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# **Assessment Report on the Suni Iron Project Geological Mapping**

**Prepared for  
Backbone Hosting Solutions Inc.**

9160 Blvd Leduc, Suite 312  
Brossard, QC, J4Y 0E3

NTS Sheet 42L/03

Prepared by  
Brent Clark (G.I.T)  
Clark Exploration Consulting Inc.  
August 2019



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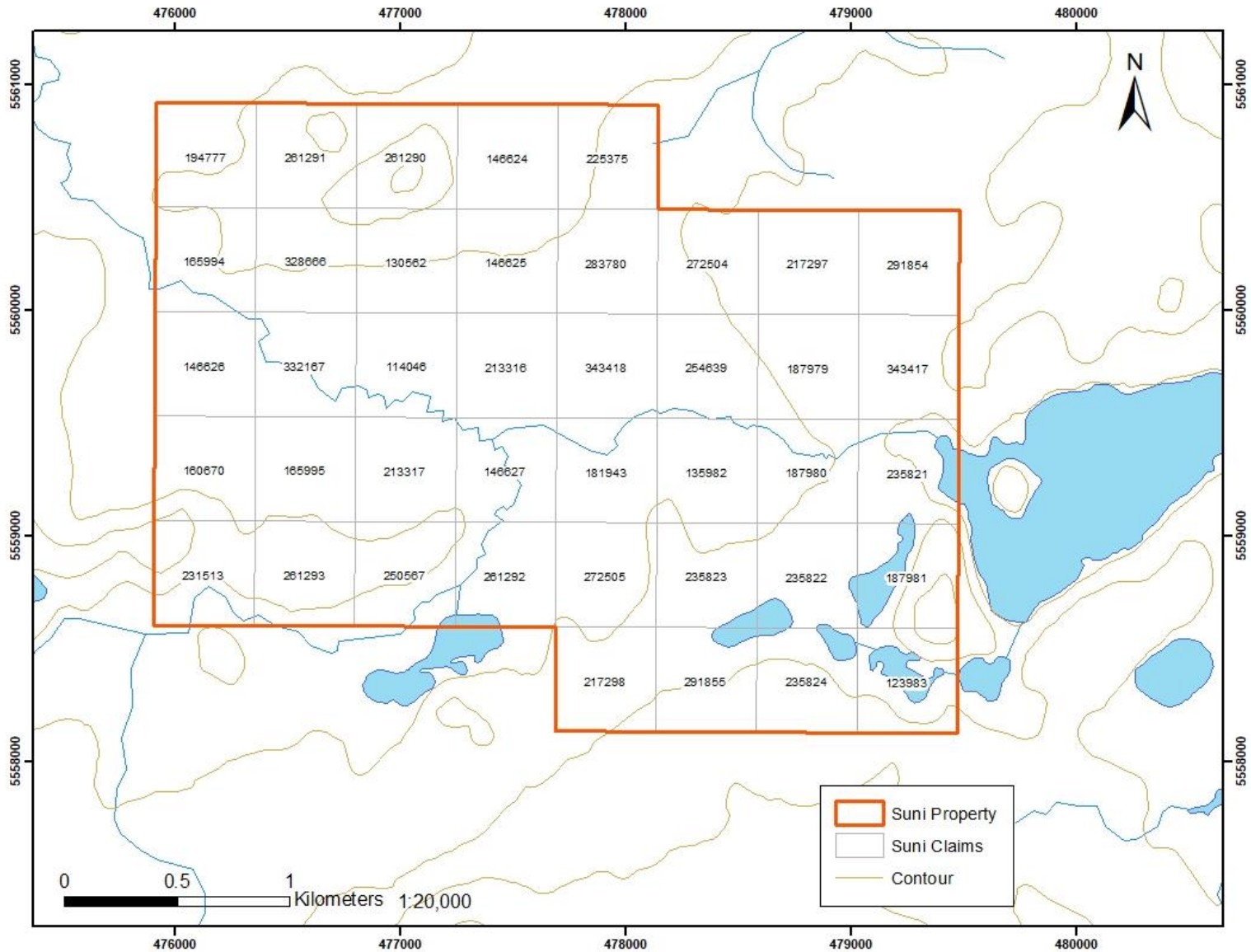
## 1.0 SUMMARY

Clark Exploration and Consulting was contracted by Backbone Hosting Solutions to carry out an exploration program on their Suni Iron Property located in Suni Township in the Thunder Bay Mining Division. The geological mapping program was carried out between August 8<sup>th</sup> to August 10<sup>th</sup>, 2019.

The Suni Iron Property is located approximately 60 kilometers northwest of the town of Geraldton, Ontario, approximately 40 kilometers west of the town of Nakina, Ontario, and approximately 245 kilometers northeast of the city of Thunder Bay, Ontario. The property is within NTS Sheet 42 L/03. The Suni Iron Property is comprised of 41 claims totalling 1092 hectares. The claims are shown in Figure 2 and are listed in Appendix I. The total work requirements for the claims is \$16,4000 annually

Figure 1: Suni Iron Property Location Map





## 2.0 LOCATION AND ACCESS

The SunI Iron Property is located approximately 60 kilometers northwest of the town of Geraldton, Ontario, approximately 40 kilometers west of the town of Nakina, Ontario, and approximately 245 kilometers northeast of the city of Thunder Bay, Ontario. The property is within NTS Sheet 42 L/03. Exploration crews can be accommodated in the communities of Geraldton and Nakina, Ontario; both communities are serviced by all weather roads and year-round asphalt tarmac airports. All necessary supplies such as; lodging, fuel and food are available in both communities. The city of Thunder Bay has a population of 110,000 and provides supports services, equipment and skilled labour for both the mineral exploration and mining industry. Rail, national highway, port and international airport services are also available out of Thunder Bay.

From Thunder Bay, the property can be reach by travelling east on highway 11/17 for approximately 110 kilometers until you reach the town of Nipigon, Ontario. From Nipigon you make a left turn onto highway 11 and follow that for approximately 160 kilometers until you reach the town of Geraldton, Ontario. The most direct access to the property is through small float equipped aircraft or helicopter. Aircraft services can be chartered from Jellicoe, Geraldton, or Nakina, Ontario. In the case of the current exploration project, Wiskair Helicopters was used out of Geraldton.

## 3.0 REGIONAL GEOLOGY

The property lies in the Eastern Wabigoon Terrane of the Superior Province. The Eastern Wabigoon Terrane is one of four terranes that make up the Wabigoon Subprovince (Figure 3). Regional Geology is displayed in Figure 4.

The following is an excerpt from Amukun (1980) that describes the regional geology of the area.

“The consolidated rocks underlying the map-area comprise an Early Precambrian (Archean) metavolcanic-metasedimentary assemblage trending east to northeast. This belt is bordered on the south by a large intrusive granitic mass and is intruded on the north side of Gledhill Lake by a small granitic stock. Middle to Late Precambrian (Proterozoic) diabase dikes cut all the other rocks of the map- area.”

“The metavolcanic-metasedimentary sequence is about 10 km wide in the map-area and in the map- area is made up of the following lithologic units in percent: mafic metavolcanics (44 to 53 percent SiO<sub>2</sub>) comprise 30 percent; intermediate to felsic

metavolcanics (53 to 75 percent SiO<sub>2</sub>) occupy 20 percent; felsic subvolcanic intrusive rocks make up 10 percent; metagabbro-metadiorite-lamprophyre comprise about 5 percent.”

“Mafic metavolcanics are present as two broad belts which strike east to northeast across the area. At the northeast corner of the map-area, northwest of Kowkash station, the northern belt is 2.4 km wide, but it thins to 400 m west of Gledhill Lake. The belt extends into the area to the west where it thickens again (Amukun 1977). The southern belt is 4.8 km wide in the area north and south of Jeffries Lake, but is only 2.4 km wide south of Oboshkegan Lake. This belt also extends into the area to the west where it attains thicker widths (Amukun 1977). The two belts are connected in the centre of the map-area about 1.6 to 2.4 km northeast of Indigo Lake.”

“The felsic metavolcanics are composed predominantly of pyroclastic units and appear essentially as two belts. The southernmost belt is 1.6 km wide and separates the mafic belts except in the centre of the map-area where the mafic belts are connected. The northern belt is the eastern extension of the Lac Ste. Marie band of the Tashota area (Amukun 1977) and extends into the Venus Lake area, and out of the map-area.”

“Volcaniclastic metasediments are present around Gledhill Lake and thinner beds of volcaniclastic metasediments are interlayered with the felsic pyroclastic rocks that host the iron formation of the central and north Onaman Iron Ranges.”

