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**Assessment Report on  
Geology and Sampling of the “B-Zone” Chromite Occurrence,  
Chrome Property,  
Thunder Bay South District,  
Ontario**

Patented Claims

PAT-16032 (TB8423), PAT-16033 (TB8424), PAT-16035 (TB10827), PAT-16036 (TB10828)  
Obonga Lake Area (G-0100), Thunder Bay Mining Division  
Latitude 49° 58' 28" N, Longitude 89° 30' 21" W;  
UTM WGS84 Zone 16U 320328 mE, 5538810 mN;  
NTS 52H 14 - Gull Bay

For:

Pavey Ark Minerals Inc.  
Client number 411465

Prepared By:

Richard H. Sutcliffe, Ph.D., P.Geo. (Client number 225603)  
130 Foxridge Drive,  
Ancaster, ON, L9G 5B9

October 17, 2019

## Executive Summary

This assessment report documents geological mapping, sampling, and assays from the “B-Zone” chromite occurrence on the Chrome Property, Thunder Bay Mining Division, Ontario. The exploration targets chromite mineralization and associated nickel, platinum group metal (PGM) mineralization potential in serpentinite intrusion that hosts the past-producing Chrome Lake mine.

The Chrome Property is located 179 km north of the city Thunder Bay, 49 km southwest of the town of Armstrong Station, and 1,043 km northwest of Toronto, Ontario. Highway 527, a paved highway that extends north from Thunder Bay to Armstrong, is located 25 km east of the Property. The property is accessed from the Obonga Lake and Scalp Creek roads and then a 2.2 km long hiking/snowmobile trail that extends SW to the Property from the west end of the Scalp Creek road.

Field work and sampling for this report was carried out from September 25 to October 2, 2019 on patented claims PAT-16032 (TB8423), PAT-16033 (TB8424), PAT-16035 (TB10827), and PAT-16036 (TB10828). Outcrops were power washed and sampled by A-Star Prospecting of Thunder Bay, Ontario. The author was in the field from September 28 to 30, 2019. Samples were submitted to Activation Laboratories Ltd. (“ActLabs”), Ancaster, Ontario, for analysis on October 7, 2019 and reporting was completed on October 17, 2018. Total expenditures (excluding HST) were \$20,163.

The Chrome Property is underlain by the Chrome-Puddy serpentinite intrusion. Historically, exploration in the eastern portion of the serpentinite on which this work was performed has targeted chromite. Following the discovery of chromite at Chrome Lake in 1928, Consolidated Chromium Corporation completed trenching, drilling and shaft sinking at the Chrome Lake mine where 7,672 tons of chromite were mined between 1934 and 1938. The ultramafic rocks have been completely altered to serpentine, talc, chlorite, carbonate, magnetite, and amphibole. Medium-grained, strongly foliated biotite tonalite bounds the serpentinite to the north and east.

Rock analyses were done at ActLabs, Ancaster, Ontario. Thirty two (32) ultramafic rocks were analyzed for Pt, Pt, Au by fire assay and for Cr, Ni and other elements by ICP-OES following peroxide fusion.

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## **1.0 Introduction**

This assessment report documents geological mapping, sampling, and assays from the “B-Zone” chromite occurrence on the Chrome Property, Thunder Bay Mining Division, Ontario.

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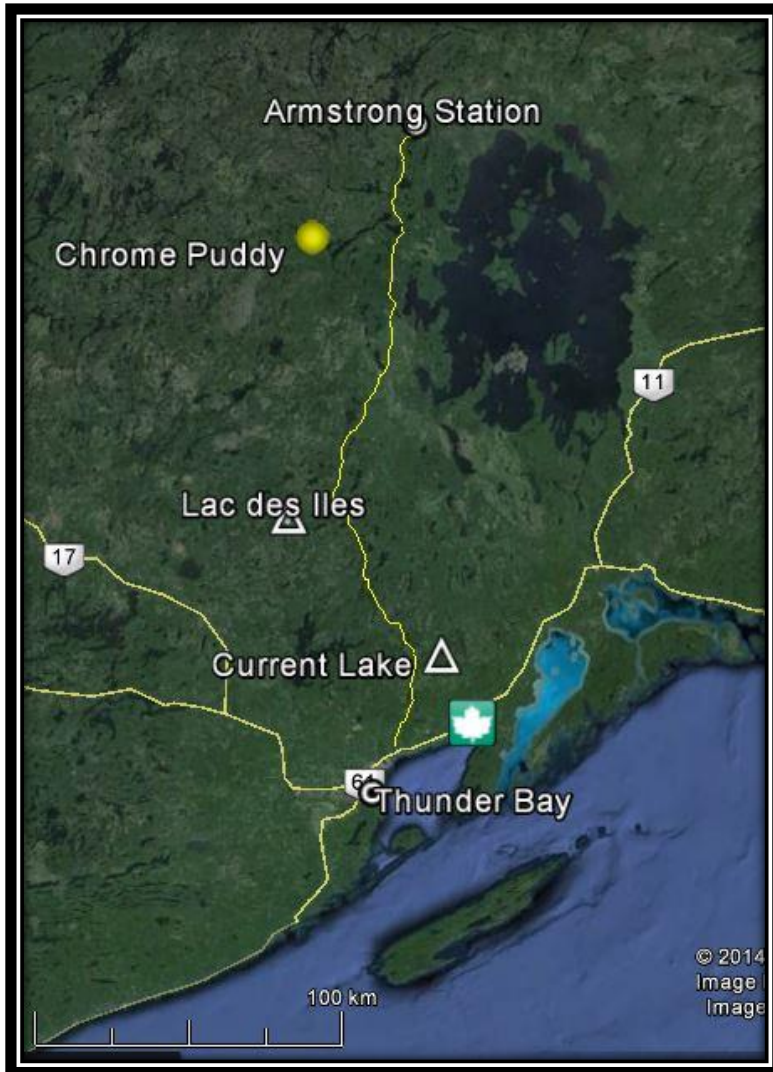
## **2.0 Location and Access**

The Chrome Property is located in the Thunder Bay Mining District of northwestern Ontario. The property is 179 km north of the city Thunder Bay, 49 km southwest of the town of Armstrong Station, and 1,043 km northwest of Toronto, Ontario. Highway 527, a paved highway that extends north from Thunder Bay to Armstrong, is located 25 km east of the Property.

Logging roads east of the Property come to within 2.2 km of Chrome Lake. The logging road access route is from the “Obonga Lake Road” which is a signed gravel road west of highway 527 and located 30 km south of Armstrong Station. From the Obonga Lake Road, the property is accessed from the Scalp Creek Road and then a hiking/snowmobile trail. The trail is approximately 2.2 km long and extends SW to the Property from the west end of the Scalp Creek road.

A gasoline powered fire pump and fire hose for power washing, and the rock saw for sampling with fuel and accessories were carried manually for several km from the termination of the Scalp Creek road to the exploration site. This work required strenuous manual labour.

**Figure 1. Chrome Property Location**



*Source: Google Earth 2016*

### **3.0 Claim Holdings and Property Disposition**

The work for this assessment was completed on patented claims PAT-16032 (TB8423), PAT-16033 (TB8424), PAT-16035 (TB10827) and PAT-16036 (TB10828) in the eastern part of Pavey Ark's Chrome-Puddy Property. The Property includes a total of 11 contiguous patented claims and 77 contiguous staked cell claims. All claims are 100% owned by Pavey Ark Minerals Inc., a private company. The complete list of patented and staked claims that forms the Chrome – Puddy Property is provided in Appendices 1 and 2.

### **4.0 Previous Work**

Historically, exploration and development in the eastern portion of the Chrome-Puddy serpentinite has targeted chromite, while the western portions of the intrusion have been

explored for nickel and precious metals. Historic exploration activity on the property, as documented by Puumala et al. (2012) is summarized below.

