

# **INDEPENDENT TECHNICAL REPORT**

**TROUT BAY PROPERTY**

**RED LAKE, ONTARIO**

## **Band-Ore Resources Ltd.**

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Toronto, Ontario M5H 1T1

July 24<sup>th</sup>, 2006

Prepared By:



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## TABLE OF CONTENTS

LIST OF FIGURES .....	3
LIST OF TABLES .....	3
APPENDIX .....	3
1.0 EXECUTIVE SUMMARY .....	4
2.0 INTRODUCTION AND TERMS OF REFERENCE .....	6
2.1 INTRODUCTION .....	6
2.2 TERMS OF REFERENCE.....	6
2.3 UNITS.....	6
2.4 CCIC QUALIFICATIONS .....	7
3.0 RELIANCE ON OTHER EXPERTS .....	7
4.0 PROPERTY LOCATION AND DESCRIPTION .....	8
4.1 LOCATION.....	8
4.2 DESCRIPTION AND OWNERSHIP.....	8
5.0 ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY, AND INFRASTRUCTURE ...	13
5.1 ACCESS.....	13
5.2 CLIMATE AND VEGETATION.....	13
5.3 PHYSIOGRAPHY .....	13
5.4 INFRASTRUCTURE AND LOCAL RESOURCES.....	13
6.0 HISTORY .....	14
7.0 GEOLOGICAL SETTING .....	18
7.1 REGIONAL GEOLOGY OF RED LAKE GREENSTONE BELT.....	18
7.2 GEOLOGY OF TROUT BAY PROPERTY .....	21
8.0 DEPOSIT TYPES .....	23
9.0 MINERALIZATION .....	24
9.1 INTRODUCTION .....	24
9.2. NI-CU-PGE MINERALIZATION.....	27
9.2.1. TROUT BAY No. 2 NI SHOWING .....	27
9.2.2. No. 1 NI SHOWING (FAHLGREN LAKE).....	28
9.2.3. OTHER NI-CU SHOWINGS .....	28
9.3. ZN-CU MINERALIZATION.....	29
9.3.1. HIGH GRADE AND ZINC PIT ZONES .....	29
10.0 EXPLORATION.....	30
11.0 DRILLING.....	30
12.0 SAMPLING METHOD AND APPROACH.....	31
13.0 SAMPLE SECURITY, PREPARATION, AND ANALYSES .....	31
14.0 DATA VERIFICATION .....	31
15.0 ADJACENT PROPERTIES .....	32

16.0 MINERAL PROCESSING AND METALLURGICAL TESTING.....	34
17.0 MINERAL RESOURCE AND RESERVE ESTIMATES .....	34
18.0 INTERPRETATION AND CONCLUSIONS.....	35
19.0 RECOMMENDATIONS.....	35
19.1. PHASE 1 EXPLORATION PROGRAM.....	36
19.2. PHASE 2 EXPLORATION PROGRAM.....	36
19.3. PHASE 3 EXPLORATION PROGRAM.....	36
19.4 EXPLORATION BUDGET .....	36
20.0 STATEMENT OF AUTHORSHIP .....	38
21.0 REFERENCES .....	39

## LIST OF FIGURES

FIGURE 4.1. LOCATION OF THE TROUT BAY PROPERTY, RED LAKE, ONTARIO, CANADA.....	9
FIGURE 4.2. CLAIM MAP SHOWING THE LOCATION OF THE CLAIMS HELD BY BAND-ORE ON THE TROUT BAY PROPERTY (FROM HUGHES AND MORRIS 2006). .....	12
FIGURE 7.1. TECTONIC GEOLOGY OF RED LAKE GREENSTONE BELT (FROM SANBORNE-BARRIE ET AL. 2001). .....	19
FIGURE 7.2. LITHOLOGY OF THE RED LAKE GREENSTONE BELT (FROM HUGHES AND MORRIS 2006). .....	20
FIGURE 7.3. GEOLOGY OF THE TROUT BAY PROPERTY (FROM HUGHES AND MORRIS 2006).....	22
FIGURE 9.1. GENERAL GEOLOGY OF THE TROUT BAY AREA AND LOCATION OF COPPER OR NICKEL-COPPER ± PLATINUM-GROUP ELEMENT SULPHIDE MINERALIZATION (FROM PARKER 2000B). .....	25
FIGURE 9.2. TROUT BAY PROPERTY DETAILED GEOLOGY AND LOCATION OF MAIN OCCURRENCES AND DEPOSITS (FROM HUGHES AND MORRIS 2006). THE LEGEND IS SAME AS THAT FOR FIGURE 7.3. ....	26
FIGURE 15.1. GOLD DEPOSITS AT THE WEST END OF RED LAKE, TODD AND BALL TOWNSHIPS (FROM BAKER ET AL. 1996). .....	34

## LIST OF TABLES

TABLE 4.1. MINING CLAIMS FOR THE TROUT BAY PROPERTY. ....	8
TABLE 4.2. DISPOSITION CLAIMS FOR TROUT BAY PROPERTY. ....	9
TABLE 6.1. SUMMARY OF WORK AND EXPLORATION HISTORY, TROUT BAY PROPERTY.....	17
TABLE 9.1. SUMMARY NI-CU AND ZN-CU OCCURRENCES AND STYLES OF MINERALIZATION ON THE TROUT BAY PROPERTY.....	24
TABLE 11.1 HISTORIC DRILLING ON TROUT BAY PROPERTY (SHKLANKA 1969; FENWICK ET AL. 1990; CUTTING 2001).....	30
TABLE 14.1 SAMPLES TAKEN DURING SITE VISIT TO TROUT BAY PROPERTY (NAD 83).....	32
TABLE 17.1. SUMMARY OF HISTORICAL RESOURCE ESTIMATIONS, TROUT BAY PROPERTY.....	34

## APPENDIX

Appendix 1. Certificates

Appendix 2. Photos from site visit to Trout Bay Property

## 1.0 EXECUTIVE SUMMARY

Caracle Creek International Consulting Inc. ("CCIC") of Sudbury, Ontario, Canada was contracted by Band-Ore Resources Ltd. of Toronto, Ontario ("Band-Ore") to review the Trout Bay Property (the "Property"), and prepare an Independent Technical Report (the "Report"), compliant with National Instrument 43-101 ("NI43-101").

The Trout Bay Property is located near Red Lake, Ontario. The Trout Bay Property consists of 13 contiguous mining claims (124 units and 1984 hectares) which are owned 100% by Goldcorp Inc. and optioned by Band-Ore. The Trout Bay Property also contains 54 contiguous disposition claims (2065.622 hectares) which are owned 100% by Goldcorp Inc. and optioned by Band-Ore. The disposition claims consist of 36 leasehold patents and 18 mining licences of occupation. The disposition claims are adjacent to the mining claims and the total size of the Property is 4049.622 hectares.

Throughout most of the history of the Trout Bay Property, it has had one owner: Cochenour Willans Gold Mines Ltd. (1956-1998). They delineated the Trout Bay No. 1 Nickel Zone on the northeast shore of Fahlgren Lake (1957), the Trout Bay No. 2 Nickel Zone southeast of High Grade Lake (1960), the Zinc Pit Zone (1960) and High Grade Cu-Ni Lake zone (1967). Several exploration companies have drilled the Ni-Cu and Zn-Cu mineralization on the Trout Bay property: Cochenour Willans Gold Mines Ltd. in 1957-1961, Falconbridge Ltd. in 1962, Cochenour Willans in 1967-1972, Inco Ltd. in 1993-1994 and Goldcorp in 2000.

In 1968, a resource of 124, 760 tons at a grade of 1.50% Cu, 7.86% Zn and 1.70 opt Ag, 0.24% Pb and 0.007 opt Au was delineated for the eastern body (High Grade Lake deposit) by Cochenour Willans Gold Mines Ltd. (Shklanka 1969). The western body (Zinc Pit) was estimated to contain 13, 766 tons at a grade of 0.68% Cu, 4.75% Zn and 0.94 opt Ag by Cochenour Willans Gold Mines Ltd. (Shklanka 1969). In 1993, Inco Exploration and Technical Services estimated a tonnage of 72,152 tons for the High Grade Lake Deposit. None of the historical resource estimates are 43-101 compliant.

The Trout Bay Property occurs within the Red Lake greenstone belt in the western part of the Uchi Subprovince. The Red Lake greenstone belt consists of seven supracrustal volcano-sedimentary assemblages from oldest to youngest: Balmer, Ball, Slate Bay, Bruce Channel, Trout Bay, Huston and Confederation (Sanborn-Barrie et al. 2001). Four of the assemblages are Mesoarchean metavolcanic: Balmer, Ball, Trout Bay and Bruce Channel and one is Mesoarchean clastic: Slate Bay assemblage (Parker 2000a). The Huston assemblage is a regionally extensive unit of a polymictic conglomerate that marks an angular unconformity between the Mesoarchean and Neoarchean strata (Sanborn-Barrie et al. 2001). Neoarchean metavolcanic rocks of the Confederation assemblage occur along the northeast and southeast flanks of the greenstone belt (Parker 2000a). The majority of the significant gold deposits in the greenstone belt occur within the Balmer assemblage (Parker 2000a).

The Trout Bay region is underlain by the Trout Bay Assemblage which forms an east- to northeast-facing, northwest-striking, folded sequence of fine-grained metasedimentary rocks consisting of argillite, wacke and siltstone (Parker 2000b). Metasedimentary rocks are interlayered with very minor, intermediate tuff and lapilli tuff breccia and quartz-magnetite iron formation (Riley 1976). The metasedimentary rocks are overlain, in the east, by northeast-facing, mafic metavolcanic flows (Riley 1976). The metasedimentary rocks are separated from the mafic metavolcanic rocks by a heterolithic, mafic, tuff breccia (Riley 1976). The rocks have been metamorphosed to upper

greenschist and amphibolite facies (Parker 2000b). The metasedimentary rocks are intruded by metamorphosed, mafic and ultramafic intrusions (i.e., gabbro) with variable amounts of garnet and amphibole porphyroblasts (Parker 2000b).

The Trout Bay Project contains a number of historical Ni-Cu showings that were first identified by drilling in the late 1950's and early 1960's. The Ni-Cu-PGE mineralization (No. 1 and No. 2 Ni showings) occurs at the base of a gabbro sill in contact with a chert-magnetite iron formation. The gabbro is altered to an amphibolite schist. Semi-massive chalcopyrite, pyrrhotite, pyrite and pentlandite are hosted in a tremolite-antigorite-magnetite schist at the base of the sill (Kuryliw 1963). The primary target area for Ni-Cu-PGE mineralization within the Trout Bay Property is the No. 2 Ni showing. Cu-Zn mineralization occurs at the High Grade Lake and Zinc Pit zones which have been dextrally displaced by 800 feet along a fault trending 284°. The Zn-Cu mineralization for both occurrences is hosted entirely by tightly folded, silicified, fine-grained, argillaceous greywackes and recrystallized, siliceous metasediments, at the contact with a thick gabbro sill (Fenwick et al. 1990). Mineralization consists of a central zone of massive sphalerite with minor chalcopyrite and galena, surrounded by a halo of disseminated pyrrhotite, pyrite and chalcopyrite with thick stringers of pyrite (Fenwick et al. 1990).

The Trout Bay is favourably located for the development of a mining project. The primary target on the property is Ni-Cu-PGE mineralization and lesser ranked targets include Zn-Cu-Ag mineralization, and Au mineralization. The Trout Bay Property holds potential for further discovery of mineralization and exploration on the property should be pursued. A two phase exploration program that includes geological mapping and prospecting, an airborne electromagnetic-magnetic survey, and diamond drilling is proposed. A first year budget of approximately \$780,000 is recommended.

## 2.0 INTRODUCTION AND TERMS OF REFERENCE

### 2.1 Introduction

At the request of Bob Duess of Band-Ore Resources Ltd. (“Band-Ore”), Caracle Creek International Consulting Inc. (“CCIC”) has prepared this Report to provide a summary of exploration, scientific and technical data on the Trout Bay Property (“Property”). The Report is based on exploration and property information and data supplied by Band-Ore, review of public domain geological and exploration data for the Trout Bay Property, incorporation of relevant mining and geological literature, and a property visit completed Monday July 10, 2006 by CCIC. The Property visit included observation of mineralized prospects on the property, collection of samples from selected showings for check analyses, and checks of field positional data.

### 2.2 Terms of Reference

**term:** definition

**Band-Ore:** Band-Ore Resources Ltd. is a TSX Exchange listed Canadian mining company trading under the symbol “BAN”. Band-Ore’s head office is located in Toronto, Ontario.

**GIS:** Geographic Information System. A computer-based information management system that is geared to a geographic framework and that can efficiently manipulate different types of geographic-based geological information across scales. Conventional industry standard software programs include Arcview (ESRI) and MapInfo.

**Goldcorp:** Goldcorp Inc. is a TSX Exchange listed Canadian mining company trading under the symbol “G” and on the NYSE trading under the symbol “GG”. Goldcorp’s head office is located in Vancouver, British Columbia.

**PGE:** Platinum-group elements (i.e., Pd, Rh, Ru, Pt, Ir, Os).

**Trout Bay Property or the “Property”:** The subject exploration property which is 100% held by Goldcorp Inc. and has been optioned by Band-Ore.

### 2.3 Units

The Metric System or SI System is the primary system of measure and length used in this Report and is generally expressed in kilometres, metres and centimetres, volume is expressed as cubic metres, and mass expressed as metric tonnes. Conversions from the SI or Metric System to the Imperial System are provided below and quoted where practical. Many of the geologic publications and more recent work assessment files now use the SI system but older work assessment files almost exclusively refer to the Imperial System. Metals and minerals acronyms in this report conform to mineral industry accepted usage and the reader is directed to an online source at [www.maden.hacettepe.edu.tr/dmmrt/index.html](http://www.maden.hacettepe.edu.tr/dmmrt/index.html).

Conversion factors utilized in this report include:

1 foot = 0.3048 metres

1 mile = 1.609 kilometres

Other abbreviations used in this report include:

ppb = parts per billion;

ppm = parts per million;

opt or oz/t = ounce per short ton;

Unless otherwise mentioned, all Universal Transverse Mercator (UTM) coordinates in this Report are provided in the datum of Canada, NAD83 Zone 15.

