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Work Assessment Report

# **Prospect Lake Property**

Coldwell

Thunder Bay District

Ontario

NTS 42 D/15

Assembled by: John Florek

Date: December 03, 2015

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## Summary:

A mapping and prospecting program was initiated to follow up on historical results of an identified exhalative unit that occurs at the boundary between sediments and mafic volcanics.

An attempt to find this horizon, projected to the surface, was the focus of this work program. This would enable a better understanding of the structural setting, stratigraphy, and exploration of this key horizon which has already demonstrated significant base metal occurrences.

Several traverses crossing this horizon, where the exhalative unit should project to surface, were accomplished. Limited exposure made it difficult to locate this horizon, but with digging in the vicinity of the projected zone the horizon was eventually located.

## Introduction:

John Florek has 100% interest in the Prospect Lake Property located in Coldwell Area of the Thunder Bay District, Ontario, within the Schreiber Greenstone Belt. The Property consists of eighteen (2) claims (24 claim units). **Table 1** and **Figure 1 and 2** show the location of the group of claims.

Prospect Lake Property	
Claim Number	Number of Claim Units
4240826	12
4240816	12
<b>Table 1: Claims</b>	

The Prospect Lake property is located 6.5 kilometres north of the TransCanada Highway, between Marathon and Terrance Bay, Ontario. The property is accessible by ATV trail, canoe, and forest trail to the southeastern area of claim 4240816. All of the claim area is very remote and most of the areas are only accessible by walking through the boreal forest.

## Regional Geology

The property occurs within the Wawa Subprovince of the Superior Province. It is within the late Archean Schreiber-Hemlo greenstone belt, i.e., 2.80-2.68 Ga. It is composed of supracrustal lithotectonic assemblages of ultramafic to tholeiitic basalt ocean plateau sequences, tholeiitic to calc-alkaline volcanic arc sequences, and siliciclastic turbidites, collectively intruded by arc granitoids (Polet et.al. 1998.)

## Property Geology

The property lies along the north limb of a regional antiform, which is located in the Archean Schreiber portion of the greenstone belt. Mafic and Intermediate volcanics are overlain by chert, shale, sulphide iron formation, and related sedimentary rocks. The belt consists of variably metamorphosed metavolcanic and metasedimentary units. **Figure 4** shows the property geology; taken from Walker 1967.

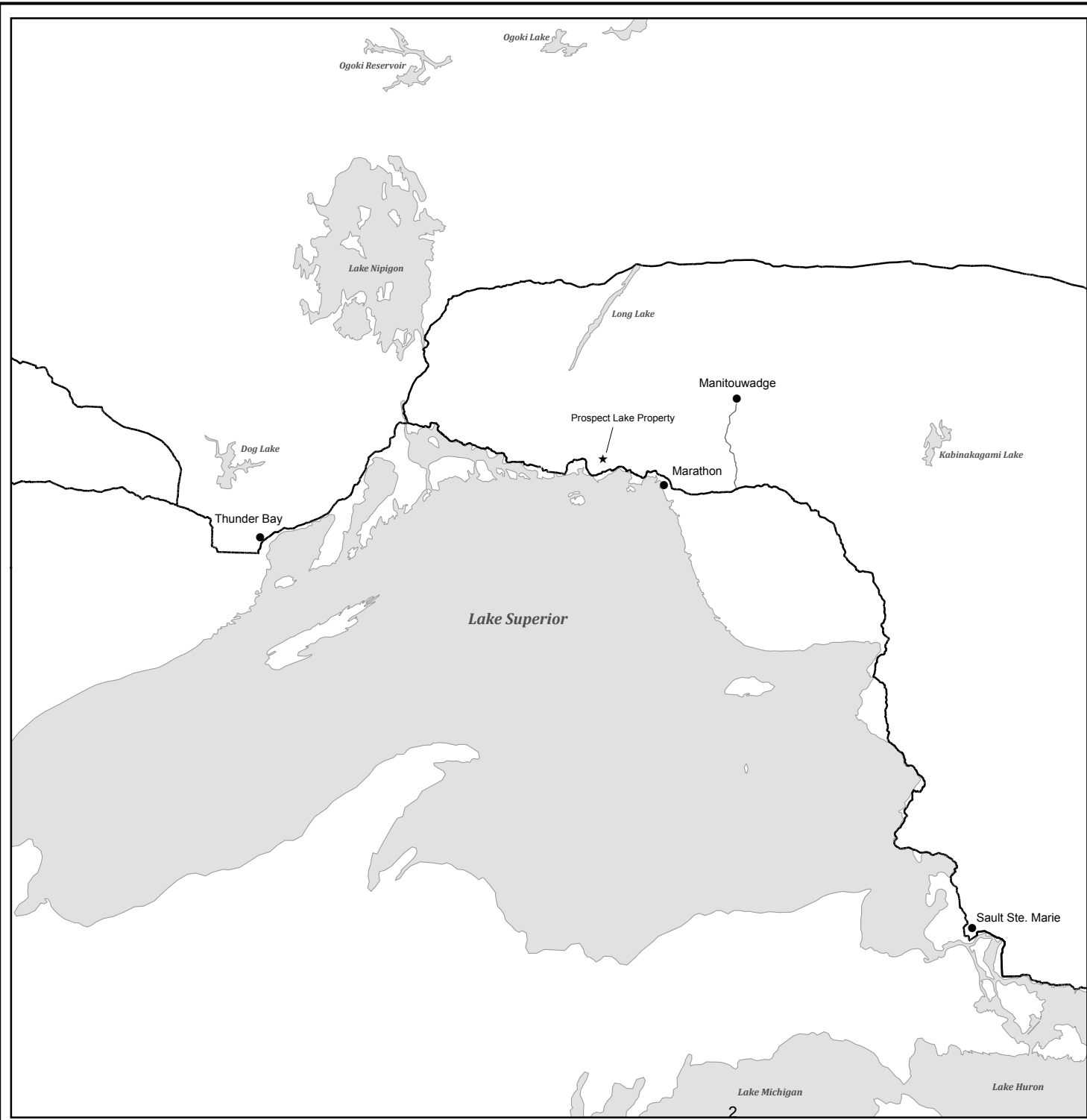
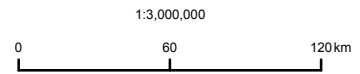