Chromite was first discovered in the vicinity of Chrome Lake in 1928 by W.K. Keefe and R.A. MacDonald who staked the occurrence and transferred ownership to Golden Centre Mines Inc. of New York. In 1930 Consolidated Chromium Corporation, a subsidiary of Golden Centre Mines, began development work, including stripping, trenching, drilling and shaft sinking. The shaft was sunk to a depth of 350 feet, with levels at 100 and 225 feet. Operations ceased in late fall of 1930 and did not resume until 1933, when new owner Chromium Alloy Co. sent 70 tons of ore to Niagara Falls, New York, for beneficiation tests. Chromium Mining and Smelting Corp. Ltd. was formed and took control of the property in 1934 and re-commenced operations in 1936. Underground work was discontinued in 1937 because of poor ore recovery, and all activities on the site ceased in 1938. The Chrome property has been inactive since 1938.

Between 1964 and 1967, Commerce Nickel Mines carried out the first significant exploration program targeting nickel in the western portion of the Puddy serpentinite, including trenching, geological mapping, geochemical and geophysical surveys and diamond drilling (24 diamond-drill holes, totalling 5,590 feet). Between 1967 and 1968, Newmont Mining Corp. of Canada completed trenching, electromagnetic surveying and diamond drilling (10 holes, totalling 3106 feet). By the mid- to late-1980s, the area began to receive attention for its PGE potential. Between 1985 and 1993, K. Kuhner carried out prospecting, outcrop stripping, surface sampling and ground geophysical surveys on claims located on the south side of Puddy Lake. The property was transferred to Obongo Precious Metals Ltd. in 1993, and Obongo completed approximately 20 diamond-drill holes between 1993 and 1996. Imperial Platinum Corp. carried out geological mapping, sampling and ground geophysical surveys in 1987 and 1988 over an adjacent property encompassing areas west, north and southeast of Puddy Lake.

The OGS completed airborne magnetic and electromagnetic surveys with the Dighem EM system in 2000 with 200m line spacing and a nominal 58m terrain clearance (OGS 2000). The most recent exploration activity includes ground magnetic and electromagnetic surveys conducted by Vale Inco Ltd. in 2007 over a property covering the western half of the Puddy Lake serpentinite that identified a number of east west trending conductors, particularly north of Puddy Lake. D. Plumridge has carried out prospecting and sampling of a claim near the southeast end of Puddy Lake since 2004.

Pavey Ark Minerals Inc reported results of mapping, portable XRF analysis and prospecting in 2014 and 2015. Pavey Ark conducted geological mapping and VLF-EM surveying on a 3.7 km grid west of the Chrome Mine shaft in 2016. This grid was extended to the northwest in 2017 with an additional 2.75 km of grid combined with geological mapping and VLF-EM surveying by Pavey Ark. The survey identified a VLF-EM anomaly that is coincident with an airborne EM response and the northern contact of the ultramafic. Petrographic and SEM studies by Pavey Ark in 2018 confirmed that the ultramafic rocks east of Chrome Lake consist of serpentinitized dunite and peridotite with relict olivine cumulate textures and locally intercumulus amphibole that likely replace pyroxenes. Disseminated oxide phases in the serpentinite are primarily Cr-

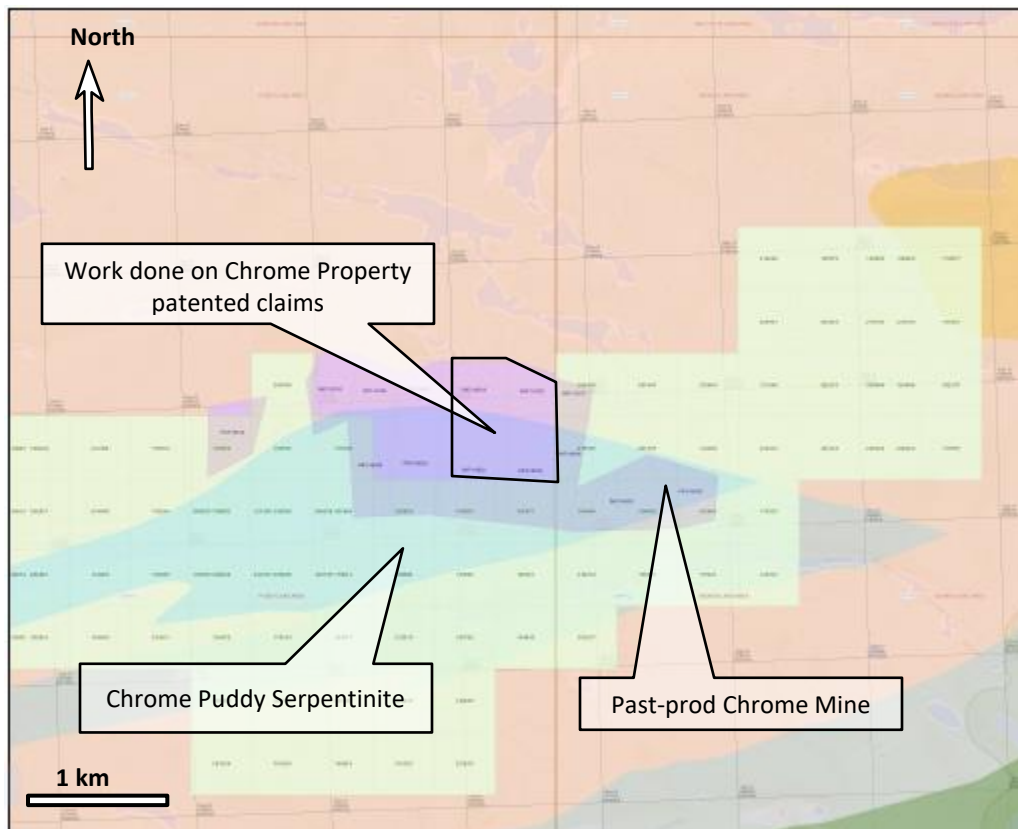
bearing magnetite with minor amounts of Mn-bearing ilmenite. Chromite is locally present as massive layers.

## 5.0 Property Geology

The Chrome-Puddy Property is located in the Obonga metavolcanic and metasedimentary greenstone belt of the Archean Superior Province. The Obonga greenstone belt is a relatively small (approximately 10 x 40 km) greenstone belt, situated between the Sturgeon-Savant belt on the west and the Onaman-Tashota belt to the east, and has been considered to be part of the Wabagoon Subprovince (Percival and Stott 2000).

The Chrome Puddy Property is underlain by the Chrome-Puddy serpentinite intrusion that is exposed for 7 km along strike and is approximately 1 km in width (Figure 2). Whittaker (1986) reports that rocks of the intrusion include dunite, peridotite, and minor pyroxenite, all of which are serpentinized. Medium-grained, biotite tonalite bounds the Serpentinite to the north. South of Puddy Lake, the serpentinite intrusion is bound by mylonite and mixed metasedimentary and granitic rocks. North-striking and east-striking diabase dikes of probable middle Proterozoic age cut the Serpentinite.

**Figure 2. Chrome Puddy Property geology and claims.** Chrome Property patented claims that are the subject of the current assessment report are outlined in black.



Base map source: MLAS 2019



The ultramafic rocks have been completely altered to serpentine, talc, chlorite, carbonate, magnetite, and amphibole. The alteration, metamorphism and deformation of the serpentinite has made the interpretation of protoliths in the intrusion difficult (Graham 1930; Hurst 1931; Simpson and Chamberlain 1967; Whittaker 1986). Although no ultramafic rocks with primary mineralogy remain, the original rock types in some areas can be inferred with confidence by comparison with the results of studies on known types of serpentine pseudomorphs. The best preserved primary texture in the serpentinite is relict olivine cumulate texture that locally exceeds 90% of the rock and indicates the original rock was probably a dunite. In some rocks, the presence of intercumulus poikilitic amphibole probably replaces pyroxene and is indicative of peridotite.