## 2.4 CCIC Qualifications

Caracle Creek International Consulting Inc. ("CCIC") is an international consulting company based in Sudbury, Ontario, Canada. CCIC provides a wide range of geological and engineering services to the mineral industry. With offices in Canada (Sudbury and Toronto, Ontario and Abbotsford, British Columbia) and South Africa (Johannesburg), CCIC is well positioned to service its international client base.

CCIC's mandate is to provide professional geological and engineering services to the mineral exploration and development industry at competitive rates and without compromise. CCIC's group of professionals have international experience in a variety of disciplines and offer services that include:

- Exploration Project Generation, Design and Management
- Data Compilation and Exploration Target Generation
- Property Evaluation and Due Diligence Studies
- Independent Technical Reports (43-101)/Competent Persons' Reports
- Mineral Resource/Reserve Modelling, Estimation and Audit, and Conditional Simulation
- 3D Geological Modelling, Visualization and Database Management

In addition, CCIC has access to the most current software for data management, interpretation and viewing, manipulation and target generation.

The Qualified Person for this Report is Dr. Julie Selway, Consulting Geologist with CCIC and a geologist in good standing with the Association of Professional Geoscientists of Ontario (#738). Dr. Selway has 15 years of experience in economic geology including a M.Sc. thesis on Platinum-Group Minerals and a Ph.D. thesis on rare-element pegmatites. Dr. Selway is an expert on exploration of rare-element pegmatites for Ta, Li and Cs deposits. Dr. Selway has over 20 peer-reviewed academic journal publications and 7 Ontario Geological Survey publications.

Co-author on this Report is Mr. Jamie Lavigne, Exploration Manager of CCIC and a geologist in good standing with the Association of Professional Engineers, Geologists, and Geophysicists of the Northwest Territories (L1244). Mr. Lavigne has 20 years of experience in the mining industry including the generation and execution of early stage exploration programs, advanced exploration and deposit delineation, resource modelling, and the design and management of quality control-quality assurance programs.

## 3.0 RELIANCE ON OTHER EXPERTS

CCIC have conducted this independent technical assessment in accordance with the methodology and format outlined in National Instrument 43-101, companion policy NI43-101CP and Form 43-101F1. This Report is directed solely for the development and presentation of data with recommendations to allow for Band-Ore to reach informed decisions. This Report was prepared by competent and professional individuals from Caracle Creek International Consulting Inc. on behalf of Band-Ore, for their ability to raise funds to further explore and develop the Property. The information, conclusions and recommendations contained herein are based largely on a

review of digital and hard copy data and information supplied to CCIC by Band-Ore, as well as various published geological reports. CCIC have assumed that the reports and other data listed in the “References” section of this Report are substantially accurate and complete.

CCIC have relied on information provided by Band-Ore regarding technical information and all of these sources appear to be of sound quality. CCIC are unaware of any technical data other than that presented by Band-Ore or its agents. CCIC did not conduct an in-depth review of mineral title and ownership and the title ownership and status of claims as outlined in this Report was obtained from Ministry of Northern Development and Mines, Ontario. While title documents and option/purchase agreements were reviewed for this study as provided by Band-Ore, it does not constitute, nor is it intended to represent, a legal, or any other opinion as to title.

All relevant information on the Property presented in this Report is based on data derived from reports written by geologists and/or engineers, whose professional status may or may not be known in relation to the NI43-101 definition of a Qualified Person. CCIC have made every attempt to accurately convey the content of those files, but cannot guarantee either the accuracy or validity of the work contained within those files. However, CCIC believe that these reports were written for internal purposes only, with the objective of presenting the results of the work performed without any promotional or misleading intent. In this sense, the information presented should be considered reliable, unless otherwise stated, and may be used without any prejudice by Band-Ore Resources Ltd.

CCIC are not responsible for any omissions in, and CCIC do not guarantee, and make no warranty as to the accuracy of, information received from outside sources. CCIC have made all reasonable efforts to outline any land tenure or environmental issues relating to the Property and CCIC disclaim all responsibility for missing or inaccurate Property information.

## **4.0 PROPERTY LOCATION AND DESCRIPTION**

### **4.1 Location**

The Trout Bay Property is located approximately 26 km west of the town of Red Lake, in the Mulcahy, southeast Ball and southwest Killala townships, northwestern Ontario, Canada (see Figure 4.1). It is located within the Red Lake greenstone belt of the Uchi Subprovince.

### **4.2 Description and Ownership**

The Trout Bay Property consists of 13 contiguous mining claims (124 units and 1984 hectares) (Table 4.1) (Figure 4.2) which are owned 100% by Goldcorp Inc. and have been optioned to Band-Ore Resources Ltd. The Trout Bay Property also contains 54 contiguous disposition claims (2065.622 hectares) (Table 4.2) which are owned 100% by Goldcorp Inc. and have been optioned to Band-Ore Resources Ltd. The disposition claims consist of 36 leasehold patents and 18 mining licences of occupation. The disposition claims are adjacent to the mining claims and the total size of the Property is 4049.622 hectares.

Table 4.1. Mining claims for the Trout Bay Property.



Claim Number	Township/ Area	units	Recording Date	Claim Due Date	Work Required	Total Applied
1184909	Mulcahy	6	1999-Sep-27	2007-Sep-27	\$2,400	\$14,400
1184910	Mulcahy	12	1999-Sep-27	2007-Sep-27	\$4,800	\$28,800
1184911	Mulcahy	9	1999-Sep-27	2007-Sep-27	\$3,600	\$21,600
1184912	Mulcahy	16	1999-Sep-27	2006-Sep-27	\$5,400	\$33,000
1184913	Mulcahy	12	1999-Sep-27	2006-Sep-27	\$4,800	\$24,000
1184914	Mulcahy	4	1999-Sep-27	2007-Sep-27	\$1,600	\$9,600
1184915	Mulcahy	8	1999-Sep-27	2007-Sep-27	\$3,200	\$19,200
1184916	Mulcahy	6	1999-Sep-27	2006-Sep-27	\$2,283	\$12,117
1185190	Mulcahy	12	1999-Sep-27	2006-Sep-27	\$4,642	\$24,158
1234065	Mulcahy	8	1999-Apr-21	2007-Apr-21	\$3,200	\$19,200
1234066	Mulcahy	11	1999-Apr-21	2007-Apr-21	\$4,400	\$22,000
1234067	Mulcahy	10	1999-Apr-21	2008-Apr-21	\$2,577	\$21,423
1234148	Mulcahy	10	2000-Jul-27	2007-Jul-27	\$4,000	\$20,000
<b>total units</b>		<b>124</b>				

Note: All mining claims are active, have a total reserve of 0\$ and the claim holder is 100% Goldcorp Inc. Trout Bay Property consists of a total of 13 mining claims, 124 units and 1984 hectares.



Figure 4.1. Location of the Trout Bay Property, Red Lake, Ontario, Canada.  
Table 4.2: Disposition claims for Trout Bay Property.

<b>Claim Number</b>	<b>Lease/ Lic#</b>	<b>Township /Area</b>	<b>type of disposition</b>	<b>Area in Hectares</b>	<b>Start Date</b>	<b>expiry date</b>
KRL48264	105892	Ball	Lease	11.784	1990-Mar-01	2011-Feb-28
KRL48265	105893	Ball	Lease	19.911	1990-Mar-01	2011-Feb-28
KRL48266	105894	Ball	Lease	14.415	1990-Mar-01	2011-Feb-28
KRL48267	105895	Ball	Lease	10.502	1990-Mar-01	2011-Feb-28
KRL48268	105896	Ball	Lease	13.152	1990-Mar-01	2011-Feb-28
KRL48269	105897	Ball	Lease	20.016	1990-Mar-01	2011-Feb-28
KRL48270	105898	Ball	Lease	15.852	1990-Mar-01	2011-Feb-28
KRL48271	105899	Ball	Lease	15.002	1990-Mar-01	2011-Feb-28
KRL48272	105900	Ball	Lease	11.052	1990-Mar-01	2011-Feb-28
KRL48273	105891	Ball	Lease	20.17	1990-Mar-01	2011-Feb-28
KRL48274	105901	Ball	Lease	16.483	1990-Mar-01	2011-Feb-28
KRL48275	105902	Ball	Lease	16.013	1990-Mar-01	2011-Feb-28
KRL48276	105890	Ball	Lease	21.359	1990-Mar-01	2011-Feb-28
KRL48277	105903	Ball	Lease	18.272	1990-Mar-01	2011-Feb-28
KRL48278	105904	Ball	Lease	14.901	1990-Mar-01	2011-Feb-28
KRL31538	13269	Mulcahy	Licence of Occupation	2.679	1961-Feb-01	
KRL33764	13270	Mulcahy	Licence of Occupation	6.325	1961-Feb-01	
KRL33765	13270	Mulcahy	Licence of Occupation	6.325	1961-Feb-01	
KRL33776	13270	Mulcahy	Licence of Occupation	6.325	1961-Feb-02	
KRL39882	13269	Mulcahy	Licence of Occupation	2.679	1961-Feb-03	
KRL47677	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL47678	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL47679	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL47699	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL47700	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL47701	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL47702	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL47703	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL48118	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL48119	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL48120	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL48327	13564	Mulcahy	Licence of Occupation	97.173	1963-Aug-01	
KRL48328	13564	Mulcahy	Licence of Occupation	98.173	1963-Aug-01	
KRL49375	105082	Mulcahy	Lease	12.59	1988-Feb-01	2009-Jan-31
KRL49376	105083	Mulcahy	Lease	15.018	1988-Feb-01	2009-Jan-31

KRL49377	105084	Mulcahy	Lease	10.506	1988-Feb-01	2009-Jan-31
KRL49522	105924	Mulcahy	Lease	15.475	1990-Mar-01	2011-Feb-28
KRL49523	105923	Mulcahy	Lease	15.139	1990-Mar-01	2011-Feb-28
KRL49524	105922	Mulcahy	Lease	12.27	1990-Mar-01	2011-Feb-28
KRL49869	106967	Mulcahy	Lease	49.246	1995-Oct-01	2016-Sep-30
KRL49870	106967	Mulcahy	Lease	49.246	1995-Oct-01	2016-Sep-30
KRL49871	106967	Mulcahy	Lease	49.246	1995-Oct-01	2016-Sep-30
KRL49872	106967	Mulcahy	Lease	49.246	1995-Oct-01	2016-Sep-30
KRL49873	106967	Mulcahy	Lease	49.246	1995-Oct-01	2016-Sep-30
KRL49877	105925	Mulcahy	Lease	15.949	1990-Mar-01	2011-Feb-28
KRL49887	106968	Mulcahy	Lease	45.462	1995-Oct-01	2016-Sep-30
KRL49888	106968	Mulcahy	Lease	45.462	1995-Oct-01	2016-Sep-30
KRL49889	105926	Mulcahy	Lease	14.293	1990-Mar-01	2011-Feb-28
KRL49890	105921	Mulcahy	Lease	8.049	1990-Mar-01	2011-Feb-28
KRL49891	105920	Mulcahy	Lease	23.597	1990-Mar-01	2011-Feb-28
KRL49892	105919	Mulcahy	Lease	11.319	1990-Mar-01	2011-Feb-28
KRL49893	105918	Mulcahy	Lease	9.437	1990-Mar-01	2011-Feb-28
KRL49894	105917	Mulcahy	Lease	20.938	1990-Mar-01	2011-Feb-28
KRL49895	105916	Mulcahy	Lease	16.422	1990-Mar-01	2011-Feb-28
<b>total hectares</b>				<b>2065.622</b>		

Note: All disposition claims are active and are owned 100% by Goldcorp Inc. Trout Bay property consists of 36 leasehold patents and 18 licences of occupation for a total of 54 disposition claims and 2065.622 hectares. Each lease and licence of occupation may consist of multiple mining claims. Each lease is for mining rights only and each licence is a mining licence of occupation.

**The description of the mineral titles is not a legal opinion, but rather, is based on written information provided to CCIC by Ministry of Northern Development and Mines, Ontario Claimap web site: [http://www.mndm.gov.on.ca/mndm/mines/lands/claimap3/Default\\_e.asp](http://www.mndm.gov.on.ca/mndm/mines/lands/claimap3/Default_e.asp)**

The land is good standing as all mining claims have credits exceeding work required, 3 leases expire January 31, 2009, 25 leases expire February 28, 2011, 7 leases expire September 30, 2016, and all licenses have no expiry date. There is no known underlying net smelter royalties and no known environmental liabilities on these claims that CCIC is aware of.

On April 24, 2006, Band-Ore Resources Ltd. (BAN-TSX) announced that it had signed a formal agreement with Goldcorp Inc. (G-TSX) for an option on 113 claim units (mining and disposition claims) located in Ball, Killala and Mulcahy townships in Red Lake, Ontario. Pursuant to the proposed terms, Band-Ore can earn an undivided 60% interest in the Trout Bay Project, by incurring \$5,000,000 in exploration expenditures on the Property over a 5 year earn in period. A 60% - 40% Joint Venture will be formed upon Band-Ore exercising the option. Upon Band-Ore earning its interest, Goldcorp Inc. may elect to back-in and acquire an additional 30% interest (resulting in a 70% Goldcorp – 30% Band-Ore Joint Venture) by making a cash payment to Band-Ore equal to 200% of expenditures incurred by Band-Ore during the earn-in period. Band-Ore is committed to spend \$750,000 on drilling and exploration in the first year of the agreement.

The Trout Bay Property contains a number of Zn-Cu and Ni-Cu-PGE mineral prospects. The most advanced of these is the Zinc Pit and No. 2 Ni showing in the center of the Property (see Figure 7.1).

