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Makada Property:  
2019 Update  
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## 1.0 Summary of Previous Work

This brief report describes follow-on work to Adam Coulter's 2014 property report that was overseen by Dr. Gordon Osinski with assistance from Thomas Baechler, Eric Pilles, and Peter Christoffersen all from the University of Western Ontario. This work was conducted in the Waters Township with the property accessed off of Clark Road via Black Lake Road and Old Highway 17. Previous work began in 2007 with the first identification of possible Quartz Diorite (QD) by Walter Peredery based on field observations and thin section analysis. Cecil Johnson and Rob Foy did four days of field investigation into the potential QD phase. In 2014 Adam Coulter prepped three samples for thin section to be made, and powdered and sent six samples to ALS laboratories for a full geochemical analysis. The most recent investigation was in 2016 and 2017, when Dr. Gordon Osinski collected additional samples.

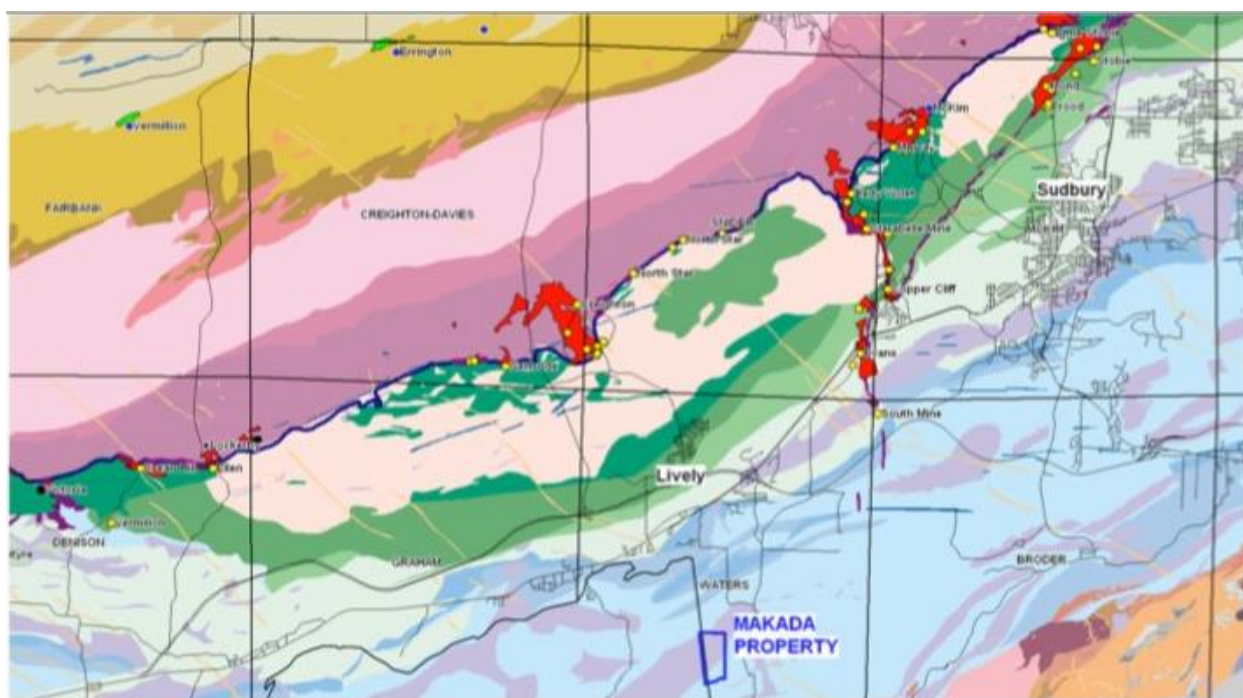


Figure 1: Location of the Makada Property, ~9km south of the Main Mass of the Sudbury Igneous Complex (SIC)

## 2.0 Regional and Local Geologic Setting

The Makada Property is located in the Water Township south of the Sudbury Igneous Complex the remains of a 1.8 Gya old impact crater that has been subsequently experienced several metamorphic events.

## 3.0 Sampling and Field Observations

Additional samples were collected in 2016 and 2017 by students from The University of Western Ontario. From these samples, a subset were selected for thin sectioning and geochemical analyses.