## **6.0 “B-Zone” Geology**

Hurst (1931) describes the “B Zone” and the “E-Zone” as being the two most important occurrences of chromitite on the Property, with the latter being the location of shaft and the past-producing Chrome Lake mine. Chromitite is an igneous cumulate rock composed mostly of chromite.

Using Hurst’s (1931) sketch map, the “B-Zone” was relocated and was cleaned by power washing with gas powered fire pump. The power washing exposed several chromite occurrences beneath moss covered outcrops (Figure 3). The work also located a trench and a pit from the 1930’s exploration (Map 2).

Hurst (1931) describes the “B-Zone” as follows:

*“This zone is located near the northwest corner of claim TB 8424 and about 600 feet east of Chrome lake. It consists of a flat lying body of chromite having an average thickness of about 2 feet. It is exposed over an area 150 feet in diameter and estimated by the management to contain about 5,000 tons of material running 34 per cent chromic oxide. The underlying serpentinite contains some disseminated chromite. A diamond-drill hole directed north at an angle of 45 degrees for 196 feet intersected no chromite-bearing rock.”*

**Figure 3. Photographs of “B-Zone” chromite occurrence**

	
<p>B-Zone outcrop looking SW, historical trench in mid-ground</p>	<p>Power washing B-zone outcrop</p>
	
<p>B-zone chromitite layer (darker) overlying serpentinite (grey area at bottom right of photo below hammer head). Exposed by power washing.</p>	<p>Chromitite lense (darker lense beside yellow part of hammer handle) dipping south at 20 to 45°. Exposed by power washing.</p>

### 7.0 Assay Samples

Thirty two (32) rock channel and chip samples were submitted for assay at Activation Laboratories Ltd. (ActLabs), in Ancaster Ontario.

A list of samples with UTM locations and descriptions is provided in Appendix 3. Sample locations are provided on Map 2. Sample intervals were nominally 1 m long and cut along the 030° trending axis of the outcrops. The main “B-Zone” occurrence occurs at the south end of the sampled outcrops. Samples numbered 677301 to 677315 were channel sampled with a portable gas-powered rock saw. A saw failure resulted in samples 677316 to 677332 being collected as chip samples.

The analytical certificate is presented as Appendix 5. All samples were submitted for fire assay with ICP finish for Pt, Pd, Au and multi-element analyses using a sodium peroxide fusion and ICP finish. The sodium peroxide fusion was used to ensure total dissolution of refractory minerals such as chromite.

Cr is the element of most interest in the samples. The chromite-bearing peridotite and chromitite from the main B-Zone occurrence (samples 677319 to 677332) ranged from 3.6 to 19.8% Cr with a 10 m interval averaging 10.4% Cr. This interval may not be representative of true thickness as the samples are interpreted to have been collected along a south sloping surface that is approximately parallel to the south dip of layering.

Three channel samples (677301 to 677303) from the northern extent of the sample section have 3.4 to 5.1% Cr and average 4.1% Cr over 3 m. These samples are from a distinct south dipping chromite rich lens that was uncovered during power washing and is separate from the main B-Zone mineralization.

All of the ultramafic samples contained relatively low precious metal values. Weakly anomalous Pt concentrations up to 39 ppb are observed associated with some chrome-rich peridotite (samples 677320 and 677321). Pt is generally higher than Au and Pd, with the latter generally being below detection limit. Ni concentrations range from 0.04 to 0.13% with higher values toward the north end of the sampled outcrops. Cu values were mostly below detection limits.

## **8.0 Conclusions and Recommendations**

This work located and sampled the B-Zone chromite occurrence described by Hurst in 1931. B-Zone chromitite and chromite-peridotite samples ranged from 3.6 to 19.8% Cr with a 10 m interval averaging 10.4% Cr. A smaller chromite-rich lens was found at the north end of the outcrops with samples ranging from 3.4 to 5.1% Cr. Highest nickel values occur toward the north end of the sampled outcrops.

Further work on the ultramafic intrusion should focus on identification of massive chromite layers similar to those found at the Chrome mine and on potential base metal sulphide mineralization at the basal contact of the intrusion.

## 9.0 References

Graham, A.R., 1930, Obonga Lake Chromite Area, District of Thunder Bay, in the Thirty-Ninth Annual Report of the Ontario Department of Mines, Vol. XXXIX, Part II, pp. 51-60.

Hurst, M.E., 1931, Chromite Deposits of the Obonga Lake Area, District of Thunder Bay, in the Fortieth Annual Report of the Ontario Department of Mines, Vol. XL, Part IV, pp. 111-119.

Ontario Geological Survey, 2000, Airborne magnetic and electromagnetic surveys, Garden-Obonga area, Ontario Geological Survey, Map 82-097, Scale 1:20,000.

Percival, J.A., and Stott, G.M. 2000, toward a revised stratigraphy and structural framework for the Obonga Lake greenstone belt, Ontario, Geological Survey of Canada, Current Research 2000-C22, 8 p.

Puumala, M., et al. 2013, Report of Activities 2012, Resident Geologists Program, Thunder Bay South District, Ontario Geological Survey P6285.

Simpson, P.R., and Chamberlain, J.A., 1967: Nickel Distribution in Serpentinities from Puddy Lake, Ontario; Geo. Assoc. Canada Proceedings, Vol. 18, p.67-91.

Whittaker, P.J., 1986, Chromite Deposits in Ontario, Ontario Geological Survey, Study 55, 97p.

## 10.0 Statement of Qualifications

I, Richard H. Sutcliffe, of 130 Foxridge Drive, Ancaster, Ontario, do hereby certify that:

I am a graduate of University of Toronto (B.Sc. Geology, 1977, M.Sc Geology 1980), and a graduate of University of Western Ontario (Ph.D. Geology, 1986) and I have been practising my profession as a geologist since.

I am a member with the Association of Professional Geoscientists of Ontario (#852).

I have direct knowledge of the exploration work performed for this assessment and I am indirectly the owner of the claims on which the work was performed.

*Signed*

*"R.H. Sutcliffe"*

Richard H. Sutcliffe, Ph.D., P.Geol.

October 17, 2019

Ancaster, Ontario

## Appendix 1. List of Patented Claims owned by Pavey Ark

MLAS Mining Rights Number	Patent Number	Recorded Claim Number	Area (acres)	Area (hectares)
PAT-16029	TB 8420	TB 14414 & TB14413	88.55	35.84
PAT-16030	TB 8421	TB 14415	50.91	20.60
PAT-16031	TB 8422	TB 14412	33.90	13.72
PAT-16032	TB 8423	TB 10835	66.41	26.88
PAT-16033	TB 8424	TB 10836	69.24	28.02
PAT-16034	TB 8425	TB 10826	44.63	18.06
PAT-16035	TB 8426	TB 10827	41.87	16.94
PAT-16036	TB 8427	TB 10828	31.88	12.90
PAT-16037	TB 8428	TB 10883	17.83	7.22
PAT-16038	TB 8814	TB 8814	74.67	30.22
PAT-16039	TB 9294	TB 19207	40.56	16.41
			<b>Total 560.45</b>	<b>226.81</b>