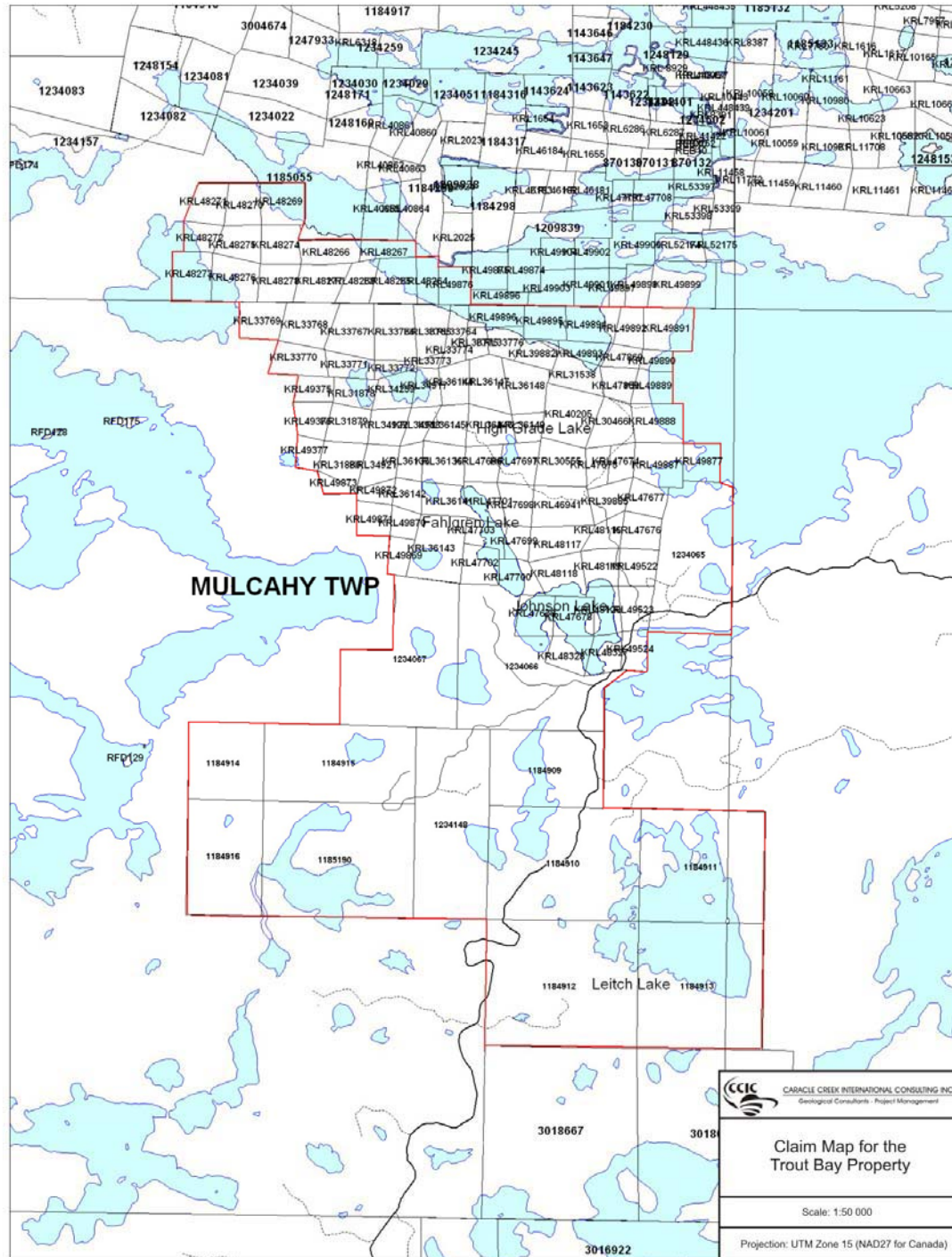


Figure 4.2. Claim map showing the location of the claims held by Band-Ore on the Trout Bay Property (from Hughes and Morris 2006).

## **5.0 ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY, AND INFRASTRUCTURE**

### **5.1 Access**

Access to the Property can be obtained via Highway 618, south of the town of Red Lake, to the community of Madsen, then west along the gravel Suffel Lake (“Flat Lake”) Road. The property is also accessible by boat from Red Lake. The extreme northwest end of the property can be accessed by travelling on highway 105 south of Red Lake, northeast on Highway 125 to the Nungesser Road (just northwest of Balmertown), north on Nungesser Road, west on Pine Ridge Road almost to the end, then south on the MacIntosh Lake Road. Logging access (skidder) trails then cross the extreme northwest corner of the north claim block. Access on the Property is provided by roads and trails (Figure 7.3).

North of the community of Balmertown within the Municipality of Red Lake is a small airport with direct flights to Winnipeg, Manitoba and Thunder Bay, Ontario.

### **5.2 Climate and Vegetation**

The climate for Red Lake is variable with a wide range in temperatures. In January, the daily minimum temperature is -25°C and in July, the daily maximum temperature is 24°C. Most of the rain occurs in the summer with the average rainfall accumulation of 97 mm for the month of June. The average snowfall accumulation is 39 cm for the month of November. Climate normals are calculated on based on daily weather from 1971-2000 as listed on Environment Canada’s web site: [http://www.climate.weatheroffice.ec.gc.ca/climate\\_normals/index\\_e.html](http://www.climate.weatheroffice.ec.gc.ca/climate_normals/index_e.html).

Vegetation cover on the property varies from low wet swamps and beaver ponds, to bald hill tops almost devoid of any vegetation except lichen and scrub secondary growth due to past logging and/or forest fires, to relatively pristine mixed forest of primarily spruce, fir and various deciduous species, to finally a large part of the area covered by thick blow down caused by the passage of the spruce budworm about fifteen years ago (Cutting 2001).

### **5.3 Physiography**

The Trout Bay Property hosts a rugged and varied topography. The elevation ranges from approximately 355 m above sea level on Red Lake to nearly 430 m above sea level at the tops of several of the knobs scattered across the property (Cutting 2001). A steep cliff follows along most of the southwest shore of Trout Bay hindering easy access from the lake at some points (Cutting 2001).

### **5.4 Infrastructure and Local Resources**

The Municipality of Red Lake is the nearest population center to the Trout Bay Property. The Municipality of Red Lake consists of 6 small communities: Red Lake, Madsen, Staratt-Olsen, Balmertown, Cochenour and McKenzie Island. According to the 2001 Census, the total population for the municipality is 4233 people (Statistics Canada web site: <http://www12.statcan.ca/english/census01/home/index.cfm>). The most populous community is Red Lake.



The Municipality of Red Lake has numerous services available, most of which are within the town of Red Lake. Services include hospital and medical facilities, dentists, pharmacy, restaurants, grocery stores, hotels, liquor and beer outlets, service stations and major automobile dealerships, department stores, banks, marine dealers, building supply centres and numerous small businesses (Red Lake tourism web site: [http://www.tourismredlake.ca/html/district\\_info.html](http://www.tourismredlake.ca/html/district_info.html)).

Each community within the Municipality of Red Lake was originally developed around a historic gold mine (Red Lake tourism web site: [http://www.tourismredlake.ca/html/district\\_info.html](http://www.tourismredlake.ca/html/district_info.html)). Madsen, a community 11 km southwest of Red Lake, is the site of Madsen Goldcorp Mine. Starratt-Olsen, 3 km beyond Madsen, grew around the mine of the same name. Cochenour, 6 km northeast of Red Lake, was the site of the Cochenour Willans gold mine. McKenzie Island, a short boat ride from Cochenour, was home to the Gold Eagle Mine and the McKenzie Red Lake Mine. Balmertown, 3 km east of Red Lake, has two producing gold mines operated by Goldcorp Inc.: Campbell Mine and Red Lake Mine (formerly Dickenson) which are the major employers in the area. The people in the area are generally supportive of potential mining employment and are skilled in mining. Other major employers in the area are forestry and tourism (i.e., hunting/fishing fly-in camps).

The Canadian National Railway (C.N.R.) travels E-W across northwestern Ontario and the closest station to the community of Red Lake is at Red Lake Road on Highway 105 (173 km south of the community). Via Rail Canada's station consists of a sign post with no personnel and 48 hours notice is required to book tickets (Via Rail's web site: [http://www.viarail.ca/en\\_index.html](http://www.viarail.ca/en_index.html)). The closest hydroelectric generating station is on the English River near the town of Ear Falls (Ontario Power Generation web site: [http://www.opg.com/ops/H\\_locations.asp](http://www.opg.com/ops/H_locations.asp)). Ear Falls is located on Highway 105 about 69 km south of the town of Red Lake. An electrical power line from the town of Red Lake travels west and ends at the eastern boundary of Ball Township about 5 km north of the High Grade Lake Deposit. The Trout Bay Property overlaps with Red Lake (body of water) and contains several lakes within it (i.e., Johnson, Fahlgren, High Grade and Kelly Lakes).

## 6.0 HISTORY

Most of the following review of the exploration history of the Trout Bay Property is taken from Cutting (2001) unpublished internal report and also in part from Shklanka (1969) and Fenwick et al. (1990). The exploration history for the Trout Bay Property is summarized in Table 6.1.

From the late 1920's to the mid-1950's, the property saw infrequent staking and prospecting for copper-nickel and gold mineralization. E.L. Bruce and J.E. Hawley of the Ontario Department of Mines mapped the area in 1927, with additional mapping by H.C. Horwood from 1940-1941.

Cochenour Willans Gold Mines Ltd., in joint venture with Coin Lake Gold Mines Ltd. and Selco Explorations Ltd., (Shklanka 1969) optioned The Trout Bay Property from W. Stupack and T. McVeigh in 1956 and staked 168 claims covering several copper-nickel showings (Fenwick et al. 1990). From 1956 to 1961, a varied series of programs were undertaken including prospecting, reconnaissance and detailed geological mapping, trenching, geophysical surveying (magnetometer, self-potential and electromagnetic methods) as well as 14,000 feet of diamond drilling. The programs were successful and included the delineation of the Trout Bay No. 1 Nickel Zone on the northeast shore of Fahlgren Lake (1957), the Trout Bay No. 2 Nickel Zone southeast of High Grade Lake (1960) and the Zinc Pit Zone (1960).

In 1957, Inco conducted a magnetic survey over the property for Cochenour Willans Gold Mines Ltd. in 1957 (Shklanka 1969).

In 1961, Falconbridge Ltd. optioned the property and completed line cutting and magnetometer surveys. In 1962, line cutting, geological mapping, and a drilling program of 58 holes (totalling 25, 500 feet) to test copper-nickel mineralization in iron formation and gabbro in the vicinity of, and along strike from, the Trout Bay No. 2 Nickel Zone. In addition, similar mineralization was discovered northeast of High Grade Lake, north of the Trout Bay No.2 Nickel Zone.

Conwest Exploration Co. Limited conducted trenching, geological mapping, ground EM, magnetic and SP surveys and 759 feet of diamond drilling at the extreme southeast end of the Frog Pit Ni-Cu zone (No. 2 Ni showing) in 1962 (Shklanka 1969).

Selco Exploration Co. Ltd. conducted airborne magnetic and EM surveys over the Trout Bay property in 1966 (Shklanka 1969).

R.A. Riley of Ontario Department of Mines, mapped Mulcahy Township in 1968 (Riley 1968, 1976) and Ball Township in 1970-1973 (Riley 1975). Both township maps are at scales of 1:12000.

Cochenour Willans Gold Mines Ltd. conducted trenching, a ground magnetic survey and completed 12,657 feet of diamond drilling on the Zinc Pit Zn-Cu zone during 1967 and 1968, following their discovery of a large faulted segment of the Zn-Cu mineralization (High Grade Copper-Nickel Lake deposit) (Shklanka 1969). The company conducted ground magnetic, horizontal loop EM and VLF-EM surveys over small portions of the property in 1971 and 1972. Cochenour Willans diamond-drilled 73 holes totalling 5383 feet in 1971 and 16 holes totalling 2206 feet in 1972 (Fenwick et al. 1990).

In 1968, a reserve (non 43-101 definition) of 124, 760 tons at a grade of 1.50% Cu, 7.86% Zn and 1.70 opt Ag, 0.24% Pb and 0.007 opt Au was estimated for the eastern body (High Grade Lake deposit) by Cochenour Willans Gold Mines Ltd. (Shklanka 1969). The western body (Zinc Pit) was calculated estimated to contain 13, 766 tons at a grade of 0.68% Cu, 4.75% Zn and 0.94 opt Ag by Cochenour Willans Gold Mines Ltd. (Shklanka 1969).

The property was dormant during 1973.

From 1974 to 1976, Selco Mining Corporation Ltd. took an option on the property and completed a preliminary mining feasibility study. The option was subsequently dropped.

The property laid dormant from 1977 to 1992 except for an airborne magnetic and electromagnetic survey undertaken by the Ontario Geological Survey in 1978. In 1979, Cochenour Willans Gold Mines Ltd. changed its name to Wilanour Resources Ltd.

In 1993, Inco Ltd. optioned the Trout Bay Property as part of a four-property deal from Wilanour Resources Ltd. During the summer and fall of that year, line cutting, geological mapping and geophysical surveys (magnetometer and HLEM) were completed over targeted parts of the property. Selective areas were targeted for Beep Mat and VLF-EM geophysical surveys. The High Grade Lake and Zinc Pit Zones were stripped and washed, subsequently mapped and sampled in detail. Trenches were blasted to expose the massive sulphide mineralization in the two zones to collect large unoxidized samples for metallurgical testing, subsequently not completed.

Late in the year, a four-hole drill program totalling 1293 metres was completed. Three of the holes were surveyed down hole using Fixed Loop, Low Power Transient Electromagnetic (LPTEM). Inco Exploration and Technical Services reviewed the resource inventory for the High Grade Lake Deposit and estimated a tonnage of 72,152 tons (Cutting 2001). This reduction in tonnage was due to a reduction in the specific gravity factor used in the estimation (Cutting 2001). Cutting (2001) does not describe a change in grade associated with the re-evaluation completed by Inco.

Inco undertook a second, limited, follow-up exploration program in early 1994. This program included establishment of lines (as extensions of the 1993 grid) and geophysical surveying (magnetometer and HLEM) on the ice over some of the water covered parts of the property including High Grade Lake, Kelly Lake, Little Kelly Lake and parts of Trout Bay. A drilling program of six holes totalling 1105 metres was completed. The company was successful in locating new copper-nickel mineralization northwest of High Grade Lake, with grab samples returning a maximum of 4.83% Ni, 2.85% Cu, 1455 ppb Pt and 7530 ppb Pd (Hughes and Morris 2006). Three dimensional computer modelling of the High Grade Zone mineralization was also completed. Inco dropped the option on the property later in 1994.