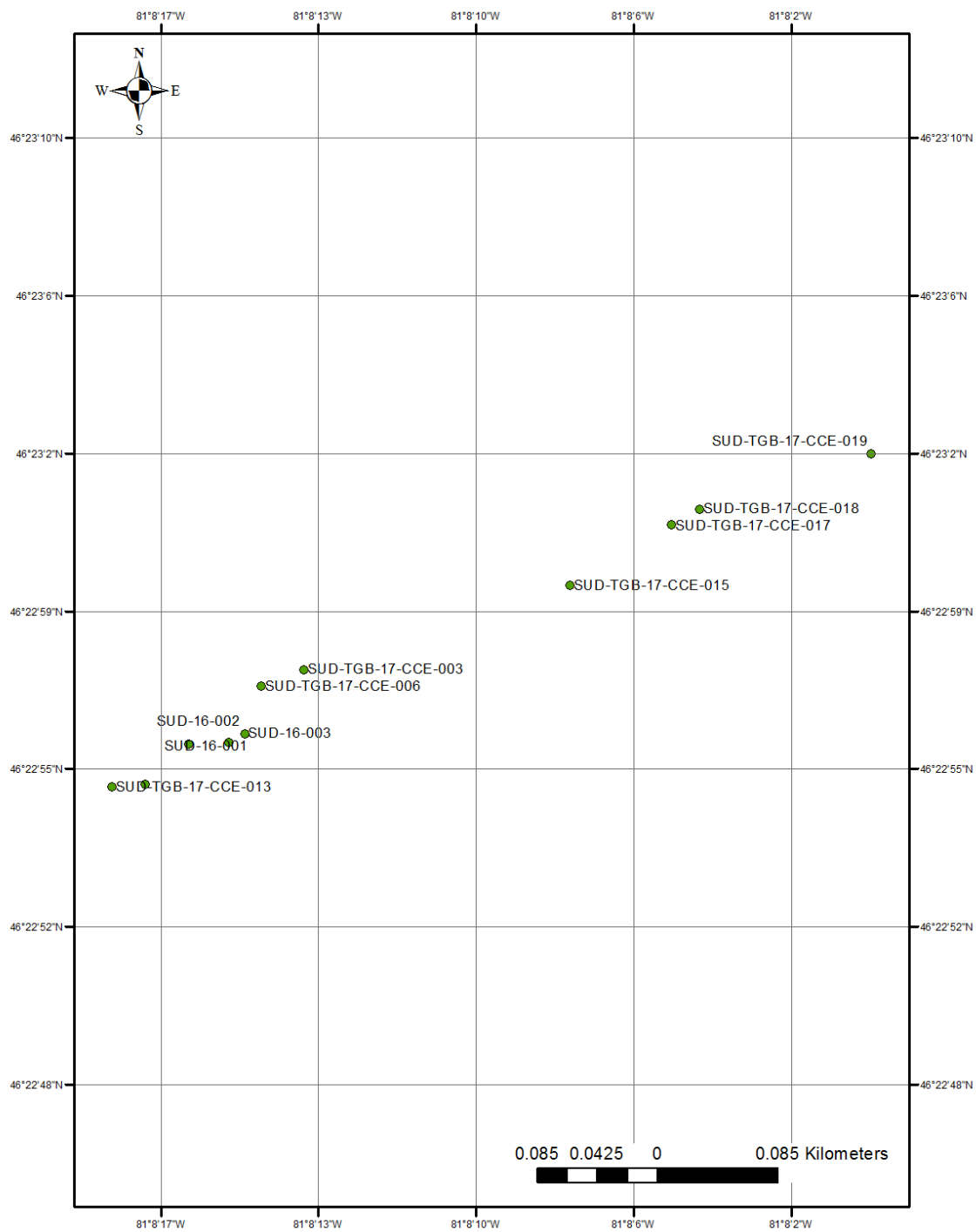


Figure 2: Map showing location of samples collected in 2016 and 2017

Sample ID	Easting	Northing	Sample Type	Location
SUD-TGB-17-CCE-003	489458	5136571	Field Sample	Makeda Property
SUD-TGB-17-CCE-006	489437	489437	Field Sample	Makeda Property
SUD-TGB-17-CCE-007	489421	5136520	Field Sample	Makeda Property
SUD-TGB-17-CCE-007-DUP	489421	5136520	QA/QC	Makeda Property
SUD-TGB-17-CCE-008	489402	5136518	Field Sample	Makeda Property
SUD-TGB-17-CCE-008-DUP	489402	5136518	QA/QC	Makeda Property
SUD-TGB-17-CCE-011	489380	5136491	Field Sample	Makeda Property
SUD-TGB-17-CCE-013	489364	5136488	Field Sample	Makeda Property
SUD-TGB-17-CCE-015	489588	5136630	Field Sample	Makeda Property
SUD-TGB-17-CCE-017	489637	5136672	Field Sample	Makeda Property
SUD-TGB-17-CCE-018	489651	5136684	Field Sample	Makeda Property
SUD-TGB-17-CCE-019	489735	5136723	Field Sample	Makeda Property
SUD-16-001	489429	5136526	Grab Sample	Makeda Property
SUD-16-002	489429	5136526	Grab Sample	Makeda Property
SUD-16-003	489429	5136526	Grab Sample	Makeda Property
SUD-16-004	489429	5136526	Grab Sample	Makeda Property

Table 1: List of samples collected from fieldwork in 2017 and 2016 on the property. All UTM coordinates are NAD83 datum. Samples SUD-TGB-17-CCE-007 and 008 had duplicates submitted for geochemical assay.

## 4.0 Geochemistry and Petrology

A total of sixteen samples from the Makada Property have been geochemically analyzed in this report. Samples were crushed and pulverized before dissolution and analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS) and X-ray Fluorescence (XRF) methods. Sample preparation and analysis were carried out by ALS Sudbury.

A large majority of samples do not show any similarity to other samples of QD collected from Offset Dikes. However, three samples SUD-OZ-003, 004, and SUD-TGB-17-CCE-006 shows similarity in their REE-profile (Fig. 2), their Yb to Ce ratios (Fig. 3), and amount of light and heavy rare earth fractionation (Fig. 4). Geochemically, these three samples are similar to the QD of the Sudbury offset dikes. The sample OZ-16-003 was further investigated under a petrographic microscope.



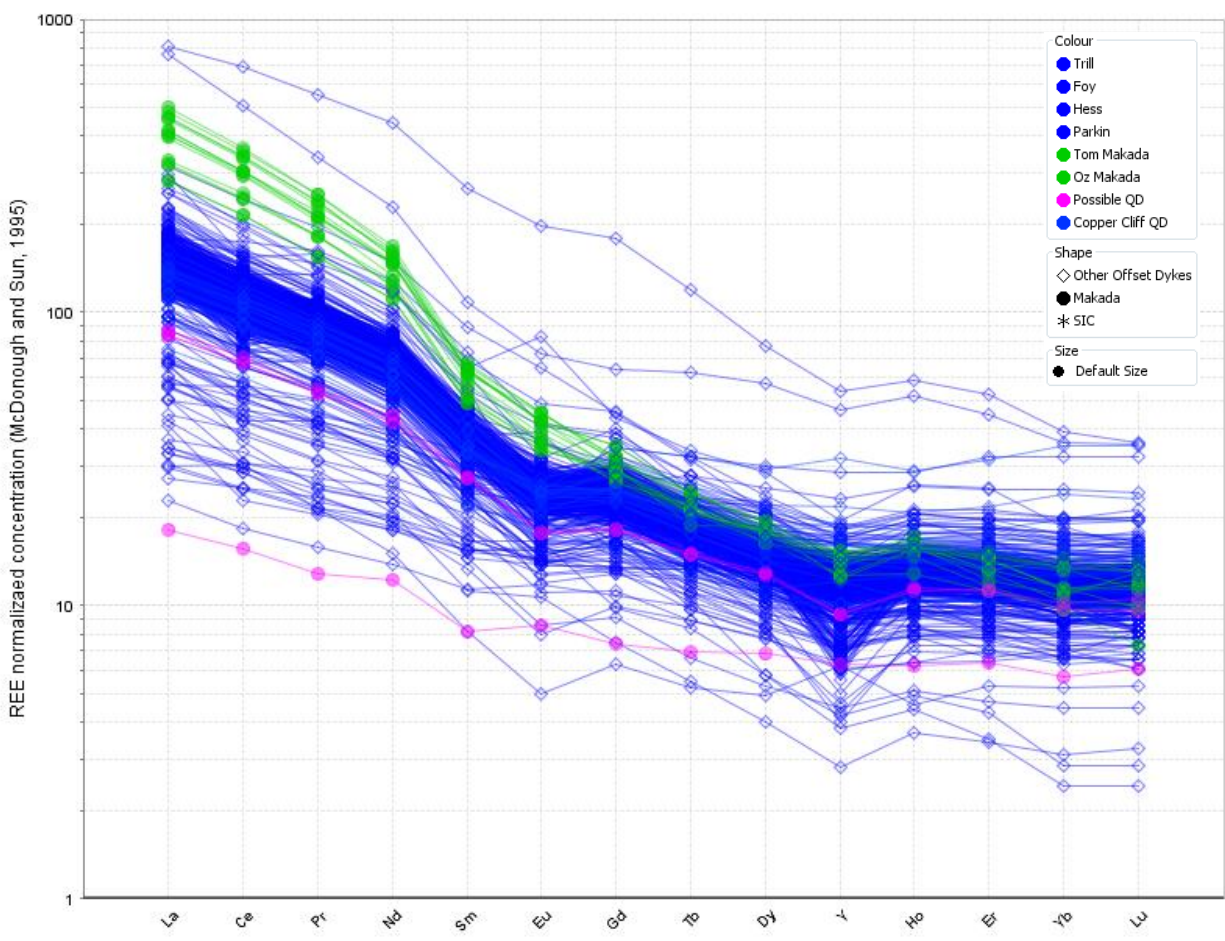


Figure 3: Plot of Rare Earth Element abundance normalized to chondrite showing Offset Dikes in blue and, Main Mass in black, and Makada rocks in green. Three samples from Makada show a similarity to Sudbury QD are highlighted in purple.