## Appendix 2. List of Staked Claims comprising the Chrome Puddy Property

Legacy Claim Id	Township / Area	Tenure ID	Tenure Type	Anniversary Date	Work Required
4254345	OBONGA LAKE AREA	233023	Single Cell Mining Claim	2019-10-20	400
4254345	OBONGA LAKE AREA	121686	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	341225	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	328866	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	328865	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	289661	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	282278	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	270180	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	262224	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	262223	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	214260	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	195573	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	195572	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	179678	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	179677	Single Cell Mining Claim	2019-10-20	400
4285401	OBONGA LAKE AREA	160829	Single Cell Mining Claim	2019-10-20	400
4244587	OBONGA LAKE AREA	164485	Single Cell Mining Claim	2019-10-22	200
4244587	OBONGA LAKE AREA	279745	Single Cell Mining Claim	2019-10-22	200
4244587	OBONGA LAKE AREA	268426	Single Cell Mining Claim	2019-10-22	200
4244587	OBONGA LAKE AREA	261066	Single Cell Mining Claim	2019-10-22	200
4244587	OBONGA LAKE AREA	261065	Single Cell Mining Claim	2019-10-22	400

4254343	PUDDY LAKE AREA	339676	Single Cell Mining Claim	2019-10-22	400
4254343	PUDDY LAKE AREA	178105	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	106244	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	341568	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	319502	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	302819	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	302818	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	302817	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	282627	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	234611	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	234610	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	234609	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	199015	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	186806	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	186805	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	134829	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	134828	Single Cell Mining Claim	2019-10-22	400
4265987	PUDDY LAKE AREA	132895	Single Cell Mining Claim	2019-10-22	200
4265987	PUDDY LAKE AREA	106245	Single Cell Mining Claim	2019-10-22	400
4265988	PUDDY LAKE AREA	280709	Single Cell Mining Claim	2019-10-22	200
4265988	PUDDY LAKE AREA	178104	Single Cell Mining Claim	2019-10-22	200
4265988	PUDDY LAKE AREA	164572	Single Cell Mining Claim	2019-10-22	200
4254343	PUDDY LAKE AREA	106762	Single Cell Mining Claim	2019-11-27	400
4254343	PUDDY LAKE AREA	340260	Single Cell Mining Claim	2019-11-27	400
4254343	PUDDY LAKE AREA	301526	Single Cell Mining Claim	2019-11-27	400
4254343	PUDDY LAKE AREA	233274	Single Cell Mining Claim	2019-11-27	400
4254343	PUDDY LAKE AREA	225269	Single Cell Mining Claim	2019-11-27	400
4254343	PUDDY LAKE AREA	121453	Single Cell Mining Claim	2019-11-27	400
4254343	PUDDY LAKE AREA	121452	Single Cell Mining Claim	2019-11-27	400
4254345	OBONGA LAKE AREA	106043	Single Cell Mining Claim	2019-11-27	200
4254345	OBONGA LAKE AREA	340354	Single Cell Mining Claim	2019-11-27	400
4254345	OBONGA LAKE AREA	281892	Single Cell Mining Claim	2019-11-27	200
4254345	OBONGA LAKE AREA	252884	Single Cell Mining Claim	2019-11-27	400
4254345	OBONGA LAKE AREA	179321	Single Cell Mining Claim	2019-11-27	400
4254345	OBONGA LAKE AREA	179320	Single Cell Mining Claim	2019-11-27	400
4254345	OBONGA LAKE AREA	166580	Single Cell Mining Claim	2019-11-27	400
4254345	OBONGA LAKE AREA	149533	Single Cell Mining Claim	2019-11-27	400
4254345	OBONGA LAKE AREA	134085	Single Cell Mining Claim	2019-11-27	200
4254346	PUDDY LAKE AREA	290692	Single Cell Mining Claim	2019-11-27	400
4254346	PUDDY LAKE AREA	282629	Single Cell Mining Claim	2019-11-27	200
4254346	PUDDY LAKE AREA	180062	Single Cell Mining Claim	2019-11-27	400

4254346	PUDDY LAKE AREA	180047	Single Cell Mining Claim	2019-11-27	200
4254346	OBONGA LAKE AREA,PUDDY LAKE AREA	341571	Single Cell Mining Claim	2019-11-27	200
4254346	OBONGA LAKE AREA,PUDDY LAKE AREA	180061	Single Cell Mining Claim	2019-11-27	400
4254346	OBONGA LAKE AREA,PUDDY LAKE AREA	134850	Single Cell Mining Claim	2019-11-27	400
4254346	OBONGA LAKE AREA	302837	Single Cell Mining Claim	2019-11-27	400
4254343	PUDDY LAKE AREA	184717	Single Cell Mining Claim	2020-03-21	400
4254346	PUDDY LAKE AREA	301445	Boundary Cell Mining Claim	2020-10-22	200
4265979	PUDDY LAKE AREA	289296	Boundary Cell Mining Claim	2020-10-22	200
4265987	PUDDY LAKE AREA	289295	Boundary Cell Mining Claim	2020-10-22	200
4265987	PUDDY LAKE AREA	252204	Boundary Cell Mining Claim	2020-10-22	200
4265988	PUDDY LAKE AREA	121380	Boundary Cell Mining Claim	2020-10-22	200
4254346	PUDDY LAKE AREA	120740	Boundary Cell Mining Claim	2021-03-21	200
	PUDDY LAKE AREA	548954	Single Cell Mining Claim	2021-04-24	400
	PUDDY LAKE AREA	548955	Single Cell Mining Claim	2021-04-24	400
	PUDDY LAKE AREA	548972	Single Cell Mining Claim	2021-04-26	400



### Appendix 3. Sample Locations and field descriptions

Sample	Lab #	Easting	Northing	Length (m)	Field comments
Channel start	677301	320415	5538897	1.02	Dunite
Channel	677302			1.05	Dunite with chromite
Channel	677303			0.98	Dunite with chromite
Channel	677304			0.99	Serpentinite
Channel	677305			1.05	Serpentinite
Channel end	677306	320416	5538887	0.72	Serpentinite
Channel start	677307	320414	5538885	0.98	Serpentinite
Channel	677308			1.06	Serpentinite
Channel end	677309			0.74	Serpentinite
Channel start	677310	320412	5538881	0.98	Serpentinite
Channel end	677311			1.10	Serpentinite
Channel start	677312	320388	5538873	0.92	Serpentinite
Channel	677313			1.00	Serpentinite
Channel	677314			1.03	Serpentinite
Channel end	677315			0.76	Serpentinite
Chip start	677316	320383	5538864	1.00	Peridotite
Chip end	677317			1.00	Peridotite
Chip start	677318	320376	5538850	1.20	Peridotite
Chip start	677319	320374	5538846	1.00	Peridotite
Chip end	677320			1.00	Peridotite
Chip start	677321	320371	5538839	1.00	Peridotite
Chip	677322			1.00	Chromitite
Chip	677323			1.00	Peridotite, chromitite
Chip	677324			1.00	Peridotite, chromitite
Chip	677325			1.00	Peridotite, chromitite
Chip	677326			1.00	Chromitite
Chip	677327			1.00	Peridotite
Chip	677328			1.00	Peridotite, chromitite
Chip	677329			1.00	Peridotite
Chip	677330			1.00	Peridotite
Chip	677331			1.00	Peridotite, chromitite
Chip end	677332	320355	5538830	1.00	Peridotite, chromitite

## Appendix 5. ActLabs Certificate



Pavey Ark Minerals Inc.  
130 Foxridge Drive  
Ancaster ON L9G 5B9  
Canada

Report No.: A19-13611  
Report Date: 15-Oct-19  
Date Submitted: 07-Oct-19  
Your Reference: Chrome lake Project

