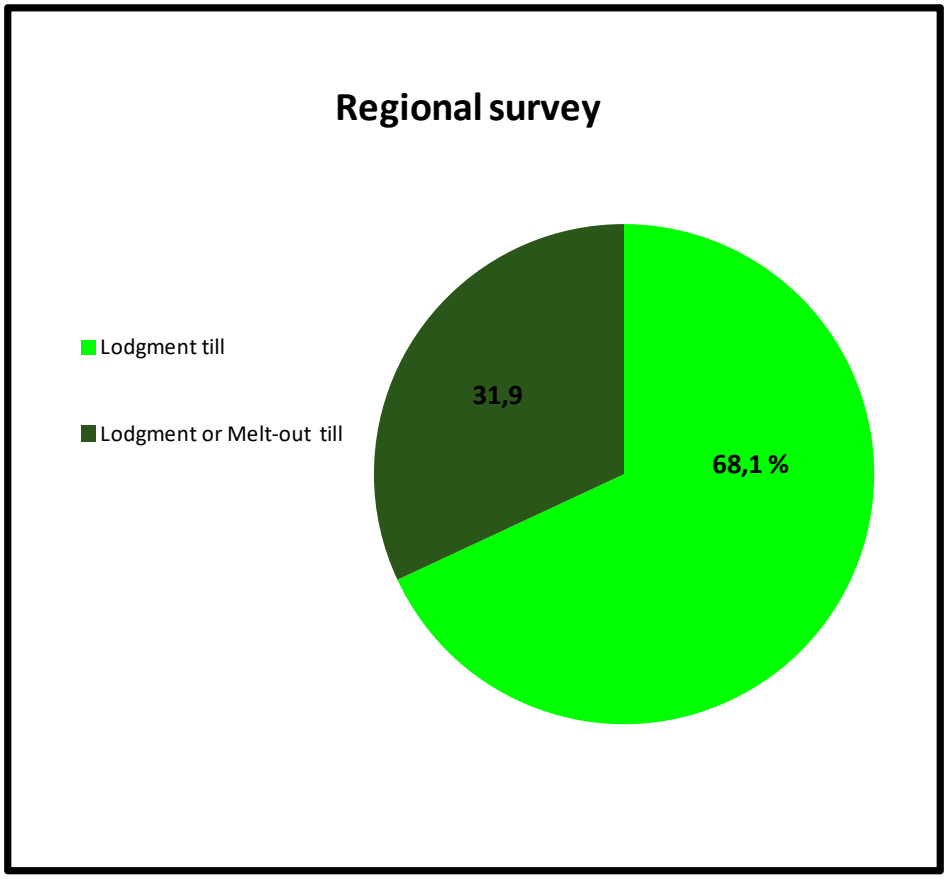


***Figure 5**: Proportion of glacial sediment types sampled during the regional survey. A total of 72 samples were collected.*

SAMPLING PROCEDURE

Approximate sampling sites were selected from aerial images and quaternary maps. However, exact sites were positioned by the geologist in the field according to local physiography. In many instances, numerous test holes were required prior of finding suitable material. Such testing is particularly important for follow-up surveys. Relevant information from each sample site, such as soil structure, cobble composition, topography, vegetation, drainage, glacial or glaciofluvial landforms, description of surficial boulders and outcrops lithologies and photographs were recorded in a standardized coded form and captured in the IOSFieldNote numerical pad (***appendix 2***).

Samples were numbered as 1483**2**xxxx. The first four digits indicate the project number; the fifth digit represents the material type, and the last four digits being sequential. Samples, with an average weight of 10 kilograms, were dedicated to gold grain counting. Sampling holes, varying from 0.35 to 1.9 m deep, were dug with the use of a hand

shovel for 72 sites. The shovel and other equipment were cleaned before each use to avoid contamination from previous sites.

Sampled material was bagged in a plastic bag, protected by a rice-bag. Sample bags were prepared in advance with sample number written on each bag (plastic and rice bag), and red flag tapes with sample number were left in the plastic bag as well as tied on the rice-bag. Another red flag-tape with a sample number was tied to a tree to indicate sampling site. Finally, every hole was backfilled once all the information was collected and the sample bagged.

TILL SAMPLING

Till sample were ideally collected from the undisturbed C horizon (***figure 6***), below any evidence of podzolization. B_2 horizon could be collected if C is not accessible or in excess of 2 metres in depth Ideal material was considered as lodgment till, followed by basal and/or melt-out till. Glacial sediments were available almost everywhere, although locally difficult to reach being overlaid by littoral deposit or thick organic, which are not suitable or very difficult to properly collect. Favourable lodgment till is typically found on the down-ice side of the outcrop margin or in depression on the bedrock surface and streamlined glacial landforms.

The basal (lodgment) till encountered is generally of greyish colour. The material was mostly humid and compact to very compact and fissile, with a silty sand matrix and various proportions of clay-sized material, gravel, pebbles and blocks. Pebbles and blocks were typically sub-angular to sub-rounded, coated with a clayed basal till on one side and clean and occasionally striated on the other side. The main lithologies observed were mafic to intermediate volcanics and felsic intrusive rocks ***appendix 2***.

Melt-out tills are slightly compact to compact, with more abundant sand, gravel and cobbles, and less clay than in the basal tills. Colours are more intense than in lodgment till due to oxidation. Blocks and pebbles vary from angular, sub-angular to sub-rounded, washed and include a wider range of lithologies than those of lodgment tills. At many sites, melt-out tills must first be dug through in order to reach underlying basal till for sampling.

The “mixed” or hybrid tills described in the database correspond to material that were most likely sampled at or near the contact with the lodgment till, but still containing some melted-out material. The till can include a significant amount of fine material although with a high proportion of blocks and pebbles.

Diamictons are poorly sorted sediments that contain particles ranging in size from clay to boulders, suspended in a fine or sandy matrix of uncertain glacial origin.

***Figure 6**: Podzol profile and basal till as found on Baden property. This specific sample (148320040) hole depth is 77 centimetres.*

TILL SAMPLE PROCESSING

For Baden project an aliquot of about 500 g was collected directly in the field, after taking the sample of 10 kg for ARTGold™, and was bagged in an 18 oz plastic bag with tie. No preparation was done prior to taking the hand-held XRF measurements.

For this project, the till sample will be processed the automated gold grain counting is performed by automated gold grain count (ARTGold™). The different steps of

ARTGold™ samples processing and it's quality control will be presented in a second report.

SAMPLE ANALYSIS

Hand-held X-ray fluorescence analysis was performed in-house on aliquot of till material directly through the plastic bag prior to ARTGold™ till processing by IOS. HH-XRF (hand-held XRF) analysis provides a semi-quantitative total determination of metal in the mineral soil.

Aliquots were analyzed by X-ray fluorescence with a portable spectrometer (Olympus Vanta VMR). The XRF measure the abundance of a vast series of elements, dominantly the transition metals. Approximately 1 cm^3 of the material is sufficient, assuming it is fine enough to be representative. A 90 seconds reading was acquired per analysis using the Compton signal deconvolution ("Geochem (3-Beam) mode") and factory calibration. Results are provided in ***appendix 3***, quality control in ***appendix 4*** and certificates in ***appendix 5***. Calibration was performed every day and blank material and certified reference material were inserted routinely in analytical sequence for quality control. XRF analyses are total determination, providing the abundance of the various elements regardless of their speciation. Numerous issues and limitations are related to this analytical method, the prominent one being representativeness. Till material is assumed as being fine grain enough to provide sufficient representativeness without prior screening. Current results must be considered as semi-quantitative only, and shall be handled with care in regard of geochemical targeting.

QUALITY CONTROL

In order to monitor analyses quality, a strict QAQC program was enforced. The program includes systematic insertion of blanks, certified and/or internal reference material prior to shipments to the commercial laboratories as well as for the in-house analyses. The blanks are used to detect contamination issues and sample mixing, while the certified and internal reference material served to check respectively accuracy and precision of the analytical technique. Analytical quality control is detailed in ***appendix 4***.

INTERPRETATION

Tills are made of grinded rock material, which grinding happen in subglacial condition. Consequently, their chemistry is dictated by the mineral assemblage they are composed of, which itself reflect a mixture of the basement rocks that were eroded. The process occurring in frozen sub-glacial condition, no corrosion or other chemical reaction is

expected and the ionic component of the signal is assumed negligible. However, the sediment being transported by glacial movement, the signal is expected to be decoupled from its source rocks, according to ice flow direction. X-ray fluorescence being a total determination, no selective signal from different mineral can be discriminated, as for an multi-acid digestion with ICP-MS analysis. The only post-sedimentation reaction that may affect such material, which is of significance, is the oxidation of sulphides if the sediment is in contact with ground water. Since only a limited amount of transition metals can be host in silicates, in diadochic replacement of iron, elevated abundance of these metals requires the presence of sulphides. A lodgement till is typically clay rich and sufficiently compact to be impermeable to groundwater, and thus assumed preserving the sulphide content. However, ablation till, hybrid till or reworked tills are more permeable and deposited in aqueous environment. Hence, for this type of material, sulphides were likely oxidized and corroded, and the metal content dispersed in water in ionic form. Consequently, the metal content of such sediments is reduced compared to lodgement till.

Constituent oxides were measured, in metallic weight proportions. Most of these are light metals, such as magnesium, aluminium, silicium, and hence suffer poor accuracy which is intrinsic to the method. Sodium is too light to be detected. Modal abundance of constituent minerals can be calculated, attempt that was not performed. Abnormal abundance are not observed, suggesting a quite uniform till composition. As per example, silicium averages 26,108 ppm, or 2.6%, or 5.56% SiO_2, which is obviously erroneous and underestimated due to radiation absorption through the plastic bag walls. Similar issue is noted for all light elements. However, the bias leading to light element underestimation is anticipated to be uniform among samples, and relative proportions shall be preserved. As per example, silicium range from 14027 to 36,626 ppm, for a variation coefficient of 19%, similar to what is observed in better quality analyses. Hence, abundance of measured magnesium is considered as indicative of the contribution of mafic volcanic, such as in the south-east of the property, while potassium is indicative of granitoids, such as in the north.

Most metals are typically partitioned into different minerals, which cannot be easily discriminated from the bulk chemical analysis. Some metals are nearly exclusively hosted in some usual minerals, such as zirconium in zircon with a spotty distribution, or yttrium in xenotime enriched in the southeast, or groups of mineral, such as phosphorus in apatite plus monazite or titanium in ilmenite, rutile plus titanite. Abundances are quite uniform and typical of volcanic or intrusive rocks, and no significant anomaly is detected.

Lanthanides, such as lanthanum or cerium, can be partionned into a variety of mineral, but restricted to monazite in most usual rocks. Their abundance is typically below detection limits, typical of volcanic or intrusive rocks without anomaly.

Alkalis, such as rubidium, and earth-alkalis, such as strontium and barium, are partitioned into usual minerals such as feldspar, and show quite uniform abundance typical of volcanic or intrusive rocks. No anomaly is detected

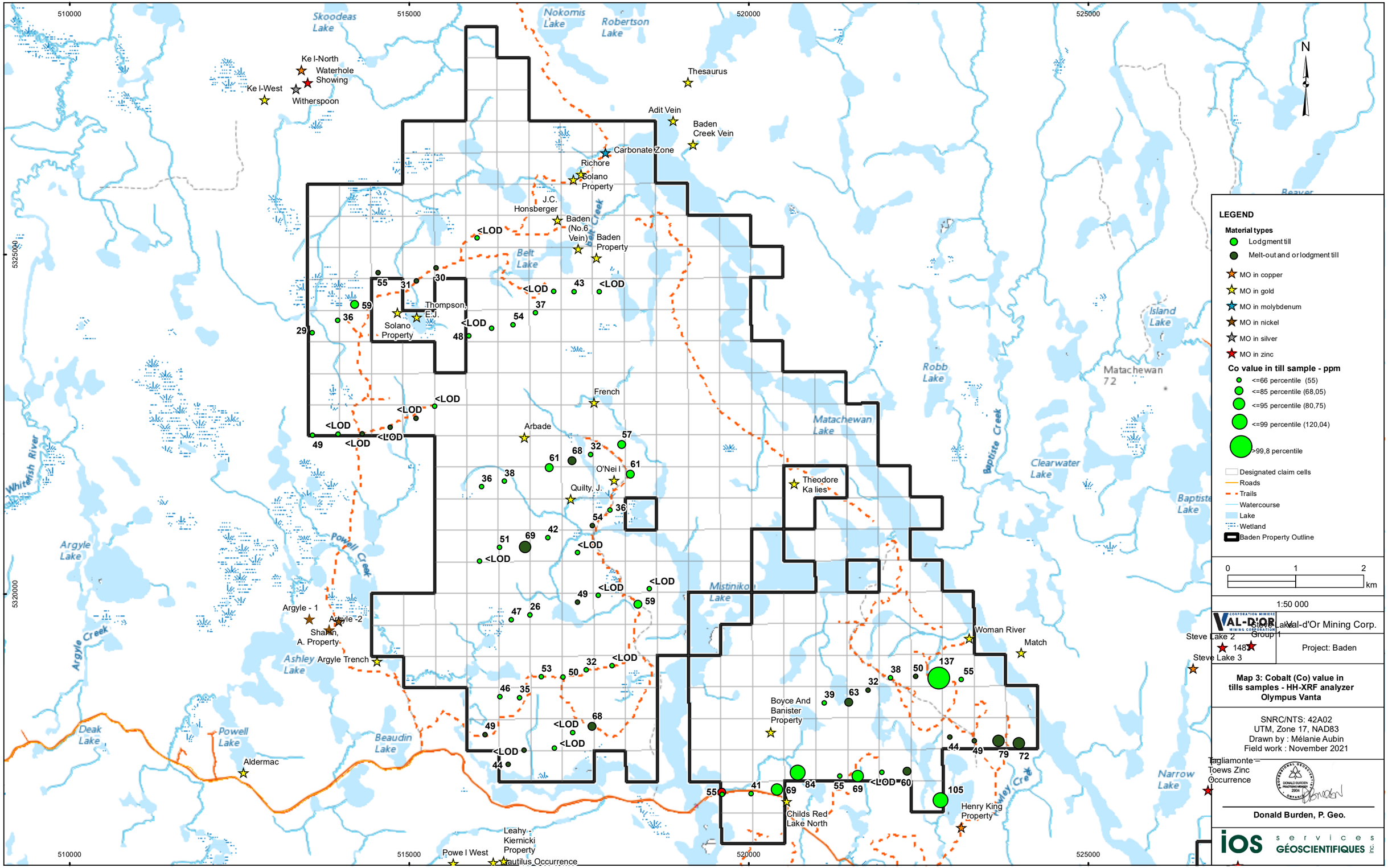
Siderophile transition metals, such as manganese, vanadium and chromium are typically partitioned into ferromagnesian minerals and iron oxides. Their abundance is low and uniform, if not below detection limit. Chromium is quite abundant in 8 samples, in excess of 50 ppm. This is suggestive of the presence of chromite or an enrichment in ferromagnesian mineral typical of mafic rocks, or even some contribution from ultramafic rocks, such as in samples from the north-west segment of the property.

Metalloids, such as sulphur, arsenic, antimony, bismuth, tellurium or selenium are quasi systematically below detection limits, and too low in abundance to be considered as anomalous if detected. Sulphur is abundant in most mineralized system, and shall have been detected if present, although a detection limit issue is suspected. However, sulphides and other sulfosalts are sensitive to oxidation, and are expected to have been altered away. These ligands are typically associated with gold mineralized system, and arsenic shall have been sufficiently abundant to be detected if such system contributed to the sediments.

Tungsten, a metal commonly associated with gold in orogenic mineralization, is also below detection limit. Most other trace metals are systematically below or near detection limits, such as mercury, cadmium, tin, silver, molybdenum, niobium. A low background abundance of thorium and uranium is detected, lacking anomalies. Lead is systematically detected in very small amount, and may be hosted in feldspar.

Chalcophile transition metals, such as cobalt, nickel, copper, nickel were detected in most samples. These metals are typically host in ferromagnesian mineral, in diadochic substitution with ferrous iron. However, their abundance in such mineral is limited (few tens of ppm copper and cobalt, few hundreds of ppm of zinc and nickel). To be of interest, these metals shall be present in sulphides, the contribution of which would be added to the one in ferromagnesian silicate, and which may cause anomalous grades. Since abundance of ferromagnesian is not constant among samples, depending on contribution of the various source rocks, chalcophile metal abundance needs to be normalized to iron to be interpreted. To ease the comparison, abundance is expressed as *Z-Score*, which is the number of standard deviation above the average represented by the analysis ($Z = (x-\mu)/\sigma$).

- The abundance of cobalt is presented on ***map 3***. Numerous samples are distinctively enriched, in the southeast portion of the area, between Mistinikaw and Matachewan lakes. Anomalous values up to 137 ppm are detected and Z-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Witherspoon
Thesaurus
Adit Vein
Baden Creek Vein
Carbonate Zone
Richore
Solano Property
J.C. Honsberger
Baden (No.6 Vein)
Baden Property
Belt Creek
Belt Lake
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Thompson, E.J.
Solano Property
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French
Arbade
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68
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O'Nei l
Quilty, J.
38
Theodore Ka lies
54
42
51
69
49
47
26
59
Argyle - 1
Argyle -2
Shamn, A. Property
Argyle Trench
53
50
46
35
68
44
Woman River
Match
137
38
32
39
63
Boyce And Banister Property
44
79
72
41
84
Childs Red Lake North
60
105
Henry King Property
Tagliamonte Toews Zinc Occurrence
Steve Lake 2
Steve Lake 3
Island Lake
Robb Lake
Matachewan 72
Matachewan Lake
Clearwater Lake
Baptiste Lake
Baptiste Creek
Mistinikon Lake
Whitefish River
Argyle Lake
Argyle Creek
Powell Creek
Ashley Lake
Deak Lake
Powell Lake
Beaudin Lake
Narrow Lake
Aldermac
Powe l West
Leahy - Kiernicki Property
Nautilus Occurrence
LEGEND
Material types
Lodgment till
Melt-out and or lodgment till
MO in copper
MO in gold
MO in molybdenum
MO in nickel
MO in silver
MO in zinc
Co value in till sample - ppm
<=66 percentile (55)
<=85 percentile (68,05)
<=95 percentile (80,75)
<=99 percentile (120,04)
>99,8 percentile
Designated claim cells
Roads
Trails
Watercourse
Lake
Wetland
Baden Property Outline
0
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km
1:50 000
Val-d'Or Mining Corp.
Group 1
Project: Baden
Map 3: Cobalt (Co) value in tills samples - HH-XRF analyzer Olympus Vanta
SNRC/NTS: 42A02
UTM, Zone 17, NAD83
Drawn by : Mélanie Aubin
Field work : November 2021
Donald Burden, P. Geo.
ios services GÉOSCIENTIFIQUES inc.

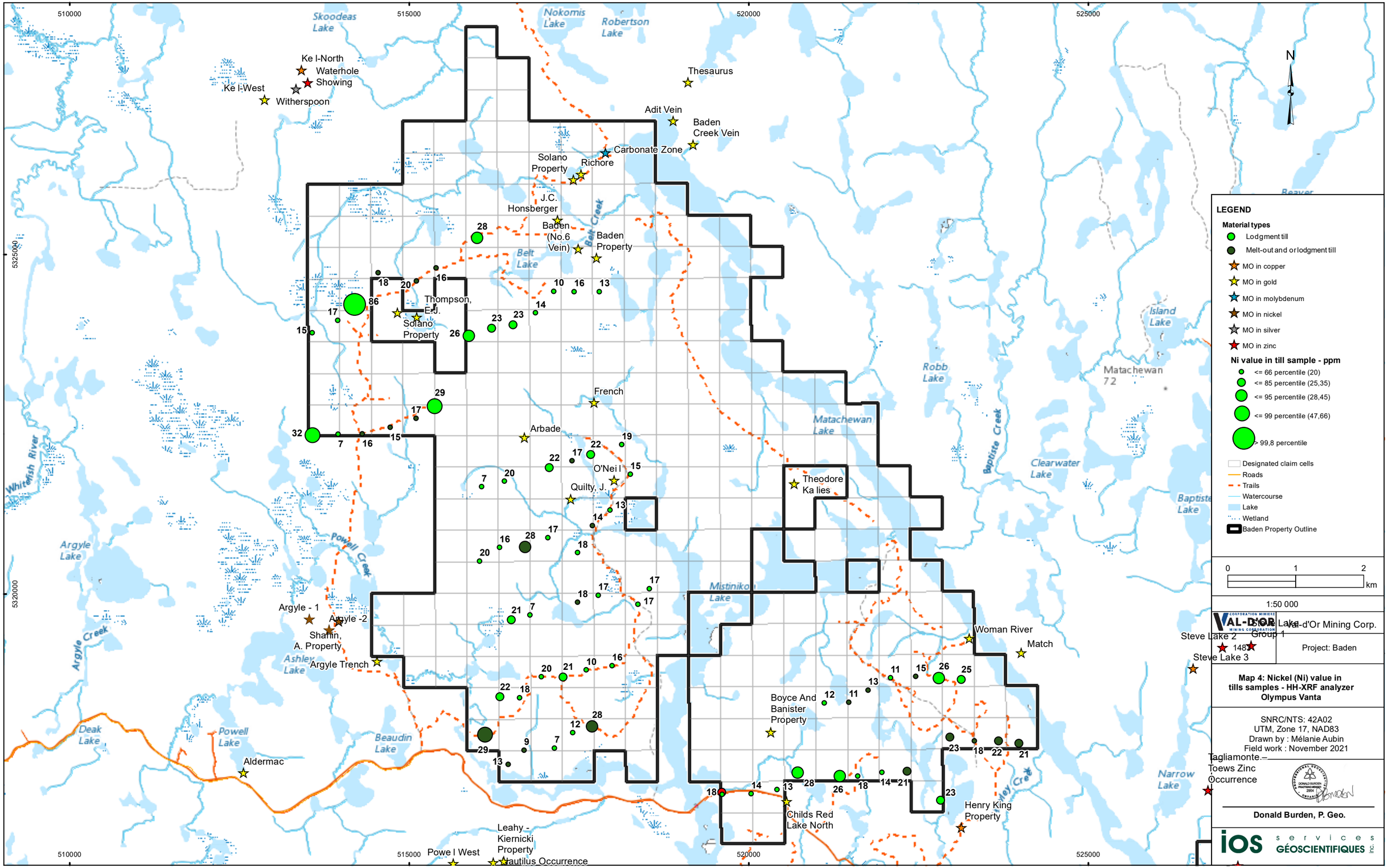
score up to 1.99. Cobalt it typically strongly partitioned into pyrite and can be considered as a proxy to its abundance, once the background abundance is subtracted. Cobalt overall abundance is suspected to be overestimated by the method, likely due to a calibration issue.

- The abundance of nickel is presented on ***map 4***. This metal has abundances that are typical for sediments derived from mafic rocks, with a single sample distinctively anomalous at 86 ppm, or a Z-score of 5.39. This sample is located in the northwest, adjacent to Solario property occurrence. This sample is also anomalous in copper, but is not distinctively enriched in magnesium or chromium. No known mineral occurrence is reported in the up-ice direction of the sample.
- The abundance of copper is presented on ***map 5***. It's abundance is typical of glacial sediments, averaging at 24 ppm. Three samples are distinctively anomalous at 133 and 327 ppm, or Z-scores of 4.15 and 6.59. Sample at 133 ppm is located at the southern limit of the property and has no copper occurrence reported in its up-ice. The second occurrence is the aforementioned nickel occurrence.
- The abundance of zinc is presented on ***map 6.*** Zinc is evenly distributed with an abundance that is quite typical of volcanic or sediments with an average of 34 ppm. A single sample is considered as slightly anomalous at 84 ppm, or a Z-score of 2.96. This sample is part of a group with slightly elevated values located in the south-east, approximately down-ice of *Woman River* occurrence.

ANOMALIES

Only sample 148320055 is to be considered as significantly anomalous in copper and nickel to suggest the proximity of a metallic source, likely associated with a sulphidic accumulation in a mafic rock. No such occurrence is reported in its immediate up-ice area nor is any prospective rocks to host such occurrence. Airborne electromagnetic maps shall be verified for the presence of conductive zone and prospecting is recommended.

Various slightly anomalous samples in cobalt, copper and zinc are detected in the southeast corner of the property. These are diffuse and located in an area dominated by mafic volcanic. Some prospecting of airborne electromagnetic conductors, if present, is justified.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Thesaurus
Adit Vein
Baden Creek Vein
Carbonate Zone
Solano Property
Richore
J.C. Honsberger
Baden (No.6 Vein)
Baden Property
Belt Creek
Belt Lake
Thompson, E.J.
Solano Property
French
Arbade
O'Neil
Quilty, J.
Theodore Ka lies
Matachewan Lake
Baptiste Creek
Clearwater Lake
Baptiste Lake
Island Lake
Robb Lake
Matachewan 72
Whitefish River
Argyle Lake
Powell Creek
Argyle Creek
Ashley Lake
Argyle - 1
Argyle -2
Shanin, A. Property
Argyle Trench
Mistiniko Lake
Woman River
Match
Steve Lake 2
Steve Lake 3
Boyce And Banister Property
Deak Lake
Powell Lake
Aldermac
Beaudin Lake
Childs Red Lake North
Henry King Property
Narrow Lake
Tagliamonte Toews Zinc Occurrence
Leahy - Kiernicki Property
Nautilus Occurrence
Powe l West
N
LEGEND
Material types
Lodgment till
Melt-out and or lodgment till
MO in copper
MO in gold
MO in molybdenum
MO in nickel
MO in silver
MO in zinc
Ni value in till sample - ppm
<= 66 percentile (20)
<= 85 percentile (25,35)
<= 95 percentile (28,45)
<= 99 percentile (47,66)
> 99,8 percentile
Designated claim cells
Roads
Trails
Watercourse
Lake
Wetland
Baden Property Outline
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Val-d'Or Mining Corp.
Group 1
Project: Baden
Map 4: Nickel (Ni) value in tills samples - HH-XRF analyzer Olympus Vanta
SNRC/NTS: 42A02
UTM, Zone 17, NAD83
Drawn by : Mélanie Aubin
Field work : November 2021
Donald Burden, P. Geo.
ios services GÉOSCIENTIFIQUES inc.

