

# **NI 43-101 TECHNICAL REPORT**

**on the**

**DOBIE LAKE COPPER**

**PROPERTY**

**ALGOMA, ONTARIO**

**For**

**BIG RED MINING CORP.**

Prepared by:

Brian H Newton, P. Geo

Mark P Wellstead, P. Geo

Minroc Management Limited  
2857 Sherwood Heights Drive, Unit 2  
Oakville ON L6J 7J9

Effective Date: August 15, 2021

## CERTIFICATE OF QUALIFIED PERSON

I, Brian H Newton P. Geo, certify that;

1. I reside at 1518 Jasmine Crescent, Oakville, Ontario L6H 3H3 and I am a geologist practitioner for Minroc Management Limited, office address 2857 Sherwood Heights Unit 2, Oakville Ontario L6J 7J9.
2. This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Dobie Lake Copper Property, Algoma, Ontario" dated 15<sup>th</sup> August 2021.
3. I am a graduate of McMaster University, Hamilton, Ontario, Canada with a Bachelor of Science (1984) and I have practiced my profession continually since that time. This practice has included:
  - Designing and implementing exploration programs across Canada and abroad;
  - Undertaking QP site visits to properties in Canada and abroad;
  - Authoring NI 43-101 Technical Reports.Past projects have included several copper deposits at all stages of exploration and development.
4. I am a member of Professional Geoscientists of Ontario (PGO), Membership Number 1330.
5. I am a Qualified Person, as per NI 43-101.
6. I have read NI 43-101 as well as all sections of this Report, verify that this Report was prepared in compliance with the Instrument, and am responsible for all sections of this Report.
7. I visited the Dobie Lake Property on the 1<sup>st</sup> August, 2021.
8. I am independent, as described in Section 1.5 of NI 43-101, of the Dobie Lake Property, Big Red Mining Corp. and all other interested parties. I have had no prior involvement with the Dobie Lake Property prior to the preparation of this Report.
9. As of the date of this certificate, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: 15<sup>th</sup> August 2021

Brian H Newton P. Geo

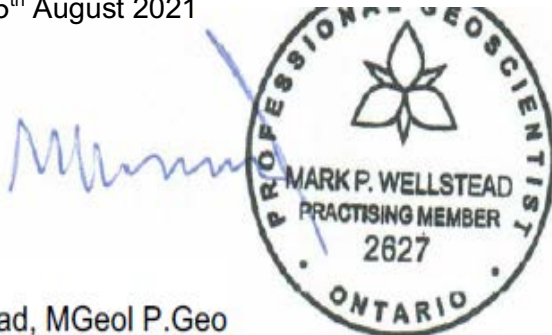


## CERTIFICATE OF AUTHOR

I, Mark P Wellstead, MGeol, P. Geo, certify that;

1. I reside at 112 Main St West, Grimsby, Ontario, L3M 1R7 and I am a geologist practitioner for Minroc Management Limited, office address 2857 Sherwood Heights Unit 2, Oakville Ontario L6J 7J9.
2. This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Dobie Lake Copper Property, Algoma, Ontario" dated 15<sup>th</sup> August 2021.
3. I am a graduate of the University of Leicester, United Kingdom with a Masters of Geology (MGeol Earth and Planetary Sciences; 2010) and I have practiced my profession continually since that time. This practice has included:
  - property evaluation, review and target generation;
  - NI43-101 Technical Report writing;
  - designing and implementing exploration programs.This experience has included compilations and reviews of vein-copper deposits in the Algoma District.
4. I am a member of Professional Geoscientists of Ontario (PGO), Membership Number 2627.
5. I am a Qualified Person, as per NI 43-101.
6. I have read NI 43-101 as well as all sections of this Report, verify that this Report was prepared in compliance with the Instrument, and am responsible for all sections of this Report.
7. I have not visited the Dobie Lake Property.
8. I am independent, as described in Section 1.5 of NI 43-101, of the Dobie Lake Property, Big Red Mining Corp. and all other interested parties, I have had no prior involvement with the Dobie Lake Property prior to the preparation of this Report.
9. As of the date of this certificate, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Effective Date: 15<sup>th</sup> August 2021



Mark P Wellstead, MGeol P. Geo

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*Note: All UTM's are in NAD83 zone 17T. All northings are against true/geodetic north.  
Costs are in Canadian Dollars unless otherwise specified*

## **1.1 SUMMARY**

### **1.1 General**

Minroc Management Ltd. (Minroc) has been retained by Big Red Mining Corp. (“Big Red” or “Issuer”) to complete a Technical Report prepared in accordance with NI 43-101 pertaining to the Dobie Lake Property (“The Property”). The purpose of this report is to disclose all material scientific and technical information pertaining to the Dobie Lake Property, in accordance with NI 43-101 and as required to facilitate Big Red’s listing on the Canadian Securities Exchange, and to recommend additional exploration.

### **1.2 Property Description, Location and Access**

The Property is located in the Algoma District of Ontario, approximately 55 kilometres west by road from Elliot Lake and 45 km north by road (Highway 546) from Iron Bridge, Ontario (Figure 1). Iron Bridge, Ontario is the nearest settlement, with an approximate population of 1,600 and is located along Ontario Highway 17. The city of Sault Ste. Marie is located 150 km west (by road) of the Property. The Property lies approximately 19 km north of the boundary of the Mississauga First Nation Mississagi River 8 Reserve.

The Dobie Lake Property consists of one hundred and thirty one (131) single-cell Mining Claims with a combined area of approximately 2,619 Ha.

The Property lies within NTS map sheets 41J/10 and 41J/11 in Albanel, Kamichisitit and Nicholas Townships in the Sault Ste. Marie Mining District of Ontario.

The historic drillhole 65-11 in the Canamiska area is approximately located at 345,486 mE, 5,157,339 mN (Zone 17T, NAD83).

The Dobie Lake claims are held 100% by Rich Copper Exploration Corp. According to the option agreement dated the 25<sup>th</sup> day of February 2021, as amended the 3<sup>rd</sup> day of June 2021 (The “Agreement”), Big Red has been granted an option by Rich Copper Exploration Corp. to acquire a 100% undivided interest in and to the Dobie Lake claims from Rich Copper Exploration Corp, by:

- Paying \$5,000 to Rich Copper within 30 days of signing the Agreement;
- Issuing 50,000 shares to Rich Copper within 90 days of the date of the Agreement;
- Issuing 100,000 shares to Rich Copper on or before each of the first, second and third anniversaries of the date of the Agreement;
- Incurring \$80,000 in exploration expenditures on the Property on or before the first anniversary of the date of the Agreement;
- Incurring an additional \$150,000 in exploration expenditures on or before the second anniversary of the date of the Agreement;
- Incurring an additional \$250,000 in exploration expenditures on or before the third anniversary of the date of the Agreement;

- Incurring an additional \$350,000 in exploration expenditures on or before the fourth anniversary of the date of the Agreement.

At that point, Big Red's tenure will be subject to a Royalty equal to 2% of Net Smelter Returns, half of which (i.e. 1%) may be purchased for \$1,000,000.

### **1.3 History**

The earliest recorded exploration on the Dobie Lake Property dates back to 1955 although undocumented exploration may have occurred into the 19<sup>th</sup> Century. The majority of historic work dates back from the 1950s-70s and was focused on vein copper and paleo-placer uranium; drilling was completed on three copper-bearing vein zones; the "No. 1" and "No. 2" Zones and the Canamiska Zone. Exploration drilling at the Canamiska Zone, for which the most detailed work documents are available, is reported to have traced a mineralized zone over about 2,000 ft (610 m) strike (Schlanka 1969), and returned drillhole intervals including 0.53% Cu over 7.62 m (DDH 65-6; Boniwell 1965).

### **1.4 Geological Setting, Mineralization, and Deposit Type**

The Dobie Lake Property lies within the Southern Province of the Canadian Shield. The Southern Province is comprised chiefly of early Proterozoic clastic sediments of the Huronian Supergroup which is early Proterozoic in age (2.45-2.115 Ga). The Huronian sequence hosts the Nipissing diabase sills which form a substantial intrusive complex across the region and are dated to 2.115 Ga.

The above units were subjected to broadly east-west deformation and greenschist grade metamorphism during the Penokean Orogeny in the mid-Proterozoic (about 1.85-1.75 Ga). Dykes relating to the Sudbury impact event were intruded around 1.2 Ga.

The Dobie Lake Property is underlain by east-west-folded, early Proterozoic conglomerates and other sediments of the Cobalt, Quirke Lake and Hough Lake Groups. In outcrop and drillholes these can be seen to include interbedded horizons of quartzite, sandstone, siltstone and conglomerate. A sill of Nipissing Diabase underlies the centre of the Property. Structural features on the Property include the Flack Lake Fault.

Historically documented mineralization on the Property consists of chalcopyrite contained within broadly east-west-striking white and pink quartz and quartz-carbonate veins and breccias. Malachite, chalcocite and bornite are occasionally present. Gold and silver are frequently recorded in assays alongside copper in the No. 1 Zone.

Three known copper mineralized systems are present on the Property, namely the No. 1 Zone, No. 2 Zone and the Canamiska Zone.

The mineralization at the Dobie Lake Property is of a distinctive vein type common to the North Shore of Lake Huron in the region from Sault Ste. Marie to Espanola.

The North Shore vein copper occurrences consist of quartz or quartz-carbonate vein

sheets or anastomosed or breccia-weld vein systems and are mineralized with pyrite, chalcopyrite, specularite and, occasionally, bornite, galena and sphalerite. Uranium and cobalt minerals are also, rarely, reported (Frarey 1977). Carbonate is generally calcite but can include ankerite and siderite. Quartz can be vuggy and is generally white but can be stained pink from minor hematite content. Veins have sharp contacts, a steep dip and, usually, a west-northwest strike. Veins often form loose swarms of parallel veins separated by tens of metres. Individual veins can be traced for several hundred metres, while packages of veins can be traced for several kilometres. The sulphide mineralization is disseminated irregularly throughout the vein material and are only very rarely emplaced within wallrocks. Assays from many of the occurrences in the region show that appreciable silver can be contained in the sulphides alongside copper, as well as modest gold values.

Similar deposit types in Canada include the Opémiska diabase-hosted vein Cu-Au deposits near Chapais, Quebec, and the Churchill Copper deposit in British Columbia. Grouped together, these vein-hosted deposits can be referred to as “Churchill-type” (Kirkham & Sinclair 1996). In general, where proven economic, this vein hosted deposit type has a relatively small tonnage and a grade between 1% and 3.5% Cu.

## **1.5 Exploration and Drilling**

Since acquiring the Dobie Lake Property, a series of ground VLF surveys have been completed on the Dobie Lake Property on behalf of Big Red by Superior Exploration, Adventure & Climbing Co. Ltd. (Superior Exploration) of Batchewana Bay, Ontario. A total of 13.82 line km were surveyed on the Property in five separate areas, covering parts of the No. 1, No. 2 and Canamiska zones, using a VLF EM-16 unit and a Garmin GPS-60CSX (Parent 2021). Survey lines are oriented broadly north-south and were walked without the aid of a field grid. The surveys were completed between the 10<sup>th</sup> June and 30<sup>th</sup> July, 2021 by Shaun Parent, P. Geo and Sandra Slater, both of Superior Exploration.

The data from the Canamiska grid (the most extensive of the five grids) shows linear in-phase and quadrature responses which appear to correspond to the historically-explored area of veining; these fall within a broader zone of higher conductivity. These structures appear to dip variously steeply southward (in the west of the grid) and northward (in the east of the grid) according to the 2-D inversions, and strike off of the east edge of the survey area, providing an obvious vector for follow-up work.

## **1.6 Sampling, Analysis and Data Verification**

The Property was visited by Brian H Newton, P. Geo of Minroc on August 1<sup>st</sup>, 2021. The No. 2 Zone vein was visited, and two grab samples were taken. Both grab samples returned elevated Cu values of 8,890 ppm (0.889%) and 2.39% Cu, indicating that copper mineralization is present in the No. 2 Zone. The Canamiska Vein and the No. 1 Zone were not visited.



## **1.7 Mineral Resource and Mineral Reserve Estimates**

The Property is an early-stage exploration property. There are no current Mineral Resources or Reserves on the Project as defined in the Definition Standards on Mineral Resources and Mineral Reserves published by the Canadian Institute of Mines, Minerals and Petroleum (CIM), JORC or any equivalent international code.

## **1.8 Recommendations for Exploration**

The Authors recommend that Big Red complete a two stage program to advance the Property. A Phase 1 program is outlined here consisting of data review and compilation and initial confirmation drilling. This is to be followed by a subsequent Phase 2 exploration program. The exact nature of Phase 2 will depend on findings from Phase 1 but the implementation of Phase 2 will not depend on any specific outcome from Phase 1.

## **2.1 INTRODUCTION**

Minroc has been retained by Big Red to complete a Technical Report prepared in accordance with NI 43-101 pertaining to the Dobie Lake Property. The purpose of this report is to disclose all material scientific and technical information pertaining to the Dobie Lake Property, in accordance with NI 43-101 and as required to facilitate Big Red's listing on the Canadian Securities Exchange, and to recommend additional exploration.

### **2.0 Notes on Issuer**

Big Red is a mineral exploration company addressed at 101 – 17565 - 58 Avenue, Surrey, BC, V3S 4E3.

According to the option agreement dated the 25<sup>th</sup> day of February 2021, as amended the 3<sup>rd</sup> day of June 2021 (The "Agreement"), Big Red has been granted an option by Rich Copper Exploration Corp. to acquire a 100% undivided interest in and to the Dobie Lake claims from Rich Copper Exploration Corp, by:

- Paying \$5,000 to Rich Copper within 30 days of signing the Agreement;
- Issuing 50,000 shares to Rich Copper within 90 days of the date of the Agreement;
- Issuing 100,000 shares to Rich Copper on or before each of the first, second and third anniversaries of the date of the Agreement;
- Incurring \$80,000 in exploration expenditures on the Property on or before the first anniversary of the date of the Agreement;
- Incurring an additional \$150,000 in exploration expenditures on or before the second anniversary of the date of the Agreement;
- Incurring an additional \$250,000 in exploration expenditures on or before the third anniversary of the date of the Agreement;
- Incurring an additional \$350,000 in exploration expenditures on or before the fourth anniversary of the date of the Agreement.

At that point, Big Red's tenure will be subject to a Royalty equal to 2% of Net Smelter Returns, half of which (i.e. 1%) may be purchased for \$1,000,000.

### **2.1 Definitions**

The following list presents the definitions used in this report.

**Table 1 Definitions**

<b>Abbreviation or term</b>	<b>Definition</b>
°	Degrees (angle)
°C	Degrees Celsius (temperature)
<b>AFRI</b>	Assessment File Research Image (Ontario assessment file catalogue system)
<b>Ag</b>	Silver (chemical symbol)
<b>As</b>	Arsenic (chemical symbol)
<b>Au</b>	Gold (chemical symbol)
<b>Bi</b>	Bismuth (chemical symbol)
<b>CIM</b>	Canadian institute of Mining, Minerals and Petroleum
<b>cm</b>	Centimetre (measurement)
<b>Co</b>	Cobalt (chemical symbol)
<b>Cu</b>	Copper (chemical symbol)
<b>DDH</b>	Diamond Drillhole
<b>DFO</b>	Department of Fisheries and Oceans (federal agency)
<b>EM</b>	Electromagnetic (geophysical conductivity survey)
<b>ENDM</b>	Ministry of Energy, Northern Development and Mines (Ontario ministry)
<b>ft</b>	Feet (imperial distance)
<b>g/t</b>	Grams per tonne (concentration)
<b>Ga</b>	Billion years (Giga-annum, age)
<b>Ha</b>	Hectare (area)
<b>Hz</b>	Hertz (frequency)
<b>ICP-MS</b>	Inductively Coupled Plasma – Mass Spectrometry (chemical analytical method)
<b>ICP-AES</b>	Inductively Coupled Plasma – Atomic Emission Spectrometry (chemical analytical method)
<b>IP</b>	Induced Polarization (geophysical survey technique)
<b>JORC</b>	Joint Ore Reserves Committee (Australian mineral resource reporting code)
<b>kg</b>	Kilogram (weight)
<b>km</b>	Kilometre (distance)
<b>km<sup>2</sup></b>	Square kilometre (area)
<b>Kt</b>	Kilotonne (thousand tonnes, weight)
<b>kΩ</b>	Kilo-ohm (electrical resistance)
<b>LRIA</b>	Lakes and Rivers Improvement Act
<b>µm</b>	Micrometre or micron (distance)
<b>m</b>	Metre (distance)
<b>MDI</b>	Mineral Deposit Inventory (Ontario mineral deposit catalogue)

<b>MLAS</b>	Mining Lands Administration System (Ontario online mining claim staking/management system)
<b>mm</b>	Millimetre (distance)
<b>Mo</b>	Molybdenum (chemical symbol)
<b>Mt</b>	Megatonne (million tonnes, weight)
<b>NAD83</b>	North American Datum 1983 (geodetic datum)
<b>NI 43-101</b>	National Instrument 43-101 (Canadian mineral resource reporting code)
<b>NSR</b>	Net Smelter Royalty
<b>ODD</b>	Ontario Drillhole Database (OGS diamond drillhole compilation)
<b>OGS</b>	Ontario Geological Survey
<b>P. Geo</b>	Professional Geoscientist (as accredited in Canada)
<b>Pb</b>	Lead (chemical symbol)
<b>PLA</b>	Public Lands Act
<b>QA/QC</b>	Quality Assurance and Quality Control
<b>QP</b>	Qualified Person
<b>SEDAR</b>	System for Electronic Document Analysis and Retrieval (Canadian securities document filing system)
<b>t</b>	Tonne (weight)
<b>U</b>	Uranium (chemical symbol)
<b>UTM</b>	Universal Transverse Mercator (coordinate reference system)
<b>VLF</b>	Very Low Frequency (electromagnetic survey method)

## **2.1 Sources of Information**

This report was written based upon documents and data, both public and private, provided by Big Red, as well as publicly available reports and data accessed via SEDAR, the online assessment file repository maintained by the Ontario ENDM, the Ontario mineral claims system (MLAS) and the Ontario Land Registry Access system. The Authors have reviewed all data described above and believe that it is sufficiently accurate for the purposes of this Technical Report.