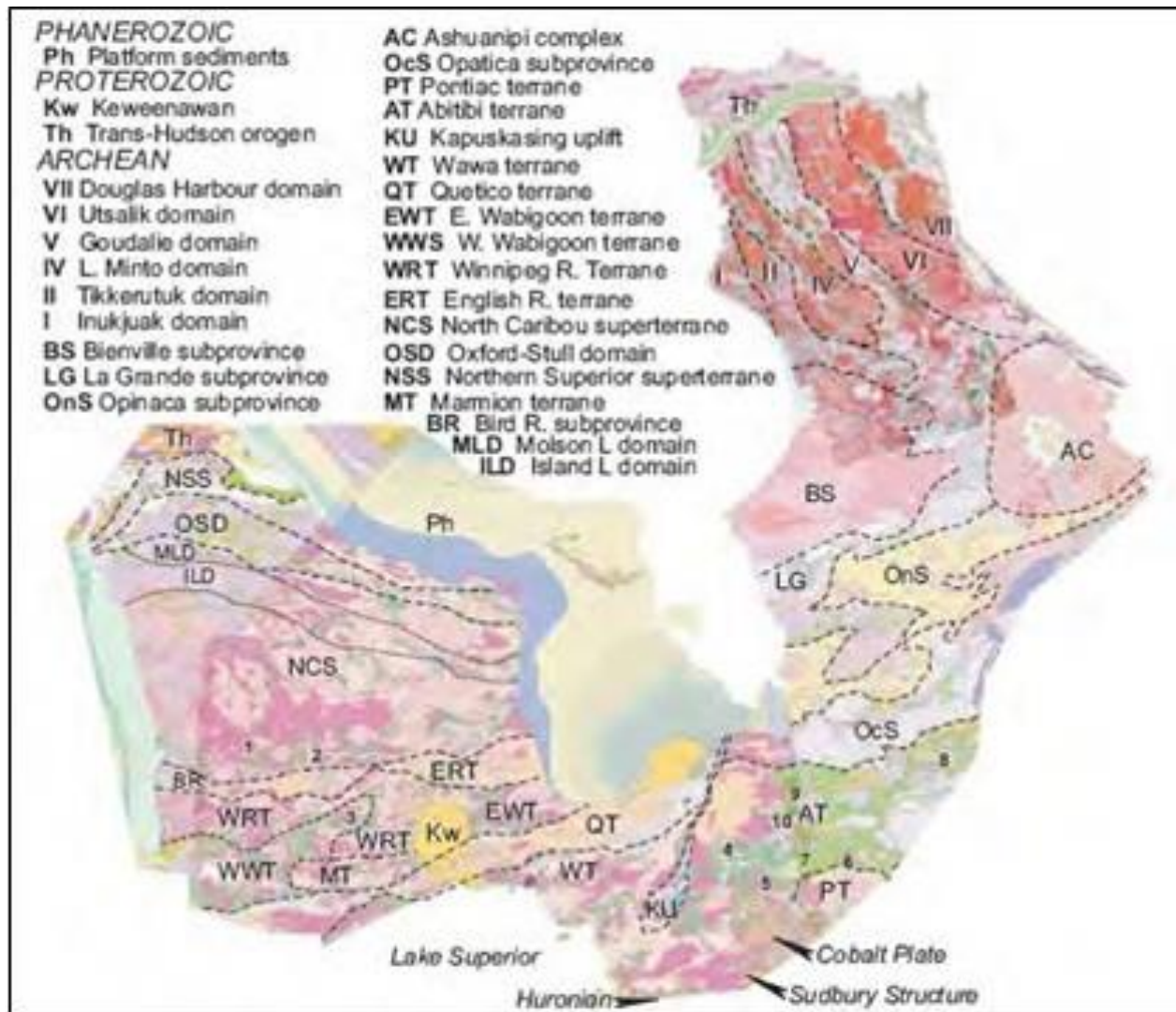
“Mafic intrusive sills and dikes of massive to foliated, medium- to coarse grained metagabbro, metadiorite, and lamprophyre intrude the metavolcanics and metasediments. These plutons were intruded prior to regional metamorphism and deformation and were probably emplaced during volcanism.”

“Felsic plutonic igneous activity started during volcanism with the intrusion of subvolcanic sheets of quartz porphyry, feldspar porphyry, and quartz-feldspar porphyry, (units 2g, 2q on Map 2412, back pocket). Major subsequent felsic plutonic igneous activity resulted in the emplacement of a potash poor granitic gneiss around Suni Lake. This granitic gneiss is intruded by massive biotite-hornblende granodiorite to quartz monzonite north of Suni Lake. A similar but smaller body of hornblende granodiorite to quartz monzonite is present northwest of Gledhill Lake.”

“Middle to Late Precambrian diabase dikes postdated the granitic intrusions and crosscut all other rocks of the map-area. These dikes form conspicuous ridges and nearly always contain magnetic minerals.”

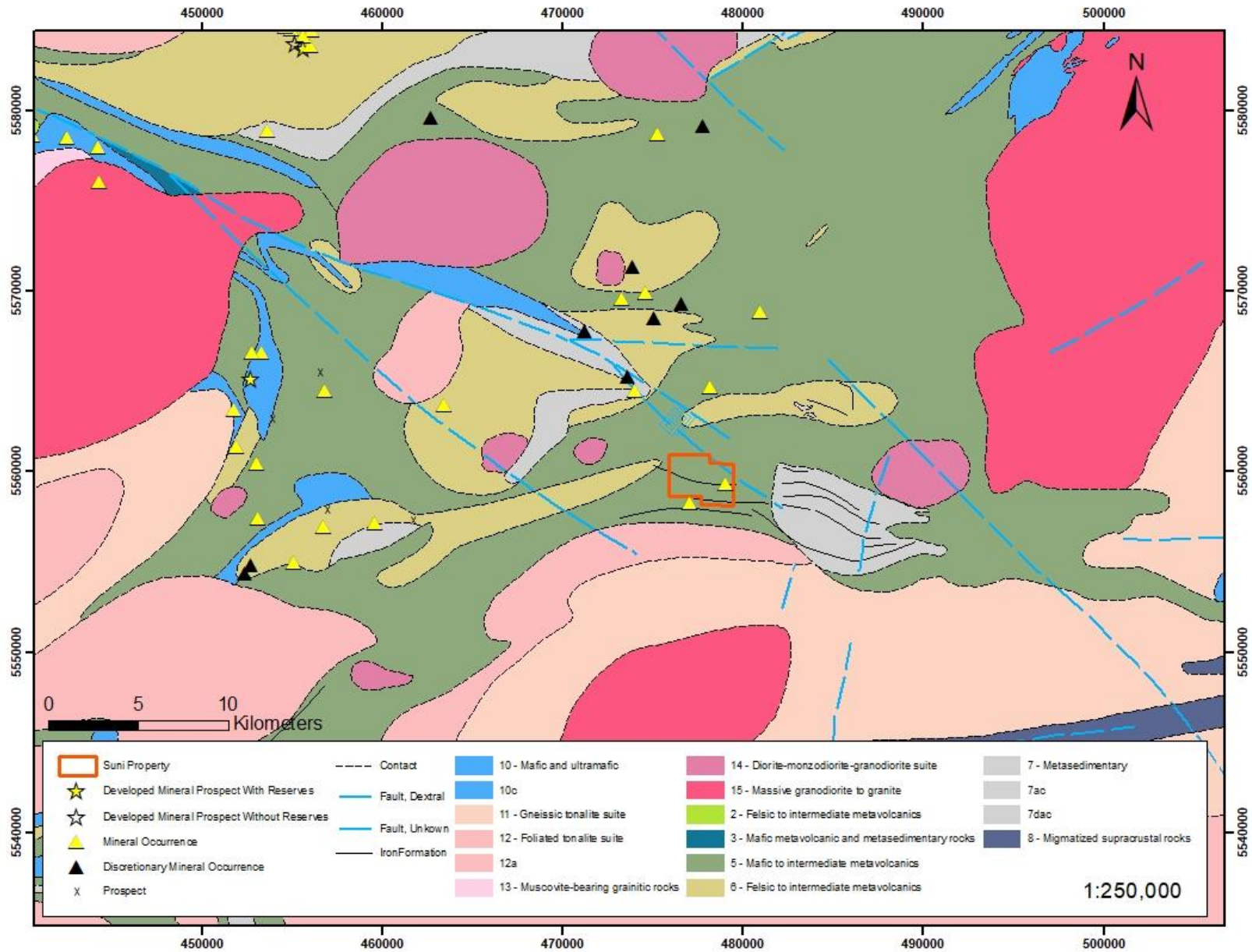


Figure 3: Map of Superior Province showing major tectonic elements (Percival, 2007)



\*Note: The Wabigoon Subprovince consists of the WWS, EWT, WRT and MT.