Figure 1.  
Northwestern Ontario Location Map  
Prospect Lake Property

★	Prospect Lake Property
●	Communities
—	Trans Canada Highway
—	Hwy 614
■	Water



Produced by Florek Consulting Services under licence from Ontario Ministry of Natural Resources, Copyright (c) Queens Printer 2011. Vector Base Data supplied by the MNR. UTM Projection, NAD83, Zone 16



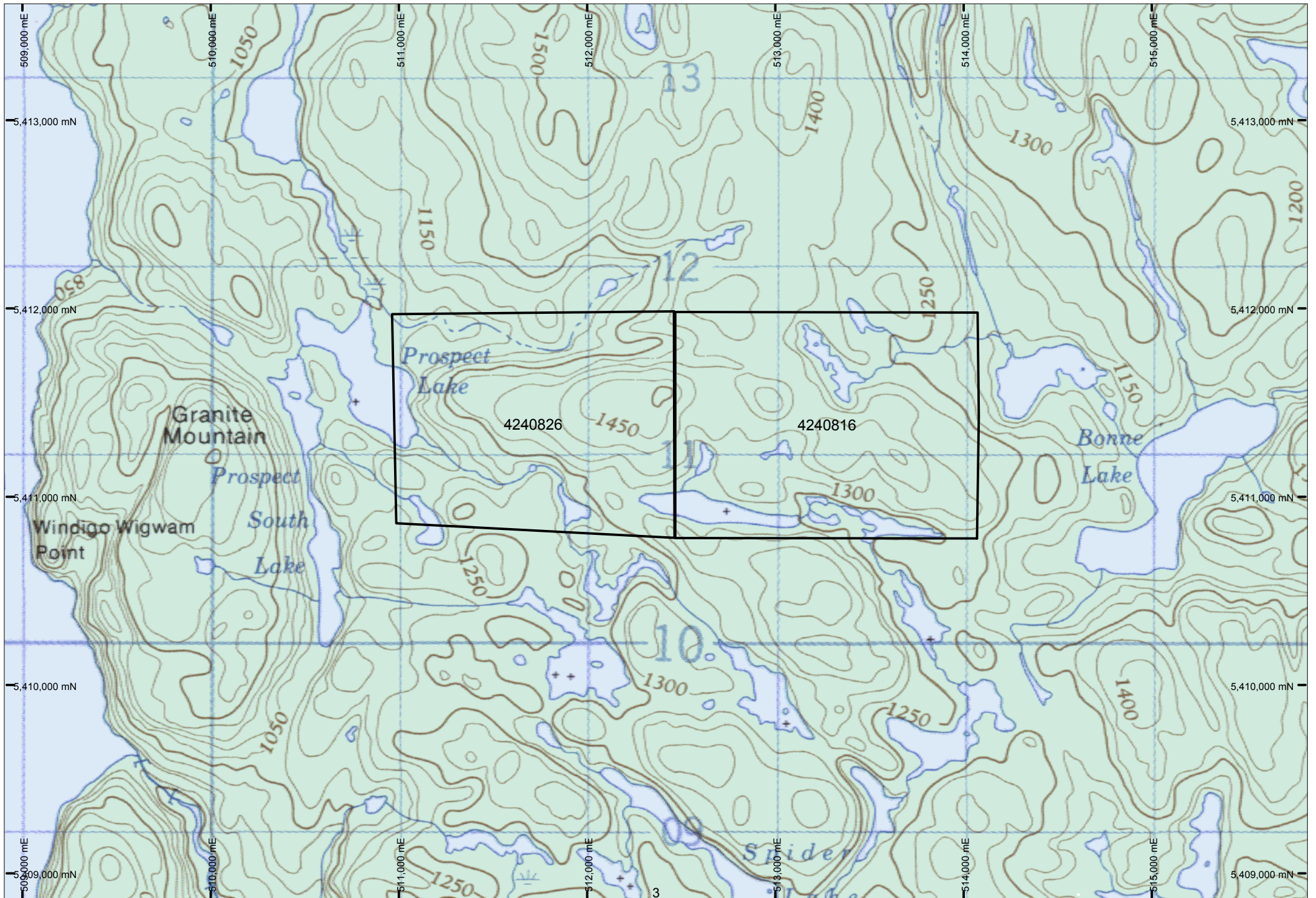


Figure 2: Claim Map (1 : 25,000)

## Historical Work Performed

Several previous companies have worked the property and the information is contained in the assessment files located at the MNDM. Brief synopses below of work performed on these properties are contained in these reports. A lot of the reports describe more regional surveys over the general area, but the list below is confined to the claims in this report.

1981: Gulf?

1983: Coronet Resources: Aerodat Ltd airborne geophysical surveys, geological survey, geochemical survey (42D15SW0082,70).

1983: Teck Exploration: Geophysics (42D15SW0090)

1986: Lionel Martin: Linecutting, Trenching, Geochemistry, Geological Mapping, Geochemistry, Geophysics, and Diamond Drilling (42D15SW0061)

1986-1987: Eldor Resources (optioned from Cunningham): Diamond Drilling, Soil Sampling, Litho geochemistry (42D15SW0064, 56\_b, 58)

1989: Cameco / Zenmac Zinc Ltd: Diamond Drilling (42D15SW0054,56)

1990: Cunningham: Whole Rock Analysis (42D15SW0051), *references Gulf work?*

2005: Phoenix Matachewan Mines: Litho geochemistry, Airborne Magnetics, VTEM (42D15SW0061, 2025, 20003043)

2006-2008: Galahad Minerals: Drilling

2012: Wayne Richards: Prospecting and bedrock sampling (20010244)