## **2.2 Personal Inspection**

The Property was visited by Brian H Newton, P. Geo of Minroc on August 1<sup>st</sup> 2021 alongside Shaun Parent, P. Geo, of Superior Exploration. Two grab samples were taken from different exposures of the No. 2 Zone vein. Both grab samples returned elevated Cu values of 8,890 ppm (0.889%) and 2.39% Cu, indicating that copper mineralization is present in the No. 2 Zone. The Canamiska Vein and the No. 1 Zone were not visited.

## **3.0 RELIANCE ON OTHER EXPERTS**

While the Authors have reviewed all publicly available data pertaining to the subject mining claims, the Authors have not investigated the ownership or otherwise legal or tax status of the mineral tenure and are not qualified to do so. The Authors have relied upon information provided by the Issuer with respect to information regarding ownership, permits, licenses, environmental concerns, and the agreements in Item 4.5 of this Report, the Authors have relied on information provided by The Issuer, and information presented by the Ontario ENDM and in the Ontario Mining Act, as more particularly set out in Section 20.0 “References”.

## **4.1 PROPERTY DESCRIPTION AND LOCATION**

### **4.1 Area**

The Dobie Lake Property consists of one hundred and thirty one (131) single-cell Mining Claims with a combined area of 2,619 Ha. The claims are staked in one contiguous block but *de facto* include two small areas separated from the main claim block by the Little White River Provincial Park.

### **4.2 Location**

The Property is located in the Algoma District of Ontario, approximately 55 kilometres west by road from Elliot Lake and 45 km north by road (Highway 546) from Iron Bridge, Ontario (Figure 1). Iron Bridge, Ontario is the nearest settlement, with an approximate population of 1,600 and is located along Ontario Highway 17. The city of Sault Ste. Marie is located 150 km west (by road) of the Property. The Property lies approximately 19 km north of the boundary of the Mississauga First Nation Mississagi River 8 Reserve.

The Property lies within NTS map sheets 41J/10 and 41J/11 in Albanel, Kamichisitiit and Nicholas Townships in the Sault Ste. Marie Mining District of Ontario.

The historic drillhole 65-11 in the Canamiska area is approximately located at 345,486 mE, 5,157,339 mN (Zone 17T, NAD83).

### 4.3 Description of Mineral Tenure

The Dobie Lake Property consists of one hundred and thirty one (131) single-cell Mining Claims (see Table 2). The claims are staked in one contiguous block but *de facto* include two small areas separated from the main claim block by the Little White River Provincial Park.

The Claim group abuts the Little White River and Blind River Provincial Parks. Exploration and mineral development is prohibited in Provincial Parks as outlined in the Provincial Parks and Conservation Reserves Act (2006).

The claim group also abuts three mining Patents (the Jentina / White River Lead property), in which surface and subsurface rights are retained by private third parties. The claim group also abuts a parcel of private surface rights which covers a riverfront cottage property in the southwest of the Property. Claim 643566 would also envelop a similar surface rights parcel (CK153) were it not truncated by the Little White River Provincial Park.

**Table 2 Claim Details**

Note: All claims are held 100% by Rich Copper Exploration Corp. Information from MLAS. LWR PP = White River Provincial Park; BR PP = Blind River Provincial Park.

Claim	Staked	Due	Area Ha	Township	Notes
618569	2020-11-10	2022-11-10	21.22	Albanel	Overlaps with LWR PP
618570	2020-11-10	2022-11-10	16.59	Albanel	Abuts patents SSM5595, SSM5597, SSM5522
618571	2020-11-10	2022-11-10	20.85	Albanel	Abuts patent SSM5595
618572	2020-11-10	2022-11-10	5.06	Albanel	Abuts patents SSM5597, SSM5522
618573	2020-11-10	2022-11-10	22.20	Albanel	
618574	2020-11-10	2022-11-10	22.20	Albanel	
618575	2020-11-10	2022-11-10	22.20	Albanel	
618576	2020-11-10	2022-11-10	19.89	Albanel	Abuts patent SSM5595
617545	2020-10-30	2022-10-30	22.20	Albanel	
617551	2020-10-30	2022-10-30	22.20	Albanel	
617546	2020-10-30	2022-10-30	22.20	Albanel	
617547	2020-10-30	2022-10-30	22.20	Albanel	
617548	2020-10-30	2022-10-30	22.20	Albanel	
617549	2020-10-30	2022-10-30	22.16	Albanel	Abuts patent SSM5597
617550	2020-10-30	2022-10-30	22.20	Albanel	
617552	2020-10-31	2022-10-30	22.20	Albanel	

617553	2020-11-01	2022-10-30	22.20	Albanel	
617554	2020-11-02	2022-10-30	22.20	Albanel	
617555	2020-11-03	2022-10-30	22.20	Albanel	
617556	2020-11-04	2022-10-30	22.20	Albanel	
617557	2020-11-05	2022-10-30	22.20	Albanel	
617558	2020-11-06	2022-10-30	22.20	Albanel	
617559	2020-11-07	2022-10-30	22.20	Albanel	
617560	2020-11-08	2022-10-30	22.20	Albanel	
659261	2020-11-09	2023-06-02	22.20	Albanel	
659262	2020-11-10	2023-06-02	22.21	Kamichisitit	
659263	2020-11-11	2023-06-02	22.21	Albanel	
659264	2020-11-12	2023-06-02	22.20	Albanel	
659265	2020-11-13	2023-06-02	0.95	Albanel	Overlaps with BR PP
659266	2020-11-14	2023-06-02	22.20	Albanel	
659267	2020-11-15	2023-06-02	22.21	Albanel	
659268	2020-11-16	2023-06-02	22.21	Albanel	
659269	2020-11-17	2023-06-02	22.21	Kamichisitit	
659270	2020-11-18	2023-06-02	22.21	Albanel	
659271	2020-11-19	2023-06-02	22.20	Albanel	
659272	2020-11-20	2023-06-02	22.21	Albanel	
659273	2020-11-21	2023-06-02	22.21	Kamichisitit	
659274	2020-11-22	2023-06-02	22.21	Albanel	
659275	2020-11-23	2023-06-02	22.20	Albanel	
659276	2020-11-24	2023-06-02	22.21	Albanel	
659277	2020-11-25	2023-06-02	22.21	Kamichisitit	
659278	2020-11-26	2023-06-02	22.20	Albanel	
659279	2020-11-27	2023-06-02	22.20	Albanel	
659280	2020-11-28	2023-06-02	22.20	Albanel	
659281	2020-11-29	2023-06-02	22.21	Albanel	
659291	2020-11-30	2023-06-02	22.21	Albanel	
659282	2020-12-01	2023-06-02	22.20	Albanel	
659283	2020-12-02	2023-06-02	22.21	Albanel	
659284	2020-12-03	2023-06-02	22.20	Albanel	
659285	2020-12-04	2023-06-02	21.68	Albanel	Overlaps with BR PP
659286	2020-12-05	2023-06-02	22.20	Albanel	
659287	2020-12-06	2023-06-02	22.20	Albanel	
659288	2020-12-07	2023-06-02	22.20	Albanel	
659289	2020-12-08	2023-06-02	7.62	Albanel	Overlaps with BR PP
659290	2020-12-09	2023-06-02	22.21	Kamichisitit	
659292	2020-12-10	2023-06-02	5.83	Albanel	Overlaps with BR PP
659293	2020-12-11	2023-06-02	21.72	Albanel	Overlaps with BR PP

<b>659294</b>	2020-12-12	2023-06-02	22.21	Albanel	
<b>659295</b>	2020-12-13	2023-06-02	16.06	Kamichisitit	Overlaps with BR PP
<b>617561</b>	2020-12-14	2022-10-30	22.19	Albanel	
<b>617562</b>	2020-12-15	2022-10-30	22.19	Albanel	
<b>617563</b>	2020-12-16	2022-10-30	16.59	Albanel	Overlaps with LWR PP
<b>617564</b>	2020-12-17	2022-10-30	8.93	Albanel	Overlaps with LWR PP
<b>617565</b>	2020-12-18	2022-10-30	22.19	Albanel	
<b>617566</b>	2020-12-19	2022-10-30	5.04	Albanel	Overlaps with LWR PP
<b>617567</b>	2020-12-20	2022-10-30	22.19	Albanel	
<b>617574</b>	2020-12-21	2022-10-30	22.21	Albanel	
<b>617575</b>	2020-12-22	2022-10-30	22.21	Albanel	
<b>617576</b>	2020-12-23	2022-10-30	22.21	Albanel	
<b>617577</b>	2020-12-24	2022-10-30	22.21	Albanel	
<b>617578</b>	2020-12-25	2022-10-30	22.21	Albanel	
<b>617579</b>	2020-12-26	2022-10-30	22.20	Albanel	
<b>617580</b>	2020-12-27	2022-10-30	22.20	Albanel	
<b>617581</b>	2020-12-28	2022-10-30	22.20	Albanel	
<b>617520</b>	2020-12-29	2022-10-29	6.16	Albanel	Overlaps with LWR PP
<b>617521</b>	2020-12-30	2022-10-29	22.20	Albanel	
<b>617522</b>	2020-12-31	2022-10-29	22.20	Albanel	
<b>617523</b>	2021-01-01	2022-10-29	22.20	Albanel	
<b>617524</b>	2021-01-02	2022-10-29	22.20	Albanel	
<b>617525</b>	2021-01-03	2022-10-29	22.20	Albanel	
<b>617526</b>	2021-01-04	2022-10-29	22.20	Albanel	
<b>617527</b>	2021-01-05	2022-10-29	22.20	Albanel	
<b>617528</b>	2021-01-06	2022-10-29	22.20	Albanel	
<b>617529</b>	2021-01-07	2022-10-29	22.20	Albanel	
<b>617530</b>	2021-01-08	2022-10-29	22.20	Albanel	
<b>617531</b>	2021-01-09	2022-10-29	22.20	Albanel	
<b>617533</b>	2021-01-10	2022-10-29	22.20	Albanel	
<b>617532</b>	2021-01-11	2022-10-29	22.20	Albanel	
<b>617534</b>	2021-01-12	2022-10-29	22.20	Albanel	
<b>643562</b>	2021-01-13	2023-03-16	22.19	Albanel	
<b>643563</b>	2021-01-14	2023-03-16	22.19	Albanel	Overlaps with LWR PP
<b>643564</b>	2021-01-15	2023-03-16	19.11	Albanel	Overlaps with LWR PP
<b>643565</b>	2021-01-16	2023-03-16	19.01	Albanel	Overlaps with LWR PP
<b>643566</b>	2021-01-17	2023-03-16	3.48	Albanel	Overlaps with LWR PP.
<b>643567</b>	2021-01-18	2023-03-16	3.47	Albanel	Overlaps with LWR PP
<b>643568</b>	2021-01-19	2023-03-16	3.06	Albanel	Overlaps with LWR PP
<b>643569</b>	2021-01-20	2023-03-16	21.74	Albanel	Overlaps with LWR PP



<b>643570</b>	2021-01-21	2023-03-16	20.32	Albanel	Overlaps with LWR PP. Abuts surface rights parcel CK103
<b>643571</b>	2021-01-22	2023-03-16	7.43	Albanel	Overlaps with LWR PP
<b>643572</b>	2021-01-23	2023-03-16	22.21	Kamichisitit	
<b>643573</b>	2021-01-24	2023-03-16	22.21	Kamichisitit	
<b>643574</b>	2021-01-25	2023-03-16	6.38	Albanel	Overlaps with LWR PP
<b>643575</b>	2021-01-26	2023-03-16	19.94	Albanel	Overlaps with LWR PP. Abuts surface rights parcel CK103
<b>643576</b>	2021-01-27	2023-03-16	21.99	Albanel	Overlaps with LWR PP
<b>643577</b>	2021-01-28	2023-03-16	21.30	Kamichisitit	Overlaps with LWR PP
<b>643578</b>	2021-01-29	2023-03-16	2.05	Albanel	Overlaps with LWR PP
<b>643579</b>	2021-01-30	2023-03-16	20.78	Albanel	Overlaps with LWR PP
<b>643580</b>	2021-01-31	2023-03-16	9.33	Albanel	Overlaps with LWR PP
<b>643581</b>	2021-02-01	2023-03-16	5.67	Albanel	Overlaps with LWR PP
<b>643582</b>	2021-02-02	2023-03-16	22.21	Kamichisitit	
<b>643583</b>	2021-02-03	2023-03-16	22.21	Albanel	
<b>643584</b>	2021-02-04	2023-03-16	21.98	Albanel	Overlaps with LWR PP
<b>643585</b>	2021-02-05	2023-03-16	22.21	Albanel	
<b>643586</b>	2021-02-06	2023-03-16	22.21	Kamichisitit	
<b>643587</b>	2021-02-07	2023-03-16	22.21	Albanel	
<b>643588</b>	2021-02-08	2023-03-16	22.21	Albanel	
<b>643589</b>	2021-02-09	2023-03-16	22.21	Albanel	
<b>643590</b>	2021-02-10	2023-03-16	22.20	Albanel	
<b>643591</b>	2021-02-11	2023-03-16	22.21	Kamichisitit	
<b>643592</b>	2021-02-12	2023-03-16	22.21	Albanel	
<b>643593</b>	2021-02-13	2023-03-16	22.21	Kamichisitit	
<b>643594</b>	2021-02-14	2023-03-16	22.21	Albanel	
<b>643595</b>	2021-02-15	2023-03-16	22.20	Albanel	
<b>643596</b>	2021-02-16	2023-03-16	22.20	Nicholas	
<b>643597</b>	2021-02-17	2023-03-16	22.20	Nicholas	
<b>643598</b>	2021-02-18	2023-03-16	22.20	Nicholas	
<b>643599</b>	2021-02-19	2023-03-16	22.20	Nicholas	
<b>643600</b>	2021-02-20	2023-03-16	22.20	Nicholas	
<b>643601</b>	2021-02-21	2023-03-16	22.20	Nicholas	
<b>643602</b>	2021-02-22	2023-03-16	22.20	Nicholas	
<b>643603</b>	2021-02-23	2023-03-16	22.20	Nicholas	

#### **4.4 Nature of Issuer's Title**

The Dobie Lake Property consists entirely of mining claims. In northern Ontario, mining claims can be acquired by any person or entity possessing a Prospector's Licence on provincially owned Crown Land as well as land for which third party surface rights exist, subject to limits as per the Ontario Mining Act and to the discretion of the Provincial Mining Recorder and Minister for Northern Development and Mines. Possession of a mining claim confers upon the holder the exclusive right to explore for all minerals, which in the context of the Ontario Mining Act refers to base and precious metals, coal, salt and "quarry and pit material", but does not include unconsolidated aggregate material, peat or oil and gas. A mineral claim does not confer any surface rights; the holder of a claim is required to notify any surface rights holders and come to arrangements regarding such factors as access and surface disturbance. A mineral claim does not confer the right to mine minerals; this requires a mining lease.

Since 2018, mining claims in Ontario have been acquired by map-staking using the online MLAS system. Claims are typically 16 hectares in area and square in shape. Claims endure for two years and can be renewed following the filing of reports of exploration work meeting the required value for assessment credits. At the time of writing, this value is set at \$400 per claim.

For further information, the reader is directed to review the Ontario Mining Act and the publications of the Ministry of Northern Development and Mines.

#### **4.5 Ownership Details**

The Dobie Lake claims are held 100% by Rich Copper Exploration Corp.

According to the option agreement dated the 25<sup>th</sup> day of February 2021, as amended the 3<sup>rd</sup> day of June 2021 (The "Agreement"), Big Red has been granted an option by Rich Copper Exploration Corp. to acquire a 100% undivided interest in and to the Dobie Lake claims from Rich Copper Exploration Corp, by:

- Paying \$5,000 to Rich Copper within 30 days of signing the Agreement;
- Issuing 50,000 shares to Rich Copper within 90 days of the date of the Agreement;
- Issuing 100,000 shares to Rich Copper on or before each of the first, second and third anniversaries of the date of the Agreement;
- Incurring \$80,000 in exploration expenditures on the Property on or before the first anniversary of the date of the Agreement;
- Incurring an additional \$150,000 in exploration expenditures on or before the second anniversary of the date of the Agreement;
- Incurring an additional \$250,000 in exploration expenditures on or before the third anniversary of the date of the Agreement;
- Incurring an additional \$350,000 in exploration expenditures on or before the fourth anniversary of the date of the Agreement.

At that point, Big Red's tenure will be subject to a Royalty equal to 2% of Net Smelter Returns, half of which (i.e. 1%) may be purchased for \$1,000,000.

#### **4.6 Environmental liabilities**

To the best of the Authors' knowledge, there are no environmental liabilities which would affect the Issuer's title upon the Property or ability to perform work upon it.

#### **4.7 Permits Required**

An Exploration Permit is required should the holder wish to complete any mechanized or invasive exploration (including drilling, stripping, trenching, significant line cutting, and ground geophysical surveys requiring generators). To acquire an Exploration Permit, the holder must:

- Submit an Exploration Plan to the ENDM outlining the proposed work.
- Notify and consult with the Mississauga First Nation and any and all other First Nations or Metis groups who have Treaty rights or traditional land uses (e.g. hunting, trapping, fishing) in the areas in question, so as to avoid conflicts regarding exploration activities, traditional land uses and significant sites.
- Notify any surface rights holders of the intent to file an Exploration Plan.

Any anticipated or potential impacts to fish habitat must be approved at the federal level by the Department of Fisheries and Oceans (DFO) via the Fisheries Act. Liaison may also be required with the Ministry of Natural Resources, local conservation authorities and First Nations.