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Nokomis Lake
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Baden Creek Vein
Carbonate Zone
Solano Property
Richore
J.C. Honsberger
Baden (No.6 Vein)
Baden Property
Belt Creek
Belt Lake
Thompson, E.J.
Solano Property
French
Arbade
O'Neil
Quilty, J.
Theodore Ka lies
Matachewan Lake
Island Lake
Robb Lake
Matachewan 72
Baptiste Creek
Clearwater Lake
Baptiste Lake
Whitefish River
Argyle Lake
Powell Creek
Argyle - 1
Argyle -2
Shamin, A. Property
Argyle Trench
Argyle Creek
Ashley Lake
Mistiniko Lake
Woman River
Match
Steve Lake 2
Steve Lake 3
Boyce And Banister Property
Deak Lake
Powell Lake
Aldermac
Beaudin Lake
Childs Red Lake North
Henry King Property
Narrow Lake
Tagliamonte – Toews Zinc Occurrence
Powe l West
Leahy - Kiernicki Property
Nautilus Occurrence

LEGEND

Material types
- Lodgment till
- Melt-out and or lodgment till
- MO in copper
- MO in gold
- MO in molybdenum
- MO in nickel
- MO in silver
- MO in zinc

Cu value in till sample - ppm
- <= 66 percentile (16)
- <= 85 percentile (29,5)
- <= 95 percentile (48)
- <= 99 percentile (200,9)
- > 99,8 percentile

- Designated claim cells
- Roads
- Trails
- Watercourse
- Lake
- Wetland
- Baden Property Outline

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1:50 000

VAL-D'OR MINING CORPORATION
Val-d'Or Mining Corp.
Group 1
1487
Project: Baden

Map 5: Copper (Cu) value in tills samples - HH-XRF analyzer Olympus Vanta

SNRC/NTS: 42A02
UTM, Zone 17, NAD83
Drawn by : Mélanie Aubin
Field work : November 2021

Donald Burden, P. Geo.

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Skoodeas Lake
Nokomis Lake
Robertson Lake
Ke l-North
Waterhole
Showing
Ke l-West
Witherspoon
Thesaurus
Adit Vein
Baden Creek Vein
Carbonate Zone
Solano Property
Richore
J.C. Honsberger
Baden (No.6 Vein)
Baden Property
Belt Creek
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Thompson, E.J.
Solano Property
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Matachewan Lake
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Matachewan 72
Robb Lake
Baptiste Creek
Clearwater Lake
Baptiste Lake
Whitefish River
Argyle Lake
Powell Creek
Argyle - 1
Argyle -2
Shanin, A. Property
Argyle Trench
Argyle Creek
Ashley Lake
Mistiniko Lake
Woman River
Match
Steve Lake 2
1487
Steve Lake 3
Boyce And Banister Property
Deak Lake
Powell Lake
Beaudin Lake
Aldermac
Childs Red Lake North
Henry King Property
Narrow Lake
Tagliamonte – Toews Zinc Occurrence
Powe l West
Leahy - Kiernicki Property
Nautilus Occurrence

N

LEGEND

Material types
- Lodgment till
- Melt-out and or lodgment till

- MO in copper
- MO in gold
- MO in molybdenum
- MO in nickel
- MO in silver
- MO in zinc

Zn value in till sample - ppm
- <= 66 percentile (34,86)
- <= 85 percentile (41)
- <= 95 percentile (48,45)
- <= 99 percentile (64,83)
- > 99,8 percentile

- Designated claim cells
- Roads
- Trails
- Watercourse
- Lake
- Wetland
- Baden Property Outline

0 1 2 km

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Val-d'Or Mining Corp.

Group 1

Project: Baden

Map 6: Zinc (Zn) value in tills samples - HH-XRF analyzer Olympus Vanta

SNRC/NTS: 42A02
UTM, Zone 17, NAD83
Drawn by : Mélanie Aubin
Field work : November 2021

Donald Burden, P. Geo.

ios services GÉOSCIENTIFIQUES inc.

CONCLUSIONS

Despite that gold grain counts are not yet available, a prominent nickel-copper anomaly is detected in the northwest area of the property which definitively justify prospecting efforts. Other copper, zinc and cobalt enriched samples are scattered in the southeast of the property, in an area where numerous former mineralized occurrences are reported.

None of the known mineral occurrence within or near the property caused a significant geochemical anomaly in the glacial sediment detectible with the current method.

Respectfully submitted

1483-2021_Report_Till
Baden Project, December 2nd, 2021

RÉJEAN GIRARD # 521

Réjean Girard, P. Geo.
OGQ n° 521

1483-2021_Report_Till
Baden Project, December 2nd, 2021

DONALD BURDEN PRACTISING MEMBER 2904 ONTARIO

Donald Burden, P. Geo.
PGO n° 2904

Contributions:
Karen Gagné, chemist, quality control
Karine Desbiens, edition
Mélanie Aubin, biologist, drawing

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APPENDIX 1

DAILY REPORTS

RAPPORT JOURNALIER	Date: 2021-11-01	PROJET: 1483	CAMPEMENT: Zzz's n Eats	MÉTÉO: sun and cloud, 5-10C
		CLIENT: Val-d'Or Mining Corp.	RESP: Donald Burden	SIGNATURE: DB
		APPEL QUOTIDIEN: non		

COMMENTAIRES SUR LES TRAVAUX: Démob/mobilise vers Matachewan pour le projet.

COMMENTAIRES SUR LA GÉOLOGIE:

PERSONNEL	TÂCHES	No Projet	Couché	Heures	Hors camps	Échant: De	Échant: A	FACT.
Donald Burden	Géologue sénior	1483	oui	4				
Patrick Larouche	Technicien d'échantillonage	1483	oui	4				
Lars Bennedsen	Technicien d'échantillonage	1483	oui	4				
Charles Gilbert-Painchaud	Technicien d'échantillonage	1483	oui	4				

VOLS D'HYDRAVIONS:		AVARIS MÉCANIQUES:	
TEMPS D'HÉLICOPTÈRE:		ACCIDENTS:	
VOYAGES DE CAMION:		TEMPS MORT:	
EXPÉDITION D'ÉCHANTILLONS:		AMÉLIORATIONS À PRÉVOIR:	
ACHATS:			
MOBILISATION:			
DEMOBILISATION:			
FORAGE- # TROU:		VÉRIFICATION:	**IOS Services Géoscientifiques Inc**
BUDGET RÉSIDUEL:	DÉPENSES:	FACTURATION:	

RAPPORT JOURNALIER	Date: 2021-11-02	PROJET: 1483	CAMPEMENT: Zzz's n Eats	MÉTÉO: sun and cloud, -2C - 5C
		CLIENT: Val-d'Or Mining Corp.	RESP: Donald Burden	SIGNATURE: DB
		APPEL QUOTIDIEN: non		

COMMENTAIRES SUR LES TRAVAUX: Première journée sur la propriété; vérifié l'accès et échantillonné les sites 50, 51, 52, 53, 58, 59, 60, 61, 62, 63, 65, 66, 67, 68.

COMMENTAIRES SUR LA GÉOLOGIE:

PERSONNEL	TÂCHES	No Projet	Couché	Heures	Hors camps	Échant: De	Échant: A	FACT.
Donald Burden	Géologue sénior	1483	oui	13.5				
Patrick Larouche	Technicien d'échantillonage	1483	oui	11.5				
Lars Bennedsen	Technicien d'échantillonage	1483	oui	11.5				
Charles Gilbert-Painchaud	Technicien d'échantillonage	1483	oui	11.5				

VOLS D'HYDRAVIONS:		AVARIS MÉCANIQUES:	
TEMPS D'HÉLICOPTÈRE:		ACCIDENTS:	
VOYAGES DE CAMION:		TEMPS MORT:	
EXPÉDITION D'ÉCHANTILLONS:		AMÉLIORATIONS À PRÉVOIR:	
ACHATS:			
MOBILISATION:			
DEMOBILISATION:			
FORAGE- # TROU:		VÉRIFICATION:	**IOS Services Géoscientifiques Inc**
BUDGET RÉSIDUEL:	DÉPENSES:	FACTURATION:	

RAPPORT JOURNALIER	Date: 2021-11-03	PROJET: 1483	CAMPEMENT: Zzz's n Eats	MÉTÉO: sun and cloud, -2C - 5C
		CLIENT: Val-d'Or Mining Corp.	RESP: Donald Burden	SIGNATURE: DB
		APPEL QUOTIDIEN: non		

COMMENTAIRES SUR LES TRAVAUX: Vérifié l'accès et échantillonné les sites 69, 27, 26, 25, 29, 35, 31; Accès à la propriété du côté est n'est pas possible et cela ajoute 2 heures par jour en VTT pour accéder la propriété par le côté ouest.

COMMENTAIRES SUR LA GÉOLOGIE:

PERSONNEL	TÂCHES	No Projet	Couché	Heures	Hors camps	Échant: De	Échant: A	FACT.
Donald Burden	Géologue sénior	1483	oui	11.5				
Patrick Larouche	Technicien d'échantillonage	1483	oui	11.5				
Lars Bennedsen	Technicien d'échantillonage	1483	oui	11.5				
Charles Gilbert-Painchaud	Technicien d'échantillonage	1483	oui	11.5				

VOLS D'HYDRAVIONS:		AVARIS MÉCANIQUES:	
TEMPS D'HÉLICOPTÈRE:		ACCIDENTS:	
VOYAGES DE CAMION:		TEMPS MORT:	
EXPÉDITION D'ÉCHANTILLONS:		AMÉLIORATIONS À PRÉVOIR:	
ACHATS:			
MOBILISATION:			
DEMOBILISATION:			
FORAGE- # TROU:		VÉRIFICATION:	**IOS Services Géoscientifiques Inc**
BUDGET RÉSIDUEL:	DÉPENSES:	FACTURATION:	

RAPPORT JOURNALIER	Date: 2021-11-04	PROJET: 1483	CAMPEMENT: Zzz's n Eats	MÉTÉO: sun and cloud, -2C - 5C
		CLIENT: Val-d'Or Mining Corp.	RESP: Donald Burden	SIGNATURE: DB
		APPEL QUOTIDIEN: non		

COMMENTAIRES SUR LES TRAVAUX: Échantilloné 21, 22, 23, 24, 55, 32, 42, 43, 44, 41, 40, 33, 34, 54.

COMMENTAIRES SUR LA GÉOLOGIE:

PERSONNEL	TÂCHES	No Projet	Couché	Heures	Hors camps	Échant: De	Échant: A	FACT.
Donald Burden	Géologue sénior	1483	oui	13.5				
Patrick Larouche	Technicien d'échantillonage	1483	oui	11.5				
Lars Bennedsen	Technicien d'échantillonage	1483	oui	11.5				
Charles Gilbert-Painchaud	Technicien d'échantillonage	1483	oui	11.5				

VOLS D'HYDRAVIONS:		AVARIS MÉCANIQUES:	
TEMPS D'HÉLICOPTÈRE:		ACCIDENTS:	
VOYAGES DE CAMION:		TEMPS MORT:	
EXPÉDITION D'ÉCHANTILLONS:		AMÉLIORATIONS À PRÉVOIR:	
ACHATS:			
MOBILISATION:			
DEMOBILISATION:			
FORAGE- # TROU:		VÉRIFICATION:	**IOS Services Géoscientifiques Inc**
BUDGET RÉSIDUEL:	DÉPENSES:	FACTURATION:	

RAPPORT JOURNALIER	Date: 2021-11-05	PROJET: 1483	CAMPEMENT: Zzz's n Eats	MÉTÉO: sun and cloud, 5-7C
		CLIENT: Val-d'Or Mining Corp.	RESP: Donald Burden	SIGNATURE: DB
		APPEL QUOTIDIEN: non		

COMMENTAIRES SUR LES TRAVAUX: Échantillonné 20, 19, 15, 16, 17, 18, 38, 37, 36, 7, 5, 4, 56, 3

COMMENTAIRES SUR LA GÉOLOGIE:

PERSONNEL	TÂCHES	No Projet	Couché	Heures	Hors camps	Échant: De	Échant: A	FACT.
Donald Burden	Géologue sénior	1483	oui	13.5				
Patrick Larouche	Technicien d'échantillonage	1483	oui	11.5				
Lars Bennedsen	Technicien d'échantillonage	1483	oui	11.5				
Charles Gilbert-Painchaud	Technicien d'échantillonage	1483	oui	11.5				

VOLS D'HYDRAVIONS:		AVARIS MÉCANIQUES:	
TEMPS D'HÉLICOPTÈRE:		ACCIDENTS:	
VOYAGES DE CAMION:		TEMPS MORT:	
EXPÉDITION D'ÉCHANTILLONS:		AMÉLIORATIONS À PRÉVOIR:	
ACHATS:			
MOBILISATION:			
DEMOBILISATION:			
FORAGE- # TROU:		VÉRIFICATION:	**IOS Services Géoscientifiques Inc**
BUDGET RÉSIDUEL:	DÉPENSES:	FACTURATION:	

RAPPORT JOURNALIER	Date: 2021-11-06	PROJET: 1483	CAMPEMENT: Zzz's n Eats	MÉTÉO: sun and cloud, 5-7C
		CLIENT: Val-d'Or Mining Corp.	RESP: Donald Burden	SIGNATURE: DB
		APPEL QUOTIDIEN: non		

COMMENTAIRES SUR LES TRAVAUX: Échantillonné 1, 2, 9, 10, 11, 12, 13, 14, 48, 49, +1 nouveau.

COMMENTAIRES SUR LA GÉOLOGIE:

PERSONNEL	TÂCHES	No Projet	Couché	Heures	Hors camps	Échant: De	Échant: A	FACT.
Donald Burden	Géologue sénior	1483	oui	11.5				
Patrick Larouche	Technicien d'échantillonage	1483	oui	11.5				
Lars Bennedsen	Technicien d'échantillonage	1483	oui	11.5				
Charles Gilbert-Painchaud	Technicien d'échantillonage	1483	oui	11.5				

VOLS D'HYDRAVIONS:		AVARIS MÉCANIQUES:	
TEMPS D'HÉLICOPTÈRE:		ACCIDENTS:	
VOYAGES DE CAMION:		TEMPS MORT:	
EXPÉDITION D'ÉCHANTILLONS:		AMÉLIORATIONS À PRÉVOIR:	
ACHATS:			
MOBILISATION:			
DEMOBILISATION:			
FORAGE- # TROU:		VÉRIFICATION:	**IOS Services Géoscientifiques Inc**
BUDGET RÉSIDUEL:	DÉPENSES:	FACTURATION:	

RAPPORT JOURNALIER	Date: 2021-11-07	PROJET: 1483	CAMPEMENT: Zzz's n Eats	MÉTÉO: cloud and drizzle +10
		CLIENT: Val-d'Or Mining Corp.	RESP: Donald Burden	SIGNATURE: DB
		APPEL QUOTIDIEN: non		

COMMENTAIRES SUR LES TRAVAUX: Échantillonné 46, 47, +6 nouveaux sites.

COMMENTAIRES SUR LA GÉOLOGIE:

PERSONNEL	TÂCHES	No Projet	Couché	Heures	Hors camps	Échant: De	Échant: A	FACT.
Donald Burden	Géologue sénior	1483	oui	11.5				
Patrick Larouche	Technicien d'échantillonage	1483	oui	11.5				
Lars Bennedsen	Technicien d'échantillonage	1483	oui	11.5				
Charles Gilbert-Painchaud	Technicien d'échantillonage	1483	oui	11.5				

VOLS D'HYDRAVIONS:		AVARIS MÉCANIQUES:	
TEMPS D'HÉLICOPTÈRE:		ACCIDENTS:	
VOYAGES DE CAMION:		TEMPS MORT:	
EXPÉDITION D'ÉCHANTILLONS:		AMÉLIORATIONS À PRÉVOIR:	
ACHATS:			
MOBILISATION:			
DEMOBILISATION:			
FORAGE- # TROU:		VÉRIFICATION:	**IOS Services Géoscientifiques Inc**
BUDGET RÉSIDUEL:	DÉPENSES:	FACTURATION:	

RAPPORT JOURNALIER	Date: 2021-11-08	PROJET: 1483	CAMPEMENT: Zzz's n Eats	MÉTÉO: cloud and drizzle +10
		CLIENT: Val-d'Or Mining Corp.	RESP: Donald Burden	SIGNATURE: DB
		APPEL QUOTIDIEN: non		

COMMENTAIRES SUR LES TRAVAUX: Démobilisation vers Kirkland Lake.

COMMENTAIRES SUR LA GÉOLOGIE:

PERSONNEL	TÂCHES	No Projet	Couché	Heures	Hors camps	Échant: De	Échant: A	FACT.
Donald Burden	Géologue sénior	1483	oui	5.5				
Patrick Larouche	Technicien d'échantillonage	1483	oui	5.5				
Lars Bennedsen	Technicien d'échantillonage	1483	oui	5.5				
Charles Gilbert-Painchaud	Technicien d'échantillonage	1483	oui	5.5				

VOLS D'HYDRAVIONS:		AVARIS MÉCANIQUES:	
TEMPS D'HÉLICOPTÈRE:		ACCIDENTS:	
VOYAGES DE CAMION:		TEMPS MORT:	
EXPÉDITION D'ÉCHANTILLONS:		AMÉLIORATIONS À PRÉVOIR:	
ACHATS:			
MOBILISATION:			
DEMOBILISATION:			
FORAGE- # TROU:		VÉRIFICATION:	**IOS Services Géoscientifiques Inc**
BUDGET RÉSIDUEL:	DÉPENSES:	FACTURATION:	