ATTN: Richard H. Sutcliffe

**CERTIFICATE OF ANALYSIS**

32 Rock samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:
1C-OES	QOP PGE-OES (Fire Assay ICPOES)	2019-10-15 12:30:13
8-Peroxide ICP	QOP Sodium Peroxide (Sodium Peroxide Fusion ICP)	2019-10-09 11:27:15

REPORT A19-13611

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

CERTIFIED BY:

Emmanuel Esemé , Ph.D.  
Quality Control Coordinator

ACTIVATION LABORATORIES LTD.  
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5  
TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613  
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Au	Pd	Pt	Al	As	Be	Ca	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Ni	Pb	S	Sb	Si	Ti	W	Zn
Unit Symbol	ppb	ppb	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Lower Limit	2	5	5	0.01	0.01	0.001	0.01	0.002	0.01	0.005	0.05	0.1	0.01	0.01	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2
677301	< 2	< 5	< 5	1.94	< 0.01	< 0.001	1.40	0.015	3.39	< 0.005	11.5	< 0.1	< 0.01	17.8	0.19	0.128	< 0.01	< 0.01	0.01	16.7	0.09	< 0.005	0.02
677302	7	7	8	2.39	< 0.01	< 0.001	1.30	0.017	5.12	< 0.005	10.8	< 0.1	< 0.01	17.5	0.24	0.113	< 0.01	0.01	0.02	15.5	0.10	< 0.005	0.03
677303	< 2	< 5	6	2.20	< 0.01	< 0.001	2.75	0.017	3.66	< 0.005	12.0	< 0.1	< 0.01	15.7	0.21	0.121	< 0.01	0.01	0.01	16.8	0.10	< 0.005	0.02
677304	4	6	8	1.94	< 0.01	< 0.001	3.13	0.012	0.46	< 0.005	9.38	< 0.1	< 0.01	17.5	0.10	0.128	< 0.01	< 0.01	< 0.01	19.5	0.10	< 0.005	< 0.01
677305	< 2	6	8	1.88	< 0.01	< 0.001	2.51	0.013	0.40	< 0.005	8.89	< 0.1	< 0.01	18.6	0.10	0.127	< 0.01	0.01	< 0.01	18.8	0.09	< 0.005	< 0.01
677306	5	< 5	< 5	1.84	< 0.01	< 0.001	1.93	0.014	0.38	0.038	8.77	< 0.1	< 0.01	19.1	0.10	0.118	< 0.01	0.03	< 0.01	18.7	0.09	< 0.005	< 0.01
677307	3	< 5	< 5	1.83	< 0.01	< 0.001	2.03	0.017	0.44	0.029	9.27	< 0.1	< 0.01	18.8	0.11	0.112	< 0.01	0.02	< 0.01	18.9	0.09	< 0.005	< 0.01
677308	3	< 5	< 5	1.74	< 0.01	< 0.001	1.69	0.017	0.78	0.025	9.47	< 0.1	< 0.01	18.7	0.12	0.118	< 0.01	0.03	< 0.01	18.8	0.08	< 0.005	0.01
677309	2	< 5	< 5	1.57	< 0.01	< 0.001	1.09	0.018	0.36	0.017	8.91	< 0.1	< 0.01	19.4	0.10	0.116	< 0.01	0.02	< 0.01	19.1	0.08	< 0.005	< 0.01
677310	< 2	< 5	7	2.15	< 0.01	< 0.001	3.18	0.011	0.15	< 0.005	8.53	< 0.1	< 0.01	17.9	0.10	0.105	< 0.01	< 0.01	< 0.01	19.9	0.10	< 0.005	< 0.01
677311	4	< 5	6	1.57	< 0.01	< 0.001	2.15	0.015	0.71	< 0.005	8.80	< 0.1	< 0.01	18.8	0.13	0.112	< 0.01	0.01	< 0.01	18.8	0.08	< 0.005	< 0.01
677312	4	< 5	7	2.28	< 0.01	< 0.001	4.56	0.009	0.94	< 0.005	8.17	< 0.1	< 0.01	15.8	0.15	0.038	< 0.01	< 0.01	< 0.01	20.9	0.11	< 0.005	< 0.01
677313	4	< 5	6	2.14	< 0.01	< 0.001	4.54	0.010	0.95	< 0.005	8.63	< 0.1	< 0.01	15.9	0.14	0.042	< 0.01	< 0.01	< 0.01	20.5	0.10	< 0.005	< 0.01
677314	< 2	< 5	5	1.73	< 0.01	< 0.001	3.15	0.012	0.62	0.011	8.76	< 0.1	< 0.01	17.3	0.13	0.053	< 0.01	< 0.01	< 0.01	19.4	0.08	< 0.005	< 0.01
677315	3	< 5	6	1.45	< 0.01	< 0.001	0.51	0.020	0.38	0.029	10.2	< 0.1	< 0.01	20.0	0.11	0.069	< 0.01	0.03	< 0.01	17.8	0.07	< 0.005	< 0.01
677316	< 2	< 5	< 5	1.52	< 0.01	< 0.001	0.14	0.014	0.29	0.028	9.49	< 0.1	< 0.01	20.6	0.08	0.089	< 0.01	< 0.01	< 0.01	18.0	0.07	< 0.005	< 0.01
677317	< 2	< 5	5	1.49	< 0.01	< 0.001	0.05	0.013	0.36	0.025	10.8	< 0.1	< 0.01	20.0	0.08	0.092	< 0.01	< 0.01	< 0.01	17.4	0.07	< 0.005	< 0.01
677318	8	< 5	< 5	1.34	< 0.01	< 0.001	0.95	0.010	0.31	< 0.005	9.24	< 0.1	< 0.01	20.4	0.11	0.071	< 0.01	< 0.01	< 0.01	17.6	0.05	< 0.005	< 0.01
677319	< 2	< 5	7	5.38	< 0.01	< 0.001	0.13	0.024	18.3	< 0.005	17.7	< 0.1	< 0.01	10.4	0.51	0.059	< 0.01	< 0.01	0.07	7.33	0.18	< 0.005	0.07
677320	< 2	< 5	39	2.16	< 0.01	< 0.001	3.29	0.010	3.89	< 0.005	7.64	< 0.1	< 0.01	15.9	0.17	0.088	< 0.01	< 0.01	0.01	16.8	0.09	< 0.005	0.01
677321	< 2	< 5	39	3.12	< 0.01	< 0.001	1.06	0.015	8.45	< 0.005	10.4	< 0.1	< 0.01	15.6	0.27	0.084	< 0.01	< 0.01	0.03	14.8	0.12	< 0.005	0.03
677322	< 2	< 5	10	5.75	< 0.01	< 0.001	0.45	0.026	19.8	< 0.005	16.8	< 0.1	< 0.01	9.88	0.50	0.053	< 0.01	< 0.01	0.07	6.69	0.20	< 0.005	0.08
677323	< 2	< 5	16	3.66	< 0.01	< 0.001	1.09	0.019	10.7	< 0.005	12.6	< 0.1	< 0.01	14.0	0.36	0.091	< 0.01	< 0.01	0.04	12.2	0.14	< 0.005	0.06
677324	< 2	< 5	< 5	3.12	< 0.01	< 0.001	0.76	0.015	7.84	< 0.005	11.4	< 0.1	< 0.01	15.7	0.29	0.099	< 0.01	0.01	0.03	14.9	0.12	< 0.005	0.03
677325	< 2	< 5	15	2.16	< 0.01	< 0.001	1.45	0.010	3.60	< 0.005	6.69	< 0.1	< 0.01	18.6	0.19	0.101	< 0.01	< 0.01	0.01	19.8	0.09	< 0.005	0.01
677326	< 2	< 5	< 5	3.51	< 0.01	< 0.001	0.45	0.016	9.82	< 0.005	11.2	< 0.1	< 0.01	15.2	0.29	0.078	< 0.01	< 0.01	0.04	14.2	0.14	< 0.005	0.03
677327	< 2	< 5	< 5	3.34	< 0.01	< 0.001	1.21	0.017	8.33	< 0.005	11.4	< 0.1	< 0.01	16.3	0.29	0.097	< 0.01	0.08	0.03	16.7	0.13	< 0.005	0.03
677328	< 2	< 5	16	5.23	< 0.01	< 0.001	0.27	0.026	18.1	< 0.005	17.0	< 0.1	< 0.01	10.8	0.47	0.062	< 0.01	< 0.01	0.07	7.97	0.19	< 0.005	0.07
677329	< 2	< 5	5	2.75	< 0.01	< 0.001	1.24	0.013	6.48	< 0.005	9.18	< 0.1	< 0.01	16.7	0.22	0.088	< 0.01	< 0.01	0.02	16.1	0.11	< 0.005	0.02
677330	< 2	< 5	< 5	2.61	< 0.01	< 0.001	1.47	0.012	6.28	< 0.005	9.33	< 0.1	< 0.01	16.7	0.23	0.084	< 0.01	< 0.01	0.02	16.0	0.11	< 0.005	0.02
677331	< 2	< 5	31	2.67	< 0.01	< 0.001	0.37	0.013	7.14	< 0.005	9.71	< 0.1	< 0.01	16.6	0.23	0.092	< 0.01	< 0.01	0.02	17.1	0.11	< 0.005	0.02
677332	13	< 5	16	5.04	< 0.01	< 0.001	0.12	0.024	17.2	< 0.005	15.9	< 0.1	< 0.01	11.3	0.44	0.063	< 0.01	< 0.01	0.06	9.07	0.18	< 0.005	0.07