Bridges, culverts and winter ice roads for the mobilization of mechanized equipment across bodies or courses of water require Ministry of Natural Resources approval, regardless of the surface rights status. Approval may be acquired in the form of a work permit under the Public Lands Act ("PLA") or approvals under the Lakes and Rivers Improvement Act ("LRIA").

Any exploration or development work which requires the pumping of 50,000 litres or more of water per day must be approved by the Ministry of the Environment via the Ontario Water Resources Act. If approved, the MOE will issue a Permit to Take Water.

#### **4.8 Other Factors**

The Property lies within the traditional lands of the Mississauga First Nation. The Authors recommend that Big Red proactively engage with the Mississauga First Nation so as to build trust and avoid conflicts regarding land use and disturbance.

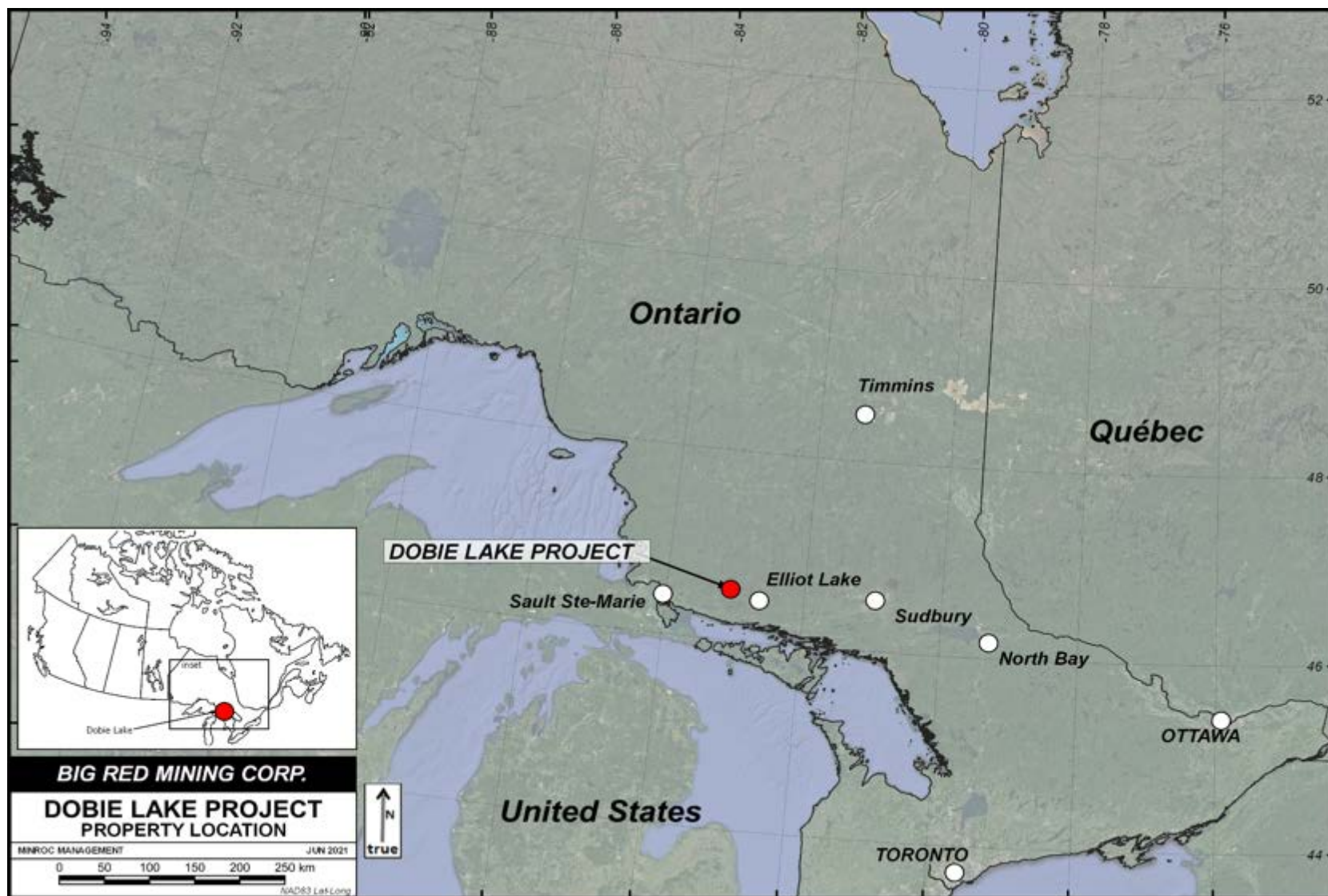


Figure 1 Property Location



## **5.1 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE & PHYSIOGRAPHY**

### **5.1 Topography, Elevation and Vegetation**

The region is very rugged with steep ridges oriented roughly east-northeast and controlled largely by the distribution of Nipissing diabases. Elevation varies from a low of 275 m near the Little White River to a high of 457 m to highs of about 480 m on the ridgetops east of Dobie Lake and north of Long Lake.

Vegetation cover is relatively undisturbed and is dominated by mixed forest stands typical of the forests north of Lake Huron. Spruce and tamarack occupy low-lying areas while poplar, maple, birch and pine are primarily found along drier ridges. There are areas of moderate to good bedrock exposure especially along the ridges and overall bedrock exposure appears to be plentiful.

Lakes wholly or partly on the Property include Dobie Lake, Cashen Lake, Windy Lake, Big Lake, Scarbo Lake and Long Lake as well as a number of smaller lakes. Smaller lakes are given names including Lost Lake and Sometimes Lake in some historic assessment files (e.g. Anthony & Willoughby 1988). The majority of the Property area drains northward into the Little White River (which runs through the northern part of the claims); a small area in the southeast drains southeastward into the Blind River. Both rivers run southward and eventually drain into Lake Huron.

Overburden thickness, as recorded in historic drilling, is in the order of 3 to 15 drilling feet (up to 3 m vertical), with occasional thicker overburden in wetland areas in the west (e.g. Canamiska DDH 17B with 30 vertical metres).

Water for drilling is readily available from small ponds and lakes located within the claim block and from several creeks that transverse the Property.

### **5.2 Accessibility**

The Property can be reached by traveling north on Highway 546 from Highway 17 at Iron Bridge. Highway 546 passes through the northern edge of the Property in two locations.

Access to the western part of the Property is possible using an ATV trail which leaves Highway 546 opposite a gravel pit at UTM 344,230 mE, 5,158,300 mN and runs east-west past the north shore of Dobie Lake. The northern and eastern parts of the Property can be reached using an ATV trail which leaves Highway 546 behind a cottage at 345,590 mE, 5,158,820 mN. This trail splits in two, one fork arcs east then south and west around a ridge, while the other continues southeast along the shore of Scarbo Lake before continuing east (leaving and then passing back onto the Property).

### **5.3 Proximity to Infrastructure**

The closest community is Iron Bridge with a population of approximately 1,600. Sault Ste. Marie is the closest community of substantial size and lies 110 km west of Iron Bridge along Highway 17 with a population of 75,000. The regional city of Sudbury lies about 175 km east. Sudbury has a population of about 160,000 and has a large mining and exploration industry, with a workforce and contractors well accustomed to exploration requirements.

A hydroelectric power line runs past the Property about 6.5 km to the south. The Huron Central Railway is located south of the Property along the north shore of Lake Huron. Ontario Highway 17 is also located 45 km south, by road, of the Property. This highway is also federally designated as the Trans-Canada Highway.

The Property is at an early stage of exploration. However, the Property area provides ample space for the sufficiency of surface rights for mining operations, potential tailings storage areas, potential waste disposal areas, heap leach pad areas, potential processing plant sites and other mining and development infrastructure. The Issuer must be granted a Mining Lease before mining or development infrastructure can be established on the Property.

### **5.4 Climate**

The Dobie Lake area has a humid continental climate (Köppen Dfb). Summers generally reach highs of 30°C and winter lows of -20°C are common. At Sault Ste. Marie, average annual rainfall is in the order of 650 mm, peaking in September and October, while average annual snowfall is roughly 300 mm, peaking in January. The Dobie Lake area may vary slightly from this.

The climate and terrain put some limits on exploration. The operating season can be considered year round save for spring thaw and late autumn freeze-up periods.

## **6.0 HISTORY**

### **6.1 Prior Ownership**

The claims comprising the Dobie Lake property were map-staked by Rich Copper Exploration Corp. in 2020-21. Prior to the Ontario claim system restructuring in 2018, much of the Dobie Lake property area was covered by two claims staked by Patrick Len Gryba and Clayton Lucien Larche in June 2017. These were converted to cell claims in April 2018 before expiring in 2019.

### **6.2 Discussion of Work**

#### *6.2.1 Regional Context*

The earliest recorded exploration on the Dobie Project dates back to 1955. Prospecting and exploration for copper may have occurred long before this, based on the fact that the nearby 'Bruce Mines' was the first recorded copper mine in North America dating back to 1846. The town of Bruce Mines is situated 65 km southwest of the Dobie Project. In 1847 the first shipment of ore grading 10% copper was shipped to Boston and sold for \$25 per ton. Mining flourished from 1847 to 1876. Records are vague but

production from the three copper mines that made up 'Bruce Mines' totaled between 400-500,000 tons of ore grading between 2.5-4.0% Cu and 0.5 g/t Au (Graham, 1971). Flooding and cave-ins in 1876 ended the 30-year period of active mining history. Several attempts to re-open the mines in the early 1900's saw only limited success. The mines were decommissioned in 1944.

Production at Bruce Mines was obtained from three quartz vein systems in a diabase sill. The veins were characterized by their persistent lengths of 350 m to over 2,400 m. Mining widths were commonly 1.5 to 2 m wide but reported up to 7 m wide in places. The origin of the veins were thought to be related to hydrothermal fluids evolving along a conduit that produced the diabase sill and structurally related to the Worthington and Palideau Fault systems (Graham, 1971).

### *6.2.2 Overview of Exploration History at Dobie Lake*

Note: Some of this work was focused on targets outside the current Property but has at least some overlap with the Dobie Lake Property. Some of the historic work at the No. 1 Zone may lie within the boundary of the Little White River Provincial Park. Work must be completed on the Property to verify the location of known mineralization with respect to the Property boundary.

**1955:** A.E. Rosen completed 7 diamond drill holes totaling 1,578.5 m in the vicinity of the Property. The location of the drilling could not be reliably confirmed from the assessment file although the Ontario Drillhole Database identifies DDH No. 1 as lying within the Property (see Table 3). No assays were reported (Rosen 1995a,b).

**1965:** Canamiska Copper Mines completed trenching, soil geochemistry, magnetic and ground EM surveys over what is now called the Canamiska Zone. Highlights of the trenching were 0.8% Cu over 9-feet, 3-inches (2.73 m; Schlanka 1969) and grab values including 5.18% Cu (Walker 1965). They also completed diamond drilling in 22 diamond drill holes (3 lost in overburden) totaling 4,478 feet (1,447.1 m). The locations of many of these drillholes, according to the Ontario Drillhole Database, are displayed on Figure 3, and an example drill section is shown in Figure 4.

Highlights include:

- 0.10% Cu over 65 feet (18.81 m) in hole 65-1
- 3.6% Cu over 1.5 feet (0.46 m) in hole 65-2
- 0.53% Cu over 25 feet (7.62 m) in hole 65-6
- 1.44% Cu over 19.5 feet (5.94 m) in hole 65-7
- 0.42% Cu over 12.5 feet (3.81 m) in hole 65-9
- 2.29% Cu over 10 feet (3.05 m) in hole 65-11
- 0.17% Cu over 30 feet (9.14 m) in hole 65-12

(Walker 1965 and Boniwell 1965).

The Canamiska assessment files include crude sketch drill plans, and the drillhole locations can only be reconstructed with a low degree of accuracy.

**1967:** Canadian Aero Mineral Surveys Ltd. completed an airborne magnetic survey over



a portion of the Property for Consolidated Morrison Exploration Ltd. The same year and same outline of the survey is recorded for GoldRay Mines Ltd (Schuur 1967a, b)

**1968:** Triller Explorations Ltd. drilled two vertical diamond drill holes totaling 4,577 feet (1,395 m). The intent appears to have been to test deeper portions of the Huronian sediments for uranium mineralization. Exact locations of the drilling cannot be confirmed but it appears to be along the trail to the No. 2 Zone. This may be one of the vertical holes mentioned by Hanna Mining Company in 1969 (Duff 1968 and Wharton 1968).

**1968:** Seigel Associates Ltd. flew a magnetic, electromagnetic and radiometric airborne survey that covered the claim group as part of a large airborne survey flown for Atlantic Richfield Company (Seigel Associates Ltd 1968).

**1968:** G. E. Parsons completed a geological mapping over a small portion of the Property. The only evidence of mineralization was a trace of chalcopyrite and copper staining in a siliceous rock outcrop in historic claim 86223 (south of the No. 1 Zone; Parsons 1968).

**1969:** Atlantic Richfield Canada Ltd. completed an airborne VLF, magnetic and radiometric survey over a portion of the Property (Klein 1968, 1969 and Zahn 1969).

**1969:** Hanna Mining Company drilled one vertical drill hole totaling 3,003 feet (915.3 m) on their (historic) claim 106940. The historic location from their assessment report does not provide an accurate location. Big Red report that a vertical collar was identified on the Property at UTM 349146E, 5158953N; this may represent this drillhole though it is not clear. The highlights of the drill hole was 0.06%  $U_3O_8$  over 3.3 ft (1 m) from 643.3 feet downhole (Hogg 1969 and Parsons 1969).

**1974:** Fort Norman Exploration Inc. drilled 4 diamond drill holes totaling 632.3 feet (192.7 m). Exact locations are not confirmed but from the claim map appears to have been drilled on the No. 1 Structure. Highlights include **0.93% Cu over 15 feet (4.51 m)** in hole 74-1 and **0.62% Cu over 13.5 feet (4.11 m)** in hole 74-4 (Rupert 1974). Note: These drillhole collars are located within the Little White River Provincial Park. It is not clear whether or not the mineralized intervals likewise lie within the Provincial Park boundaries.

**1975:** Ram Petroleum Ltd. flew an airborne EM and magnetic survey over a portion of the Property (Stemp 1975).

**1986:** A. Roy carried out linecutting and a ground VLF-EM-16 survey over a portion of the Property (Roy 1986). Grab samples from the No. 1 Zone "Main Trench" included values of 7.84% Cu. The Authors caution that this mineralization may lie a short distance outside the Property.

**1988:** United Reef Petroleum Ltd. completed geological mapping and soil and humus geochemical surveys over a portion of the Property. Highlights of the sampling program

at the Main Showing (the No. 1 Zone) was a chip channel that returned **5.233% Cu over 23-feet (7.01 m)** that included 13-feet (3.96 m) averaging **8.761% Cu and 0.019 oz/ton Au (0.59 g/t Au)**. The Authors caution that this mineralization may lie up to a few tens of metres outside the Dobie Lake Property but that this must be confirmed.

The soil and humus surveys failed to show any continuity between mineralized outcrops possibly reflecting widely spaced grid lines and sample locations (Anthony & Willoughby 1988). United Reef also performed a ground magnetometer survey completed by MPH Consulting Ltd. totaling 21 km. The magnetic data, when combined with careful topographic notes and previous geological mapping, clearly define the extent of the sedimentary units, interpreted from northeast to southwest as:

- (i) Mississagi Formation feldspathic sandstones of minimal magnetic expression;
- (ii) Bruce Formation polymictic conglomerate (0-6 m wide) which has no magnetic expression; and
- (iii) Espanola Formation limestones, dolomites and siltstones within which the magnetite-rich limestone beds are clearly evident but do not necessarily explain all the magnetic features.

The response patterns of the latter two formations broadly outline the folding about the Little White River Anticline which has an east-northeast orientation. (Bate 1988)

**1989:** United Reef Petroleum Ltd. completed a ground horizontal loop EM survey over a portion of the Property (Bate 1989).

**1994:** MR&J Resource Associates performed geological mapping and prospecting for A.J. Roy on what they called the Jentina Mine Property. The worked claims were east and west of the former White River Lead mine patents and have significant overlap with the Dobie Lake Property in both areas. Highlights of the sampling and mapping program include an 8-foot (2.43 m) channel sample that reported **6.78% Cu and 1.90 oz/ton Ag (59.1 g/t Ag)** on the No. 1 Zone structure. Gold values up to 0.03 oz/ton Au (0.933 g/t Au) were also recorded. This may be taken from the trench identified by Parent (2021) in which visible chalcopyrite and malachite mineralization was reportedly seen; if so then this trench straddles the boundary of the Provincial Park and therefore also the Property. The "No. 2 Copper Structure" (No. 2 Zone) returned **1.83% Cu over 4 feet (1.22 m)** from a trench, and a grab sample returned **13% Cu** (Willoughby 1994). Figure 5 shows some of the trenching and sampling in the No. 2 Zone area. These results appear to be within claim 617560. The Willoughby report also contains a detailed compilation of historic work, also covering the Canamiska area.

**2007:** Carina Energy Inc. completed a heliborne AeroTEM electromagnetic and magnetic survey over the Property (Area 1) as a part of a larger regional survey (Smith 2007). They also completed a high resolution magnetic and radiometric survey (Elliot Lake Project) that covered the Property (MPX Geophysics 2007)

**2008:** Carina Energy Inc. provides an interpretation of the AeroTEM electromagnetic and magnetic survey in Smith (2007). They concluded that 'the magnetic patterns over Areas 1 and 2 outline the intrusive Nippising diabase, that may occur as dykes and as more like the classical intrusive bodies. Anomalies I1 and I2 show buried intrusives; the form of I2 is suggestive of a possible kimberlite and should be investigated on the ground. The weak conductor C2 deserves a brief field check'. The aforementioned C2 conductor is not within the Property. Anomaly I1 is not within the Property, however I2 may be partially (Jagodits 2008).