APPENDIX 2

SAMPLE LOCATION AND DESCRIPTION

Till_Numb	UTMX (NAD 83)	UTMY (NAD 83)	Type Till	GSF ALTITUDE (m)	Target	GSF DATE	Survey type	Transport type	Excavation method	Sampling type	Sampled horizon	Hole total depth (cm)	LFH thickness (cm)	Ah thickness (cm)	Ae thickness (cm)	Bhf thickness (cm)	Bhf (%)	B thickness (cm)	B (%)	B color	C thickness (cm)	C (%)
148320001	523978,42	5317804,62	Lodgment and or Melt-out Till	349,5	61	2021-11-02T08:26:06Z	Regional	By foot	Hand shovel	Hole	C	80	0	0	0	0	0	60	20	2.5Y 5/4	20	80
148320002	523675,20	5317837,69	Lodgment and or Melt-out Till	352,2	60	2021-11-02T10:08:13Z	Regional	By foot	Hand shovel	Hole	C	88	10	2	6	0	0	40	15	10.5Y 5/6	30	85
148320003	523320,68	5317838,59	Lodgment and or Melt-out Till	370,8	59	2021-11-02T11:25:14Z	Regional	Quad	Hand shovel	Hole	C	70	0	0	0	0	0	40	15	10.5YR 5/6	30	85
148320004	522959,83	5317895,91	Lodgment and or Melt-out Till	364,4	58	2021-11-02T12:19:11Z	Regional	By foot	Hand shovel	Hole	C	122	19	2	1	0	0	60	5	2.5Y 4/2	40	95
148320005	522821,22	5316963,01	Lodgment Till	344,2	57	2021-11-02T13:36:10Z	Regional	By foot	Hand shovel	Hole	C	70	15	1	7	0	0	21	10	10YR 5/6	26	90
148320006	522332,59	5317390,91	Lodgment and or Melt-out Till	385,3	52	2021-11-02T15:10:51Z	Regional	By foot	Hand shovel	Hole	C	81	13	3	11	0	0	35	20	10YR 4/6	19	80
148320007	521961,75	5317377,02	Lodgment Till	379,4	51	2021-11-02T16:11:34Z	Regional	By foot	Hand shovel	Hole	C	71	12	1	1	0	0	40	20	5Y 4/4	17	80
148320008	521603,83	5317321,21	Lodgment Till	361,6	50	2021-11-02T16:50:08Z	Regional	By foot	Hand shovel	Hole	C	56	10	2	2	0	0	17	2	10YR 3/6	25	98
148320009	521338,20	5317319,61	Lodgment Till	344,5	53	2021-11-02T17:20:29Z	Regional	By foot	Hand shovel	Hole	C	59	14	2	2	0	0	17	2	5Y 4/2	24	98
148320010	516779,06	5319694,39	Lodgment Till	366,7	29	2021-11-03T11:17:19Z	Regional	By foot	Hand shovel	Hole	C	49	17	2	16	0	0	12	30	7.5YR 4/6	2	70
148320011	518128,88	5322200,14	Lodgment Till	350,2	68	2021-11-02T10:56:57Z	Regional	Quad	Hand shovel	Hole	C	94	3	8	9	0	0	40	0	10YR 4/6	34	100
148320012	517674,63	5322055,81	Lodgment Till	330,4	67	2021-11-02T11:37:04Z	Regional	Quad	Hand shovel	Hole	C	94	1	10	6	0	0	40	0	7.5YR 4/6	37	100
148320013	516068,52	5321580,01	Lodgment Till	336,5	62	2021-11-02T13:35:14Z	Regional	Quad	Hand shovel	Hole	C	101	2	12	2	0	0	48	0	7.5YR 4/6	37	100
148320014	516404,41	5321660,99	Lodgment Till	332,7	63	2021-11-02T14:13:48Z	Regional	Quad	Hand shovel	Hole	C	79	9	13	6	0	0	23	0	7.5YR 5/6	28	100
148320015	517062,89	5321860,20	Lodgment Till	339,9	65	2021-11-02T15:15:21Z	Regional	Quad	Hand shovel	Hole	C	66	6	3	5	0	0	32	0	7.5YR 4/6	20	100
148320016	517398,06	5321961,05	Lodgment and or Melt-out Till	349,5	66	2021-11-02T15:49:13Z	Regional	Quad	Hand shovel	Hole	C	87	2	8	12	0	0	25	0	10YR 4/6	40	100
148320017	518255,64	5321762,49	Lodgment Till	333,9	69	2021-11-03T11:13:25Z	Regional	Quad	Hand shovel	Hole	C	89	2	12	5	0	0	57	0	10YR 3/3	13	100
148320018	517959,01	5321233,83	Lodgment Till	322,4	27	2021-11-03T12:41:26Z	Regional	Quad	Hand shovel	Hole	C	103	2	11	8	0	0	52	0	10YR 4/3	30	100
148320019	517696,53	5321007,99	Lodgment and or Melt-out Till	327,8	26	2021-11-03T13:29:33Z	Regional	Quad	Hand shovel	Hole	C	95	2	16	5	0	0	48	0	7.5YR 4/6	24	100
148320020	517477,20	5320609,55	Lodgment Till	330,0	25	2021-11-03T14:25:42Z	Regional	Quad	Hand shovel	Hole	C	47	1	19	0	0	0	15	0	7.5YR 2.5/3	12	100
148320021	516504,18	5319618,94	Lodgment Till	376,8	29	2021-11-03T12:18:59Z	Regional	By foot	Hand shovel	Hole	C	73	14	2	6	0	0	2	5	7.5YR 4/3	49	95
148320022	516945,15	5318781,62	Lodgment Till	350,3	35	2021-11-03T13:16:59Z	Regional	Quad	Hand shovel	Hole	C	53	4	2	1	0	0	6	2	2.5Y 5/4	40	98
148320023	517478,71	5319877,79	Lodgment and or Melt-out Till	334,4	31	2021-11-03T14:32:18Z	Regional	By foot	Hand shovel	Hole	B-C	77	16	2	4	0	0	26	50	7.5YR 5/6-10Y	29	50
148320024	517782,76	5319983,80	Lodgment Till	322,7	31	2021-11-03T15:14:53Z	Regional	By foot	Hand shovel	Hole	C	57	10	2	4	0	0	18	3	10YR 4/4	23	97
148320025	517141,28	5317730,75	Lodgment Till	360,3	42	2021-11-04T10:03:16Z	Regional	By foot	Hand shovel	Hole	C	45	13	2	4	0	0	20	5	10YR 4/6	6	95
148320026	516037,79	5320485,31	Lodgment Till	318,5	21	2021-11-04T10:55:43Z	Regional	Quad	Hand shovel	Hole	C	73	2	3	3	0	0	45	0	5YR 4/6	20	100
148320027	516331,67	5320685,28	Lodgment Till	341,1	22	2021-11-04T11:38:44Z	Regional	Quad	Hand shovel	Hole	C	78	2	9	7	0	0	30	0	5YR 4/6	30	100
148320028	516706,95	5320692,91	Lodgment and or Melt-out Till	346,7	23	2021-11-04T12:45:06Z	Regional	Quad	Hand shovel	Hole	C	96	2	8	6	0	0	60	0	7.5YR 4/6	20	100
148320029	517406,22	5317957,36	Lodgment Till	333,7	43	2021-11-04T11:02:32Z	Regional	By foot	Hand shovel	Hole	C	46	3	0	0	0	0	10	1	2.5Y 5/4	33	99
148320030	517690,68	5318051,78	Lodgment and or Melt-out Till	336,6	44	2021-11-04T11:59:46Z	Regional	Quad	Hand shovel	Hole	B-C	22	10	0	0	0	0	10	50	7.5YR 3/4	2	50
148320031	517041,17	5320830,58	Lodgment Till	326,7	24	2021-11-04T14:13:38Z	Regional	Quad	Hand shovel	Hole	C	110	2	11	7	0	0	70	0	7.5YR 4/6	20	100
148320032	518538,38	5320077,87	Lodgment Till	322,6	55	2021-11-04T15:39:22Z	Regional	Quad	Hand shovel	Hole	C	75	2	12	8	0	0	36	0	7.5YR 4/6	17	100
148320033	518368,27	5319851,71	Lodgment Till	347,1	32	2021-11-04T16:05:41Z	Regional	Quad	Hand shovel	Hole	C	110	2	9	8	0	0	63	0	10YR 5/6	28	100
148320034	517799,84	5324452,18	Lodgment Till	331,3	20	2021-11-05T10:54:58Z	Regional	Quad	Hand shovel	Hole	C	91	3	5	3	0	0	42	0	7.5YR 5/8	38	100
148320035	517430,70	5324451,72	Lodgment Till	323,0	New	2021-11-05T11:24:21Z	Regional	Quad	Hand shovel	Hole	C	94	1	12	4	0	0	50	0	7.5YR 5/8	27	100
148320036	517128,66	5324457,92	Lodgment Till	320,0	19	2021-11-05T11:56:06Z	Regional	Quad	Hand shovel	Hole	C	95	2	24	6	0	0	43	0	7.5YR 2.5/3	20	100
148320037	515877,03	5323804,07	Lodgment Till	281,1	15	2021-11-05T13:36:34Z	Regional	Quad	Hand shovel	Hole	C	90	3	5	8	0	0	49	0	10YR 4/6	25	100
148320038	516213,97	5323913,78	Lodgment Till	300,6	16	2021-11-05T14:15:10Z	Regional	Quad	Hand shovel	Hole	C	66	15	20	3	0	0	8	0	7.5YR 4/1	20	100
148320039	516532,05	5323965,08	Lodgment Till	312,8	17	2021-11-05T14:38:35Z	Regional	Quad	Hand shovel	Hole	C	54	10	13	4	0	0	12	0	5YR 4/4	15	100
148320040	516857,39	5324140,18	Lodgment Till	321,3	18	2021-11-05T15:22:09Z	Regional	Quad	Hand shovel	Hole	C	77	2	9	6	0	0	30	0	5YR 4/4	30	100
148320041	516691,04	5317700,16	Lodgment and or Melt-out Till	332,4	41	2021-11-04T13:14:29Z	Regional	By foot	Hand shovel	Hole	C	80	10	10	3	0	0	40	10	10YR 5/6	17	90
148320042	516458,96	5317490,35	Lodgment and or Melt-out Till	323,4	40	2021-11-04T14:14:01Z	Regional	By foot	Hand shovel	Hole	C	65	12	1	6	0	0	17	10	10YR 7/6	29	90
148320043	516338,79	5318487,55	Lodgment Till	351,3	33	2021-11-04T15:28:01Z	Regional	By foot	Hand shovel	Hole	C	75	13	3	7	0	0	33	10	7.5YR 4/6	19	90
148320044	516624,67	5318473,73	Lodgment Till	353,5	34	2021-11-04T16:00:52Z	Regional	By foot	Hand shovel	Hole	C	59	9	2	2	0	0	29	10	10YR 5/6	17	90
148320045	516117,27	5317929,52	Lodgment and or Melt-out Till	334,8	54	2021-11-04T16:29:58Z	Regional	Quad	Hand shovel	Hole	C	46	5	0	0	0	0	9	5	7.5YR 4/4	32	95
148320046	517989,40	5318946,70	Lodgment Till	330,2	38	2021-11-05T09:55:39Z	Regional	By foot	Hand shovel	Hole	C	34	5	0	0	0	0	4	0	10YR 6/4	25	100
148320047	517606,10	5318882,53	Lodgment and or Melt-out Till	338,2	37	2021-11-05T10:16:30Z	Regional	By foot	Hand shovel	Hole	C	35	6	0	0	0	0	4	0	7.5YR 5/6	25	100
148320048	517266,91	5318777,95	Lodgment Till	348,6	36	2021-11-05T10:41:07Z	Regional	By foot	Hand shovel	Hole	C	50	5	0	0	0	0	15	10	10YR 4/6	30	90
148320049	515998,94	5325242,70	Lodgment Till	328,6	7	2021-11-05T12:27:16Z	Regional	By foot	Hand shovel	Hole	C	58	8	2	2	0	0	18	5	7.5YR 4/6	28	95
148320050	515395,22	5324799,97	Lodgment and or Melt-out Till	335,1	5	2021-11-05T13:34:23Z	Regional	By foot	Hand shovel	Hole	B	81	12	2	2	0	0	46	80	7.5YR 4/6	19	20
148320051	513570,59	5323846,16	Lodgment Till	339,0	1	2021-11-06T09:39:23Z	Regional	Quad	Hand shovel	Hole	C	61	2	3	13	0	0	30	0	10YR 4/6	13	100
148320052	515378,83	5322763,75	Lodgment Till	336,8	14	2021-11-06T10:05:35Z	Regional	By foot	Hand shovel	Hole	C	122	18	12	12	0	0	47	2	7.5YR 4/6	33	98
148320053	513946,98	5324030,27	Lodgment Till	344,7	2	2021-11-06T10:39:15Z	Regional	Quad	Hand shovel	Hole	C	77	3	15	3	0	0	36	0	7.5YR 3/4	20	100
148320054	514541,82	5324729,85	Lodgment and or Melt-out Till	329,0	56	2021-11-05T14:45:55Z	Regional	By foot	Hand shovel	Hole	C	69	15	3	1	0	0	20	0	10.5YR 5/6	30	100
148320055	514196,82	5324265,41	Lodgment Till	336,2	3	2021-11-05T15:43:59Z	Regional	By foot	Hand shovel	Hole	C	110	40	16	16	0	0	14	5	10YR 4/4	24	95
148320056	515106,46	5324611,74	Lodgment and or Melt-out Till	335,9	4	2021-11-05T14:10:32Z	Regional	By foot	Hand shovel	Hole	C	82	14	2	7	0	0	24	10	7.5YR 4/6	35	90
148320057	515101,98	5322587,91	Lodgment and or Melt-out Till	339,6	13	2021-11-06T11:16:51Z	Regional	By foot	Hand shovel	Hole	C	93	13	3	13	0	0	32	10	2.5Y 5/6	32	90
148320058	513579,49	5322337,91	Lodgment Till	347,4	9	2021-11-06T12:01:12Z	Regional	Quad	Hand shovel	Hole	C	89	2	8	9	0	0	43	0	5YR 4/6	27	100
148320059	514723,29	5322455,58	Lodgment and or Melt-out Till	331,1	12	2021-11-06T11:54:05Z	Regional	By foot	Hand shovel	Hole	C	97	14	1	1	0	0	57	10	10YR 5/6	24	90
148320060	514308,35	5322359,87	Lodgment and or Melt-out Till	339,4	11	2021-11-06T12:53:30Z	Regional	By foot	Hand shovel	Hole	C	76	12	3	2	0	0	27	25	10YR 4/6	32	75
148320061	513955,80	5322353,95	Lodgment Till	334,7	10	2021-11-06T12:48:10Z	Regional	Quad	Hand shovel	Hole	C	86	2	11	8	0	0	45	0	10YR 4/6	20	100
148320062	523128,20	5318743,16	Lodgment Till	428,5	New	2021-11-06T15:36:01Z	Regional	By foot	Hand shovel	Hole	C	40	6	1	0	0	0	16	2	2.5Y 5/4	17	98
148320063	520719,96	5317371,49	Lodgment Till	320,7	49	2021-11-06T15:25:31Z	Regional	Quad	Hand shovel	Hole	C	101	3	7	10	0	0	60	0	5YR 3/4	21	100
148320064	521113,89	5318394,41	Lodgment Till	354,8	New	2021-11-07T09:37:09Z	Regional	By foot	Hand shovel	Hole	C	110	7	2	12	0	0	47	10	10YR 3/6	42	90
148320065	520417,17	5317121,62	Lodgment Till	337,0	48	2021-11-06T16:00:28Z	Regional	Quad	Hand shovel	Hole	C	91	3	8	8	0	0	52	0	5YR 4/6	20	100
148320066	520035,00	5317061,00	Lodgment Till	323,8	47	2021-11-07T08:11:14Z	Regional	Quad	Hand shovel	Hole	C	95	3	16	8	0	0	40	0	5YR 3/4	28	100
148320067	521472,86	5318406,26	Lodgment and or Melt-out Till	356,4	New	2021-11-07T10:29:52Z	Regional	By foot	Hand shovel	Hole	C	111	12	9	4	0	0	58	10	10YR 4/6	28	90
148320068	519606,91	5317051,93	Lodgment Till	335,0	46	2021-11-07T08:41:11Z	Regional	Quad	Hand shovel	Hole	C	99	2	20	0	0	0	60	0	2.5Y 4/4	17	100
148320069	521755,67	5318585,90	Lodgment and or Melt-out Till	377,0	New	2021-11-07T11:33:30Z	Regional	By foot	Hand shovel	Hole	C	89	8	3	7	0	0	42	10	10YR 4/6	29	90

Till_Numb	C color	Humidity	Compacity	C Blocs Pebbles (%)	C Gravel (%)	C Sand (%)	C Silt (%)	C Clay (%)	Roundness pebbles	Litho pebbles	Condition	Outcrop (%)	Forest cover	Drainage	Sampled under	Slope	Slope situation	Slope shape	Slope side
148320001	5Y 5/2 - 2.5Y 5/4	Dry	Really compact	10	15	61	12	2	Subangular subrounded	v3	Brut	0	Woodshed	Excellent	Dead leaves	0	Mid Slope	Regular	Top
148320002	5Y 5/4	Dry	Compact	12	12	62	13	1	Subangular subrounded	v3	Brut	0	Dense	Excellent	Dead leaves	0	Low slope	Regular	Top
148320003	5Y 6/4	Dry	Compact	12	12	63	12	1	Subangular subrounded	v3, v2	Brut	0	Medium	Excellent	Dead leaves	0	Top slope	Regular	Medium
148320004	2.5Y 5/2	Humid	Compact	10	5	65	15	5	Subangular subrounded	v3, qv	Brut	0	Medium	Excellent	Dead leaves	0	Open depression	Irregular	Medium
148320005	5Y 5/4	Dry	Compact	9	12	65	12	2	Subangular subrounded	v3	Brut	0	Medium	Excellent	Dead leaves	0	Rounded peak	Regular	Top
148320006	5Y 4/4	Dry	Really compact	15	15	57	12	1	Subangular subrounded	I1, V3	Brut	0	Medium	Excellent	Dead leaves	0	Cliff	Irregular	Top
148320007	5Y 6/2	Wet	Little compact to compact	5	10	57	20	8	Subangular subrounded	v3	Brut	0	Low	Moderated	Dead leaves	0	Open depression	Irregular	Medium
148320008	5Y 5/2	Dry	Compact	8	12	64	13	3	Subangular subrounded	v3	Brut	0	Dense	Excellent	Dead leaves	0	Low slope	Regular	Medium
148320009	5Y 5/2	Humid	Compact	10	12	61	15	2	Subangular subrounded	v2	Brut	0	Medium	Moderated	Dead leaves	0	Open depression	Concave	Medium
148320010	5Y 5/2	Dry	Compact	8	10	66	15	1	Subangular subrounded	I1, V2	Brut	0	Medium	Excellent	Hypme	0	Top slope	Regular	Medium
148320011	5Y 6/3	Humid	Compact	1	10	66	22	1	Subangular subrounded	i1	Brut	0	Medium	Really good	Dead leaves	1	Re flat	Wavy	
148320012	5Y 6/3	Humid	Compact	4	16	62	17	1	Subangular subrounded	i1, v1, qfp	Brut	0	Medium	Good	Hypme	2	Mid Slope	Regular	
148320013	5Y 5/6	Humid	Compact	3	16	65	15	1	Subangular subrounded	v3, v2	Brut	0	Medium	Good	Hypme	1	Re flat	Regular	
148320014	2.5Y 5/4	Humid	Compact	3	12	68	16	1	Subangular subrounded	v2, v3	Brut	0	Medium	Really good	Lichen	1	Mid Slope	Regular	
148320015	5Y 5/2	Humid	Compact	3	16	68	12	1	Subangular subrounded	v3, v2	Brut	0	Dense	Really good	Dead leaves	1	Mid Slope	Regular	
148320016	5Y 5/4	Humid	Compact	2	15	70	12	1	Subangular subrounded	v3, v2, i1	Brut	0	Low	Medium	Dead leaves	2	Low slope	Regular	Low
148320017	5Y 5/2	Humid	Compact	4	15	63	17	1	Subangular subrounded	i1, v3, qfp, bx, qv	Brut	0	Medium	Good	Hypme	0	Re flat	Regular	
148320018	5Y 5/6	Humid	Compact	3	20	59	17	1	Subangular subrounded	v3, fp, v1	Brut	0	Medium	Good	Hypme	2	Mid Slope	Concave	Medium
148320019	2.5Y 5/4	Humid	Compact	3	23	64	9	1	Subangular subrounded	v3	Brut	0	Medium	Good	Hypme	0	Re flat	Regular	
148320020	5Y 5/2	Wet	Compact	2	13	66	18	1	Subangular subrounded	v2, v3	Brut	0	Medium	Medium	Hypme	0	Low slope	Concave	Low
148320021	5Y 5/2	Dry	Compact	10	12	63	13	2	Subangular subrounded	I1, V3	Brut	0	Dense	Excellent	Dead leaves	0	Top slope	Regular	Top
148320022	5Y 6/2	Dry	Little compact to compact	8	10	64	17	1	Subangular subrounded	i1	Brut	0	Dense	Excellent	Dead leaves	0	Low slope	Concave	Medium
148320023	5Y 4/4	Dry	Compact	5	12	68	14	1	Subangular subrounded	V3	Brut	0	Medium	Excellent	Hypme	0	Mid Slope	Regular	Medium
148320024	5Y 5/2	Dry	Compact	8	12	65	14	1	Subangular subrounded	V3	Brut	0	Dense	Excellent	Hypme	0	Rounded peak	Regular	Medium
148320025	5Y 6/2	Dry	Little compact to compact	8	10	66	15	1	Subangular subrounded	I1	Brut	0	Medium	Excellent	Dead leaves	0	Rounded peak	Regular	Top
148320026	5Y 5/2	Humid	Compact	3	14	65	17	1	Subangular subrounded	v2, v3, i1	Brut	0	Dense	Good	Hypme	1	Top slope	Convex	
148320027	5Y 5/2	Humid	Compact	3	17	63	16	1	Subangular subrounded	v3, v2, i1, qfp	Brut	0	Medium	Good	Hypme	1	Mid Slope	Regular	
148320028	5Y 5/2	Humid	Compact	12	20	59	8	1	Subangular subrounded	v3, v2, brecciated fp	Brut	0	Medium	Good	Hypme	2	Mid Slope	Wavy	
148320029	5Y 5/2	Dry	Compact	7	12	63	17	1	Subangular subrounded	I1, V1	Brut	0	Medium	Excellent	Dead leaves	0	Low slope	Regular	Medium
148320030	5Y 5/4	Humid	Compact	10	14	58	17	1	Subangular subrounded	i1	Brut	0	Medium	Excellent	Dead leaves	0	Top slope	Irregular	Top
148320031	5Y 5/2	Humid	Compact	3	16	68	12	1	Subangular subrounded	fp, v2	Brut	0	Medium	Good	Hypme	1	Open depression	Concave	
148320032	5Y 6/3	Humid	Compact	3	15	69	12	1	Subangular subrounded	i1, v2	Brut	0	Medium	Really good	Dead leaves	0	Re flat	Regular	Top
148320033	5Y 5/6	Humid	Really compact	3	16	68	12	1	Subangular subrounded	v2	Brut	0	Medium	Medium	Dead leaves	2	Mid Slope	Regular	
148320034	5Y 5/2	Humid	Compact	3	15	69	12	1	Subangular subrounded	qfp, i1	Brut	0	Medium	Good	Hypme	1	Rounded peak	Regular	Top
148320035	5Y 5/2	Humid	Compact	3	16	67	13	1	Subangular subrounded	i1, v3	Brut	0	Medium	Good	Hypme	1	Rounded peak	Regular	
148320036	5Y 5/4	Saturated	Compact	3	16	62	17	2	Subangular subrounded	i1, v3	Brut	0	Medium	Really good	Dead leaves	0	Re flat	Regular	
148320037	5Y 5/2	Humid	Compact	3	15	65	16	1	Subangular subrounded	v3, v2	Brut	0	Dense	Good	Dead leaves	0	Re flat	Regular	
148320038	5Y 5/2	Wet	Compact	4	18	60	17	1	Subangular subrounded	i1, v3	Brut	0	Medium	Good	Hypme	0	Re flat		
148320039	5Y 5/2	Humid	Compact	2	14	63	19	2	Subangular subrounded	v2	Brut	0	Medium	Medium	Hypme	0	Re flat	Regular	
148320040	5Y 5/6	Humid	Compact	3	18	64	14	1	Subangular subrounded	i1, v2	Brut	0	Medium	Good	Hypme	1	Top slope	Regular	
148320041	5Y 6/2	Dry	Little compact to compact	10	12	66	12	0	Subangular subrounded	I1	Brut	0	Dense	Excellent	Dead leaves	0	Mid Slope	Regular	Medium
148320042	2.5Y 6/4	Dry	Little compact to compact	5	15	70	10	0	Subangular subrounded	I1, V2	Brut	0	Dense	Excellent	Dead leaves	0	Low slope	Regular	Medium
148320043	5Y 5/4	Dry	Little compact to compact	10	12	64	14	0	Subangular subrounded	V2	Brut	0	Dense	Excellent	Dead leaves	0	Rounded peak	Wavy	Top
148320044	5Y 5/2	Dry	Little compact to compact	8	12	68	12	0	Subangular subrounded	V1	Brut	0	Dense	Excellent	Dead leaves	0	Top slope	Regular	Top
148320045	5Y 6/2	Dry	Compact	12	10	67	10	1	Subangular subrounded	V1, I1	Brut	0	Medium	Excellent	Dead leaves	0	Mid Slope	Regular	Medium
148320046	5Y 6/2	Dry	Little compact to compact	12	16	62	10	0	Subangular subrounded	V2	Brut	0	Dense	Excellent	Dead leaves	0	Mid Slope	Regular	Top
148320047	5Y 6/2	Dry	Little compact to compact	5	10	75	10	0	Subangular subrounded	QFP	Brut	0	Dense	Excellent	Dead leaves	0	Mid Slope	Regular	Top
148320048	5Y 5/2	Dry	Little compact to compact	12	10	67	11	0	Subangular subrounded	V2, I1	Brut	0	Low	Excellent	Dead leaves	0	Top slope	Regular	Top
148320049	5Y 5/2	Dry	Compact	10	10	59	20	1	Subangular subrounded	I1	Brut	0	Dense	Excellent	Dead leaves	0	Low slope	Regular	Low
148320050	5Y 6/2	Dry	Little compact to compact	10	12	64	14	0	Subangular subrounded	I1, V3	Brut	0	Dense	Excellent	Dead leaves	0	Low slope	Regular	Top
148320051	5Y 5/4	Humid	Compact	3	15	64	17	1	Subangular subrounded	v2, i1	Brut	0	Woodshed	Good	Dead leaves	2	Mid Slope	Wavy	
148320052	5Y 5/4	Dry	Compact	10	12	58	19	1	Subangular subrounded	V2, V1	Brut	0	Medium	Really good	Dead leaves	0	Low slope	Regular	Low
148320053	5Y 5/4	Humid	Compact	3	17	62	17	1	Subangular subrounded	v2, v1, i1	Brut	0	Medium	Medium	Hypme	3	Mid Slope	Wavy	
148320054	5Y 5/2	Dry	Little compact	10	10	70	10	0	Subangular subrounded	V2, I1	Brut	0	Woodshed	Excellent	Dead leaves	0	Mid Slope	Convex	Medium
148320055	5Y 5/2	Humid	Little compact to compact	10	14	57	18	1	Subangular subrounded	V3, V2	Brut	0	Dense	Medium	Hypme	0	Low slope	Regular	Low
148320056	5Y 5/2	Dry	Little compact to compact	10	10	69	10	1	Subangular subrounded	V3, V2	Brut	0	Dense	Excellent	Hypme	0	Low slope	Regular	Low
148320057	5Y 5/4	Dry	Little compact	14	12	64	10	0	Subangular subrounded	V2, V3	Brut	0	Medium	Excellent	Hypme	0	Mid Slope	Regular	Low
148320058	5Y 5/4	Humid	Compact	3	18	60	18	1	Subangular subrounded	v3, v2	Brut	0	Medium	Good	Hypme	0	Re flat	Wavy	
148320059	5Y 7/2	Dry	Compact	10	14	65	11	0	Subangular subrounded	V2, I1	Brut	0	Dense	Really good	Hypme	0	Low slope	Regular	Medium
148320060	2.5Y 4/4	Dry	Compact	10	10	70	10	0	Subangular subrounded	V2	Brut	0	Dense	Excellent	Hypme	0	Mid Slope	Irregular	Top
148320061	2.5Y 5/4	Humid	Compact	3	13	65	18	1	Subangular subrounded	v2, i1	Brut	0	Medium	Good	Hypme	1	Mid Slope	Regular	
148320062	5Y 4/4	Dry	Really compact	12	12	59	16	1	Subangular subrounded	V3	Brut	0	Dense	Excellent	Hypme	0	Rounded peak	Wavy	Top
148320063	5Y 5/4	Humid	Compact	3	15	65	16	1	Subangular subrounded	v2, v1	Brut	0	Medium	Good	Hypme	0	Rounded peak	Convex	Top
148320064	5Y 7/2	Dry	Compact	10	12	63	15	0	Subangular subrounded	V2	Brut	0	Dense	Excellent	Hypme	0	Rounded peak	Regular	Medium
148320065	5Y 5/2	Humid	Compact	2	16	63	18	1	Subangular subrounded	v2	Brut	0	Medium	Good	Hypme	1	Mid Slope	Regular	
148320066	5Y 5/2	Humid	Really compact	5	14	62	18	1	Subangular subrounded	fp, i1	Brut	0	Medium	Good	Dead leaves	2	Mid Slope	Regular	
148320067	2.5Y 5/4	Dry	Compact	10	15	56	14	5	Subangular subrounded	V2	Brut	0	Dense	Excellent	Hypme	0	Rounded peak	Irregular	Medium
148320068	5Y 5/2	Humid	Really compact	9	15	60	15	1	Subangular subrounded	i1, v2	Brut	0	Medium	Good	Hypme	3	Low slope	Regular	
148320069	5Y 5/2	Dry	Compact	12	14	60	13	1	Subangular subrounded	V3, V2	Brut	0	Medium	Excellent	Hypme	0	Cliff	Regular	Medium

Till_Numb	Comments
148320001	Sample collected on the side of the bedrock. Machine work of the materiel in the area. The organic layer as been removed by machine. We moved the target to avoid the sand and gravel.
148320002	Sample collected on the top of a big outcrop. Lot of sand and gravel all around.
148320003	Sample collected next to the road (about 7m). Organics layers as been removed by machine.
148320004	Sample collected on the bedrock. Lot of boulders in the hole. About 1m of over burden. We saw trace of machinery work all around. Many outcrops spot all around. Some clay layers in the hole.
148320005	Sample collected on the top of a bedrock hill. Taken under a fallen tree. Outcrop all around.
148320006	Sample collected directly on the bedrock. Many cliffs all around.
148320007	Sample collected under a fallen tree. Water is filling the hole. Lot of clay and silt.
148320008	Typical lodgment till.
148320009	Sample collected at the base of big bedrock. Many outcrop around. Water filling the hole before picture taken.
148320010	Sample collected directly on the bedrock. Sandy till.
148320011	Collected beside the trail. Collected 11kg samples at site to remove material at end of day for witness
148320012	collected beside grid stn 1400E 1050N @3m from sample site. Collected 11kg samples at site to remove material at end of day for witness
148320013	Collected under a fallen tree. Collected 11kg samples at site to remove material at end of day for witness
148320014	Yellowish color till in area matched a yellowish outcrop- is this stuff rich in epidote or spessartine? . Collected 11kg samples at site to remove material at end of day for witness
148320015	collected in a small divot. Collected 11kg samples at site to remove material at end of day for witness
148320016	collected at the bottom of a hill in a valley. Collected 11kg samples at site to remove material at end of day for witness
148320017	collected near the top of a hill on a flat area. id'd rocks quartz feldspar porphyry and a breccia. see photos
148320018	collected near an old trench
148320019	collected on a flat area, scraped off bedrock
148320020	10m sw of site is a 6-8m cliff that the sample was at the bottom
148320021	Sample collected next to a big boulder on the top of a hill. Disaggregated rock
148320022	Sample collected next to the road (about 10 m). About 2 feet of the top layer as been removed by mecanical shovel. Sandy till.
148320023	Sample collected near the base of a bedrock in the middle of a slope. The till was between 2 boulders
148320024	Sample collected in the middle of the side of a hill, just in front of a big boulder.
148320025	Sample collected on the top of a hill directly on the bedrock.
148320026	collected along the ridge of a linear hill
148320027	collected beside a large boulder
148320028	feldspars are all shattered in fp cobbles and boulders, see photo
148320029	Sample collected in the ditch of a very old road. About 2 feets of material as been removed by mecanical shovel. Sandy till.
148320030	Sample collected directly on the bedrock between big boulders.Sand all around the bed rock. We found a tranch with more than 3m of sand.
148320031	collected at the bottom of a small valley under a layer of fine to medium sand
148320032	Island of till surrounded by sandy jackpine forest
148320033	Collected above a flat spot next to the road
148320034	collected beside a boulder poking out of the moss
148320035	small hump of rocks and till at this location, added for opportunity
148320036	collected to the north of the swamp
148320037	collected beside a fallen tree
148320038	collected beside a swamp
148320039	moved away from wet ground
148320040	moved up hill out of sandy area
148320041	Sample collected in the middle of a slope. Sandy till. Got 2 colors in the till.
148320042	Very sandy till. Really fin grain sand
148320043	Sample collected directly on the bedrock on the top of a hill. Many hills all around with boulders. Sandy till. Lot of sand everywhere.
148320044	Sample collected on the top of a hill. Typical lodgment till
148320045	Sample collected next to the road. Top layers removed by mecanical shovel
148320046	Sample collected near the road (about 10m) in a kind of tranch made by mecanical shovel. About 1.5 m of top layers as been removed.
148320047	Sample collected near the road (about 10m). Lot of sand a around. Found a spot near a boulders. Sandy till. Probably a big part of the top layers as been removed by mecanical shovel
148320048	Sample collected next to the road (10m). Big part of the top layers as been removed by mecanical shovel. Sand all around. Sandy till.
148320049	Sample collected at the base of a big bedrock. Lot of sand all around.
148320050	Sample collected on the top of the bedrock. Sand all around the target. Lot of B in the sample.
148320051	collected on the flank of a gentle hill. observed interesting breccia tuff nearby see wpt/photo
148320052	Sample collected at the base of a bedrock.
148320053	collected midway up the flank of a hill
148320054	Sample collected under a unrooted tree in a old woodshed. Sandy till.
148320055	Sample collected at the base of a big bedrock.
148320056	Sample collected at the base of a big bedrock. Marble till (2 colors). Next to the road (25m).
148320057	Sample collected at the base of a big bedrock with sand on it. We found a spot with some gravel and took it directly on the bedrock. Sandy till.
148320058	collected beside a fallen tree
148320059	Sample collected on the top of a little hill under a unrooted tree. Sandy till.
148320060	Sample collected directly on the bedrock. About 100m from the road.
148320061	moved out of a swampy area
148320062	Sample collected on the top of a hill. A layer of about 1m as been removed by mankind.
148320063	collected under a fallen tree
148320064	Sample collected in the middle side of a big bedrock. Sand directly on the bedrock.
148320065	collected a little higher in elevation than the proposed site
148320066	very blocky till at surface
148320067	Sample collected in the middle of a hill directly on the bedock. Some clay in the sample.
148320068	collected at the base of a hill, moved away from and above a sand dune
148320069	Sample collected at the base of a cliff. Sandy till.