Analyte Symbol	Au	Pd	Pt	Al	As	Be	Ca	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Ni	Pb	S	Sb	Si	Ti	W	Zn
Unit Symbol	ppb	ppb	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Lower Limit	2	5	5	0.01	0.01	0.001	0.01	0.002	0.01	0.005	0.05	0.1	0.01	0.01	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2
PTM-1a Meas					0.21			2.04		24.9						48.0		22.8					
PTM-1a Cert					0.220			2.05		24.96						47.44		22.4					
CD-1 Meas					0.65															3.57			
CD-1 Cert					0.660															3.57			
DTS-2b Meas				0.22			0.08	0.013	1.64	< 0.005				31.7	0.08	0.385	< 0.01		< 0.01	18.7			< 0.01
DTS-2b Cert				0.240			0.0900	0.0120	1.55	0.000300				29.8	0.0830	0.378	0.000400		0.0000600	18.4			0.00450
DTS-2b Meas									1.57														
DTS-2b Cert									1.55														
Oreas 74a (Fusion) Meas					< 0.01			0.055	0.18	0.122	13.6					3.21		7.26			15.1		
Oreas 74a (Fusion) Cert					0.005			0.058	0.18	0.124	13.7					3.24		7.25			15.14		
OREAS 131b (Fusion) Meas					< 0.01			0.002		0.024	5.78						1.87	4.87	< 0.01				3.02
OREAS 131b (Fusion) Cert										0.022	5.85						1.90	5.01					3.05
MP-1b Meas					2.24		2.59			3.12	8.12			0.03			2.10	13.3			16.7	0.109	16.4
MP-1b Cert					2.30		2.47			3.07	8.19			0.024			2.09	13.79			16.79	0.110	16.7
NCS DC73304 (GBW 07106) Meas					< 0.01	< 0.001		< 0.002	< 0.01	< 0.005			< 0.01		0.02	< 0.005	< 0.01	0.08	< 0.01	42.9	0.16	< 0.005	< 0.01
NCS DC73304 (GBW 07106) Cert																	0.09			42.24	0.16		
AMIS 0129 Meas											44.3				0.27					4.64	13.7		
AMIS 0129 Cert											43.573				0.28					4.47	13.75		
NCS DC86303 Meas													0.21										< 0.005
NCS DC86303 Cert													0.21										0.0009
NCS DC86314 Meas													1.80										0.008
NCS DC86314 Cert													1.81										
PK2 Meas	4860	6090	4880																				
PK2 Cert	4785	5918	4749																				
CPB-2 Meas				0.07						0.127	6.94			0.10			64.8						5.84
CPB-2 Cert				0.074						0.1213	7.065			0.0683			63.52						6.04
CZN-4 Meas				0.08	0.04			0.011		0.424							0.19	34.8			0.28		58.7
CZN-4 Cert				0.0715	0.0356			0.0094		0.403							0.1861	33.07			0.295		55.07
W 106 Meas																							2.11
W 106 Cert																							2.16
OREAS 922 (Peroxide Fusion) Meas				7.57			0.47	0.003	< 0.01	0.223	5.66	2.6	< 0.01	1.58	0.09	< 0.005	< 0.01	0.37			31.0	0.43	0.02
OREAS 922 (Peroxide Fusion) Cert				7.59			0.49	0.002	0.009	0.222	5.71	2.60	0.003	1.61	0.09	0.004	0.006	0.389			30.51	0.439	0.03
CCU-1e Meas				0.13	0.10			0.031		21.8	31.8			0.74	< 0.01		0.70	35.5	< 0.01				3.02
CCU-1e Cert				0.139	0.101			0.0301		22.9	30.7			0.706	0.00960		0.703	35.3	0.0104				3.02
CDN-PGMS-27 Meas	4850	2080	1320																				
CDN-PGMS-27 Cert	4800	2000	1290.00																				

Analyte Symbol	Au	Pd	Pt	Al	As	Be	Ca	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Ni	Pb	S	Sb	Si	Ti	W	Zn
Unit Symbol	ppb	ppb	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Lower Limit	2	5	5	0.01	0.01	0.001	0.01	0.002	0.01	0.005	0.05	0.1	0.01	0.01	0.01	0.005	0.01	0.01	0.01	0.01	0.01	0.005	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2	FUS-Na2O2
677310 Orig	< 2	< 5	8	2.15	< 0.01	< 0.001	3.19	0.011	0.15	< 0.005	8.51	< 0.1	< 0.01	17.9	0.10	0.105	< 0.01	< 0.01	< 0.01	20.1	0.10	< 0.005	< 0.01
677310 Dup	< 2	< 5	6	2.15	< 0.01	< 0.001	3.17	0.011	0.15	< 0.005	8.56	< 0.1	< 0.01	17.9	0.10	0.104	< 0.01	< 0.01	< 0.01	19.8	0.11	< 0.005	< 0.01
677320 Orig	< 2	< 5	41	2.16	< 0.01	< 0.001	3.28	0.010	3.88	< 0.005	7.64	< 0.1	< 0.01	15.8	0.17	0.088	< 0.01	< 0.01	0.01	16.7	0.09	< 0.005	0.01
677320 Dup	< 2	< 5	36	2.16	< 0.01	< 0.001	3.30	0.010	3.91	< 0.005	7.64	< 0.1	< 0.01	16.0	0.17	0.088	< 0.01	< 0.01	0.01	16.9	0.09	< 0.005	0.01
677328 Orig									17.9														
677328 Dup									18.3														
677330 Orig	< 2	< 5	< 5	2.62	< 0.01	< 0.001	1.47	0.012		< 0.005	9.35	< 0.1	< 0.01	16.6	0.23	0.084	< 0.01	< 0.01	0.02	15.9	0.11	< 0.005	0.02
677330 Dup	< 2	< 5	9	2.60	< 0.01	< 0.001	1.48	0.012		< 0.005	9.31	< 0.1	< 0.01	16.7	0.23	0.085	< 0.01	< 0.01	0.02	16.0	0.11	< 0.005	0.02
Method Blank				< 0.01	< 0.01	< 0.001	< 0.01	< 0.002	< 0.01	< 0.005	< 0.05	< 0.1	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.005	< 0.01
Method Blank				< 0.01	< 0.01	< 0.001	< 0.01	< 0.002	< 0.01	< 0.005	< 0.05	< 0.1	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank									< 0.01														