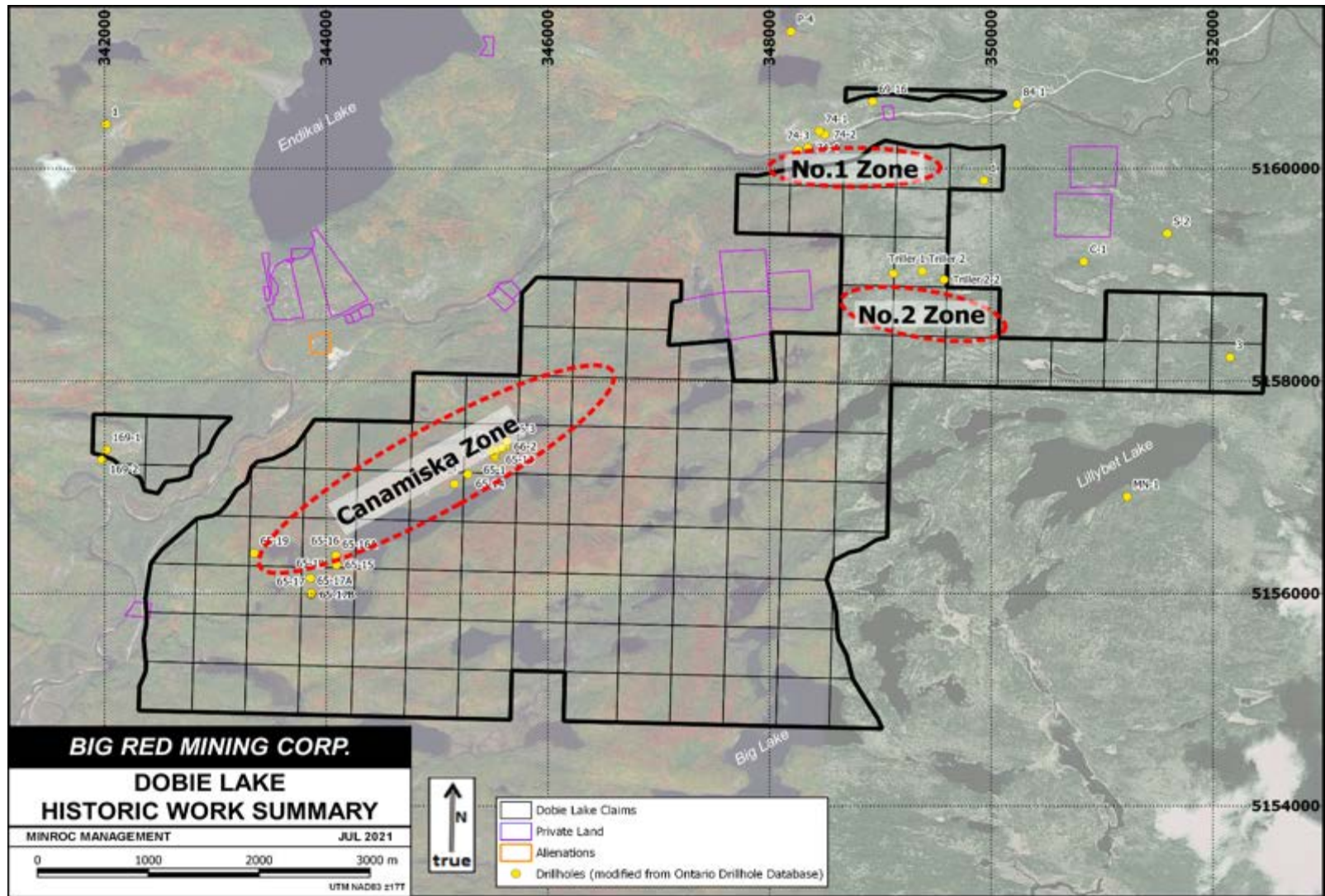
**Table 3 Table of Drillholes on the Dobie Lake Property**

Note: Canamiska DDH intervals are from Willoughby (1994). Collar UTMs from ODD; Canamiska UTMs are modified based upon an assessment file map review. All require field verification.

DDH	Company	Year	Dip	Az	Length m	UTM E	UTM N	Reference (AFRI)	Mineralization notes
1	A E Rosen	1955	-45	360	122.56	349936.7	5159888	41J10SW0108	
Triller 1	Triller Expl Ltd	1968	-90	0	470.43	349116.5	5159012	41J10SW0100	
Triller 2	Triller Expl Ltd	1968	-90	0	925	349378.2	5159034	41J10SW0100	
3	A E Rosen	1955	-60	360	146.34	352155.7	5158223	41J10SW0053	
65-1	Canamiska Copper Mines Ltd	1965	-45	360	76.22	345518.1	5157304	41J11SE0003	0.10% Cu over 65ft (18.81m)
65-2	Canamiska Copper Mines Ltd	1965	-45	360	138.41	345518.3	5157282	41J11SE0003	3.6% Cu over 1.5ft (0.46m)
65-3	Canamiska Copper Mines Ltd	1965	-45	360	106.71	345531	5157348	41J11SE0003	
65-4	Canamiska Copper Mines Ltd	1965	-45	360	106.71	345156.4	5157032	41J11SE0003	
65-5	Canamiska Copper Mines Ltd	1965	-45	180	4.57	345512.3	5157317	41J11SE0003	
65-6	Canamiska Copper Mines Ltd	1965	-45	180	27.44	345516	5157340	41J11SE0003	0.53% Cu over 25ft (7.62m)
65-7	Canamiska Copper Mines Ltd	1962	-30	180	28.96	345515.7	5157339	41J11SE0003	1.44% Cu over 19.5ft (5.94m)
65-8	Canamiska Copper Mines Ltd	1965	-45	180	27.44	345500.9	5157340	41J11SE0003	
65-9	Canamiska Copper Mines Ltd	1965	-30	180	24.7	345500.9	5157341	41J11SE0003	0.42% Cu over 12.5ft (3.81m)
65-10	Canamiska Copper Mines Ltd	1965	-45	180	27.74	345486.1	5157340	41J11SE0003	
65-11	Canamiska Copper Mines Ltd	1965	-45	180	29.57	345486.2	5157339	41J11SE0003	2.29% Cu over 10ft (3.05m)

<b>65-12</b>	Canamiska Copper Mines Ltd	1965	-45	180	76.22	345516.2	5157357	41J11SE0003	0.17% Cu over 30ft (9.14m)
<b>65-13</b>	Canamiska Copper Mines Ltd	1966	-45	180	39.33	345584.4	5157369	41J11SE0003	
<b>65-14</b>	Canamiska Copper Mines Ltd	1966	-45	180	62.2	345615.1	5157384	41J11SE0003	
<b>65-15</b>	Canamiska Copper Mines Ltd	1966	-45	40	92.38	345628.8	5157435	41J11SE0003	
<b>74-1</b>	Fort Norman Expl Inc	1974	-40	320	50.3	348448.9	5160351	41J10SW0090	0.93% Cu over 15ft (4.51m)
<b>74-2</b>	Fort Norman Expl Inc	1974	-90	0	33.9	348499.7	5160322	41J10SW0090	
<b>74-3</b>	Fort Norman Expl Inc	1974	-40	12	56.59	348257.6	5160173	41J10SW0090	
<b>74-4</b>	Fort Norman Expl Inc	1974	-65	5	51.98	348344.4	5160198	41J10SW0090	0.62% Cu over 13.5ft (4.11m)
<b>169-1</b>	Falconbridge Nickel Mines Ltd	1966	-90	0	225.3	342015.6	5157353	41J11SE0009	
<b>169-2</b>	Falconbridge Nickel Mines Ltd	1966	-90	0	473.78	341974.2	5157261	41J11SE0009	
<b>65-13</b>	Canamiska Copper Mines Ltd	1965	-45	180	38.11	345545.8	5157351	41J11SE0003	
<b>65-14</b>	Canamiska Copper Mines Ltd	1965	-45	360	91.46	345276.6	5157123	41J11SE0003	
<b>65-15</b>	Canamiska Copper Mines Ltd	1965	-45	360	121.95	344091.3	5156270	41J11SE0003	
<b>65-16</b>	Canamiska Copper Mines Ltd	1965	-45	360	10.98	344085.6	5156358	41J11SE0003	
<b>65-16A</b>	Canamiska Copper Mines Ltd	1965	-55	360	92.68	344088.2	5156349	41J11SE0003	
<b>65-17</b>	Canamiska Copper Mines Ltd	1965	0	360	12.2	343863	5155997	41J11SE0003	
<b>65-17A</b>	Canamiska Copper Mines Ltd	0	0	360	8.54	343862.3	5156005	41J11SE0003	

<b>65-17B</b>	Canamiska Copper Mines Ltd	1965	-60	360	106.71	343861.4	5155989	41J11SE0003	
<b>65-18</b>	Canamiska Copper Mines Ltd	1965	-60	360	152.44	343856.6	5156144	41J11SE0003	
<b>65-19</b>	Canamiska Copper Mines Ltd	1965	-45	360	142.38	343348.8	5156379	41J11SE0003	
<b>69-16</b>	The Hanna Mining Co	1969	-85	360	915.24	348929.3	5160632	41J10SW0104	
<b>Triller 2-2</b>	Atlantic Richfield Co / Triller Explorations	1968	-90	0	1398.5	349574.1	5158955	41J10SW0105	



**Figure 3 Summary of Historic Work on the Dobie Lake Property.** Drillhole locations are modified from Ontario Drillhole Database after an assessment file review

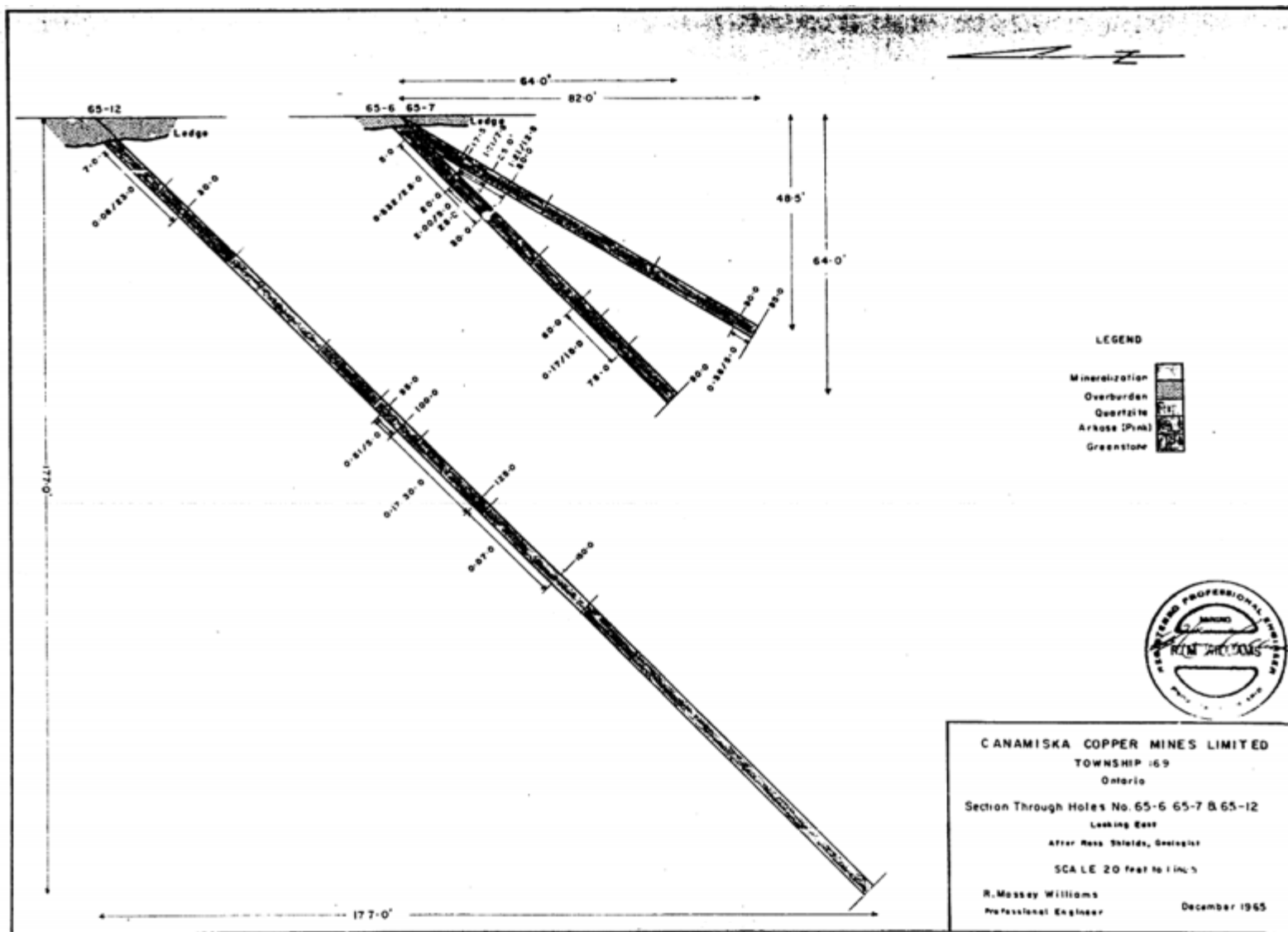


Figure 4 Historic section of DDH 65-6, 65-7 and 65-12 from Canamiska Copper Mines (Boniwell 1965)



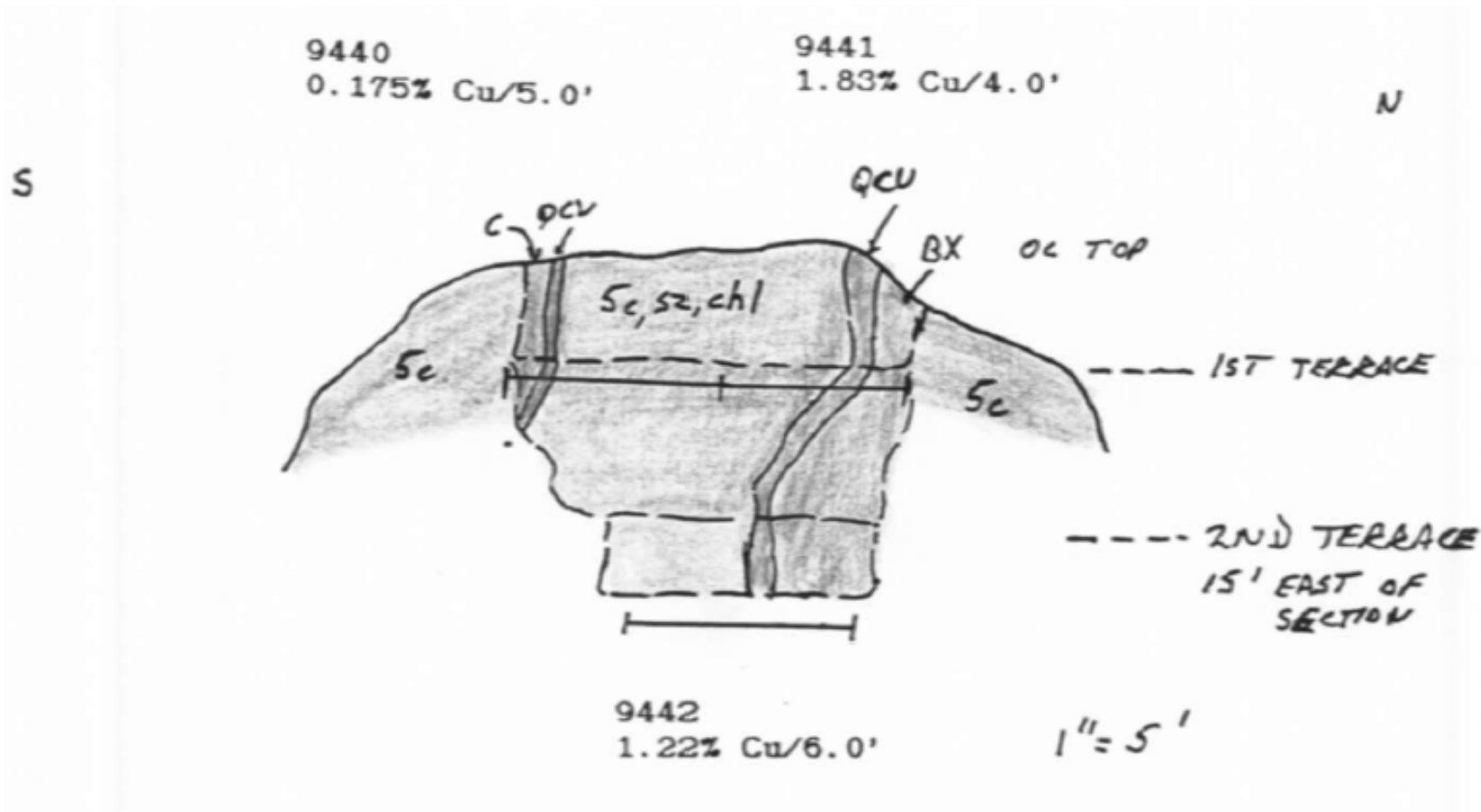


Figure 5 Diagram of trench in the No.2 Zone, from Willoughby (1994)

### **6.3 Resources, Reserves and Production**

The Property is an early-stage exploration property. There are no current Mineral Resources or Reserves on the Project as defined in the Definition Standards on Mineral Resources and Mineral Reserves published by the Canadian Institute of Mines, Minerals and Petroleum (CIM), JORC or any equivalent international code. The Authors are unaware of any records of any past production from the Property.

## **7.1 GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1 Regional and Local Geology**

The Dobie Lake Property lies within the Southern Province of the Canadian Shield. The Southern Province is comprised chiefly of early Proterozoic clastic sediments of the Huronian Supergroup which is early Proterozoic in age (2.45-2.115 Ga). The Huronian sequence hosts the Nipissing diabase sills which form a substantial intrusive complex across the region and are dated to 2.115 Ga. The Property is considered to be in the western extension of the Cobalt Embayment.

