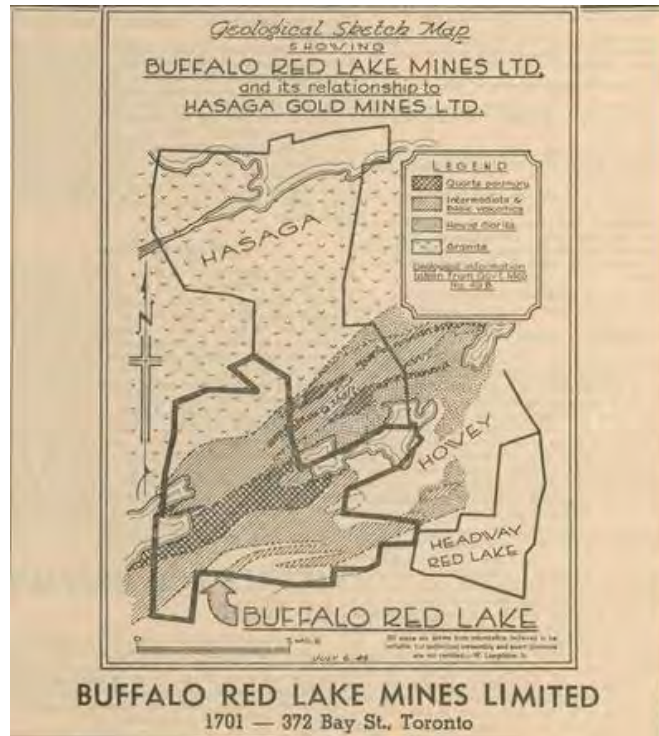


# TECHNICAL REPORT ON THE HASAGA PROPERTY

Red Lake, Ontario, Canada



Effective Date: June 30, 2024  
Report Date: September 11, 2024

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## **1.0 SUMMARY**

### **1.1 Introduction**

Equinox Gold Corp. (Equinox Gold) retained Equity Exploration Consultants (Equity) to prepare an Independent Technical Report on the Hasaga Property in Red Lake, Canada.

### **1.2 Project Description**

The Hasaga Property is a gold exploration project located in the Red Lake district of north-western Ontario, Canada. The Hasaga Property is the site of several past-producing gold mines. Significant exploration activity was conducted prior to and after closing of the mines aimed at expanding the historically mined zones of mineralization and defining additional zones. Exploration results have been positive and justify the continuance of exploration activities by several operators and completion of a Mineral Resource Estimate, which is detailed in this report.

### **1.3 Location, Access and Ownership**

The Hasaga Property is located on the western edge of the town of Red Lake, Ontario, Canada. The Red Lake Mining District is a significant and long-lived gold mining district in northwestern Ontario, Canada, with a history of continuous gold production from multiple mines since the 1930's until the present day. The Hasaga Property can be accessed via Highway 105, which is a paved highway that is the main access to the town of Red Lake. Regularly scheduled domestic commercial air travel is available to the Red Lake regional airport. The Red Lake area is well equipped in terms of infrastructure and resources required for mining operations and is supportive of the economic activity related to mining activities.

The Hasaga Property is comprised of a series of patented Mining Land Tenures and Boundary Cell Mining Claims, all of which are presently registered to Premier Gold Mines NWO Ltd (Premier). On April 7<sup>th</sup>, 2021, Premier was acquired by Equinox Gold, making Equinox Gold the rights holder to the mineral claims and tenures and Premier a wholly owned subsidiary of Equinox Gold. Some of the mineral tenures are subject to various royalty agreements.

### **1.4 History, Exploration and Drilling**

The Hasaga Property hosts several past-producing underground mining operations including the Red Lake Goldshore, Hasaga and Buffalo mines. Most historical production came from the Hasaga Mine, that produced 218,213 oz of gold at an average gold grade of 4.94 g/t (0.144 oz/ton) between 1938 and 1952. Exploration and production drilling was conducted by operators of the historical mines prior to and during mining operations, and portions of these datasets are still accessible and useable for modern exploration targeting purposes. Sporadic exploration was conducted on the Hasaga Property following mine closure and prior to its acquisition by Premier in 2015. Exploration completed by Premier included a series of drilling campaigns totalling 174,200 m of diamond drilling. Most of this drilling was focused on the Central, Hasaga, Epp C, Epp D and Buffalo zones. The Hasaga and Buffalo zones are along strike and down-dip of the historical mines of the same name, while the Central Zone represents a new target zone similar in character to the Red Lake Goldshore Mine. The Epp C Zone is



also along the same trend as the Hasaga Mine and is interpreted to be the down-plunge extension of mineralization exploited by that mine. Lastly, the Epp D Zone occurs further down-plunge of Epp C and the Hasaga Mine.

### **1.5 Geology and Mineralization**

The Hasaga Property is situated within the Red Lake Greenstone Belt, with the northern half of the Hasaga Property underlain by granodiorite of the Dome Stock and the southern portion by felsic, intermediate and mafic volcanics of the Confederation and Balmer Assemblages. The volcanic units are intruded by the intermediate Howie Diorite and the felsic Hasaga Porphyry. Gold mineralization is classified as an orogenic gold deposit and is primarily hosted in quartz-tourmaline-sulphide veins within the Dome Stock and Hasaga Porphyry. The Dome Stock is host to the Central and Buffalo zones, while the remainder of the zones (Hasaga, Epp C and Epp D) are hosted in the Hasaga Porphyry. Despite having similar mineralogy, vein morphology differs between host rock types. Veins hosted in the Dome Stock are generally thinner, occurring as mm-scale to cm-scale veins, with little to no ductile deformation. Veins hosted in the Hasaga Porphyry are generally thicker, occurring as cm-scale to dm-scale with more abundant ductile deformation textures and well-developed alteration halos. Vein geometry and orientation also differs between zones, with the Hasaga Porphyry zones displaying an orientation slightly oblique to stratigraphy, striking northeast-southwest, with minor cross-cutting splays and folding. Dome Stock zones, in contrast, typically strike northwest-southeast. Both settings of mineralization are interpreted to be associated with a belt-scale mineralization event, postdating emplacement of all major geological units, and pre-dating the peak regional metamorphic and deformation event that modified mineralization.

### **1.6 Metallurgical Testing and Mineral Processing**

Preliminary metallurgical testwork was completed in 2016. The external engineering group contracted to conduct this work concluded that the mineralization is not refractory and should be amenable to extraction using conventional milling using whole-ore cyanidation. Initial metallurgical testwork showed a range in gold recoveries from 89% to 96% recovery depending on the zone.

### **1.7 Mineral Resource Estimate**

The current Mineral Resource Estimate of the Hasaga Property includes the Hasaga, Epp C, Epp D, Buffalo and Central resource areas. Mineral Resources are summarised in Table 1-1.

Table 1-1: Hasaga Property Mineral Resource Statement.

Classification	Area	Gold Cut-off Grade (g/t)	Tonnage (kt)	Gold Grade (g/t)	Contained Gold (koz)
Indicated	Epp C	4.0	893	9.58	275
	Hasaga	4.0	346	7.06	79
	Buffalo	4.0	158	8.17	41
	Central	4.0	73	5.66	13
	<b>Total</b>	<b>4.0</b>	<b>1,470</b>	<b>8.64</b>	<b>408</b>
Inferred	Epp C	4.0	728	8.59	201
	Hasaga	4.0	507	6.35	103
	Epp D	4.0	322	6.46	67
	Buffalo	4.0	259	7.09	59
	Central	4.0	243	6.81	53
	<b>Total</b>	<b>4.0</b>	<b>2,059</b>	<b>7.31</b>	<b>484</b>

1. Mineral Resources are reported using a cut-off grade of 4.0 g/t gold based on the following costs and assumptions: US\$1700 per oz gold price, 0.77 \$C to US\$ exchange rate, US\$4.62 per gold oz refining and transportation costs, 3% royalty, US\$83.93/t mining costs, US\$30.80/t process costs, US\$23.10/t G&A costs, US\$26.18/t sustaining capital, 90% process recovery and 1m minimum width.
2. Mineral Resources are reported at a gold price of US\$1700 /oz gold.
3. Mineral Resources are constrained using wireframes representing continuous blocks with estimated gold grades  $\geq 4$  g/t gold, continuous volumes representing  $>120$  kt, and minimum thickness of 1.0 m.
4. The Hasaga Property Mineral Resource statement has been prepared by Trevor Rabb, P.Geo. who is a qualified person as defined by NI 43-101 Standards of Disclosure for Mineral Projects.
5. The Hasaga Property Mineral Resource statement has been prepared in accordance with NI 43-101 Standards of Disclosure for Mineral Projects (May 2016) and the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014).
6. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
7. The number of metric tonnes and gold ounces are rounded to the nearest thousand. Any discrepancies in the totals are due to rounding effects.
8. Mineral Resources from the Hasaga Property presented herein have an effective date of June 30, 2024.

The Mineral Resources are presented in accordance with the most recent CIM Definition Standards for Mineral Resource and Mineral Reserve (CIM, 2014), and have been prepared according to CIM Estimation of Mineral Resource and Mineral Reserve Best Practice Guidelines (CIM, 2019).

A combination of mining cost assumptions and a constraining wireframe to indicate continuity of the minable mineralization (Table 1-2) were used to test the reasonable prospects for eventual economic extraction by underground mining. The mining cost assumptions were used to establish the reported cut-off grade for the Mineral Resource statement and as parameters to produce a constraining wireframe generated from the block model representing continuous blocks greater than or equal to 4 g/t gold and a minimum true thickness greater than 1 m within volumes greater than 120 kt. Blocks outside the grade shells are not reported in the Mineral Resource statement.

Block model quantities and grade estimates were classified in accordance with the CIM Definition Standards for Mineral Resources and Mineral Reserves by Trevor Rabb, P.Geo. (Equity). Geologic interpretations were performed in Leapfrog and Micromine software. Leapfrog software was used to generate final resource domains. Estimation of Mineral Resources was completed using

Micromine software. The databases were provided by Equinox Gold and validated for adequacy by Dave Swanton, P.Geol. (Equity).

*Table 1-2: Underground Mining Cost Assumptions.*

<b>Parameter</b>	<b>Unit Cost</b>	<b>Amount</b>
Gold Price	US\$ per gold oz	\$1,700
Exchange Rate	C\$ to US\$	0.77
Refining/Transportation	US\$ per gold oz	\$4.62
Royalty	%	3
Mining Costs	US\$/t	\$83.93
Process Costs	US\$/t processed	\$30.80
G&A	US\$/t processed	\$23.10
Sustaining Capex	US\$/t processed	\$26.18
Process Recovery	%	90
Minimum Thickness	m	1.0

## **1.8 Conclusions**

Exploration work conducted since Premier acquired the Hasaga Property in 2015 has resulted in the advancement of the geological framework for mineralization on the Hasaga Property. The three zones within the Hasaga Porphyry (Hasaga, Epp C and Epp D) account for most of the Mineral Resources on the Hasaga Property and are the most attractive targets for future exploration. All three zones occur along a common mineralized trend and near the past-producing Hasaga and Howie mines. The current Mineral Resource estimate has similar gold grades and contained tonnage to other deposits in the region. Additional exploration work is warranted and recommended based on the current Mineral Resource Estimate, the Hasaga Property's access, and existing nearby infrastructure.