Till_Numb	UTMX (NAD 83)	UTMY (NAD 83)	Type Till	GSF ALTITUDE (m)	Target	GSF DATE	Survey type	Transport type	Excavation method	Sampling type	Sampled horizon	Hole total depth (cm)	LFH thickness (cm)	Ah thickness (cm)	Ae thickness (cm)	Bhf thickness (cm)	Bhf (%)	B thickness (cm)	B (%)	B color	C thickness (cm)	C (%)
148320070	522796,93	5318761,84	Lodgment Till	417,4	New	2021-11-07T10:02:57Z	Regional	Quad	Hand shovel	Hole	C	48	5	3	0	0	0	28	0	7.5YR 3/4	12	100
148320071	522088,66	5318769,45	Lodgment Till	379,0	New	2021-11-07T11:21:39Z	Regional	Quad	Hand shovel	Hole	C	80	0	0	0	0	0	60	0	10YR 4/6	20	100
148320072	522456,43	5318788,84	Lodgment and or Melt-out Till	393,1	New	2021-11-07T10:43:22Z	Regional	Quad	Hand shovel	Hole	C	81	4	16	8	0	0	40	0	10YR 4/6	13	100

Till_Numb	C color	Humidity	Compacity	C Blocs Pebbles (%)	C Gravel (%)	C Sand (%)	C Silt (%)	C Clay (%)	Roundness pebbles	Litho pebbles	Condition	Outcrop (%)	Forest cover	Drainage	Sampled under	Slope	Slope situation	Slope shape	Slope side
148320070	2.5Y 4/4	Humid	Really compact	4	13	66	16	1	Subangular subrounded	i1, v1, v2	Brut	0	Medium	Really good	Dead leaves	3	Mid Slope	Concave	Medium
148320071	5Y 5/4	Humid	Compact	3	12	67	17	1	Subangular subrounded	v1, v2, v3, i1	Brut	0	Medium	Good	Dead leaves	1	Low slope	Irregular	
148320072	5Y 5/4	Humid	Compact	3	10	70	16	1	Subangular subrounded	v3, v2	Brut	0	Low	Good	Dead leaves	2	Mid Slope	Regular	

Till_Numb	Comments
148320070	collected on the back flank of an excavated ditch, scraped off bedrock
148320071	collected beside the ditch by a skidder track. logging activity removed topsoil
148320072	collected in the middle of a skidder track

APPENDIX 3

TILL SAMPLES HAND-HELD X-RAY FLUORESCENCE SPECTROMETER ANALYSIS

PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER	ESTANT (Nad 83)	NORDANT (Nad 83)	XRF MODE	VANTA HAND HELD X-RAY FLUORESCENCE SPECTROMETER																					
					Mg	Mg Errors	Al	Al Errors	Si	Si Errors	P	P Errors	S	S Errors	K	K Errors	Ca	Ca Errors	Ti	Ti Errors	V	V Errors	Cr	Cr Errors	Mn	Mn Errors
Nb Analysis:	Nb Analysis:				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Count	Historic				71	315	310	315	315	315	315	315	203	315	307	315	315	315	310	315	66	315	63	315	313	315
99 Percentile	Historic				9767	28872	27478	988	374612	635	5560	59	6782	1539	10121	287	15379	54	2354	265	231	96	162	54	782	19
Average	Historic				5585	7853	8323	228	168231	378	2772	33	2138	443	3890	39	7448	33	1257	69	70	67	47	37	213	14
Std-Dev	Historic				1412	7231	6695	102	114130	166	1894	14	1267	576	2548	49	2652	8	874	26	31	27	34	15	178	62
Maximum	Historic				10721	42411	54330	1013	587225	1019	14581	149	13039	1877	12501	447	29568	134	10373	271	237	188	288	109	1656	801
Minimum	Historic				3256	904	1296	167	14027	115	246	14	124	26	76	15	1254	15	223	40	40	10	24	8	26	7
Count	Project				49	72	72	72	72	72	72	72	0	72	72	72	72	72	72	72	15	72	29	72	72	72
Average	Project				6011	9158	3876	207	26108	166	328	17	#DIV/0!	1300	6263	35	6650	31	1496	66	61	69	42	29	210	9
Std. Dev.	Project				1357	11589	854	14	4998	19	29	1	#DIV/0!	154	632	3	966	4	291	4	9	27	15	17	54	1
Maximum	Project				10721	42411	8371	253	36626	216	383	21	0	1877	8183	42	10393	40	2429	75	79	101	84	52	368	11
Minimum	Project				4216	1187	2699	174	14027	115	246	14	0	942	5081	29	4582	25	1013	57	46	15	24	8	132	7
1483	148320001	523978	5317805	Geochem(3-Beam)	<LOD	26927	3728	204	24152	151	312	16	<LOD	1274	5341	29	7126	28	1788	64	69	17	<LOD	41	273	9
1483	148320002	523675	5317838	Geochem(3-Beam)	5343	1399	4400	204	28476	172	313	16	<LOD	1051	6521	35	7539	34	1713	64	55	17	49	8	293	9
1483	148320003	523321	5317839	Geochem(3-Beam)	<LOD	22228	4105	203	29592	162	327	16	<LOD	1076	6634	31	6899	27	1707	63	<LOD	82	26	8	246	9
1483	148320004	522960	5317896	Geochem(3-Beam)	5634	1601	3305	207	20570	152	246	16	<LOD	1358	6161	35	6207	32	1723	65	<LOD	82	<LOD	43	246	9
1483	148320005	522821	5316963	Geochem(3-Beam)	5892	1546	4296	214	30197	188	327	17	<LOD	1205	6135	36	7182	35	1735	67	65	18	29	9	236	9
1483	148320006	522333	5317391	Geochem(3-Beam)	5905	1636	3806	217	24369	172	310	17	<LOD	1316	6006	37	7125	36	1508	67	<LOD	87	<LOD	45	323	10
1483	148320007	521962	5317377	Geochem(3-Beam)	5660	1853	3325	227	19608	161	310	18	<LOD	1496	5875	38	7548	40	1774	72	<LOD	87	<LOD	44	168	9
1483	148320008	521604	5317321	Geochem(3-Beam)	4998	1578	3154	209	24404	169	272	16	<LOD	1393	6518	38	6111	32	1207	64	<LOD	80	<LOD	43	156	9
1483	148320009	521338	5317320	Geochem(3-Beam)	<LOD	24538	3464	195	20519	136	278	15	<LOD	1242	6120	30	7418	29	1586	61	<LOD	80	27	8	221	8
1483	148320010	516779	5319694	Geochem(3-Beam)	4945	1492	3923	202	25696	168	356	16	<LOD	1443	5346	32	4582	25	1425	64	<LOD	77	<LOD	39	158	8
1483	148320011	518129	5322200	Geochem(3-Beam)	5795	1625	3745	219	28224	187	323	18	<LOD	1349	6619	39	6544	34	1400	69	<LOD	85	<LOD	43	215	9
1483	148320012	517675	5322056	Geochem(3-Beam)	<LOD	25283	3145	202	29271	167	335	17	<LOD	1286	6234	32	6216	27	1439	67	<LOD	85	<LOD	43	212	9
1483	148320013	516069	5321580	Geochem(3-Beam)	<LOD	26858	3831	217	30962	177	311	18	<LOD	1374	6415	34	6437	28	1013	66	62	18	<LOD	42	155	9
1483	148320014	516404	5321661	Geochem(3-Beam)	7006	1541	3487	207	25847	172	328	17	<LOD	1361	6311	37	5683	30	1640	69	<LOD	84	<LOD	43	167	9
1483	148320015	517063	5321860	Geochem(3-Beam)	<LOD	24714	3958	208	29513	168	340	17	<LOD	1222	6452	33	6869	29	1121	66	<LOD	83	33	9	281	10
1483	148320016	517398	5321961	Geochem(3-Beam)	<LOD	28734	3534	217	28205	173	315	18	<LOD	1453	5691	33	6625	30	1315	68	<LOD	87	<LOD	45	199	9
1483	148320017	518256	5321762	Geochem(3-Beam)	5791	1439	4009	202	27198	172	354	16	<LOD	1338	5746	34	5844	29	1546	65	<LOD	80	31	9	163	8
1483	148320018	517959	5321234	Geochem(3-Beam)	4930	1526	3537	207	30259	188	306	17	<LOD	1287	6310	37	6929	34	1296	68	<LOD	81	<LOD	43	163	9
1483	148320019	517697	5321008	Geochem(3-Beam)	<LOD	34860	3400	223	24312	166	322	19	<LOD	1732	5534	33	5663	28	1135	70	<LOD	87	<LOD	44	193	9
1483	148320020	517477	5320610	Geochem(3-Beam)	4216	1308	3455	191	28816	168	375	16	<LOD	942	7067	36	9735	40	2429	70	<LOD	85	47	9	205	9
1483	148320021	516504	5319619	Geochem(3-Beam)	4695	1483	5448	222	31706	193	330	17	<LOD	1222	7047	39	6750	34	1265	69	<LOD	84	36	9	268	10
1483	148320022	516945	5318782	Geochem(3-Beam)	<LOD	21195	5825	227	36626	190	353	18	<LOD	1114	7625	37	7622	32	1654	70	<LOD	86	44	10	212	9
1483	148320023	517479	5319878	Geochem(3-Beam)	6157	1440	5132	210	24806	164	351	16	<LOD	1393	5664	34	5584	29	1345	65	<LOD	81	<LOD	42	159	8
1483	148320024	517783	5319984	Geochem(3-Beam)	5224	1528	3902	210	25817	173	293	17	<LOD	1376	6219	37	6377	33	1306	67	57	18	<LOD	44	179	9
1483	148320025	517141	5317731	Geochem(3-Beam)	<LOD	20488	3911	189	33541	166	359	15	<LOD	1105	6701	31	5856	25	1506	63	<LOD	73	<LOD	37	132	8
1483	148320026	516038	5320485	Geochem(3-Beam)	4665	1476	4179	211	32356	194	344	17	<LOD	1220	6808	38	6804	34	1472	69	<LOD	82	35	9	216	9
1483	148320027	516332	5320685	Geochem(3-Beam)	<LOD	23872	3008	199	30501	170	378	17	<LOD	1249	6615	33	7054	29	1440	67	<LOD	83	51	9	195	9
1483	148320028	516707	5320693	Geochem(3-Beam)	5100	1441	3458	198	27652	176	332	17	<LOD	1286	5659	34	7090	34	1655	65	56	18	50	9	328	10
1483	148320029	517406	5317957	Geochem(3-Beam)	5287	1462	3945	209	32797	195	340	17	<LOD	1232	6849	38	6650	33	1114	68	<LOD	82	<LOD	43	188	9
1483	148320030	517691	5318052	Geochem(3-Beam)	4653	1224	3517	181	22086	141	318	14	<LOD	1240	6506	33	5654	27	1212	60	60	16	24	8	137	7
1483	148320031	517041	5320831	Geochem(3-Beam)	<LOD	24739	3201	200	29252	168	341	17	<LOD	1340	6240	33	6337	28	1564	68	55	18	41	9	204	9
1483	148320032	518538	5320078	Geochem(3-Beam)	5595	1643	4040	224	30419	199	358	19	<LOD	1301	7102	42	7612	39	2040	74	<LOD	94	43	10	197	9
1483	148320033	518368	5319852	Geochem(3-Beam)	4647	1414	3137	197	28694	177	345	17	<LOD	1242	6692	37	6723	33	1501	66	<LOD	84	<LOD	42	212	9
1483	148320034	517800	5324452	Geochem(3-Beam)	5898	1410	3828	201	30446	182	324	16	<LOD	1197	6536	36	6861	33	1546	67	<LOD	82	<LOD	42	182	9
1483	148320035	517431	5324452	Geochem(3-Beam)	5206	1620	4117	220	30551	197	325	18	<LOD	1394	6251	38	6642	35	1280	70	79	19	<LOD	45	153	9
1483	148320036	517129	5324458	Geochem(3-Beam)	<LOD	20494	2699	194	23541	147	333	17	<LOD	1083	6744	33	10393	37	2356	71	57	19	<LOD	43	200	9
1483	148320037	515877	5323804	Geochem(3-Beam)	4969	1213	4276	186	28481	163	320	15	<LOD	1132	5936	32	6407	29	1492	62	<LOD	79	68	9	196	8
1483	148320038	516214	5323914	Geochem(3-Beam)	<LOD	25003	3268	217	23918	159	309	18	<LOD	1317	7181	37	8892	36	1816	72	<LOD	91	69	10	189	9
1483	148320039	516532	5323965	Geochem(3-Beam)	<LOD	26104	3075	223	25359	166	310	18	<LOD	1372	8183	40	7875	34	1636	75	<LOD	96	<LOD	48	192	10
1483	148320040	516857	5324140	Geochem(3-Beam)	5111	1498	3248	204	28861	184	358	17	<LOD	1356	6530	38	6141	32	1187	68	<LOD	86	33	9	176	9
1483	148320041	516691	5317700	Geochem(3-Beam)	<LOD	21376	2949	174	23843	137	330	14	<LOD	1210	6378	29	6226	25	1382	60	<LOD	72	<LOD	37	173	8
1483	148320042	516459	5317490	Geochem(3-Beam)	<LOD	26000	4292	224	29205	175	335	18	<LOD	1383	7102	37	7212	31	1355	72	<LOD	86	<LOD	45	165	9
1483	148320043	516339	5318488	Geochem(3-Beam)	<LOD	28894	3302	212	25729	164	357	18	<LOD	1546	5993	34	6237	29	1399	69	<LOD	85	<LOD	46	198	9
1483	148320044	516625	5318474	Geochem(3-Beam)	<LOD	21908	5702	204	28436	156	321	16	<LOD	1195	6178	31	6537	27	1396	64	<LOD	80	35	9	203	9
1483	148320045	516117	5317930	Geochem(3-Beam)	4524	1446	2787	195	26168	171	374	17	<LOD	1314	6241	36	6226	31	1889	67	<LOD	85	<LOD	45	348	10
1483	148320046	517989	5318947	Geochem(3-Beam)	<LOD	24043	3103	202	30541	171	341	17	<LOD	1291	6818	34	6556	28	1307	68	<LOD	85	<LOD	43	184	9
1483	148320047	517606	5318883	Geochem(3-Beam)	7124	1707	3714	226	33955	216	324	19	<LOD	1411	6399	41	7164	38	1093	72	<LOD	85	<LOD	46	168	9
1483	148320048	517267	5318778	Geochem(3-Beam)	5852	1368	8371	230	34838	196	379	17	<LOD	1102	6770	37	6630	32	1732	68	77	18	<LOD	44	293	10
1483	148320049	515999	5325243	Geochem(3-Beam)	6328	1398	6000	217	28911	177	366	17	<LOD	1109	7264	39	7998	37	1852	69	<LOD	87	64	9	192	9
1483	148320050	515395	5324800	Geochem(3-Beam)	4852	1271	4125	184	22885	147	365	15	<LOD	1422	5081	29	4954	25	1413	60	52	16	25	8	165	7
1483	148320051	513571	5323846	Geochem(3-Beam)	5552	1635	2955	209	22011	164	286	17	<LOD	1713	5712	36	5410	30	1093	68	<LOD	81	32	10	156	9
1483	148320052	515379	5322764	Geochem(3-Beam)	<LOD	24628	4306	202	20900	137	324	15	<LOD	1321	7168	33	5409	25	1340	63	<LOD	80	28	9	289	9
1483	148320053	513947	5324030	Geochem(3-Beam)	6818	1347	4299	196	26263	163	306	16	<LOD	1203	6212	34	6874	32	1377	64	<LOD	78	<LOD	40	187	9
1483	148320054	514542	5324730	Geochem(3-Beam)	6225	1329	3624	193	31318	180	372	16	<LOD	1164	6388	35	6737	31	1484	67	<LOD	81	34	9	163	8
1483	148320055	514197	5324265	Geochem(3-Beam)	6098	1187	3559	176	18442	126	286	14	<LOD	1131	6806	33	6469	28	1397	57	<LOD	80	84	8	276	9
1483	148320056	515106	5324612	Geochem(3-Beam)	<LOD	20506	4626	207	27473	159	321	16	<LOD	1119	7129	34	8033	31	2284	70	<LOD	87	62	9	279	9
1483	148320057	515102	5322588	Geochem(3-Beam)	5417	1407	2970	193	27207	171	312	16	<LOD	1319	6537	36	6284	31	1236	65	<LOD	79	43	9	168	9

PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER	VANTA HAND HELD X-RAY FLUORESCENCE SPECTROMETER																																	
		Fe	Fe Error1s	Co	Co Error1s	Ni	Ni Error1s	Cu	Cu Error1s	Zn	Zn Error1s	As	As Error1s	Se	Se Error1s	Rb	Rb Error1s	Sr	Sr Error1s	Y	Y Error1s	Zr	Zr Error1s	Nb	Nb Error1s	Mo	Mo Error1s	Ag	Ag Error1s	Cd	Cd Error1s	Sn	Sn Error1s
Nb Analysis:	Nb Analysis:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Count	Historic	315	315	200	315	277	315	306	315	314	315	62	315	7	315	309	315	311	315	305	315	310	315	2	315	136	315	6	315	2	315	21	315
99 Percentile	Historic	91707	244	170	106	51	12	62	9	172	3	64	5	3	3	59	2	399	2	33	5	228	6	21	6	27	8	3	171	15	24	25	32
Average	Historic	19206	66	64	28	17	3	24	2	64	2	7	3	2	2	26	1	176	1	12	1	87	1	21	5	7	4	3	97	14	20	19	26
Std-Dev	Historic	18212	48	30	23	10	3	21	1	35	1	16	1	1	1	15	0	122	0	7	1	62	1	0	1	4	3	1	39	1	2	2	6
Maximum	Historic	179087	546	224	122	121	12	327	9	179	6	126	9	3	7	81	7	413	3	37	6	408	12	21	11	38	15	3	397	15	39	25	49
Minimum	Historic	1100	12	23	7	5	2	5	2	5	1	2	1	1	0	2	0	1	0	3	1	2	1	21	1	3	1	2	1	13	4	16	5
Count	Project	72	72	54	72	72	72	66	72	72	72	2	72	1	72	72	72	72	72	72	72	72	72	0	72	9	72	2	72	1	72	10	72
Average	Project	12571	54	52	20	19	2	24	3	34	2	3	3	1	2	42	1	297	2	7	1	125	1	#DIV/0!	4	4	5	2	58	15	21	18	25
Std. Dev.	Project	2750	10	19	17	10	0	42	2	9	0	1	1	#DIV/0!	0	3	0	36	0	2	0	29	0	#DIV/0!	0	1	2	0	10	#DIV/0!	2	2	8
Maximum	Project	22214	80	137	59	86	3	327	9	84	2	4	4	1	3	52	1	389	2	16	1	217	1	0	5	7	7	2	69	15	24	21	32
Minimum	Project	6801	29	26	8	7	2	7	2	21	1	2	1	1	0	35	1	208	1	3	1	42	1	0	4	3	1	2	1	15	4	16	5
1483	148320001	16029	55	72	11	21	2	16	2	33	2	<LOD	3	<LOD	2	38	1	261	1	10	1	132	1	<LOD	4	<LOD	6	<LOD	61	<LOD	20	<LOD	28
1483	148320002	16222	66	79	11	22	2	29	2	40	2	<LOD	3	<LOD	2	44	1	292	2	9	1	148	1	<LOD	4	<LOD	6	<LOD	58	<LOD	20	<LOD	27
1483	148320003	15403	52	49	10	18	2	19	2	37	1	<LOD	3	<LOD	2	49	1	328	2	9	1	138	1	<LOD	4	<LOD	6	<LOD	59	<LOD	20	18	5
1483	148320004	13394	61	44	10	23	2	49	2	40	2	<LOD	3	<LOD	2	37	1	235	1	12	1	180	1	<LOD	4	4	1	<LOD	58	<LOD	20	20	5
1483	148320005	17374	75	105	12	23	2	23	2	39	2	<LOD	3	<LOD	2	43	1	311	2	9	1	136	1	<LOD	4	<LOD	6	<LOD	60	15	4	<LOD	29
1483	148320006	16110	73	60	11	21	2	39	2	41	2	<LOD	3	<LOD	2	39	1	265	2	7	1	109	1	<LOD	4	<LOD	6	<LOD	63	<LOD	21	<LOD	29
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PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER			VANTA HAND HELD X-RAY FLUORESCENCE SPECTROMETER																								
		Sb	Sb Error1s	Ba	Ba Error1s	La	La Error1s	Ce	Ce Error1s	Pr	Pr Error1s	Nd	Nd Error1s	W	W Error1s	Hg	Hg Error1s	Pb	Pb Error1s	Bi	Bi Error1s	Th	Th Error1s	U	U Error1s	LE	LE Error1s
Nb Analysis:	Nb Analysis:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Count	Historic	3	315	309	315	103	315	121	315	32	315	29	315	10	315	1	315	301	315	1	315	269	315	277	315	315	315	
99 Percentile	Historic	26	44	387	832	85	3101	121	3334	123	4531	224	6473	24	16	6	11	21	4	63	45	73	11	56	7	948417	1636	
Average	Historic	25	37	144	27	49	1412	57	1424	71	2878	119	4190	14	12	6	8	9	1	63	34	35	3	15	2	785556	661	
Std-Dev	Historic	1	5	110	147	13	1079	17	1209	17	1170	42	1564	5	2	#DIV/0!	1	4	1	#DIV/0!	5	18	3	12	2	114316	399	
Maximum	Historic	26	65	475	1630	94	5753	123	6186	133	8271	233	6906	24	33	6	24	28	6	63	81	80	11	117	7	951487	1785	
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Std. Dev.	Project	1	6	51	1	6	576	9	719	7	504	9	844	#DIV/0!	1	#DIV/0!	1	2	0	#DIV/0!	2	5	4	1	2	6166	563	
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1483	148320054	<LOD	39	335	9	47	15	<LOD	1720	<LOD	2391	<LOD	3501	<LOD	11	<LOD	8	12	1	<LOD	31	6	2	3	1	932237	1277	
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PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER	ESTANT (Nad 83)	NORDANT (Nad 83)	XRF MODE	VANTA HAND HELD X-RAY FLUORESCENCE SPECTROMETER																						
					Mg	Mg Error1s	Al	Al Error1s	Si	Si Error1s	P	P Error1s	S	S Error1s	K	K Error1s	Ca	Ca Error1s	Ti	Ti Error1s	V	V Error1s	Cr	Cr Error1s	Mn	Mn Error1s
Nb Analysis:	Nb Analysis:				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Count	Historic				71	315	310	315	315	315	315	315	203	315	307	315	315	315	310	315	66	315	63	315	313	315
99 Percentile	Historic				9767	28872	27478	988	374612	635	5560	59	6782	1539	10121	287	15379	54	2354	265	231	96	162	54	782	19
Average	Historic				5585	7853	8323	228	168231	378	2772	33	2138	443	3890	39	7448	33	1257	69	70	67	47	37	213	14
Std-Dev	Historic				1412	7231	6695	102	114130	166	1894	14	1267	576	2548	49	2652	8	874	26	31	27	34	15	178	62
Maximum	Historic				10721	42411	54330	1013	587225	1019	14581	149	13039	1877	12501	447	29568	134	10373	271	237	188	288	109	1656	801
Minimum	Historic				3256	904	1296	167	14027	115	246	14	124	26	76	15	1254	15	223	40	40	10	24	8	26	7
Count	Project				49	72	72	72	72	72	72	72	0	72	72	72	72	72	72	72	15	72	29	72	72	72
Average	Project				6011	9158	3876	207	26108	166	328	17	#DIV/0!	1300	6263	35	6650	31	1496	66	61	69	42	29	210	9
Std. Dev.	Project				1357	11589	854	14	4998	19	29	1	#DIV/0!	154	632	3	966	4	291	4	9	27	15	17	54	1
Maximum	Project				10721	42411	8371	253	36626	216	383	21	0	1877	8183	42	10393	40	2429	75	79	101	84	52	368	11
Minimum	Project				4216	1187	2699	174	14027	115	246	14	0	942	5081	29	4582	25	1013	57	46	15	24	8	132	7
1483	148320058	513579	5322338	Geochem(3-Beam)	5089	1400	3396	194	26266	168	347	17	<LOD	1257	5501	33	7602	35	1728	67	69	18	53	9	207	9
1483	148320059	514723	5322456	Geochem(3-Beam)	4935	1426	3886	205	34187	197	327	17	<LOD	1197	6720	37	6859	33	1253	67	<LOD	81	<LOD	41	159	8
1483	148320060	514308	5322360	Geochem(3-Beam)	9048	1606	4338	215	25067	168	291	16	<LOD	1251	5508	33	5296	28	1174	61	<LOD	73	<LOD	39	159	8
1483	148320061	513956	5322354	Geochem(3-Beam)	6222	1648	3439	211	21860	158	256	16	<LOD	1339	5235	32	5937	30	1051	61	<LOD	73	<LOD	38	148	8
1483	148320062	523128	5318743	Geochem(3-Beam)	5295	1588	4343	218	26938	176	279	16	<LOD	1096	6083	35	6884	33	1822	64	53	17	<LOD	43	233	9
1483	148320063	520720	5317371	Geochem(3-Beam)	10721	1691	3828	217	19950	153	351	17	<LOD	1345	5480	34	5815	31	1796	64	<LOD	83	<LOD	42	251	9
1483	148320064	521114	5318394	Geochem(3-Beam)	8040	1611	3942	212	20579	151	308	16	<LOD	1288	5585	33	6240	31	1401	64	<LOD	77	34	9	202	8
1483	148320065	520417	5317122	Geochem(3-Beam)	7208	1695	3858	218	17756	145	362	17	<LOD	1454	5158	33	6126	32	1456	65	<LOD	80	<LOD	40	213	9
1483	148320066	520035	5317061	Geochem(3-Beam)	7648	1572	4105	208	15271	127	331	16	<LOD	1401	5333	32	5502	28	1216	60	<LOD	74	<LOD	39	306	9
1483	148320067	521473	5318406	Geochem(3-Beam)	9358	1403	3800	190	14027	115	310	14	<LOD	1325	5458	30	5412	26	1431	57	46	15	<LOD	36	164	7
1483	148320068	519607	5317052	Geochem(3-Beam)	6052	1605	4023	213	18273	143	303	16	<LOD	1305	5630	34	7398	36	1330	62	<LOD	81	<LOD	42	299	9
1483	148320069	521756	5318586	Geochem(3-Beam)	7198	1604	3985	214	19964	151	383	17	<LOD	1361	5726	34	6206	31	1455	63	<LOD	78	<LOD	40	247	9
1483	148320070	522797	5318762	Geochem(3-Beam)	<LOD	42411	3151	253	15612	149	339	21	<LOD	1877	5388	36	6886	33	1857	75	<LOD	101	<LOD	52	368	11
1483	148320071	522089	5318769	Geochem(3-Beam)	8342	1520	3763	205	19774	145	358	16	<LOD	1336	5702	33	5928	30	1492	63	<LOD	76	<LOD	39	142	8
1483	148320072	522456	5318789	Geochem(3-Beam)	7273	1731	3742	223	18529	151	307	17	<LOD	1476	6106	37	6174	33	1364	66	<LOD	83	<LOD	43	243	9

PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER	VANTA HAND HELD X-RAY FLUORESCENCE SPECTROMETER																																
		Fe	Fe Errors	Co	Co Errors	Ni	Ni Errors	Cu	Cu Errors	Zn	Zn Errors	As	As Errors	Se	Se Errors	Rb	Rb Errors	Sr	Sr Errors	Y	Y Errors	Zr	Zr Errors	Nb	Nb Errors	Mo	Mo Errors	Ag	Ag Errors	Cd	Cd Errors	Sn	Sn Errors
Nb Analysis:	Nb Analysis:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Count	Historic	315	315	200	315	277	315	306	315	314	315	62	315	7	315	309	315	311	315	305	315	310	315	2	315	136	315	6	315	2	315	21	315
99 Percentile	Historic	91707	244	170	106	51	12	62	9	172	3	64	5	3	3	59	2	399	2	33	5	228	6	21	6	27	8	3	171	15	24	25	32
Average	Historic	19206	66	64	28	17	3	24	2	64	2	7	3	2	2	26	1	176	1	12	1	87	1	21	5	7	4	3	97	14	20	19	26
Std-Dev	Historic	18212	48	30	23	10	3	21	1	35	1	16	1	1	1	15	0	122	0	7	1	62	1	0	1	4	3	1	39	1	2	2	6
Maximum	Historic	179087	546	224	122	121	12	327	9	179	6	126	9	3	7	81	7	413	3	37	6	408	12	21	11	38	15	3	397	15	39	25	49
Minimum	Historic	1100	12	23	7	5	2	5	2	5	1	2	1	1	0	2	0	1	0	3	1	2	1	21	1	3	1	2	1	13	4	16	5
Count	Project	72	72	54	72	72	72	66	72	72	72	2	72	1	72	72	72	72	72	72	72	72	72	0	72	9	72	2	72	1	72	10	72
Average	Project	12571	54	52	20	19	2	24	3	34	2	3	3	1	2	42	1	297	2	7	1	125	1	#DIV/0!	4	4	5	2	58	15	21	18	25
Std. Dev.	Project	2750	10	19	17	10	0	42	2	9	0	1	1	#DIV/0!	0	3	0	36	0	2	0	29	0	#DIV/0!	0	1	2	0	10	#DIV/0!	2	2	8
Maximum	Project	22214	80	137	59	86	3	327	9	84	2	4	4	1	3	52	1	389	2	16	1	217	1	0	5	7	7	2	69	15	24	21	32
Minimum	Project	6801	29	26	8	7	2	7	2	21	1	2	1	1	0	35	1	208	1	3	1	42	1	0	4	3	1	2	1	15	4	16	5
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1483	148320059	9970	47	<LOD	47	15	2	8	2	25	1	<LOD	3	<LOD	2	48	1	322	2	5	1	116	1	<LOD	4	<LOD	6	<LOD	61	<LOD	21	<LOD	29
1483	148320060	12100	55	<LOD	49	16	2	10	2	27	1	<LOD	3	<LOD	2	47	1	284	2	6	1	100	1	<LOD	4	<LOD	5	<LOD	57	<LOD	20	<LOD	27
1483	148320061	8118	40	<LOD	40	7	2	14	2	24	1	<LOD	3	<LOD	2	37	1	268	1	5	1	89	1	<LOD	4	<LOD	5	2	1	<LOD	20	<LOD	27
1483	148320062	16726	72	55	11	25	2	31	2	44	2	<LOD	3	<LOD	2	43	1	298	2	10	1	143	1	<LOD	4	<LOD	6	<LOD	59	<LOD	20	<LOD	27
1483	148320063	15818	71	84	11	28	2	38	2	54	2	<LOD	3	<LOD	2	44	1	292	2	9	1	150	1	<LOD	4	<LOD	6	<LOD	60	<LOD	20	16	5
1483	148320064	11057	51	39	9	12	2	22	2	44	2	<LOD	3	<LOD	2	39	1	287	2	6	1	121	1	<LOD	4	3	1	<LOD	55	<LOD	20	<LOD	27
1483	148320065	12316	58	69	10	13	2	21	2	43	2	<LOD	3	<LOD	2	36	1	273	2	7	1	109	1	<LOD	4	<LOD	6	2	1	<LOD	20	<LOD	28
1483	148320066	12302	55	41	9	14	2	26	2	41	1	<LOD	3	<LOD	2	35	1	264	1	6	1	96	1	<LOD	4	<LOD	5	<LOD	56	<LOD	19	<LOD	26
1483	148320067	10932	46	63	8	11	2	19	2	41	1	<LOD	3	<LOD	2	36	1	208	1	6	1	204	1	<LOD	4	<LOD	5	<LOD	55	<LOD	18	<LOD	25
1483	148320068	15559	69	55	11	18	2	50	2	48	2	<LOD	3	<LOD	2	41	1	293	2	11	1	117	1	<LOD	4	4	1	<LOD	60	<LOD	20	<LOD	28
1483	148320069	12383	57	32	10	13	2	7	2	40	2	<LOD	3	<LOD	2	40	1	293	2	7	1	139	1	<LOD	4	<LOD	6	<LOD	58	<LOD	20	<LOD	28
1483	148320070	19857	76	137	14	26	2	38	3	84	2	<LOD	4	<LOD	3	41	1	263	2	9	1	124	1	<LOD	5	7	1	<LOD	69	<LOD	24	<LOD	32
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1483	148320072	13316	63	50	10	15	2	23	2	49	2	<LOD	3	<LOD	2	44	1	290	2	8	1	124	1	<LOD	4	<LOD	6	<LOD	62	<LOD	21	<LOD	29

PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER			VANTA HAND HELD X-RAY FLUORESCENCE SPECTROMETER																									
		Sb	Sb Error1 s	Ba	Ba Error1 s	La	La Error1 s	Ce	Ce Error1 s	Pr	Pr Error1 s	Nd	Nd Error1 s	W	W Error1 s	Hg	Hg Error1 s	Pb	Pb Error1 s	Bi	Bi Error1 s	Th	Th Error1 s	U	U Error1 s	LE	LE Error1 s
Nb Analysis:	Nb Analysis:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Count	Historic	3	315	309	315	103	315	121	315	32	315	29	315	10	315	1	315	301	315	1	315	269	315	277	315	315	315
99 Percentile	Historic	26	44	387	832	85	3101	121	3334	123	4531	224	6473	24	16	6	11	21	4	63	45	73	11	56	7	948417	1636
Average	Historic	25	37	144	27	49	1412	57	1424	71	2878	119	4190	14	12	6	8	9	1	63	34	35	3	15	2	785556	661
Std-Dev	Historic	1	5	110	147	13	1079	17	1209	17	1170	42	1564	5	2	#DIV/0!	1	4	1	#DIV/0!	5	18	3	12	2	114316	399
Maximum	Historic	26	65	475	1630	94	5753	123	6186	133	8271	233	6906	24	33	6	24	28	6	63	81	80	11	117	7	951487	1785
Minimum	Historic	24	6	18	4	28	9	31	10	51	14	53	15	8	3	6	1	3	1	63	9	6	2	2	1	342633	226
Count	Project	2	72	72	72	11	72	15	72	3	72	4	72	0	72	0	72	72	72	0	72	54	72	59	72	72	72
Average	Project	25	39	286	8	50	1351	63	1402	77	2367	127	3433	#DIV/0!	11	#DIV/0!	8	9	1	#DIV/0!	31	12	4	4	2	937448	1067
Std. Dev.	Project	1	6	51	1	6	576	9	719	7	504	9	844	#DIV/0!	1	#DIV/0!	1	2	0	#DIV/0!	2	5	4	1	2	6166	563
Maximum	Project	26	45	475	10	65	1921	77	2114	85	2955	136	4341	0	14	0	9	15	1	0	37	31	11	7	7	948740	1785
Minimum	Project	24	8	162	7	43	14	51	16	71	23	115	37	0	9	0	6	6	1	0	27	6	2	3	1	918864	226
1483	148320058	<LOD	40	275	9	<LOD	1595	<LOD	1773	<LOD	2478	<LOD	3624	<LOD	11	<LOD	8	7	1	<LOD	31	8	2	3	1	934389	1343
1483	148320059	<LOD	40	280	8	<LOD	1621	<LOD	1799	<LOD	2507	<LOD	3697	<LOD	11	<LOD	8	10	1	<LOD	32	10	2	4	1	930863	1365
1483	148320060	<LOD	37	341	9	<LOD	1500	<LOD	1659	<LOD	2316	<LOD	3417	<LOD	10	<LOD	7	7	1	<LOD	29	<LOD	10	<LOD	6	936180	1544
1483	148320061	24	8	253	8	<LOD	1486	<LOD	1643	<LOD	2300	<LOD	3375	<LOD	10	<LOD	7	7	1	<LOD	29	<LOD	10	3	1	946998	1594
1483	148320062	<LOD	38	329	9	<LOD	1619	70	17	<LOD	2512	<LOD	3704	<LOD	11	<LOD	7	8	1	<LOD	30	6	2	3	1	930279	1514
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1483	148320064	<LOD	38	294	9	<LOD	1516	<LOD	1685	<LOD	2345	<LOD	3465	<LOD	10	<LOD	7	8	1	<LOD	29	<LOD	10	3	1	941732	1553
1483	148320065	<LOD	39	248	8	<LOD	1589	<LOD	1765	<LOD	2460	<LOD	3620	<LOD	11	<LOD	7	6	1	<LOD	30	<LOD	11	4	1	944716	1637
1483	148320066	<LOD	37	271	9	<LOD	1530	<LOD	1702	<LOD	2373	<LOD	3497	<LOD	10	<LOD	7	8	1	<LOD	29	<LOD	10	<LOD	6	947186	1522
1483	148320067	<LOD	34	253	8	<LOD	1469	63	17	<LOD	2281	<LOD	3353	<LOD	9	<LOD	6	6	1	<LOD	27	<LOD	9	<LOD	6	948152	1364
1483	148320068	<LOD	39	288	9	51	15	<LOD	1802	<LOD	2535	<LOD	3731	<LOD	11	<LOD	7	9	1	<LOD	30	<LOD	11	4	1	940144	1543
1483	148320069	<LOD	38	257	8	<LOD	1608	<LOD	1776	<LOD	2481	<LOD	3624	<LOD	11	<LOD	7	8	1	<LOD	30	<LOD	11	3	1	941613	1546
1483	148320070	<LOD	45	162	7	<LOD	1921	<LOD	2114	<LOD	2955	<LOD	4341	<LOD	14	<LOD	9	11	1	<LOD	37	31	3	7	1	945603	303
1483	148320071	<LOD	38	279	8	<LOD	1555	<LOD	1734	<LOD	2432	<LOD	3571	<LOD	11	<LOD	7	6	1	<LOD	29	<LOD	10	5	1	942254	1469
1483	148320072	<LOD	40	226	8	<LOD	1646	<LOD	1820	<LOD	2535	<LOD	3711	<LOD	11	<LOD	8	9	1	<LOD	32	14	2	3	1	942091	1668

APPENDIX 4

ANALYTICAL QUALITY CONTROL FOR HH-XRF

ANALYTICAL QUALITY CONTROL FOR HH-XRF

The various tables in ***appendix 4*** show the results of analytical quality control for HH-XRF. Quality analysis can be obtained with HH-XRF, at the moment proper care is taken into calibrating every element, and that proper deconvolution algorithm is used. Light element, with atomic number below magnesium, cannot be measured accurately with the model of spectrometer that has been used, and X-rays from elements lighter than potassium are partly absorbed by the plastic bag, leading to severe underestimations. Elements with spectral interferences (ex.: sulfur, lead and molybdenum) can hardly be deconvolved accurately. Detection limits are variable depending on elements, best with transition metals of third and fourth periods, and host matrix, and calculated for each analysis.

Certified reference material

The OREAS 25a certified reference material was used to control HH-XRF and inserted four times among the current sample sequence. This material is an oxidic soil from an *in-situ* layer of mature soil developed above tertiary tholeiitic basalt near Melbourne, Victoria State, Australia. The certified values of this reference material are presented in the header of ***appendix 4***, ***table 1***. The values obtained are not all reconciled to the certified values and appear in yellow since the calibration used for the portable XRF is that of the factory and not an individual calibration for each element with a similar matrix, which would be very tedious to perform. Contrarily to the results on regular samples, light elements are not underestimated, since the measurements on reference material is made on compacted material under a low X-ray absorbance mylar film, without plastic bag interferences.

Internal reference material

The internal reference material inserted is a blank made of cleaned quartz. It was inserted 4 times among the aliquots of till samples for analysis by HH-XRF. These results are presented in ***appendix 4***, ***table 2***. This quartz from the Lac Bouchette, is a high purity quartz vein, laboratory cleaned and soaked in oxalic acid to remove any iron staining. The quartz cobbles were pulverized with a ceramic disk mill (BICO) and sieved at 90 µm and the fraction < 90 µm was inserted. Thousands of analyses are available to the author with numerous methods and laboratory. Two values in Si and one in P are a slightly underestimated, causing the LE (light element not detected, dominantly oxygen) to be overestimated and highlighted in yellow.

‘’Blank’’ Vanta

The "Blank Vanta" reference material is a fused quartz glass provided by Olympus for the calibration of the instrument. It was analyzed 2 times for this project and the results are presented in ***table 3 of appendix 4***. One value in Si is a little low but not exceed twice the calculated standard deviation so that the LE (light element not detected) is higher and appear in yellow.

The instrument was calibrated every day and routinely every 80 analyzes. Calibrations schedule is presented in ***table 4*** of ***appendix 4.***

CHIMISTE
Karen Gagné
2003-137
QUÉBEC

1483-2021_Report_Till
Baden Project, December 2nd, 2021

Karen Gagné, chemist
OCQ nº 2003-137

PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER	XRF MODE	CERTIFICATE	VANTA HAND-HELD X-RAY FLUORESCENCE SPECTROMETER																													
				Mg	Mg Error1s	Al	Al Error1s	Si	Si Error1s	P	P Error1s	S	S Error1s	K	K Error1s	Ca	Ca Error1s	Ti	Ti Error1s	V	V Error1s	Cr	Cr Error1s	Mn	Mn Error1s	Fe	Fe Error1s	Co	Co Error1s	Ni	Ni Error1s
Nb Analysis:	Nb Analysis:			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Compte	Compte			0	9	9	9	9	9	9	9	3	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
99 Percentile	99 Percentile			#NOMBRE!	10334	54262	374	138187	373	2882	30	117	439	3535	26	2824	20	10388	100	237	25	84	11	445	12	64002	181	180	23	57	3
Moyenne	Moyenne			#DIV/0!	7581	50557	362	129260	368	2583	29	86	264	3392	25	2766	19	10257	97	198	24	69	10	433	11	63247	171	138	22	51	3
Écart type	Écart type			#DIV/0!	1209	3061	8	6727	4	226	1	27	183	84	0	44	1	113	2	33	1	9	0	10	1	650	6	35	1	3	0
Coeff. var.	Coefficient var.			#DIV/0!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	Maximum			0	10525	54330	374	138189	373	2884	30	118	442	3537	26	2826	20	10389	100	237	25	84	11	445	12	64011	181	181	23	57	3
Minimum	Minimum			0	6568	44758	352	117047	362	2211	28	70	23	3301	25	2680	18	10030	95	141	23	57	10	415	11	62336	166	90	21	46	3
Compte	Compte			4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Moyenne	Moyenne			#DIV/0!	8260	47779	360	123561	367	2375	29	94	223	3352	26	2770	19	10252	99	186	24	72	10	434	12	63430	176	113	22	51	3
Écart type	Écart type			#DIV/0!	1576	2181	10	4617	3	118	1	34	231	42	1	31	1	162	1	19	1	10	1	7	1	564	4	16	1	5	0
Coeff. var.	Coefficient var.			#DIV/0!	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	Maximum			0	10525	49509	374	127633	371	2470	30	118	442	3397	26	2802	20	10389	100	211	25	84	11	441	12	64011	181	125	23	57	3
Minimum	Minimum			0	7132	44758	352	117047	364	2211	28	70	23	3306	25	2729	19	10030	98	169	24	60	10	426	11	62740	172	90	22	46	3
OREAS 45A	**Limite inférieure (-2σ)**													**4650**		**2980**		**9450**		**152**		**105**		**460**		**63800**				**44**	
OREAS 45A	**Valeur certifiée**											**510**		**4820**		**3090**		**9770**		**157**		**115**		**470**		**66000**				**46**	
OREAS 45A	**Limite supérieure (+2σ)**													**5000**		**3190**		**10008**		**163**		**124**		**490**		**68200**				**48**	
1483	Oreas 25a	Geochem(3-Beam)	IOS21-0037	<LOD	8139	49509	374	125769	371	2453	30	<LOD	404	3329	25	2729	19	10352	98	174	24	71	10	429	12	63742	175	113	22	49	3
1483	Oreas 25a	Geochem(3-Beam)	IOS21-0037	<LOD	7132	49237	356	127633	367	2470	29	118	23	3377	25	2802	19	10238	98	190	24	74	10	426	11	63226	172	125	22	46	3
1483	Oreas 25a	Geochem(3-Beam)	IOS21-0037	<LOD	7244	47612	352	123794	364	2364	28	70	23	3397	26	2781	19	10389	99	169	24	60	10	439	12	64011	177	90	22	57	3
1483	Oreas 25a	Geochem(3-Beam)	IOS21-0037	<LOD	10525	44758	358	117047	367	2211	29	<LOD	442	3306	26	2769	20	10030	100	211	25	84	11	441	12	62740	181	124	23	53	3

PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER	VANTA HAND-HELD X-RAY FLUORESCENCE SPECTROMETER																											
		Cu	Cu Error1s	Zn	Zn Error1s	As	As Error1s	Se	Se Error1s	Rb	Rb Error1s	Sr	Sr Error1s	Y	Y Error1s	Zr	Zr Error1s	Nb	Nb Error1s	Mo	Mo Error1s	Ag	Ag Error1s	Cd	Cd Error1s	Sn	Sn Error1s	Sb	Sb Error1s
Nb Analysis:	Nb Analysis:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Compte	Compte	9	9	9	9	9	9	1	9	9	9	9	9	9	9	9	9	9	9	8	9	0	9	0	9	4	9	0	9
99 Percentile	99 Percentile	44	3	54	2	14	1	2	3	67	1	46	1	26	1	412	2	21	1	8	5	#NOMBRE!	80	#NOMBRE!	19	23	26	#NOMBRE!	37
Moyenne	Moyenne	39	3	52	2	11	1	2	2	64	1	45	1	25	1	401	2	20	1	6	1	#DIV/0!	75	#DIV/0!	18	21	16	#DIV/0!	35
Écart type	Écart type	4	0	2	0	1	0	#DIV/0!	1	1	0	1	0	1	0	6	0	1	0	1	1	#DIV/0!	3	#DIV/0!	0	2	10	#DIV/0!	1
Coeff. var.	Coefficient var.	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	0	0	0	0	0	0	1	#DIV/0!	0	#DIV/0!	0	0	1	#DIV/0!	0
Maximum	Maximum	44	3	54	2	14	1	2	3	67	1	46	1	26	1	412	2	21	1	8	5	0	80	0	19	23	26	0	37
Minimum	Minimum	34	3	48	2	10	1	2	1	63	1	44	1	24	1	392	2	19	1	4	1	0	72	0	18	18	6	0	34
Compte	Compte	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Moyenne	Moyenne	40	3	52	2	12	1	2	2	64	1	45	1	25	1	402	2	20	1	5	1	#DIV/0!	77	#DIV/0!	18	21	21	#DIV/0!	36
Écart type	Écart type	4	0	2	0	2	0	#DIV/0!	1	1	0	1	0	1	0	7	0	1	0	1	0	#DIV/0!	3	#DIV/0!	1	#DIV/0!	10	#DIV/0!	1
Coeff. var.	Coefficient var.	0	0	0	0	0	0	#DIV/0!	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
Maximum	Maximum	44	3	54	2	14	1	2	3	65	1	46	1	26	1	412	2	21	1	6	1	0	80	0	19	21	26	0	37
Minimum	Minimum	36	3	50	2	10	1	2	1	63	1	44	1	24	1	397	2	19	1	4	1	0	74	0	18	21	6	0	35
OREAS 45A	**Limite inférieur**	**32**		**42,20**						**57**		**45,9**						**20,9**		**2,40**									
OREAS 45A	**Valeur certifiée**	**34**		**44,40**						**61**		**48,5**						**22,4**		**2,55**									
OREAS 45A	**Limite supérieu**	**36**		**46,60**						**64**		**51,0**						**23,9**		**2,70**									
1483	Oreas 25a	36	3	51	2	10	1	<LOD	2	65	1	44	1	26	1	397	2	19	1	4	1	<LOD	75	<LOD	18	<LOD	25	<LOD	35
1483	Oreas 25a	38	3	50	2	14	1	2	1	65	1	46	1	24	1	412	2	21	1	5	1	<LOD	74	<LOD	18	21	6	<LOD	35
1483	Oreas 25a	44	3	54	2	11	1	<LOD	2	64	1	45	1	26	1	398	2	20	1	6	1	<LOD	80	<LOD	18	<LOD	25	<LOD	35
1483	Oreas 25a	42	3	52	2	11	1	<LOD	3	63	1	44	1	24	1	401	2	19	1	5	1	<LOD	78	<LOD	19	<LOD	26	<LOD	37

PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER	VANTA HAND-HELD X-RAY FLUORESCENCE SPECTROMETER																							
		Ba	Ba Error1s	La	La Error1s	Ce	Ce Error1s	Pr	Pr Error1s	Nd	Nd Error1s	W	W Error1s	Hg	Hg Error1s	Pb	Pb Error1s	Bi	Bi Error1s	Th	Th Error1s	U	U Error1s	LE	LE Error1s
Nb Analysis:	Nb Analysis:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Compte	Compte	9	9	4	9	3	9	1	9	0	9	0	9	4	9	9	9	0	9	9	9	8	9	9	9
99 Percentile	99 Percentile	142	12	78	1999	90	2219	102	3076	#NOMBRE!	4506	#NOMBRE!	12	6	8	27	1	#NOMBRE!	30	31	3	6	6	754465	485
Moyenne	Moyenne	127	12	72	1094	81	1442	102	2658	#DIV/0!	4373	#DIV/0!	11	5	5	24	1	#DIV/0!	28	22	2	5	2	736097	475
Écart type	Écart type	12	1	6	1018	9	1065	#DIV/0!	986	#DIV/0!	83	#DIV/0!	0	1	3	2	0	#DIV/0!	1	5	1	1	2	10258	5
Coeff. var.	Coefficient var.	0	0	0	1	0	1	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	0	1	0	0	#DIV/0!	0	0	0	0	1	0	0
Maximum	Maximum	142	12	78	2001	90	2223	102	3080	0	4511	0	12	6	8	27	1	0	30	31	3	6	6	755389	485
Minimum	Minimum	106	11	63	21	73	23	102	33	0	4248	0	11	4	1	22	1	0	27	15	2	3	1	722038	467
Compte	Compte	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Moyenne	Moyenne	123	11	71	1483	85	1104	102	2283	#DIV/0!	4419	#DIV/0!	11	6	5	25	1	#DIV/0!	29	26	3	5	1	744640	478
Écart type	Écart type	17	0	#DIV/0!	975	7	1249	#DIV/0!	1501	#DIV/0!	72	#DIV/0!	1	1	4	2	0	#DIV/0!	1	5	1	1	0	7458	6
Coeff. var.	Coefficient var.	0	0	#DIV/0!	1	0	1	#DIV/0!	1	#DIV/0!	0	#DIV/0!	0	0	1	0	0	#DIV/0!	0	0	0	0	0	0	0
Maximum	Maximum	142	11	71	2001	90	2223	102	3080	0	4511	0	12	6	8	26	1	0	30	31	3	6	1	755389	485
Minimum	Minimum	106	11	71	21	80	23	102	33	0	4349	0	11	5	1	22	1	0	28	19	2	4	1	738898	472
OREAS 45A	**Limite inférieur**	**141**														**23,7**		**0,30**							
OREAS 45A	**Valeur certifiée**	**147**														**25,2**		**0,35**							
OREAS 45A	**Limite supérieu**	**152**														**26,8**		**0,40**							
1483	Oreas 25a	131	11	<LOD	1940	<LOD	2148	<LOD	2983	<LOD	4378	<LOD	11	5	1	26	1	<LOD	29	27	3	4	1	740433	485
1483	Oreas 25a	142	11	71	21	80	23	102	33	<LOD	4349	<LOD	11	<LOD	8	22	1	<LOD	28	19	2	4	1	738898	474
1483	Oreas 25a	112	11	<LOD	1971	90	23	<LOD	3036	<LOD	4437	<LOD	11	<LOD	8	25	1	<LOD	29	28	3	5	1	743840	472
1483	Oreas 25a	106	11	<LOD	2001	<LOD	2223	<LOD	3080	<LOD	4511	<LOD	12	6	2	25	1	<LOD	30	31	3	6	1	755389	479

PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER	XRF MODE	CERTIFICATE	HANDHELD X-RAY FLUORESCENCE SPECTROMETER																										
				Mg	Mg Error1s	Al	Al Error1s	Si	Si Error1s	P	P Error1s	S	S Error1s	K	K Error1s	Ca	Ca Error1s	Ti	Ti Error1s	V	V Error1s	Cr	Cr Error1s	Mn	Mn Error1s	Fe	Fe Error1s	Co	Co Error1s	
Nb Analysis:	4			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Compte	Historique			0	37	4	37	37	37	37	37	0	37	0	37	37	37	0	37	0	37	0	37	37	37	37	37	1	37	
Moyenne	Historique			#DIV/0!	4915	1240	938	300844	462	3172	34	#DIV/0!	233	#DIV/0!	299	1302	15	#DIV/0!	282	#DIV/0!	65	#DIV/0!	36	93	8	1154	13	14	19	
Écart type	Historique			#DIV/0!	537	237	287	9549	4	162	1	#DIV/0!	15	#DIV/0!	20	104	0	#DIV/0!	17	#DIV/0!	1	#DIV/0!	1	7	0	63	0	#DIV/0!	3	
Coeff. var.	Historique			#DIV/0!	0	0	0	0	0	0	0	#DIV/0!	0	#DIV/0!	0	0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	
Maximum	Historique			0	6220	1549	1247	314508	476	3450	35	0	279	0	364	1578	16	0	329	0	69	0	38	111	9	1283	13	14	20	
Minimum	Historique			0	4069	974	140	279097	452	2728	33	0	211	0	273	1186	15	0	258	0	61	0	34	77	8	1040	12	14	4	
Compte	Projet			0	4	0	4	4	4	4	4	0	4	0	4	4	4	0	4	0	4	0	4	4	4	4	4	1	4	
Moyenne	Projet			#DIV/0!	5867	#DIV/0!	1170	281719	470	2847	34	#DIV/0!	264	#DIV/0!	344	1281	16	#DIV/0!	319	#DIV/0!	68	#DIV/0!	38	88	8	1093	13	14	16	
Écart type	Projet			#DIV/0!	423	#DIV/0!	66	2193	8	82	1	#DIV/0!	13	#DIV/0!	17	12	1	#DIV/0!	8	#DIV/0!	2	#DIV/0!	1	6	1	38	0	#DIV/0!	8	
Coeff. var.	Projet			#DIV/0!	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	#DIV/0!	0	0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	0	0	0	0	#DIV/0!	0	
Maximum	Projet			0	6220	0	1247	283614	476	2907	35	0	279	0	364	1298	16	0	329	0	69	0	38	96	9	1134	13	14	20	
Minimum	Projet			0	5289	0	1086	279097	459	2728	33	0	247	0	323	1269	15	0	310	0	65	0	36	84	8	1044	13	14	4	
1483	Blanc 2016 < 90 µm	Geochem(3-Beam)	IOS21-0037	<LOD	6141	<LOD	1165	283442	476	2893	35	<LOD	264	<LOD	344	1280	16	<LOD	320	<LOD	68	<LOD	38	89	8	1134	13	<LOD	20	
1483	Blanc 2016 < 90 µm	Geochem(3-Beam)	IOS21-0037	<LOD	5289	<LOD	1247	279097	474	2728	33	<LOD	279	<LOD	364	1269	16	<LOD	329	<LOD	69	<LOD	38	84	9	1044	13	14	4	
1483	Blanc 2016 < 90 µm	Geochem(3-Beam)	IOS21-0037	<LOD	6220	<LOD	1183	283614	469	2860	33	<LOD	266	<LOD	344	1298	16	<LOD	317	<LOD	68	<LOD	38	96	8	1086	13	<LOD	20	
1483	Blanc 2016 < 90 µm	Geochem(3-Beam)	IOS21-0037	<LOD	5818	<LOD	1086	280724	459	2907	33	<LOD	247	<LOD	323	1277	15	<LOD	310	<LOD	65	<LOD	36	84	8	1106	13	<LOD	19	

PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER	HANDHELD X-RAY FLUORESCENCE SPECTROMETER																													
		Ni	Ni Error1s	Cu	Cu Error1s	Zn	Zn Error1s	As	As Error1s	Se	Se Error1s	Rb	Rb Error1s	Sr	Sr Error1s	Y	Y Error1s	Zr	Zr Error1s	Nb	Nb Error1s	Mo	Mo Error1s	Ag	Ag Error1s	Cd	Cd Error1s	Sn	Sn Error1s	Sb		
Nb Analysis:	4	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Compte	Historique	0	37	19	37	34	37	0	37	0	37	10	37	6	37	1	37	36	37	0	37	6	37	0	37	0	37	4	37	0	
Moyenne	Historique	#DIV/0!	8	6	5	6	1	#DIV/0!	3	#DIV/0!	2	1	1	2	2	2	4	3	1	#DIV/0!	4	3	5	#DIV/0!	59	#DIV/0!	22	16	27	#DIV/0!	
Écart type	Historique	#DIV/0!	0	2	3	1	1	#DIV/0!	0	#DIV/0!	0	1	1	1	1	#DIV/0!	1	1	1	#DIV/0!	0	1	2	#DIV/0!	1	#DIV/0!	0	1	8	#DIV/0!	
Coeff. var.	Historique	#DIV/0!	0	0	1	0	1	#DIV/0!	0	#DIV/0!	0	0	1	0	0	#DIV/0!	0	0	1	#DIV/0!	0	1	0	#DIV/0!	0	#DIV/0!	0	0	0	#DIV/0!	
Maximum	Historique	0	8	10	9	9	6	0	3	0	2	2	2	2	3	2	4	5	5	0	5	4	6	0	61	0	23	16	32	0	
Minimum	Historique	0	7	2	2	4	1	0	3	0	2	1	0	1	0	2	1	2	1	0	4	1	1	0	57	0	21	15	5	0	
Compte	Projet	0	4	3	4	3	4	0	4	0	4	0	4	0	4	0	4	3	4	0	4	0	4	0	4	0	4	2	4	0	
Moyenne	Projet	#DIV/0!	8	7	4	6	2	#DIV/0!	3	#DIV/0!	2	#DIV/0!	2	#DIV/0!	3	#DIV/0!	4	3	2	#DIV/0!	5	#DIV/0!	6	#DIV/0!	60	#DIV/0!	23	15	18	#DIV/0!	
Écart type	Projet	#DIV/0!	0	1	4	1	3	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	1	2	#DIV/0!	1	#DIV/0!	0	#DIV/0!	1	#DIV/0!	1	0	15	#DIV/0!	
Coeff. var.	Projet	#DIV/0!	0	0	1	0	1	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	0	1	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	0	1	#DIV/0!	
Maximum	Projet	0	8	8	9	7	6	0	3	0	2	0	2	0	3	0	4	4	5	0	5	0	6	0	61	0	23	15	32	0	
Minimum	Projet	0	8	6	2	5	1	0	3	0	2	0	2	0	3	0	4	3	1	0	4	0	6	0	58	0	22	15	5	0	
1483	Blanc 2016 < 90 µm	<LOD	8	<LOD	9	<LOD	6	<LOD	3	<LOD	2	<LOD	2	<LOD	3	<LOD	4	<LOD	5	<LOD	5	<LOD	6	<LOD	61	<LOD	23	15	5	<LOD	
1483	Blanc 2016 < 90 µm	<LOD	8	8	2	5	1	<LOD	3	<LOD	2	<LOD	2	<LOD	3	<LOD	4	3	1	<LOD	5	<LOD	6	<LOD	61	<LOD	23	<LOD	32	<LOD	
1483	Blanc 2016 < 90 µm	<LOD	8	6	2	6	1	<LOD	3	<LOD	2	<LOD	2	<LOD	3	<LOD	4	4	1	<LOD	5	<LOD	6	<LOD	60	<LOD	23	<LOD	31	<LOD	
1483	Blanc 2016 < 90 µm	<LOD	8	6	2	7	1	<LOD	3	<LOD	2	<LOD	2	<LOD	3	<LOD	4	3	1	<LOD	4	<LOD	6	<LOD	58	<LOD	22	15	5	<LOD	

PROJECT NUMBER	RANDOMIZED SAMPLE NUMBER	HANDHELD X-RAY FLUORESCENCE SPECTROMETER																								
		Sb Error1s	Ba	Ba Error1s	La	La Error1s	Ce	Ce Error1s	Pr	Pr Error1s	Nd	Nd Error1s	W	W Error1s	Hg	Hg Error1s	Pb	Pb Error1s	Bi	Bi Error1s	Th	Th Error1s	U	U Error1s	LE	LE Error1s
Nb Analysis:	4	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Compte	Historique	37	4	37	6	37	3	37	6	37	0	37	0	37	0	37	0	37	0	37	36	37	28	37	37	37
Moyenne	Historique	42	25	745	58	1311	56	1587	86	2018	#DIV/0!	3464	#DIV/0!	11	#DIV/0!	8	#DIV/0!	4	#DIV/0!	30	9	2	3	2	693244	462
Écart type	Historique	1	10	247	14	563	39	432	35	847	#DIV/0!	44	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	1	2	1	1	2	9600	5
Coeff. var.	Historique	0	0	0	0	0	1	0	0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	0	1	0	1	0	0
Maximum	Historique	44	33	854	81	1615	88	1781	117	2468	0	3608	0	12	0	8	0	4	0	32	14	11	5	6	715701	475
Minimum	Historique	41	11	9	36	17	13	20	18	28	0	3395	0	10	0	7	0	4	0	29	6	2	1	1	679637	451
Compte	Projet	4	1	4	0	4	0	4	1	4	0	4	0	4	0	4	0	4	0	4	4	4	4	4	4	4
Moyenne	Projet	44	28	632	#DIV/0!	1584	#DIV/0!	1746	92	1838	#DIV/0!	3529	#DIV/0!	11	#DIV/0!	8	#DIV/0!	4	#DIV/0!	31	12	2	4	1	712903	469
Écart type	Projet	1	#DIV/0!	416	#DIV/0!	31	#DIV/0!	33	#DIV/0!	1207	#DIV/0!	68	#DIV/0!	1	#DIV/0!	0	#DIV/0!	0	#DIV/0!	1	2	0	1	0	2257	8
Coeff. var.	Projet	0	#DIV/0!	1	#DIV/0!	0	#DIV/0!	0	#DIV/0!	1	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	0	0	0	0	0	0
Maximum	Projet	44	28	854	0	1615	0	1781	92	2468	0	3608	0	12	0	8	0	4	0	32	14	2	5	1	715701	475
Minimum	Projet	42	28	9	0	1547	0	1704	92	28	0	3448	0	11	0	8	0	4	0	30	10	2	2	1	711016	458
1483	Blanc 2016 < 90 µm	44	<LOD	854	<LOD	1604	<LOD	1760	<LOD	2447	<LOD	3554	<LOD	11	<LOD	8	<LOD	4	<LOD	32	12	2	5	1	711128	475
1483	Blanc 2016 < 90 µm	44	28	9	<LOD	1615	<LOD	1781	<LOD	2468	<LOD	3608	<LOD	12	<LOD	8	<LOD	4	<LOD	32	14	2	4	1	715701	473
1483	Blanc 2016 < 90 µm	44	<LOD	840	<LOD	1569	<LOD	1737	<LOD	2409	<LOD	3504	<LOD	11	<LOD	8	<LOD	4	<LOD	31	10	2	4	1	711016	468
1483	Blanc 2016 < 90 µm	42	<LOD	826	<LOD	1547	<LOD	1704	92	28	<LOD	3448	<LOD	11	<LOD	8	<LOD	4	<LOD	30	11	2	2	1	713766	458

PROJECT NUMBER	CONTENT	XRF MODE	CERTIFICATE	HANDHELD X-RAY FLUORESCENCE SPECTROMETER																							
				Mg	Mg Error1s	Al	Al Error1s	Si	Si Error1s	P	P Error1s	S	S Error1s	K	K Error1s	Ca	Ca Error1s	Ti	Ti Error1s	V	V Error1s	Cr	Cr Error1s	Mn	Mn Error1s	Fe	Fe Error1s
Nb Analysis:				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Compte	Historique	Historique		0	47	1	47	47	47	0	47	0	47	0	47	6	47	0	47	0	47	0	47	9	47	11	47
99 Percentile	Historique	Historique		#NOMBRE!	2642	609	656	515552	482	#NOMBRE!	52	#NOMBRE!	97	#NOMBRE!	136	76	110	#NOMBRE!	144	#NOMBRE!	67	#NOMBRE!	37	28	295	49	22
Moyenne	Historique	Historique		#DIV/0!	2334	609	601	505099	472	#DIV/0!	47	#DIV/0!	88	#DIV/0!	123	54	91	#DIV/0!	129	#DIV/0!	65	#DIV/0!	36	24	217	27	17
Écart type	Historique	Historique		#DIV/0!	145	#DIV/0!	74	8145	3	#DIV/0!	1	#DIV/0!	2	#DIV/0!	3	16	31	#DIV/0!	4	#DIV/0!	1	#DIV/0!	1	2	103	14	7
Coeff. var.	Historique	Historique		#DIV/0!	0	#DIV/0!	0	0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	0	0	1	0
Maximum	Historique	Historique		0	2688	609	671	516102	487	0	54	0	100	0	139	77	113	0	145	0	67	0	37	28	295	50	22
Minimum	Historique	Historique		0	1942	609	125	473010	467	0	45	0	85	0	119	35	11	0	124	0	63	0	35	22	7	15	5
Compte	Projet	Projet		0	2	0	2	2	2	0	2	0	2	0	2	1	2	0	2	0	2	0	2	0	2	1	2
Moyenne	Projet	Projet		#DIV/0!	2563	#DIV/0!	647	486753	480	#DIV/0!	51	#DIV/0!	94	#DIV/0!	133	66	60	#DIV/0!	139	#DIV/0!	66	#DIV/0!	37	#DIV/0!	285	38	13
Écart type	Projet	Projet		#DIV/0!	177	#DIV/0!	35	6355	10	#DIV/0!	5	#DIV/0!	8	#DIV/0!	9	#DIV/0!	67	#DIV/0!	8	#DIV/0!	2	#DIV/0!	1	#DIV/0!	15	#DIV/0!	11
Coeff. var.	Projet	Projet		#DIV/0!	0	#DIV/0!	0	0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	1	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	1
Maximum	Projet	Projet		0	2688	0	671	491247	487	0	54	0	100	0	139	66	107	0	145	0	67	0	37	0	295	38	21
Minimum	Projet	Projet		0	2438	0	622	482259	473	0	47	0	88	0	126	66	12	0	133	0	64	0	36	0	274	38	5
1483	BLANK VANTA	Geochem(3-Beam)	IOS21-0037	<LOD	2688	<LOD	671	482259	487	<LOD	54	<LOD	100	<LOD	139	66	12	<LOD	145	<LOD	67	<LOD	37	<LOD	295	38	5
1483	BLANK VANTA	Geochem(3-Beam)	IOS21-0037	<LOD	2438	<LOD	622	491247	473	<LOD	47	<LOD	88	<LOD	126	<LOD	107	<LOD	133	<LOD	64	<LOD	36	<LOD	274	<LOD	21

PROJECT NUMBER	CONTENT	XRF MODE	CERTIFICATE	HANDHELD X-RAY FLUORESCENCE SPECTROMETER																							
				Co	Co Error1s	Ni	Ni Error1s	Cu	Cu Error1s	Zn	Zn Error1s	As	As Error1s	Se	Se Error1s	Rb	Rb Error1s	Sr	Sr Error1s	Y	Y Error1s	Zr	Zr Error1s	Nb	Nb Error1s	Mo	Mo Error1s
Nb Analysis:				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Compte	Historique	Historique		7	47	0	47	9	47	26	47	0	47	7	47	12	47	0	47	1	47	47	47	0	47	3	47
99 Percentile	Historique	Historique		10	13	#NOMBRE!	8	7	8	6	6	#NOMBRE!	3	1	2	2	2	#NOMBRE!	2	2	4	6	1	#NOMBRE!	4	3	6
Moyenne	Historique	Historique		9	11	#DIV/0!	7	6	7	4	3	#DIV/0!	3	1	2	1	1	#DIV/0!	2	2	3	4	1	#DIV/0!	4	3	6
Écart type	Historique	Historique		1	4	#DIV/0!	0	1	2	1	2	#DIV/0!	0	0	1	0	1	#DIV/0!	0	#DIV/0!	0	1	0	#DIV/0!	0	0	1
Coeff. var.	Historique	Historique		0	0	#DIV/0!	0	0	0	0	1	#DIV/0!	0	0	0	0	1	#DIV/0!	0	#DIV/0!	0	0	0	#DIV/0!	0	0	0
Maximum	Historique	Historique		10	13	0	8	7	8	6	6	0	3	1	2	2	2	0	2	2	4	6	1	0	4	3	6
Minimum	Historique	Historique		8	3	0	7	5	2	3	1	0	3	1	0	1	0	0	2	2	1	3	1	0	4	3	1
Compte	Projet	Projet		0	2	0	2	0	2	1	2	0	2	0	2	1	2	0	2	0	2	2	2	0	2	0	2
Moyenne	Projet	Projet		#DIV/0!	13	#DIV/0!	8	#DIV/0!	8	4	4	#DIV/0!	3	#DIV/0!	2	1	1	#DIV/0!	2	#DIV/0!	4	4	1	#DIV/0!	4	#DIV/0!	6
Écart type	Projet	Projet		#DIV/0!	0	#DIV/0!	1	#DIV/0!	0	#####	4	#DIV/0!	0	#DIV/0!	0	#DIV/0!	1	#DIV/0!	0	#DIV/0!	1	1	0	#DIV/0!	0	#DIV/0!	0
Coeff. var.	Projet	Projet		#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#####	1	#DIV/0!	0	#DIV/0!	0	#DIV/0!	1	#DIV/0!	0	#DIV/0!	0	0	0	#DIV/0!	0	#DIV/0!	0
Maximum	Projet	Projet		0	13	0	8	0	8	4	6	0	3	0	2	1	2	0	2	0	4	4	1	0	4	0	6
Minimum	Projet	Projet		0	13	0	7	0	8	4	1	0	3	0	2	1	0	0	2	0	3	3	1	0	4	0	6
1483	BLANK VANTA	Geochem(3-Beam)	IOS21-0037	<LOD	13	<LOD	8	<LOD	8	4	1	<LOD	3	<LOD	2	1	0	<LOD	2	<LOD	4	4	1	<LOD	4	<LOD	6
1483	BLANK VANTA	Geochem(3-Beam)	IOS21-0037	<LOD	13	<LOD	7	<LOD	8	<LOD	6	<LOD	3	<LOD	2	<LOD	2	<LOD	2	<LOD	3	3	1	<LOD	4	<LOD	6

PROJECT NUMBER	CONTENT	XRF MODE	CERTIFICATE	HANDHELD X-RAY FLUORESCENCE SPECTROMETER																							
				Ag	Ag Error1s	Cd	Cd Error1s	Sn	Sn Error1s	Sb	Sb Error1s	Ba	Ba Error1s	La	La Error1s	Ce	Ce Error1s	Pr	Pr Error1s	Nd	Nd Error1s	W	W Error1s	Hg	Hg Error1s	Pb	Pb Error1s
Nb Analysis:				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Compte	Historique	Historique		0	47	0	47	12	47	4	47	2	47	11	47	1	47	5	47	8	47	0	47	0	47	0	47
99 Percentile	Historique	Historique		#NOMBRE!	55	#NOMBRE!	22	17	30	24	43	40	787	125	1480	101	1639	163	2288	278	3351	#NOMBRE!	11	#NOMBRE!	8	#NOMBRE!	4
Moyenne	Historique	Historique		#DIV/0!	53	#DIV/0!	22	16	24	22	39	40	740	84	1119	101	1576	138	2016	219	2746	#DIV/0!	11	#DIV/0!	8	#DIV/0!	4
Écart type	Historique	Historique		#DIV/0!	1	#DIV/0!	0	1	11	2	10	0	155	16	612	#DIV/0!	231	20	690	32	1230	#DIV/0!	0	#DIV/0!	0	#DIV/0!	1
Coeff. var.	Historique	Historique		#DIV/0!	0	#DIV/0!	0	0	0	0	0	0	0	0	1	#DIV/0!	0	0	0	0	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
Maximum	Historique	Historique		0	55	0	22	17	30	24	43	40	789	129	1487	101	1648	163	2297	281	3368	0	11	0	8	0	4
Minimum	Historique	Historique		0	51	0	22	14	5	20	7	40	12	73	23	101	26	119	38	177	58	0	10	0	7	0	3
Compte	Projet	Projet		0	2	0	2	1	2	0	2	0	2	0	2	0	2	0	2	1	2	0	2	0	2	0	2
Moyenne	Projet	Projet		#DIV/0!	54	#DIV/0!	22	16	18	#DIV/0!	43	#DIV/0!	782	#DIV/0!	1469	#DIV/0!	1625	#DIV/0!	2268	281	1691	#DIV/0!	11	#DIV/0!	8	#DIV/0!	4
Écart type	Projet	Projet		#DIV/0!	1	#DIV/0!	0	#DIV/0!	18	#DIV/0!	1	#DIV/0!	3	#DIV/0!	5	#DIV/0!	4	#DIV/0!	11	#DIV/0!	2309	#DIV/0!	0	#DIV/0!	1	#DIV/0!	1
Coeff. var.	Projet	Projet		#DIV/0!	0	#DIV/0!	0	#DIV/0!	1	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	1	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
Maximum	Projet	Projet		0	54	0	22	16	30	0	43	0	784	0	1472	0	1628	0	2276	281	3324	0	11	0	8	0	4
Minimum	Projet	Projet		0	53	0	22	16	5	0	42	0	780	0	1465	0	1622	0	2260	281	58	0	11	0	7	0	3
1483	BLANK VANTA	Geochem(3-Beam)	IOS21-0037	<LOD	54	<LOD	22	16	5	<LOD	43	<LOD	784	<LOD	1472	<LOD	1628	<LOD	2276	<LOD	3324	<LOD	11	<LOD	8	<LOD	4
1483	BLANK VANTA	Geochem(3-Beam)	IOS21-0037	<LOD	53	<LOD	22	<LOD	30	<LOD	42	<LOD	780	<LOD	1465	<LOD	1622	<LOD	2260	281	58	<LOD	11	<LOD	7	<LOD	3

PROJECT NUMBER	CONTENT	XRF MODE	CERTIFICATE	Bi	Bi Error1s	Th	Th Error1s	U	U Error1s	LE	LE Error1s
Nb Analysis:				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Compte	Historique	Historique		0	47	12	47	12	47	47	47
99 Percentile	Historique	Historique		#NOMBRE!	30	9	11	3	6	522625	482
Moyenne	Historique	Historique		#DIV/0!	29	7	8	2	5	494776	472
Écart type	Historique	Historique		#DIV/0!	0	1	4	1	2	8115	3
Coeff. var.	Historique	Historique		#DIV/0!	0	0	0	0	0	0	0
Maximum	Historique	Historique		0	30	9	11	3	6	526902	487
Minimum	Historique	Historique		0	29	5	2	2	1	483886	467
Compte	Projet	Projet		0	2	2	2	1	2	2	2
Moyenne	Projet	Projet		#DIV/0!	30	7	2	3	4	513033	480
Écart type	Projet	Projet		#DIV/0!	1	1	0	#DIV/0!	4	6464	10
Coeff. var.	Projet	Projet		#DIV/0!	0	0	0	#DIV/0!	1	0	0
Maximum	Projet	Projet		0	30	7	2	3	6	517604	487
Minimum	Projet	Projet		0	29	6	2	3	1	508462	473
1483	BLANK VANTA	Geochem(3-Beam)	IOS21-0037	<LOD	30	6	2	3	1	517604	487
1483	BLANK VANTA	Geochem(3-Beam)	IOS21-0037	<LOD	29	7	2	<LOD	6	508462	473

Project number	Project name	# Analyse	Date	Time	Method name	Unit	Duration (sec)
1483	Baden	1	2021-11-22	12:57:02	Cal Check	ppm	14.8338
1483	Baden	1	2021-11-24	15:20:28	Cal Check	ppm	14.8339

APPENDIX 5

CERTIFICATE OF HH-XRF ANALYSIS

IOS Services Géoscientifiques inc.
1319, boulevard Saint-Paul
Chicoutimi, Québec, Canada
G7J 3Y2
418-698-4498

CERTIFICATE : IOS21-0037

To : Mr. Michael Rosatelli
VAL-D'OR MINING CORPORATION
2864 chemin Sullivan
Val-d'Or, Québec
J9P 0B9

Project :	1483, Baden
Date of certificate:	2021-11-25
Number of analyzes:	84 with calibrations and QAQC
Sample type:	Till

Samples preparation:	Without preparation, directly on the bag with wet material aliquot
Instrument used:	Microanalyzer XRF Vanta-VMR of Olympus
Analysis mode:	Mode Geochem(3-Beam)

This report contains protected and confidential information to the recipient's attention.
The results relate only to the sample submitted for analysis.
This report is final and replaces any other preliminary reports with that number.