The Huronian sedimentary rocks lie unconformably atop the older (Archean) Superior Province, and windows of Archean (>2.45 Ga) metasediments, metavolcanics and granitic complexes are present in the region. The early Proterozoic Huronian Supergroup extends in a belt about 325 km long by 60 km wide stretching from Sault Ste. Marie, Ontario to Rouyn-Noranda, Quebec. The Huronian sediments are interpreted to be deposited during a period of marine transgression from south to north in south to southeasterly drainage patterns both in non-marine and paralic environments. Dominant coarse clastic materials for the most part alluvial, compose a complex suite of sedimentary rocks subdivided into four groups totaling 15 km in thickness. The predominant clastic material are the products from gradual uplift of the Archean Superior Province (Abitibi/Wawa subprovince) foreland to the north. The unconformity with the basement rocks is sharply defined in some places and at others is represented by several meters of regolith. The Huronian sequence is up to 6,000 ft (1.8 km) thick in the centre of the basin (Roscoe 1995).

The primary intrusive event affecting the region was the intrusion of the Nipissing diabase sills and dykes in the early Proterozoic. The Nipissing diabase is primarily found as voluminous intrusions in the Huronian sediments, but smaller bodies of diabase are also found in the underlying Archean rocks. Being the most erosion-resistant units in the region, the Nipissing sills have a strong influence on topography and drainage.

The above units were subjected to broadly east-west deformation and greenschist grade metamorphism during the Penokean Orogeny in the mid-Proterozoic (about 1.85-1.75 Ga). Dykes relating to the Sudbury impact event were intruded around 1.2 Ga.

**Precambrian (0.542 Ga to <3.85 Ga)**

*Mafic Intrusive Rocks*

*Sudbury olivine diabase dikes 1.235-1.238 Ga*

*Nipissing diabase sills and dikes 2.219 Ga*

**Paleoproterozoic (1.6 Ga to 2.5 Ga)**

**Huronian Supergroup (2.2 Ga-2.45 Ga)**

**Cobalt Group**

*Bar River Formation* orthoquartzite

*Gordon Lake Formation* sandstone, siltstone, greywacke, cherty siltstone

*Lorrain Formation* orthoquartzite, sandstone, conglomerate

*Gowganda Formation* conglomerate, sandstone, siltstone

**Quirke Lake Group**

*Serpent Formation* calcareous sandstone, siltstone, sandstone, conglomerate

*Espanola Formation* calcareous sandstone, siltstone, limestone, dolomite

*Bruce Formation* conglomerate, sandstone, greywacke

**Hough Lake Group**

*Mississauga Formation* feldspathic sandstone

**Intrusive Contact**

**Mafic Dikes**

*Matachewan mafic dike swarm (2.454 Ga)*

**Intrusive Contact**

**Archean (2.5 Ga to <3.85 Ga)**

*Felsic Intrusive Rocks* trondhjemite, granodiorite, quartz monzonite, aplite

**Intrusive Contact**

*Gneissic and Migmatitic Rocks* orthogneiss, migmatite, amphibolite

**Intrusive Contact**

*Metavolcanics and metasediments* mafic, intermediate and felsic pyroclastic rocks, metasediments

**Figure 6 Stratigraphy in the Dobie Lake project area** (from Siemiatkowska 1978)

The major structural event that has deformed the Huronian sediments is the Penokean Orogeny, which affected the region between about 1.850 Ga and 1.750 Ga (Van Schmus, 1975b). The deformation caused by the Penokean Orogeny resulted in slight to intense folding and have been affected by numerous reverse and normal faults. Folding in the Huronian terrane is moderate for most part (Frarey, 1977).

The dominant structures in the Bruce Mines-Elliot Lake corridor are: a set of faults belonging to the Flack Lake Fault System; the Little White River Fault; the Quirke Syncline; and the Chiblow anticline (Figures 6, 7, 8). Movement along these faults resulted in the formation of a series of fault bounded rotated blocks (Siemiatkowska, 1978). Huronian rocks in the Bruce Mines-Elliot Lake corridor are also folded and form a shallow westward plunging, gently folded syncline and anticline structures. On the north,

the limbs of the Quirke syncline generally dip from 20° to 40° south and, on the south, the limbs dip from 15° to 30° north. The depth to the centre of the syncline from the present surface is estimated to be approximately 1,500m. The axis of the syncline plunges gently west at approximately 15°. Minor offsets and drag folds are mapped locally (Lang, 1962).

### **Property Geology**

The Dobie Lake Project is covered by Paleoproterozoic sediments of the Huronian Supergroup and a large Nipissing diabase sill. These lie unconformably on top of Archean basement metavolcanic and metasedimentary rocks.

The following is largely taken from Siemiatkowska, K.M. 1978, Ontario Geological Survey Open File Report 178.

#### *Hough Lake Group-Mississagi Formation*

The Mississagi Formation unconformably overlies the granitic rocks of the Early Precambrian basement.

The sandstone lies directly on the Precambrian basement forming a narrow east-trending wedge. The lithology of the sandstone reflects the lithology of the underlying granitic rocks. The basal Mississagi sandstone is poorly sorted, contains angular clasts of pink feldspar, granite, and white quartz averaging 7.5 cm in diameter set in a green sericite-rich matrix. The overlying sandstone is finer grained and is pinkish green. Bedding ranging from 0.6 to 1.2 m (2 to 4 feet), is laminated with laminae 2 to 5 cm (0.8 inch to 2 inches) thick and contains greenish fine sandy siltstone interbeds approximately 30 cm (1 foot) thick. Away from the unconformity, the sandstone becomes coarser grained with less pronounced laminations. Minor pyrite occurs throughout the whole sequence.

#### *Quirke Lake Group- Bruce Formation*

The Bruce Formation, considered by Young and Chandler (1968) to be of possible glacial origin, is a massive, polymictic, matrix-supported conglomerate consisting of scattered coarse clasts of igneous rock in a muddy feldspathic sandstone matrix. On a regional scale, local interbeds of sandstone and siltstone, ripples, and crossbedding are the only structures found.

At the contact with the Mississagi Formation, the Bruce Formation consists of interbedded sandstone and conglomerate which is 1.5 m thickness. The Bruce Formation varies from 0 to 6 m in thickness in the Little White River Anticline. In places where the Mississagi Formation does not occur, the Bruce Formation is difficult to distinguish from the Gowganda Formation. The predominant rock type is a polymictic, matrix- to clast-supported conglomerate containing 10 to 25 percent predominantly white plutonic clasts in a pyrite-bearing greywacke to mudstone matrix. The clasts,

ranging in size from 1 mm to 46 cm (18 inches), are angular to subrounded, and consist of 85 percent white granite, and 15 percent of the following: smokey quartz, metavolcanics, metasandstone, metasiltstone, chert, and occasional pink granitic rock.

#### *Quirke Lake Group- Espanola Formation*

The Espanola Formation consists of calcareous siltstone and sandstone, limestone, and dolomite. It is the only formation in the area that has a limestone member, and therefore is very useful as a marker horizon. Ripples, desiccation cracks, flame structures, ball and pillow structures, intraformational breccias, slump balls, and clastic dikes have been interpreted as indicative of deposition in an unstable, shallow water, possibly tidal mud flat environment (Card et al. 1972).

In the Property, three stratigraphic units have been observed in the Espanola Formation. From the base these units are: 1) laminated to massive limestone and dolomite; 2) laminated to massive siltstone; and 3) calcareous sandstone with siltstone interbeds.

#### *Quirke Lake Group- Serpent Formation*

The Serpent Formation, a uniform wedge of course, immature, feldspathic sandstone, is characterized by abundant crossbedding and parallel laminations. Like the Mississagi Formation, a fluvial or fluvial-deltaic depositional environment has been proposed by many workers (Card et al. 1972). An erosional disconformity has been proposed to exist at the base of this formation, because the Serpent Formation is missing in many areas (Frarey, 1977) and the Lower Gowganda Formation rests directly on the Espanola Formation.

East of Scarbo Lake on the Property, the Serpent Formation consists of a pink, medium grained feldspathic sandstone with rusty brown pyrite-bearing spots and is interbedded with fine-grained grey coloured dirty sandstone with parallel laminations. Minor siltstone interbeds are present. West of Scarbo Lake on the Property, the Serpent Formation consists of fine-grained laminated grey sandstone with sparse white, well rounded and sorted granitic clasts ranging in size from 5 cm to 15 cm across. The pebble bands are 15 cm thick and occur at base the of the lower beds.

#### *Cobalt Group-Gowganda Formation*

The Gowganda Formation is the basal formation of the Cobalt Group, the thickest and most widespread of the Huronian groups. The Gowganda Formation, 200 to 2,700 m thick, is a heterogeneous assemblage of paraconglomerate, orthoconglomerate, greywacke, feldspathic sandstone, and laminated argillite exposed from Sault Ste. Marie to the Cobalt-Gowganda area (Card et al. 1972).

The base of the Gowganda Formation consists of massive clast-supported to matrix-

supported polymictic conglomerate in a predominantly sandy matrix. The conglomerate consists of 50 to 70 percent clasts with about 70 percent of the total clast content consisting of pink to red, and in some areas, white granitic rocks; 10 percent quartz; and up to 20 percent metavolcanic, metasedimentary, and gneissic rocks; sandstone; and argillite. The clasts range in size from pebble to boulder, 1 to 26 cm (0.4 to 10 inches). The conglomeratic lenses the clasts on the average are fairly well sorted with the degree of roundness ranging from rounded to angular. The matrix in these lenses is predominantly arkosic, and well sorted. In the thicker conglomeratic units, the matrix is poorly sorted with angular grains and clasts reflecting the same features as in the thinner conglomeratic lenses. Scour and fill channels are abundant. The non-conglomeratic rocks of the Lower Gowganda Formation consist of sandstone, siltstone, and mudstone, and occur predominantly as interbeds in the conglomeratic rocks.

### *Nipissing Diabase*

One of the more prominent and widespread rock types on the Property are the Nipissing diabase intrusions. Their abundance is strongly emphasized in topography because they are relatively erosion-resistant, occupying large outcrop areas and forming prominent ridges, scarps, and hills. In addition to the large intrusions appearing on the various geological maps, many more small occurrences exist. Such small intrusions are particularly numerous in the Archean terranes. This abundance is probably due, as to the relative competency and resulting widespread fracturing of the basement rocks during tectonism. On the other hand, large diabase masses are relatively scarce in the Archean rocks as compared to the Huronian rocks. This suggests that such large masses and their feeders may have been emplaced in the basement rocks farther south beneath thicker Huronian cover, or, more likely, that during the emplacement process the bulk of the mafic magma passed through the granitic basement via narrow conduits. On entering the Huronian column, the magma was able to pervade the section laterally along flat or gently inclined bedding planes and fractures (Frarey, 1977).

### *Property Structural Elements*

The dominant fault structure on the Property is the east-west Flack Lake Fault System. The faults delineate a prominent east- and northwest-trending fracture pattern accentuated by diabase dikes and quartz stringers. The foliation and shearing foliation in the Huronian rocks shows the same predominant easterly trend. Movement along these faults, as well as numerous faults, resulted in the formation of a series of fault bounded rotated blocks.

The Flack Lake Fault, the most important fault in the region, was described by Robertson (1963) as a system of faults, rather than a single fault forming an east-trending curvilinear structure extending for approximately 154 km. In the Property, the Flack Lake Fault consists of a curvilinear structure. Movement along the fault has produced considerable shearing and deformation in the rocks. Carbonate and hematite-bearing quartz veins are associated with this shearing.

Two prominent folds on the Property are Quirke Syncline and the Little White River Anticline. The Quirke Syncline is a major regional structure in the Sault Ste. Marie-Elliot Lake region. It is a variably plunging fold with the north limb dipping approximately 40° to 45° south and a south limb dipping about 100 north (Robertson, 1963). The westward extension of the trace of the fold axis cannot be accurately defined because of the lack of exposure, shearing, and lack of a distinctive marker unit in the Gowganda Formation. The Wakomata Lake Syncline may be the continuation of the Quirke Syncline. The Little White River Anticline has an inverted canoe shape, and its axial trace has been buckled in a north-south direction. The deformation associated with the formation of this anticline is well preserved in the limestone member of the Espanola Formation which shows numerous drag folds, stretching, and boudinaging of the more competent layers (Siemiatkowska, 1978).

## **7.2 Mineralization**

Mineralization on the Property consists of copper bearing quartz veins and stockwork within the Huronian sediments. These systems generally strike east-west to northeast and have been traced for over 1 km long. Copper mineralization is accompanied by silver and gold albeit at lower tenors than copper. The vein systems are usually highlighted by a quartz-carbonate brecciated vein <1-3 m in width with blebby to coarse to locally semi-massive chalcopyrite dominant mineralization within a halo of quartz stockwork/stringer disseminated chalcopyrite mineralization that can attain widths of up to 10 m. Bornite, chalcocite and malachite are also subordinate copper minerals noted. Hematization of the country rock within the vein systems is common.

Two copper mineralized systems are present on the Property, namely the No. 2 Zone and the Canamiska Zone (see Figures 3-5, 8). A third, the No. 1 Zone, may lie partly within the Property, though this must be confirmed by future work. A fourth, the Jentina (White River Lead) polymetallic veins, is also discussed here on account of its proximity (a few hundred metres from the boundary).

According to the historic assessment work, the No. 1 Zone appears to carry appreciable gold and silver mineralization alongside copper, while there are fewer mentions of other mineralization besides copper at the No. 2 and Canamiska Zones.

Given the early stage of exploration on the Property, the widths, tenors and vertical and horizontal extents of mineralization are not accurately known and remain to be determined by future exploration programs.

### *7.2.1 Canamiska Zone*

The following is taken from the Barringer Research Ltd. trenching efforts in 1965 for Canamiska Copper Mines (Walker 1965):

“The principal geological feature mapped in the trench is a mineralized fault zone

extending 4 to 26 feet from the northern end of the trench. Within this zone the rocks comprise steeply dipping, ferruginous, cherty quartzites which have been sheared and brecciated in places. The faulting is almost vertical and strikes east-west. The unmineralized country rock, a grey felspathic quartzite, was exposed on either side of the faulted zone. The dip is very shallow varying between 8° N and 10° S. The mineralization occurs within the sheared and fractured zone and consists of veins up to 1/2 inch wide, and blebs of sulphide. The main sulphides observed comprise pyrite, chalcopryrite, chalcocite and a little bornite. Malachite staining is abundant along fractures and shear planes.”

A review of the 1965 drilling efforts by Canamiska Copper Mines (see Boniwell 1965 and others) by the Authors reveal a wide zone of disseminated copper mineralization centered on higher grade veins. The diamond drill logs do an adequate job of describing rock types, but lack in detail describing the nature of the mineralization. Willoughby (1994) reports the best intersection from the drilling program of 1.44% over 19.5 feet (5.94 m), but this cannot be confirmed from the drill logs. Diamond drill cross sections (e.g. in Figure 4) reveal high grade intersections (3.6% over 0.46 m in hole 66-2) surrounded by wide downhole intervals commonly 200-1000 ppm Cu over intervals of 1 to 20 m wide. Schlanka (1969) reports that the Canamiska drill programs traced the mineralized zone over about 2000 ft (610 m) strike. Selected DDH intervals presented in the Canamiska assessment files are presented in Table 3.

#### *7.2.2 No. 2 Zone*

According to Willoughby (1994), “The No. 2 Copper Structure consists of mainly quartz-carbonate veining hosted by sheared and chloritized Espanola Formation siltstone and Gowganda Formation conglomerate. To date, the zone measures 4,400 feet long (east-west). Due to poor exposure, the width is not well defined. The host structure is on a line with the former White River Lead Mine (Cu-Pb-Ag-Au-Zn-Co) 3,000 feet to the west. To the east, the zone was not prospected beyond a 250-foot long area of trenching, and is considered open in that direction. The Southeast Trench gave 1.83% copper over a 4-foot channel of chalcopryrite-rich quartz veining. A grab of semi-massive chalcopryrite from a pit 250 feet to the west assayed 13% copper”.

#### *7.3.3 No. 1 Zone*

Based on a Minroc review, the mineralization at the No. 1 Zone, as historically sampled on surface and in drilling, may lie partly or entirely within the Little White River Provincial Park. This must be confirmed in the field by Big Red. Regardless, it is possible that strike extensions of this vein/breccia system may continue onto the Property. The following is largely taken from Willoughby (1994):

“The No. 1 Copper-Precious Metal Structure is delineated over a strike length of 3,500 feet and is hosted mainly by Espanola Formation limestone. Width varies from 60 feet on the west to 150 feet on the east. The showing consists of a chalcopryrite-bearing quartz-chlorite +/- albite breccia hosted by a chloritic shear. Extensive albite-silica



alteration is associated and later subparallel and cross-cutting quartz-carbonate veins are also mineralized. Massive sulphide horizons In the No. 1 structure occur In Pit 1 at the Main Showing in the east. An 8-foot channel sample containing some massive sulphide assayed 6.782 copper and 1.90 oz silver per ton. Gold values of up to 0.03 oz per ton were returned from some samples. At the east end, channels from Trench 1 returned up to 0.63% copper over 4 feet and 0.445% copper over 10 feet. Grab samples of mineralized rock returned up to 1.25% copper and 0.029 oz gold per ton. A 5-foot channel from Trench 2, 300 feet east of Trench 1, ran 1.88% copper.”

Grab samples taken by Willoughby (1994) also returned elevated zinc values near the No. 1 Zone including a value of 0.402% Zn (sample 3968); this is on the Property within claim 617565.

#### *7.3.4 Jentina*

While outside the Property, the Jentina mineralized zone is of relevance since similar mineralization may exist on the Property. The Jentina zone consists of a vein of up to 6 foot width, controlled by the Scarbo Lake Fault within, or adjacent to the north-south contact between a Nipissing dyke and the Huronian country rocks (Wilson 2013a). This vein hosts polymetallic massive sulphide mineralization consisting of pyrrhotite, chalcopyrite and galena, as well as sphalerite and arsenopyrite (Willoughby 1994). According to Schlanka (1969), historic underground work exposed a shoot 80ft x 7ft grading 7.6% Pb, 1% Cu and 2.3 oz/ton Ag.

