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# Impala Canada

# 2021 Exploration Assessment Report on the Rathbun Property

Claim Cell Numbers: 229864, 336843, 336844, 146049, 162606, 175307, 175308

Prepared by:

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Submitted by:

Jami Brown, P.Geo

Thunder Bay, Ontario

October 21, 2021

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### Introduction

Impala Canada Ltd. and its wholly owned predecessor, Lac des Iles Mines Ltd. (LDIM) completed grass roots prospecting on claim cells within the Rathbun Township northeast of Sudbury. Fieldwork was completed on September 9, 2021, with travel days to/from Thunder Bay, ON.

The claim cells are located within the Huronian Supergroup, adjacent to Nipissing diabase sills and Sudbury offset dykes.

This report is submitted to satisfy assessment work requirements. A total expenditure of \$6969.56 is submitted for assessment. Activities documented herein include:

• 7 samples submitted for assay

### Land Tenure, Location, and Access

The Rathbun property is located approximately 40 km northeast of Sudbury in central Ontario (Figure 1). To access the site from Sudbury, travel east on the Trans-Canada Highway 28km, then turn north onto Kukagami Rd. Continue on Kukagami Rd for 21km, keeping left on Matagamasi Rd and Bushy Bay Rd for another 11km.

This report, submitted to obtain assessment work credit, details the results of prospecting and field sampling within the Sudbury Mining Division, Rathbun area, on claim cells: 229864, 175307, 175308, 146049, 162606, 336843, and 336844 (see Table 1 & Figure 2).

Claim No.	Cell Type	Area (ha)	Anniversary Date	Holder
146049	Boundary	9.403	10/31/2022	8616868 Canada Ltd.
162606	Boundary	.00471	10/31/2022	8616868 Canada Ltd.
175307	Single cell	22.095	10/31/2022	8616868 Canada Ltd.
175308	Boundary	5.680	10/31/2022	8616868 Canada Ltd.
229864	Single cell	22.095	10/31/2021	8616868 Canada Ltd.
336843	Single cell	22.095	10/31/2022	8616868 Canada Ltd.
336844	Single cell	22.097	10/31/2022	8616868 Canada Ltd.

Table	1:	Impala	Canada	Ltd.	Claim	Cells.
i abic	<u> </u>	mpara	canada	L C C .	ciunni	ccno.



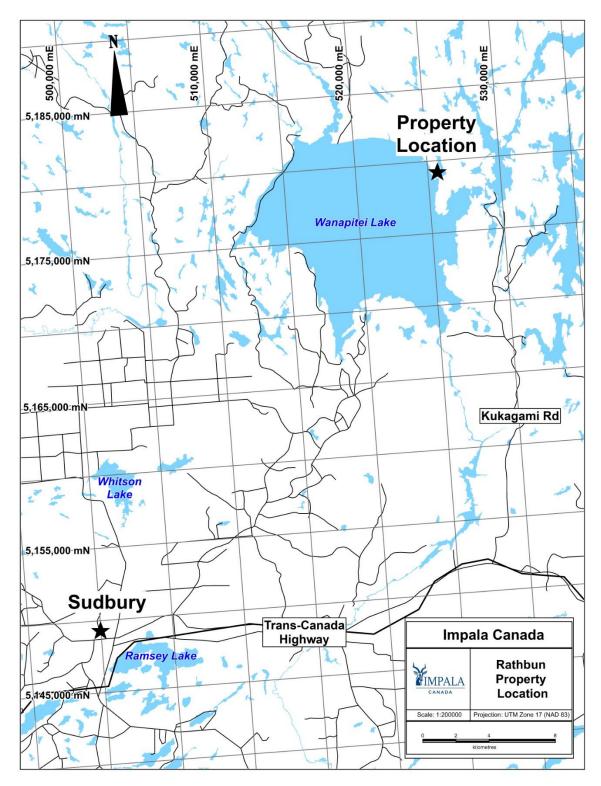


Figure 1: Rathbun property location map.