**Figure 4: Suni Iron Property Regional Geology**



## 4.0 PROPERTY GEOLOGY

Adapted from (Jolk, R. et al, 2011)

The iron formation occurrences in the area are Algoma-type and are known as the Onaman Iron Ranges. The Onaman Iron formation is subdivided into the northern, southern, and central ranges. The iron formation in the three ranges is poorly exposed and consists of a composite formation of narrow units of the metavolcanics, metasediments, and ferruginous metasediments. The ranges lay in a broad belt of Pre-Cambrian rocks which trend in an east west direction and are steeply dipping to the north with local shallower dips. The rock types are mainly metamorphosed lavas and inter-bedded sediments. They have been tightly folded into a series of minor synclines and anticlines lying along the north limb of a major anticline which is centered in the granite batholiths to the south.

The Suni Iron Project is located in the central Onaman Iron Range, just east of Jeffries Lake. The consolidated rocks underlying Suni Iron property comprise an Early Precambrian (Archean) metavolcanic-metasedimentary assemblage trending east to northeast. Middle to Late Precambrian (Proterozoic) diabase dikes cut all the older rocks. The area was covered by a glacial lake. Glacial deposits of this lake together with the glaciofluvial deposits of moraine.

The Suni Iron Project contains two iron deposits of Banded Iron Formation (BIF). The most westerly has been called the "West Zone". The most easterly part is called the "Jeffries Zone". The Jeffries Zone has a vertical dip on the east side and dips steeply north on the west side. The other zones dip steeply to the north, all in conformity with the bedding of the sediments.

The BIF of sedimentary origin consists of magnetic rich bands inter-bedded with jasper and greywacke. The magnetite bands are commonly from 0.55 to 0.18 cm thick although occasionally they are as much as 6.5 cm thick. An important metallurgical feature is that the waste bands which separate the magnetite bands do not contain disseminated magnetite. The iron formation contains two main iron-bearing rock-types, namely, magnetic chlorite sericite schist (slaty in part), and a banded magnetic jaspilitic cherty iron formation in which either red jasper or black chert predominates. The iron formation zones also contain grey chert bands, greywacke, dark grey to black siliceous slates, and quartz chlorite and sericite schists (Bartley, 1957).

Can-Fer Mines states that “The central range (Figure 6) contains 100 million tons proved and 100 million tons of indicated reserves. This includes a rock body 200 feet long and 800 feet wide, with an “island of waste 1,300 by 300 feet, outlined in the Jeffries Zone which contains 60 million tons to a depth of 600 feet averaging 22.5% mag Fe. Bulk samples from 2 pits grade 29.7% Fe. By wet magnetic methods and grinding to 88.90% - 325M, a concentrate assaying 66.5% Fe, 6% SiO<sub>2</sub> has been produced with a magnetic iron recovery of 94% (i.e. 3.14 tons crude produces 1 ton of concentrate).”

Figure 5: Suni Iron Property Geology

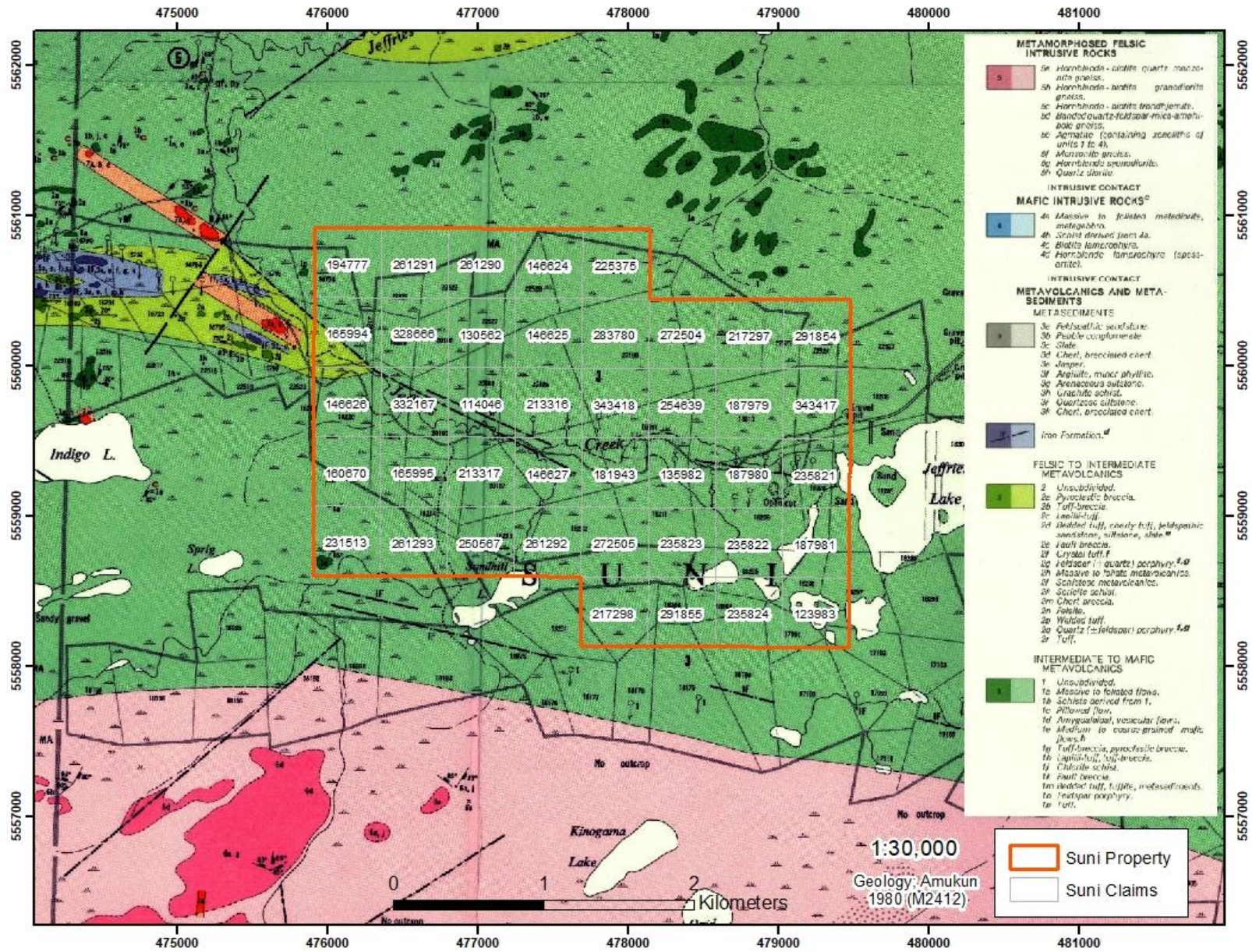
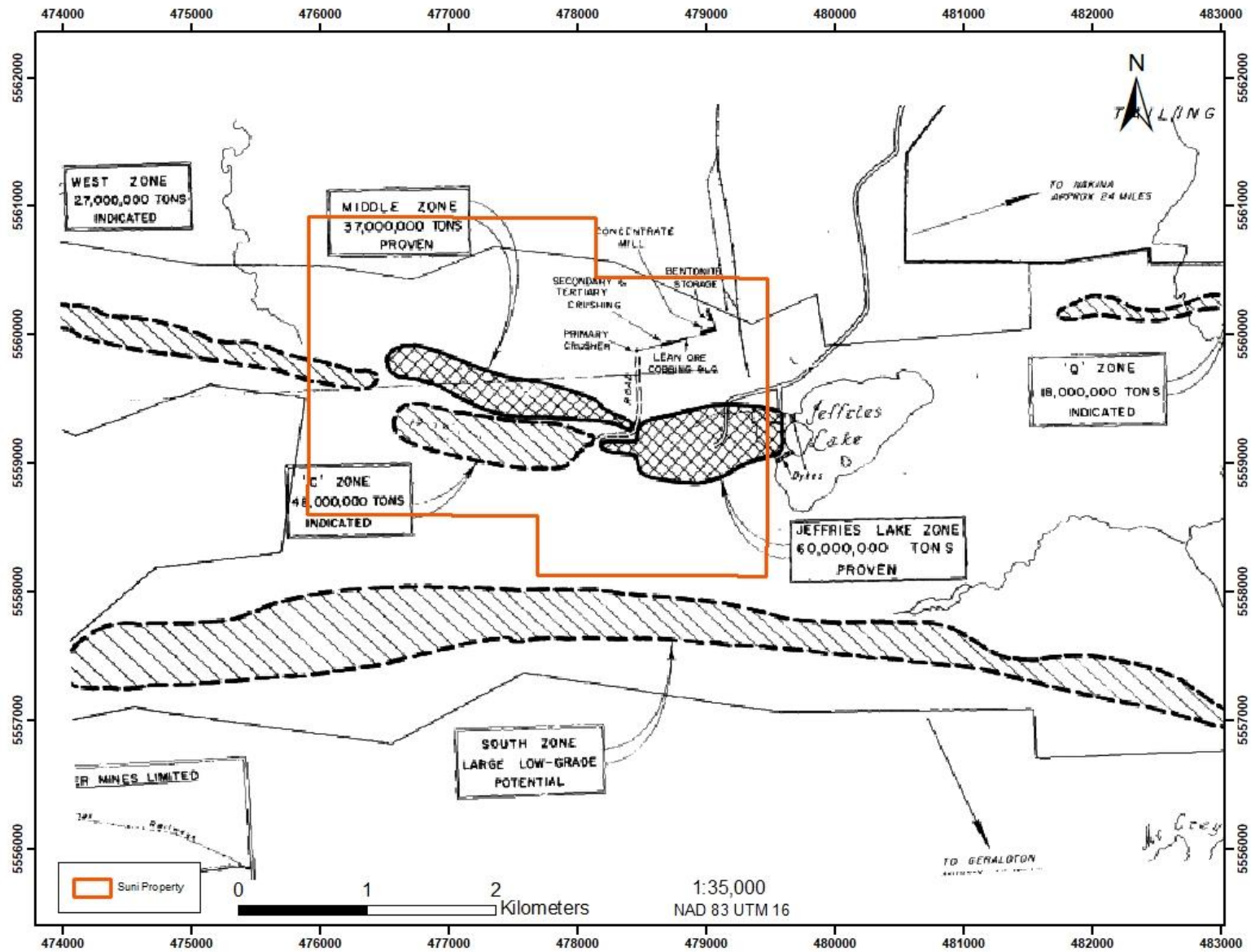