## **1.9 Recommendations**

The majority of past work on the Hasaga Property has been comprised of diamond drilling, with very little surface geology, data compilation or geological modelling work. Prior to commencement of additional diamond drilling, it is recommended that a systematic evaluation of the surface geology and improvements to the geological framework for the Hasaga Property are completed. Following this, a limited program of diamond drilling focused on infill and step-out drilling within the resource areas and known mineralization away from the resource areas will improve confidence in the model and assist with further geological modelling, respectively. A second, more extensive program of diamond drilling should be conducted contingent on results of the first phase.

## 2.0 INTRODUCTION

### 2.1 Terms of Reference

Equinox Gold retained Equity Exploration Consultants Ltd. to prepare an Independent Technical Report on the Hasaga Property in Red Lake, Ontario, Canada. Prior to being acquired by Equinox Gold in April 2021, Premier owned the Hasaga Property; as such, this report describes work conducted by Premier prior to the acquisition (Equinox Gold Corp., 2020). Equinox Gold, through its indirect wholly-owned subsidiary Premier Gold Mines NWO Inc, holds a 100% interest in the Hasaga Property.

This Technical Report (Report) was prepared in compliance with National Instrument 43–101, Standards of Disclosure for Mineral Projects (NI 43-101) and summarizes the results of the estimation of Mineral Resources on the Hasaga Property.

The units of measure used in this report are as per the International System of Units (SI) or metric units, except for other units of measure that are commonly used in industry (i.e., Troy ounces (oz) for the mass of gold). All Hasaga Property coordinates are recorded in NAD83 UTM zone 15 North projection and datum. All dollar figures quoted in this report refer to United States dollars (US\$) unless otherwise noted. Where noted, structural measurements are reported as dip/dip direction. Frequently used abbreviations and acronyms used throughout the report are listed in Table 2-1.

This report includes technical information that required subsequent calculations to derive subtotals, totals, and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the qualified persons (QPs) as defined in NI 43-101 do not consider these rounding differences to be material.

*Table 2-1: Table of Abbreviations and Units.*

<b>Abbreviations</b>	
AAS	atomic absorption spectroscopy
Au	gold
C\$	dollars (\$) in Canadian currency
CRM	certified reference material
CI	Confidence Interval
CV	coefficient of variation
DEM	digital elevation model
DDH	diamond drillhole
ENE	east-northeast
FA	fire assay
Ga	billion years ago
GPS	global positioning system
ISO	International Standards Organization
IP	Induced Polarization
JORC	Joint Ore Reserve Committee
LiDAR	Light Detecting and Ranging survey
M+I	measured and indicated
MLAS	Mining Lands Administration System
Ma	million years ago
Mt	Million tonnes
N	north
NE	northeast
NI 43-101	National Instrument 43-101
NNE	north-northeast

<b>Abbreviations</b>	
NSR	net smelter royalty
NAD83	North American Datum 1983
PGO	Professional Geoscientists Ontario
QA	quality assurance
QC	quality control
QP	Qualified Person
R2	Proportion of explained variance in regression model
RLGB	Red Lake Greenstone Belt
RMA	reduction to major axis
SW	southwest
SRMA	Standardized reduced major axis
TSX	Toronto Stock Exchange
US\$	dollars (\$) in USA currency
UTM	Universal Transverse Mercator
WNW	West-northwest
Wt %	Weight Percent
VLF-EM	Very Low Frequency Electromagnetic
<b>Units of measure</b>	
cm	centimetre
dm	decimetre
ft	feet
g/t	grams per metric tonne
ha	hectare
kbar	kilobars
km	kilometre
km <sup>2</sup>	square kilometres
kg	kilogram
koz	thousands of Troy ounces
kt	thousands of metric tonnes
m	metre
mm	millimetre
Moz	millions of Troy ounces
nT	nanotesla
oz	Troy ounces
oz/ton	Troy ounce per US short ton
ppb	part per billion
ppm	part per million
t	metric tonne
t/m <sup>3</sup>	tonnes per cubic metre
%	percent
°C	degrees Celsius

## 2.2 Qualified Persons Responsibilities and Site Inspections

The QPs, as defined in NI 43-101, responsible for the preparation of the Report are listed in Table 2-2.

*Table 2-2: Qualified Persons and Section Responsibility.*

<b>Qualified Person</b>	<b>Company</b>	<b>Certification</b>	<b>Date(s) of Site Visit(s)</b>	<b>Section Responsibilities</b>
Dave Swanton	Equity Exploration	P.Geol.	June 24 – June 30, 2021	Sections 1 – 3, 4.1, 4.2, 4.3, 4.5, 5 – 13, 15 - 26
Trevor Rabb	Equity Exploration	P.Geol.	No site visit completed	Section 14
Paul J Brugger	Brugger Enterprises Inc.	P.Eng	October 15 – October 20, 2021	Section 4.4

### **2.3 Effective Dates**

The effective date for the Hasaga Property Mineral Resource estimate and Technical Report is June 30, 2024.

### **2.4 Information Sources and References**

Equity sourced information from other reports and other reference documents as cited in the text and summarized in Section 27 of this Report. Technical data for preparation of the Mineral Resource Estimate was provided by Equinox Gold.

### **2.5 Previous Technical Reports**

Premier retained MRB & Associates Geological Consultants to prepare a technical report and Mineral Resource Estimate with an effective date of December 30, 2016 on the Hasaga Property in 2017 (Jourdain et al., 2017).

No other technical reports have been completed on the Hasaga Property.

### **3.0 RELIANCE ON OTHER EXPERTS**

In section 4.0, the authors have relied upon information supplied by Equinox Gold and obtained from the Ontario Mining Lands Administration System (MLAS) of the Ontario Ministry of Mines (Ministry of Mines) regarding property ownership.

The author is not relying on a report, opinion, or statement of another expert who is not a qualified person, nor on information provided by the issuer, concerning other legal, political or tax matters relevant to the Report.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

### 4.1 Property Location

The Hasaga Property is located on the western edge of the town of Red Lake, Ontario, Canada (Figure 4-1 and Figure 4-2). The northern portion of the Hasaga Property lies within the Dome township; the southern portion is within the Heyson township. The entire area lies within the Red Lake Mining District of northwestern Ontario. The centre of the Hasaga Property is approximately at Universal Transverse Mercator (UTM) coordinates 440580 mE, 5652250 mN in Zone 15 of the 1983 North American Datum projected coordinate system (NAD83-Zone 15 North); or 51° 01' 08" North / 93° 50' 50" West (Latitude /Longitude).



Figure 4-1: Red Lake Location Map. Source: Equinox Gold 2024.



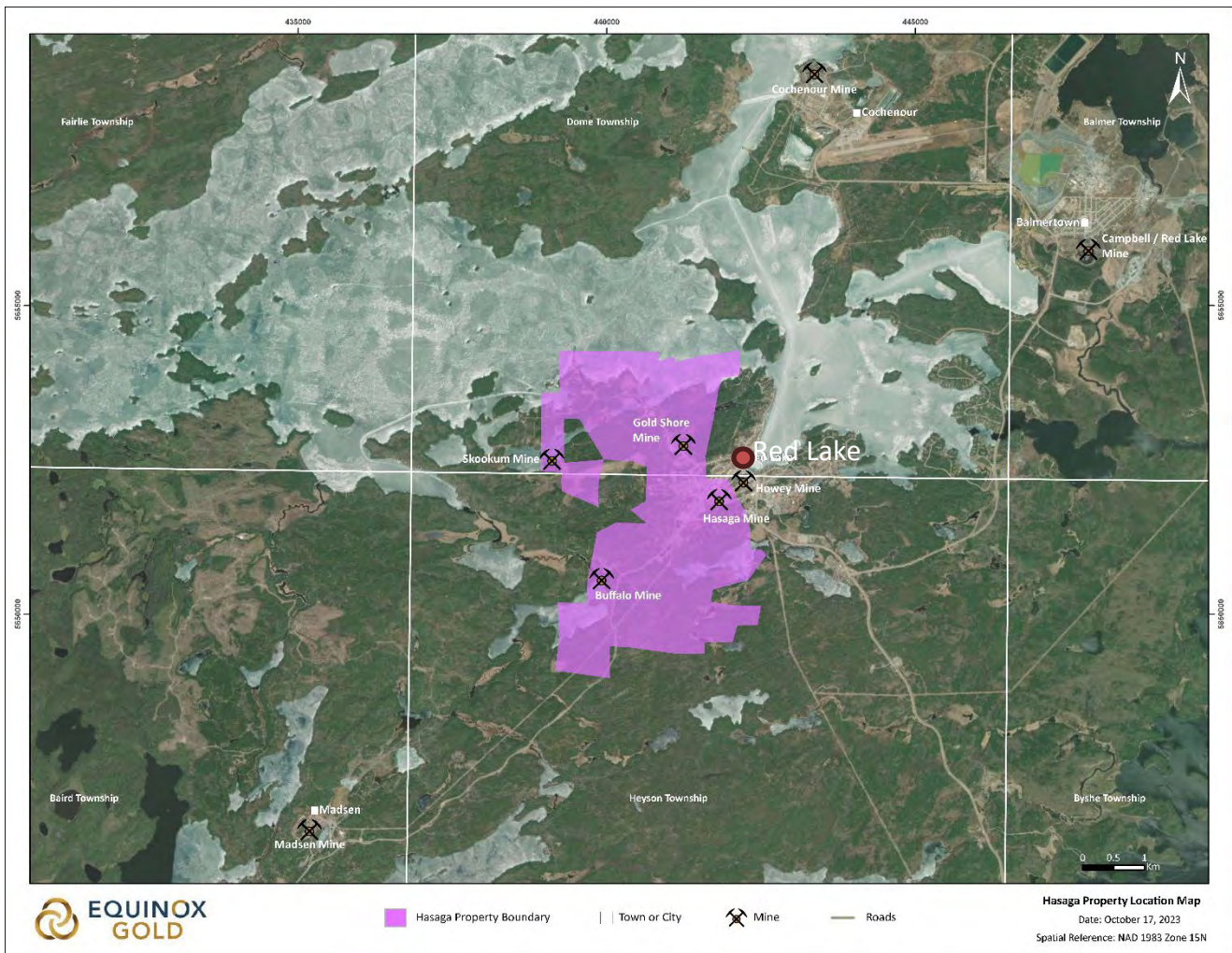


Figure 4-2: Hasaga Property Location Map. Source: Equinox Gold, 2024.

## 4.2 Tenure Information

Three types of Mineral Land Tenure make up the Hasaga Property: Mining Claims, Mining Patents and Mining Licences of Occupation.