Goldcorp Inc. acquired the property from Wilanour Resources Ltd. as part of the purchase of assets in 1998. In 1999, Goldcorp Inc. performed some minor reconnaissance work to confirm and verify some of the results reported by Inco.

From 2000 to 2001, Goldcorp executed an exploration program targeting known Cu-Ni-PGE mineralization. August to December of 2000, Goldcorp investigated the Trout Bay Property in search of platinum-group elements (PGE), Au, Cu and Ni. The company completed line cutting, channel sampling, diamond drilling (6 holes totalling 1861 metres were completed), assays of 99 channel samples and 62 drill core samples, and 588 grab samples, re-logging of recovered Falconbridge drill core, mechanical and overburden stripping, mapping, compilation and interpretation of data (assessment file AFRO ID 2.21430, AFRI file 52M01SE2013). In October 2000, SIAL Geosciences Inc. completed a helicopter high-resolution magnetic, electromagnetic, VLF survey in conjunction with a radiometric survey for Goldcorp Inc. (assessment file AFRO ID 2.20753, AFRI file 52M01SE2005).

June to October 2001, Goldcorp completed reconnaissance geological mapping at 1:2500 scale, assayed 89 samples, 7 drill core samples, and 152 grab samples (assessment file AFRO ID 2.23827, AFRI file 52M01SE2018).



Table 6.1. Summary of work and exploration history, Trout Bay Property.

<b>DATE</b>	<b>WORK COMPLETED</b>
Late 1920's to mid-1950's	Infrequent staking and prospecting for Cu-Ni and Au
1927	Area was mapped by Ontario Department of Mines
1940-1941	Additional mapping in the area by Ontario Department of Mines
1956-1961	Cochénour Willans Gold Mines Ltd. – optioned property and completed prospecting, reconnaissance and detailed geological mapping, trenching, geophysical surveying, diamond drilling (14 000 feet) - delineated Trout Bay No. 1 Nickel zone, Trout Bay No. 2 Nickel zone, Zinc pit zone
1957	Inco evaluated the property
1961	Falconbridge Ltd. – optioned property and completed line cutting, magnetometer surveys
1962	Falconbridge Ltd. – completed line cutting, geological mapping, 58 diamond drill holes (totalling 25, 500 feet) - Gulag showing was discovered
1962	Conwest Explorations Co. Limited – completed trenching, geological mapping, geophysical surveys and 759 feet of diamond drilling at the SE end of Frog Pit zone (No. 2 Ni showing)
1966	Selco Explorations Co. Ltd. conducted airborne magnetic and EM surveys
1968	Mulcahy township was mapped by Ontario Department of Mines (scale 1:12000)
1970-1973	Ball township was mapped by Ontario Department of Mines (scale 1:12000)
1963-1972	Cochénour Willans Gold Mines Ltd. – completed trenching, geological mapping, geophysical surveying, diamond drilling (12, 657 feet in 1967-1968, 5383 feet in 1971 and 2206 feet in 1972)
1967	Cochénour Willans Gold Mines Ltd. – discovered the High Grade Cu-Ni Lake deposit
1968	Cochénour Willans Gold Mines Ltd. – estimated a reserve of 124,760 tons at a grade of 1.50% Cu, 7.86% Zn and 1.70 opt Ag, 0.24% Pb and 0.007 opt Au for the eastern body (High Grade Lake deposit) - estimated a resource of 13,766 tons at a grade of 0.68% Cu, 4.75% Zn and 0.94 opt Ag for the western body (Zinc Pit)
1974-1976	Selco Mining Corporation Ltd. - optioned property and completed preliminary mine feasibility study and later dropped the option
1978	Airborne and magnetic electromagnetic survey by Ontario Geological Survey
1993	Inco Ltd. – optioned property from Wilanour Resources Ltd. (previously known as Cochénour Willans Gold Mines Ltd.) and completed line cutting, geological mapping and geophysical surveys. High Grade Lake and Zinc pit zones were stripped, washed, mapped in detail, sampled and had trenches blasted on them. Four diamond drill holes and geophysical surveying was also completed.
1993	Inco Ltd. – estimated resource of 72,152 tons for the High Grade Lake Deposit
1994	Inco Ltd. – completed additional line cutting, geophysical surveying, 6 diamond drill holes and 3D computer modelling of High Grade Lake zone. Inco dropped the option.
1998	Goldcorp Inc. – acquired the property from Wilanour Resources Ltd. and performed minor reconnaissance work.
2000	Goldcorp Inc. – completed line cutting, channel sampling, 6 diamond drill holes, assaying, relogging Falconbridge drill core, mechanical and overburden stripping, mapping and compilation and interpretation of data, geophysical

	surveying
2001	Goldcorp Inc. – completed reconnaissance geological mapping at 1:25000 scale and assaying

## 7.0 GEOLOGICAL SETTING

### 7.1 Regional Geology of Red Lake greenstone belt

The Trout Bay Property occurs within the Red Lake greenstone belt in the western part of the Uchi Subprovince. The Uchi Subprovince is a linear belt of metavolcanic and metasedimentary assemblages that wrap around granitoid batholiths and plutons (Stott and Corfu 1991). The Red Lake greenstone belt consists of seven supracrustal volcano-sedimentary assemblages from oldest to youngest: Balmer, Ball, Slate Bay, Bruce Channel, Trout Bay, Huston and Confederation (Figure 7.1 and 7.2) (Sanborn-Barrie et al. 2001). Four of the assemblages are Mesoarchean metavolcanic: Balmer, Ball, Trout Bay and Bruce Channel and one is Mesoarchean clastic: Slate Bay assemblage (Parker 2000a). The Huston assemblage is a regionally extensive unit of a polymictic conglomerate that marks an angular unconformity between the Mesoarchean and Neoarchean strata (Sanborn-Barrie et al. 2001). Neoarchean metavolcanic rocks of the Confederation assemblage occur along the northeast and southeast flanks of the greenstone belt (Parker 2000a).

The majority of the significant gold deposits in the greenstone belt occur within the Balmer assemblage (Parker 2000a). The Balmer assemblage (2.99-2.96 Ga) is dominated by submarine tholeiitic basalt, komatiite and komatiitic basalt with minor felsic volcanic rocks, iron-formation and fine-grained clastic rocks (Sanborn-Barrie et al. 2001). The Ball assemblage (2.94-2.92 Ga) comprises a calc-alkalic sequence of basalt, andesite, dacite and rhyolite intercalated with minor komatiite and komatiitic basalt flows, conglomerate, quartzite and locally stromatolitic marble. The Ball assemblage may be in tectonic contact with the Balmer assemblage, as these assemblages young toward one another.

The Trout Bay assemblage (2.85 Ga) was previously correlated with the Balmer assemblage (Stott and Corfu 1991), but new field, geochronological and geochemical data from Sanborn-Barrie et al. (2001) indicate that the Trout Bay assemblage is a distinct volcano-sedimentary sequence. This assemblage consists of a lower sequence of basalt overlain by clastic rocks, intermediate tuff, and chert-magnetite iron-formation. These rocks are intruded by gabbro and less abundant ultramafic rocks with Ni-Cu-PGE potential. The lower sequence is overlain by a thick sequence of pillowed tholeiitic basalt capped by thinly bedded oxide-facies iron-formation. Separating the lower and upper sequences is a unit of fragmental pyroclastic rock.

The Confederation assemblage (2.75-2.73 Ga) can be divided into three volcanic sequences: a) the 2745 to 2742 Ma McNeely calc-alkali sequence in central Red Lake, b) the <2744 to 2739 Ma Heyson tholeiitic sequence in southeastern Red Lake, and c) the 2734 to 2731 Ma Graves calc-alkalic sequence in the north. The McNeely sequence overlies the Balmer assemblage and is dominated by intermediate tuff breccia and lapilli tuff (Sanborn-Barrie et al. 2001). The overlying Heyson sequence comprises a thick succession of tholeiitic felsic volcanic rocks dominated by pyroclastic tuff, lobe-hyaloclastite rhyolite flows and rhyolite flow breccia. These rocks are overlain and interlayered with pillowed mafic flows, quartz-feldspar crystal tuff and younger plagioclase-phyric high-TiO<sub>2</sub> basaltic andesite and associated dykes. The Graves sequence was erupted on polymictic conglomerate that overlies, and sourced, Slate Bay and Balmer

assemblages and mesothermal granitoid rocks. The Graves sequence includes andesitic to dacitic pyroclastic rocks and synvolcanic diorite and tonalite.

There are two main stages ( $D_1$  and  $D_2$ ) of regional penetrative ductile deformation in the Red Lake greenstone belt.  $D_1$  is a north-striking foliation that is axial planar to  $F_1$  folds and is best developed in volcanic rocks of the Balmer, Ball and Trout Bay assemblages (Sanborn-Barrie et al. 2000).  $D_2$  is an easterly-striking foliation that overprints  $D_1$  and is axial planar to  $D_2$  folds that refold  $F_1$  folds (Sanborn-Barrie et al. 2000). Regional greenschist-facies metamorphism probably occurred during  $D_1$  (Parker 2000a). Metamorphic grade increases from greenschist facies in the middle of the greenstone belt to amphibolite facies at the margins of the belt (Parker 2000a).

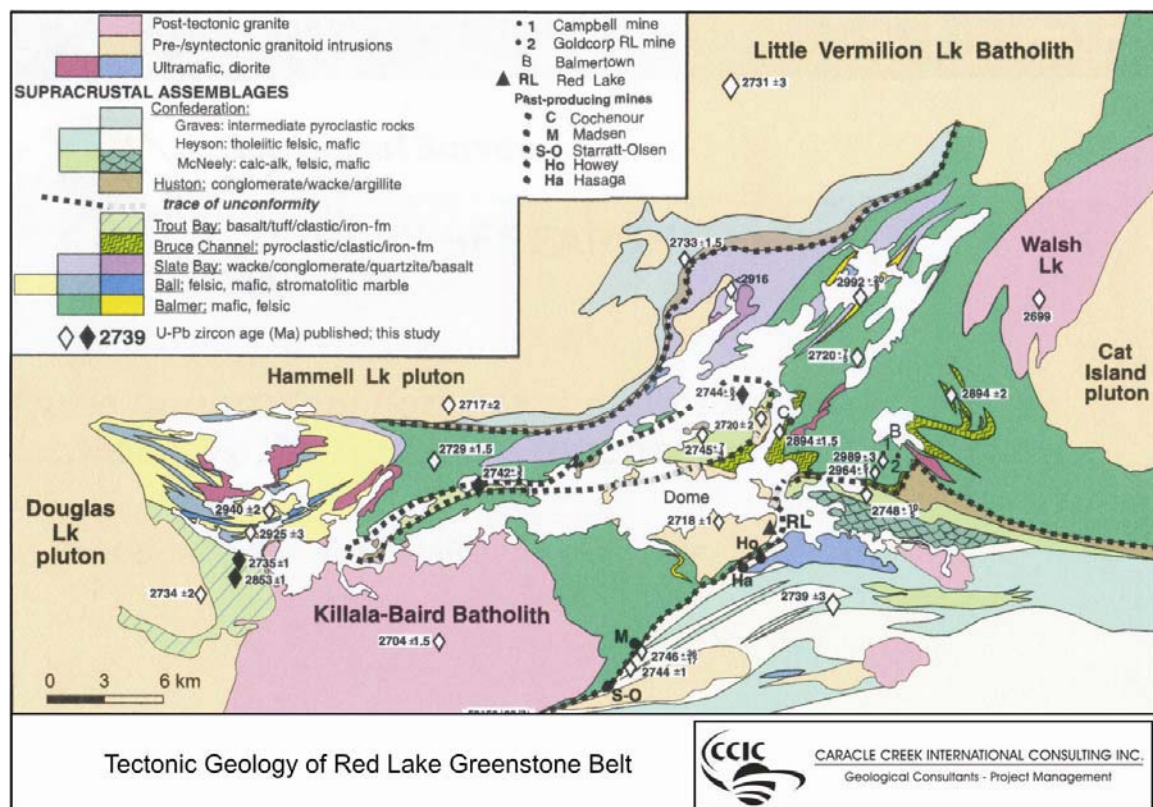


Figure 7.1. Tectonic geology of Red Lake greenstone belt (from Sanborne-Barrie et al. 2001).