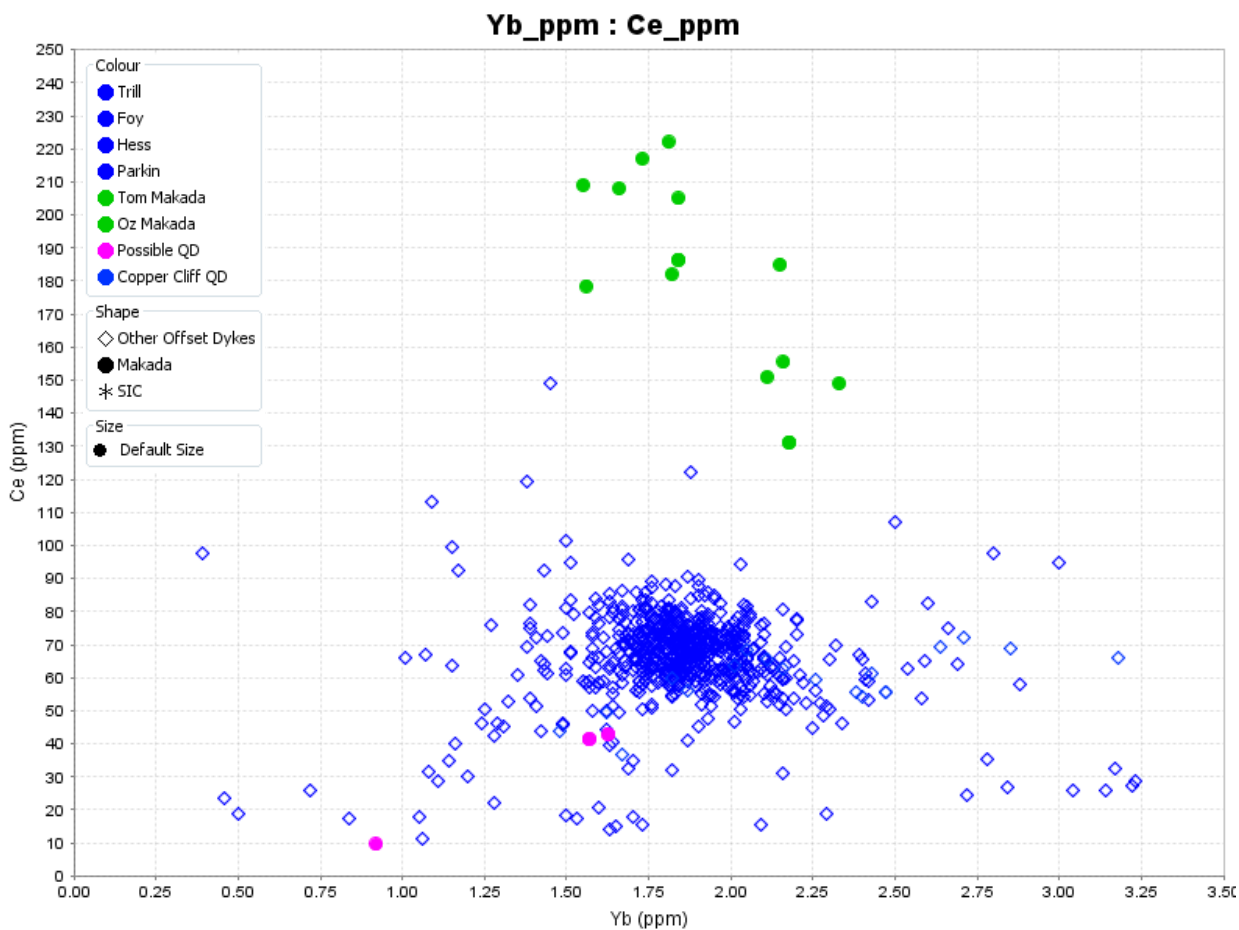


Figure 4: Yb vs Ce plot with Makada samples in green, Offset Dike samples in blue, and Main Mass samples in black. Three samples from Makada show a similarity to Sudbury QD are highlighted in purple.

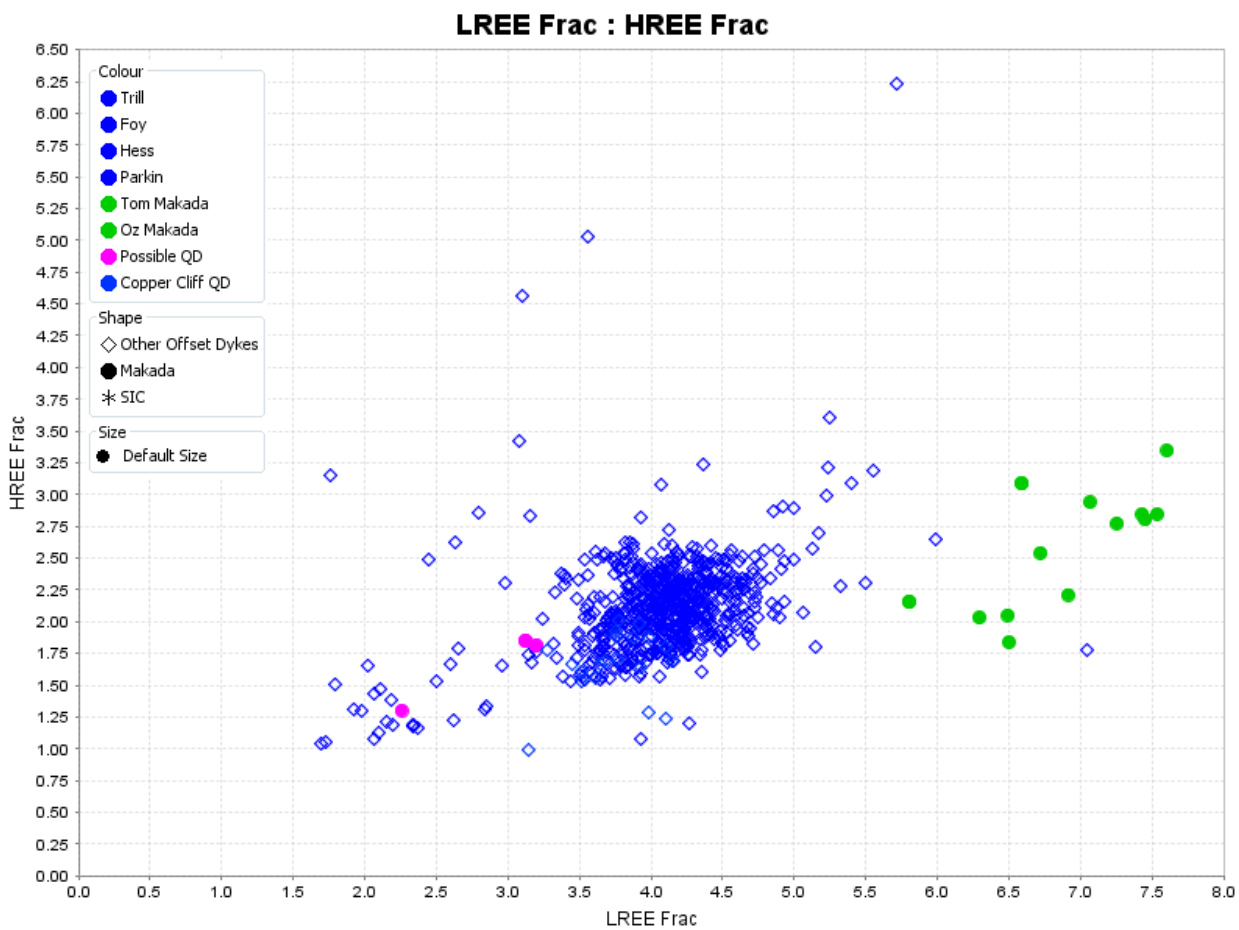
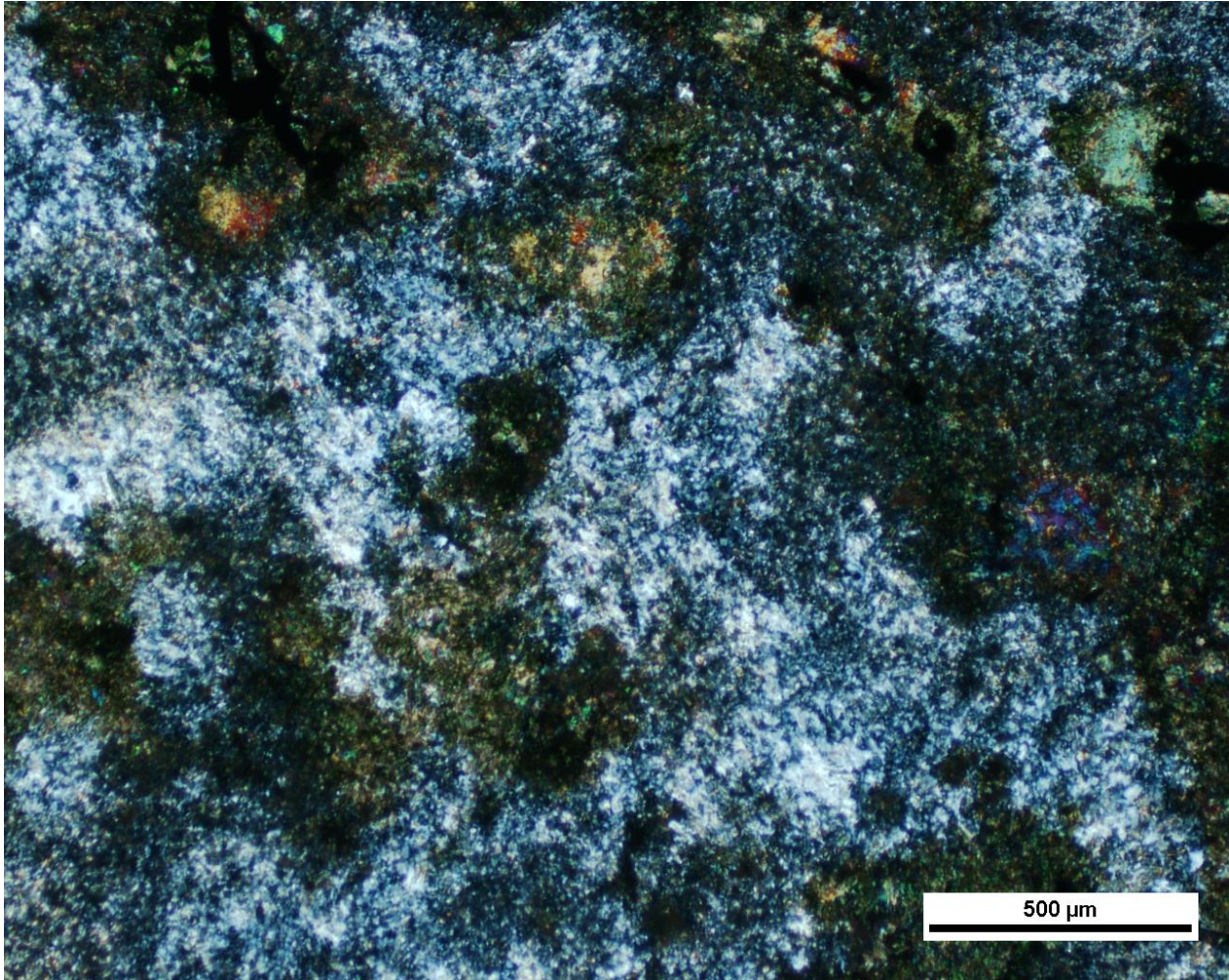