Mining Claims are the current system of mineral tenure registration wherein the mineral rights for parcels of land whose boundaries are based on a latitude/longitude derived grid system can be staked and assigned to registered owners. Two categories of claims exist: boundary claims and cell claims. A cell claim is a mining claim that relates to all of the land included in one or more cells on the provincial grid. A boundary claim is a claim made up of only a part or parts of one or more cells. In cases where multiple boundary claims exist within a single cell, the provincial Mining Lands Administration System (MLAS) may record multiple Boundary Cell Mining Claims within a single grid cell. Claim owners are required to perform exploration work on their claims to keep them in good standing; \$400/year is required for each cell claim and \$200/year is required for each boundary claim. A summary of anniversary dates for each of the mining claims which are part of the Hasaga Property is presented in Table 4-2.

Patents can grant ownership of either surface and mineral rights for a parcel or simply the mineral rights. Historically, if a mineral tenure was covered by water, a licence of occupation was granted for the water area of the claim, as patents do not typically include the water portion. The Mining Licences of Occupation grant the right to explore for minerals under the waterbody. No work requirements are required to maintain ownership of Mining Patents or Mining Licenses of Occupation however annual tax and rent are due to the Ontario Ministry of Mines.

In order to perform certain categories of exploration work on a claim, an Exploration Permit must be obtained from the Ministry of Mines. Details of the categories of work that require permitting can be found on the Ministry of Mines website (<https://www.mndm.gov.on.ca/en/mines-and-minerals/exploration-permits>). Exploration work may be conducted on a Patent without any permitting if both surface and mining rights are owned; if only the mineral rights are held, the surface rights holder must be consulted and permission obtained.

The Hasaga Property is comprised of 14 Mining Licenses of Occupation, 55 Patents, and 15 boundary cell mining claims (Figure 4-3, Table 4-1, Table 4-2). All tenures are on record with the Ontario Ministry of Mines as held by Premier and the total area is 1,217.22 ha. Mining Licences of Occupation total 142.89 ha, Mining Patents total 1009.43 ha and Boundary Cell Mining Claims total 64.9 ha. Additionally, 8 surface rights parcels, registered to Premier, overlap most of the mining patents and total 688.9 ha (Figure 4-3).

At present, no permits are in place for exploration work on the boundary cell claims that are included in the Hasaga Property. As of the effective date of this report, all tenures are registered to Premier.

*Table 4-1: Hasaga Mining Land Tenures and Royalty Details.*

Tenure Number	Tenure Type	Area (ha)	Net Smelter Royalty
MLO-10132	Mining License of Occupation	11.86	Lac Minerals (3%)
MLO-10133	Mining License of Occupation	19.03	Lac Minerals (3%)
MLO-2927	Mining License of Occupation	2.54	Lac Minerals (3%)
MLO-2928	Mining License of Occupation	7.42	Lac Minerals (3%)
MLO-2929	Mining License of Occupation	5.11	Lac Minerals (3%)
MLO-3051	Mining License of Occupation	12.77	Lac Minerals (3%)
MLO-3052	Mining License of Occupation	2.97	Lac Minerals (3%)
MLO-3053	Mining License of Occupation	4.55	Lac Minerals (3%)
MLO-3181	Mining License of Occupation	11.69	Lac Minerals (3%)
MLO-3182	Mining License of Occupation	13.63	Lac Minerals (3%)
MLO-3183	Mining License of Occupation	16.05	Lac Minerals (3%)
MLO-3184	Mining License of Occupation	13.47	Lac Minerals (3%)
MLO-3211	Mining License of Occupation	8.65	Lac Minerals (3%)
MLO-3212	Mining License of Occupation	13.14	Lac Minerals (3%)
PAT-51840	Patent	21.74	Camp McMan (1.5%); Sandstorm (0.5%)
PAT-51841	Patent	22.71	Camp McMan (1.5%); Sandstorm (0.5%)

Tenure Number	Tenure Type	Area (ha)	Net Smelter Royalty
PAT-52614	Patent	40.06	Lac Minerals (3%)
PAT-52615	Patent	19.22	Lac Minerals (3%)
PAT-52616	Patent	19.89	Lac Minerals (3%)
PAT-52617	Patent	15.73	Lac Minerals (3%)
PAT-52618	Patent	22.84	Lac Minerals (3%)
PAT-52619	Patent	15.30	Lac Minerals (3%)
PAT-52620	Patent	19.22	Lac Minerals (3%)
PAT-52621	Patent	18.73	--
PAT-52622	Patent	18.93	--
PAT-52628	Patent	26.43	Lac Minerals (3%)
PAT-52629	Patent	17.13	Lac Minerals (3%)
PAT-52630	Patent	15.72	Lac Minerals (3%)
PAT-52631	Patent	15.77	--
PAT-52632	Patent	12.42	Lac Minerals (3%)
PAT-52633	Patent	34.16	--
PAT-52634	Patent	16.97	--
PAT-52635	Patent	7.24	--
PAT-52636	Patent	10.39	--
PAT-52637	Patent	15.59	Lac Minerals (3%)
PAT-52638	Patent	14.12	Lac Minerals (3%)
PAT-52639	Patent	15.16	Lac Minerals (3%)
PAT-52640	Patent	21.62	Lac Minerals (3%)
PAT-52641	Patent	29.03	Lac Minerals (3%)
PAT-52642	Patent	16.74	Lac Minerals (3%)
PAT-52643	Patent	15.87	Lac Minerals (3%)
PAT-52644	Patent	11.57	Lac Minerals (3%)
PAT-52645	Patent	8.23	Lac Minerals (3%)
PAT-6714	Patent	13.63	West Red Lake Gold Mines (1%)
PAT-6715	Patent	19.11	West Red Lake Gold Mines (1%)
PAT-6716	Patent	20.71	West Red Lake Gold Mines (1%)
PAT-6717	Patent	22.01	West Red Lake Gold Mines (1%)
PAT-6718	Patent	17.16	West Red Lake Gold Mines (1%)
PAT-6719	Patent	14.71	West Red Lake Gold Mines (1%)
PAT-6720	Patent	14.89	West Red Lake Gold Mines (1%)
PAT-6721	Patent	18.48	West Red Lake Gold Mines (1%)
PAT-6722	Patent	15.06	West Red Lake Gold Mines (1%)
PAT-6723	Patent	16.06	West Red Lake Gold Mines (1%)
PAT-6724	Patent	17.28	West Red Lake Gold Mines (1%)
PAT-6725	Patent	25.62	West Red Lake Gold Mines (1%)
PAT-6726	Patent	20.19	West Red Lake Gold Mines (1%)

Tenure Number	Tenure Type	Area (ha)	Net Smelter Royalty
PAT-6727	Patent	29.02	West Red Lake Gold Mines (1%)
PAT-6728	Patent	22.34	West Red Lake Gold Mines (1%)
PAT-6729	Patent	19.52	West Red Lake Gold Mines (1%)
PAT-6730	Patent	29.82	West Red Lake Gold Mines (1%)
PAT-6731	Patent	23.65	West Red Lake Gold Mines (1%)
PAT-6732	Patent	11.77	West Red Lake Gold Mines (1%)
PAT-6733	Patent	35.22	West Red Lake Gold Mines (1%)
PAT-6734	Patent	23.21	West Red Lake Gold Mines (1%)
PAT-6735	Patent	12.88	West Red Lake Gold Mines (1%)
PAT-6736	Patent	4.82	West Red Lake Gold Mines (1%)
PAT-6737	Patent	11.34	West Red Lake Gold Mines (1%)
PAT-6738	Patent	9.04	West Red Lake Gold Mines (1%)
PAT-6739	Patent	3.35	West Red Lake Gold Mines (1%)
	<b>TOTAL:</b>	<b>1152.32</b>	

*Table 4-2: Hasaga Mining Claims*

Tenure Number	Tenure Type	Issue Date	Anniversary	Holder	Area (ha)
115225	Boundary Cell Mining Claim	2018-04-10	2028-10-30	PREMIER GOLD MINES NWO INC.	1.29
130594	Boundary Cell Mining Claim	2018-04-10	2027-09-02	PREMIER GOLD MINES NWO INC.	10.22
150571	Boundary Cell Mining Claim	2018-04-10	2027-10-30	PREMIER GOLD MINES NWO INC.	0.01
150572	Boundary Cell Mining Claim	2018-04-10	2027-10-30	PREMIER GOLD MINES NWO INC.	9.29
160636	Boundary Cell Mining Claim	2018-04-10	2028-02-10	PREMIER GOLD MINES NWO INC.	11.23
169402	Boundary Cell Mining Claim	2018-04-10	2028-10-30	PREMIER GOLD MINES NWO INC.	0.79
169588	Boundary Cell Mining Claim	2018-04-10	2028-02-10	PREMIER GOLD MINES NWO INC.	2.36
194739	Boundary Cell Mining Claim	2018-04-10	2028-02-10	PREMIER GOLD MINES NWO INC.	5.97
194807	Boundary Cell Mining Claim	2018-04-10	2027-09-02	PREMIER GOLD MINES NWO INC.	2.14
232038	Boundary Cell Mining Claim	2018-04-10	2027-09-02	PREMIER GOLD MINES NWO INC.	6.95
264999	Boundary Cell Mining Claim	2018-04-10	2028-02-10	PREMIER GOLD MINES NWO INC.	4.69
302016	Boundary Cell Mining Claim	2018-04-10	2027-10-30	PREMIER GOLD MINES NWO INC.	3.18
315924	Boundary Cell Mining Claim	2018-04-10	2027-09-02	PREMIER GOLD MINES NWO INC.	1.54
319237	Boundary Cell Mining Claim	2018-04-10	2027-10-30	PREMIER GOLD MINES NWO INC.	2.20
328688	Boundary Cell Mining Claim	2018-04-10	2027-09-02	PREMIER GOLD MINES NWO INC.	3.04
				<b>TOTAL:</b>	<b>64.90</b>