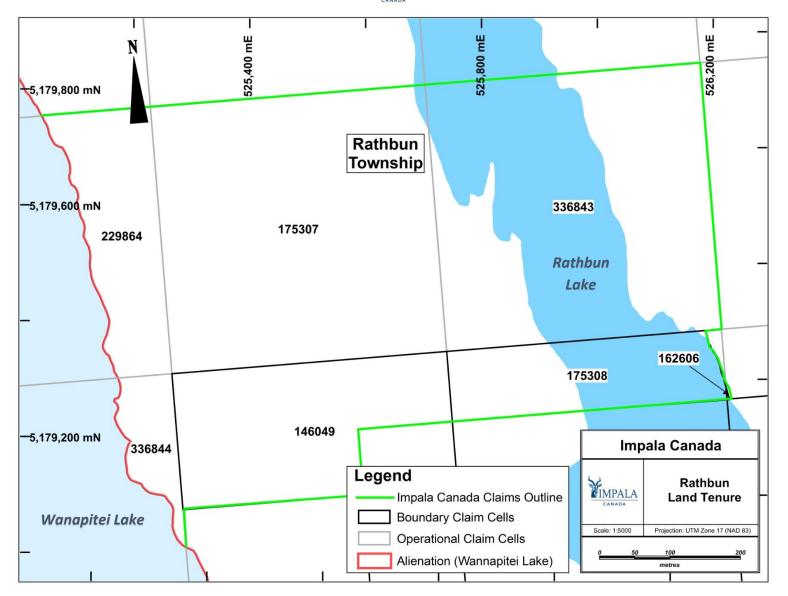


Figure 2: Land tenure of Rathbun property.



# **Regional Geology**

The Rathbun property is situated 15 km east of the Sudbury Igneous Complex, along the boundary of the 2.45-2.31 Ga Huronian Supergroup and intruding 2.22 Ga Nipissing Diabase. Sudbury breccia is also present throughout the property, along with post-impact (1.23 Ga) olivine diabase dikes (Inventus Mining Corp., 2020).

The Huronian Supergroup can be subdivided into six formations: Mississagi, Bruce, Espanola, Serpent, Gowganda, and Lorrain. These rocks are mainly clastic sedimentary rocks including quartz arenite, arkose, and wacke, as well as the carbonate-rich Espanola Formation (Dressler, 1982). The Huronian sequence was deposited onto early Precambrian felsic plutonic basement, and has a total cumulative thickness of 10.7 km. Volcanic units are also present in the formation, including subalkaline, tholeiitic, mafic, and felsic varieties, with abundant cyclical repetitions of volcanic and sedimentary units (Card et al., 1977). Regional metamorphism of the Huronian rocks ranges from low greenschist facies to low amphibolite facies.

The Nipissing rocks intrude the sedimentary rocks of the Huronian Supergroup, and range in compositions from gabbro, granodiorite, quartz-plagioclase porphyry, and pegmatite. Gabbro is the most common rock type, with the other varieties making up less than 1% of the Nipissing Intrusive rocks (Dressler, 1982). Less competent rocks of the Gowganda Formation, within the Huronian Supergroup, dominantly controlled the emplacement of these gabbro intrusions through pre-emplacement faults, folds, and lithological features.

The Sudbury Igneous Complex is part of the Sudbury structure, a remnant of an historic impact crater dated at 1.85 Ga, which had an original diameter of 200-250 km. The complex itself is a 2.5-3.0 km thick, 60 x 27 km elliptical igneous-rock body, which consists of four major lithologies from top to bottom including granophyre, quartz gabbro, norite, and contact sublayer (sulfide- and inclusions-bearing noritic rock, Therriault et al., 2002). This sublayer hosts Ni-Cu-PGE deposits in Sudbury, along with inclusion-bearing quartz-diorite hosting mineralization within the radial and concentric offset dykes.



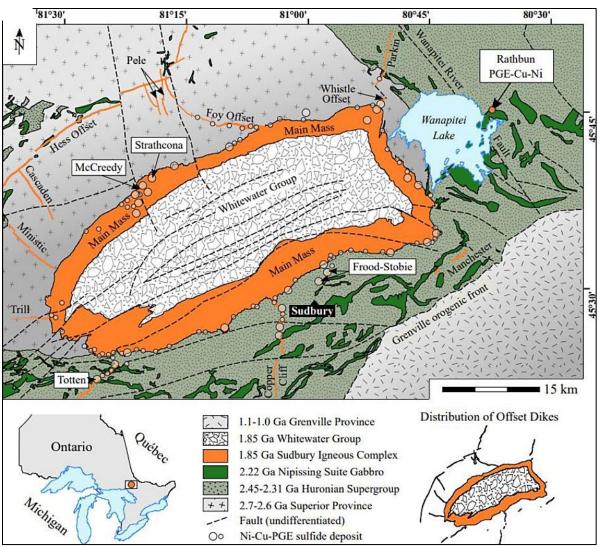


Figure 3: Regional geology in Sudbury area (adapted from Kawohl et al., 2020).