Figure 5: Light and heavy Rare Earth Element (REE) fractionation plot. Offset Dike QD shown in blue, Makada samples shown in green. Possible Makada QD samples highlighted in purple.



*Figure 6: Crossed polarized light photomicrograph of sample OZ-SUD-16-003. Sample shows heavy alteration of feldspar grains.*

OZ-SUD-16-003 was investigated using a petrographic microscope to see whether it was petrographically similar in addition to being geochemically similar to QD. While heavily altered (Fig. 4), the sample did have sulfide blebs (Fig. 5) which had very similar mineralogy to ones seen in other QD samples. However, due to the high degree of alteration, it is difficult to say whether the samples contains the same mineralogical composition as Offset Dike QD.

Sample ID	SUD-TGB-17-CCE-003	SUD-TGB-17-CCE-006	SUD-TGB-17-CCE-007	SUD-TGB-17-CCE-007-DUP	SUD-TGB-17-CCE-008	SUD-TGB-17-CCE-008-DUP	SUD-TGB-17-CCE-011	SUD-TGB-17-CCE-013
SiO2 Wt. %	56.1	52.5	50	50	46.8	46.3	48.9	51.2
Al2O3 Wt. %	15.6	12.25	15.75	15.65	15.3	15.25	15.7	15.35
Fe2O3 Wt. %	7.97	9.56	9.98	9.83	9.91	10	9.67	8.82
CaO Wt. %	6.45	12.25	8.24	8.25	11.7	11.65	9.01	8.32
MgO Wt. %	5.01	12.05	7.01	6.94	9.5	9.46	8.12	7.47
Na2O Wt. %	3.1	1.36	2.82	2.81	1.94	1.9	2.31	2.76
K2O Wt. %	2.6	0.26	2.21	2.19	1.54	1.52	2.11	2.23
Cr2O3 Wt. %	0.03	0.15	0.05	0.05	0.06	0.06	0.06	0.06
TiO2 Wt. %	0.95	0.42	1.26	1.24	0.83	0.82	0.98	0.91
MnO Wt. %	0.1	0.17	0.14	0.13	0.15	0.15	0.14	0.13
P2O5 Wt. %	0.54	0.02	0.73	0.73	0.48	0.47	0.59	0.53
SrO (ppm)	0.08	0.01	0.1	0.1	0.09	0.09	0.1	0.08
BaO Wt. %	0.22	0.01	0.22	0.22	0.15	0.15	0.2	0.21
LOI %	100	100.94	99.7	99.31	100.24	99.53	100.08	99.95
C Wt. %	0.1	<0.01	0.06	0.06	0.2	0.2	0.2	0.22
S Wt. %	0.17	0.01	0.24	0.2	0.32	0.29	0.22	0.26
Totals %	100	100.94	99.7	99.31	100.24	99.53	100.08	99.95

Sample ID	SUD-TGB-17-CCE-015	SUD-TGB-17-CCE-017	SUD-TGB-17-CCE-018	SUD-TGB-17-CCE-019	SUD-16-001	SUD-16-002	SUD-16-003	SUD-16-004
SiO2 Wt. %	52.2	50.3	47	50	51.32	48.13	51.98	52.31
Al2O3 Wt. %	15.2	15.2	15.75	15.85	15.64	15.51	15.05	15.01
Fe2O3 Wt. %	9.25	9.95	10.05	10.2	9.92	9.84	12.66	12.74
CaO Wt. %	7.09	7.9	11.45	7.82	7.58	10.84	7.17	7.20
MgO Wt. %	6.37	7.24	8.84	7.33	6.91	9.75	5.36	5.33
Na2O Wt. %	2.85	2.78	2.08	2.72	2.84	2.17	3.56	3.53
K2O Wt. %	2.5	2.4	1.46	2.14	2.46	1.40	1.27	1.30
Cr2O3 Wt. %	0.04	0.05	0.05	0.05	0.03	0.06	0.01	0.01
TiO2 Wt. %	1.18	1.23	0.87	1.27	1.29	0.87	0.87	0.87
MnO Wt. %	0.12	0.13	0.16	0.13	0.11	0.13	0.17	0.16
P2O5 Wt. %	0.67	0.73	0.51	0.75	0.72	0.47	0.13	0.13
SrO (ppm)	0.09	0.1	0.1	0.08	0.08	0.09	0.04	0.05
BaO Wt. %	0.23	0.22	0.16	0.23	0.21	0.15	0.04	0.04
LOI %	99.08	99.47	100.09	100.69	1.32	1.64	1.98	1.98
C Wt. %	0.1	0.05	0.17	0.06	n/a	n/a	n/a	n/a
S Wt. %	0.21	0.25	0.34	0.23	n/a	n/a	n/a	n/a
Totals %	99.08	99.47	100.09	100.69	100.43	101.03	100.28	100.65

Table 2: Major element concentrations of samples as determined by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS) and X-ray fluorescence (XRF).

Sample ID	SUD-TGB-17-CCE-003	SUD-TGB-17-CCE-006	SUD-TGB-17-CCE-007	SUD-TGB-17-CCE-007-DUP	SUD-TGB-17-CCE-008	SUD-TGB-17-CCE-008-DUP	SUD-TGB-17-CCE-011	SUD-TGB-17-CCE-013
La (ppm)	93.4	4.3	110.5	109.5	75.8	76.5	94.9	95.9
Ce (ppm)	178.5	9.6	208	209	149	151	185	182
Pr (ppm)	18.95	1.19	22.2	22	16.8	17.05	20.4	19.55
Nd (ppm)	61.1	5.6	70.8	71.5	56.6	56	67.8	66.1
Sm (ppm)	8.32	1.2	9.33	9.06	7.34	7.65	8.64	8.98
Eu (ppm)	2.17	0.48	2.41	2.55	2.04	2.1	2.29	2
Gd (ppm)	5.66	1.48	5.74	6.4	5.29	5.29	5.87	5.71
Tb (ppm)	0.75	0.25	0.78	0.78	0.78	0.74	0.68	0.76
Dy (ppm)	4.02	1.68	4.02	4.57	4.37	4.29	4.56	4.42
Ho (ppm)	0.7	0.34	0.85	0.8	0.88	0.88	0.86	0.89
Er (ppm)	1.79	1.02	2.09	1.86	2.1	2.25	2.36	2.3
Tm (ppm)	0.21	0.16	0.28	0.27	0.31	0.36	0.3	0.36
Yb (ppm)	1.56	0.92	1.66	1.55	2.33	2.11	2.15	1.82
Lu (ppm)	0.18	0.15	0.25	0.24	0.32	0.35	0.28	0.3