## Work Program

The main goal was to identify and prospect the area where an exhalative horizon trends through the claims and to determine if a soil gas survey would be appropriate to identify increased sulphidation along this known horizon in planned future exploration work. This work will guide the next phase of exploration on the property and its implementation.

A review of the historical work was performed on the property prior to field work. Attempts were made to put pertinent historical information into a GIS format, so that precise areas could be located since all established surface grids are now somewhat overgrown. This was the basis for prospecting and collecting outcrop samples to follow up on previously mapped areas, in hopes of identifying new showings. Samples that were identified and recorded are shown in **Figure 3** and **Appendix B**.

This exhalative horizon is known to be composed of chert, iron oxide and sulphide facies iron formation, and locally intercalated graphitic schists. This horizon has significant untested strike length and is one of the most continuous and thickest exhalite horizons in the greenstone belt shown on Walker's (1953)

geological map. The prospecting was done between known lithochemistry done by Phoenix Matachewan Mines, to hopefully identify new showings or unknown rock types. Lateral to this horizon, just off the claims is a diamond drillhole intercept that contained 8.6% Zn over 10 meters.

The area of prospecting is located on the northern flanks of a regional magnetic high, in an area of magnetic low. This is a similar spatial location of the diamond drillhole intercept on the adjacent property which intercepted 8.6% over 10 meters. It is also spatially close to a determined syncline in the stratigraphy, which could be very important in creating structural traps for massive sulphides. Part of the prospecting was to see if any fold hinges were seen in the outcrops.