Figure 6: CanFer Mines Orezones map 1961



## 5.0 EXPLORATION HISTORY

This review of Exploration History was performed using a GIS based assessment work boundary layer and intersecting it with the current property boundary of the Rockstone project. It should be noted that this is not a complete review and a physical search of the assessment files should be performed to ensure it is complete (regarding filed assessment work). Because of the odd shape of the property a thorough compilation of assessment data should be performed to locate the exact positions of the work performed.

AFRI_FID	YEAR	PERFORM_FO	Author	TOWNSHIP_P	Work Summary	GO_LINK
42L03NW0007	1952	Kennco Expl (Canada) Ltd	Fleming, H. W.	Suni	Magnetometer survey identified anomalies related to banded iron formation	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>
42L03NW0015	1953	Kennco Expl (Canada) Ltd	R. Stevenson	Suni	11 Diamond Drill Holes totaling 1375m (4510.5 ft), no assays reported	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>
42L03NW0006	1953	Kennco Expl (Canada) Ltd	Fleming, H. W.	Suni	Magnetometer survey identified anomalies with a northeast to eastern trend	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>

AFRI_FID	YEAR	PERFORM_FO	Author	TOWNSHIP_P	Work Summary	GO_LINK
42L03NW0018	1954	Kennco Expl (Canada) Ltd	Fleming, H. W.	Suni	7 DDH totaling 847m (2780.8ft), no assays reported	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>
20000005112	1954	Kennco Expl (Canada) Ltd	Fleming, H. W.	Suni	Electromagnetic survey; 26 anomalies ranging from poor to excellent	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>
42L03NW0016	1958	Can-Fer Mines Ltd	No Author	Suni	4 DDH totaling (891m) 2924ft, no assays reported	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>
42L03NW0008	1959	Can-Fer Mines Ltd	Mead, E. R.	Suni	Magnetic survey, 3 DDH (no assays reported)	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>
42L03NW0017	1960	Can-Fer Mines Ltd	No Author	Suni	8 DDH (no assays reported)	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>
42L03NW0009	1960	Can-Fer Mines Ltd	Black, N. H.	Suni	Magnetic survey identified narrow intense anomalies	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>
42L03NW0014	1961	Can-Fer Mines Ltd	No Author	Suni	6 DDH totaling 1092m (3585ft)	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>
42L03NW0013	1961	Can-Fer Mines Ltd	No Author	Suni	29 DDH 4245m (13928ft)	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/</a>



AFRI_FID	YEAR	PERFORM_FO	Author	TOWNSHIP_P	Work Summary	GO_LINK
20000005932	2010	1401385 Ontario Inc	Siemieniuk, S., Cullen, D.	Oboshkegan	Prospecting with no significant results reported	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles">http://www.geologyontario.mndm.gov.on.ca/mndmfiles</a>
20000005680	2011	J Garry Clark, Terraquest Ltd	Clark, J. G.	Suni	Airborne mag survey	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles">http://www.geologyontario.mndm.gov.on.ca/mndmfiles</a>
20000007965	2013	Resource Capital	Siemieniuk, S.	Suni	Line cutting, georeferencing, and ground magnetics	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles">http://www.geologyontario.mndm.gov.on.ca/mndmfiles</a>

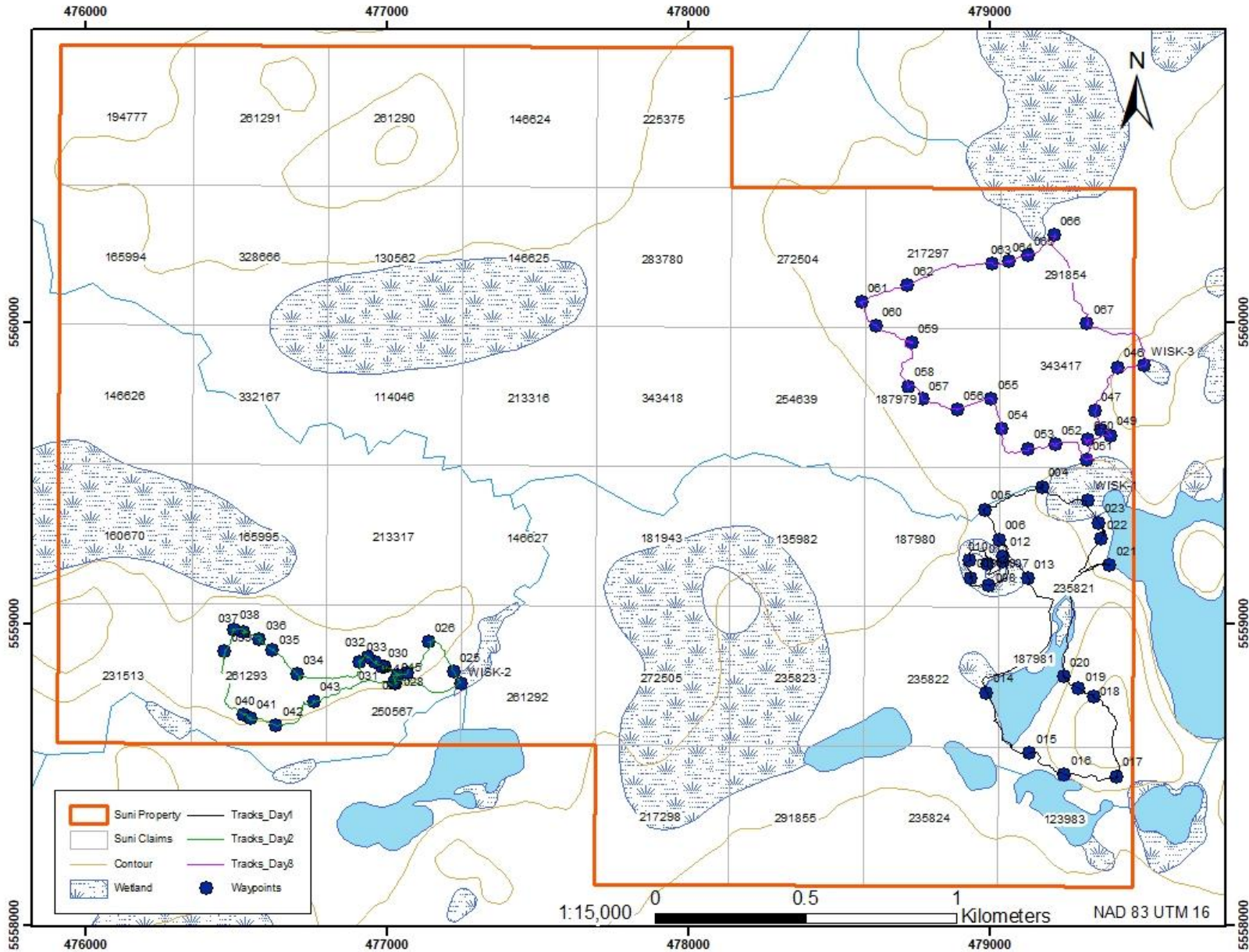
## 6.0 GEOLOGICAL MAPPING PROGRAM

Clark Exploration and Consulting was contracted to carry out a geological mapping program on Backbone Hosting Solutions Suni Iron Property. The purpose of the field program was to investigate the area surrounding historic workings on the property as well find evidence of iron formation outcrop.