Sample ID	SUD-TGB-17-CCE-015	SUD-TGB-17-CCE-017	SUD-TGB-17-CCE-018	SUD-TGB-17-CCE-019	SUD-16-001	SUD-16-002	SUD-16-003	SUD-16-004
La (ppm)	119	108	78.4	115	98.82	66.43	20.53	19.81
Ce (ppm)	222	205	155.5	217	186.56	131.24	42.97	41.36
Pr (ppm)	23.5	21.5	16.9	23.3	19.67	14.32	5.07	4.92
Nd (ppm)	77	72.8	58.6	74.3	67.58	50.95	20.34	19.35
Sm (ppm)	9.94	9.37	7.6	9.74	9.44	7.20	4.05	3.99
Eu (ppm)	2.54	2.38	1.96	2.58	2.40	1.90	1.00	0.99
Gd (ppm)	6.36	6.3	5.47	6.08	7.01	5.80	3.63	3.58
Tb (ppm)	0.88	0.82	0.75	0.88	0.88	0.75	0.54	0.54
Dy (ppm)	4.78	4.41	4.42	4.71	4.55	4.36	3.18	3.13
Ho (ppm)	0.92	0.87	0.94	0.87	0.84	0.85	0.63	0.62
Er (ppm)	2.31	2.13	2.39	1.95	2.30	2.44	1.79	1.81
Tm (ppm)	0.3	0.26	0.33	0.39	0.29	0.34	0.25	0.24
Yb (ppm)	1.81	1.84	2.16	1.73	1.84	2.18	1.63	1.57
Lu (ppm)	0.29	0.24	0.32	0.32	0.28	0.32	0.26	0.23

Table 3: Rare Earth Element (REE) concentrations of samples as determined by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS).

Sample ID	SUD-TGB-17-CCE-003	SUD-TGB-17-CCE-006	SUD-TGB-17-CCE-007	SUD-TGB-17-CCE-007-DUP	SUD-TGB-17-CCE-008	SUD-TGB-17-CCE-008-DUP	SUD-TGB-17-CCE-011	SUD-TGB-17-CCE-013
Ag (ppm)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
As (ppm)	1.10	0.60	0.50	0.60	3.20	3.30	1.00	1.90
Ba (ppm)	2010.00	72.30	2030.00	1995.00	1340.00	1340.00	1830.00	1920.00
Bi (ppm)	0.15	0.02	0.08	0.08	0.09	0.10	0.05	0.07
Cd (ppm)	0.80	0.70	0.25	0.50	0.60	0.25	0.60	0.25
Co (ppm)	30.00	50.00	39.00	40.00	50.00	45.00	42.00	40.00
Cr (ppm)	240.00	1140.00	410.00	410.00	470.00	480.00	490.00	440.00
Cs (ppm)	2.62	0.50	1.76	1.54	1.58	1.61	2.09	2.10
Cu (ppm)	39.00	51.00	49.00	52.00	64.00	63.00	42.00	50.00
Ga (ppm)	20.90	11.70	19.60	19.30	15.80	15.70	17.70	19.40
Hf (ppm)	6.40	0.90	5.70	6.10	4.00	3.80	5.10	5.70
Hg (ppm)	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.00
Li (ppm)	20.00	10.00	20.00	20.00	20.00	20.00	20.00	30.00
Mo (ppm)	2.00	1.00	2.00	2.00	2.00	2.00	2.00	1.00
Nb (ppm)	16.90	1.30	19.20	18.70	8.90	8.80	13.30	14.80
Ni (ppm)	90.00	245.00	142.00	146.00	169.00	161.00	159.00	160.00
Pb (ppm)	20.00	3.00	21.00	24.00	7.00	9.00	10.00	20.00
Rb (ppm)	94.70	9.70	66.70	65.50	44.10	44.00	65.20	68.90
Sb (ppm)	0.17	0.09	0.03	0.03	0.06	0.05	0.03	0.07
Sc (ppm)	15.00	34.00	20.00	20.00	32.00	31.00	19.00	21.00
Se (ppm)	0.10	0.10	0.10	0.30	0.30	0.30	0.40	0.40
Sn (ppm)	2.00	1.00	2.00	1.00	1.00	1.00	1.00	2.00
Sr (ppm)	695.00	132.50	858.00	858.00	823.00	823.00	846.00	756.00
Ta (ppm)	1.00	0.10	0.90	0.90	0.40	0.40	0.60	0.80
Te (ppm)	0.01	0.01	0.01	0.02	0.01	0.02	0.01	0.03
Th (ppm)	16.60	1.04	13.90	13.50	6.47	6.67	10.60	13.30
Tl (ppm)	0.49	0.06	0.37	0.35	0.31	0.29	0.39	0.38
U (ppm)	3.96	0.28	2.58	2.46	1.13	1.00	2.18	3.06
V (ppm)	159.00	253.00	205.00	200.00	235.00	232.00	216.00	182.00
W (ppm)	1.00	0.50	1.00	1.00	1.00	1.00	1.00	1.00
Y (ppm)	20.00	9.90	22.40	22.20	23.80	24.00	24.30	22.10
Zn (ppm)	82.00	61.00	93.00	93.00	61.00	60.00	97.00	83.00
Zr (ppm)	258.00	31.00	267.00	268.00	173.00	171.00	234.00	255.00

Sample ID	SUD-TGB-17-CCE-015	SUD-TGB-17-CCE-017	SUD-TGB-17-CCE-018	SUD-TGB-17-CCE-019	SUD-16-001	SUD-16-002	SUD-16-003	SUD-16-004
Ag (ppm)	0.25	0.25	0.25	0.25	n/a	n/a	n/a	n/a
As (ppm)	0.80	0.70	1.40	0.60	n/a	n/a	n/a	n/a
Ba (ppm)	2100.00	2010.00	1385.00	2070.00	n/a	n/a	n/a	n/a
Bi (ppm)	0.10	0.09	0.08	0.07	n/a	n/a	n/a	n/a
Cd (ppm)	0.70	0.25	0.25	0.80	n/a	n/a	n/a	n/a

Sample ID	SUD-TGB-17-CCE-015	SUD-TGB-17-CCE-017	SUD-TGB-17-CCE-018	SUD-TGB-17-CCE-019	SUD-16-001	SUD-16-002	SUD-16-003	SUD-16-004
Co (ppm)	35.00	41.00	45.00	42.00	n/a	n/a	n/a	n/a
Cr (ppm)	320.00	420.00	340.00	400.00	n/a	n/a	n/a	n/a
Cs (ppm)	2.27	1.88	0.86	1.08	n/a	n/a	n/a	n/a
Cu (ppm)	42.00	52.00	84.00	39.00	n/a	n/a	n/a	n/a
Ga (ppm)	20.50	19.80	16.40	20.20	n/a	n/a	n/a	n/a
Hf (ppm)	7.30	6.10	4.10	6.10	n/a	n/a	n/a	n/a
Hg (ppm)	0.00	0.00	0.00	0.01	n/a	n/a	n/a	n/a
Li (ppm)	20.00	30.00	20.00	30.00	n/a	n/a	n/a	n/a
Mo (ppm)	3.00	1.00	1.00	2.00	n/a	n/a	n/a	n/a
Nb (ppm)	21.10	20.00	9.60	19.20	18.51	8.44	4.06	3.92
Ni (ppm)	123.00	164.00	154.00	153.00	n/a	n/a	n/a	n/a
Pb (ppm)	14.00	22.00	12.00	12.00	n/a	n/a	n/a	n/a
Rb (ppm)	77.60	67.50	31.40	58.70	64.85	28.23	47.82	48.49
Sb (ppm)	0.03	0.03	0.05	0.06	n/a	n/a	n/a	n/a
Sc (ppm)	18.00	19.00	30.00	19.00	18.49	29.97	26.68	27.36
Se (ppm)	0.10	0.20	0.20	0.10	n/a	n/a	n/a	n/a
Sn (ppm)	2.00	2.00	2.00	2.00	n/a	n/a	n/a	n/a
Sr (ppm)	764.00	803.00	790.00	726.00	732.07	710.94	359.04	356.85
Ta (ppm)	1.10	0.90	0.40	0.90	1.06	0.41	0.26	0.24
Te (ppm)	0.01	0.02	0.02	0.02	n/a	n/a	n/a	n/a
Th (ppm)	16.95	13.75	7.16	14.10	n/a	n/a	n/a	n/a
Tl (ppm)	0.42	0.36	0.21	0.19	0.15	0.01	0.03	0.04
U (ppm)	3.62	2.71	1.28	2.84	2.86	1.12	0.41	0.39
V (ppm)	174.00	185.00	210.00	202.00	159.27	181.26	215.96	218.15
W (ppm)	1.00	1.00	1.00	1.00	n/a	n/a	n/a	n/a
Y (ppm)	23.00	21.30	22.80	22.90	19.48	19.88	14.73	14.73
Zn (ppm)	91.00	98.00	78.00	92.00	n/a	n/a	n/a	n/a
Zr (ppm)	322.00	279.00	187.00	275.00	n/a	n/a	n/a	n/a

Table 4: Table of trace element concentration in samples as determined by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS).