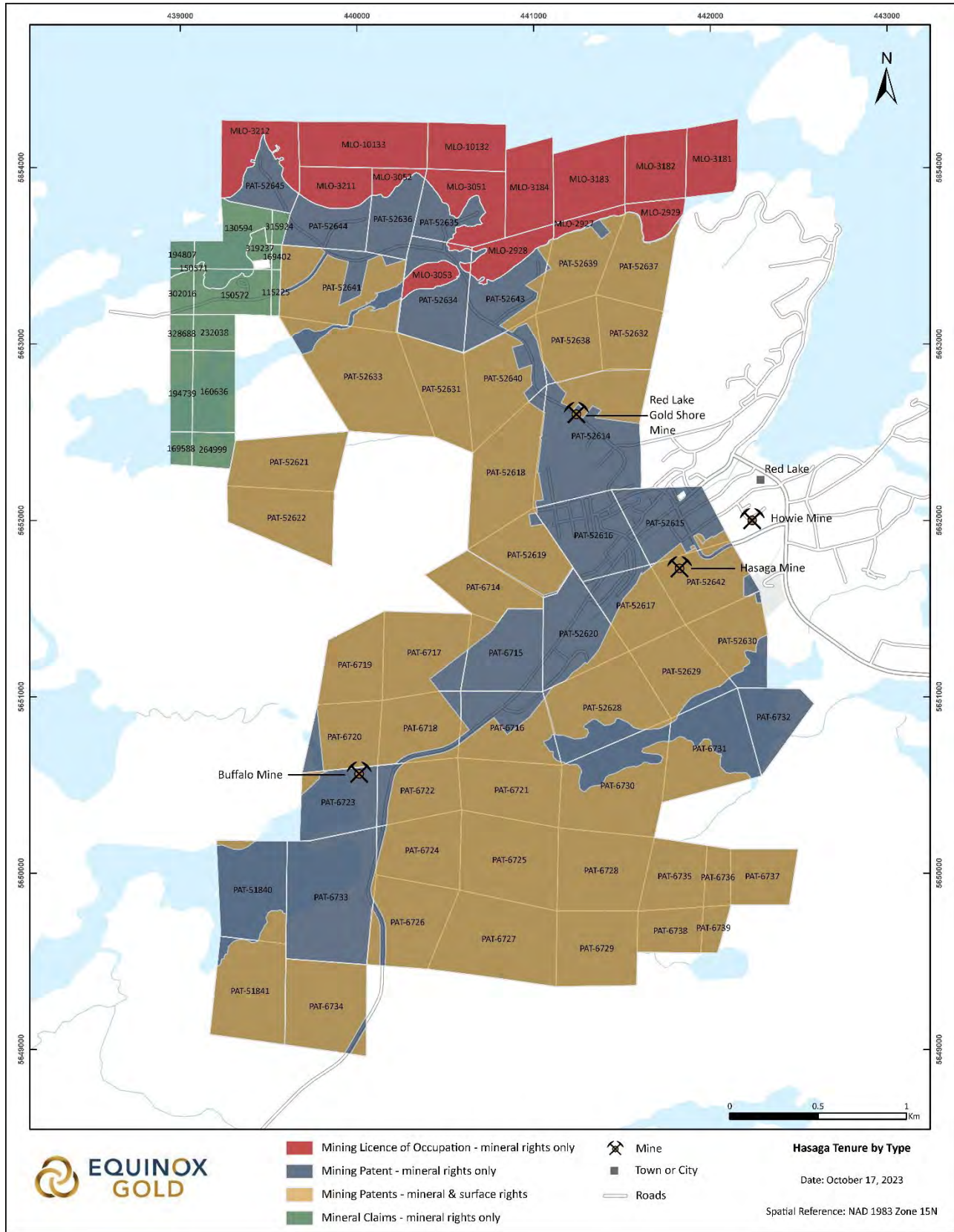


Figure 4-3: Hasaga Property Tenure Map. Source: Equinox Gold, 2024.

### **4.3 Property Agreements and Royalties**

The Hasaga Property is subject to a variety of net smelter return (NSR) royalties that vary by claim (Figure 4-4). Twenty-six of the patented claims were acquired from Pure Gold Mining Inc. (Pure Gold Mining) in 2015 are subject to a 1% NSR where by 50% of this NSR can be acquired for a consideration of \$1,000,000 as per an agreement between Pure Gold Mining and Premier (Pure Gold Mining Inc., 2015). Pure Gold Mining was acquired by West Red Lake Gold Mines Ltd. (West Red Lake) on May 9, 2023, and the royalty interests formerly held by Pure Gold Mining are now held by West Red Lake. The remaining two claims that formed part of the agreement between West Red Lake and Premier are subject to a different NSR with 1.5% payable to Camp McMan and a further 0.5% payable to Sandstorm Gold Royalties.

Twenty of the patented claims and fourteen of the Mining Licenses of Occupation acquired by Premier from Goldcorp Inc (prior to Goldcorp Inc's merger with Newmont Corporation to form Newmont Goldcorp) are subject to a 3% NSR which is payable to Lac Minerals Ltd, a subsidiary of Barrick Gold Corporation (Barrick). The NSR resulted from the sale of the claims to Goldcorp Inc by Lac Minerals Ltd, and is detailed in an agreement dated April 30, 2010 between the two parties.

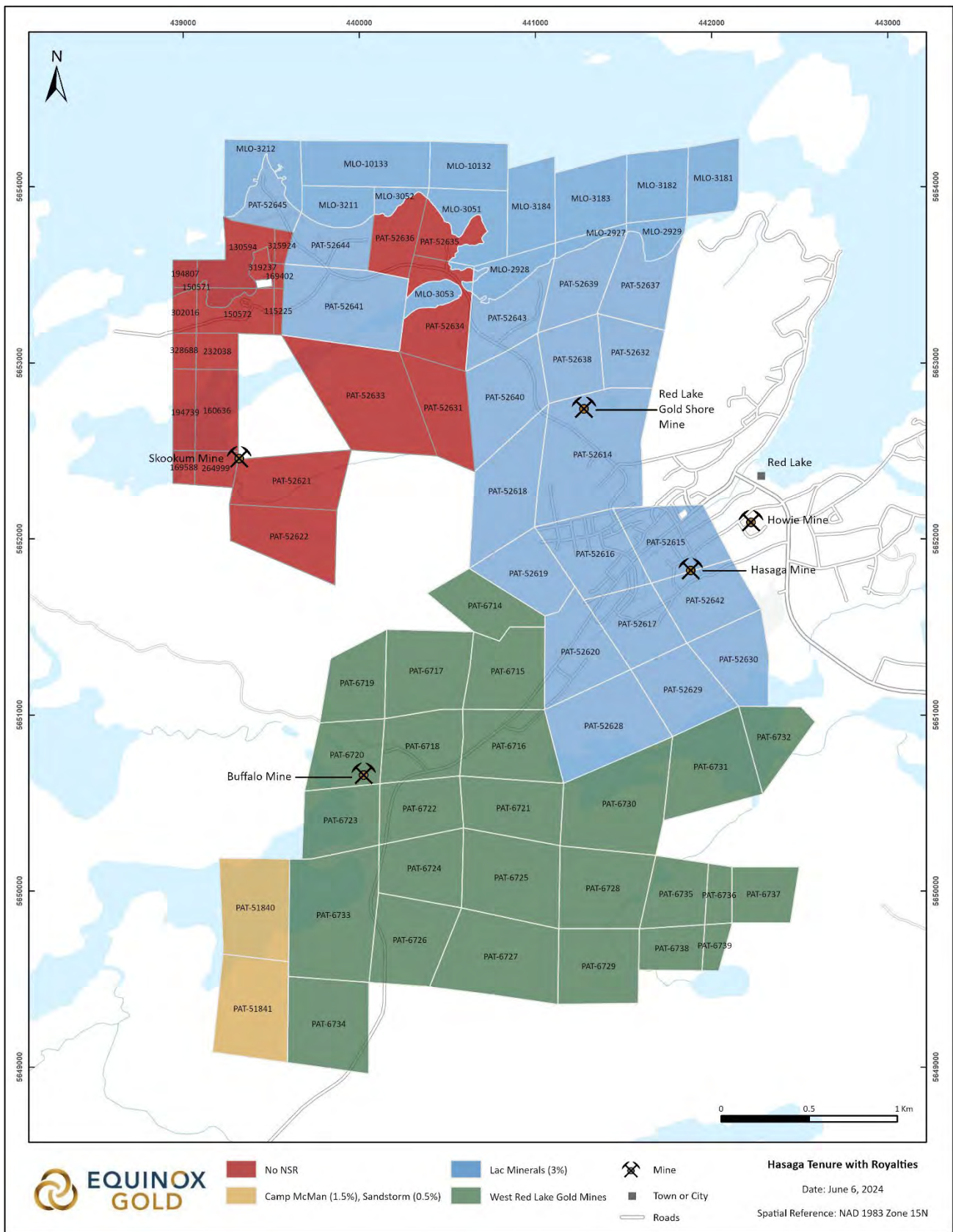


Figure 4-4: Hasaga Property Tenure Map showing Royalties. Source: Equinox Gold, 2024.

## **4.4 Environmental Liabilities**

### **4.4.1 Historic Buffalo Site**

The Buffalo Red Lake Property has an existing closure plan, last amended in 2000 by previous owner Claude Resources Inc. This closure plan estimated a Financial Assurance amount of \$111,936 which was revised at the request of the Ministry of Mines in 2016 to \$251,449 upon transfer to Premier. This amount is currently held by the Ministry of Mines in the form of a letter of credit and provides for the proper closure of the shaft and portal, building removal and long-term physical stability monitoring. Surface water quality had been previously acknowledged to be of no concern and there are no tailings on this property.

The Ministry of Mines conducted a site inspection in 2020 and requested an updated review of the outstanding site closure issues and costs. These included addressing any crown pillar issues, determining the buried location of the shaft and condition of the shaft cap, certification of the portal closure and submission of an updated surface plan. With the exception of the crown pillar review, all of these issues were addressed and documented in a Progressive Rehabilitation Report submitted in late 2021. The crown pillar review is currently planned for 2024 and seeks to confirm via geotechnical drilling that there are no new issues. Should any near-surface workings be discovered, additional remediation may be required.

### **4.4.2 Historic Hasaga Site**

The Hasaga underground openings to surface were properly sealed with engineered concrete caps in 1996, apart from two raises within the area of the crown pillar; one of the raises is fenced and the other raise is covered with a historical concrete cap. Studies and follow-up monitoring between 1996 and 2006 indicated that, while the crown pillar is currently stable, ongoing monitoring is required as long-term stability is unknown. The majority of the crown pillar area was fenced in 2023, with the exception of a small portion of the western end which is located under the municipal right of way for Hammell Road. Since the municipality wishes to keep the road open, this area will require monitoring to ensure long-term stability. The monitoring program is currently being discussed and will likely consist of instrumentation to monitor for movement in the existing borehole at the edge of the right of way.

The Hasaga tailings lie on the Red Lake Gold Shore Property east of the shaft. The tailings are mostly covered by vegetation except for approximately one hectare that has been exposed due to trespasser activity. Gates have recently been installed at access points to curtail activity and the damaged area was reseeded in spring 2022. Water quality from tailings surface run-off historically has not been an issue. At the request of the Ministry of Mines, a short-term monitoring program is currently being conducted to confirm this.

### **4.4.3 Historic Red Lake Gold Shore Site**

Underground openings on the Red Lake Gold Shore site include the main shaft and two raises within the crown pillar area. Access to the area around both the raises and the crown pillar are secured by a fence. The historical shaft cap was replaced with an engineered concrete cap in 1996.



The crown pillar and underlying near-surface workings were investigated via diamond drilling in 2000. The pillar was found to be intact and positioned as indicated in historical plans. The underlying stope was found to be filled with tailings to within 2.5 m of the crown pillar.