Prospecting revealed that the exhalite horizon is more complex than shown on the map. Mafic volcanics and sediments were seen within this mapped exhalite horizon, constructed by Walker (1953). It appears that there are probably several horizons of exhalites that need to be further delineated with additional prospecting, geophysics or geochemistry.

In addition to prospecting, trails were cut for safety reasons, to provide easy ingress and egress to the property and to re-establish claim boundaries where they were difficult to discern. An emergency shelter was also constructed, due to the remoteness of the claim group. GPS mapping, of former existing trails, were also accomplished; to provide future access to historical drillholes and future unencumbered entry to property.

## **Recommendations**

Further investigations of these occurrences are warranted. It is suggest that the following be accomplished:

- Follow-up of geochemical (soils, rocks, gas) and geophysical surveys.
- The reestablishment of overgrown trails to provide better access.
- Additional evaluation of the historical geochemical dataset.



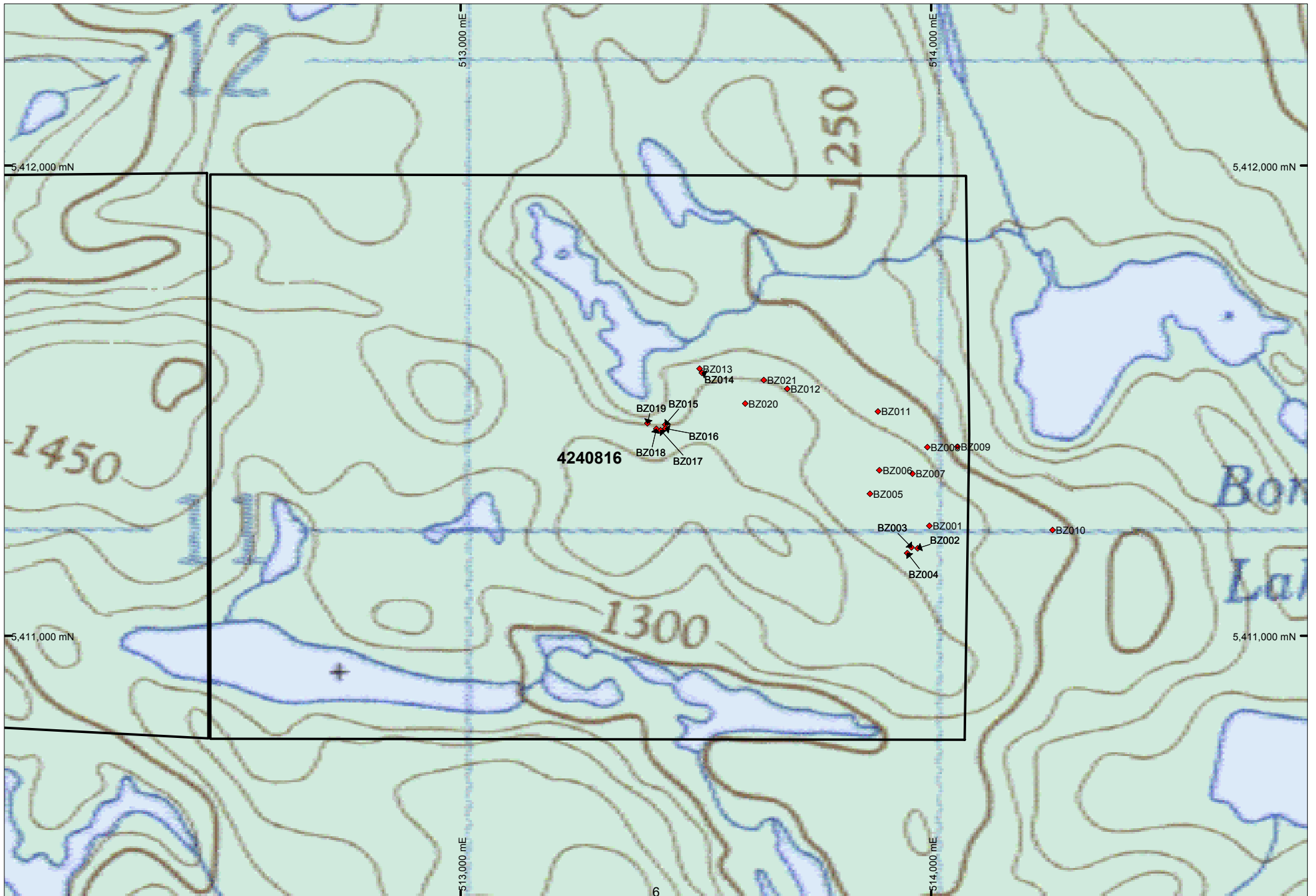
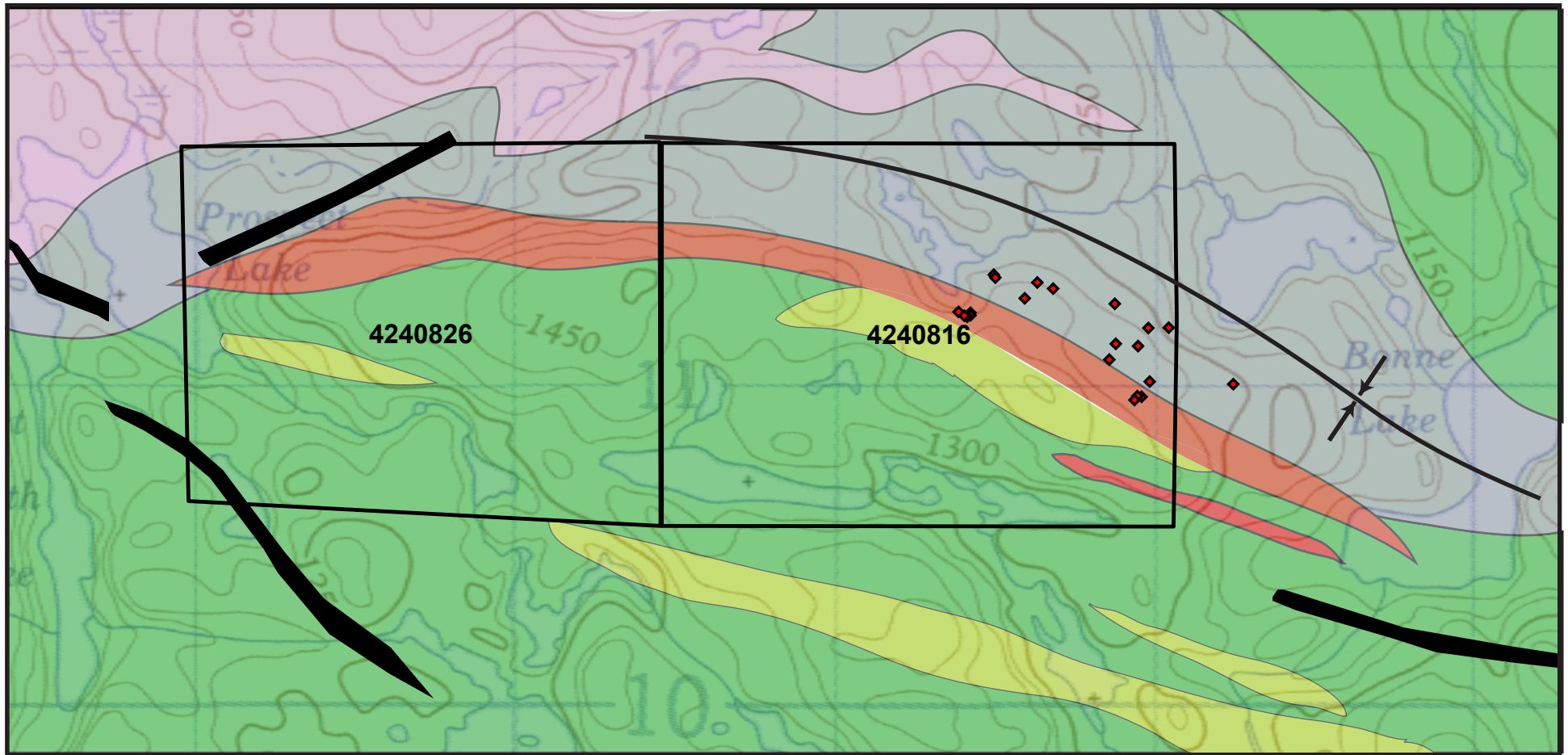


Figure 3: Outcrop Locations

# Prospect Lake Geology



## Prospect Lake Property Geology

- |                                                                                               |                                                                                                            |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
|  Intrusive |  Mafic Volcanics        |
|  Exhalite  |  Diabase Dikes          |
|  Sediments |  Intermediate Volcanics |
|  FeFm      |                                                                                                            |

After J.W.R. Walker 1953



Scale



Figure 4: Geology

## References

Polat, R. Kerrich, and D.A. Wyman (1998). The late Archean Schreiber–Hemlo and White River–Dayohessarah greenstone belts, Superior Province: collages of oceanic plateaus, oceanic arcs, and subduction–accretion complexes. *Tectonophysics*, v. 289, Issue 4. pp. 295-326.