Note: The data in this certificate is informative and unofficial.

CHIMISTE Karen Gagné 2003-137 QUÉBEC

1483-2021_Report_till
Baden Project, December 2nd, 2021

Signature:

Karen Gagné
Chemist, OCQ 2003-137
Quality control

Sample Échantillon	Content Contient	Date Date	Element/Élément Unit/Unité Duration (sec) Durée (sec)	# Analyse/ Analysis #	Mg ppm	Mg Error1s ppm	Al ppm	Al Error1s ppm	Si ppm	Si Error1s ppm	P ppm	P Error1s ppm	S ppm	S Error1s ppm	K ppm	K Error1s ppm	Ca ppm	Ca Error1s ppm	Ti ppm	Ti Error1s ppm	V ppm	V Error1s ppm	Cr ppm	Cr Error1s ppm	Mn ppm	Mn Error1s ppm	Fe ppm	Fe Error1s ppm	Co ppm	Co Error1s ppm
Calibration	Calibration	2021-11-22	15	1																										
Standard	BlanK Vanta	2021-11-22	90	2	<LOD	2688	<LOD	671	482259	487	<LOD	54	<LOD	100	<LOD	139	66	12	<LOD	145	<LOD	67	<LOD	37	<LOD	295	38	5	<LOD	13
Standard	Blanc quartz < 90 µm	2021-11-22	90	3	<LOD	6141	<LOD	1165	283442	476	2893	35	<LOD	264	<LOD	344	1280	16	<LOD	320	<LOD	68	<LOD	38	89	8	1134	13	<LOD	20
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148320004	Till	2021-11-22	90	8	5634	1601	3305	207	20570	152	246	16	<LOD	1358	6161	35	6207	32	1723	65	<LOD	82	<LOD	43	246	9	13394	61	44	10
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148320006	Till	2021-11-22	90	10	5905	1636	3806	217	24369	172	310	17	<LOD	1316	6006	37	7125	36	1508	67	<LOD	87	<LOD	45	323	10	16110	73	60	11
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148320012	Till	2021-11-22	90	16	<LOD	25283	3145	202	29271	167	335	17	<LOD	1286	6234	32	6216	27	1439	67	<LOD	85	<LOD	43	212	9	13678	50	32	10
148320013	Till	2021-11-22	90	17	<LOD	26858	3831	217	30962	177	311	18	<LOD	1374	6415	34	6437	28	1013	66	62	18	<LOD	42	155	9	8511	37	36	9
148320014	Till	2021-11-22	90	18	7006	1541	3487	207	25847	172	328	17	<LOD	1361	6311	37	5683	30	1640	69	<LOD	84	<LOD	43	167	9	10927	51	38	9
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148320018	Till	2021-11-22	90	22	4930	1526	3537	207	30259	188	306	17	<LOD	1287	6310	37	6929	34	1296	68	<LOD	81	<LOD	43	163	9	10356	49	36	9
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148320021	Till	2021-11-22	90	27	4695	1483	5448	222	31706	193	330	17	<LOD	1222	7047	39	6750	34	1265	69	<LOD	84	36	9	268	10	12327	56	47	10
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148320023	Till	2021-11-22	90	29	6157	1440	5132	210	24806	164	351	16	<LOD	1393	5664	34	5584	29	1345	65	<LOD	81	<LOD	42	159	8	13083	57	49	10
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148320025	Till	2021-11-22	90	31	<LOD	20488	3911	189	33541	166	359	15	<LOD	1105	6701	31	5856	25	1506	63	<LOD	73	<LOD	37	132	8	6801	29	<LOD	37
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148320029	Till	2021-11-22	90	35	5287	1462	3945	209	32797	195	340	17	<LOD	1232	6849	38	6650	33	1114	68	<LOD	82	<LOD	43	188	9	10256	49	<LOD	49
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148320032	Till	2021-11-22	90	38	5595	1643	4040	224	30419	199	358	19	<LOD	1301	7102	42	7612	39	2040	74	<LOD	94	43	10	197	9	13424	65	<LOD	59
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148320037	Till	2021-11-22	90	43	4969	1213	4276	186	28481	163	320	15	<LOD	1132	5936	32	6407	29	1492	62	<LOD	79	68	9	196	8	13707	55	48	10
148320038	Till	2021-11-22	90	44	<LOD	25003	3268	217	23918	159	309	18	<LOD	1317	7181	37	8892	36	1816	72	<LOD	91	69	10	189	9	12615	50	<LOD	57
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Standard	Blanc quartz < 90 µm	2021-11-22	90	46	<LOD	6220	<LOD	1183	283614	469	2860	33	<LOD	266	<LOD	344	1298	16	<LOD	317	<LOD	68	<LOD	38	96	8	1086	13	<LOD	20
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148320040	Till	2021-11-22	90	48	5111	1498	3248	204	28861	184	358	17	<LOD	1356	6530	38	6141	32	1187	68	<LOD	86	33	9	176	9	11320	53	37	10
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148320042	Till	2021-11-22	90	51	<LOD	26000	4292	224	29205	175	335	18	<LOD	1383	7102	37	7212	31	1355	72	<LOD	86	<LOD	45	165	9	9817	42	44	10
148320043	Till	2021-11-22	90	52	<LOD	28894	3302	212	25729	164	357	18	<LOD	1546	5993	34	6237	29	1399	69	<LOD	85	<LOD	46	198	9	11990	48	46	10
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148320045	Till	2021-11-22	90	54	4524	1446	2787	195	26168	171	374	17	<LOD	1314	6241	36	6226	31	1889	67	<LOD	85	<LOD	45	348	10	14837	65	49	11
148320046	Till	2021-11-22	90	55	<LOD	24043	3103	202	30541	171	341	17	<LOD	1291	6818	34	6556	28	1307	68	<LOD	85	<LOD	43	184	9	10671	43	<LOD	50
148320047	Till	2021-11-22	90	56	7124	1707	3714	226	33955	216	324	19	<LOD	1411	6399	41	7164	38	1093	72	<LOD	85	<LOD	46	168	9	8436	46	32	9
148320048	Till	2021-11-22	90	57	5852	1368	8371	230	34838	196	379	17	<LOD	1102	6770	37	6630	32	1732	68	77	18	<LOD	44	293	10	15301	65	50	11
148320049	Till	2021-11-22	90	58	6328	1398	6000	217	28911	177	366	17	<LOD	1109	7264	39	7998	37	1852	69	<LOD	87	64	9	192	9	13689	60	<LOD	56
148320050	Till	2021-11-22	90	59	4852	1271	4125	184	22885	147	365	15	<LOD	1422	5081	29	4954	25	1413	60	52	16	25	8	165	7	12740	52	30	9
148320051	Till	2021-11-22	90	60	5552	1635	2955	209	22011	164	286	17	<LOD	1713	5712	36	5410	30	1093	68	<LOD	81	32	10	156	9	8421	44	29	9
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148320054	Till	2021-11-22	90	63	6225	1329	3624	193	31318	180	372	16	<LOD	1164	6388	35	6737	31	1484	67	<LOD	81	34	9	163	8	10391	47	55	9
148320055	Till	2021-11-22	90	64	6098	1187	3559	176	18442	126	286	14	<LOD	1131	6806	33	6469	28	1397	57	<LOD	80	84	8	276	9	22214	80	59	12
148320056	Till	2021-11-22	90	65	<LOD	20506	4626	207	27473	159	321	16	<LOD	1119	7129	34	8033	31	2284	70	<LOD	87	62	9	279	9	13884	51	31	10
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148320058	Till	2021-11-22	90	68	5089	1400	3396	194	26266	168	347	17	<LOD	1257	5501	33	7602	35	1728	67	69	18	53	9	207	9	14481	62	49	11
148320059	Till	2021-11-22	90	69	4935	1426	3886	205	34187	197	327	17	<LOD	1197	6720	37	6859	33	1253	67	<LOD	81	<LOD	41	159	8	9970	47	<LOD	47
Standard	Oreas 25a	2021-11-22	90	71	<LOD	10525	44758	358	117047	367	2211	29	<LOD	442	3306	26	2769	20	10030	100	211	25	84	11	441	12	62740	181	124	23
Calibration	Calibration	2021-11-24	15	1																										
Standard	BlanK Vanta	2021-11-24	90	2	<LOD	2438	<LOD	622	491247	473	<LOD	47	<LOD	88	<LOD	126	<LOD	107	<LOD	133	<LOD	64	<LOD	36	<LOD	274	<LOD	21	<LOD	13
148320060	Till	2021-11-24	90	3	9048	1606	4338	215	25067	168	291	16	<LOD	1251	5508	33	5296	28	1174	61	<LOD	73	<LOD	39	159	8	12100	55	<LOD	49
148320061	Till	2021-11-24	90	4	6222	1648	3439	211	21860	158	256	16	<LOD	1339	5235	32	5937	30	1051	61	<LOD	73	<LOD	38	148	8	8118	40	<LOD	40
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148320063	Till	2021-11-24	90	6	10721	1691	3828	217	19950	153	351	17	<LOD	1345	5480	34	5815	31	1796	64	<LOD	83	<LOD	42	251	9	15818	71	84	11
148320064	Till	2021-11-24	90	7	8040	1611	3942	212	20579	151	308	16	<LOD	1288	5585	33	6240	31	1401	64	<LOD	77	34	9	202	8	11057	51	39	9
148320065	Till	2021-11-24	90	8	7208	1695	3858	218	17756	145	362	17	<LOD	1454	5158	33	6126	32	1456	65	<LOD	80	<LOD	40	213	9	12316	58	69	10
148320066	Till	2021-11-24	90	9	7648	1572	4105	208	15271	127	331	16	<LOD	1401	5333	32	5502	28	1216	60	<LOD	74	<LOD	39	306	9	12302	55	41	9

Sample Échantillon	Content Contient	Ni ppm	Ni Error1s ppm	Cu ppm	Cu Error1s ppm	Zn ppm	Zn Error1s ppm	As ppm	As Error1s ppm	Se ppm	Se Error1s ppm	Rb ppm	Rb Error1s ppm	Sr ppm	Sr Error1s ppm	Y ppm	Y Error1s ppm	Zr ppm	Zr Error1s ppm	Nb ppm	Nb Error1s ppm	Mo ppm	Mo Error1s ppm	Ag ppm	Ag Error1s ppm	Cd ppm	Cd Error1s ppm	Sn ppm	Sn Error1s ppm	Sb ppm	Sb Error1s ppm	Ba ppm
Calibration	Calibration																															
Standard	BlanK Vanta	<LOD	8	<LOD	8	4	1	<LOD	3	<LOD	2	1	0	<LOD	2	<LOD	4	4	1	<LOD	4	<LOD	6	<LOD	54	<LOD	22	16	5	<LOD	43	<LOD
Standard	Blanc quartz < 90 µm	<LOD	8	<LOD	9	<LOD	6	<LOD	3	<LOD	2	<LOD	2	<LOD	3	<LOD	4	<LOD	5	<LOD	5	<LOD	6	<LOD	61	<LOD	23	15	5	<LOD	44	<LOD
Standard	Oreas 25a	49	3	36	3	51	2	10	1	<LOD	2	65	1	44	1	26	1	397	2	19	1	4	1	<LOD	75	<LOD	18	<LOD	25	<LOD	35	131
148320001	Till	21	2	16	2	33	2	<LOD	3	<LOD	2	38	1	261	1	10	1	132	1	<LOD	4	<LOD	6	<LOD	61	<LOD	20	<LOD	28	<LOD	39	235
148320002	Till	22	2	29	2	40	2	<LOD	3	<LOD	2	44	1	292	2	9	1	148	1	<LOD	4	<LOD	6	<LOD	58	<LOD	20	<LOD	27	<LOD	38	331
148320003	Till	18	2	19	2	37	1	<LOD	3	<LOD	2	49	1	328	2	9	1	138	1	<LOD	4	<LOD	6	<LOD	59	<LOD	20	18	5	26	8	363
148320004	Till	23	2	49	2	40	2	<LOD	3	<LOD	2	37	1	235	1	12	1	180	1	<LOD	4	4	1	<LOD	58	<LOD	20	20	5	<LOD	39	260
148320005	Till	23	2	23	2	39	2	<LOD	3	<LOD	2	43	1	311	2	9	1	136	1	<LOD	4	<LOD	6	<LOD	60	15	4	<LOD	29	<LOD	40	284
148320006	Till	21	2	39	2	41	2	<LOD	3	<LOD	2	39	1	265	2	7	1	109	1	<LOD	4	<LOD	6	<LOD	63	<LOD	21	<LOD	29	<LOD	41	261
148320007	Till	14	2	12	2	35	2	<LOD	4	<LOD	2	44	1	295	2	5	1	115	1	<LOD	5	3	1	<LOD	60	<LOD	22	<LOD	30	<LOD	43	265
148320008	Till	18	2	133	3	37	2	<LOD	3	<LOD	2	42	1	272	2	11	1	110	1	<LOD	4	<LOD	6	<LOD	58	<LOD	21	21	5	<LOD	41	293
148320009	Till	26	2	45	2	38	2	<LOD	3	<LOD	2	37	1	226	1	9	1	111	1	<LOD	4	4	1	<LOD	59	<LOD	20	<LOD	27	<LOD	38	255
148320010	Till	7	2	<LOD	8	32	1	<LOD	3	<LOD	2	41	1	226	1	6	1	138	1	<LOD	4	<LOD	6	<LOD	58	<LOD	20	<LOD	27	<LOD	38	262
148320011	Till	19	2	11	2	27	2	<LOD	3	<LOD	2	40	1	302	2	7	1	138	1	<LOD	4	<LOD	6	<LOD	58	<LOD	22	<LOD	30	<LOD	41	239
148320012	Till	22	2	15	2	34	2	<LOD	3	<LOD	2	45	1	306	1	6	1	117	1	<LOD	4	<LOD	6	<LOD	62	<LOD	21	<LOD	29	<LOD	40	269
148320013	Till	7	2	7	2	24	1	<LOD	3	<LOD	2	45	1	325	2	4	1	100	1	<LOD	4	<LOD	6	<LOD	60	<LOD	22	<LOD	30	<LOD	41	315
148320014	Till	20	2	11	2	28	1	<LOD	3	<LOD	2	41	1	281	2	5	1	92	1	<LOD	4	<LOD	6	<LOD	57	<LOD	21	<LOD	29	<LOD	40	271
148320015	Till	22	2	13	2	30	1	<LOD	3	<LOD	2	45	1	328	2	6	1	118	1	<LOD	4	<LOD	6	<LOD	61	<LOD	21	<LOD	29	<LOD	40	272
148320016	Till	17	2	11	2	29	2	<LOD	4	<LOD	2	36	1	288	2	8	1	110	1	<LOD	5	<LOD	6	<LOD	63	<LOD	22	<LOD	30	<LOD	41	195
148320017	Till	15	2	14	2	32	1	<LOD	3	<LOD	2	42	1	313	2	5	1	105	1	<LOD	4	<LOD	6	<LOD	58	<LOD	20	<LOD	28	<LOD	39	310
148320018	Till	13	2	9	2	25	1	<LOD	3	<LOD	2	42	1	304	2	8	1	106	1	<LOD	4	<LOD	6	<LOD	61	<LOD	21	18	5	<LOD	40	293
148320019	Till	14	2	12	2	28	2	<LOD	4	<LOD	2	43	1	318	2	6	1	101	1	<LOD	5	<LOD	6	<LOD	66	<LOD	23	<LOD	31	<LOD	43	231
148320020	Till	18	2	35	2	29	1	<LOD	3	<LOD	2	39	1	299	2	11	1	217	1	<LOD	4	<LOD	6	<LOD	55	<LOD	20	<LOD	28	<LOD	39	330
Standard	Oreas 25a	46	3	38	3	50	2	14	1	2	1	65	1	46	1	24	1	412	2	21	1	5	1	<LOD	74	<LOD	18	21	6	<LOD	35	142
Standard	Blanc quartz < 90 µm	<LOD	8	8	2	5	1	<LOD	3	<LOD	2	<LOD	2	<LOD	3	<LOD	4	3	1	<LOD	5	<LOD	6	<LOD	61	<LOD	23	<LOD	32	<LOD	44	28
148320021	Till	21	2	14	2	31	2	<LOD	4	<LOD	2	52	1	328	2	5	1	123	1	<LOD	4	<LOD	6	<LOD	59	<LOD	21	<LOD	29	<LOD	41	411
148320022	Till	20	2	13	2	33	2	<LOD	4	<LOD	2	44	1	323	2	5	1	142	1	<LOD	4	<LOD	6	<LOD	61	<LOD	22	<LOD	30	<LOD	42	269
148320023	Till	18	2	9	2	33	1	<LOD	3	<LOD	2	40	1	298	2	6	1	117	1	<LOD	4	<LOD	6	<LOD	65	<LOD	20	<LOD	28	<LOD	38	264
148320024	Till	17	2	9	2	30	2	<LOD	3	<LOD	2	42	1	294	2	6	1	116	1	<LOD	4	<LOD	6	<LOD	61	<LOD	21	<LOD	29	<LOD	41	274
148320025	Till	7	2	<LOD	8	21	1	<LOD	3	1	0	39	1	250	1	6	1	158	1	<LOD	4	<LOD	5	<LOD	54	<LOD	19	<LOD	27	<LOD	37	297
148320026	Till	20	2	9	2	29	1	<LOD	3	<LOD	2	42	1	319	2	5	1	114	1	<LOD	4	<LOD	6	<LOD	59	<LOD	21	<LOD	29	<LOD	41	277
148320027	Till	16	2	<LOD	9	28	1	<LOD	3	<LOD	2	42	1	318	2	6	1	119	1	<LOD	4	<LOD	6	<LOD	60	<LOD	21	<LOD	29	<LOD	40	238
148320028	Till	28	2	18	2	40	2	<LOD	4	<LOD	2	43	1	341	2	8	1	109	1	<LOD	4	<LOD	6	<LOD	65	<LOD	21	18	5	<LOD	40	249
148320029	Till	12	2	10	2	27	1	<LOD	3	<LOD	2	41	1	325	2	6	1	119	1	<LOD	4	<LOD	6	<LOD	62	<LOD	21	<LOD	29	<LOD	41	310
148320030	Till	28	2	16	2	47	2	<LOD	3	<LOD	2	38	1	231	1	7	1	112	1	<LOD	4	<LOD	5	<LOD	53	<LOD	19	<LOD	26	<LOD	37	300
148320031	Till	17	2	12	2	29	1	<LOD	3	<LOD	2	43	1	389	2	6	1	190	1	<LOD	4	<LOD	6	<LOD	60	<LOD	21	17	5	<LOD	41	475
148320032	Till	17	2	11	2	34	2	<LOD	4	<LOD	3	48	1	346	2	6	1	127	1	<LOD	5	<LOD	6	<LOD	64	<LOD	23	<LOD	31	<LOD	43	272
148320033	Till	17	2	12	2	30	2	<LOD	3	<LOD	2	41	1	331	2	6	1	120	1	<LOD	4	<LOD	6	<LOD	59	<LOD	21	<LOD	28	<LOD	40	258
148320034	Till	13	2	11	2	30	1	<LOD	3	<LOD	2	43	1	361	2	5	1	123	1	<LOD	4	<LOD	6	<LOD	58	<LOD	21	<LOD	28	<LOD	40	456
148320035	Till	16	2	13	2	31	2	<LOD	4	<LOD	2	42	1	347	2	6	1	94	1	<LOD	5	<LOD	6	<LOD	62	<LOD	22	<LOD	30	<LOD	43	261
148320036	Till	10	2	13	2	30	1	<LOD	3	<LOD	2	40	1	364	2	5	1	166	1	<LOD	4	6	1	<LOD	61	<LOD	21	<LOD	29	<LOD	40	272
148320037	Till	26	2	12	2	30	1	<LOD	3	<LOD	2	46	1	329	2	8	1	108	1	<LOD	4	<LOD	5	<LOD	55	<LOD	19	18	5	<LOD	37	377
148320038	Till	23	2	16	2	34	2	<LOD	4	<LOD	2	41	1	372	2	6	1	130	1	<LOD	5	<LOD	6	<LOD	61	<LOD	22	20	6	<LOD	43	278
148320039	Till	23	2	9	2	35	2	<LOD	4	<LOD	2	44	1	292	2	8	1	200	1	<LOD	5	<LOD	7	<LOD	64	<LOD	23	<LOD	32	<LOD	44	308
Standard	Blanc quartz < 90 µm	<LOD	8	6	2	6	1	<LOD	3	<LOD	2	<LOD	2	<LOD	3	<LOD	4	4	1	<LOD	5	<LOD	6	<LOD	60	<LOD	23	<LOD	31	<LOD	44	<LOD
Standard	Oreas 25a	57	3	44	3	54	2	11	1	<LOD	2	64	1	45	1	26	1	398	2	20	1	6	1	<LOD	80	<LOD	18	<LOD	25	<LOD	35	112
148320040	Till	14	2	14	2	25	2	<LOD	3	<LOD	2	48	1	329	2	3	1	94	1	<LOD	4	<LOD	6	<LOD	59	<LOD	22	<LOD	30	<LOD	41	281
148320041	Till	9	2	8	2	26	1	<LOD	3	<LOD	2	41	1	257	1	6	1	172	1	<LOD	4	<LOD	5	<LOD	58	<LOD	19	<LOD	25	<LOD	35	263
148320042	Till	13	2	<LOD	9	27	2	<LOD	4	<LOD	2	45	1	296	2	6	1	155	1	<LOD	5	<LOD	6	<LOD	62	<LOD	23	<LOD	31	<LOD	43	246
148320043	Till	22	2	<LOD	9	26	2	<LOD	4	<LOD	2	40	1	307	2	6	1	135	1	<LOD	5	<LOD	6	<LOD	63	<LOD	22	<LOD	30	<LOD	42	260
148320044	Till	18	2	10	2	29	1	<LOD	3	<LOD	2	42	1	286	1	5	1	124	1	<LOD	4	<LOD	6	<LOD	57	<LOD	20	<LOD	27	<LOD	38	320
148320045	Till	29	2	14	2	35	2	<LOD	3	<LOD	2	44	1	292	2	4	1	126	1	<LOD	4	<LOD	6	<LOD	63	<LOD	21	<LOD	29	<LOD	40	303
148320046	Till	16	2	10	2	27	1	<LOD	3	<LOD	2	47	1	324	2	6	1	103	1	<LOD	4	<LOD	6	<LOD	59	<LOD	21	<LOD	29	<LOD	41	293
148320047	Till	10	2	11	2	27	2	<LOD	4	<LOD	2	41	1	311	2	5	1	96	1	<LOD	5	<LOD	7	<LOD	65	<LOD	23	<LOD	32	<LOD	44	239
148320048	Till	21	2	19	2	39	2	<LOD	3	<LOD	2	45	1	293	2	7	1	132	1	<LOD	4	<LOD	6	<LOD	62	<LOD	21	<LOD	29	<LOD	40	267
148320049	Till	28	2	16	2	33	2	<LOD	3	<LOD	2	41	1	286	2	9	1	140	1	<LOD	4	<LOD	6	<LOD	58	<LOD	21	17	5	<LOD	40	259
148320050	Till	16	2	11	2	32	1	2	1	<LOD	2	35	1	233	1	5	1	137	1	<LOD	4	<LOD	5	<LOD	57	<LOD	19	<LOD	26	<LOD	36	230
148320051	Till	15	2	13	2	29	1	<LOD	3	<LOD	2	47	1	287	2	6	1	84	1	<LOD	4	<LOD	6	<LOD	59	<LOD	22	<LOD	30	<LOD	42	266
148320052	Till	29	2	18	2	31	1	<LOD	3	<LOD	2	42	1	266	1	4	1	42	1	<LOD	4	3	1	<LOD	56	<LOD	20	<LOD	28	<LOD	39	322
148320053	Till	17	2	13	2	28	1	<LOD	3	<LOD	2	38	1	291	2	6	1	120	1	<LOD	4	<LOD	6	<LOD	55	<LOD	20	<LOD	28	<LOD	39	299
148320054	Till	18	2	16	2	31	1	<LOD	3	<LOD	2	46	1	324	2	5	1	128	1	<LOD	4	<LOD	6	<LOD	58	<LOD	20	<LOD	28	<LOD	39	335
148320055	Till	86	3	327	4	57	2	4	1	<LOD	2	44	1	212	1	16	1	63	1	<LOD	4	<LOD	5	<LOD	56	<LOD	19	<LOD	26	<LOD	36	388
148320056	Till	20	2	16	2	30	2	<LOD	3	<LOD	2	44	1	325	2	8	1	143	1	<LOD	4	<LOD	6	<LOD	59	<LOD	21	<LOD	29	<LOD	40	312
148320057	Till	17	2	<LOD	9	32	1	<LOD	3	<LOD	2	44	1	306	2	5	1	133	1	<LOD	4	3	1	<LOD	59	<LOD	21	<LOD	28	<LOD	40	306
148320058	Till	32	2	13	2	32	2	<LOD	3	<LOD	2	39	1	267	2	9	1	137	1	<LOD	4	<LOD	6	<LOD	58	<LOD	21	<LOD	29	<LOD	40	275
148320059	Till	15	2	8	2	25	1	<LOD	3	<LOD	2	48	1	322	2	5	1	116	1	<LOD	4	<LOD	6	<LOD	61	<LOD	21	<LOD	29	<LOD	40	280
Standard	Oreas 25a	53	3	42	3	52	2	11	1	<LOD	3	63	1	44	1	24	1	401	2	19	1	5	1	<LOD	78	<LOD	19	<LOD	26	<LOD	37	106
Calibration	Calibration																															
Standard	BlanK Vanta	<LOD	7	<LOD	8	<LOD	6	<LOD	3	<LOD	2	<LOD	2	<LOD	2	<LOD	3	3	1	<LOD	4	<LOD	6	<LOD	53	<LOD	22	<LOD	30	<LOD	42	<LOD
148320060	Till	16	2	10	2	27	1	<LOD	3	<LOD	2	47	1	284	2	6	1	100	1	<LOD	4	<LOD	5	<LOD	57	<LOD	20	<LOD	27	<LOD	37	341
148320061	Till	7	2	14	2	24	1	<LOD	3	<LOD	2	37	1	268	1	5	1	89	1	<LOD	4	<LOD	5	2	1	<LOD	20	<LOD	27	24	8	253
148320062	Till	25	2	31	2	44	2	<LOD	3	<LOD	2	43	1	298	2	10	1	143	1	<LOD	4	<LOD	6	<LOD	59	<LOD	20	<LOD	27	<LOD	38	329
148320063	Till	28	2	38	2	54	2	<LOD	3	<LOD	2	44	1	292	2	9	1	150	1	<LOD	4	<LOD	6	<LOD	60	<LOD	20	16	5	<LOD	39	282
148320064	Till	12	2	22	2	44	2	<LOD	3	<LOD	2	39	1	287	2	6	1	121	1	<LOD	4	3	1	<LOD	55	<LOD	20	<LOD	27	<LOD	38	294
148320065	Till	13	2	21	2	43	2	<LOD	3	<LOD	2	36	1	273	2	7	1	109	1	<LOD	4	<LOD	6	2	1	<LOD	20	<LOD	28	<LOD	39	248
148320066	Till	14	2	26	2	41	1	<LOD	3	<LOD	2	35	1	264	1	6	1	96	1	<LOD	4	<LOD	5	<LOD	56	<LOD	19	<LOD	26	<LOD	37	271