# **Property Geology**

The Rathbun property is situated near the contact between the siliclastic Huronian Supergroup (2.45-2.31 Ga) and Nipissing diabase (2.22 Ga). The Sudbury Igneous Complex is 15km west of the property; however, Sudbury breccia is observed in the surrounding area. Post-impact olivine diabase dikes (1.23 Ga) crosscut both the Nipissing diabase and Huronian Supergroup in the region. Since the initial mining of the area in the 1890's, the property has undergone intermittent exploration, including trenching, drilling, and various geophysical methods.

Impala Canada claims at the Rathbun property are only known to host Huronian Supergroup rocks. This includes rhythmically banded argillites, wackes, and siltstones, with lower greenschist facies metamorphism. South and east of Impala Canada claims, within the adjacent Inventus Mining Corp. claims, Nipissing diabase and inclusion-bearing Quartz Diorite are observed. The diabase here is fine- to medium-grained hornblende gabbro, known as the Wanapitei intrusive sill. The phaneritic quartz diorite displays epidote and sericite alteration and hosts abundant inclusions of well-rounded aphanitic mafic material. Mineralization ranges from massive to semi-massive, net-textured, and disseminated chalcopyrite, pentlandite, pyrrhotite, and inclusions of Pd-(Bi)-Te precious metal minerals (Inventus Mining Corp., 2020).

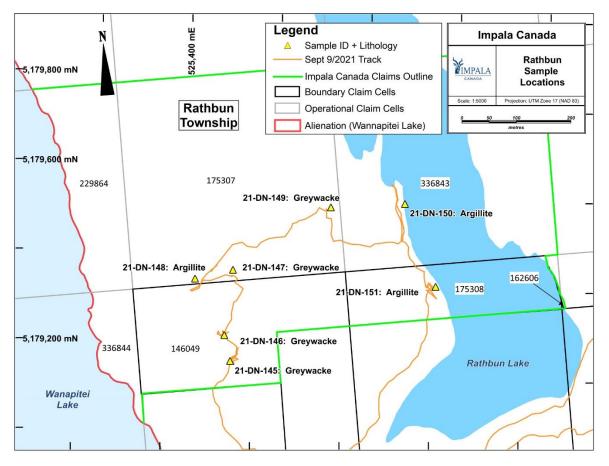


Figure 4: Sample locations on Impala Canada claims.



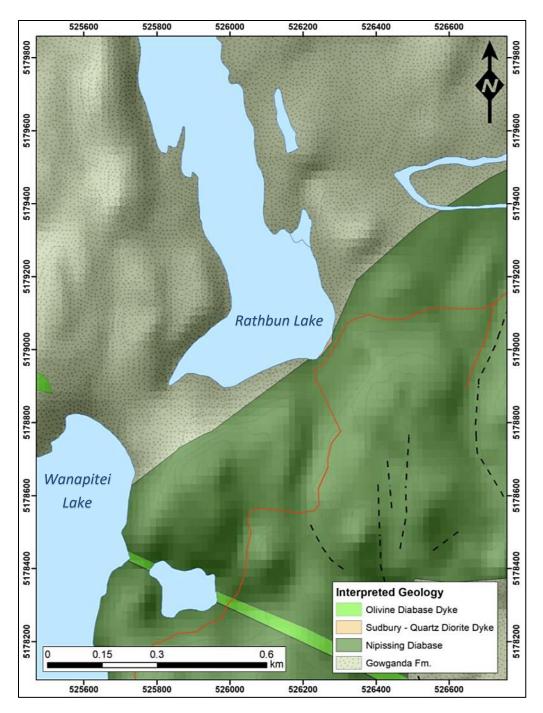


Figure 5: Rathbun surface geology map (adapted from Inventus Mining Corp., 2020).



# **Exploration History**

The following excerpt was modified from Inventus Mining Corp. – Rathbun Offset Dyke Presentation (2020).

**1889:** Property patented, with mining beginning in the 1890's.

**1954:** Dolmac Mines purchased the property, dewatered the old workings, and determined the shaft was sunk to a depth of 45 feet, with 35 feet of drifting towards the north.

**1958:** 12 drill holes completed by Dolmac Mines totalling 2000 feet, targeting high-grade sulfides, with previously observed massive sulfides observed to be cut off by a fault.