Overburden subsidence has been historically observed in proximity to the crown pillar. To prevent entry into this area a fence was installed and expanded in 1997 to include the entire crown pillar with the exception of the western edge, where core drilling of the crown pillar drill core indicated competent rock. The underlying stope was also found to be backfilled to within 2.4m of the back. The Ministry of Mines has requested a review of these findings along with updated crown pillar certification. A study to fulfil this request is currently in progress.

#### **4.5 Significant Risk Factors**

The authors are unaware of any other significant factors or risks associated with the Hasaga Property that may affect access, title, or the right or ability to perform work on the Hasaga Property.

## 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, PHYSIOGRAPHY

### 5.1 Accessibility

The Hasaga Property can be easily accessed year-round directly from Highway ON-105 which connects the town of Red Lake to the Trans-Canada highway system, and Highway ON-618 which bisects the southern part of the Hasaga Property from east to west and connects the Hasaga Property to the town of Red Lake. Travel distances via paved highway from Winnipeg, Manitoba and Thunder Bay, Ontario are approximately 480 km and 570 km, respectively. The Red Lake region is also accessible year-round by commercial and private planes with daily departures from both Winnipeg, Manitoba and Thunder Bay, Ontario. Various dirt roads and trails allow for easy access throughout the Hasaga Property itself.

### 5.2 Climate

The Hasaga Property is in northwestern Ontario, an area considered Humid Continental within the Koppen climate classification, typified by large seasonal temperature differences, with warm to hot and often humid summers, and cold, sometimes severely cold, winters. Seasonal temperature and precipitation, as recorded by Environment Canada, are summarized in Figure 5.1. Summer months are typically the wettest, while November through April produce less precipitation. The average winter temperatures are coldest in December, January and February. Temperatures of  $-40^{\circ}\text{C}$  are possible. Snow cover and cold temperatures can be expected from November to April, but surface exploration drilling or geophysical programs can typically be carried out year-round.

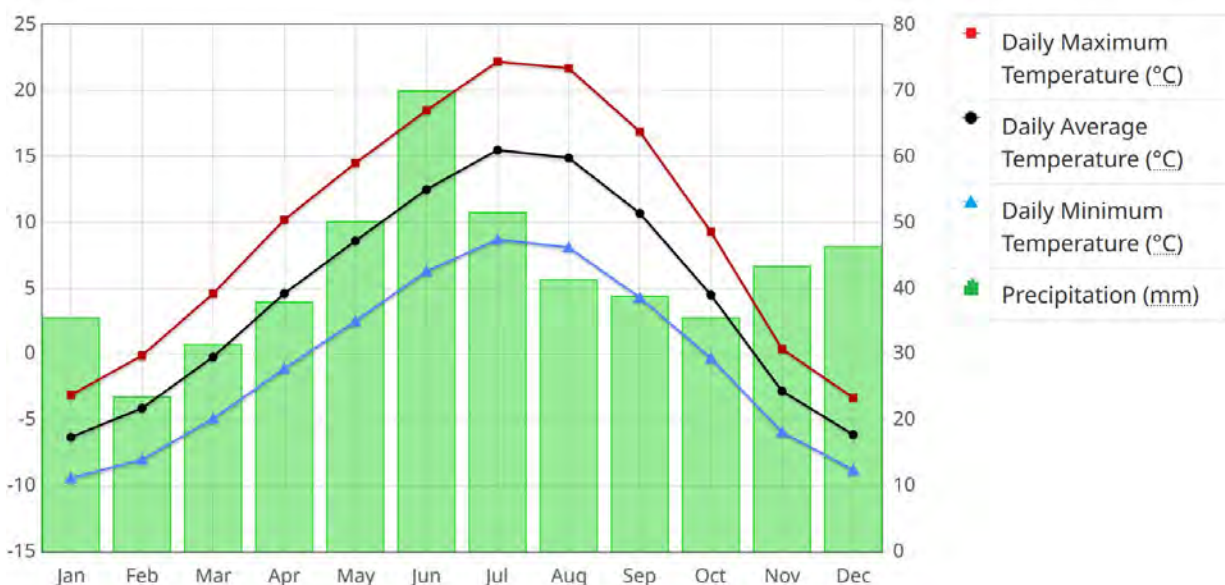


Figure 5-1: Temperature and Precipitation Graph From 1981 to 2010 For Red Lake, ON. Source: Environment Canada, 2023.

### **5.3 Local Resources and Infrastructure**

The Municipality of Red Lake has a population of over 4,000 within the communities of Red Lake, Balmertown, Cochenour and Madsen. The local economy and infrastructure are strongly focused on the mining industry. Nearby communities readily provide support services, equipment and skilled labour for both mineral exploration and mining.

Red Lake Airport (IATA: YRL, ICAO: CYRL) is located 5.6 km north of Red Lake and 1 km south of the community of Cochenour. The airport serves as a point of call for air carriers offering scheduled passenger service, is an operating base for the Ministry of Mines, and services both private and commercial fixed-wing aircraft and helicopter operators located on site. The airport is classified in the Regional/Local category according to the National Airports Policy. Local air services connect to major airports in Winnipeg, and Thunder Bay. Vehicle rentals are available at the airport.

The nearest city to Red Lake is Thunder Bay, which has government offices serving the Natural Resources and Mining sectors, and sources for exploration and mining machinery, supplies and expertise.

As the Hasaga Property is partly within the community of Red Lake itself, hydroelectric, transportation, and water supply infrastructure are readily accessible.

Several nearby mines are in operation, with tailings storage facilities and ore processing facilities situated in areas with similar topography and surface ownership structures to those found on the Hasaga Property.

### **5.4 Physiography**

The topography of the Hasaga Property area is flat to gently rolling hills with elevation ranging from 348 m to 421 m. Landforms on the Hasaga Property are attributed to glacial deposits with variable thickness that are controlled by underlying bedrock. Distinct topographic features that stand out in relief are attributed to post-glacial drainage patterns, with low lying areas consisting of ponds, swamps and streams.

The Hasaga Property lies within the northern coniferous section of the boreal forest. The predominant tree species is black spruce but the forest also includes tamarack, cedar and birch, with local stands of white birch, jack pine, red pine and poplar.

## **6.0 HISTORY**

### **6.1 Property Ownership Changes**

Prior to 2015 the areas surrounding the Hasaga and Buffalo zones were held by different owners, constituting individual properties with their unique ownership history. A full history of the ownership changes of the Hasaga and Buffalo claim blocks is presented in Table 6-1.

Initial staking of the claims surrounding the Hasaga, Red Lake Gold Shore (operation ceased in 1938) and Skookum mines was during the 1920's and 1930's. Hasaga Gold Mines Ltd was the product of claim consolidation by Jack Hammell in 1938. Two shafts were sunk in 1938 and another headframe and hoist completed in 1947. Hasaga Gold Mines Ltd ceased production in 1952, having produced 218,213 oz of gold. The company assets were divested immediately, and the claims were purchased by Lac Minerals Ltd. (Lac Minerals, now part of Barrick Gold Corporation) in 1956.

Lac Minerals held the Hasaga Property, variably referred to as the Hasaga Property or Red Lake Townsite Property, until 2010 at which time Goldcorp Inc. assumed ownership. The Hasaga Property was sold to Premier in 2015 and subsequently acquired by Equinox Gold in 2021.

The Buffalo claims were initially owned and explored in 1925 by Buffalo Red Lake Syndicate, comprised of Bill and Ed Cochenour and the Red Lake Prospector's Syndicate, established by Jack Hammell (Red Lake Regional Heritage Centre, 2023). Buffalo Red Lake Mines Ltd consolidated the claims staked by the respective syndicates in 1928. Exploration work was completed during this ownership from 1925 to 1947 and a two-compartment shaft was sunk between 1945 and 1946.

In 1981 the claims were owned by Wilanour Resources (Wilanour), who diamond drilled 6,600 m and completed open pit and underground development. Open pit mining was limited to mining of two benches, whereas underground development included construction of a decline from surface to 175 level. Wilanour processed a bulk sample from the Buffalo Mine which produced 1,656 oz of gold between 1981 and 1982.

In 1982, the claims were acquired by Madsen Gold Corp. and amalgamated with the neighbouring Madsen property by Red Lake Buffalo Resources Ltd. (Red Lake Buffalo) which in 1988 extended the decline that was initially developed by Wilanour an additional 253 ft. Red Lake Buffalo was subsequently renamed Madsen Gold Corp. and partially developed a stope above the 175 level, and 50 feet below the open pit. Approximately 6,600 tons were mined.

Claude Resources Inc. acquired Madsen Gold Corp. in 1998 (subsequent entities include Laurentian Goldfields Ltd. and Pure Gold Mining). Pure Gold Mining sold the Buffalo block of claims to Premier in 2015 for cash consideration of C\$2,500,000, share consideration of 1,001,721 shares of Premier with an expected value at the time of sale of approximately C\$2,500,000, and a 1% NSR royalty on all of the Buffalo claims (Pure Gold Mining Inc., 2015). As with the remainder of the Hasaga Property, the Buffalo block became owned by Equinox Gold through its acquisition of Premier in 2021.

*Table 6-1: Summary of Hasaga Property Ownership History.*

<b>Block</b>	<b>Owner</b>	<b>Date</b>
Hasaga	Hasaga Gold Mines	1938 - 1956
Hasaga	Lac Minerals Ltd. (Barrick Gold Corporation)	1956 - 2010
Hasaga	Goldcorp Inc.	2010-2015
Hasaga	Premier	2015 – 2021
Hasaga	Equinox Gold	2021 – present
Buffalo	Buffalo Red Lake Syndicate & Red Lake Prospector’s Syndicate	1925 – 1928
Buffalo	Buffalo Red Lake Mines Ltd.	1928 – 1980
Buffalo	Wilanour Resources Ltd.	1981 – 1982
Buffalo	Red Lake Buffalo Resources/Madsen Gold Corp.	1982 – 1998
Buffalo	Claude Resources Inc./ Laurentian Goldfields Ltd./Pure Gold Mining Inc.	1998 – 2015
Buffalo	Premier	2015 – 2021
Buffalo	Equinox Gold	2021 – present

## **6.2 Exploration by Previous Owners**

### **6.2.1 Surface Geochemistry**

Many small campaigns of surface rock sampling and prospecting have been conducted on the Hasaga Property, with varying levels of documentation of the results remaining. Exploration campaigns for which records exist are summarised in Table 6-2.

*Table 6-2: Summary of Historical Surface Sampling.*

<b>Year</b>	<b>Company</b>	<b>Details of Work</b>	<b>Reference</b>
1987 / 1988	Lac Minerals Ltd.	11 rock samples	(Kita, 1988a)
1988	Buffalo Red Lake Resources Corp.	16 rock samples	(Kita, 1988b)
2012	Goldcorp Inc.	45 rock samples	(Epp, 2013)
2013	Goldcorp Inc.	29 rock samples	(Epp, 2014)

### **6.2.2 Geophysics**

There has been limited geophysical work conducted on the Hasaga Property by historical operators. An induced polarization (IP) survey covering a small portion of the Hasaga Property was conducted in 1977 by Cochenour-Williams Gold Mines for which no data are available (Jourdain et al., 2017). Lac Minerals conducted magnetic, VLF-EM and IP surveys over the Hasaga and Gold Shore target areas in 1987; however, records for this work are incomplete with only summary figures available (Pegg, 1990).