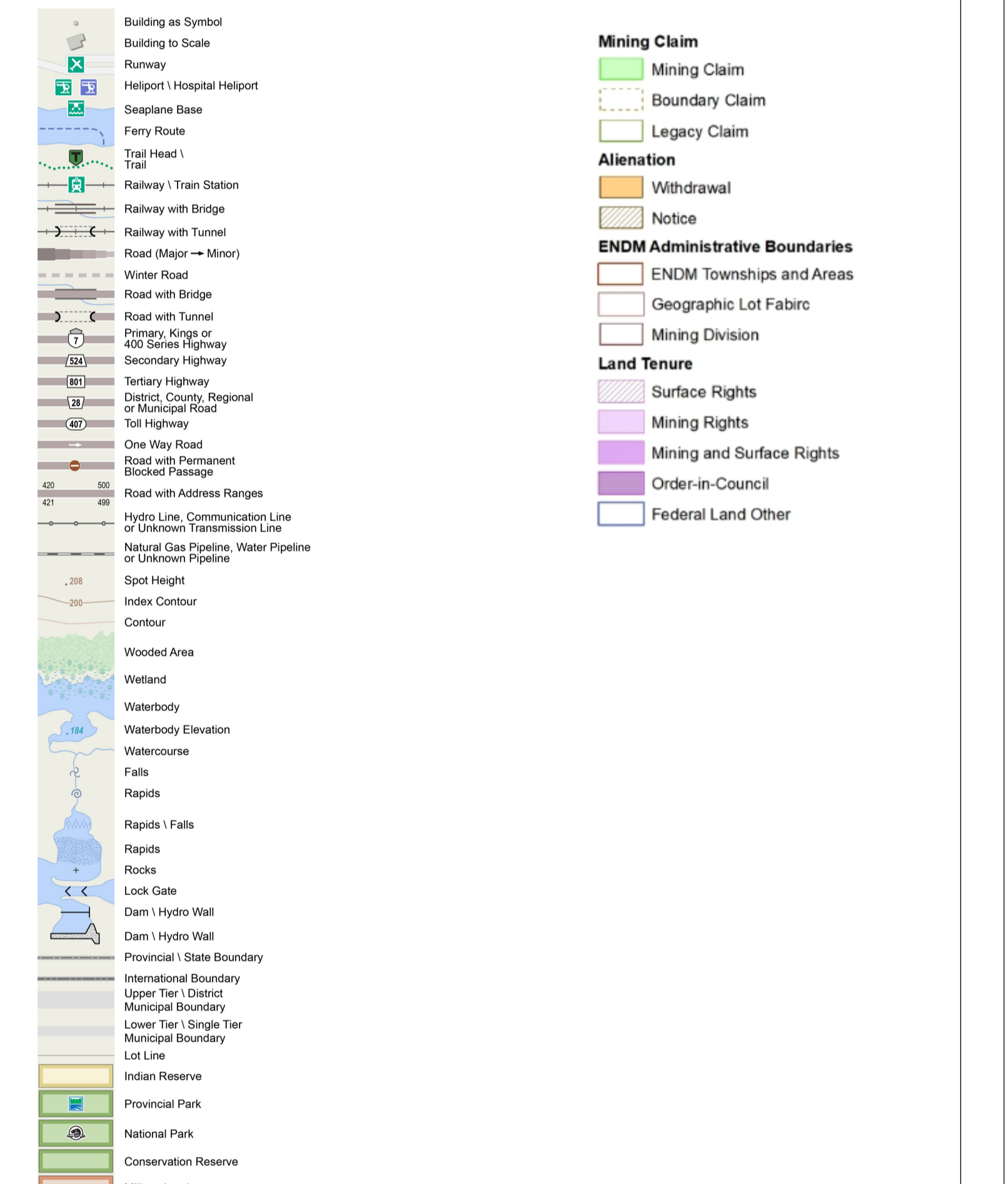
# Ontario Ministry of Northern Development and Mines Mining Lands Claim Map