**1962:** 6 drill holes completed by Waco Petroleum Ltd. totalling 1100 feet.

**1966:** 4 drill holes completed by Norlex Mines Ltd. totalling 1911 feet.

**1968:** 2 drill holes completed by Burco Explorations Ltd., totalling 852 feet.

**1981:** Flag Resources acquired the property.

**1985:** Flag Resources completes airborne magnetics and VLF-EM survey, as well as geological reconnaissance mapping.

**1998:** 3 drill holes completed by Flag Resources totalling 1678 feet.

**2003:** 4 drill holes completed by Flag Resources totalling 1608 feet.

**2005:** 2 drill holes completed by Flag Resources totalling 469 feet.

**2009:** 1 drill holes completed by Flag Resources from east shore of Rathbun Lake totalling 885 feet.

**2020:** Trenching and surface sampling by Inventus Mining Corp. within Rathbun occurrence.



# 2021 Prospecting

#### Summary

Over 3 days (September 8-10<sup>th</sup>), geologist D. Nikkila and a field assistant from Impala Canada Ltd. collected five samples from the Rathbun property for whole rock geochemical and precious metal analyses. Outcrop station data was recorded where exposure was noted but no sample collected.

Table 2: Summary of all field stations and samples (Datum: UTM NAD 83, Zone 17).

	2021 Rathbun Station and Sample Details							
Claim Cell	Station ID	Sample ID	Easting (m)	Northing (m)	Rock Type	Sulfides		
146049	21-DN-145	A0159454	525498	5179114	Greywacke	0.1% Py		
146049	21-DN-146	A0159455	525489	5179173	Greywacke	0.3% Py, 0.1% Ccp		
175307	21-DN-147	A0159456	525520	5179317	Greywacke	0.1% Py		
175307	21-DN-148	A0159457	525433	5179304	Argillite	nil		
175307	21-DN-149	ns	525749	5179439	Greywacke	0.1% Py		
336843	21-DN-150	ns	525915	5179434	Argillite	nil		
175308	21-DN-151	A0159458	525969	5179244	Argillite	nil		

Note: ns = no sample, Py = pyrite, Ccp = chalcopyrite.

## Results

### Field Observations

The primary lithologies encountered included silicified greywacke and argillite of the Huronian Supergroup (2.45-2.31 Ga). The greywacke were locally observed as non-magnetic, with an aphanitic groundmass hosting fine- to medium-grained interstitial minerals with variable composition. Also observed were rare rounded stones that hosted chalcopyrite in sample A0159455. Fine- to medium-grained disseminated cubic pyrite is observed within groundmass. Argillite is present as strongly foliated with prominent cm-scale bedding, weakly to moderately magnetic, with variable hematite concentrations along bedding planes.

A total of five samples were collected within the property. An overview of PGE and base metal results are provided in Table 3. No significant assays were returned.



2021 Rathbun Assay Details								
Station ID	Sample ID	Au (ppb)	Pt (ppb)	Pd (ppb)	Cu (ppm)	Ni (ppm)		
21-DN-145	A0159454	1	<5	2	50	69		
21-DN-146	A0159455	<1	<5	1	50	62		
21-DN-147	A0159456	<1	<5	1	49	64		
21-DN-148	A0159457	<1	<5	2	22	77		
21-DN-151	A0159458	10	<5	1	181	65		

Table 3: Summary of precious and base metal analyses by sample from Rathbun prospecting.

### **Conclusions and Recommendations**

Results from this phase of prospecting did not return any notable results. Follow up is not required at this time.

### Statement of Expenditures

The total value of work completed for each claim on 2021 Rathbun prospecting is summarized in Table 4. Costs for personnel were determined using an average cost of \$500 per staff-day. Transportation vehicle costs calculated at \$0.47/km (maintenance, insurance, registration). A more detailed statement of expenditures is summarized in Table 6.

Table 4: Statement of expenditures for claims on Rathbun property.

Rathbun							
Personnel	\$	3,000					
Food & accommodation	\$	711					
Transportation	\$	1,003					
Fuel	\$	228					
Analyses	\$	527					
Report Writing	\$	1,500					
TOTAL EXPENDITURE	\$	6970					

Table 5: Summary of allocation of expenditures by claim visited at Rathbun based on sample distribution.