The field program was conducted between August 8<sup>th</sup> to August 10<sup>th</sup>, 2019. A total of three field days was spent on the property by Clark Exploration personnel. The property was accessed via helicopter, based out of Geraldton, ON. The field mapping program failed to find iron formation in outcrop due to much of the property being covered by glacial deposits. Outcrop was noted on the south western portion of the property to the north of Sandhill Lake. The outcrop was dominantly mafic metavolcanics with rare interbedded felsic metavolcanics, with local gabbro (Appendix VI). Representative lithological samples were taken of each of the units. One sample taken (SI-BC-19-001) was of angular BIF float with alternating beds of jasper and magnetite from 1-4cm, located on the western side of the historic pit located on claim 187980 (Appendix V). At the time of this report assay results are pending.

Tree coverage varied but was dominantly composed of black spruce with minor poplar, tamarack, and cedar. Cover was composed of mosses, Labrador tea, and glacial sand to boulder deposits. In areas of thick cover approximate location of the BIF was inferred based on compass malfunction as well as historic electromagnetic surveys.

Figure 7: Summary of GPS tracks and Waypoint locations



## **7.0 CONCLUSIONS AND RECOMMENDATIONS**

The field program was unsuccessful in locating surface expressions of the BIF west of Jefferies Lake due to the high degree of glacial cover.

Clark Exploration recommends that the next step be a compilation and review of data followed by the planning and execution of a diamond drilling program to further delineate BIF and gather additional data for resource calculations.

## 8.0 REFERENCES

- Amukun, S.E, 1980: Ontario Geological Survey Report 198: *Geology of the Gledhill Lake Area, District of Thunder Bay* (Publication R198)
- Black, N. H. (1959) Report on a Gravity Survey for Can-Fer Mines Ltd Paska Township. (OAFD# 42L03NW0009)
- Clark, J. G., (2011) Natural Resource Holdings SunI Iron Project, Airborne High-Resolution Magnetic Survey. (OAFD# 20000005680)
- Fleming, H. W., (1952): Report on Magnetometer survey of a portion of the Paska Property of Kennco Explorations (Canada) Limited. (OAFD# 42L03NW0007)
- Fleming, H. W., (1953) Report on Magnetometer survey of Toronto Lake Property of Kennco Explorations (Canada) Ltd. (OAFD# 42L03NW0006)
- Fleming, H.W, Nicole, P.C., (1954) Diamond Drilling report for Kennco Explorations (Canada) Ltd. (OAFD# 42L03NW0018)
- Fleming, H.W., (1954) Report on the electromagnetic Survey in Paska Township, Ontario for Kennco Explorations (Canada) Limited. (OAFD# 20000005112)
- Jolk, R., Bryan, R., Bertisen, A., Martin, R., McCracken, T., (2011): Ore Calculation on the SunI Iron Property.
- Mead, E., R. (1959) Can-Fer Mines Limited, Report on Magnetic survey of the Shestad-minoletiy options Pasks and Oboshkegan Townships. (OAFD# 42L03NW0008)
- No Author (1958) Diamond Drilling Report for Can-Fer Mines Ltd. (OAFD# 42L03NW0016)
- No Author. (1960) Diamond Drilling Report for Can-Fer Mines Ltd. (OAFD# 42L03NW0017)
- No Author (1961) Diamond Drilling Report for Can-Fer Mines Ltd. (OAFD# 42L03NW0014)
- Siemieniuk, S., Cullen, D., (2010) 2010 Prospecting Program on 1401385 Ontario Ltd. SunI Iron Deposit. (OAFD# 20000005932)
- Siemieniuk, S. (2013) Assessment Report on the Georeferencing of unpatented mining claims, Line cutting, and ground magnetics program for Resources Capitals; SunI Iron Property. (OAFD# 20000007965)
- Stevenson, R. (1953) Diamond Drilling Report for Kennco Explorations (Canada) Ltd. (OAFD# 42L03NW0015)

## 9.0 CERTIFICATE AND QUALIFICATIONS

Brent Clark  
941 Cobalt Crescent  
Thunder Bay, Ontario  
Canada, P7B 5Z4  
Telephone: 807-622-3284, Fax: 807-622-4156

### CERTIFICATE OF QUALIFIED PERSON

I, Brent Clark, do hereby certify that:

1. I graduated with the degree of Honours Bachelor of Science (Earth Sciences) from Carleton University, Ottawa, Ontario in 2014.
2. "Assessment Report" refers to the report titled "Assessment Report on the Suni Iron Property"
3. I am a registered Geologist in Training (G.I.T) the Professional Geoscientists of Ontario (#10506).
4. I have worked as a Geologist for 5 years since my graduation from university.
5. I have had no other prior involvement with the mineral Property that forms the subject of this Technical Report.
6. As of the date of this certificate, and to the best of my knowledge, information and belief, the Assessment Report contains all scientific and technical information that is required to be disclosed to make the Assessment Report not misleading.

Dated this 15<sup>th</sup> day of August 2019.

SIGNED

“Brent Clark”

---

Brent Clark, G.I.T

## **APPENDIX I**

### Suni Iron Property Claims List

<b>Township</b>	<b>Tenure ID</b>	<b>Tenure Type</b>	<b>Anniversary Date</b>	<b>Extension</b>	<b>Status</b>	<b>Work Required</b>
SUNI	114046	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	130562	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	146624	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	146625	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	146626	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	146627	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	160670	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	165994	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	165995	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	181943	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	194777	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	213316	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	213317	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	225375	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	231513	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	250567	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	261290	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	261291	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	261292	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	261293	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	272505	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	283780	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	328666	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	332167	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	343418	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	123983	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	135982	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	187979	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	187980	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	187981	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	217297	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	217298	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	235821	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	235822	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	235823	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	235824	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	254639	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	272504	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	291854	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400
SUNI	291855	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400



<b>Township</b>	<b>Tenure ID</b>	<b>Tenure Type</b>	<b>Anniversary Date</b>	<b>Extension</b>	<b>Status</b>	<b>Work Required</b>
SUNI	343417	Single Cell Mining Claim	2019-03-06	2019-08-30	Active	\$400

## **APPENDIX II**

### Daily Log

Wednesday, August 7, 2019

- Sam Metteer flew into Thunder Bay and finished gathering supplies before driving up to Geraldton.

Thursday, August 8<sup>th</sup>, 2019

- Met helicopter at Geraldton airport at 8:30am, went over safety briefing and departed to claims, arrived at 9:15am. Landed at the western edge of Jefferies Lake. From there traversed west along river before heading south to 'Old Pit' location. Minor BIF boulders angular in nature found along shoreline (SI-BC-19-001). Continued south to claim boundary to inspect topographic highs/ridges. All were glacial deposits with varying types of tree cover.

Friday, August 9<sup>th</sup>, 2019

- Depart for property at 8:30am.
- Landed on claim 250567. Traversed west on claims 2505687 and 261293 along ridgeline where potential outcrop was spotted from the air the day prior. Encountered gabbroic unit on northern part of ridge where we continued west and encountered a mafic metavolcanic unit. Contact was at 260/70. Rep samples taken of lithologies. Picked up where dropped off and scouted landing areas for tomorrow north of Day 1 traverses.

Saturday, August 10<sup>th</sup>, 2019

- Travelled to claims 343417, 187979, 217297, and 291854 to investigate areas of blowdown and topographic highs. Intersected outcrops of mafic metavolcanics. Found old drilling road running E-W along northern shore of Jefferies Lake. Departed back to Geraldton, helicopter ferried back to Thunder Bay.

