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# Report on Prospecting and Physical Work Done on the Maun Lake Area Claims for Whitefish Exploration Ltd. – 2021.

Thunder Bay Mining Division Northwest Ontario

NTS 42-L-7 UTM Zone 16 502000 E 5589000 N Rand Hodgson B.Sc. B. Ed.

Dec. 20, 2020

# **Table of Contents**

- -Statement of work done
- -Introduction
- -Property Description, Location, Access
- -Topography and Drainage
- -Exploration History
- -Regional Geology
- -Property Geology
- -Mineralization
- -Conclusions and Recommendations
- -References
- -Statement of Qualifications
- -Map-1- Ontario Location Map
- -Map-2- Detailed Property Location Map
- -Map-3- Claim Map
- -Map-4- Regional Geology Map
- -Map-5- Prospecting and Sample location Map- Scale 1:4000- back pocket
- Appendix I- Sample Locations and Descriptions
- Appendix II- Daily Report of Work
- Appendix III- Assay Certificate
- Appendix IV-Expense Summary
- Appendix V- Accommodation receipts
- Appendix VI- Assay receipt

# **Statement of Work Done**

- 2 man- days compiling historical data from EMND files.
- 4 man -days travel
- 4 man-days logistics, mobilization etc.
- 14 man- days prospecting
- 4 man-days stripping and trenching

# Introduction

This report describes a program of prospecting and physical work carried out on a 120 hectare claim group in the Maun Lake Area of Northwestern Ontario-Thunder Bay Mining Division. The prospecting was carried out between July 8 and July 25 2021 by Rand Hodgson (CL # 145101, lic. # 1001968)-residence 287 Swanston Ave' Peterborough Ontario and Tom Green (CL # 10004667,lic.# 2001406)- residence at 17 Beverly Drive, Janetville, Ontario. It was carried out using pace and compass traversing supported by GPS location. Traverse lines were randomized according to outcrop location. A total of 28 rock samples were assayed for gold using routine fire assay methodology. Results are submitted in the Appendix and are located on the sample location map (scale 1:5000). Samples are described and GPS located. All co-ordinates are from UTM Zone 16. The aim of the 2021 prospecting program was to determine a lithological connection between the New Athona deposit located 500 m southwest of the property and the new "Discovery" cluster of occurrences located 400 m to the northeast. The challenge of accessing this central part of the regional Whitefish Property was solved by the construction of the access trail in 2020. Last year's program identified the mineralized zone on the group-but only on the last day.

This program continues in the same general area as last years-in order to follow-up and delineate the zone's dimensions. The mineralized zone is identified as having a thickness of about 250 meters or more and is confirmed continuous along strike for 3500 meters and open in both directions.

The dominant lithology which hosts the gold mineralization is a mafic breccia interbedded with local felsic breccias, sericite schists, and associated quartzfeldspar porphyry (QFP). The porphyry's are ubiquitous across the entire Whitefish Property. The mafic breccias contain vugs which in turn contain rustcoloured pyramidal quartz crystals. These crystals provide an unambiguous marker horizon which clearly identifies continuation of the breccia zone across the full length of the regional property.







# **Property Description, Location, Access.**

The Bush Road North claim group is on the north side of the North-East Arm of O'Sullivan Lake, approximately 37 km. NNW of Nakina, Ont. Access is by road from Nakina to O'Sullivan Lake, then by boat across the lake to North-East Arm. The property consists of three single cell claim units and six partial cell boundary units centred approximately around UTM 502000 E 5589000 N, Zone 16 in the Maun Lake Area. Total area of the group estimated at 120 hectares. The claim registration #'s are: 313526,191505,306794,306795,144283,268382,218655, 287311, and 268470. Provincial Grid cell #'s are: 42L07L183,184, 185,203,204,205. The registered owner of these claims is Whitefish Exploration Ltd., CL # 10003285.