Rathbun							
Claim Number	Claim Type	No. of Samples	Expenditure				
146049	Boundary	2	\$2787.82				
175307	Operational	2	\$2787.82				
175308	Boundary	1	\$1393.91				
тот	AL	5	\$6969.56				



### References

Card, K.D., Innes, D. G., and Debicki, R.L. 1977. Stratigraphy, Sedimentology, and Petrology of the Huronian Supergroup in the Sudbury – Espanola Area, Ontario Division of Mines, Geoscience Study 16.

Dressler, B.O. 1982. Geology of the Wanapitei Lake Area, District of Sudbury, Ontario Geological Survey, Report 213.

Inventus Mining Corp. 2020. The Rathbun Offset Dyke, News Release; prepared by Wesley Whymark, P.Geo.

Kawohl, A., Whymark, W., Bite, A., and Frimmel, H. 2020. High-Grade Magmatic Platinum Group Element-Cu-(-Ni) Sulfide Mineralization Associated with the Rathbun Offset Dike of the Sudbury Igneous Complex (Ontario, Canada), Economic Geology, v. 115 (3), p. 505-525.

Therriault, A., Fowler, A., and Grieve, R. 2002. The Sudbury Igneous Complex: A Differentiated Impact Melt Sheet; Economic Geology, v. 97 (7), p. 1521–1540.



# Statement of Qualifications



Douglas Nikkila, M.Sc., P. Geo

### 84 Logan Ave

### Thunder Bay, ON, P7A 6P9

I, Douglas Nikkila, of the City of Thunder Bay, in the Province of Ontario, do hereby certify that:

- 1. I am a practicing professional geoscientist with the association of Professional Geoscientists of Ontario (#3440).
- 2. I attained a H.BSc. in Geology (2015) and a M.Sc. in Geology (2018) from Lakehead University in Thunder Bay, Ontario.
- 3. I am currently a Senior Field Geologist for Impala Canada Ltd. and have been employed by the company since 2017.
- 4. I did personally work on the 2021 prospecting program at Rathbun.
- 5. I have based my interpretations and recommendations in the preceding report on my professional experience, my personal knowledge of the property, and the information available to me at the time of writing.

Respectfully submitted,



Date: October 21, 2021

Douglas Nikkila, M.Sc., P. Geo

Senior Field Geologist

Impala Canada Ltd.



Appendix A: List of Claim Cells on which work was performed



Claim Cell	Cell Type	Claim Holder	%	Township/Area
146049	Boundary Cell Mining Claim	8616868 Canada Inc.	100	Rathbun
162606	Boundary Cell Mining Claim	8616868 Canada Inc.	100	Rathbun
175307	Single Cell Mining Claim	8616868 Canada Inc.	100	Rathbun
175308	Boundary Cell Mining Claim	8616868 Canada Inc.	100	Rathbun
229864	Single Cell Mining Claim	8616868 Canada Inc.	100	Rathbun
336843	Single Cell Mining Claim	8616868 Canada Inc.	100	Rathbun
336844	Single Cell Mining Claim	8616868 Canada Inc.	100	Rathbun



Appendix B: Complete List of Sample Descriptions and their Respective Claim Cells



Claim Cell	Sample ID	Station ID	Rock Type	Sulfides	Descriptions
146049	A0159454	21-DN-145	Greywacke	0.1% Py	Extreme topography high trending 20, large exposure (top of ridge 25x40 meters). Non-magnetic unit, aphanitic groundmass with fine to medium-grained black minerals, cubic pyrite observed, sugary texture in rock, some localized foliation observed, part of Huronian Supergroup.
162606	A0159455	21-DN-146	Greywacke	0.3% Py, 0.1% Ccp	Same lithology as previously sampled, aphanitic groundmass with fine- to medium-grained black Hornblende or Pyroxene, concoidal fracture, foliation observed throughout, cm-scale pebbles of Diorite observed hosting medium-grained blebby chalcopyrite-pyrrhotite-pyrite.
175307	A0159456	21-DN-147	Greywacke	0.1% Py	Continuation of same unit, near bottom of ridge to the north, aphanitic groundmass with grains black hornblende-pyroxene and rounded clasts medium-grained Diorite, disseminated Pyrite, concoidal fractures and foliation.
175308	A0159457	21-DN-148	Argillite	nil	Strong bedding/foliation, siltstone or shale, aphanitic, some Fe-weathering and hematite, strongly magnetic, Huronian Supergroup below greywacke observed to the East.
229864	ns	21-DN-149	Greywacke	0.1% Py	Fine-grained rock observed elsewhere on property, topography high, fine- grained disseminated black minerals, trace cubic Pyrite.
336843	ns	21-DN-150	Argillite	nil	Aphanitic groundmass, shale or siltstone part of Huronian Supergroup, weakly magnetic, extreme cm-scale bedding.
336844	A0159458	21-DN-151	Argillite	nil	Same as previous sample, strong bedding weakly magnetic, shale or siltstone.