### **APPENDIX III**

GPS waypoint locations and descriptions

**Day 1 Waypoints and Descriptions**

Waypoint	Descript	Rock Type	Tree Type	Sample ID	Comment	DateTimeS	UTM_E	UTM_N	Datum	Zone
4	Old 3ft culvert blocked by beaver dam along old road				Compass off	2019-08-08T13:31:40Z	479175	5559454	NAD 83	16N
5	OB no outcrop		Black Spruce / Tamarack			2019-08-08T13:47:35Z	478983	5559378	NAD 83	16N
6	OB no outcrop		Black Spruce			2019-08-08T13:52:27Z	479030	5559279	NAD 83	16N
7	boulders along edge of clearing		Black Spruce			2019-08-08T13:59:36Z	479044	5559207	NAD 83	16N
8	small 15m wide clearing with boulders/sand		Black Spruce / Tamarack			2019-08-08T14:04:40Z	478997	5559127	NAD 83	16N
9	glacial deposits along western edge of swamp 'Pit'			SI-BC-19-001	Angular 0.4mx0.3mx0.3m boulder of BIF. Alternating bands of jasper and magnetite 2mm-2cm. Bands are planar. One surface normal to layer appears to have lineation's defined by grooves along magnetite surface	2019-08-08T14:17:56Z	478935	5559152	NAD 83	16N

Waypoint	Descript	Rock Type	Tree Type	Sample ID	Comment	DateTimeS	UTM_E	UTM_N	Datum	Zone
10	Angular boulder (sub-crop?) 1x0.5mx0.3m tall dark grey/black w/ stretched mm-scale qz layers. Ultra fine-grained; appears ultra mylonitic. Patches of 1mm-sized garnets. Isoclinally folded. Magnetite layers ~5cm wide within rock.		Black Spruce			2019-08-08T14:44:56Z	478933	5559211	NAD 83	16N
11	OB no outcrop		Black Spruce / Tamarack			2019-08-08T15:00:55Z	478991	5559200	NAD 83	16N
12	stand of paper birch and alders		Birch / Alders			2019-08-08T15:06:48Z	479045	5559223	NAD 83	16N
13	OB no outcrop		Black Spruce			2019-08-08T15:13:47Z	479127	5559151	NAD 83	16N
14	black spruce on SW side of swamp rimmed by small alders		Black Spruce			2019-08-08T15:27:46Z	478989	5558772	NAD 83	16N
15	Ridge of blowdown		Spruce / Pine			2019-08-08T16:04:24Z	479133	5558571	NAD 83	16N
16	Ridge of blowdown		Spruce / Pine			2019-08-08T16:13:41Z	479247	5558500	NAD 83	16N
17	Ridge of blowdown		Poplar / Pine / Spruce			2019-08-08T16:27:24Z	479421	5558493	NAD 83	16N

Waypoint	Descript	Rock Type	Tree Type	Sample ID	Comment	DateTimeS	UTM_E	UTM_N	Datum	Zone
18	Blow down, sandy ridge		Poplar / Pine / Spruce			2019-08-08T16:56:40Z	479345	5558757	NAD 83	16N
19	Blow down, sandy ridge		Poplar / Pine / Spruce			2019-08-08T17:07:35Z	479295	5558786	NAD 83	16N
20	Cedar trees along NW facing step ridge		Cedar			2019-08-08T17:13:31Z	479245	5558824	NAD 83	16N
21	Blow down, no outcrop, glacial sand/boulders		Black Spruce			2019-08-08T17:27:47Z	479398	5559195	NAD 83	16N
22	Blow down, moss / Labrador tea		Black spruce			2019-08-08T18:08:29Z	479369	5559281	NAD 83	16N
23	old Claim post #1 478???					2019-08-08T18:25:00Z	479362	5559335	NAD 83	16N

**Day 2 Waypoints and Descriptions**

Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimes	UTM_E	UTM_N	Datum	Zone
25	Blow down, no outcrop, glacial sand/boulders		Black spruce			2019-08-09T13:02:36Z	477222	5558841	NAD 83	16N
26	Blow down, no outcrop, glacial sand/boulders		Black spruce			2019-08-09T13:10:12Z	477138	5558941	NAD 83	16N
27	Blow down, no outcrop, glacial sand/boulders		Black spruce			2019-08-09T13:19:06Z	477065	5558838	NAD 83	16N
28	SW-NE trending outcrop 10-15m long x 4m tall. Weathered surface light brown/grey in colour, fresh surface medium grey with 1-2mm sized equigranularity subhedral grey & white crystalline minerals with massive texture. Mineralogy appears to be pyroxene (60%), plagioclase (40%) w/ <1% fg anhedral pyrite. rock is weakly magnetic. vertical to sub-vertical joint set at 345	Gabbro		SI-BC-19-002	rep sample taken from east facing slope	2019-08-09T13:23:24Z	477034	5558831	NAD 83	16N
29	10m scale outcrop of same rock type as above. En echelon joint set at 345 feature light green epidote/actinolite chlorite, sub-vertical.	Gabbro				2019-08-09T14:03:10Z	476990	5558856	NAD 83	16N



Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimes	UTM_E	UTM_N	Datum	Zone
30	rounded outcrop along topo high. Light brown-grey weathered surface, massive, medium grained gabbro. Joints vertical to sub @ 325. Chl/actinolite altered shear with sinistral displacement	Gabbro				2019-08-09T14:11:33Z	476983	5558856	NAD 83	16N
31	Outcrop is rounded topo covered by mosses. Weathered surface is light brown-grey, massive. En echelon tension gashes common, along with sub-parallel joints (sub-vertical) @325-350. Tension gashes @ 200. Where tension gashes <1mm wide rock appears green in colour (epidote/chlorite?)	Gabbro				2019-08-09T14:26:19Z	476960	5558872	NAD 83	16N
32	Outcrop 10m x 15m x 1m. Light brown-grey weathered surface, medium grained gabbro. Joint set @ 145/82	Gabbro				2019-08-09T14:38:45Z	476933	5558890	NAD 83	16N

Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimes	UTM_E	UTM_N	Datum	Zone
33	<p>2m x 2m outcrop beneath blown down tree. Rock type different than gabbro: layered outcrop 296°/86°N. Two layers are distinctive on outcrop: one is dark brown/grey, weathered, dark green, fresh surface is v.f.g., foliated greenschist, weathered surface is very soft: chlorite/actinolite. Other layer type is cream/white weathered, cream/grey fresh surface. Fresh surface reveals 1-2mm-sized Qz-pl-Bt, with the plagioclase and quartz as equant, subhedral grains, and interstitial biotite. Pl: 55%, Qz: 35%, Bt: 10% Felsic layers are foliation-parallel, vary in width 3cm-100cm (or wider) show some evidence of deformation; pinch-and-swell and incipient boudinage. Some felsic material is stretched &amp; drawn out within other unit. Qz-filled extension fractures inject 5cm thick layer (drawing (3)) . The darker unit is extremely foliated, soft, appears to have deformed more ductility than light-coloured unit. Some light layers do not have perpendicular fractures or boudinage. Lighter unit appears porphyritic at fresh surfaces; defined by light-coloured 1-2mm</p> <p>gz+fsp, dark matrix.</p>	Mafic Metavolcanic		SI-BC-19-003 SI-BC-19-004	Rep samples taken of both fg mafic metavolcanic and mg-cg felsic metavolcanic(?)	2019-08-09T15:04:06Z	476909	5558875	NAD 83	16N

Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimes	UTM_E	UTM_N	Datum	Zone
34	Outcrop 1x2m weathered surface is light green-grey with local oxidization. Fresh medium green-grey, fine grained, weakly foliated. Mineralogy chlorite/actinolite. /plag/qtz +/- fg anhedral pyrite. Local qtz/cr veins up to 3mm cross cutting foliation at 035/70. Foliation @ 292/64.	Mafic Metavolcanic				2019-08-09T16:21:21Z	476700	5558832	NAD 83	16N
35	Blow Down, No outcrop		Spruce / Poplar			2019-08-09T16:35:42Z	476619	5558914	NAD 83	16N
36	1x2m outcrop exposed from blown down tree. Weathered surface is light green-cream, fresh green-grey. Fg-mg, foliated @ 280/66. Contains finer and coarse grained laths. Coarser grained contains subhedral and bladed laths of actinolite up to 5mm with anhedral cream-white plagioclase as matrix. Qtz/crb veinlets cross cut foliation @ 010/75	Mafic Metavolcanic				2019-08-09T16:46:39Z	476575	5558948	NAD 83	16N

Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimes	UTM_E	UTM_N	Datum	Zone
37	282°/67° foliated green/grey fine-grained rock. This collection of ~1x1m outcrops beneath blow-down features occasional 1cm-wide qz veins (035/62), rusty rock, and at least one 10x20cm breccia pod controlled by joints at 055°/70° SE. Breccia pod is matrix-supported features angular clasts broken along foliation orientation.	Mafic Metavolcanic				2019-08-09T17:19:04Z	476522	5558970	NAD 83	16N
38	3x3m outcrop of fine grained green-grey weakly foliated rock with occasional qtz/crb veins. Foliation @ 280/65	Mafic Metavolcanic				2019-08-09T17:47:49Z	476489	5558982	NAD 83	16N
39	1x1m fine grained weakly foliated green-grey	Mafic Metavolcanic				2019-08-09T18:13:30Z	476460	5558909	NAD 83	16N
40	fine grained weakly foliated @ 240/64, qtz/crb veins parallel to foliation.	Mafic Metavolcanic				2019-08-09T18:31:27Z	476523	5558699	NAD 83	16N
41	Large qtz vein ~1m wide flanked by weakly foliated fine grained green-grey metavolcanics. Qtz veins is dark grey to blue in colour. No visible sulphides.	Mafic Metavolcanic		SI-BC-19-005	qtz vein, medium grey/blue to white, local <1mm anhedral pyrite	2019-08-09T18:55:48Z	476544	5558685	NAD 83	16N
42	No outcrop		Black Spruce			2019-08-09T19:06:40Z	476631	5558663	NAD 83	16N

Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimes	UTM_E	UTM_N	Datum	Zone
43	Sub-crop(?) weakly foliated @ 310/40	Mafic Metavolcanic				2019-08-09T19:20:07Z	476756	5558744	NAD 83	16N
44	South facing slope, outcrop ~10m long and 1m in height. Weathered surface is green-grey with local oxidization. Local qtz/crb veins <1cm parallel to foliation @ 287/76					2019-08-09T19:44:22Z	477027	5558803	NAD 83	16N
45	Contact between Gabbro and metavolcanics @ 260/70. Gabbro is fine grained up to 3m away from contact (chilled margin?) Metavolcanics are heavily stretched, foliated. Joint set cross cuts both units @ 330/75.	Gabbro / Metavolcanics				2019-08-09T19:50:01Z	477024	5558807	NAD 83	16N

**Day 3 Waypoints and Descriptions**

Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimeS	UTM_E	UTM_N	Datum	Zone
46	Blow down, no outcrop, glacial sand/boulders		Black Spruce			2019-08-10T12:57:13Z	479424	5559852	NAD 83	16N
47	Blow down, no outcrop, glacial sand/boulders		Black Spruce			2019-08-10T13:04:50Z	479349	5559706	NAD 83	16N
48	compass reversed		Black Spruce			2019-08-10T13:08:44Z	479370	5559643	NAD 83	16N
49	old road running east west. Compass off 90 to west		Black Spruce			2019-08-10T13:11:43Z	479400	5559624	NAD 83	16N
50	compass off 90 to west. Intersected old claim line.		Poplar / Spruce			2019-08-10T13:15:46Z	479325	5559611	NAD 83	16N
51	old claim line. Tamarack along edge of swamp. Black spruce between here and last		Tamarack / Black Spruce			2019-08-10T13:25:47Z	479320	5559545	NAD 83	16N
52	Fork in old road. One runs south towards culvert at WP004. Other smaller and more overgrown continues west.		Black Spruce / Poplar			2019-08-10T13:31:18Z	479217	5559594	NAD 83	16N
53	Old road covered in alders, swampy cover. Surrounded by Black Spruce.		Black Spruce / Alders			2019-08-10T13:37:07Z	479126	5559581	NAD 83	16N
54	Spruce blow down. Sandy/glacial topo high covered in thick moss		Black Spruce			2019-08-10T13:46:10Z	479039	5559648	NAD 83	16N
55	Blow down, no outcrop, glacial sand/boulders.		Black Spruce			2019-08-10T13:55:37Z	479005	5559746	NAD 83	16N

Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimeS	UTM_E	UTM_N	Datum	Zone
56	moss / swampy cover (very wet)		Black Spruce / Alders			2019-08-10T14:01:30Z	478893	5559712	NAD 83	16N
57	Minor alders diminishing away from 56		Black Spruce / Alders			2019-08-10T14:07:47Z	478776	5559748	NAD 83	16N
58	Blow down, no outcrop, glacial sand/boulders.		Black Spruce			2019-08-10T14:11:58Z	478728	5559788	NAD 83	16N
59	Blow down, no outcrop, glacial sand/boulders. Labrador tree		Black Spruce			2019-08-10T14:21:29Z	478742	5559933	NAD 83	16N
60	Lush mossy carpet; thick sandy soil; not outcrop		Black Spruce			2019-08-10T14:28:15Z	478623	5559989	NAD 83	16N
61	Area of near-complete blow-down reveals no OC					2019-08-10T14:34:48Z	478573	5560066	NAD 83	16N
62	Pleasant spruce bog with Labrador tea.					2019-08-10T14:48:44Z	478727	5560124	NAD 83	16N
63	Spruce and poplar with thick moss carpet.					2019-08-10T14:58:16Z	479007	5560195	NAD 83	16N
64	2x1m OC beneath blown-down tree. Green-grey, fine-grained, rock with occasional cm/scale ductility deformed qz veins. No rust, no alteration. Rock is highly jointed, fractured, difficult to determine foliation orientation. Fracture spacing $\geq$ 5cm. Fracture sets: 065°/70° S, 032°/51°	Mafic Metavolcanic				2019-08-10T15:05:25Z	479065	5560202	NAD 83	16N

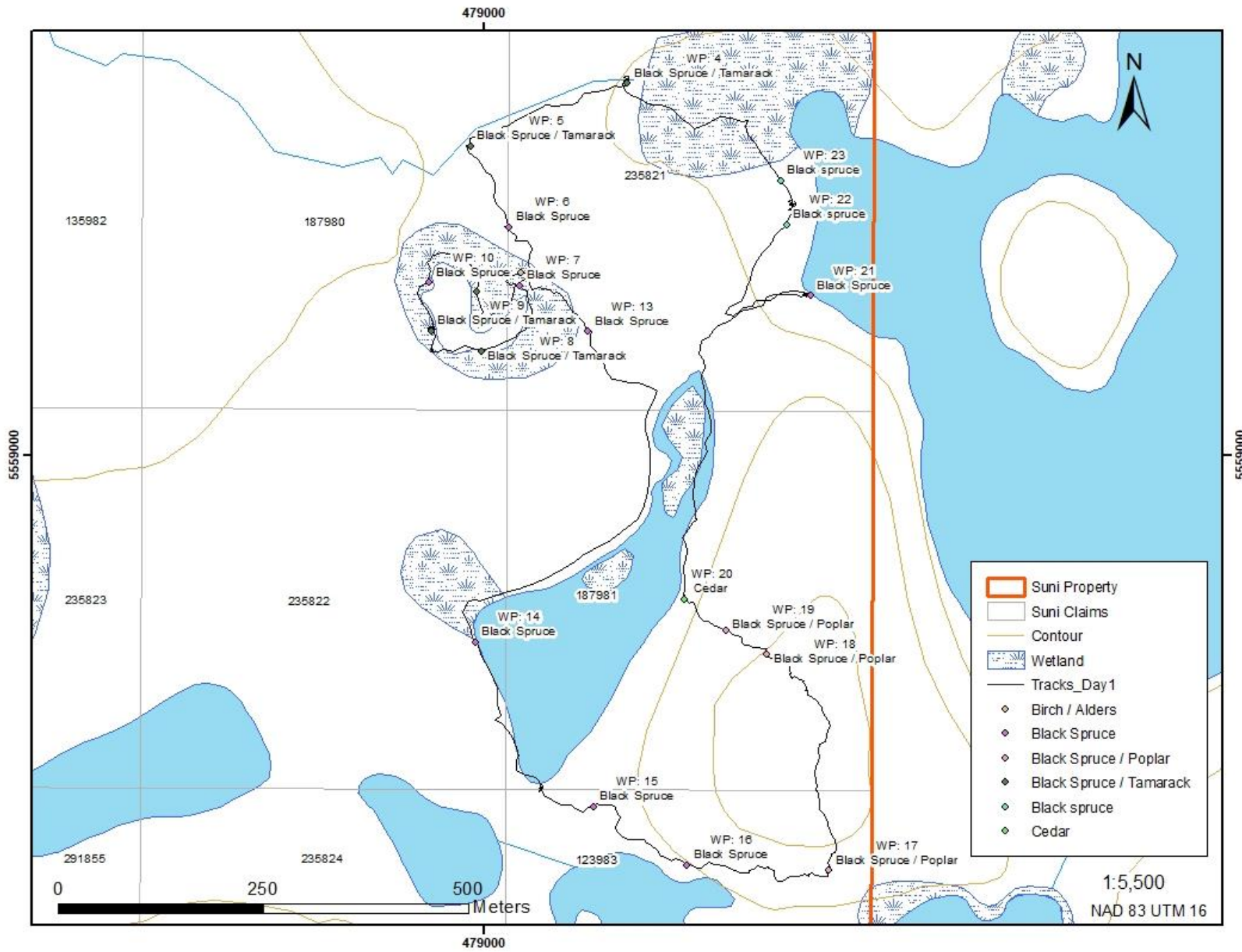
Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimes	UTM_E	UTM_N	Datum	Zone
	SE, 012°/71° E, 321°/74° NE. Foliation of qz veins: 132°/76° SW.									
65	20mx20m partly mossy outcrop is a broad dome topo high with gently-sloping sides. Weathered surface of rock is med-grey/green. Fresh surface of rock is dark green, consists of interlocking crystals of 1-2mm actinolite and chlorite and plagioclase. Weathered surface reveals amphibole crystals standing proud relative to feldspar which are preferentially weathered out. Plag laths are 1-2mm, slender, subhedral. Rock does not appear foliated, joints are spaced 80cm apart. Ductile shears @ 175°/79° W are ~5cm wide, include	Gabbro				2019-08-10T15:43:33Z	479126	5560223	NAD 83	16N