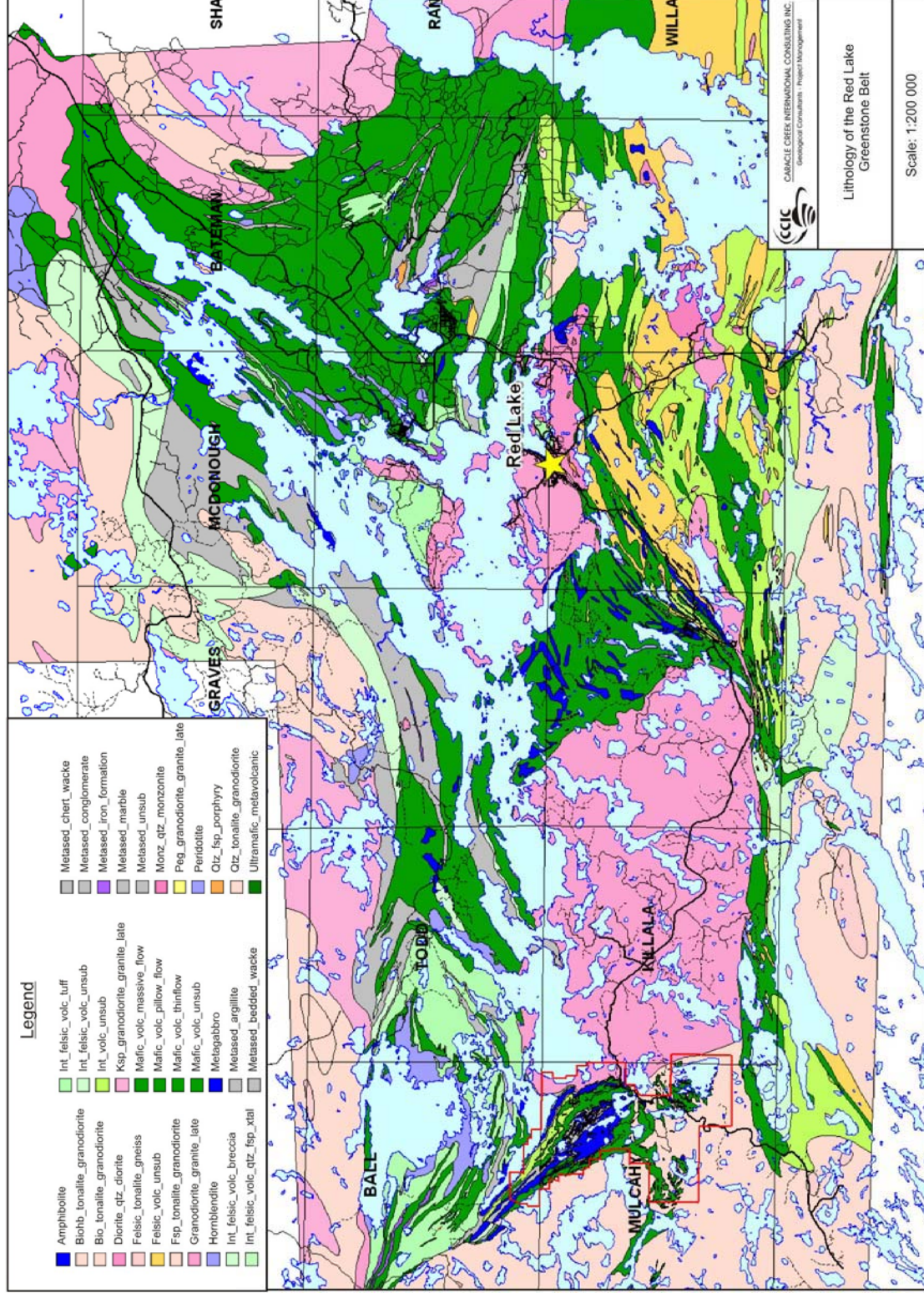


Figure 7.2. Lithology of the Red Lake greenstone belt (from Hughes and Morris 2006).

## 7.2 Geology of Trout Bay Property

The Trout Bay property is underlain by the Trout Bay assemblage consisting of an east- to northeast-facing, northwest-striking, folded sequence of fine-grained metasedimentary rocks consisting of argillite, wacke and siltstone (Parker 2000b) (Figure 7.3). Metasedimentary rocks are interlayered with very minor, intermediate tuff and lapilli tuff breccia and quartz-magnetite iron formation (Riley 1976). The metasedimentary rocks are overlain, in the east, by northeast-facing, mafic metavolcanic flows (Riley 1976). The metasedimentary rocks are separated from the mafic metavolcanic rocks by a heterolithic, mafic, tuff breccia (Riley 1976). The rocks have been metamorphosed to upper greenschist and amphibolite facies (Parker 2000b). The metasedimentary rocks are intruded by metamorphosed, mafic and ultramafic intrusions with variable amounts of garnet and amphibole porphyroblasts (Parker 2000b). The gabbro consists of massive, fine- to coarse-grained gabbro, leucogabbro and feldspar porphyritic gabbro (Parker 2000b). Anorthositic gabbro is situated along the southwest shore of Trout Bay (Parker 2000b). A large gabbroic sill at Fahlgren Lake hosts numerous small Ni-Cu occurrences (Parker 2000b).

Sanborne-Barrie (2001) determined that the U-Pb magmatic crystallization age for the intermediate tuff interlayered with the metasedimentary rocks is  $2853 \pm 1$  Ma based on analyses of five single zircon grains (Figure 7.1). The northeast-facing mafic and intermediate metavolcanic flows that overlie the metasedimentary rocks are intruded by an intermediate porphyry dike with a U-Pb zircon age of  $2735 \pm 1$  Ma (Parker 2000b; Sanborne-Barrie 2001). Therefore, the mafic metavolcanic rocks were extruded prior to 2735 Ma and may be similar in age to the underlying metasedimentary rocks (Parker 2000b).

The geology around Johnson, Fahlgren, Kelly and High Grade Lakes is a folded sequence of intercalated metasediments (siltstone, argillite, wacke and minor chemical sediments) and metavolcanic rocks intruded by mafic sub-volcanic sills (Hughes and Morris 2006). Metasediments appear to have been overlain by a variable, but often thick sequence of mafic metavolcanic rocks which include basal amphibolite (possibly originally pyroxenite) sills. The volcanic sequence North of Fahlgren Lake contains amphibolite, gabbro, relatively massive mafic flows and flow tops, including thin pillowed or mafic derived sediment units. Hughes and Morris (2006) concluded that this sequence represents several poorly differentiated mafic volcanic intrusions and associated extrusive phases rather than a sill.

The overall geometry of the Trout Bay property area is an overturned, northeast-facing  $F_2$  anticline, with axial trace approximately west-northwest to northwest (Hughes and Morris 2006). The sequence is grossly homoclinal in nature but lies on the upper limb of this regional fold.



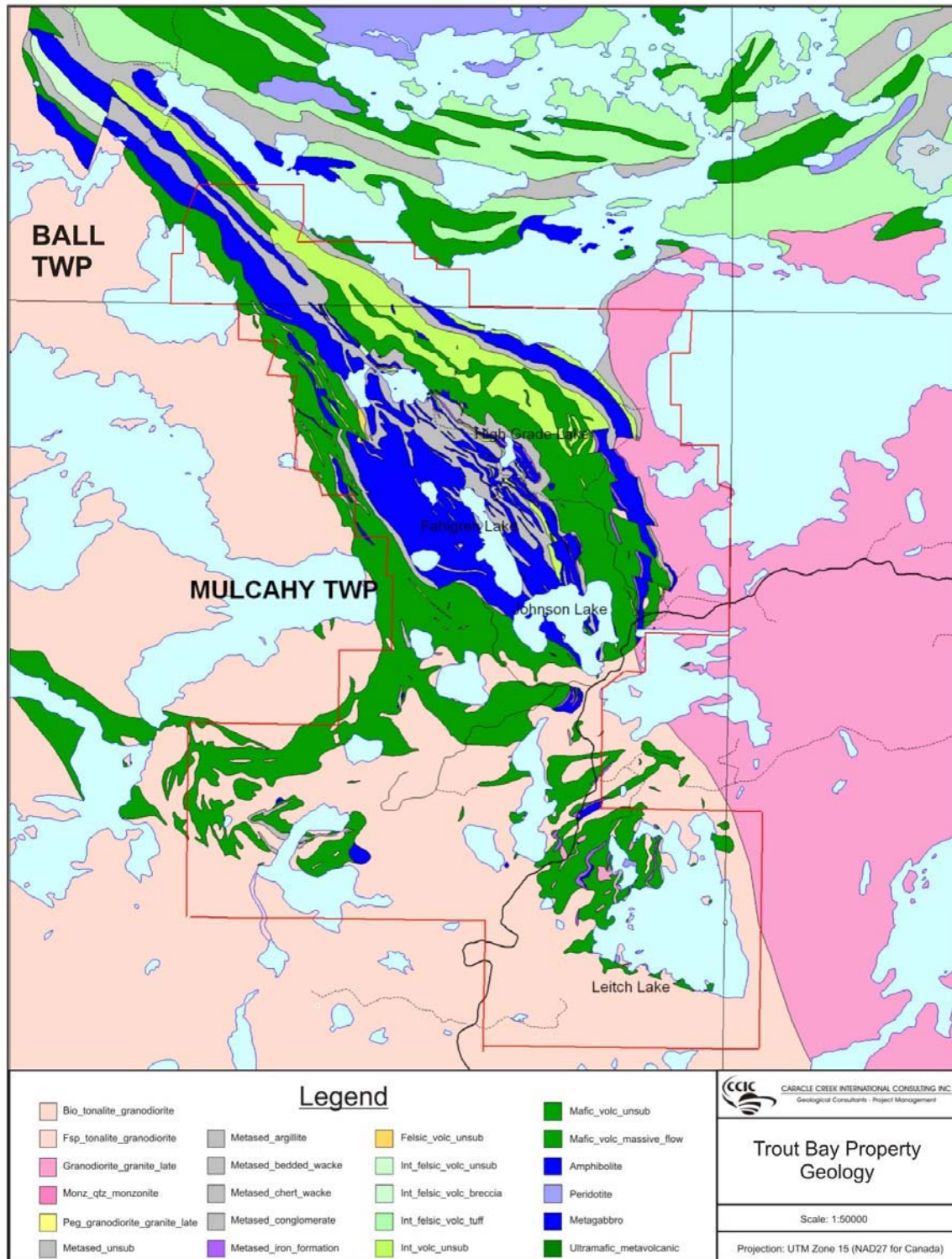


Figure 7.3. Geology of the Trout Bay Property (from Hughes and Morris 2006).

## 8.0 DEPOSIT TYPES

Gold production from the Red Lake Greenstone Belt has come from greenstone-hosted lode gold type deposits. As of Dec. 31, 2005, 22, 882, 403 troy ounces Au has been produced in the Red Lake District (Lichtblau et al. 2006). Most of the production has come from the Balmer assemblage however Au showings occur in all of the litho-tectonic assemblages. Volcanogenic Massive Sulphide (VMS) mineralization occurs dominantly in the Confederation assemblage and to a lesser extent in the Balmer and Ball assemblages. The South Bay Mine, located in the Confederation assemblage in the Birch-Uchi Greenstone Belt produced 1.6 million tons of ore averaging 11.06% Zn, 1.8% Cu, and 2.12 ounces Ag per ton (Parker, 1999).

The Trout Bay assemblage underlying the Trout Bay Property hosts the Trout Bay Ni-Cu-PGE prospect. Other Ni-Cu-PGE prospects in the Red Lake greenstone belt occur on the Peterson property and the Coin Lake and Flat lake prospects all within the Balmer assemblage (Parker, 2000b). In addition to the Trout Bay prospect, the Trout Bay property hosts a number of Ni-Cu-PGE sulphide showings and two occurrences of Cu-Zn-Ag mineralization (see mineralization below). The Trout Bay assemblage hosts some small, undeveloped gold occurrences.

Based on metal assemblage, description of the sulphide mineralogy, and the dominant host rock being mafic intrusive rocks, the Ni-Cu-PGE mineralization on the Trout Bay property appears to be of the magmatic sulphide type. The known Ni-Cu-PGE occurrences are located near the contact with the metasedimentary rocks and in some cases are very closely associated with iron formation. Parker (2000b) described the occurrence of xenoliths of iron formation in gabbro and the occurrence of disseminated pyrite, chalcopyrite, and pyrrhotite in the contact zone rocks. Huges and Morris (2006) describe the occurrence of PGE-bearing sulphides hosted by iron formation. The effect of assimilation of iron formation (Fe-bearing silicates) on Fe-Ni-Cu sulphide solubility in the mafic melt may be consistent with relatively low MgO contents (relative to productive magmatic sulphide districts) as noted by Burnham et al. (2000).

The metal assemblage and sulphide mineralogy for the Zn-Cu-Ag mineralization is consistent with VMS type mineralization. However, evaluation of the Trout Bay lithogeochemical database by Burnham et al. (2000) revealed a lack of significant correlation between anomalous Zn-Cu mineralization and those elements that are commonly considered as pathfinders to VMS-style mineralization (Burnham et al. 2000). In addition, local and regional geological features considered part of the VMS signature (e.g. synvolcanic intrusion, semi-conformable alteration, fragmental felsic volcanic rocks) are not present in the Trout Bay assemblage (Burnham et al., 2000). However, Burnham et al. (2000) indicate that the findings are based on a small sample set relative to the property.

Band Ore has not completed an exploration program on the Trout Bay property. Based on description from previous work and the results of lithogeochemical studies, CCIC recommends that the fundamental concepts of magmatic sulphide deposit models be applied to exploration for Ni-Cu-PGE deposits. Furthermore, CCIC recommends that consideration of a late stage magmatic-hydrothermal model (e.g. Lac de Illes) for the occurrence of Pd mineralization in iron formation be considered. CCIC recommends that the validity of application of the VMS model to the Trout Bay property be further evaluated through more regional mapping and lithogeochemical analyses and interpretation and that a model for the occurrence of the Zn-Cu-Ag mineralization be developed.

## 9.0 MINERALIZATION

### 9.1 Introduction

Two main types of mineralization occur on the Trout Bay Property and are the main exploration targets: 1) Ni-Cu-PGE mineralization (No.1 and No. 2 Ni showings) and 2) Zn-Cu mineralization (Zinc Pit and High Grade Lake deposit). In addition, some small gold occurrences are present on the property. The most advanced mineralized areas or showings are summarized in Table 9.1. The distribution of Ni-Cu-PGE and Zn-Cu-Ag showings is illustrated in Figures 9.1 and 9.2.

Table 9.1. Summary Ni-Cu and Zn-Cu occurrences and styles of mineralization on the Trout Bay Property.