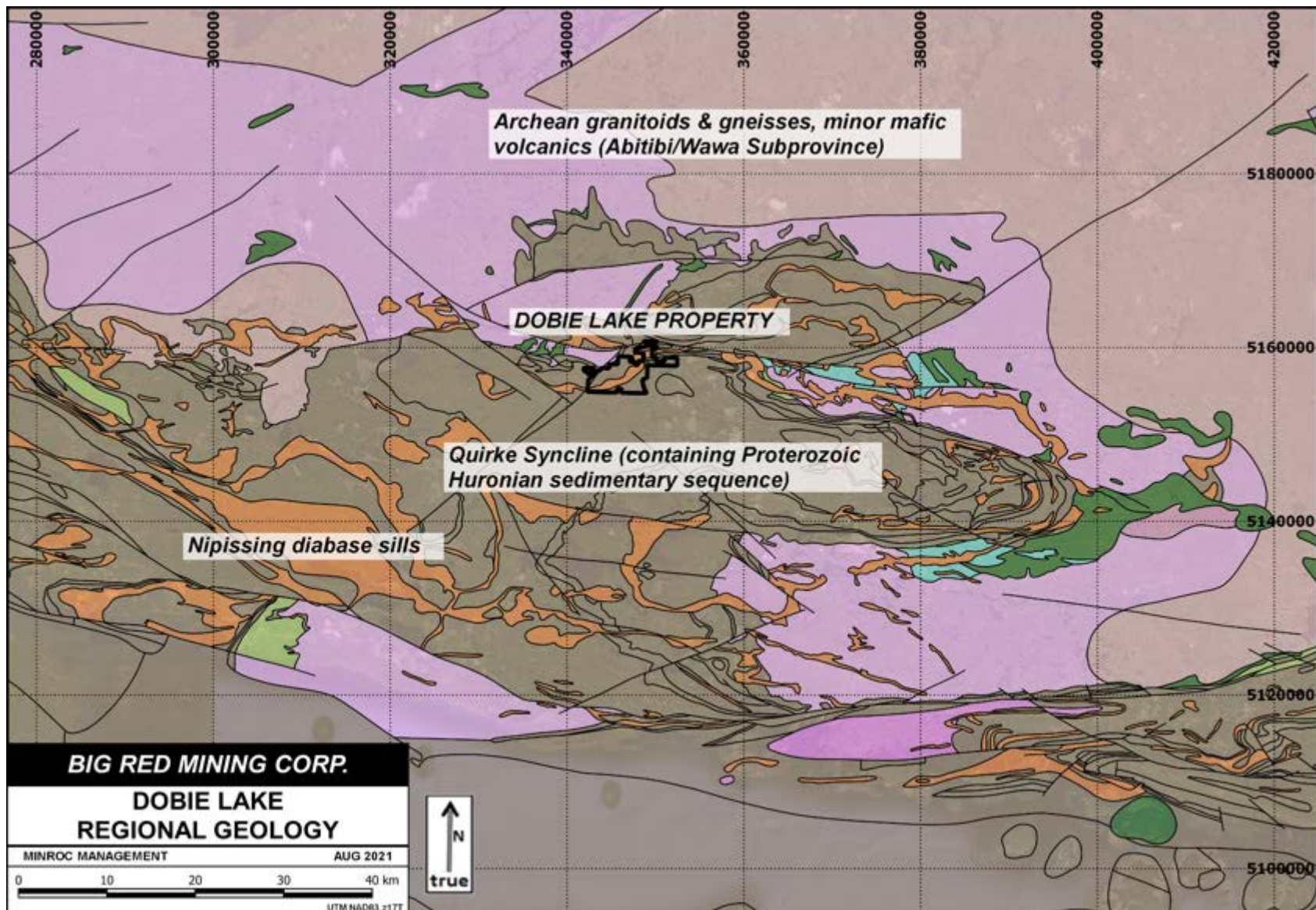


Figure 7 Regional Geology of the Huron North Shore

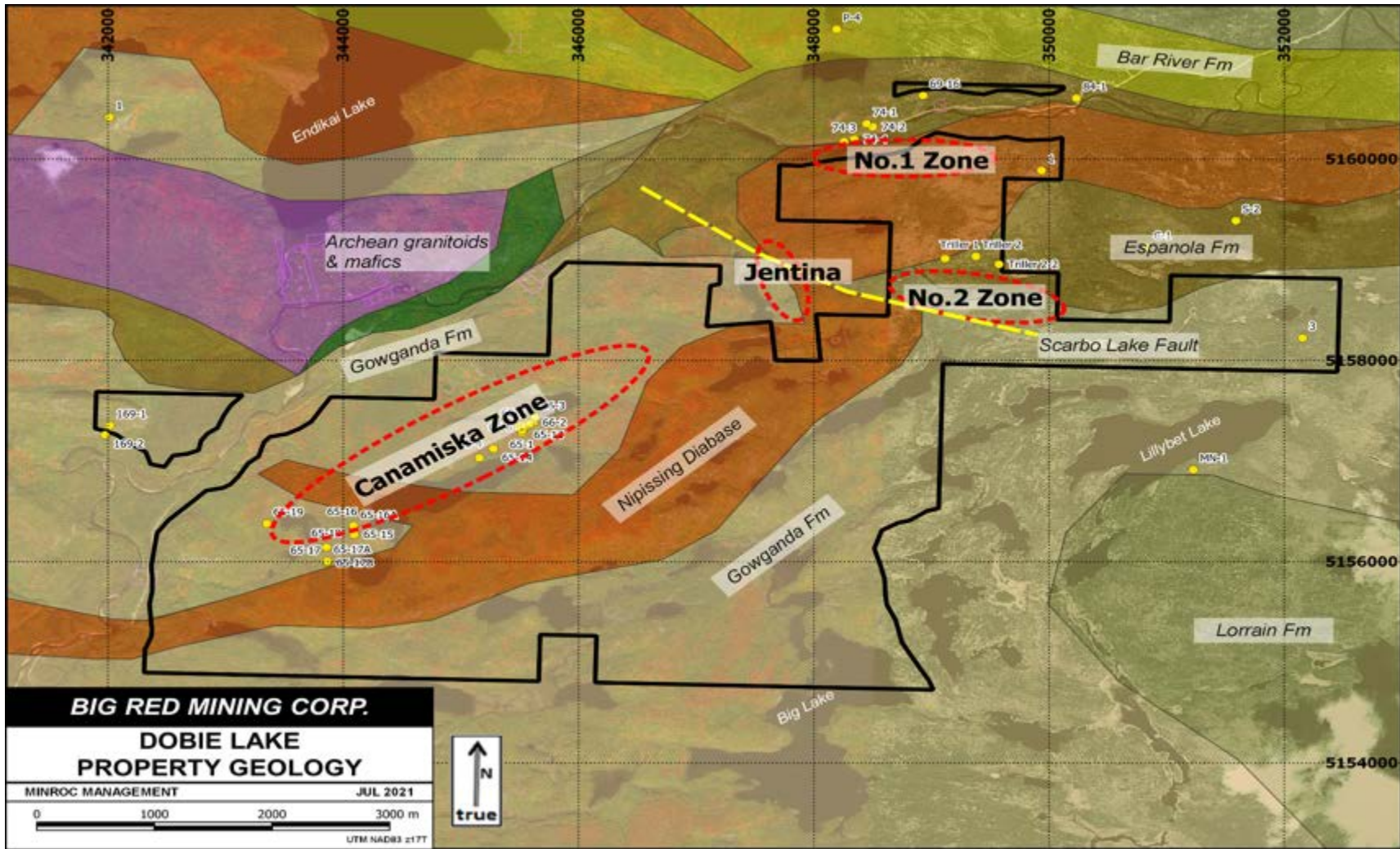


Figure 8 Property Geology. Using data from Siemiatkowska (1978), Robertson (1969). DDH from the Ontario Drillhole Database

## 8.0 DEPOSIT TYPES

### 8.1 Vein copper

The mineralization at the Dobie Lake Property is of a distinctive vein type common to the North Shore of Lake Huron in the region from Sault Ste. Marie to Espanola.

The North Shore vein copper occurrences consist of quartz or quartz-carbonate vein sheets or anastomosed or breccia-weld vein systems and are mineralized with pyrite, chalcopyrite, specularite and, occasionally, bornite, galena and sphalerite. Uranium and cobalt minerals are also, rarely, reported (Frarey 1977). Carbonate is generally calcite but can include ankerite and siderite. Quartz can be vuggy and is generally white but can be stained pink from minor hematite content. Veins have sharp contacts, a steep dip and, usually, a west-northwest strike. Veins often form loose swarms of parallel veins separated by tens of metres. Individual veins can be traced for several hundred metres, while packages of veins can be traced for several kilometres. The sulphide mineralization is disseminated irregularly throughout the vein material and are only very rarely emplaced within wallrocks. Assays from many of the occurrences in the region show that appreciable silver can be contained in the sulphides alongside copper, as well as modest gold values.

North Shore type veins are almost exclusively found within Huronian sediments but are known to occur within Nipissing diabase (Frarey 1977). However, when hosted by sediments, they are always “spatially related” to Nipissing intrusives. A genetic relation to the intrusives (and therefore to the Co-Ag deposits associated with them in the Cobalt and New Liskeard areas of Ontario) is suspected by many authors, but models of formation for vein type copper mineralization are relatively understudied. Kirkham and Sinclair (1976) suggest that the veins are genetically related to voluminous mafic intrusives and, like the intrusives, are emplaced in the same extensional tectonic regimen. Copper is suspected to have been leached from country rocks by hydrothermal fluids circulating in the crust, which is then deposited in brittle-deformed crust at cooler, higher levels. Others, including Willoughby (1994) consider them to post-date the Nipissing intrusives and attribute them to faulting during the Penokean Orogeny (~1.85 Ga).

The earliest, and most extensive, production from a North Shore vein copper deposit was at Bruce Mines, from which copper and minor gold was produced from the 1840s to 1920s. Other vein systems saw some modest production from the 1920s to 1960s, including Bar-Fin, Hermina, Crownbridge and Copper Prince.

Similar deposit types in Canada include the Opemiska diabase-hosted vein Cu-Au deposits near Chapais, Quebec, and the Churchill Copper deposit in British Columbia. Grouped together, these vein-hosted deposits can be referred to as “Churchill-type” (see Figure 9, Table 4). In general, where proven economic, this vein hosted deposit type has a relatively small tonnage and a grade between 1% and 3.5% Cu.

The Jentina polymetallic vein-hosted mineralization, on patented ground adjacent to the Dobie Lake Property, is generally considered a sister deposit style to the vein copper deposits of the region (Willoughby 1994).

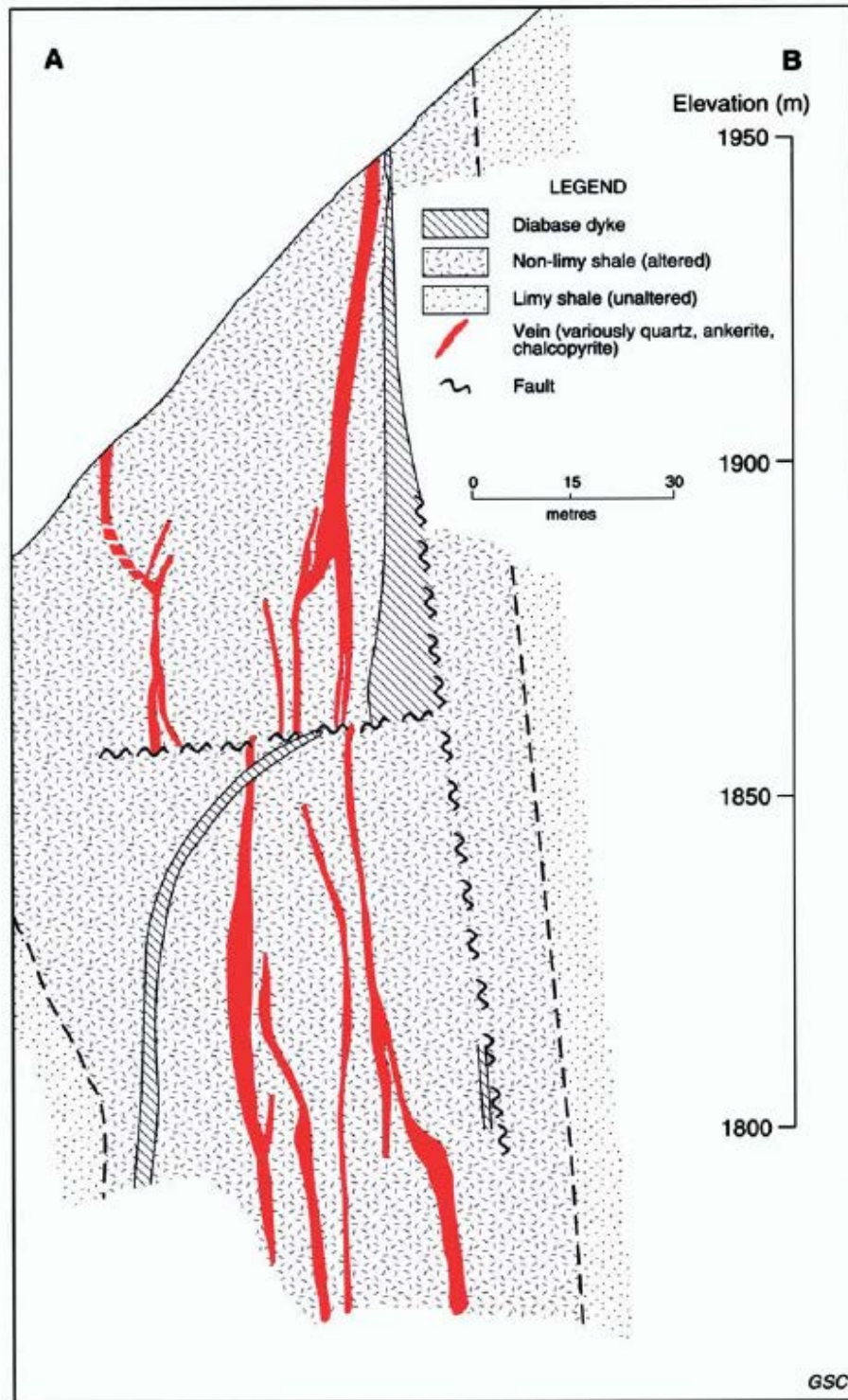
**Table 4 Vein Style Copper Deposits in Canada (Kirkham & Sinclair 1996)**

<b>Deposit</b>	<b>Production/ Resources (Mt)</b>	<b>Grade</b>
<b>Churchill Copper, BC</b>	0.6	2.9% Cu
<b>Davis-Keays, BC</b>	1.9	3.65% Cu
<b>Bull River, BC</b>	0.5	1.5% Cu, 13.5 g/t Ag, 0.27 g/t Au
<b>Copper Lamb, NT</b>	0.05	"high grade bornite ore"
<b>Susu Lake, NT</b>	0.13	0.95% Cu
<b>Bruce Mines, ON</b>	0.4	3% Cu
<b>Crownbridge, ON</b>	0.4	2% Cu
<b>Bilton, ON</b>	0.5	1.7% Cu
<b>Goulais River, ON</b>	0.2	2.35% Cu, 0.26 g/t Ag
<b>Ethel Copper, ON</b>	0.077	1.2% Cu, 10 g/t Ag, 0.3 g/t Au
<b>Icon-Sullivan, QC</b>	1.4	2.9% Cu

### *8.2 Paleo-placer uranium and gold*

Pyritic quartz pebble conglomerate horizons within the Huronian sediments (mostly the Matinenda Formation near the base of the Huronian sequence) have historically been economic sources of uranium in the Elliot Lake area. These deposits trace their origin to early Proterozoic erosion of the Superior Province, and the deposition of uraninite in river deltas following its weathering out of primary uranium sources in Archean granitoids. The Huronian sequence in the Dobie Lake Property area has been explored for uranium in the past and it is possible that uranium mineralization may exist within lower Huronian horizons at depth on the Property.

Paleo-placer gold occurrences are also known within the Huronian sequence, for example at the Pardo project northeast of Sudbury, where gold is found in pyritic pebble and cobble conglomerates proximal to the Archean paleosurface. There may be some potential for paleo-placer gold mineralization at Dobie Lake, particularly at depth close to the base of the Huronian sequence.



**Figure 9** Vertical section of the Churchill Copper-bearing vein system, British Columbia (Kirkham & Sinclair 1996)

## 9.0 EXPLORATION

### 9.1 VLF Survey

In June and July 2021, a series of ground VLF surveys were completed on the Dobie Lake Property on behalf of Big Red by Superior Exploration, Adventure & Climbing Co. Ltd. (Superior Exploration) of Batchewana Bay, Ontario. A total of 13.82 line km were surveyed on the Property in five separate areas, covering parts of the No. 1, No. 2 and Canamiska zones, using a VLF EM-16 unit and a Garmin GPS-60CSX (Parent 2021). Survey lines are oriented broadly north-south and were walked without the aid of a field grid. Two VLF naval transmitters were utilized: Cutler, Maine and Jim Creek, Washington (callsigns NAA and NLK respectively). The surveys were completed between the 10<sup>th</sup> June and 30<sup>th</sup> July, 2021 by Shaun Parent, P. Geo and Sandra Slater, both of Superior Exploration.

For each survey grid or line, Parent (2021) provides in-phase and quadrature response as well as resistivity contour plots (calculated using 2k $\Omega$  and 4k $\Omega$  mean resistances) and 2-D inversion sections for both the NAA and NLK VLF signals.