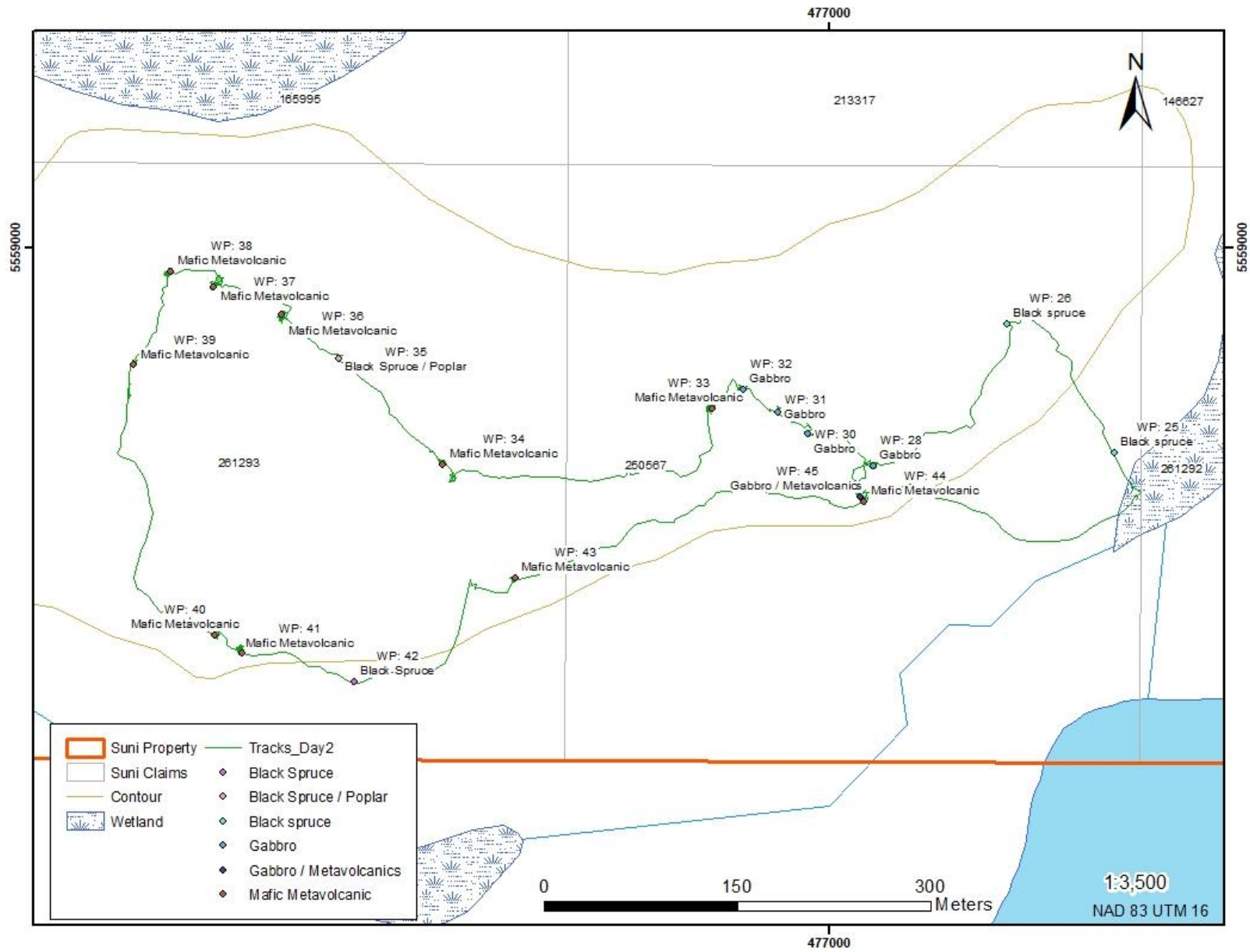


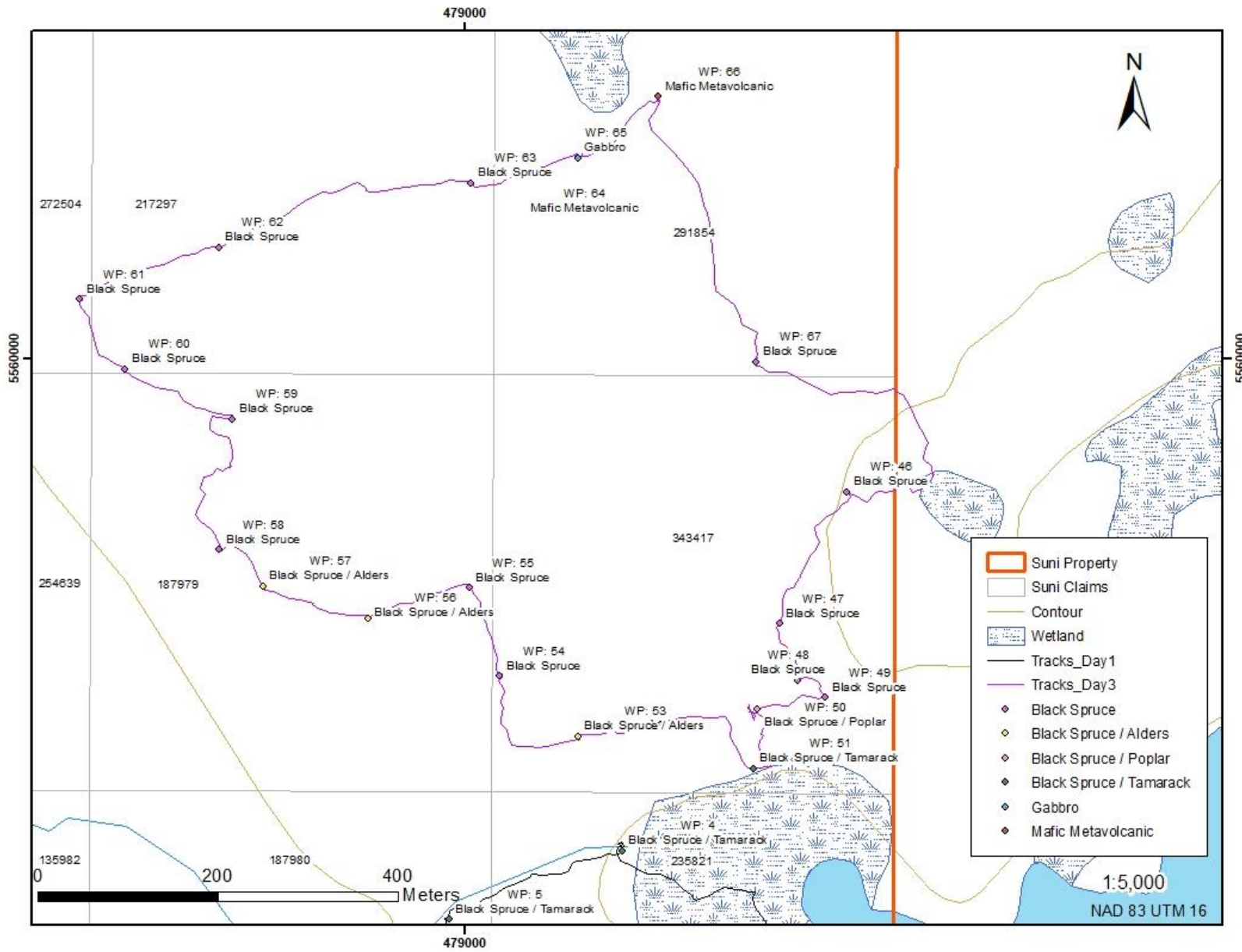
Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimes	UTM_E	UTM_N	Datum	Zone
	stretched, ductility deformed qz veins.									
66	Partly moss-covered outcrop is 5mx10m, features fine-grained light green high fractured rock, very much like WP064. Fractures are mm-scale, feature quartz. Dominant fracture sets: 055°/62° SE, 025°/40° E. Fractures are tightly-spaced, </_ 5cm.	Mafic Metavolcanic				2019-08-10T16:10:39Z	479215	5560291	NAD 83	16N
67	Moss-covered relative topo-high. No outcrop.					2019-08-10T16:23:20Z	479323	5559997	NAD 83	16N
WISK-1	Helicopter Landing Day 1				Swamp	2019-08-08T13:15:47Z	479326	5559411	NAD 83	16N

Waypoint	Descript	Rock Type	Tree Type	Sample_ID	Comment	DateTimes	UTM_E	UTM_N	Datum	Zone
WISK-2	Helicopter Landing Day 2				Swamp	2019-08-09T12:54:38Z	477244	5558802	NAD 83	16N
WISK-3	Helicopter Landing Day 3				Swamp	2019-08-10T12:46:01Z	479513	5559858	NAD 83	16N

**APPENDIX VI**  
Geological Maps







## **APPENDIX V**

### Sample Photos



SI-BC-19-001





SI-BC-19-002