## 5.0 Conclusions

In conclusion, three samples have been identified that show some geochemical similarity to Offset Dike QD. One of those samples has similar sulfide composition, but is too altered to determine whether it has a similar overall mineralogical composition. On the whole this evidence indicates that these samples could be Offset Dike QD, but more investigations would be needed to confirm.

These investigations have met the original objective to determine whether there is potential QD outcropping on this property.



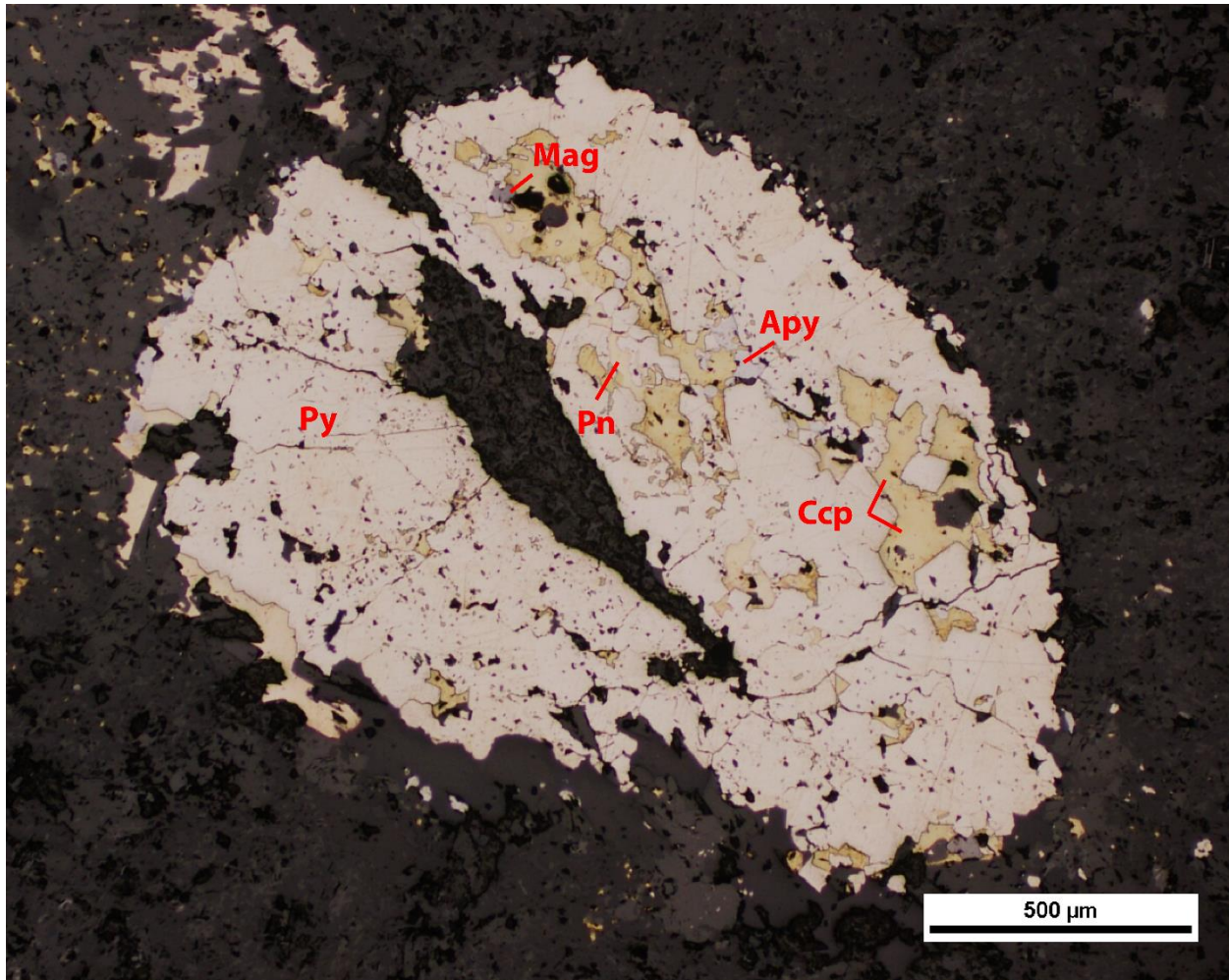


Figure 7: Reflected light photomicrograph of sample OZ-SUD-16-003 showing a sulfide bleb. Sulfide bleb contains pyrite, chalcopyrite, pentlandite, arsenopyrite, and magnetite. This is similar in composition to many sulfide blebs seen in QD from Offset Dikes. Abbreviations are as follows Apy – arsenopyrite, Ccp – chalcopyrite, Mag – magnetite, Pn – pentlandite, and Py – pyrite.



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**CERTIFICATE SD17246736**

Project: Sudbury - Makada Property  
 P.O. No.: Dr. Gordon Osinski  
 This report is for 12 Pulp samples submitted to our lab in Sudbury, ON, Canada on 10-NOV-2017.  
 The following have access to data associated with this certificate:  
 THOMAS BAECHLER                      GORDON OSINSKI

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode
LOG-QC	QC Test on Received Samples
PUL-31	Pulverize split to 85% < 75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
ME-4ACD81	Base Metals by 4-acid dig.	ICP-AES
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
C-IR07	Total Carbon (Leco)	LECO
S-IR08	Total Sulphur (Leco)	LECO
ME-MS81	Lithium Borate Fusion ICP-MS	ICP-MS
ME-MS42	Up to 34 elements by ICP-MS	ICP-MS
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
TOT-ICP06	Total Calculation for ICP06	ICP-AES

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

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

Signature:   
 Colin Ramshaw, Vancouver Laboratory Manager



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**CERTIFICATE OF ANALYSIS SD17246736**

Sample Description	Method Analyte Units LOR	WEI-21	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	OA-GRA05
		Recvd Wt. kg	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %	K2O %	Cr2O3 %	TiO2 %	MnO %	P2O5 %	SrO %	BaO %	LOI %
		0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SUD-TGB-17-CCE-003		0.13	56.1	15.60	7.97	6.45	5.01	3.10	2.60	0.03	0.95	0.10	0.54	0.08	0.22	1.25
SUD-TGB-17-CCE-006		0.13	52.5	12.25	9.56	12.25	12.05	1.36	0.26	0.15	0.42	0.17	0.02	0.01	0.01	-0.07
SUD-TGB-17-CCE-007		0.05	50.0	15.75	9.98	8.24	7.01	2.82	2.21	0.05	1.26	0.14	0.73	0.10	0.22	1.19
SUD-TGB-17-CCE-007-DUP		0.06	50.0	15.65	9.83	8.25	6.94	2.81	2.19	0.05	1.24	0.13	0.73	0.10	0.22	1.17
SUD-TGB-17-CCE-008		0.07	46.8	15.30	9.91	11.70	9.50	1.94	1.54	0.06	0.83	0.15	0.48	0.09	0.15	1.79
SUD-TGB-17-CCE-008-DUP		0.07	46.3	15.25	10.00	11.65	9.46	1.90	1.52	0.06	0.82	0.15	0.47	0.09	0.15	1.71
SUD-TGB-17-CCE-011		0.10	48.9	15.70	9.67	9.01	8.12	2.31	2.11	0.06	0.98	0.14	0.59	0.10	0.20	2.19
SUD-TGB-17-CCE-013		0.11	51.2	15.35	8.82	8.32	7.47	2.76	2.23	0.06	0.91	0.13	0.53	0.08	0.21	1.88
SUD-TGB-17-CCE-015		0.06	52.2	15.20	9.25	7.09	6.37	2.85	2.50	0.04	1.18	0.12	0.67	0.09	0.23	1.29
SUD-TGB-17-CCE-017		0.16	50.3	15.20	9.95	7.90	7.24	2.78	2.40	0.05	1.23	0.13	0.73	0.10	0.22	1.24
SUD-TGB-17-CCE-018		0.12	47.0	15.75	10.05	11.45	8.84	2.08	1.46	0.05	0.87	0.16	0.51	0.10	0.16	1.61
SUD-TGB-17-CCE-019		0.13	50.0	15.85	10.20	7.82	7.33	2.72	2.14	0.05	1.27	0.13	0.75	0.08	0.23	2.12