Appendix C: Daily Work Logs



#### September 8, 2021

D. Nikkila and G. Njiekak travel from Impala Canada exploration office in Thunder Bay, ON to the Northbury Hotel in Sudbury, ON.

#### September 9, 2021

Team left hotel at 8am and travelled to Rathbun property, parking truck just off Bushy Bay Rd. A 2.3 km traverse was completed to access the claims. The first stop was a topographic high in the area, represented by a greywacke unit that was part of the Huronian Supergroup (A0159454). Continuing the traverse north, three more samples of both greywacke and argillite were collected. Following sample 21-DN-148 (A0159457), the team traversed east towards Rathbun Lake, with another greywacke outcrop recorded along a topographic high. Along the western shores of Rathbun Lake, argillite outcrops were observed. The team then traversed back to the truck and returned to the hotel at 4pm.

#### September 10, 2021

The team travelled back to Thunder Bay, ON from Sudbury, ON.



Appendix D: Rock Codes



Lithology Code	Rock Name	Mineral Code	Mineral Name	Mineralization Style	Mineralization Style Name
ARG	Argillite	Сру/Ср/Сср	Chalcopyrite	Bl	Blebby
DIA	Diabase	Plag/Pl	Plagioclase	Cg	Coarse-grained
GAB	Gabbro	Po/Pyrr	Pyrrhotite	Diss	Disseminated
WCKE	Greywacke	Py/Pyr	Pyrite	Fg	Fine-grained
QDIOR	Quartz Diorite	Qtz	Quartz	Mg	Medium-grained



# Appendix E: Assay Certificates



ALS Canada Ltd. 2103 Dollarton Hwy North Vancouver BC V7H 0A7 Phone: +1 604 984 0221 Fax: +1 604 984 0218 www.alsglobal.com/geochemistry

### CERTIFICATE TB21243886

Project: Titan

P.O. No.: 182449

This report is for 7 samples of Rock submitted to our lab in Thunder Bay, ON, Canada on 11-SEP-2021.

The following have access to data associated with this certificate:

JAMI BROWN CLAIRE MCGUINNESS	KAITLYN CHOVANCAK LDIM WEBTRIEVE	SAM DAVIES

To: IMPALA CANADA LTD. BUSINESS NUMBER 131081184 556 TENTH AVE THUNDER BAY ON P7B 2R2 Page: 1 Total # Pages: 2 (A - E) Plus Appendix Pages Finalized Date: 11-OCT-2021 Account: MZI

ALS CODE DESCRIPTION									
ALS CODE	DESCRIPTION								
WEI-21	Received Sample Weight								
LOG-23	Pulp Login – Rcvd with Barcode								
LOG-21	Sample logging – ClientBarCode								
CRU-31	Fine crushing – 70% <2mm								
SPL-21	Split sample – riffle splitter								
PUL-31	Pulverize up to 250g 85% <75 um								
CRU-QC	Crushing QC Test								
PUL-QC	Pulverizing QC Test								

ANALYTICAL PROCEDURES									
ALS CODE	DESCRIPTION	INSTRUMENT							
ME-ICP06	Whole Rock Package – ICP-AES	ICP-AES							
C-IR07	Total Carbon (IR Spectroscopy)	LECO							
S-IR08	Total Sulphur (IR Spectroscopy)	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								
ME-4ACD81	Base Metals by 4-acid dig.	ICP-AES							
PGM-ICP23	Pt, Pd, Au 30g FA ICP	ICP-AES							

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 \*\*\*\*\*

Saa Traxler, General Manager, North Vancouver



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#### To: IMPALA CANADA LTD. BUSINESS NUMBER 131081184 556 TENTH AVE THUNDER BAY ON P7B 2R2

Page: 2 - A Total # Pages: 2 (A - E) Plus Appendix Pages Finalized Date: 11-OCT-2021 Account: MZI