Sample Échantillon	Content Contient	Ba ppm	Ba Error1s ppm	La ppm	La Error1s ppm	Ce ppm	Ce Error1s ppm	Pr ppm	Pr Error1s ppm	Nd ppm	Nd Error1s ppm	W ppm	W Error1s ppm	Hg ppm	Hg Error1s ppm	Pb ppm	Pb Error1s ppm	Bi ppm	Bi Error1s ppm	Th ppm	Th Error1s ppm	U ppm	U Error1s ppm	LE ppm	LE Error1s ppm
Calibration	Calibration																								
Standard	BlanK Vanta	784	<LOD	1472	<LOD	1628	<LOD	2276	<LOD	3324	<LOD	11	<LOD	8	<LOD	4	<LOD	30	6	2	3	1	517604	487
Standard	Blanc quartz < 90 µm	854	<LOD	1604	<LOD	1760	<LOD	2447	<LOD	3554	<LOD	11	<LOD	8	<LOD	4	<LOD	32	12	2	5	1	711128	475
Standard	Oreas 25a	11	<LOD	1940	<LOD	2148	<LOD	2983	<LOD	4378	<LOD	11	5	1	26	1	<LOD	29	27	3	4	1	740433	485
148320001	Till	8	<LOD	1616	<LOD	1782	<LOD	2479	<LOD	3643	<LOD	11	<LOD	8	9	1	<LOD	30	<LOD	11	3	1	940352	259
148320002	Till	9	48	16	<LOD	1746	<LOD	2422	127	40	<LOD	11	<LOD	7	8	1	<LOD	29	<LOD	10	<LOD	6	927900	1336
148320003	Till	9	<LOD	1583	<LOD	1748	<LOD	2449	<LOD	3590	<LOD	11	<LOD	7	10	1	<LOD	30	<LOD	11	<LOD	7	933997	263
148320004	Till	8	<LOD	1568	<LOD	1732	<LOD	2411	<LOD	3537	<LOD	11	<LOD	7	9	1	<LOD	31	15	2	5	1	941582	1541
148320005	Till	9	<LOD	1615	<LOD	1784	<LOD	2480	<LOD	3665	<LOD	11	<LOD	8	10	1	<LOD	31	9	2	4	1	925521	1470
148320006	Till	8	<LOD	1641	<LOD	1813	<LOD	2536	<LOD	3734	<LOD	12	<LOD	8	7	1	<LOD	32	12	2	4	1	933673	1564
148320007	Till	8	<LOD	1603	<LOD	1772	<LOD	2476	<LOD	3636	<LOD	12	<LOD	8	10	1	<LOD	33	17	2	5	1	944892	1785
148320008	Till	9	<LOD	1563	<LOD	1734	<LOD	2438	<LOD	3588	<LOD	11	<LOD	8	10	1	<LOD	32	12	2	4	1	938627	1515
148320009	Till	8	<LOD	1582	55	17	<LOD	2453	<LOD	3605	<LOD	10	<LOD	7	8	1	<LOD	30	10	2	4	1	943571	245
148320010	Till	8	<LOD	1557	<LOD	1710	85	23	<LOD	3485	<LOD	11	<LOD	7	6	1	<LOD	30	6	2	4	1	943202	1440
148320011	Till	8	<LOD	1634	<LOD	1809	<LOD	2534	<LOD	3701	<LOD	12	<LOD	8	8	1	<LOD	32	12	2	5	1	934767	1557
148320012	Till	8	<LOD	1636	<LOD	1816	<LOD	2523	<LOD	3697	<LOD	11	<LOD	8	10	1	<LOD	31	11	2	3	1	938602	266
148320013	Till	8	48	14	<LOD	1761	<LOD	2457	<LOD	3626	<LOD	11	<LOD	8	9	1	<LOD	32	8	2	3	1	941370	282
148320014	Till	8	47	14	<LOD	1756	<LOD	2445	<LOD	3593	<LOD	11	<LOD	8	8	1	<LOD	31	8	2	3	1	937751	1482
148320015	Till	9	<LOD	1618	68	17	<LOD	2492	<LOD	3658	<LOD	11	<LOD	8	8	1	<LOD	32	12	2	4	1	937672	271
148320016	Till	8	<LOD	1718	<LOD	1906	<LOD	2667	<LOD	3930	<LOD	12	<LOD	8	8	1	<LOD	33	15	2	7	1	940190	281
148320017	Till	9	<LOD	1563	<LOD	1731	<LOD	2412	115	38	<LOD	11	<LOD	8	9	1	<LOD	31	7	2	4	1	935914	1383
148320018	Till	8	<LOD	1586	59	16	<LOD	2475	<LOD	3638	<LOD	11	<LOD	8	8	1	<LOD	32	11	2	3	1	934979	1463
148320019	Till	8	<LOD	1649	<LOD	1819	<LOD	2536	<LOD	3714	<LOD	12	<LOD	9	9	1	<LOD	34	16	2	6	1	947323	282
148320020	Till	9	<LOD	1479	68	18	<LOD	2274	<LOD	3378	<LOD	10	<LOD	7	9	1	<LOD	30	7	2	<LOD	7	930670	1252
Standard	Oreas 25a	11	71	21	80	23	102	33	<LOD	4349	<LOD	11	<LOD	8	22	1	<LOD	28	19	2	4	1	738898	474
Standard	Blanc quartz < 90 µm	9	<LOD	1615	<LOD	1781	<LOD	2468	<LOD	3608	<LOD	12	<LOD	8	<LOD	4	<LOD	32	14	2	4	1	715701	473
148320021	Till	9	<LOD	1598	<LOD	1779	<LOD	2480	<LOD	3630	<LOD	11	<LOD	8	10	1	<LOD	32	12	2	3	1	929069	1417
148320022	Till	8	<LOD	1665	<LOD	1842	<LOD	2570	<LOD	3768	<LOD	12	<LOD	8	10	1	<LOD	33	13	2	3	1	927691	296
148320023	Till	8	<LOD	1634	<LOD	1811	<LOD	2539	<LOD	3739	<LOD	11	<LOD	8	8	1	<LOD	31	6	2	5	1	936864	1386
148320024	Till	8	<LOD	1619	<LOD	1792	<LOD	2503	<LOD	3664	<LOD	11	<LOD	8	9	1	<LOD	32	11	2	5	1	936578	1467
148320025	Till	9	<LOD	1478	<LOD	1629	<LOD	2273	<LOD	3325	<LOD	10	<LOD	7	7	1	<LOD	29	<LOD	10	3	1	940403	253
148320026	Till	8	<LOD	1590	<LOD	1751	<LOD	2440	<LOD	3578	<LOD	11	<LOD	8	9	1	<LOD	32	9	2	5	1	932306	1413
148320027	Till	8	<LOD	1602	<LOD	1771	<LOD	2471	136	37	<LOD	11	<LOD	8	9	1	<LOD	31	8	2	3	1	939166	268
148320028	Till	8	<LOD	1723	56	17	<LOD	2695	<LOD	4000	<LOD	11	<LOD	8	11	1	<LOD	32	10	2	4	1	928528	1374
148320029	Till	8	<LOD	1624	<LOD	1785	<LOD	2510	<LOD	3702	<LOD	11	<LOD	8	8	1	<LOD	32	10	2	3	1	931701	1401
148320030	Till	9	<LOD	1449	<LOD	1618	<LOD	2257	<LOD	3308	<LOD	10	<LOD	7	15	1	<LOD	28	<LOD	10	<LOD	6	943231	1185
148320031	Till	9	<LOD	1602	<LOD	1775	<LOD	2478	<LOD	3652	<LOD	11	<LOD	8	9	1	<LOD	33	14	2	4	1	939458	266
148320032	Till	8	43	14	58	16	<LOD	2638	<LOD	3879	<LOD	12	<LOD	9	11	1	<LOD	35	19	2	6	1	928172	1565
148320033	Till	8	<LOD	1618	59	17	74	24	<LOD	3674	<LOD	12	<LOD	8	8	1	<LOD	32	10	2	3	1	935190	1357
148320034	Till	9	<LOD	1546	<LOD	1713	<LOD	2390	<LOD	3526	<LOD	11	<LOD	8	9	1	<LOD	31	8	2	3	1	931925	1351
148320035	Till	8	<LOD	1618	53	16	71	23	<LOD	3658	<LOD	11	<LOD	8	10	1	<LOD	33	15	2	4	1	933477	1551
148320036	Till	8	<LOD	1615	<LOD	1796	<LOD	2522	<LOD	3704	<LOD	12	<LOD	8	9	1	<LOD	32	16	2	4	1	940805	251
148320037	Till	9	<LOD	1522	<LOD	1685	<LOD	2346	<LOD	3454	<LOD	10	<LOD	7	7	1	<LOD	29	<LOD	10	<LOD	6	933141	1166
148320038	Till	8	49	14	76	16	<LOD	2536	<LOD	3744	<LOD	12	<LOD	8	10	1	<LOD	34	21	2	5	1	940664	275
148320039	Till	8	65	14	57	16	<LOD	2580	<LOD	3802	<LOD	12	<LOD	8	12	1	<LOD	35	22	2	5	1	939249	284
Standard	Blanc quartz < 90 µm	840	<LOD	1569	<LOD	1737	<LOD	2409	<LOD	3504	<LOD	11	<LOD	8	<LOD	4	<LOD	31	10	2	4	1	711016	468
Standard	Oreas 25a	11	<LOD	1971	90	23	<LOD	3036	<LOD	4437	<LOD	11	<LOD	8	25	1	<LOD	29	28	3	5	1	743840	472
148320040	Till	8	<LOD	1603	<LOD	1782	<LOD	2495	<LOD	3655	<LOD	11	<LOD	8	10	1	<LOD	32	14	2	4	1	936161	1438
148320041	Till	8	<LOD	1518	<LOD	1684	<LOD	2348	<LOD	3465	<LOD	10	<LOD	7	8	1	<LOD	28	<LOD	10	<LOD	6	948740	226
148320042	Till	8	<LOD	1634	<LOD	1805	<LOD	2516	<LOD	3710	<LOD	12	<LOD	8	10	1	<LOD	34	20	2	4	1	939652	287
148320043	Till	8	<LOD	1658	<LOD	1836	<LOD	2566	<LOD	3737	<LOD	12	<LOD	8	8	1	<LOD	33	15	2	3	1	943926	273
148320044	Till	8	50	14	<LOD	1716	<LOD	2397	<LOD	3517	<LOD	11	<LOD	7	9	1	<LOD	30	10	2	3	1	938723	260
148320045	Till	8	46	14	<LOD	1844	<LOD	2574	<LOD	3795	<LOD	11	<LOD	8	8	1	<LOD	32	16	2	4	1	935635	1386
148320046	Till	8	<LOD	1587	51	16	<LOD	2461	<LOD	3610	<LOD	11	<LOD	8	9	1	<LOD	32	10	2	4	1	939578	268
148320047	Till	8	<LOD	1686	<LOD	1868	<LOD	2620	<LOD	3822	<LOD	12	<LOD	9	10	1	<LOD	35	22	2	6	1	930817	1632
148320048	Till	9	<LOD	1626	<LOD	1813	<LOD	2524	<LOD	3713	<LOD	11	<LOD	8	10	1	<LOD	31	12	2	<LOD	7	918864	1302
148320049	Till	9	<LOD	1575	<LOD	1751	<LOD	2449	<LOD	3602	<LOD	11	<LOD	8	10	1	<LOD	31	11	2	5	1	926482	1336
148320050	Till	8	<LOD	1554	<LOD	1719	<LOD	2387	<LOD	3511	<LOD	10	<LOD	7	10	1	<LOD	29	8	2	4	1	942590	1229
148320051	Till	8	<LOD	1571	<LOD	1740	<LOD	2434	<LOD	3561	<LOD	11	<LOD	8	8	1	<LOD	32	13	2	6	1	947568	1582
148320052	Till	9	<LOD	1532	77	18	<LOD	2395	<LOD	3508	<LOD	11	<LOD	7	10	1	<LOD	30	15	2	4	1	945776	250
148320053	Till	9	<LOD	1510	<LOD	1677	<LOD	2340	129	39	<LOD	10	<LOD	7	7	1	<LOD	30	<LOD	11	4	1	936056	1297
148320054	Till	9	47	15	<LOD	1720	<LOD	2391	<LOD	3501	<LOD	11	<LOD	8	12	1	<LOD	31	6	2	3	1	932237	1277
148320055	Till	10	<LOD	1525	76	19	<LOD	2375	<LOD	3498	<LOD	10	<LOD	7	8	1	<LOD	28	<LOD	10	5	1	933024	1139
148320056	Till	9	51	15	<LOD	1763	<LOD	2465	<LOD	3642	<LOD	11	<LOD	8	8	1	<LOD	32	11	2	<LOD	7	934910	266
148320057	Till	9	<LOD	1577	<LOD	1740	<LOD	2420	<LOD	3553	<LOD	11	<LOD	7	9	1	<LOD	31	8	2	<LOD	7	938192	1354
148320058	Till	9	<LOD	1595	<LOD	1773	<LOD	2478	<LOD	3624	<LOD	11	<LOD	8	7	1	<LOD	31	8	2	3	1	934389	1343
148320059	Till	8	<LOD	1621	<LOD	1799	<LOD	2507	<LOD	3697	<LOD	11	<LOD	8	10	1	<LOD	32	10	2	4	1	930863	1365
Standard	Oreas 25a	11	<LOD	2001	<LOD	2223	<LOD	3080	<LOD	4511	<LOD	12	6	2	25	1	<LOD	30	31	3	6	1	755389	479
Calibration	Calibration																								
Standard	BlanK Vanta	780	<LOD	1465	<LOD	1622	<LOD	2260	281	58	<LOD	11	<LOD	7	<LOD	3	<LOD	29	7	2	<LOD	6	508462	473
148320060	Till	9	<LOD	1500	<LOD	1659	<LOD	2316	<LOD	3417	<LOD	10	<LOD	7	7	1	<LOD	29	<LOD	10	<LOD	6	936180	1544
148320061	Till	8	<LOD	1486	<LOD	1643	<LOD	2300	<LOD	3375	<LOD	10	<LOD	7	7	1	<LOD	29	<LOD	10	3	1	946998	1594
148320062	Till	9	<LOD	1619	70	17	<LOD	2512	<LOD	3704	<LOD	11	<LOD	7	8	1	<LOD	30	6	2	3	1	930279	1514
148320063	Till	8	<LOD	1615	<LOD	1789	<LOD	2507	<LOD	3672	<LOD	11	<LOD	7	10	1	<LOD	31	10	2	<LOD	7	934973	1623
148320064	Till	9	<LOD	1516	<LOD	1685	<LOD	2345	<LOD	3465	<LOD	10	<LOD	7	8	1	<LOD	29	<LOD	10	3	1	941732	1553
148320065	Till	8	<LOD	1589	<LOD	1765	<LOD	2460	<LOD	3620	<LOD	11	<LOD	7	6	1	<LOD	30	<LOD	11	4	1	944716	1637
148320066	Till	9	<LOD	1530	<LOD	1702	<LOD	2373	<LOD	3497	<LOD	10	<LOD	7	8	1	<LOD	29	<LOD	10	<LOD	6	947186	1522

Sample Échantillon	Content Contient	Date Date	Element/Élément Unit/Unité Duration (sec) Durée (sec)	# Analyse/ Analysis #	Mg ppm	Mg Error1s ppm	Al ppm	Al Error1s ppm	Si ppm	Si Error1s ppm	P ppm	P Error1s ppm	S ppm	S Error1s ppm	K ppm	K Error1s ppm	Ca ppm	Ca Error1s ppm	Ti ppm	Ti Error1s ppm	V ppm	V Error1s ppm	Cr ppm	Cr Error1s ppm	Mn ppm	Mn Error1s ppm	Fe ppm	Fe Error1s ppm	Co ppm	Co Error1s ppm
148320067	Till	2021-11-24	90	10	9358	1403	3800	190	14027	115	310	14	<LOD	1325	5458	30	5412	26	1431	57	46	15	<LOD	36	164	7	10932	46	63	8
148320068	Till	2021-11-24	90	11	6052	1605	4023	213	18273	143	303	16	<LOD	1305	5630	34	7398	36	1330	62	<LOD	81	<LOD	42	299	9	15559	69	55	11
148320069	Till	2021-11-24	90	12	7198	1604	3985	214	19964	151	383	17	<LOD	1361	5726	34	6206	31	1455	63	<LOD	78	<LOD	40	247	9	12383	57	32	10
148320070	Till	2021-11-24	90	13	<LOD	42411	3151	253	15612	149	339	21	<LOD	1877	5388	36	6886	33	1857	75	<LOD	101	<LOD	52	368	11	19857	76	137	14
148320071	Till	2021-11-24	90	14	8342	1520	3763	205	19774	145	358	16	<LOD	1336	5702	33	5928	30	1492	63	<LOD	76	<LOD	39	142	8	11400	51	38	9
148320072	Till	2021-11-24	90	15	7273	1731	3742	223	18529	151	307	17	<LOD	1476	6106	37	6174	33	1364	66	<LOD	83	<LOD	43	243	9	13316	63	50	10
Standard	Blanc quartz < 90 µm	2021-11-24	90	16	<LOD	5818	<LOD	1086	280724	459	2907	33	<LOD	247	<LOD	323	1277	15	<LOD	310	<LOD	65	<LOD	36	84	8	1106	13	<LOD	19

Sample Échantillon	Content Contient	Ni ppm	Ni Error1s ppm	Cu ppm	Cu Error1s ppm	Zn ppm	Zn Error1s ppm	As ppm	As Error1s ppm	Se ppm	Se Error1s ppm	Rb ppm	Rb Error1s ppm	Sr ppm	Sr Error1s ppm	Y ppm	Y Error1s ppm	Zr ppm	Zr Error1s ppm	Nb ppm	Nb Error1s ppm	Mo ppm	Mo Error1s ppm	Ag ppm	Ag Error1s ppm	Cd ppm	Cd Error1s ppm	Sn ppm	Sn Error1s ppm	Sb ppm	Sb Error1s ppm	Ba ppm
148320067	Till	11	2	19	2	41	1	<LOD	3	<LOD	2	36	1	208	1	6	1	204	1	<LOD	4	<LOD	5	<LOD	55	<LOD	18	<LOD	25	<LOD	34	253
148320068	Till	18	2	50	2	48	2	<LOD	3	<LOD	2	41	1	293	2	11	1	117	1	<LOD	4	4	1	<LOD	60	<LOD	20	<LOD	28	<LOD	39	288
148320069	Till	13	2	7	2	40	2	<LOD	3	<LOD	2	40	1	293	2	7	1	139	1	<LOD	4	<LOD	6	<LOD	58	<LOD	20	<LOD	28	<LOD	38	257
148320070	Till	26	2	38	3	84	2	<LOD	4	<LOD	3	41	1	263	2	9	1	124	1	<LOD	5	7	1	<LOD	69	<LOD	24	<LOD	32	<LOD	45	162
148320071	Till	11	2	12	2	44	2	<LOD	3	<LOD	2	40	1	296	2	6	1	109	1	<LOD	4	<LOD	5	<LOD	58	<LOD	20	<LOD	27	<LOD	38	279
148320072	Till	15	2	23	2	49	2	<LOD	3	<LOD	2	44	1	290	2	8	1	124	1	<LOD	4	<LOD	6	<LOD	62	<LOD	21	<LOD	29	<LOD	40	226
Standard	Blanc quartz < 90 µm	<LOD	8	6	2	7	1	<LOD	3	<LOD	2	<LOD	2	<LOD	3	<LOD	4	3	1	<LOD	4	<LOD	6	<LOD	58	<LOD	22	15	5	<LOD	42	<LOD

Sample Échantillon	Content Contient	Ba ppm	Error1s ppm	La ppm	La Error1s ppm	Ce ppm	Ce Error1s ppm	Pr ppm	Pr Error1s ppm	Nd ppm	Nd Error1s ppm	W ppm	W Error1s ppm	Hg ppm	Hg Error1s ppm	Pb ppm	Pb Error1s ppm	Bi ppm	Bi Error1s ppm	Th ppm	Th Error1s ppm	U ppm	U Error1s ppm	LE ppm	LE Error1s ppm
148320067	Till	8	<LOD	1469	63	17	<LOD	2281	<LOD	3353	<LOD	9	<LOD	6	6	1	<LOD	27	<LOD	9	<LOD	6	948152	1364
148320068	Till	9	51	15	<LOD	1802	<LOD	2535	<LOD	3731	<LOD	11	<LOD	7	9	1	<LOD	30	<LOD	11	4	1	940144	1543
148320069	Till	8	<LOD	1608	<LOD	1776	<LOD	2481	<LOD	3624	<LOD	11	<LOD	7	8	1	<LOD	30	<LOD	11	3	1	941613	1546
148320070	Till	7	<LOD	1921	<LOD	2114	<LOD	2955	<LOD	4341	<LOD	14	<LOD	9	11	1	<LOD	37	31	3	7	1	945603	303
148320071	Till	8	<LOD	1555	<LOD	1734	<LOD	2432	<LOD	3571	<LOD	11	<LOD	7	6	1	<LOD	29	<LOD	10	5	1	942254	1469
148320072	Till	8	<LOD	1646	<LOD	1820	<LOD	2535	<LOD	3711	<LOD	11	<LOD	8	9	1	<LOD	32	14	2	3	1	942091	1668
Standard	Blanc quartz < 90 µm	826	<LOD	1547	<LOD	1704	92	28	<LOD	3448	<LOD	11	<LOD	8	<LOD	4	<LOD	30	11	2	2	1	713766	458