# **Topography and Drainage**

The claim group is situated on relatively high ground between Hurd Lake to the west and the Walkup Creek valley to the east. The group rises gently toward the north from O'Sullivan Lake which is located 800 meters to the south. Relief is moderate and undulating, reaching a maximum of 15 meters above the level of the lake. The southeastern and southwestern quadrants of the property consist of overburden proximal to the Walkup Creek Valley and Hurd Lake respectively-mainly swamp and sand. Outcrop exposure is good- about 30 % - concentrated in the central north and northeastern quadrants.

# **Exploration History**

The area has been mapped by the Geological Survey of Canada (Wilson and Collins, 1904) and the Ontario Geological Survey (Stott, 1984) as well as early mapping by the Ontario Department of Mines (Hopkins, 1916; Kindle, 1929; Moorehouse, 1955)

Gold and copper were first discovered in the O'Sullivan Lake area in the 1920's, centred on showings on the Osulak Peninsula and northeast of the lake, resulting in a staking rush after WW II, when Osulak Mines started to sink a shaft and carry out underground development. Since that time, several operators have attempted to resurrect the property. The most recent, Mining Corp. of Canada, removed 90,000 tons of 0.33 oz./ ton gold. Since 1950, both gold and base metal exploration has been undertaken throughout the O'Sullivan Lake belt with limited success.

Five hundred meters west of the property, the New Athona Mines copper-silver-gold occurrence, located 200 m. south-west of Hurd Lake was investigated by means of 9 shallow drill holes in 1955. The showing consists of 2 mineralized fracture zones containing arsenopyrite, chalcopyrite, pyrite, marcasite, accompanied by quartz- sericite, chlorite, and carbonate schists. No strike length was determined. Somewhere in the northern part of the group, an unknown operator drilled 4 holes into what is referred to as the Megan- Hurd gold occurrence. The drill target was a sulphide – rich shear zone in felsic volcanic. Assays up to 14 grams per tonne (gpt) Au. were reported.( Wells, R, 1984-see references). The Warren copper-nickel occurrences, located 1 km. northeast of the property have been the focus of intermittent activity since the 1950's. Historical exploration activity has resulted in significant polymetallic occurrences being discovered-confirming the mineral potential.

## **Regional Geology**

The property is situated within the Onaman-Tashota Greenstone Belt, a fairly typical north-east trending greenstone sequence consisting of a mafic to felsic transition, younging to the north, intercalated with intermediate-felsic and chemical metasediments . The interflow sediments are mainly tuffs, tuff breccias and siliceous metasediments, which locally contain copper sulfides with lesser magnetite, arsenopyrite, and gold.

The greenstones are locally intruded by syngenetic and postgenetic tectonic sills and dykes. -gabbro and diabase. Metamorphic grade is generally lower greenschist facies.

Structurally, the Onaman-Tashota belt has been faulted in a north-east trending strike-slip fashion, resulting in locally strongly sheared, highly schistose volcanic units. Government airborne geophysics suggest fault offsets of greater than 600 meters, stratabound magnetic highs and indications of cross faulting.



#### **Property Geology**

The property is underlain by a north-easterly trending sequence of mafic and felsic volcanic flows and pyroclastics. Occasionally narrow lensoidal or sill-like gabbroic intrusions locally interfinger with the volcanics. Exposures of felsic intrusive quartz -feldspar porphyry (QFP) are commonly found widely dispersed across the property- co-incidentally in close association with mineral enrichment. Locally, these QFP intrusions carry anomalous levels of sulphides – about 2% - as well as gold up to 2 grams per tonne (gpt). Anomalous levels of sulphide mineralization have been observed in all of the major lithologies on the property with the exception of the mafic intrusives. This mineralization appears to be coincident with a wide (250 meter) zone of brecciated felsic and mafic volcanics which transects the property. Mineralization and breccia is probably related to the regional north-east trending Hurd Lake Fault which is located proximal to the claims about 500 meters to the north-east.