Type	Mineralized Area	Location	Lithology of Mineralization
Ni-Cu-PGE	No. 1 Ni showing	Southeast shore of Fahlgren Lake	At the contact between iron formation/ argillite and gabbro
	No.2 Ni showing	South of High Grade Lake	At the contact between iron formation and altered gabbro/mafic metavolcanic rocks
Zn-Cu-Ag	Zinc Pit	Southwest of High Grade Lake	At the contact between altered siliceous metasediments and gabbro sill
	High Grade Lake	South of High Grade Lake	At the contact between altered siliceous metasediments and gabbro sill



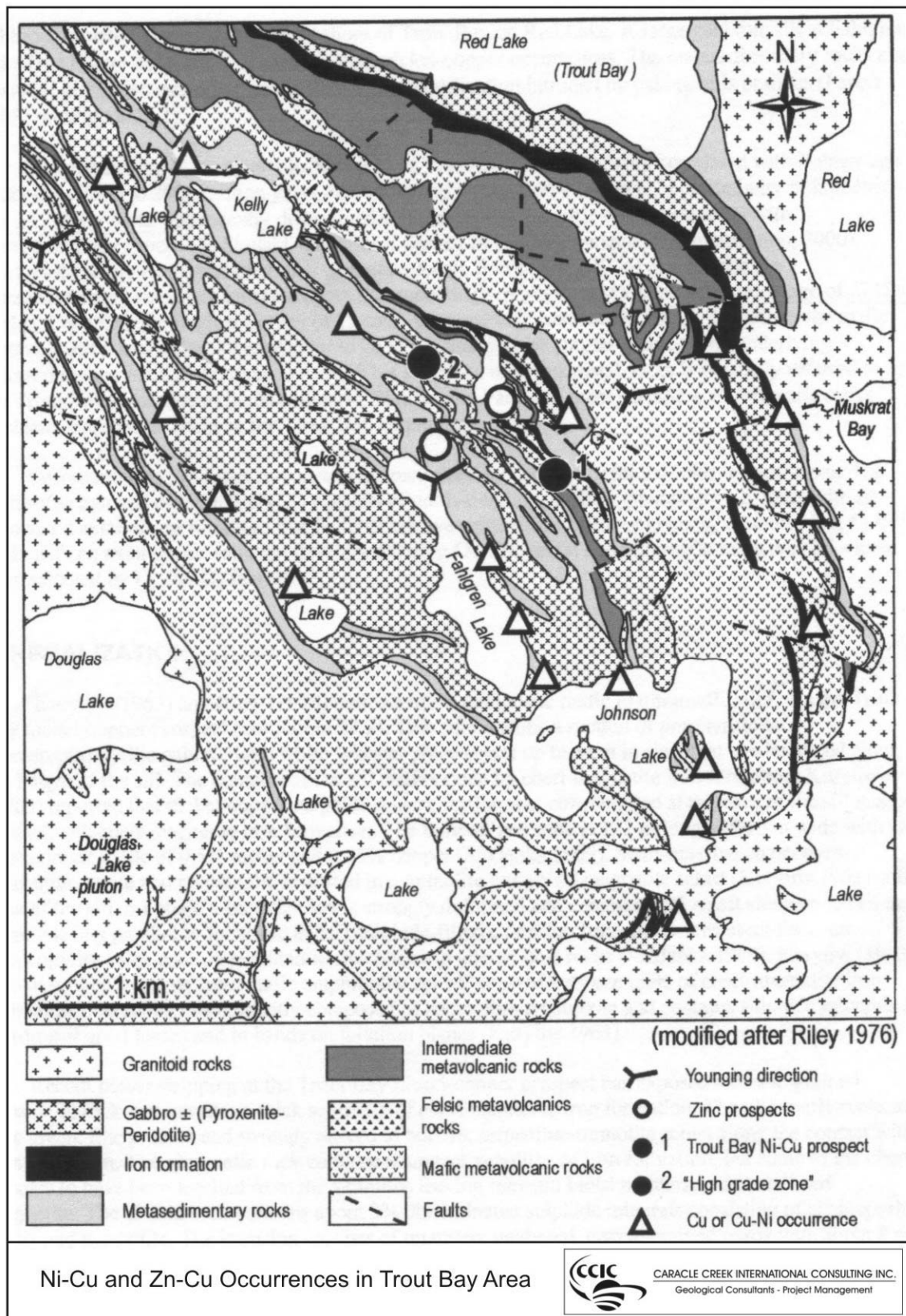


Figure 9.1. General geology of the Trout Bay area and location of copper or nickel-copper ± platinum-group element sulphide mineralization (from Parker 2000b).

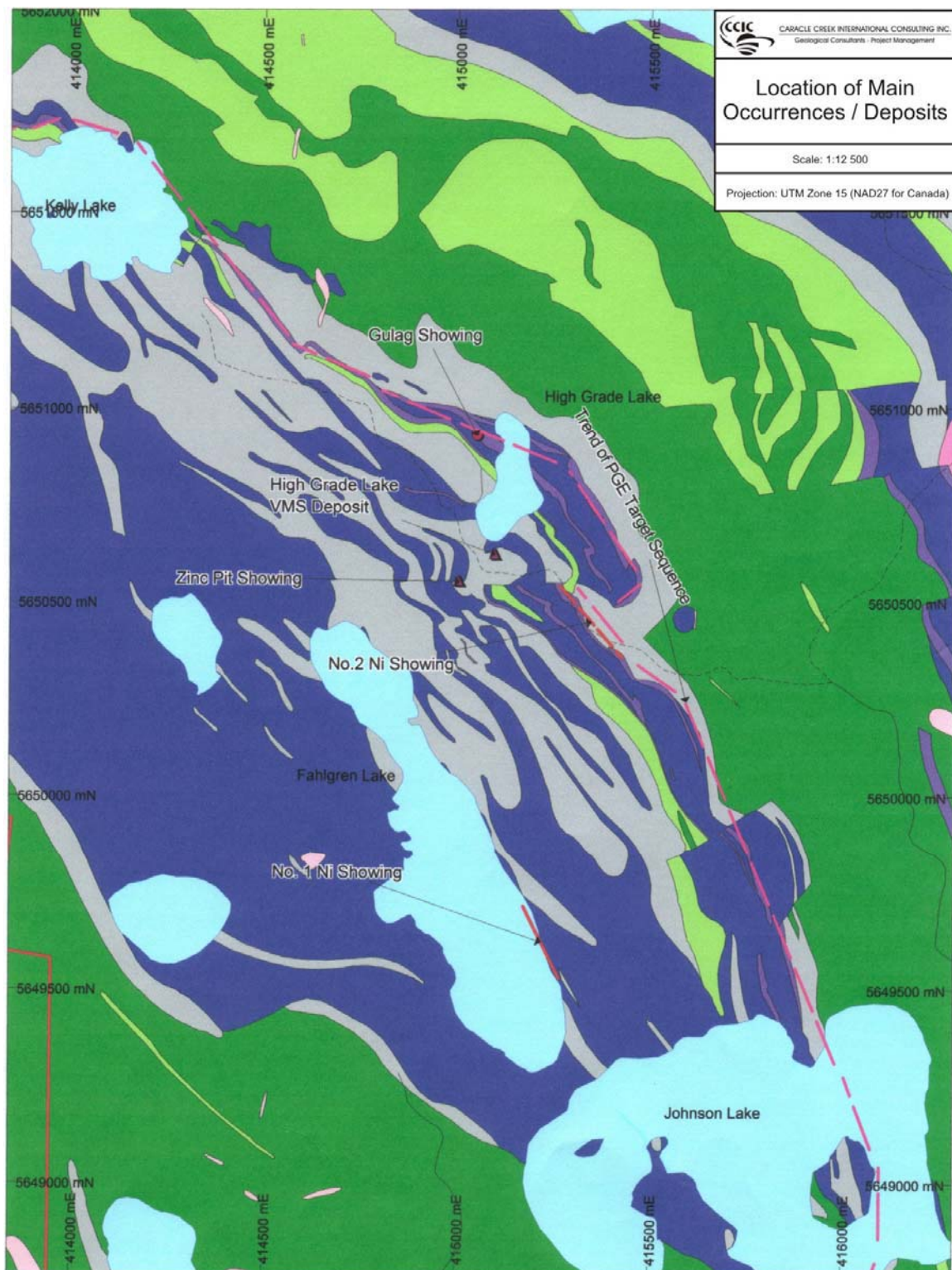


Figure 9.2. Trout Bay Property detailed geology and location of main occurrences and deposits (from Hughes and Morris 2006). The legend is same as that for Figure 7.3.

## 9.2. Ni-Cu-PGE mineralization

Goldcorp identified that Ni-Cu-PGE mineralization occurs within:

- a) magnetite-rich, finely banded iron formation with at least a portion of the sulphides present are related to and possibly derived from magnetite replacement
- b) amphibole-rich, either magnetite-banded, magnetite clastic or disseminated magnetite-bearing iron formation.
- c) Tremolite and chlorite alteration of mafic flows, flow tops or mafic fragments lying above the iron formation sequence
- d) Gabbro, leucogabbro, glomerophyric gabbro (Hughes and Morris 2006).

All four types of mineralization have been located, mapped, sampled and intersected by drilling at the No. 2 Nickel Showing with drill intercepts along a 2.1 km strike to the east and west from Johnson Lake to Big Kelly Lake (Hughes and Morris 2006). Widths for all types of mineralization range from 0.5 m to 15 m, based on assessment of previous drilling, where “amphibole schist” or “chlorite schist” was intersected.

Trends in Ni-Cu-PGE values are from Goldcorp’s 2000 exploration program are:

- a) Ni:Cu ratio is variable, from 1.5:1 to 3:1
- b) Pd:Pt ratio is approximately 5:1
- c) Ni:Pt ratio is 3.5 to 5:1, with the latter where Ni is greater than 4000-5000 ppm. The relative consistency of the ratio where Ni exceeds 4000 ppm provides a useful indicator of probable Pd tenor when analyzing old drill hole assays where PGE’s were analyzed (Hughes and Morris 2006).

Sulphide minerals in the mineralized zones are: pyrite, pyrrhotite, chalcopyrite, pentlandite, violarite ( $\text{FeNi}_2\text{S}_4$ ), merenskyite  $[(\text{Pd,Pt})(\text{Te,Bi})_2]$ , hollingworthite ( $\text{RhAsS}$ ), sperrylite ( $\text{PtAs}_2$ ) and cobaltite ( $\text{CoAsS}$ ) (Hughes and Morris 2006). Violarite occurs to depths of 90 m. To date, the platinum-group minerals have only been observed in thin section with verification by SEM (scanning electron microscope).

### 9.2.1. Trout Bay No. 2 Ni showing

The geological setting of the Trout Bay No. 2 Ni showing (disposition KRL46941) is characterized by mineralization located at the contact between a banded iron formation and overlying mafic volcanic rocks comprised of gabbros, mafic flows and fragmentals, including pyroclastic tuffs (Hughes and Morris 2006). The iron formation is strongly amphibolitic (tremolite after actinolite or hornblende), at the contact, with variable primary and secondary magnetite and chlorite, hosting up to 5% total sulphides. The iron formation often grades into the overlying mafic lithotypes with contacts blurred, marked by rapid loss of magnetite. Elsewhere, contacts may be abrupt, truncated or transported.

Kuryliw (1963) recognized that the gabbro sill was differentiated into a pyroxenitic base, central noritic phase and micropegmatite-gabbro phase in the upper portion of the sill. Mineralization occurs in the pyroxenitic base of the gabbro sill which has been metamorphosed and altered into tremolite-antigorite-magnetite schist (Kuryliw 1963). The ultramafic rock contains abundant xenoliths of iron formation, but some chert appears to have been leached from the xenoliths leaving remnant blobs of coarse, recrystallized magnetite (Parker 2000b). The intrusion consists of relatively unaltered coarse-grained pyroxenite about 8 m from the contact (Parker 2000b).

The altered rock contains about 3% disseminated sulphide minerals consisting of chalcopyrite, pyrite and pyrrhotite. The mineralization is intensely sheared and consists of disseminated and

semimassive sulphides which occur in small elongate lenses and narrow bands parallel to the foliation, as well as in fractures which intersect the foliation (Kuryliw 1963). Chalcopyrite halos occur around pentlandite-rich lenses in intensely altered portions of the mineralized zone (Shklanka 1969).

The mineralization has been delineated by drilling by Goldcorp over a minimum strike length of 550 m and the mineralized gabbro – iron formation – gabbro/mafic metavolcanic sequence has been traced by geophysics and drilling over a distance of 2.1 km (Hughes and Morris 2006). Mineralization has been intersected to a known maximum vertical depth of 140 m (Hughes and Morris 2006). Shklanka (1969) notes that in 1962, Falconbridge identified that the best zone of mineralization grades approximately 0.50% Ni and 0.25% Cu and is over 400 feet long with a maximum thickness of 30 feet. There is no inferred tonnage for this locale.

### **9.2.2. No. 1 Ni showing (Fahlgren Lake)**

The No.1 Ni showing (disposition KRL47700) is located on the southeast shore of Fahlgren Lake, 500 m south and southeast of the No. 2 Ni showing. Mineralization is in close contact of the base of the gabbro sill and underlying oxide facies iron formation and argillite (Hughes and Morris 2006). Basal sequences of the sill may include pyroxenite that has been amphibolitized. The thickness of the metagabbro, including intercalated sediments is in the order of 280 m to a maximum of 350 m.

Disseminated chalcopyrite-pentlandite-pyrrhotite occurs over widths of 1.5 to 6 m and can be traced continuously for about 1.3 km along the north shore of Fahlgren Lake (Hughes and Morris 2006). It has been identified by surface mapping and drilling, the later to a maximum depth of 260 m.

Cochenour Wilians drilling in the late 1950's to early 1960's intersected up to 0.55% Ni, 9.515% Cu over 1.5 m. The majority of the holes were shallow with intersections above 15 m.

In 1962, Falconbridge drilling under the original discovery pits intersected up to 30 m of fracture-hosted, erratic disseminated sulphides which returned trace Ni and up to 0.16% Cu over 0.7 m. It is not known if any PGE assays were conducted. Kuryliw (1963) assay values range from trace to 0.60% Cu and from 0.22 to 0.55% Ni.

Goldcorp Inc. exploration work consisted of prospecting and grab sampling. Cu-Ni-PGE mineralization was found as blebby scattered sulphides in coarse-grained metagabbro near the base of the sequence. The highest assays returned were 606 ppb Pd, 115 ppb Pt, 0.19% Ni and 0.24% Cu (drill hole TB-2000-384).

### **9.2.3. Other Ni-Cu showings**

Numerous small Ni-Cu occurrences (including No. 1 Ni showing) are hosted by a large fine- to coarse-grained gabbro intrusion at Fahlgren and Johnson lakes) (Parker 2000b) (Figure 9.1). The majority of the occurrences are hosted by coarse-grained gabbro that has been variably altered to actinolite similar to No.1 and No. 2 Ni showings.

### 9.3. Zn-Cu mineralization

#### 9.3.1. High Grade and Zinc Pit Zones

The High Grade Lake deposit (disposition KRL47697) and Zinc Pit zones (disposition KRL47696) occur southwest of High Grade Lake. They are two related zoned deposits which have been dextrally displaced by 800 feet along a fault trending 284° (Shklanka 1969). A large trench known as the Zinc Pit was sunk on the western part of the mineralized zone, on the south side of the fault. The eastern part of the mineralized zone (High Grade Lake deposit), on the north side of the fault does not crop out. The Zn-Cu mineralization for both occurrences is hosted entirely by tightly folded, silicified, fine-grained, argillaceous greywackes and recrystallized, siliceous metasediments, at the contact with a thick gabbro sill (Fenwick et al. 1990). The massive gabbro adjacent to the mineralized zone is fine- to medium-grained and appears to be relatively unaltered. Kuryliw (1963) suggested that the Zn-Cu mineralization may be a replacement of chert-magnetite iron formation.