Walker, J.W.R., 1967, *Geology of the Jackfish Middleton Area*, Ontario Department of Mines, 41p.

## **Appendix A**

**Prospect Lake Claim 4240816**

Date	MOB						DEMOB
	September-19-15	September-20-15	September-24-15	September-25-15	September-26-15	September-27-15	September-28-15
Trail Making		800	800				
ATV	200	200	200	200	200	200	200
Canoe	100	100	100	100	100	100	100
Mob/Demob	800						800
Emergency Shelter Setup							
Prospecting				800	800	800	
Mileage.	54	54	54	54	54	54	54
Perdiem	70	70	70	70	70	70	70
	1224	1224	1224	1224	1224	1224	1224
							8568

Description	Quantity	units	cost/unit	Total
Mob/Demob (Equipment, Emergency Shelter Setup)	2	day	\$800.00	\$1,600.00
Mapping, Prospecting (P.Geo, M.Sc Geologist)	3	day	\$800.00	\$2,400.00
ATV	7	day	\$200.00	\$1,400.00
Canoe and motor	7	day	\$100.00	\$700.00
Trail Establishment, Access Route (Emergency)	2	day	\$800.00	\$1,600.00
Perdiem	7	day	\$70.00	\$490.00
Mileage	630	km	\$0.60	\$378.00
Report Writing	2	day	\$800.00	\$1,600.00
Figures	3	day	\$800.00	\$2,400.00
				<b>\$10,168.00</b>

## **Appendix B**

## Prospect Lake Property

Sample	Easting	Northing	Structure	Lithology	Picture
BZ001	513996	5411234	Fol 142/vert	Rusty Mafic Volcanics	BZ001
BZ002	513971	5411186		Graywacky, rusty, mg	BZ002
BZ003	513958	5411188		Sediments, Cliff forming, slightly mineralized (aspy?)	BZ003
BZ004	513949	5411176		Mafic volcanics, rusty surface, vfg	BZ004b
BZ005	513870	5411302		Mafic volcanics	
BZ006	513890	5411352		Sediments, vfg	BZ006
BZ007	513960	5411345	fol 120/70 SW	Mafics, vfg	BZ007
BZ008	513992	5411401		Bleached Basalts, white weathered rind.	BZ008
BZ009	514056	5411402		Mafic Volcanoclastics	BZ009
BZ010	514258	5411225		Mafic Volcanoclastics, folded qtz vein	BZ010b
BZ011	513887	5411477	Fol 120/60 SW	Mafic Volcanoclastics, mg, Drk gray, qtz vn parallel to fol.	BZ011
BZ012	513694	5411525	Fol 110/60 SW, Jts perpendicular to Fol.	Basalt, vfg, dark gray, foliated.	BZ012
BZ013	513508	5411568	Fol 124/60 SW	Graywacky, vfg, drk gray, prominent foliation.	BZ013
BZ014	513513	5411559	Fol 85/60 SE	Basalt, vfg, dark gray, foliated, highly magnetic	BZ014
BZ015	513435	5411449	Fol 280/ 80 NE	Basalt, vfg, dark gray, foliated, highly magnetic	BZ015b
BZ016	513435	5411441	Fol 80/Vert	Semi-Massive Sulfide in Exhalite Unit, non-magnetic	BZ016, c
BZ017	513425	5411437		Semi-Massive Sulfide in Exhalite Unit, non-magnetic	BZ017, b
BZ018	513416	5411440	Fol 65/Vert	Basalt, slightly mineralized, margins of exhalite	BZ018b
BZ019	513397	5411452		Semi-Massive Sulfide in Exhalite Unit, non-magnetic	BZ019
BZ020	513605	5411494	fol 120/70 SW	Basalt, grey, vfg, non-magnetic	BZ020
BZ021	513644	5411544	Trend 120 <sup>o</sup> ; Perpendicular jts.	Quartz vn, barren	BZ021



BZ001



BZ002



BZ003



BZ004b











**BZ017**



**BZ017b**



**BZ018b**



**BZ019**



**BZ020**



**BZ021**



**Emergency Shelter #1**



**Emergency Shelter #2 (off property)**

## **Appendix C**