Within this zone of anomalous sulphide mineralization, which is in close association with porphyry, there are locally enriched zones carrying up to 10% and higher sulphides including massive sulphides and sericite schists. One of these, located at 5589700 N, 502000 E, is described as mafic and felsic volcanics, chlorite schists, commonly brecciated and intruded by QFP. Within this "fault breccia", the felsic units contain local interbedded cherts and sericite schists. The interbedded mafic volcanics are highly schistose and rich in carbonate. An interesting marker horizon has been identified in the mafic breccia. The breccia contains vugs which in turn contain small rust coloured pyramidal quartz crystals. These have been identified in numerous locations along strike in the mineralized zone and provide irrefutable evidence that the zones are regionally connected across a strike length of more than 3000 meters.

The mineralized zone is the south-west extension of the previously identified "Discovery" zone located 400 meters to the north-east. (Hodgson, 2019). It has an estimated thickness of 250 m and intermittently up to 700 m. It extends from the New Athona massive sulphide occurrence south-west of the property to the Warren occurrence (Cu., Ni.) to the north-east ; a distance of about 4 kilometers.

### Mineralization

Locally anomalous background sulphide mineralization (up to 5 %) is present within the "fault breccia" zone- in all three dominant lithologies- felsic volcanic, mafic volcanic, and QFP. The most significant assay from this prospecting program was taken at 501955 E 5589700 N. Gold mineralization up to 0.95 g.p.t was confirmed in samples described as primarily QFP, brecciated, within mafic breccias and chlorite schists- both mineralized locally up to 15% py., strongly carbonated, with large (10 cm) vesicles and small (1-2 cm) angular shaped vugs partially filled with well formed rust coloured quartz crystals. QFP clasts with anomalous sulphides were found in the mafic breccias. This description matches descriptions of mineralized mafic breccias on strike 400 meters to the north-east and serves as a marker for locating and expanding the zone in future prospecting.

#### **Conclusions and Recommendations**

The mineralized breccia zone which crosses the property and continues in both directions is highly prospective for gold as well as base metals. Difficult access has enhanced the area as under-prospected. This problem is now partially alleviated by the construction of the access trail into the zone. There are at least 20 known gold occurrences within the zone -on the property and on the surrounding Whitefish claims. (Map 4-Regional Geology; Appendix 10 - List of New and Historical Occurrences). Most of these have been identified by Whitefish personnel in the past few years. Rock samples more than 10 gpt have been identified in several separate locations, including a channel sample of 8.5 gpt across 3 meters in sericitized rhyolite. (Hodgson, 2019, see references). Favourable geology, several unexplained Aerodat VLF-EM conductors, and 1-2 gpt Au in felsic intrusives all further enhance the Whitefish property as an important exploration target for further exploration. An I.P. geophysical and soil geochemical surveys and follow-up drilling is recommended over the entire sulphide enrichment zone.

### References

-Hodgson, R., 2017, Technical Report on the Hodgson Claims, Maun Lake Area. AFRO # 2.58421

-Hodgson, R., 2019, Technical Report on the 2019 Prospecting and Geochemical Sampling Survey on the Discovery Claims, Maun Lake Area. EMDM Assessment Files.

-Nelson, Cullen, 2005, Clark Exploration Consulting Report on the Aurum Property for Superior Canadian Resources Inc. AFRO file # 2.30942

-Parker, J.R. and Stott, G.M., 1998, Precambrian Geology of the O'Sullivan Lake Area, OGS Map P 3377.

-Smith, M., 1991, Technical Report on the Hurd Lake Property, O'Sullivan Lake Area, AFRO file # 63.6249.

-Wells, R.C., 1984, Report on the Culhane Property for Lacana Mining Corp. MNDM Assessment file # 42L07NW0007.

# **Statement of Qualifications**

I, Rand Hodgson, of 287 Swanston Ave., Peterborough, Ont., do hereby state:

1) That I have been a consulting geologist practicing my profession from the above address since 2016, and have been actively engaged in mineral exploration since 1977.

2) That I hold a B.Sc. (Earth Science) from the University of Waterloo (1977)

3) That I am the author of the report and that I personally supervised and carried out the field program.

4)That the data contained in this report is true to the best of my knowledge.

Signed, Rand Hodgson, B.Sc., B.Ed.,

January, 2022.