Project: Titan

Sample Description	Method	WEI–21	PGM-ICP23	PGM-ICP23	PGM-ICP23	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06
	Analyte	Recvd Wt.	Au	Pd	Pt	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO2	MnO	P2O5
	Units	kg	ppb	ppb	ppb	%	%	%	%	%	%	%	%	%	%	%
	LOD	0.02	1	1	5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.002	0.01	0.01	0.01
A0159453 A0159454 A0159455 A0159456 A0159456 A0159457		1.28 1.38 1.30 2.09 1.42	<1 1 <1 <1 <1	<1 2 1 1 2	<5 <5 <5 <5 <5	34.4 63.8 64.7 63.3 57.5	0.06 15.85 15.65 15.30 17.50	0.18 6.66 6.57 6.83 9.75	24.8 2.80 3.27 2.25 0.58	19.00 3.14 3.02 2.69 3.14	0.04 3.37 3.74 2.76 0.68	0.02 1.96 1.41 2.24 4.58	<0.002 0.022 0.022 0.021 0.026	<0.01 0.61 0.60 0.59 0.75	0.04 0.10 0.10 0.15 0.24	0.02 0.13 0.13 0.13 0.22
A0159458		1.55	10	1	<5	63.4	16.00	7.85	1.22	2.49	2.40	2.44	0.022	0.67	0.22	0.15
A0159459		0.07	113	601	300	47.3	12.70	20.8	6.25	6.64	2.14	0.63	0.032	1.21	0.18	0.14



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Page: 2 - B Total # Pages: 2 (A - E) Plus Appendix Pages Finalized Date: 11-OCT-2021 Account: MZI

Project: Titan

Sample Description	Method	ME-ICP06	ME-ICP06	OA-GRA05	TOT-ICP06	C-IR07	S-IR08	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
	Analyte	SrO	BaO	LOI	Total	C	S	Ba	Ce	Cr	Cs	Dy	Er	Eu	Ga	Gd
	Units	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.1	10	0.01	0.05	0.03	0.02	0.1	0.05
A0159453		0.01	0.03	21.3	99.90	5.45	0.01	315	1.2	10	0.46	<0.05	0.03	0.02	0.2	0.06
A0159454		0.04	0.06	2.51	101.05	0.06	0.06	552	52.7	150	3.34	3.22	1.87	1.04	21.4	3.94
A0159455		0.05	0.05	2.59	101.90	0.10	0.09	366	38.6	120	1.71	2.32	1.42	0.74	16.4	2.75
A0159456		0.03	0.06	2.58	98.93	0.03	0.05	556	52.3	150	4.04	3.32	1.95	1.00	20.9	3.51
A0159457		<0.01	0.09	3.84	98.90	0.07	<0.01	796	24.9	180	6.66	2.95	2.09	0.41	25.8	1.59
A0159457 A0159458 A0159459		0.01	0.06 0.02	3.84 2.84 1.29	99.77 99.36	0.03 0.09	<0.01 <0.01 1.73	543 210	24.9 59.6 23.7	160 230	6.66 4.46 0.78	2.95 3.94 2.45	2.09 2.32 1.32	0.41 1.00 1.00	22.8 16.2	3.99 2.93

ALS)

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#### To: IMPALA CANADA LTD. BUSINESS NUMBER 131081184 556 TENTH AVE THUNDER BAY ON P7B 2R2

Page: 2 - C Total # Pages: 2 (A - E) Plus Appendix Pages Finalized Date: 11-OCT-2021 Account: MZI

Project: Titan

Sample Description	Method Analyte Units LOD	ME-MS81 Ge ppm 5	ME-MS81 Hf ppm 0.1	ME-MS81 Ho ppm 0.01	ME-MS81 La ppm 0.1	ME-MS81 Lu ppm 0.01	ME-MS81 Nb ppm 0.1	ME-MS81 Nd ppm 0.1	ME-MS81 Pr ppm 0.02	ME-MS81 Rb ppm 0.2	ME-MS81 Sm ppm 0.03	ME-MS81 Sn ppm 1	ME-MS81 Sr ppm 0.1	ME-MS81 Ta ppm 0.1	ME-MS81 Tb ppm 0.01	ME-MS81 Th ppm 0.05
A0159453 A0159454 A0159455 A0159456 A0159456 A0159457		<5 <5 <5 <5 <5 <5	<0.1 3.6 2.8 3.9 3.8	0.02 0.60 0.47 0.59 0.57	0.9 27.2 20.5 27.1 7.1	0.01 0.25 0.19 0.26 0.32	0.2 7.8 5.3 7.3 10.7	0.4 24.6 18.3 23.9 7.1	0.12 6.27 4.44 6.25 1.91	0.6 76.2 41.9 111.0 183.0	0.11 4.72 3.40 4.70 1.60	<1 2 1 2 3	98.3 321 305 294 20.9	<0.1 0.7 0.4 0.7 1.1	0.02 0.47 0.38 0.49 0.34	0.16 9.32 5.57 9.04 14.80
A0159458 A0159459		<5 <5	4.4 2.4	0.77 0.47	31.5 11.3	0.35 0.19	9.7 6.5	26.7 13.0	6.85 2.93	104.5 15.8	5.17 2.61	3 4	125.5 235	1.0 0.4	0.62 0.39	13.05