### **6.2.3 Drilling**

The historical mining operations at the Hasaga, Red Lake Gold Shore (Gold Shore), Skookum and Buffalo mines were all likely supported and preceded by diamond drilling campaigns. However, very few primary records exist of this drilling. Historical archives indicate that mining at Hasaga was preceded by roughly 7,500 m of exploration drilling and a further ~50,000 m of production drilling. Exploration at the Gold Shore property prior to mining is reported to total ~800 m (Lortie, 1987). Operational reports from the Skookum Mine indicate that approximately 1,700 m of drilling was conducted on the prospect prior to initiation of mining (Skookum Gold Mines, 1938).

No collar locations, logs or assays are available for any of the drilling related to the Gold Shore or Skookum mines. Data are available for only 40 of the underground holes from the Hasaga Mine and have been incorporated into the Hasaga Property’s drillhole database.

Buffalo Red Lake Mines Ltd. completed trenching, stripping and diamond drilling from 1925 to 1947 on the Buffalo Mine area (Red Lake Regional Heritage Centre, Equity, 2023a). Surface diamond drilling was conducted around the mine while it was in operation by Wilanour Resources in the early 1980’s with a total of 95 holes recorded for 6,600 m of core. Assays, collar location, and lithologies are recorded for these drillholes in a digital database and hard copy records are stored in company archives. A subsequent drilling campaign of 5 drillholes during the 1988 season was conducted by Red Lake Buffalo Resources Corp., with a focus on defining additional zones of mineralization to the main Buffalo Mine zone. Despite being limited in scope, several encouraging results were obtained and follow up work was recommended at the time (Kita, 1988b).

Following closure of the Hasaga and Gold Shore mines, no diamond drilling was conducted on these targets until 1987 when Lac Minerals drilled 12 holes totalling 5,026 m targeting both the Red Lake Gold Shore and Hasaga Mine areas. At the time results were considered generally positive from both areas, and additional work was recommended (Pegg, 1990).

Following its acquisition of Lac Minerals, Barrick Gold Corporation conducted a follow-up drilling campaign in 1996, primarily targeting the C Zone’s down-plunge extension of the Hasaga Mine workings. Despite intersecting mineralization at the targeted zones, the grades were generally too low to be of interest at the time and no additional work was recommended (Gauthier, 1996).

This history of diamond drilling is summarized in Table 6-3.

*Table 6-3: Summary of Historical Diamond Drilling.*

Year	Company	Prospect	Number of holes	Meterage	Data Source
1928	Red Lake Gold Shore Mines	Gold Shore	26	807	(Lortie, 1987)
1928 - 1947	Buffalo Red Lake Mines Ltd.	Buffalo	Unknown	~8,840	<a href="https://www.redlakemuseum.com/buffalo-mine.html">https://www.redlakemuseum.com/buffalo-mine.html</a>
1936	Skookum Gold Mines	Skookum	14	1,312	(Skookum Gold Mines, 1938)
1937	Hasaga Gold Mines	Hasaga	Unknown	7,450	(Lortie, 1987)
1937	Skookum Gold Mines	Skookum	6	373	(Skookum Gold Mines, 1938)
1938 – 1952	Hasaga Gold Mines	Hasaga	47 (surface) 1,459 (UG)	49,458	(Lortie, 1987)
1980 / 1981/1982/1988	Wilanour Resources/ Red Lake Buffalo Resources/Madsen Gold Corp.	Buffalo	95	8,447	Wilanour Drill Logs
1987 / 1988	Lac Minerals	Hasaga & Gold Shore	12	5,026	(Pegg, 1990)
1988	Buffalo Red Lake Resources	Buffalo	5	1,257	(Kita, 1988b)
1996	Barrick	Hasaga	4	2,898	(Gauthier, 1996)

### 6.3 Historical Mineral Resource Estimates

MRB & Associates Geological Consultants were engaged by Premier to author an NI 43-101 Technical Report on the Hasaga Property and completed a Mineral Resource Estimate on the Hasaga, Buffalo and Central zones (Jourdain et al., 2017). The Buffalo and Hasaga sectors generally correspond to the areas overlying or along strike from the past producing Buffalo and Hasaga mines, respectively. The Central sector refers to a zone of mineralization within the Dome Stock south of the historical Red Lake Gold Shore Mine. The Mineral Resources were reported at a 0.5 g/t gold cut-off grade and were

constrained by optimised open pit shells using the parameters summarised within the footnotes of Table 6-4. Equinox Gold is not treating the historical Mineral Resource Estimate as current and it is superseded by the Mineral Resource Estimate presented in Section 14 of the report herein.

*Table 6-4: 2016 Hasaga Historical Mineral Resource Estimate.*

Sector	Indicated			Inferred		
	Tonnes ('000t)	Grade (Au g/t)	Gold (Oz)	Tonnes ('000t)	Grade (Au g/t)	Gold (Oz)
Central	31,613	0.79	803,900	23,733	0.76	582,700
Hasaga	9,050	0.89	258,100	806	1.00	26,000
Buffalo	1,632	1.18	61,900	604	1.12	21,800
<b>TOTAL</b>	<b>42,294</b>	<b>0.83</b>	<b>1,123,900</b>	<b>25,143</b>	<b>0.78</b>	<b>630,500</b>

- Independent Qualified Persons for the Hasaga Mineral Resources Estimate (MRE) are Abderrazak Ladidi P. Geo and Vincent Jourdain, P. Eng., Ph.D of MRB & Associates. The effective date of the estimate is December 30<sup>th</sup>, 2016;
- CIM definitions were followed for calculations of mineral resources;
- mineral resources that are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues;
- the MRE includes 13 mineralized zones (4 in Central Sector, 6 in Hasaga Sector and 3 in Buffalo Sector), and 2 lithological (rock-type) envelopes;
- high gold assays were capped at 15 gpt Au;
- bulk density data were averaged on a per zone basis: zones 1220, 1230 and 1320 at 2.71 t/m<sup>3</sup>; zones 1330, 1510, 1540 and 2399 at 2.72 t/m<sup>3</sup>; zones 1520 and 1525 at 2.74 t/m<sup>3</sup>; zones 1210 and 1340 at 2.75 t/m<sup>3</sup>; zones 1515 and 2599 at 2.77 t/m<sup>3</sup>; zone 1530 at 2.79 t/m<sup>3</sup>, and; zone 1310 at 2.83 t/m<sup>3</sup>;
- resources were evaluated from drill-hole and channel samples using a 5-pass ID2 interpolation in a block model (block size = 5 x 5 x 5 metres);
- open pit resources are constrained to the property limit in an optimized pit-shell at a cut-off grade of 0.5 gpt Au;
- pit shell optimization parameters: Mining cost = 2.5 \$CAD/t; milling cost = 12.0 \$CAD/t; G&A = 3.0 \$CAD/t; Gold price = 1,400 \$US/oz (exchange rate 1.3 \$CAD = 1 \$US); milling recovery = 94%; mining recovery = 100%; mining dilution = 0.0%; pit slope = 55°
- Totals may not add correctly due to rounding

Source: Jourdain et al., 2017

## 6.4 Historical Production

Four past producing mines are present on the Hasaga Property: Hasaga, Red Lake Gold Shore, Skookum and Buffalo (Figure 4-2). The following descriptions of historical production are modified from Epp (2014).

### 6.4.1 Hasaga Mine

Originally staked in 1928, the Hasaga Mine was in production from 1938 to 1952, producing 218,213 oz of gold at an average grade of 4.94 g/t gold (0.144 oz/t). Ore being skipped to surface was also “hand cobbled” removing about 20% waste tonnage from the mill feed, and was then trucked to the milling facilities located at the Red Lake Gold Shore Mine. Production came from two closely situated shafts in the northeast of the property; however, a third exploration shaft was driven to explore the potential for ore to the southwest. Underground excavations were quite extensive with the deepest shaft (No. 3 Shaft) reaching a depth of 747 m (2,450 ft) from surface with 14 established levels and stope panels being 152 – 183 m in strike length. Mineralization at the Hasaga Mine was

nearly identical to that at the Howey Mine situated immediately to the east, consisting of a fractured and mineralized quartz porphyry dyke contained within strongly sheared intermediate calc-alkaline volcanics. This mineralized porphyry dyke is generally trending northeast-southwest and dipping steeply to the south (85/155°) and can vary in width from 3 to 46 m; however, the best grades occurred within the narrower 3 to 12 m portions of the dyke. Gold occurred within fracture veins consisting of bluish white quartz, black tourmaline, coarse pyrite and minor amounts of other sulphides including sphalerite, galena, chalcopyrite and tellurides.

#### **6.4.2 Red Lake Gold Shore**

In production from 1936 to 1938, the Red Lake Gold Shore Mine produced 21,100 oz of gold at a grade of 8.36 g/t (0.244 oz/t). Hosted in granodiorites within the core of the Dome Stock, the main mineralization was pipe-like, with the strongest mineralization occurring at the intersection of two different aged shears. The older shear was oriented at 75/055 and the younger shear oriented 80/130. The main mineralized zone consisted of quartz veins ranging in widths from 1.5 to 9.1 m (5 to 30 ft) and having strike lengths of 15.2 to 45.7 m (50 to 150 ft). The veins consist of near pure quartz with minor pyrite and chalcopyrite, with even rarer sphalerite, tetrahedrite, altaite and free gold. Underground development consisted of a 700-foot shaft with five developed levels and an internal winze down to 1000 feet with two additional developed levels. A 113 tonne per day (125 ton per day) mill was constructed to support production. Ore grades were enriched on surface by hand sorting of the ore material, removing approximately 20% waste material from the mill feed. Once the ore resource on this property was depleted in 1938, the Hasaga Mine purchased the patented ground and all assets specifically to obtain ownership of the Gold Shore milling facilities.

#### **6.4.3 Buffalo**

The Buffalo Deposit occurs along the southern edge of the Dome Stock immediately west of the old patented Hasaga Mine property. Initial staking was performed in 1925, with sufficient drilling and stripping work being done up to 1931 to patent the claims. Initial underground exploration work was only started in 1947 to 1948 and focused on narrow quartz-tourmaline (+/- coarse pyrite) veins in tectonized quartz porphyry dykes intruding sheared greenstones, similar to mineralization found at the Howey and Hasaga mines located to the east. Though these veins often had high gold content, the volume of vein material was not high enough and was found to be uneconomic at the time.