Narrow stringers of massive sphalerite and disseminated pyrite, pyrrhotite and chalcopyrite occur parallel to bedding in the metasediments (Fenwick et al. 1990). Mineralization consists of a central zone of massive sphalerite with minor chalcopyrite and galena, surrounded by a halo of disseminated pyrrhotite, pyrite and chalcopyrite with thick stringers of pyrite.

The following description is from a report by Inco Technical Services in 1994 after outcrop stripping and power washing at the High Grade Lake and Zinc Pit zones to expose Zn-Cu mineralization. Alteration is associated with the footwall stratigraphy (i.e., metasediments) underlying both zones.

Alteration at the **High Grade Lake zone** consists of a narrow 2 to 3 m zone of anthophyllite in the footwall immediately below the copper-zinc mineralization. The blade-like amphibole crystals radiate in the shape of “bow ties”. Individual amphibole blades are 0.5 cm in length. Further in the footwall, sedimentary rocks are characterized by andalusite and chiastolite alteration. Andalusite forms oval “spots” up to 0.5 cm in length. This alteration could also be the product of regional metamorphism.

Massive sulphide mineralization at the High Grade Lake zone is exposed on surface over a strike length of 15 m and varies in width from 0.5 to 8.0 m. The mineralization is banded and consists of pyrrhotite, pyrite, sphalerite, chalcopyrite, Ag-bearing minerals and minor galena. Polished section petrographic studies indicate that these sulphides are primary. The massive mineralization grades in the footwall to stringer chalcopyrite mineralization which occurs 2 to 3 m into the footwall and corresponds closely with the envelope of anthophyllite alteration. The best channel sample assayed 2.0% Cu and 5.8% Zn over 1.5 m by Inco in 1994.

Alteration at the **Zinc Pit zone** is more widely developed than at the High Grade zone where alteration is characterized by a wide halo of fine grained anthophyllite alteration in the footwall of the mineralized zone. Garnet alteration is also present in the footwall fragmental unit. The garnets are red in colour, up to 0.5 cm in diameter, and coalesce locally within this unit to form over 50% of the host rock. A siliceous sedimentary unit immediately to the south and in the footwall of the Zinc Pit zone, is characterized by a distinct alteration fabric in which cordierite, rimmed by brown chlorite alteration, forms oval-shaped porphyroblasts up to 2 cm in length.

Spectacular massive sulphide mineralization at the Zinc Pit zone consisting of coarse-grained sphalerite, stringer chalcopyrite, pyrrhotite, Ag-bearing minerals and minor galena, is exposed over



an area of 3.5 by 12 m. Mineralization is crudely banded locally and consists of sphalerite and chalcopyrite bands. The best channel sample assayed 1.4% Cu and 24.0% Zn over 2.0 m by Inco in 1994.

## 10.0 EXPLORATION

Band-Ore Resources optioned the Trout Bay Property from Goldcorp Inc. on April 24, 2006. CCIC is unaware of any exploration activity by Band-Ore on the property. The last known exploration activity on the property was by Goldcorp in 2001. See section 6.0 for the exploration history on the property.

## 11.0 DRILLING

Band-Ore Resources optioned the Trout Bay Property from Goldcorp Inc. on April 24, 2006. The authors of this report are unaware of any exploration activity by Band-Ore on the property. The last known drilling on the property was by Goldcorp in 2001.

Table 11.1 Historic Drilling on Trout Bay Property (Shklanka 1969; Fenwick et al. 1990; Cutting 2001)

Year	Company	Location	No. of holes	Total drilled
1957	Cochenour Willans Gold Mines Ltd.	No. 1 Ni showing	*	*
1960-1961	Cochenour Willans Gold Mines Ltd.	Zinc Pit	*	1423 feet (433.7 m)
1962	Falconbridge Ltd.	No. 1 and 2 Ni showing	58	25, 500 feet (7772.4 m)
1962	Conwest Exploration Co. Limited	SE end of No. 2 Ni showing	*	759 feet (231.3 m)
1967-1968	Cochenour Willans Gold Mines Ltd.	High Grade Lake deposit	*	12, 336 feet (3760.0 m)
1967-1968	Cochenour Willans Gold Mines Ltd.	Zinc Pit	*	321 feet (97.8 m)
1971	Cochenour Willans Gold Mines Ltd.	Zn-Cu mineralization on property	73	5383 feet (1640.7 m)
1972	Cochenour Willans Gold Mines Ltd.	Zn-Cu mineralization on property	16	2206 feet (672.4 m)
1993	Inco Ltd.	Zn-Cu mineralization on property	4	1293 m
1994	Inco Ltd.	Zn-Cu mineralization on property	6	1105 m
2000	Goldcorp Inc.	Ni-Cu-PGE mineralization on property	6	1861 m

\* CCIC was unable to determine the number of holes for the older historic drilling, as assessment files were unavailable.

## **12.0 SAMPLING METHOD AND APPROACH**

Band-Ore Resources optioned the Trout Bay Property from Goldcorp Inc. on April 24, 2006 and has not completed any exploration on the property. Significant previous exploration campaigns on the property have been completed by major Canadian mining companies. CCIC believes that sampling method and approach employed during these exploration programs would have been consistent with industry practices at the respective times.

## **13.0 SAMPLE SECURITY, PREPARATION, AND ANALYSES**

Band-Ore Resources optioned the Trout Bay Property from Goldcorp Inc. on April 24, 2006 and has not completed any exploration on the property and therefore CCIC has not evaluated sample security, preparation and analyses procedures. However, as indicated above significant previous exploration campaigns on the property have been completed by major Canadian mining companies and multiple analyses have been completed at the same showings by successive operators. Although CCIC can not verify sample security, preparation, and analyses of the historical exploration programs CCIC has no cause to question the integrity of the previous analytical data.

## **14.0 DATA VERIFICATION**

Band-Ore has not completed and exploration work on the property and therefore accordingly no data has been verified. As indicated above, a significant portion of the past data on the Trout Lake Property has been collected by major Canadian mining companies. Although CCIC can not verify the results from the previous exploration programs, CCIC has no reason to doubt the results.

Iain Kelso, H.B.Sc., (P. Geo), a geologist with CCIC, visited the Trout Bay Property on July 10<sup>th</sup>, 2006. Reference samples were collected from the No. 2 Ni, High Grade Lake VMS, Zinc Pit, and Gulag showings. The trails between the showings have grown in somewhat but are in generally good condition. The large, washed outcrop strippings over each showing are easily locatable. The No. 1 Ni showing on the shore of Fahlgren Lake was not visited.

At the old core storage area (north end of Fahlgren Lake), most of the core remaining has been dumped or the racks on which they were stored have collapsed. Some Winkie core remains undamaged on wood racks but did not appear to be labelled. A float plane dock remains in good condition and requires minor repairs to be serviceable. Photographs are presented in Appendix 2.

The Property is accessible by Flat Lake Rd.; 4x4s can be driven to within 1 km of High Grade Lake. Thereafter the brush becomes dense, but the road surface is in excellent condition to the High Grade Lake area. Direct access can be attained via all-terrain vehicles or snowmobile.

Eight samples were taken during the property visit and submitted to commercial lab for analysis. The precious and base metal values obtained from the samples are consistent with the values of samples taken previously. Although, the samples taken from the site visit to the High Grade Lake and Zinc Pit did not contain the elevated Zn contents that are characteristic of these zones. This likely due to the limited number of samples collected during the visit to these two zones.

Table 14.1 Samples taken during site visit to Trout Bay Property (NAD 83).

Sample	UTM E	UTM N	Showing	Sample Comment	Au (ppb)	Pt (ppb)	Pd (ppb)	Cu (ppm)	Ni (ppm)	Zn (ppm)
TB-01	415311	5650667	No. 2 Ni	Gossan	24	224	685	1101	4048	341
TB-02	415267	5650714	No. 2 Ni	Gossan	18	<15	32	66	61	99
TB-03	415172	5650829	HGL	Gossan - aphanitic gabbro	16	<15	15	238	206	556
TB-04	415172	5650829	HGL	Gossan - aphanitic gabbro, 1-2% sx, cpy	6	<15	<10	18120	31	495
TB-05	414917	5650794	Zinc Pit	Gossan - visible sx	<5	<15	<10	187	49	206
TB-06	414916	5650783	Zinc Pit	Gossan - visible sx, cpy	85	<15	17	32595	41	9572
TB-07	414916	5650783	Zinc Pit	Gossan - vfg qtz gabbro; cpy	184	<15	<10	36736	25	9976
TB-08	414885	5651217	Gulag	Gossan - vfg qtz gabbro	19	<15	<10	249	108	1344

## 15.0 ADJACENT PROPERTIES

The only significant properties adjacent to Trout Bay Property being explored are gold properties to the north of Trout Bay from west to east: Miles Red Lake, May-Spiers and West Red Lake (Figure 15.1). These properties are within the Ball township and within the Ball assemblage, whereas the Trout Bay Property is mostly within the Mulcahy township and the Trout Bay assemblage (2.85 Ga). The Ball assemblage (2.94-2.92 Ga) comprises a calc-alkalic sequence of basalt, andesite, dacite and rhyolite intercalated with minor komatiite and komatiitic basalt flows, conglomerate, quartzite and locally stromatolitic marble (Sanborne-Barrie et al. 2001). The above three properties are all underlain by felsic metavolcanic rocks.

The **Miles Red Lake property** (disposition KRL10727) is located at the west end of Middle Bay (Baker et al. 1996). The property is underlain by northwest-trending, intercalated mafic and felsic metavolcanic rocks. Mineralization consists of quartz veins in northwest-trending shear zones. Pyrite, pyrrhotite, sphalerite, galena, chalcopyrite, arsenopyrite and gold are present in the veins. Gold is only present within sulphide-bearing quartz veins (Durocher et al. 1987). The wallrocks are altered to sericite and chlorite and silicified (Durocher et al. 1987). Mapping by Hemlo Gold Mines Inc. indicates the presence of a regional-scale deformation zone up to 1 km wide (Baker et al. 1996). Within this zone, east- and northwest trending local shear zones contain gold-bearing quartz veins. During the early period of exploration of this property, gold assays gave predominately low values, with several ranging from 0.20 to 1.0 opt Au (Baker et al. 1996). In 1946-1947, Miles Red Lake Gold Mines Ltd. developed a shaft to 91 m with levels at 46 m and 84 m (Durocher et al. 1987). Lateral development on 46 m, 84 m and a total of 610 m of underground drilling was performed.

The **May-Spiers property** (disposition KRL8121) is located on an island in Middle Bay. The property is underlain by east-trending, intermediate to felsic pyroclastic rocks. Mafic metavolcanic flows are intercalated with the felsic rocks in the underground workings and on the mainland (Baker et al. 1996). Serpentinized, ultramafic intrusive rocks intrude the metavolcanic flows. Lenticular quartz veins mineralized with gold, minor pyrite, sphalerite and chalcopyrite are present in east-trending shear zones (Baker et al. 1996). In 1936-1937, May-Spiers Gold Mines Ltd. sunk a 3 compartment vertical shaft to 114 m with levels at 66 m and 107 m, 602 m lateral workings and 754 m of underground drilling (Durocher et al. 1987). Surface and drill core



samples from the property assay as high as 0.76 opt Au, but values found in underground workings are lower (Durocher et al. 1987; Baker et al. 1996). A.S. Bayne reports that the underground workings may not have intersected the main ore zone (Durocher et al. 1987). In 1980, Dumont Nickel Corp. calculated that the May-Spiers property hosts a mineral inventory of 30, 000 tons grading 0.09 opt Au (Baker et al. 1996) (this resource is not 43-101 compliant).

The **West Red Lake property** (disposition KRL10057, now known as 448437) is located on the east side of Phillips Channel of Red Lake. The property is underlain by east-trending felsic pyroclastic rocks and mafic flows (Baker et al. 1996). A small carbonatized amphibolite body outcrops immediately west of the shaft (Baker et al. 1996). A sulphide-bearing quartz vein system occupies a north-northwest trending fracture zone. Mineralization consists of coarse-grained pyrite with minor chalcopyrite, sphalerite, galena and gold (Baker et al. 1996). Gold values are erratic; assays as high as 5.6 opt Au are reported (Baker et al. 1996). Other quartz veins on the property are auriferous. In 1934-1936, West Red Lake Gold Mines Ltd. sunk a shaft to 66 m with 183 m of drilling on 61 m level along vein (Durocher et al. 1987). An assay plan, drawn in 1934, shows an average grade of 0.40 oz Au per ton over 1.07 m width and 0.68 m length (Durocher et al. 1987). In 1934, Paterson, J.A.H. resampled the underground workings and found two “ore shoots”, one of 0.35 oz Au per ton over 1.04 m width and 0.34 m length and another of 0.15 oz Au per ton over 0.97 m width and 610 m length (Durocher et al. 1987).