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Project: Sudbury - Makada Property

**CERTIFICATE OF ANALYSIS SD17246736**

Sample Description	Method	TOT-ICP06	C-IR07	S-IR08	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
	Analyte	Total	C	S	Ba	Ce	Cr	Cs	Dy	Er	Eu	Ga	Gd	Ge	Hf	Ho
	Units	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOR	0.01	0.01	0.01	0.5	0.5	10	0.01	0.05	0.03	0.03	0.1	0.05	5	0.2	0.01
SUD-TGB-17-CCE-003		100.00	0.10	0.17	2010	178.5	240	2.62	4.02	1.79	2.17	20.9	5.66	<5	6.4	0.70
SUD-TGB-17-CCE-006		100.94	<0.01	0.01	72.3	9.6	1140	0.50	1.68	1.02	0.48	11.7	1.48	<5	0.9	0.34
SUD-TGB-17-CCE-007		99.70	0.06	0.24	2030	208	410	1.76	4.02	2.09	2.41	19.6	5.74	<5	5.7	0.85
SUD-TGB-17-CCE-007-DUP		99.31	0.06	0.20	1995	209	410	1.54	4.57	1.86	2.55	19.3	6.40	<5	6.1	0.80
SUD-TGB-17-CCE-008		100.24	0.20	0.32	1340	149.0	470	1.58	4.37	2.10	2.04	15.8	5.29	<5	4.0	0.88
SUD-TGB-17-CCE-008-DUP		99.53	0.20	0.29	1340	151.0	480	1.61	4.29	2.25	2.10	15.7	5.29	<5	3.8	0.88
SUD-TGB-17-CCE-011		100.08	0.20	0.22	1830	185.0	490	2.09	4.56	2.36	2.29	17.7	5.87	<5	5.1	0.86
SUD-TGB-17-CCE-013		99.95	0.22	0.26	1920	182.0	440	2.10	4.42	2.30	2.00	19.4	5.71	<5	5.7	0.89
SUD-TGB-17-CCE-015		99.08	0.10	0.21	2100	222	320	2.27	4.78	2.31	2.54	20.5	6.36	<5	7.3	0.92
SUD-TGB-17-CCE-017		99.47	0.05	0.25	2010	205	420	1.88	4.41	2.13	2.38	19.8	6.30	<5	6.1	0.87
SUD-TGB-17-CCE-018		100.09	0.17	0.34	1385	155.5	340	0.86	4.42	2.39	1.96	16.4	5.47	<5	4.1	0.94
SUD-TGB-17-CCE-019		100.69	0.06	0.23	2070	217	400	1.08	4.71	1.95	2.58	20.2	6.08	<5	6.1	0.87

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**CERTIFICATE OF ANALYSIS SD17246736**

Sample Description	Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	
	Analyte	La	Lu	Nb	Nd	Pr	Rb	Sm	Sn	Sr	Ta	Tb	Th	Tm	U	V
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOR	0.5	0.01	0.2	0.1	0.03	0.2	0.03	1	0.1	0.1	0.01	0.05	0.01	0.05	5
SUD-TGB-17-CCE-003		93.4	0.18	16.9	61.1	18.95	94.7	8.32	2	695	1.0	0.75	16.60	0.21	3.96	159
SUD-TGB-17-CCE-006		4.3	0.15	1.3	5.6	1.19	9.7	1.20	1	132.5	0.1	0.25	1.04	0.16	0.28	253
SUD-TGB-17-CCE-007		110.5	0.25	19.2	70.8	22.2	66.7	9.33	2	858	0.9	0.78	13.90	0.28	2.58	205
SUD-TGB-17-CCE-007-DUP		109.5	0.24	18.7	71.5	22.0	65.5	9.06	1	858	0.9	0.78	13.50	0.27	2.46	200
SUD-TGB-17-CCE-008		75.8	0.32	8.9	56.6	16.80	44.1	7.34	1	823	0.4	0.78	6.47	0.31	1.13	235
SUD-TGB-17-CCE-008-DUP		76.5	0.35	8.8	56.0	17.05	44.0	7.65	1	823	0.4	0.74	6.67	0.36	1.00	232
SUD-TGB-17-CCE-011		94.9	0.28	13.3	67.8	20.4	65.2	8.64	1	846	0.6	0.68	10.60	0.30	2.18	216
SUD-TGB-17-CCE-013		95.9	0.30	14.8	66.1	19.55	68.9	8.98	2	756	0.8	0.76	13.30	0.36	3.06	182
SUD-TGB-17-CCE-015		119.0	0.29	21.1	77.0	23.5	77.6	9.94	2	764	1.1	0.88	16.95	0.30	3.62	174
SUD-TGB-17-CCE-017		108.0	0.24	20.0	72.8	21.5	67.5	9.37	2	803	0.9	0.82	13.75	0.26	2.71	185
SUD-TGB-17-CCE-018		78.4	0.32	9.6	58.6	16.90	31.4	7.60	2	790	0.4	0.75	7.16	0.33	1.28	210
SUD-TGB-17-CCE-019		115.0	0.32	19.2	74.3	23.3	58.7	9.74	2	726	0.9	0.88	14.10	0.39	2.84	202



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**CERTIFICATE OF ANALYSIS SD17246736**

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-4ACD81	ME-4ACD81	
		W ppm	Y ppm	Yb ppm	Zr ppm	As ppm	Bi ppm	Hg ppm	In ppm	Re ppm	Sb ppm	Se ppm	Te ppm	Tl ppm	Ag ppm	Cd ppm
SUD-TGB-17-CCE-003		1	20.0	1.56	258	1.1	0.15	<0.005	0.009	0.001	0.17	<0.2	0.01	0.49	<0.5	0.8
SUD-TGB-17-CCE-006		<1	9.9	0.92	31	0.6	0.02	0.005	<0.005	<0.001	0.09	<0.2	<0.01	0.06	<0.5	0.7
SUD-TGB-17-CCE-007		1	22.4	1.66	267	0.5	0.08	<0.005	0.010	0.001	<0.05	<0.2	0.01	0.37	<0.5	<0.5
SUD-TGB-17-CCE-007-DUP		1	22.2	1.55	268	0.6	0.08	<0.005	0.011	<0.001	<0.05	0.3	0.02	0.35	<0.5	0.5
SUD-TGB-17-CCE-008		1	23.8	2.33	173	3.2	0.09	0.006	<0.005	0.001	0.06	0.3	0.01	0.31	<0.5	0.6
SUD-TGB-17-CCE-008-DUP		1	24.0	2.11	171	3.3	0.10	<0.005	<0.005	<0.001	0.05	0.3	0.02	0.29	<0.5	<0.5
SUD-TGB-17-CCE-011		1	24.3	2.15	234	1.0	0.05	0.007	<0.005	0.001	<0.05	0.4	0.01	0.39	<0.5	0.6
SUD-TGB-17-CCE-013		1	22.1	1.82	255	1.9	0.07	<0.005	0.007	0.001	0.07	0.4	0.03	0.38	<0.5	<0.5
SUD-TGB-17-CCE-015		1	23.0	1.81	322	0.8	0.10	<0.005	0.009	0.001	<0.05	<0.2	0.01	0.42	<0.5	0.7
SUD-TGB-17-CCE-017		1	21.3	1.84	279	0.7	0.09	<0.005	0.009	0.002	<0.05	0.2	0.02	0.36	<0.5	<0.5
SUD-TGB-17-CCE-018		1	22.8	2.16	187	1.4	0.08	<0.005	0.005	0.001	0.05	0.2	0.02	0.21	<0.5	<0.5
SUD-TGB-17-CCE-019		1	22.9	1.73	275	0.6	0.07	0.007	0.014	0.002	0.06	<0.2	0.02	0.19	<0.5	0.8