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#### To: IMPALA CANADA LTD. BUSINESS NUMBER 131081184 556 TENTH AVE THUNDER BAY ON P7B 2R2

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#### **CERTIFICATE OF ANALYSIS** TB21243886 ME-MS81 ME-MS81 ME-MS81 ME-MS81 ME-MS81 ME-MS81 ME-MS81 ME-MS42 ME-MS42 ME-MS42 ME-MS42 ME-MS42 ME-MS42 ME-MS42 ME-MS42 Method Τm U V W Υ Yb Zr As Bi Hg In Re Sb Se Te Analyte ppm Units Sample Description 0.01 0.05 5 1 0.1 0.03 2 0.1 0.01 0.005 0.005 0.001 0.05 0.2 0.01 LOD <5 0.5 <2 0.2 A0159453 0.01 0.39 1 0.04 1.4 0.03 < 0.005 < 0.005 < 0.001 0.13 < 0.01 A0159454 0.25 2.82 118 1 15.6 1.72 129 21.9 0.15 < 0.005 0.018 0.001 0.42 0.3 0.02 98 0.45 0.3 0.03 A0159455 0.19 1.96 111 1 11.6 1.27 10.0 0.26 0.011 0.015 0.001 0.25 3.29 117 2 16.2 1.71 136 2.0 0.23 < 0.005 0.020 0.001 0.43 0.3 0.02 A0159456 0.27 4.77 3 14.0 2.01 136 1.7 0.25 <0.2 0.02 A0159457 160 < 0.005 0.019 < 0.001 0.30 2 3.0 0.33 4.72 124 19.2 2.19 157 0.78 0.021 0.2 0.04 A0159458 0.014 < 0.001 0.49 0.37 3 1.25 92 0.33 5.0 0.48 A0159459 0.18 119 11.7 4.1 0.71 0.007 0.062 0.005





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Method Analyte Sample Description LOD	ME-MS42 Tl ppm 0.02	ME-4ACD81 Ag ppm 0.5	ME-4ACD81 Cd ppm 0.5	ME-4ACD81 Co ppm 1	ME-4ACD81 Cu ppm 1	ME-4ACD81 Li ppm 10	ME-4ACD81 Mo ppm 1	ME-4ACD81 Ni ppm 1	ME-4ACD81 Pb ppm 2	ME-4ACD81 Sc ppm 1	ME-4ACD81 Zn ppm 2		
A0159453 A0159454 A0159455 A0159456 A0159457	0.04 0.14 0.08 0.07 0.04	<0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5	<1 26 21 23 36	1 50 50 49 22	20 40 30 40 60	1 2 1 2	2 69 62 64 77	9 15 26 10 3	<1 15 14 15 19	36 90 82 91 99		
A0159458 A0159459	0.04 0.09	<0.5 2.0	<0.5 0.9	30 114	181 4420	50 20	25	65 4400	11 22	16 12	96 107		



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		CERTIFICATE COMI	MENTS							
	LABORATORY ADDRESSES									
Applies to Method:	Processed at ALS Thunder Bay locate CRU-31 PUL-31	ed at 645 Norah Crescent, Tl CRU-QC PUL-QC	nunder Bay, ON, Canada LOG-21 SPL-21	LOG-23 WEI-21						
Applies to Method:	Processed at ALS Vancouver located C-IR07 ME-MS81 TOT-ICP06	at 2103 Dollarton Hwy, Nor ME-4ACD81 OA-GRA05	th Vancouver, BC, Canada. ME-ICP06 PGM-ICP23	ME-MS42 S-IR08						



Maps