#### **Appendix I- Sample Locations and Descriptions**

- S-1 5589683 N 501864 E- mafic volcanic, 15% py., carbonate.
- S-2 5589660 N 501807 E- mafic breccia, 15% py.,carb., vugs
- S-3 5589804 N 502032 E- no description
- S-4 5589686 N 502049 E- mafic breccia, 10% py. blebs, carbonate.
- S-5 "
- S-6 5589630 N 502000 E- mafic volcanic, 10% py., quartz, carb.
- S-7 "
- S-8 " porphyry, 5% py. blebs
- S-9 5589875 N 501600 E- felsic volcanic, minor py. -200 ppb.
- S-10 5589813 N 501552 E- intermediate volcanic, 5% py.
- S-11 "
- S-12 5589570 N 501615 E- felsic sericite schist, 15% py.
- S-13-15- " "
- S-16,17 5589533 N 501632 E- Felsic schist, 15% fine disseminated py.
- S-18 5589520 N 501630 E-
- S-19 5589520 N 501632 E- narrow(5 cm.) quartz vein, minor py.
- S-20 No location
- S-21 5589560 N 501630 E- felsic volcanic,5% fine diss. py., massive c.gr. rhyolite

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- S-30 5589635 N 502000 E- porphyry- 5% coarse py., in blebs, veinlets.
- S 31-35 5589700 N 501955 E- mafic breccia, 20% py., strong carbonate, silica,

-contact with porphyry.- 950 ppb

Appendix II

#### Daily Log – Report of Work – Summer 2021

- July 8 Mobilize
- July 9 travel to Hearst
- July 10- logistics, travel to O'Sullivan Lake Lodge
- July 11- prospecting NE of Maun access trail, samples 1-8
- July 12 prospecting N of Maun access trail- samples 9-12
- July 13 stripping and trenching in vicinity of old trench- samples 13-20
- July 14 prospecting on Prop Lake claim group- samples 22-28
- July 15 prospecting ENE of Maun access trail samples 29,30.
- July 16 supplies in Geraldton-
- July 17 stripping and trenching mineralized zone-claim 306794 --samples 31-35
- July 18 prospecting west of Maun access trail on claim 144973.
- July 19 prospecting west of Maun access trail on claim 313526
- July 20 prospecting on Prop Lake claim group samples 36-43
- July 21 prospecting NW of Maun access trail claim 144283
- July 22 prospecting far north end of Maun group- up to cl. 202940
- July 23 travel to Earlton
- July 24 travel to Peterborough
- July 25 demobilize.

Appendix III

Quality Analysis ...



Innovative Technologies

A21-14080

Report No.: Report Date: 06-Aug-21 Date Submitted: 23-Jul-21 Your Reference:

Whitefish Exploration 287 Swanston Avenue Peterborough ON Canada

ATTN: Rand Hodgson

### **CERTIFICATE OF ANALYSIS**

43 Rock samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:	
1A2-50-Geraldton	QOP AA-Au (Au - Fire Assay AA)	2021-08-06 07:15:47	15

#### REPORT A21-14080

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#### Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3



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CERTIFIED BY:

Emmanuel Eseme , Ph.D.

Quality Control Coordinator

Page 1/3



Expense Summary - 2021 - Appendix IV \* Expense divided - 75% for Mann area Report. 25% for Prop Lake Report. MAUN CLAIMS PROPLAKE TOTAL CATEGORY \$ 2584 - \$ 861 - \$ 3445 -796.2 265.4 1,061.60 117.5 37.5 150.00 262.5 87.5 350.00 1,125 - 375 1,500.00 accomposition Boat Rental Doar Kental Canoe Rental Boat fue Vehicle miteage (0.50 ¢/km) Assays Groceviestfood 350.00 1,500.00 Assays' 1,138,3 379.6 1,518,44 Groceviestfeet 1349,75 116.25 466.50 Garmin subscription 59.25 19.75 78.98 Supplies 184. 61.75 78.98 1,518,44 466.50 \$=6611.25 61.75 245.50 8,815.54