In the early 1980s and late 1990s work shifted to quartz-tourmaline veining contained within granodiorite of the southern Dome Stock. These veins were also narrow quartz, tourmaline and pyrite dominated, frequently occurring with pinkish carbonate alteration halos within gray granodiorite. A decline was driven down from surface to access small tonnage stopes; however, due to narrow vein widths and excessive mining dilution, this mineralization was also found to be uneconomic. Ore from this phase of mining was trucked and processed at the nearby Madsen Mine.

#### **6.4.4 Skookum**

Initial exploration on this property began in 1936 with a short shaft being sunk to 51.8 m (170 ft) in the summer of 1937; however, no lateral development was extended from this shaft. Structures of interest on this property were moderately well-developed shear zones along 070/subvertical trends



(which were frequently intruded by granodiorite to mafic dykes), and narrow quartz veins running 150/subvertical. The southeasterly trending quartz vein carried most of the noted gold and tended to be less than six inches wide, white to bluish grey in colour and glassy in texture. The veins contain only minor pyrite and chalcopyrite with local visible free gold.

## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 Regional Geology

The following description of the regional geology of the Red Lake area is taken from DeGasperis (2018) which is primarily taken from Sanborn-Barrie et al. (2004).

The Red Lake Greenstone Belt (RLGB) evolved on the southern margin of the North Caribou terrane, within the Uchi Subprovince. The Uchi Subprovince evolved from a volcano-sedimentary continental margin between 2.99 to 2.85 Ga to a subduction-related volcanic arc setting between 2.75 to 2.73 Ga. The North Caribou terrane collided with the Winnipeg River terrane between 2.72 to 2.70 Ga marking the Uchian phase of the Kenoran orogeny (Stott and Corfu, 1991; Sanborn-Barrie et al., 2000; Sanborn-Barrie et al., 2001).

Seven volcano-sedimentary supracrustal assemblages make up the RLGB (Figure 7-1). Balmer assemblage volcanic rocks (3.0 to 2.98 Ga) are the region's oldest rocks and host most of its gold deposits. This dominantly mafic to ultramafic sequence is comprised of tholeiitic to komatiitic basalts. Balmer Assemblage volcanic rocks are interpreted to have originated from shallow, subaqueous eruptions from mantle plume magmatism in an island arc environment. A sequence of felsic to intermediate calc-alkaline extrusive and pyroclastic units of the Ball assemblage overlie Balmer assemblage rocks and is interpreted to reflect a shallow marine intra-arc rift. The Slate Bay assemblage (2.9 to 2.85 Ga) unconformably overlies both the Balmer and Ball assemblages and comprises a clastic sedimentary sequence found throughout the belt ranging from conglomerate, quartz arenite to wacke and mudstones. The Bruce Channel assemblage is contemporaneous with the Slate Bay assemblage at ~2.89 Ga and unconformably overlies the Balmer assemblage in the eastern RLGB. It is comprised of dacitic to rhyodacite pyroclastic rocks indicative of explosive arc-volcanism overlain by upward-fining clastic sediments and chert-magnetite iron formation indicative of transition to a marine environment. The Trout Bay assemblage is a distinct sequence exposed in the southwest part of the RLGB. This assemblage comprises a lower sequence of tholeiitic basalt overlain by clastic sedimentary rocks with interbedded intermediate tuff (Sanborn-Barrie et al., 2004).

A regional angular unconformity representing an approximate 100-million-year time gap in volcanic activity exists between the Confederation assemblage and older assemblages. The Confederation assemblage (2,748 to 2,739 Ma) is a predominantly calc-alkaline volcanic sequence. The lower Confederation assemblage, known as the McNeely group, includes intermediate to mafic volcanic rock, and is overlain by felsic to intermediate tuff, lapilli tuff and massive to pillowed andesite. Minor interbedded sedimentary units occur within the volcanic sequence. The McNeely group is overlain by the Heyson group, a tholeiitic volcanic sequence that includes a range of basalts (tholeiitic, pillowed and porphyritic), porphyritic andesite flows and dacitic tuffs. The younger Graves group consists of tuffaceous conglomerate, andesitic to dacitic pyroclastics and syn-volcanic diorite and tonalite. The McNeely and Graves groups are interpreted to have formed in a shallow marine to subaerial arc complex, with intra-arc extension represented by the Heyson group (Sanborn-Barrie et al., 2001, 2004).

Three main phases of felsic syn- to post-volcanic plutonism occurred in the RLGB. The first includes the syn-volcanic Graves plutonic suite (2,736  $\pm$  3/-2 Ma to 2,731  $\pm$  3/-2 Ma) comprising

granodiorite, tonalite and quartz monzonite. The Graves plutonic suite is widespread in the western and northern parts of the RLGB. The second plutonic phase is post volcanic, syn-tectonic and include major plutons proximal to the Red Lake townsite, including the Mackenzie Island ( $2,720 \pm 3$  Ma), Dome Stock ( $2,718.2 \pm 1.1$  Ma) and Albino Granodiorite plutons. Also included in this second phase is a syn-tectonic quartz-feldspar porphyry dyke swarm dated to  $2,714 \pm 4$  Ma that may include the important Hasaga Porphyry. A third phase of late to post tectonic intrusions were emplaced at ca. 2.7 Ga and include Killala-Baird Batholith, Cat Island pluton, Medicine Stone Lake Batholith and Para Lake Stock.

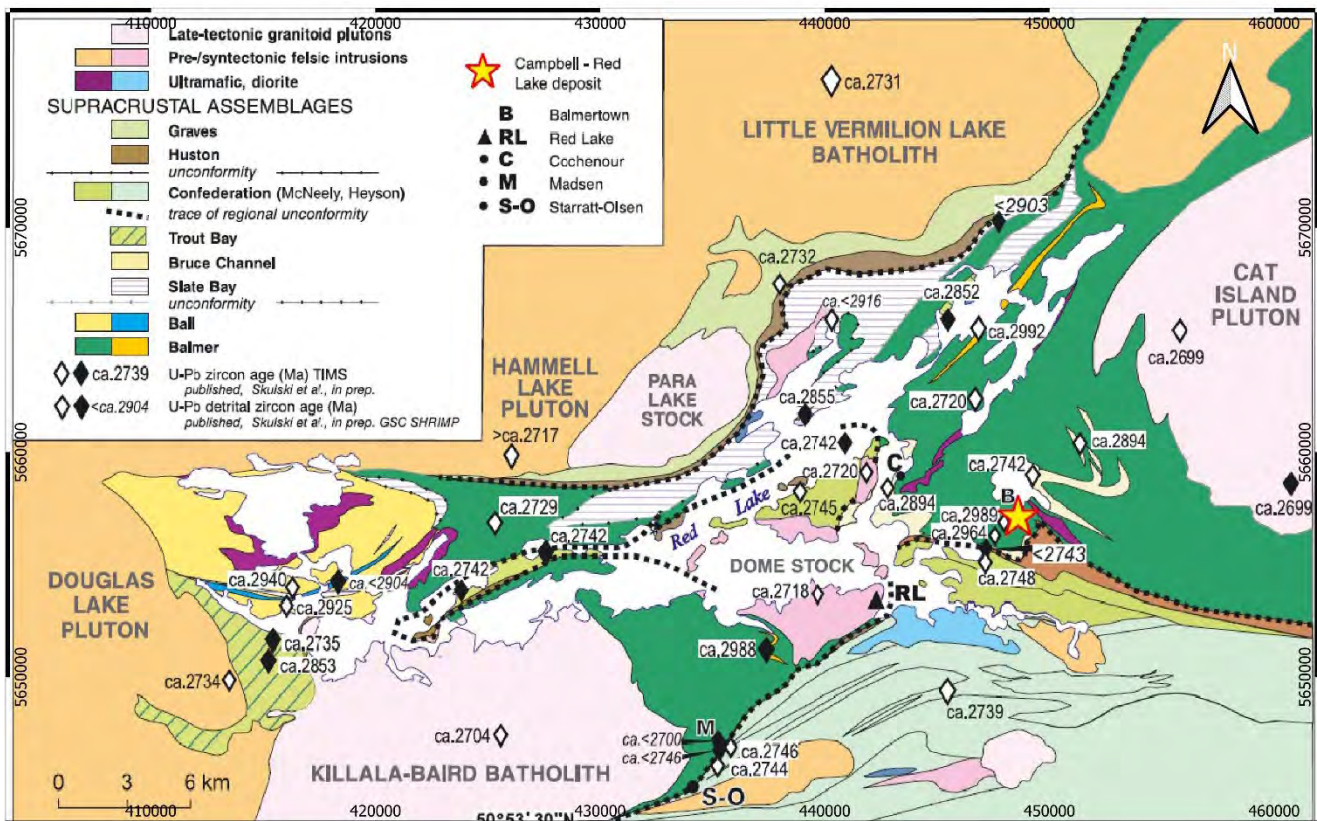


Figure 7-1: Regional Geology of the Red Lake Greenstone Belt. Source: Stott and Corfu (1991) in Sanborn-Barrie et al., (2001).

## 7.2 Regional Deformation and Metamorphism

The following description of the regional deformation and metamorphism of the Red Lake area is taken from DeGasparis (2018).

The RLGB preserves evidence for multi-phase deformational events synchronous with greenschist-amphibolite metamorphism resulting in significant gold mineralization (Dubé et al., 2004). This deformation and subsequent metamorphism are interpreted to be the result of orogenic processes with syn- to late-plutonism. A total of five deformation events occurred regionally ( $D_0$ - $D_4$ ).  $D_0$  represents the earliest non-penetrative deformation event with the overturning and/or rotation of the Balmer assemblage stratigraphy prior to the Neoproterozoic volcanism (Sanborn-Barrie et al., 2001).

Following this event, is a series of locally penetrative deformation events ( $D_1$ - $D_4$ ) which affected rock packages locally.

The first penetrative deformation event ( $D_1$ ) occurred approximately between 2,742 to 2,733 Ma evidenced by  $D_1$  structures present in Mesoarchean volcanic rocks, the Huston polymictic conglomerate and the McNeely sequence, and constrained by the Graves sequence dated at 2,733 Ma (Sanborn-Barrie et al., 2001; Dubé et al., 2004). These structures include north-northeast trending isoclinal folds ( $F_1$ ) in the eastern belt and northwest trending folds in the southwestern portion of the RLGB (Dubé et al., 2004). Also associated with folding is an axial planar foliation ( $S_1$ ). Figure 7-2 shows the axial traces of  $F_1$  with coplanar axial planar foliation ( $S_1$ ). Regionally, these structures suggest an east-west shortening event with respect to present day geographical orientations (Sanborn-Barrie et al., 2001).

$D_2$  deformation is superimposed on  $D_1$  with northwest trending folds ( $F_2$ ) and coplanar foliation ( $S_2$ ) becoming southwest trending in the central belt. These  $D_2$  structures wrap around and are weakly preserved in the McKenzie and Dome stocks indicating these intrusions are pre- to syn-tectonic (Figure 7-2). This constrains the timing of  $D_2$ , suggesting an age between 2,720 to 2,715 Ma, pre-dating the Dome Stock (2718 Ma) and outlasting its emplacement (Sanborn-Barrie et al., 2001; Sanborn-Barrie et al., 2004; Liu et al., 2011). Early peak amphibolite grade metamorphism ( $M_2$ ) coincided with  $D_2$  and is related to both deformation/orogenic processes and contact metamorphism from intruding stocks and batholiths (Menard et al., 1999).  $D_2$  is interpreted as a collisional event between the North Caribou Terrane and the Winnipeg River Sub province to the south.