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 Account: ONTWES

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**CERTIFICATE OF ANALYSIS SD17246736**

Sample Description	Method	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81
	Analyte	Co	Cu	Li	Mo	Ni	Pb	Sc	Zn
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LOR		1	1	10	1	1	2	1	2
SUD-TGB-17-CCE-003		30	39	20	2	90	20	15	82
SUD-TGB-17-CCE-006		50	51	10	1	245	3	34	61
SUD-TGB-17-CCE-007		39	49	20	2	142	21	20	93
SUD-TGB-17-CCE-007-DUP		40	52	20	2	146	24	20	93
SUD-TGB-17-CCE-008		50	64	20	2	169	7	32	61
SUD-TGB-17-CCE-008-DUP		45	63	20	2	161	9	31	60
SUD-TGB-17-CCE-011		42	42	20	2	159	10	19	97
SUD-TGB-17-CCE-013		40	50	30	1	160	20	21	83
SUD-TGB-17-CCE-015		35	42	20	3	123	14	18	91
SUD-TGB-17-CCE-017		41	52	30	1	164	22	19	98
SUD-TGB-17-CCE-018		45	84	20	1	154	12	30	78
SUD-TGB-17-CCE-019		42	39	30	2	153	12	19	92

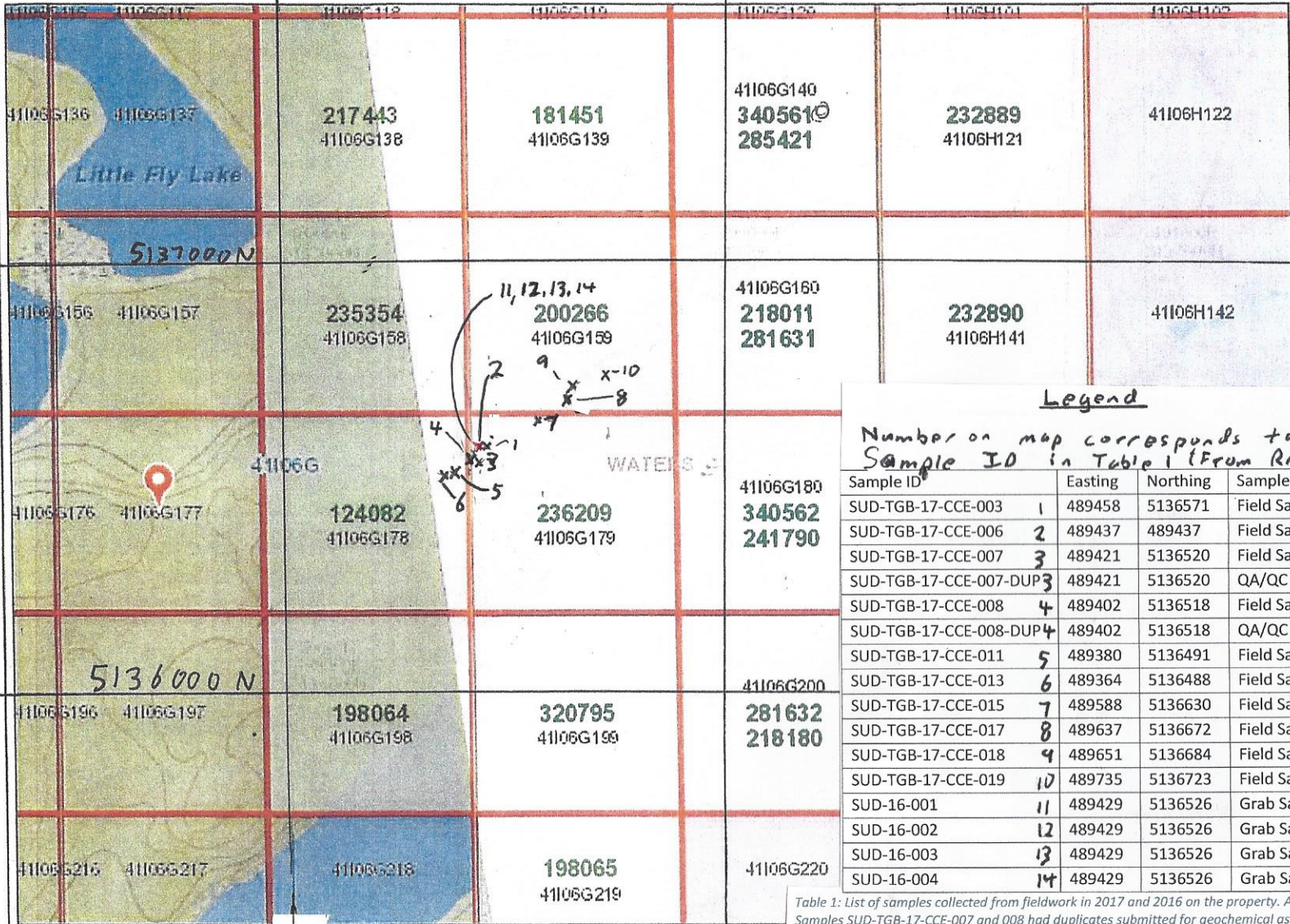
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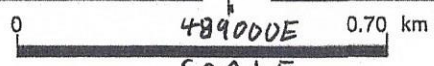


- Legend**
- Provincial Grid Cell
    - Available
    - Pending
    - Unavailable
  - Mining Claim
  - Mining Lease
    - Surface Rights Only
    - Mining Rights Only
    - Surface and Mining Rights
  - Mining Licence of Occupation
    - Surface Rights Only
    - Mining Rights Only
    - Surface and Mining Rights
  - Mining Patent
    - Surface Rights Only
    - Mining Rights Only
    - Surface and Mining Rights
  - Mining Division
  - MNDM Townships and Areas
  - Provincial Grid Group
  - Non-Mining Land Tenure
    - Patent, Surface Rights Only
    - Patent, Mining Rights Only
    - Patent, Surface and Mining Rights
    - Lease, Surface Rights Only
    - Lease, Mining Rights Only
    - Lease, Surface and Mining Rights
    - Water Power Lease Agreement
    - Licence of Occupation, Surface

**Legend**  
Number on map corresponds to Sample ID in Table 1 (From Report)

Sample ID	Eastings	Northing	Sample Type	
SUD-TGB-17-CCE-003	1	489458	5136571	Field Sample
SUD-TGB-17-CCE-006	2	489437	489437	Field Sample
SUD-TGB-17-CCE-007	3	489421	5136520	Field Sample
SUD-TGB-17-CCE-007-DUP3	3	489421	5136520	QA/QC
SUD-TGB-17-CCE-008	4	489402	5136518	Field Sample
SUD-TGB-17-CCE-008-DUP4	4	489402	5136518	QA/QC
SUD-TGB-17-CCE-011	5	489380	5136491	Field Sample
SUD-TGB-17-CCE-013	6	489364	5136488	Field Sample
SUD-TGB-17-CCE-015	7	489588	5136630	Field Sample
SUD-TGB-17-CCE-017	8	489637	5136672	Field Sample
SUD-TGB-17-CCE-018	9	489651	5136684	Field Sample
SUD-TGB-17-CCE-019	10	489735	5136723	Field Sample
SUD-16-001	11	489429	5136526	Grab Sample
SUD-16-002	12	489429	5136526	Grab Sample
SUD-16-003	13	489429	5136526	Grab Sample
SUD-16-004	14	489429	5136526	Grab Sample

Table 1: List of samples collected from fieldwork in 2017 and 2016 on the property. All UTM coordinates are NAD83 datum. Samples SUD-TGB-17-CCE-007 and 008 had duplicates submitted for geochemical assay.



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