The above descriptions of adjacent properties are from two Ontario Geological Survey reports (Durocher et al. 1987; Baker et al. 1996) and are independent of Goldcorp and Band-Ore and have not been further validated by CCIC. **The occurrence of the gold mineralization described above, which is hosted by the Ball assemblage, is not necessarily an indication of similar type mineralization occurring in the Trout Bay assemblage.**

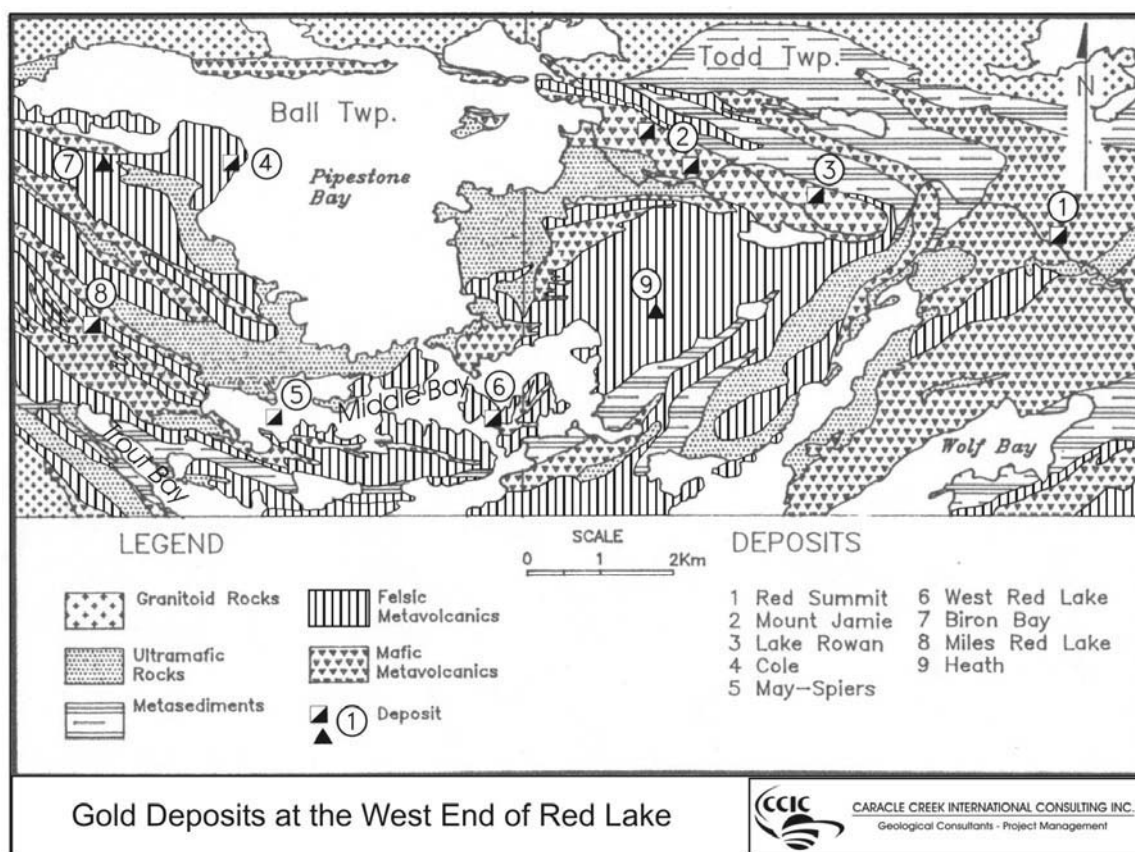


Figure 15.1. Gold deposits at the west end of Red Lake, Todd and Ball Townships (from Baker et al. 1996).

## 16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

CCIC is unaware of any mineral processing or metallurgical test work that has been commissioned by previous property holders on potential ores from the Trout Bay Property.

## 17.0 MINERAL RESOURCE AND RESERVE ESTIMATES

No resource estimates have been completed by Band Ore for any of the mineralized zones on the Trout Bay Property. Historical resource estimates have been completed by Cochenour Willans Gold Mines Ltd. and reported in (Shklanka 1969). The resource estimates are restricted to the Cu-Zn mineralization and are summarized in Table 17.1.

Table 17.1. Summary of historical resource estimations, Trout Bay Property.

Zone	Tonnage (tons)	Cu (%)	Zn(%)	Ag (opt)
High Grade Lake	124,760	1.50	7.86	1.70
Zinc Pit	13,766	0.68	4.75	0.94

Cutting (2001) reports that Inco completed an estimate of the High Grade Lake Zone that resulted in a tonnage of 72,152 tons. According to Cutting (2001) the reason for the decrease in tonnage for the High Grade Lake Zone was due to a decrease in the density factor used. None of the original documentation on these estimates was recovered by CCIC and the data used, estimation

methods, and other parameters remain unknown. None of the historical estimates as reported by Shklanka (1969) and Cutting (2001) include a resource classification as per NI 43-101 requirements.

## **18.0 INTERPRETATION AND CONCLUSIONS**

The Trout Bay Property is located in the Red Lake Greenstone Belt which is renowned for its lode gold deposits. In addition to lode gold, exploration potential exists for base metal deposits including Zn-Cu-Ag mineralization and Ni-Cu-PGE mineralization in the Red Lake Greenstone Belt. The Property is favourably located being approximately 26 kilometres from the town of Red Lake which, with the other communities in the Red Lake district, provide good infrastructure and a supply of skilled and unskilled labour. The property is accessible by road and a network of smaller trails.

The Trout Bay property is underlain by the Trout Bay assemblage of the Red Lake Greenstone belt. The property has been the subject of numerous previous exploration programs over a 50 year time span and as such has a significant database upon which to base continued exploration. Previous exploration programs have resulted in the discovery of massive sulphide and numerous showings. In this respect, it is significant that the most recent exploration programs have resulted in the discovery of additional mineralized showings.

Mineralization identified on the property includes Au mineralization, Ni-Cu-PGE mineralization, and Cu-Zn-Ag mineralization. Based on the results of previous exploration programs it appears that the priority target is Ni-Cu-PGE mineralization followed by Cu-Zn-Ag mineralization, and followed by Au mineralization. It appears from the previous work that the controls on the occurrence and distribution of sulphide mineralization are not well understood. An increase in the understanding of the geological history of the property and the relative timing of the mineralization(s) is critical in targeting both within known sulphide hosting environments and to test the complete property potential.

The Trout Bay property is favourably located for the development of a mineral discovery and CCIC concludes that the Trout Bay Property holds potential for further discovery.

## **19.0 RECOMMENDATIONS**

CCIC recommends that a primary objective of the next phase of exploration should be determination of the controls on the occurrence and distribution of sulphide mineralization and the confirmation/elucidation of geological models for the Cu-Ni-PGE mineralization and the Zn-Cu-Ag mineralization on the Trout Bay Property.

CCIC recommends that continued exploration should include both the testing of known sulphide hosting environments and a program to initiate a property wide assessment. Targets based on known mineralization and extrapolation of sulphide bearing geological environments include:

- 1) Far western extremity of the iron formation
- 2) Test and evaluate known mineralization at Big Kelly lake
- 3) The favourable stratigraphy in the area of Johnson Lake

As a start to the regional property assessment, CCIC recommends identification and mapping of compositional variation within the mafic-ultramafic intrusive complex.

A three phase, success-based exploration program is recommended where movement to the successive phase is contingent upon previous exploration results.

### **19.1. Phase 1 Exploration Program**

- 1) Ground geological exploration
  - a) Detailed geological mapping of the known mineralized area including stripping as required and practicable to establish setting and controls
  - b) Property scale geological mapping, prospecting, and sampling of the mafic and ultramafic intrusive rocks for lithogeochemistry to evaluate property prospectivity
- 2) Property wide airborne geophysical survey consisting of time domain electromagnetic and magnetic survey
- 3) Diamond drilling:
  - a) Drilling to evaluate expansion of known resources
  - b) Drilling to test known showings and known mineralized horizons

### **19.2. Phase 2 Exploration Program**

A two pronged approach should be taken in the second phase of exploration:

- 1) Based on success in the drilling program of phase 1, continued drilling is recommended to:
  - a) initiate the delineation of resources, and
  - b) continue to test known prospective geological environments
- 2) Follow-up exploration of targets derived from Phase 1 geological and geophysical exploration and consisting of:
  - a) ground based magnetic and electromagnetic surveys
  - b) geological mapping and sampling
  - c) diamond drilling

### **19.3. Phase 3 Exploration Program**

Phase 3 exploration is essentially a continuation of phase 2 work focussed on ranked and prioritized targets based on the results of phase 2. The break between phase 2 and 3 exploration programs is marked by interpretation of results, prioritization of targets, and planning for phase 3.

### **19.4 Exploration Budget**

It is envisaged that the first two phases will require 1 year spanning two field seasons. Accordingly, a 1 year budget is proposed for phases 1 and 2. Phase 3 exploration budgeting is contingent on the results of the first 2 phases of exploration, prioritization of targets, and industry conditions at the time.

Item	Unit	Number	Cost
<b>Phase 1</b>			
Geological Field Program			
Geologists 2 @ \$450/day	days	90	40,500
Prospectors 2 @ 300/day	days	90	27,000
Technician 1 @ 200/day	days	60	12,000
GIS and Support @ 400/day	days	20	8,000
Analytical @ 30/sample	sample	1000	30,000
Airborne Mag-EM Survey			
Direct 125/line km	line km's	500	62,500
Mobe-DeMobe (flat)	fee	1	10,000
Geophysicist @ 500/day	days	10	5,000
Drilling			
All-in cost @ 150/metre	metre	1000	150,000
<b>Sub-total Phase 1</b>			<b><u>345,000</u></b>
<b>Phase 2</b>			
Geological Field Program			
Geologists 2 @ \$450/day	days	120	54,000
Prospectors 1 @ 300/day	days	30	9,000
Technician 1 @ 200/day	days	60	12,000
GIS and Support @ 400/day	days	10	4,000
Analytical @ 30/sample	sample	250	7,500
Ground Geophysical Program			
Geophysical Technician 2 @ 250/day	days	120	30,000
Geophysicist @ 500/day	days	20	10,000
GIS and Support @400/day	days	20	8,000
Drilling			
All-in cost @ 150/metre	metre	2000	300,000
<b>Sub-total Phase 2</b>			<b><u>434,500</u></b>
<b>Total Phases 1 and 2</b>			<b><u>779,500</u></b>

## 20.0 STATEMENT OF AUTHORSHIP

This report titled “Independent Technical Report, Trout Bay Property, Red Lake, Ontario”, and dated July 24<sup>th</sup>, 2006, was prepared and signed by the following authors:

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**APPENDIX 1.**  
Certificates of Author  
Permissions of Author





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**CERTIFICATE OF AUTHOR**

I, Julie Selway, do hereby certify that:

1. I am employed as a consultant with Caracle Creek International Consulting Inc. (CCIC).
2. I hold the following academic qualifications: B.Sc. (Hons) Geology (1991) Saint Mary's University; M.Sc. Geology (1993) Lakehead University; Ph.D. Mineralogy (1999) University of Manitoba.
3. I am a member of the Association of Professional Geoscientists of Ontario (member # 738). I am a member in good standing of the Mineralogical Association of Canada, Geological Association of Canada and Mineralogical Society of America.
4. I have worked as a geologist for 15 years with academia and industry.
5. I have had no prior involvement with the Property that forms the subject of this Technical Report.
6. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
7. I am independent of the parties involved in the transaction for which this report is required, other than providing consulting services.
8. I have read NI-43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
9. I am jointly responsible for the preparation of the Technical Report titled "Independent Technical Report, Trout Bay Property, Red Lake, Ontario" (the "Technical Report") and dated July 24<sup>th</sup>, 2006.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated this 24<sup>th</sup> Day of July, 2006.

**SIGNED AND SEALED**

"Julie Selway"

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Julie Selway, Ph.D., P.Geo.





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**CONSENT of AUTHOR**

British Columbia Securities Commission  
Alberta Securities Commission  
Ontario Securities Commission  
Manitoba Securities Commission  
Nova Scotia Securities Commission  
Department of Government Services, Consumer & Commercial Affairs Branch (Newfoundland & Labrador)  
TSX Venture Exchange

I, Julie Selway (P.Geo), do hereby consent to the filing of the written disclosure of the technical report titled, "Independent Technical Report, Trout Bay Property, Red Lake, Ontario" (the "Technical Report") and dated July 24<sup>th</sup>, 2006, and to the filing of the Technical Report with the securities regulatory authorities and stock exchange referred to above.

Dated 24<sup>th</sup> Day of July, 2006.

**SIGNED AND SEALED**

"Julie Selway"

---

Julie Selway, Ph.D., P.Geo.



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**CERTIFICATE OF AUTHOR**

I, Jamie Lavigne (L1244), do hereby certify that:

1. I am employed as a Exploration Manager with Caracle Creek International Consulting Inc. (CCIC).
2. I hold the following academic qualifications: B.Sc. Geology (1986) Memorial University of Newfoundland and M.Sc. Geology (1991) University of Ottawa.
3. I am a Professional Geologist registered (L1244) with the Association of Professional Engineers, Geologists, and Geophysicists, of the Northwest Territories.
4. I have been practicing my profession of geologist for the past 20 years.
5. I have had no prior involvement with the Property that forms the subject of this Technical Report.
6. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
7. I am independent of the parties involved in the transaction for which this report is required, other than providing consulting services.
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Dated this 24<sup>th</sup> Day of July, 2006.

**SIGNED AND SEALED**

"Jamie Lavigne"

-----  
Jamie Lavigne, M.Sc., P.Geo.





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Manitoba Securities Commission  
Nova Scotia Securities Commission  
Department of Government Services, Consumer & Commercial Affairs Branch (Newfoundland & Labrador)  
TSX Venture Exchange

I, Jamie Lavigne (P.Geo), do hereby consent to the filing of the written disclosure of the technical report titled, "Independent Technical Report, Trout Bay Property, Red Lake, Ontario" (the "Technical Report") and dated July 24<sup>th</sup>, 2006, and to the filing of the Technical Report with the securities regulatory authorities and stock exchange referred to above.

Dated 24<sup>th</sup> Day of July, 2006.

**SIGNED AND SEALED**

"Jamie Lavigne"

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Jamie Lavigne, M.Sc., P.Geo.

**Appendix 2**  
**Pictures of the Trout Bay Property taken by CCIC during the site visit July 10, 2006**

## No.2 Ni showing



Top Photo: No. 2 Ni showing facing northeast, Middle Photo: Crenulations/Folding facing north, Bottom Photo: Close up of gossan.



## High Grade Lake Deposit



Top Photo: High Grade Lake deposit facing north, Middle Photo: High Grade Lake deposit facing south, Bottom Photo: Gossan.

### **Zinc Pit showing**



Top Photo: Zinc Pit showing, Middle Photo: Gossan, Bottom Photo: Location of CCIC samples: number TB-06 and TB-07.



## Gulag Showing



Top Photo: Layering at Gulag showing, Middle Photo: Garnets at Gulag showing, Bottom Photo: Gossan.