## Administrative Districts

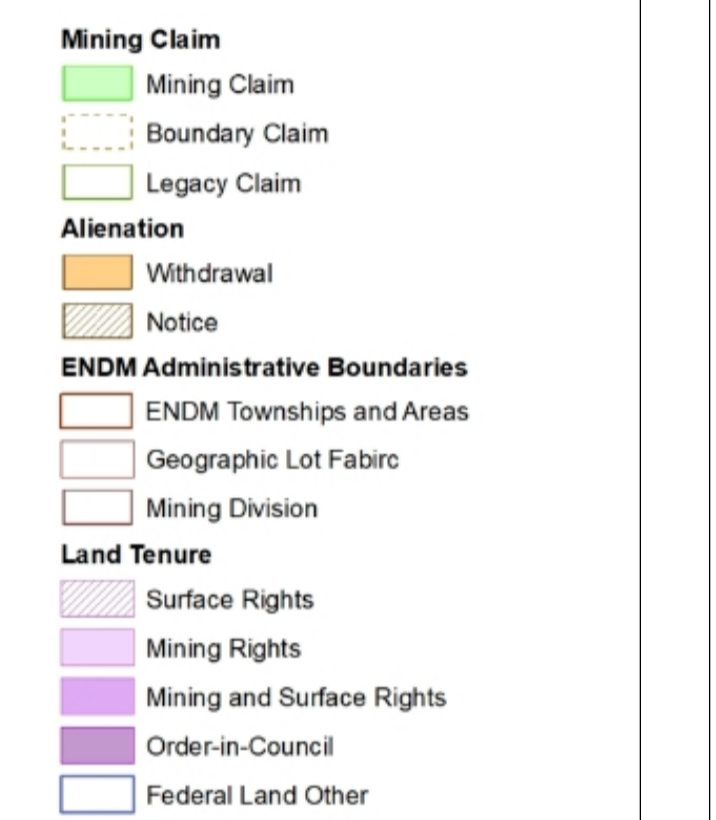
Township  
*Unknown*  
Mining Division

Land Registry  
*Unknown*  
MNR District Office  
*Thunder Bay*

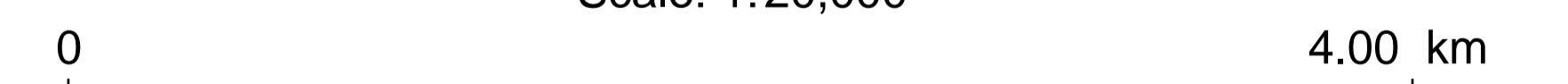
## Topographic



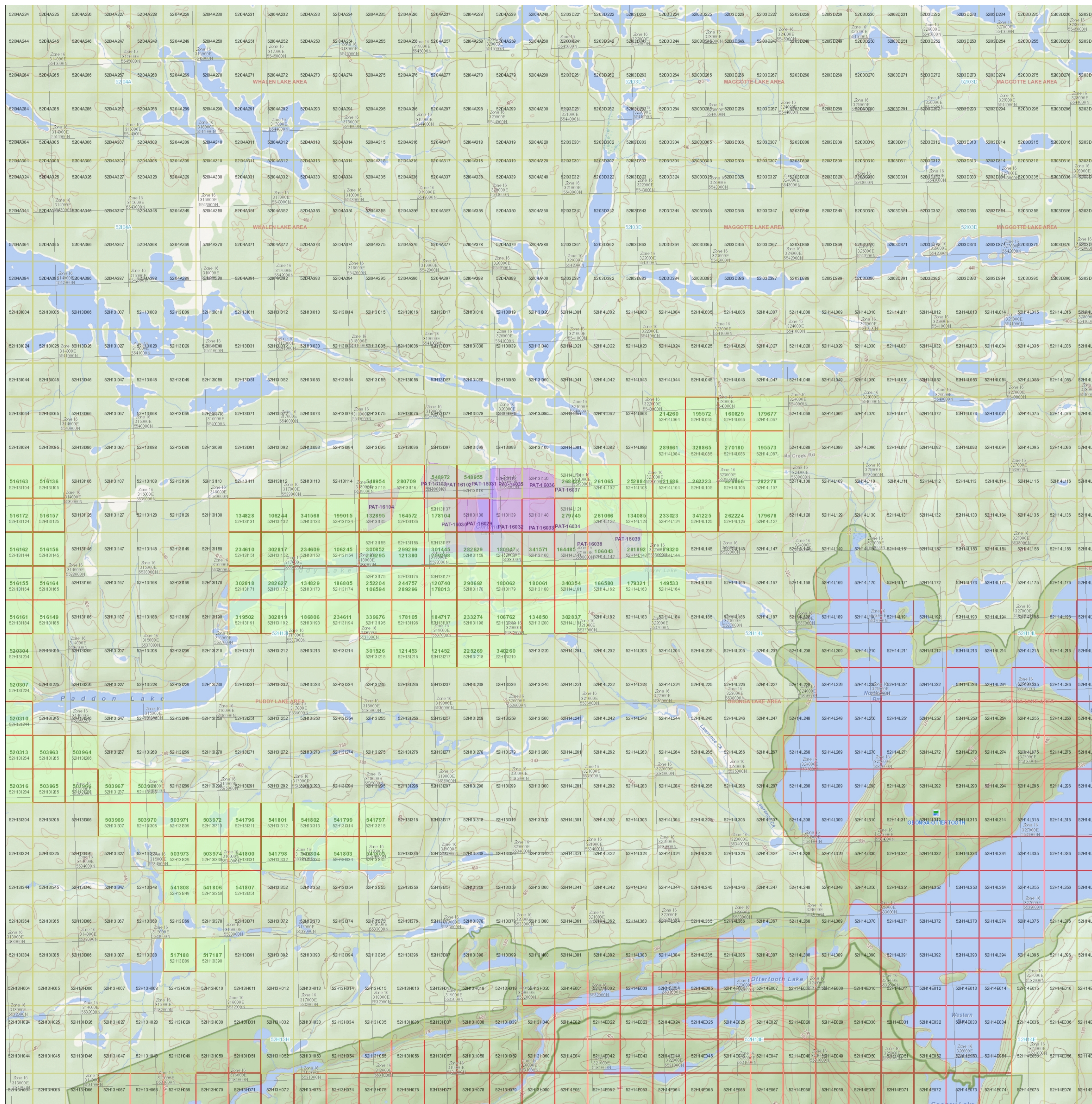
## Legend



Scale: 1:20,000



Map Datum: NAD 83  
Projection: Web Mercator



Those wishing to stake mining claims should consult with the Provincial Mining Records' Office of the Ministry of Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources.

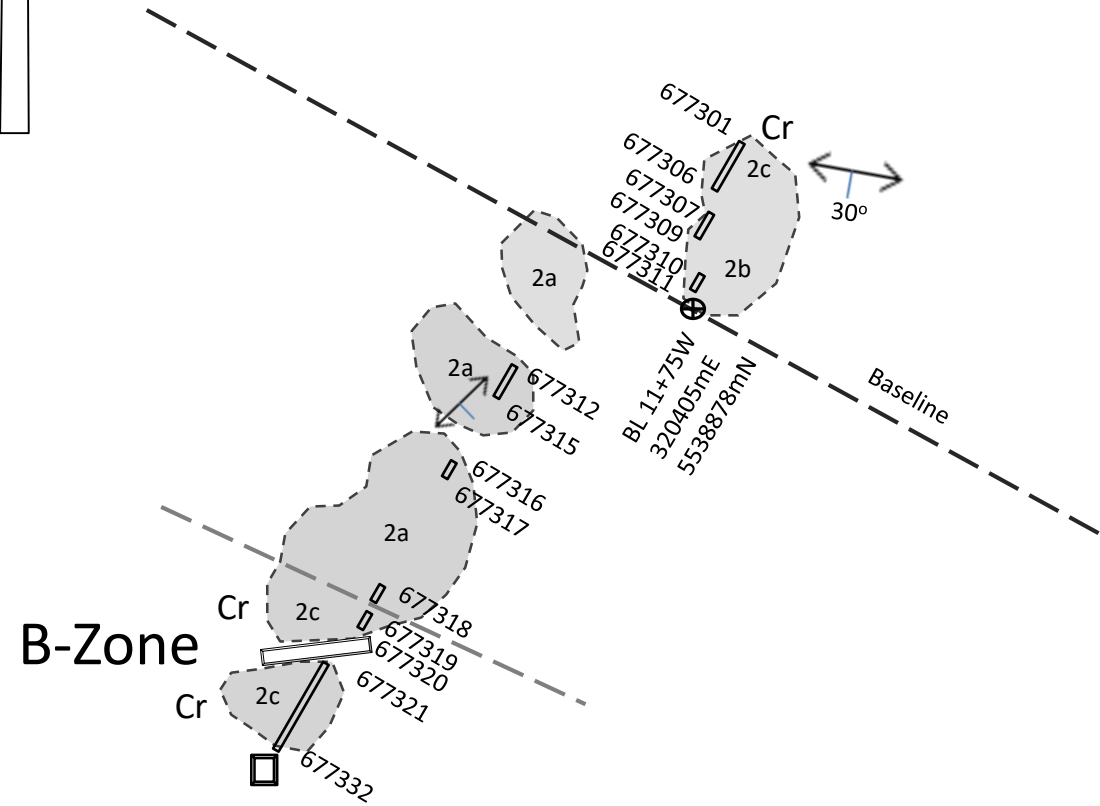
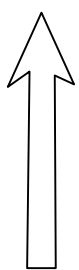
Completeness and accuracy are not guaranteed.

Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources and Forestry.

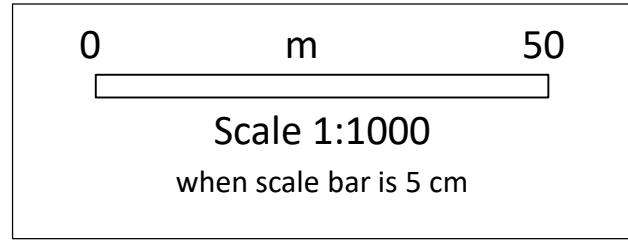
The information shown is derived from digital data available in the Provincial Mining Records' Office at the time of downloading from the Ministry of Northern Development and Mines web site.

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N



B-Zone



**Map 2. B-Zone, Chrome Property**  
**Patented Claims TB10827, TB10828, TB10835, TB10836**  
**G-0100, Obonga Lake area, Thunder Bay Mining Division**  
**NTS 52H 14 - Gull Bay**  
**Datum NAD83, UTM Zone 16U Mag declination 3° 53' W**  
**For: Pavey Ark Minerals Inc., Client 41165**  
**Prepared By: R. H. Sutcliffe, P.Geo.**  
**October 16, 2019**

Legend	
2a Serpentinite	Cr – chromite
2b Dunite (relict olivine cumulate texture)	Baseline
2c Serpentinite with chromite	Picket
Geological Contact	Sample Number 677301
Foliation	Channel/chip sample
	Outcrop
Trench	Pit