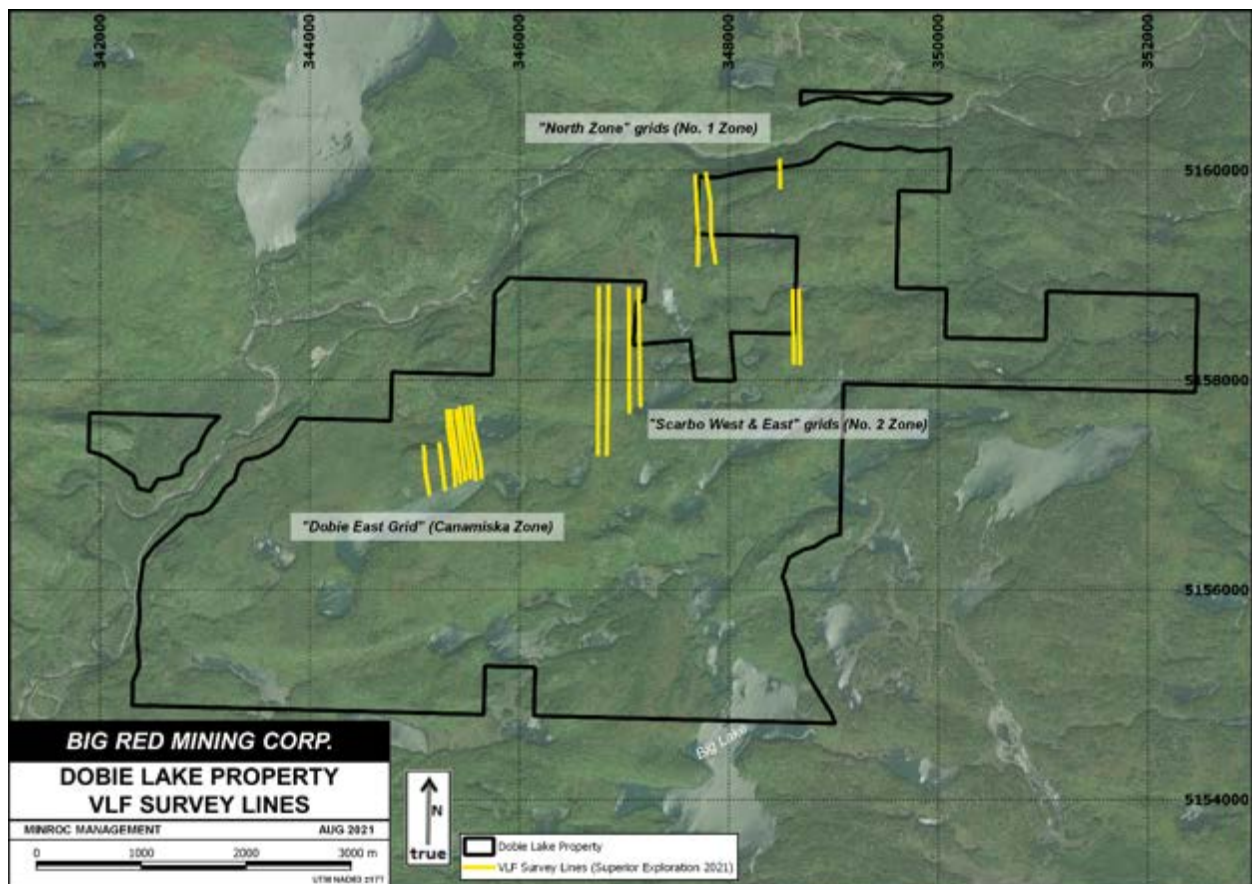


Figure 10 VLF Survey details

9.2 Results and Interpretation

The five survey areas are disparate and cover only small target areas on the Property. Regardless, a number of anomalies can be interpreted. The data from the Canamiska grid (referred to by Parent as the Dobie East grid, referring to its position on Dobie Lake itself) shows linear in-phase and quadrature responses which appear to correspond to the historically explored area of veining; these fall within a broader zone of higher conductivity (see Figure 11). These structures appear to dip variously steeply northward (in the west of the grid) and southward (in the east of the grid; see Figure 12) according to the 2-D inversions and strike off of the east edge of the survey area, providing an obvious vector for follow-up work.

The remaining four exploration areas capture inferred strike extensions of the No. 1 and No. 2 Zones (though the single North Zone East survey line runs across a historic trench on the No. 1 Zone); all partly run beyond the Property. The “Scarbo West” lines (covering the west extension of the No. 1 Zone and/or Jentina zone) show a broad conductive zone at the north end of the survey lines.

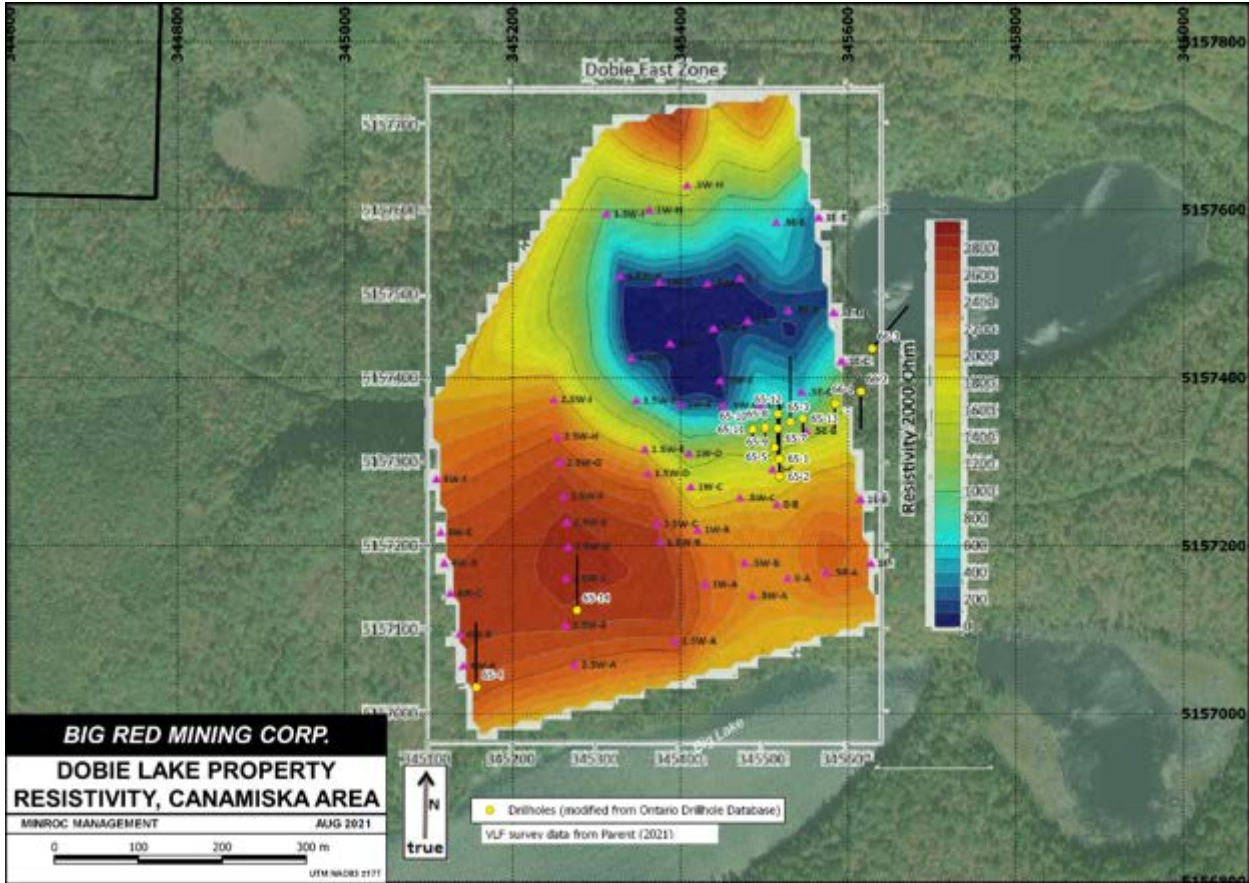


Figure 11 Resistivity heat map; Canamiska (Dobie East) survey grid



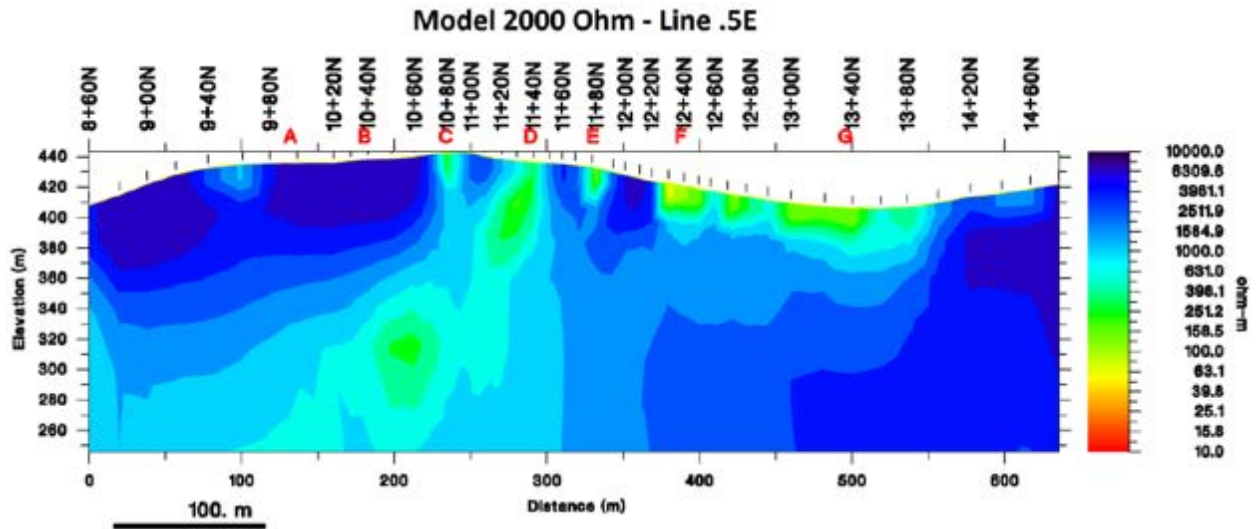


Figure 12 VLF resistivity inverted pseudosection, Canamiska section line 0.5E. From Parent (2021), showing south-dipping conductor beneath the Canamiska area.

## 10.1 DRILLING

No recent drilling has taken place on the Dobie Lake Property. Historic drilling is discussed under Item 6.2.

## 11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

### 11.1 Minroc Site Visit Samples

This section discusses the samples taken in the Minroc site visit discussed in detail under Item 12.1.

Two grab samples were taken during the visit on August 1<sup>st</sup>, 2021. Brian Newton, P. Geo. (PGO) performed the sampling. The Minroc samples were taken in the field using hand tools and sealed inside plastic bags alongside a unique identifying tag and recorded in field notes alongside UTM coordinates taken with a handheld GPS, according to standard best field practices. The samples were stored securely before being delivered by Minroc personnel to ALS Laboratories (ALS) in Sudbury, Ontario on the 9<sup>th</sup> August, 2021 for sample preparation. Sample analysis was then completed by ALS Minerals in their North Vancouver geochemical laboratory in British Columbia.

At ALS, the samples were crushed to 70% passing a 2 mm mesh and riffle-split, after which one split is pulverized to 85% passing a 75 µm mesh. The unpulverized split (the reject) were retained while the pulverized split (the pulp) were assayed by “ME-MS41” aqua regia digestion with ICP-MS analysis for a suite of 51 elements as well as “Au-AA23” gold fire assay on a 30 g sub-sample. Copper overlimits (>10,000 ppm) were retested following “OG46” ICP-AES after aqua regia digestion.

ALS ran a QA/QC regime internally alongside the sample assays, including two Standards (MRGeo8 and OREAS 905) and one Blank. Duplicates of the Cu overlimit

value (249577) were also taken, returning 2.39 and 2.40%, indicating a satisfactory level of reproducibility. A variety of standards were also tested against the Cu-OG46 and Au-AA23 methods. All results were reviewed against the published values by Minroc and are considered satisfactory by the Authors.

ALS facilities conform to the requirements of the ISO/IEC 17025 Standard (General requirements for the competence of testing and calibration laboratories), and regularly take part in proficiency testing. Further, ALS facilities conform to CAN-P-1579 (Mineral Analysis/Geological Tests) as set out by the Standards Council of Canada. ALS is independent of Big Red, Minroc and all other interested parties.

## 11.2 General Comments

The Authors are of the opinion that, while there are doubts regarding the historic sampling procedures and assay data integrity and completeness, it is beyond doubt that copper mineralization is present within several vein systems on the Property. There is some uncertainty regarding the exact location of the No. 1 Zone mineralization with respect to the Provincial Park boundary; the Authors recommend clarifying this at an early stage. The Authors consider that the available historic dataset is sufficient for planning future early stage exploration programs.

## 12.0 DATA VERIFICATION

### 12.1 Site Visit

The Property was visited by Brian H Newton, P. Geo of Minroc and Shaun Parent, P. Geo, of Superior Exploration on August 1<sup>st</sup>, 2021. The Property was accessed via an ATV trail which leaves Highway 546. The main quartz vein at the No. 2 occurrence was reviewed. The Author observed that this vein can be traced over about 1,500 m of strike on surface, from the boundary with the Jentina Patents eastward. The main vein is hosted by Huronian sandstones and pinches and swells with a thickness varying from a few centimetres to two metres. Chalcopyrite and malachite disseminations and clots were observed both within the vein quartz and along the vein contacts. No mineralization was observed in the wall rocks. Two grab samples were taken of mineralized vein material (see Table 5, Figure 13).

The Minroc samples confirmed the presence of copper mineralization. Silver and gold values are also presented in Table 5; the values of these precious metals were not notably elevated.

The No. 1 vein area and the Canamiska occurrence were not visited.

**Table 5 Samples from Minroc Site Visit**

Sample	UTM E	UTM N	Notes	Cu ppm	Cu %	Ag ppm	Au ppm
249576	348619	5158585	From "Vein A" location	8890		0.02	0.009
249577	348642	5158587	From "Vein C" location	>10000	2.39	0.03	0.005

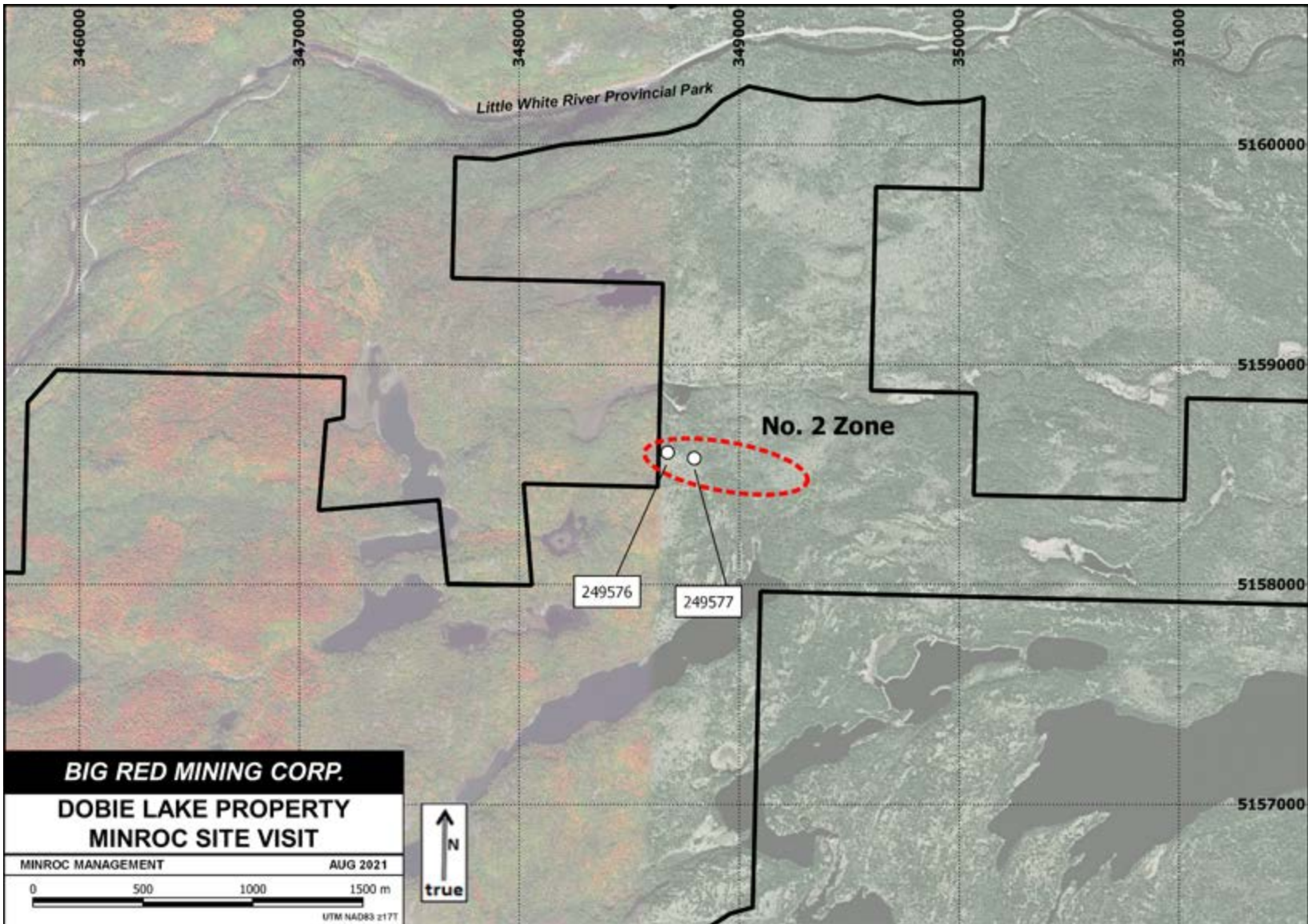


Figure 13 Locations of Confirmatory Minroc Samples

## **12.2 Data Review**

Minroc has reviewed the assessment files dating to previous exploration programs on the Property. Data from the historic drilling and surface programs is partial and/or poorly recorded and cannot be relied upon. For example, the Canamiska drillhole locations are difficult to reconstruct given the absence of any high quality surface plans in the Canamiska Copper Mines documents. Likewise, there is generally little if any documentation to verify historic drillhole intervals in the form of raw assay data or laboratory certificates for the Canamiska and other contemporary work. Assay certificates (from Technical Service Laboratories) are, however, provided for the Fort Norman drilling (Rupert 1974) and for the surface sampling in and around the No. 1 Zone (from Chemex Labs) from Willoughby (1994).

The Authors caution that, while the historic dataset is of great value as a guide for future exploration, the Issuer treat it in this respect only.

## **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

The Authors are not aware of any mineral processing or metallurgical testing having been completed on any material from the Dobie Lake Property.

## **14.0 MINERAL RESOURCE ESTIMATES**

To date, no mineral resource estimates, as defined in the CIM Definition Standards, or any equivalent international code, have been filed on any mineral occurrences within the Dobie Lake Property.

## **15.0 ADJACENT PROPERTIES**

Note: the Authors are not in a position to verify any of the information given in this section regarding any adjacent properties. Information regarding adjacent properties is not necessarily indicative of the mineralization which is or may be present within the Dobie Lake Property.

### **15.1 Jentina (White River) Lead Patents**

The Dobie Lake property partly surrounds a block of five mining patents which cover much of the former Jentina, or White River, lead project. A fault-controlled north-south quartz vein with a steep eastward dip carries polymetallic massive sulphide mineralization and has been traced over 150 m (Wilson 2013a). Considerable surface work and some poorly documented underground work was completed here from 1927 to 1942 by Sudbury Basin Mines Ltd. (Willoughby, 1994). According to Schlanka (1969), a historic adit (presumably the Sudbury Basin workings) exposed a shoot 80ft x 7ft grading 7.6% Pb, 1% Cu and 2.3 oz/ton Ag. Willoughby (1994) states that he was unable to locate the adit during his work on the Property. The Authors were unable to ascertain the current owners of the Patents.

## **15.2 Bruce-Pesto Patents**

Two Patents cover the Bruce-Pesto occurrence which lies about 600 m east of the Dobie Lake property. An east-west shear-hosted vein was explored historically on these patents. Historic diamond drilling is reported to have returned assays of 0.7% Cu over 12.3f t and 1.96% Cu over 11.5 ft (Wilson, A. 2013b). The Authors were unable to ascertain the current owners of the Patents.

## **15.3 Flack Lake Claim Block - 2683304 Ontario Inc**

The Flack Lake claim block lies to the east of the Dobie Lake block, and stretches in an arc for 15 km to the southeast following the outcrop of the Quirke Lake Group. Most historic exploration appears to have consisted of vertical drillholes focused on exploration for deep uranium targets within the Quirke syncline similar to those known in the Elliot Lake area. The MDI lists five uranium occurrences within the claim group. 2683304 Ontario Inc also holds claim blocks to the north of the Dobie Lake property around Endikai Lake.

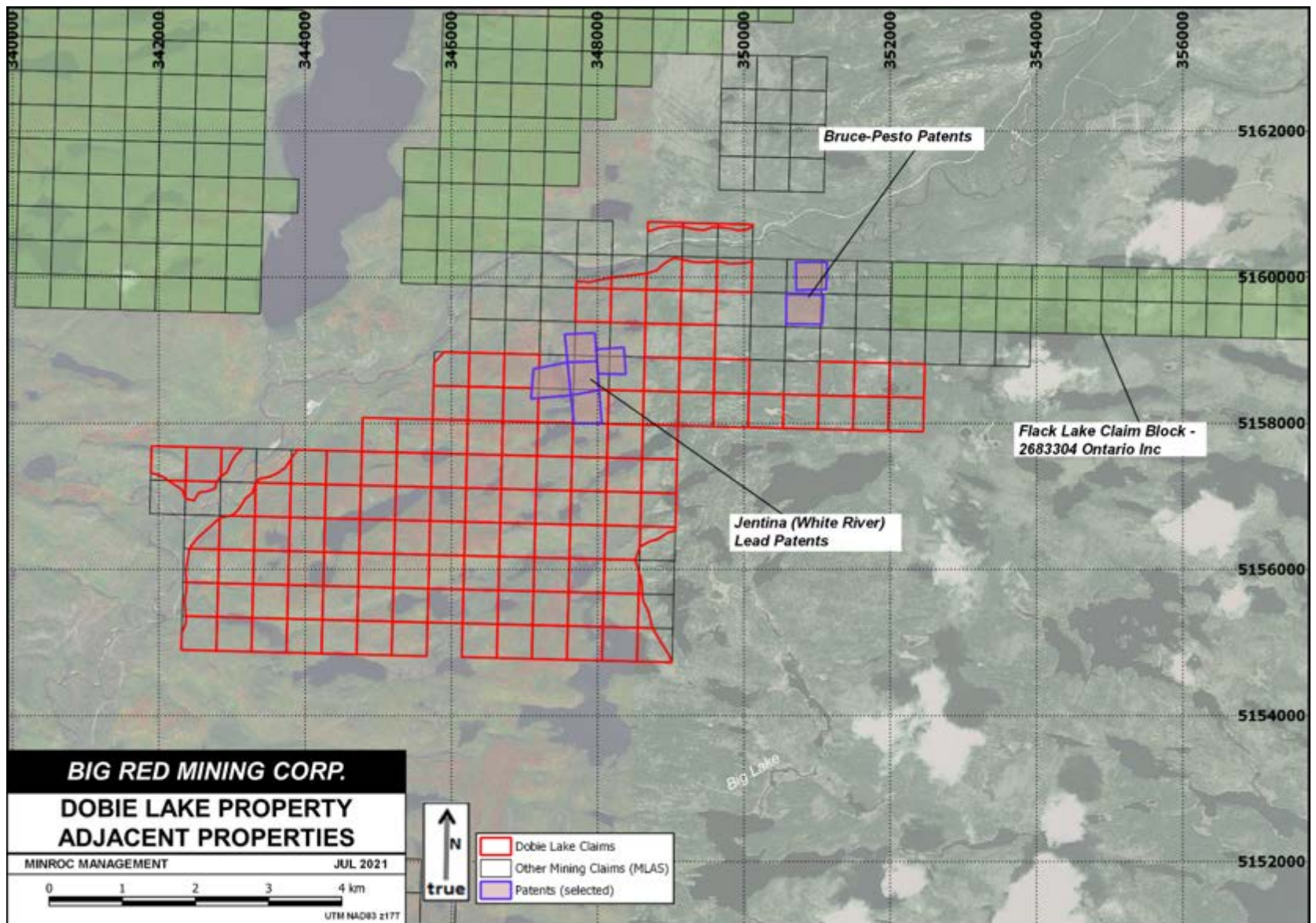


Figure 14 Adjacent Properties. Claim details from MLAS

## **16.0 OTHER RELEVANT DATA AND INFORMATION**

To the Authors' knowledge, all relevant information has been included in the other sections of this report.

## **17.0 INTERPRETATION AND CONCLUSIONS**

The Dobie Lake property lies within the Southern Subprovince of the Canadian Shield and is underlain by Huronian sediments and Nipissing diabases, cut by east-west structures and containing quartz vein systems which host gold and copper mineralization in several locations on the Property. This type of vein hosted mineralization is common throughout the north shore of Lake Huron and has been historically developed in several producing mines, the earliest of which was Bruce Mines in the 1840s. This local mineralization type can be taken alongside similar economic mineralization styles across Canada as part of the "Churchill-type" vein-hosted deposit type, and there are several examples of historically productive mines of this type including Churchill in British Columbia and in the Chapais area of Quebec.

The best-explored vein systems on the Property are the No. 2 Zone and the Canamiska Zone, while the No. 1 Zone may lie partly within the Property. All of these mineralized vein systems were explored on surface and by drilling from the 1950s to 1980s. This historic work, while a valuable source of information to direct future exploration, must be "ground truthed" in the field, notably in terms of accurately georeferencing the locations of surface showings and drillholes. Furthermore, the grades, widths, and vertical and lateral extents of the mineralization documented in historic programs have not been well documented in recent times and must be confirmed by future exploration work.

Recent geophysical work has tentatively suggested the presence of untested eastward strike continuations of the Canamiska Zone as well as highlighted steeply dipping conductive structures which may represent down-dip extensions. The 2021 site visit confirmed the presence of copper mineralization on surface at the No. 2 Zone.

The Authors believe that the Dobie Lake Property is highly prospective for copper mineralization, and that there is also potential for gold, silver and lead mineralization. There remains great potential for mineralization to be discovered beyond the historically-explored areas along strike, to depth, and in potential parallel vein systems.

**Table 6 Risks and Opportunities to the Dobie Lake Property**

<b>Risk</b>	<b>Potential Impact</b>	<b>Possible Mitigation</b>
Poor social acceptability	Difficulty in undertaking work on the Property or enhancing its value	Maintain good relationships with First Nations communities and other local stakeholders, including landowners, hunters, fishers and trappers both on the Property and along access routes
Logistic Issues	Difficulty in accessing part of the Property due to ground conditions	Winter conditions will likely improve access in lower lying areas.
Environmental Issues	Permits to complete part or all of work programs (e.g. drilling) may be denied	Minimize potential environmental impact at all stages of exploration planning and execution (e.g. area and intensity of surface disturbance).
<b>Opportunity</b>	<b>Potential Impact</b>	<b>Explanation</b>
Successful exploration results	Value of property enhanced	Discovery of notable copper mineralization would increase the Property value
Discovery of secondary economic minerals	Value of property enhanced	Silver, gold or other potentially economic metals may be discovered alongside copper mineralization
Successful exploration in region	Value of property enhanced	Successful exploration by third parties on nearby projects may increase market interest in the Property

## 18.0 RECOMMENDATIONS

The Authors recommend that Big Red complete a two stage program to advance the Property. A Phase 1 program is outlined here consisting of data review and compilation, and initial confirmation drilling (see Table 7). This is to be followed by a subsequent Phase 2 exploration program. The exact nature of Phase 2 will depend on findings from Phase 1 but the implementation of Phase 2 will not depend on any specific outcome from Phase 1.

Drilling as part of the Phase 1 program would require that Big Red submit an Exploration Plan with details on proposed drill pads, trails and water sources.

Phase 1 shall consist of the following:

- A compilation, review and interpretation of all available data including historic drilling and surface work, and recent geophysics and site visit findings. This interpretation work should result in the drafting of a detailed compilation map and/or GIS workspace, and the selection of targets for exploration or confirmation. The compilation should include historic work from the Jentina patents and other adjacent properties, such that potential strike extensions may be factored into exploration targeting. A priority should also be accurately delineating the Property Boundary with respect to the Provincial Parks and known mineralization;



- 600 m initial diamond drilling program based on targets selected from the interpretation. These may include confirmation of the Canamiska, No. 1 and/or No. 2 mineralization and/or testing of these zones along depth and strike.

All core sampling should routinely incorporate multi-element sampling and gold fire assaying in order to detect gold and other potentially economic metals. Given that vein copper deposits typically lack broad zones of halo or disseminated mineralization around veins, it may be possible to keep the number of samples relatively low in comparison to drill programs upon other deposit types.

Findings from this initial Phase 1 program can be used to plan more detailed Phase 2 exploration which should consist of further drilling along strike of holes drilled in phase 1.

**Table 7 Recommendations for Phase 1 Program**

Item	Details	Units	Rate	Quantity	Total
<b>Targeting</b>		Days	\$ 800.00	5	\$ 4,000.00
<b>Drilling</b>	Six holes @ 100 m	Meters	\$ 150.00	600	\$ 90,000.00
<b>Logging</b>	Assumes 25 m per day	days	\$ 800.00	24	\$ 19,200.00
<b>Assays</b>	Assumes 25% of core	samples	\$ 50.00	150	\$ 7,500.00
<b>Accommodation</b>		Days	\$ 150.00	24	\$ 3,600.00
<b>Transportation</b>		Days	\$ 75.00	24	\$ 1,800.00
<b>Report</b>		Days	\$ 800.00	5	\$ 4,000.00
<b>Management</b>	15% of Total				\$ 19,500.00
<b>Contingency</b>	10%				\$ 15,000.00
<b>Total</b>					\$ 164,600.00

**Table 8 Recommendations for Phase 2 Program**

Item	Details	Units	Rate	Quantity	Total
<b>Targeting</b>		Days	\$ 800.00	5	\$ 4,000.00
<b>Drilling</b>	Six holes	Meters	\$ 150.00	650	\$ 97,500.00
<b>Logging</b>	Assumes 25 m per day	days	\$ 800.00	26	\$ 20,800.00
<b>Assays</b>	Assumes 25% of core	samples	\$ 50.00	160	\$ 8,000.00
<b>Accommodation</b>		Days	\$ 150.00	26	\$ 3,900.00
<b>Transportation</b>		Days	\$ 75.00	26	\$ 1,950.00
<b>Report</b>		Days	\$ 800.00	5	\$ 4,000.00
<b>Management</b>	15% of Total				\$ 21,000.00
<b>Contingency</b>	10%				\$ 16,000.00
<b>Total</b>					\$ 177,500.00

Note that these costs are estimates. Prior to execution a program proposal must be built out in detail based on RFPs from various contractors which will then be approved by the client.

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## 20.0 APPENDICES

### 20.1 Photos



Photo 1: Brian Newton P. Geo and Shaun Parent at the No. 2 Zone on the Dobie Lake Property



Photo 2: Surface exposure of quartz veining at the No. 2 Zone



## 20.2 Assay Certificate



ALS Canada Ltd.  
 2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: +1 604 984 0221 Fax: +1 604 984 0218  
 www.alsglobal.com/geochemistry

To: MINROC MANAGEMENT LTD.  
 2857 SHERWOOD HEIGHTS DRIVE, UNIT 2  
 OAKVILLE ON L6J 7J9

Page: 1  
 Total # Pages: 2 (A - D)  
 Plus Appendix Pages  
 Finalized Date: 23-AUG-2021  
 This copy reported on 8-SEP-2021  
 Account: MINMAN

**CERTIFICATE SD21207274**

Project: Dobie Lake

This report is for 2 samples of Rock submitted to our lab in Sudbury, ON, Canada on 9-AUG-2021.

The following have access to data associated with this certificate:

BRIAN NEWTON

ACCESS WEBTRIEVE

MARK WELLSTEAD

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
DISP-01	Disposal of all sample fractions
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES
Cu-OG46	Ore Grade Cu - Aqua Regia	
Au-AA23	Au 30g FA-AA finish	AAS
ME-MS41	Ultra Trace Aqua Regia ICP-MS	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

Signature:

Saa Traxler, General Manager, North Vancouver



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Page: 2 - A  
 Total # Pages: 2 (A - D)  
 Plus Appendix Pages  
 Finalized Date: 23-AUG-2021  
 Account: MINMAN

Project: Dobie Lake

**CERTIFICATE OF ANALYSIS SD21207274**

Sample Description	Method Analyte Units LOD	WEI-21	CRU-QC	PUL-QC	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	
		Recvd Wt.	Pass2mm	Pass75um	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co
		kg	%	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
249576		2.43	79.4	93.6	0.02	0.20	2.3	<0.02	<10	10	0.11	110.0	1.41	0.02	6.08	35.8
249577		1.42			0.03	0.18	1.6	<0.02	<10	10	0.08	1.49	0.22	0.02	3.80	15.0



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To: MINROC MANAGEMENT LTD.  
 2857 SHERWOOD HEIGHTS DRIVE, UNIT 2  
 OAKVILLE ON L6J 7J9

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 Plus Appendix Pages  
 Finalized Date: 23-AUG-2021  
 Account: MINMAN

Project: Dobie Lake

**CERTIFICATE OF ANALYSIS SD21207274**

Sample Description	Method Analyte Units LOD	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Cr	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
		1	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05
249576		12	0.08	8890	2.40	1.41	0.06	0.05	<0.01	0.108	0.02	2.6	2.5	0.40	1020	2.10
249577		16	0.08	>10000	3.42	1.20	0.06	0.03	0.05	0.207	0.02	1.6	1.8	0.14	272	2.39



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Sample Description	Method Analyte Units LOD	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te
		%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01
249576		0.03	<0.05	8.2	10	0.4	1.0	<0.001	0.75	0.12	3.8	1.6	<0.2	5.2	<0.01	0.02
249577		0.02	<0.05	5.8	50	1.2	0.8	<0.001	2.00	0.35	2.6	2.9	<0.2	2.7	<0.01	0.02



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**CERTIFICATE OF ANALYSIS SD21207274**

Sample Description	Method Analyte Units LOD	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	Cu-OG46	Au-AA23
		Th	Ti	Tl	U	V	W	Y	Zn	Zr	Cu	Au
		ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.2	0.005	0.02	0.05	1	0.05	0.05	2	0.5	0.001	0.005
249576		0.6	<0.005	<0.02	0.52	8	<0.05	2.31	3	1.9		0.009
249577		0.3	<0.005	<0.02	1.61	8	<0.05	14.65	4	0.8	2.39	0.005



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**CERTIFICATE OF ANALYSIS SD21207274**

CERTIFICATE COMMENTS									
	<b>ANALYTICAL COMMENTS</b>								
Applies to Method:	Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g). ME-MS41								
	<b>LABORATORY ADDRESSES</b>								
Applies to Method:	Processed at ALS Sudbury located at 1351-B Kelly Lake Road, Unit #1, Sudbury, ON, Canada.								
	<table border="0"> <tr> <td>CRU-31</td> <td>CRU-QC</td> <td>DISP-01</td> <td>LOG-22</td> </tr> <tr> <td>PUL-31</td> <td>PUL-QC</td> <td>SPL-21</td> <td>WEI-21</td> </tr> </table>	CRU-31	CRU-QC	DISP-01	LOG-22	PUL-31	PUL-QC	SPL-21	WEI-21
CRU-31	CRU-QC	DISP-01	LOG-22						
PUL-31	PUL-QC	SPL-21	WEI-21						
Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.								
	<table border="0"> <tr> <td>Au-AA23</td> <td>Cu-OG46</td> <td>ME-MS41</td> <td>ME-OG46</td> </tr> </table>	Au-AA23	Cu-OG46	ME-MS41	ME-OG46				
Au-AA23	Cu-OG46	ME-MS41	ME-OG46						