The third event ( $D_3$ ) is described as a late to post collisional event with a maximum age of  $2,700 \pm 6$  Ma (Dubé et al., 2004; Sanborn-Barrie et al., 2004).  $D_3$  is coplanar with  $D_2$  suggesting reactivation or continuous northeast crustal shortening less intense than  $D_2$  (Dubé et al., 2004). A kilometre-scale peak amphibolite facies metamorphic aureole locally affects volcanic rocks adjacent to post orogenic intrusions (Killala-Baird and Cat Island batholiths) and this contact metamorphism is thought to be synchronous with  $D_3$  (Menard et al., 1999; Dubé et al., 2004).

The final deformation event,  $D_4$  ( $< 2.70$  Ga), resulted in widespread brittle hair-line faults filled with quartz, tourmaline and chlorite (Dubé et al., 2004). This event also resulted in short, thin carbonate veins typically less than 2 mm wide (Menard et al., 1999; Pettigrew, 1999). These brittle faults are known as “black line faults” and are typically described as barren, discrete, 2-5 mm slip planes that cut and displace mineralization (Dubé et al., 2003).

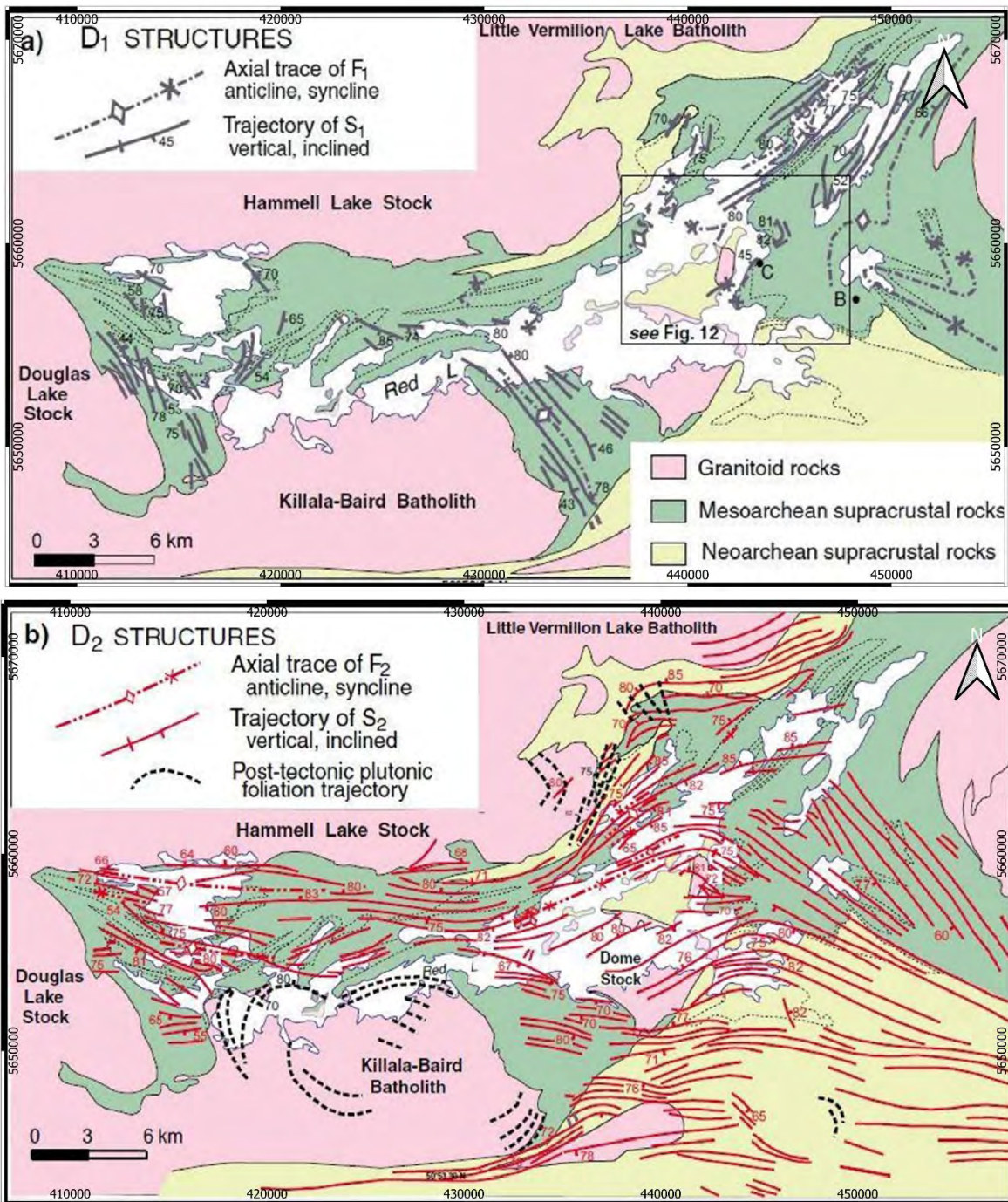


Figure 7-2: Distribution of D<sub>1</sub> and D<sub>2</sub> Structures Across the RLG. Source: Sanborn-Barrie et al. (2004).

### 7.3 Regional Metallogeny

The following discussion of metallogeny of the RLG is largely taken from Dubé et al (2004) which, though largely focused on the High Grade Zone of the Campbell-Red Lake deposit, extrapolates findings in that area to the RLG.

Menard et al (1999) proposed two stages of gold mineralization in the RLGB, with the main stage corresponding to D<sub>2</sub> and occurring between 2,720 to 2,715 Ma and a subsequent but lesser event in terms of total gold content at around ca. 2,700 Ma, represented by auriferous quartz-pyrite tourmaline vein-type deposits (e.g., Buffalo mine).

U-Pb geochronological data presented by Dubé et al (2004) support this interpretation and constrain dates for the two events: a pre-2,712 Ma main stage related to silicification of iron-carbonate ± quartz veins with associated arsenopyrite and a second stage that is post 2,702 Ma and is associated with filling of late brittle fractures, to form a smaller amount of very high grade gold mineralization.

## **7.4 Property Geology**

The main lithological units on the Hasaga Property are described as follows and shown in Figure 7-5.

### **7.4.1 Balmer Assemblage**

The Balmer assemblage is dominated by submarine tholeiitic basalt, komatiite and komatiitic basalt with minor felsic volcanic rock, iron formation and fine-grained clastic sedimentary units dated at 3.0 to 2.98 Ga (Sanborn-Barrie et al., 2001). Balmer Basalt is distinguished from other mafic volcanic sequences in the belt by relatively high titanium contents (approximately 2 wt%). Regional mapping suggests that a small area of Balmer assemblage basalt is present on the southern contact of the Dome Stock; however, logging data from Premier drilling indicates a mix of mafic and intermediate volcanics on this contact. Whole rock geochemistry from these samples does not show any high titanium oxide (TiO<sub>2</sub>) values, with the majority below 0.8% (in the range expected for Confederation assemblage units). Most samples from the volcanic sequence have calc-alkaline affinity so evidence for Balmer assemblage rocks on the Hasaga Property is lacking and basalt on the southern contact of the Dome Stock is likely Confederation-aged.

### **7.4.2 Confederation Assemblage**

The Confederation assemblage in the Hasaga area comprises both the McNeely and Heyson sequences (Sanborn-Barrie et al., 2004), described as calc-alkaline and tholeiitic sequences, respectively. Classification plots of drilling samples from this sequence provide support for this interpretation, with the vast majority plotting in calc-alkaline fields of several geochemical plots including K<sub>2</sub>O vs SiO<sub>2</sub> (Figure 7-3) and AFM plots (Figure 7-4). This analysis suggests that the majority of rocks intersected by drilling belong to the McNeely Sequence. According to Sanborn-Barrie et al (2001), this sequence comprises intermediate tuff breccia and lapilli tuff with minor felsic and amygdaloidal mafic volcanic units. This is consistent with drill core logging records and the drill core review by author Swanton.

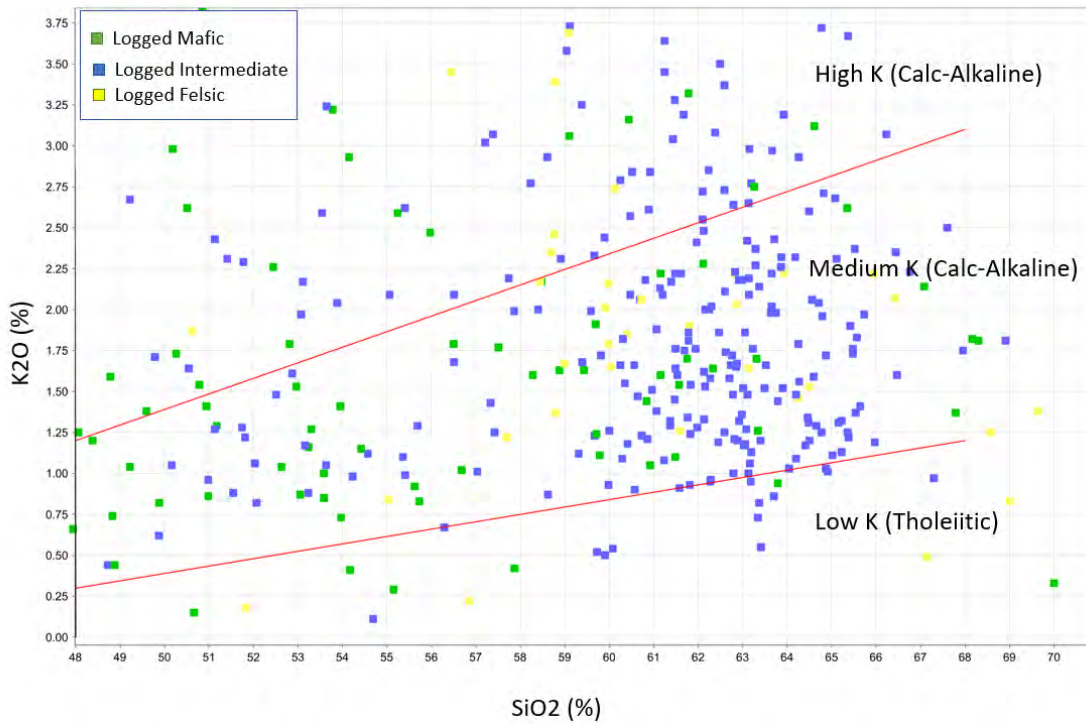


Figure 7-3: Scatterplot of  $K_2O$  vs  $SiO_2$  for Volcanic Rocks.

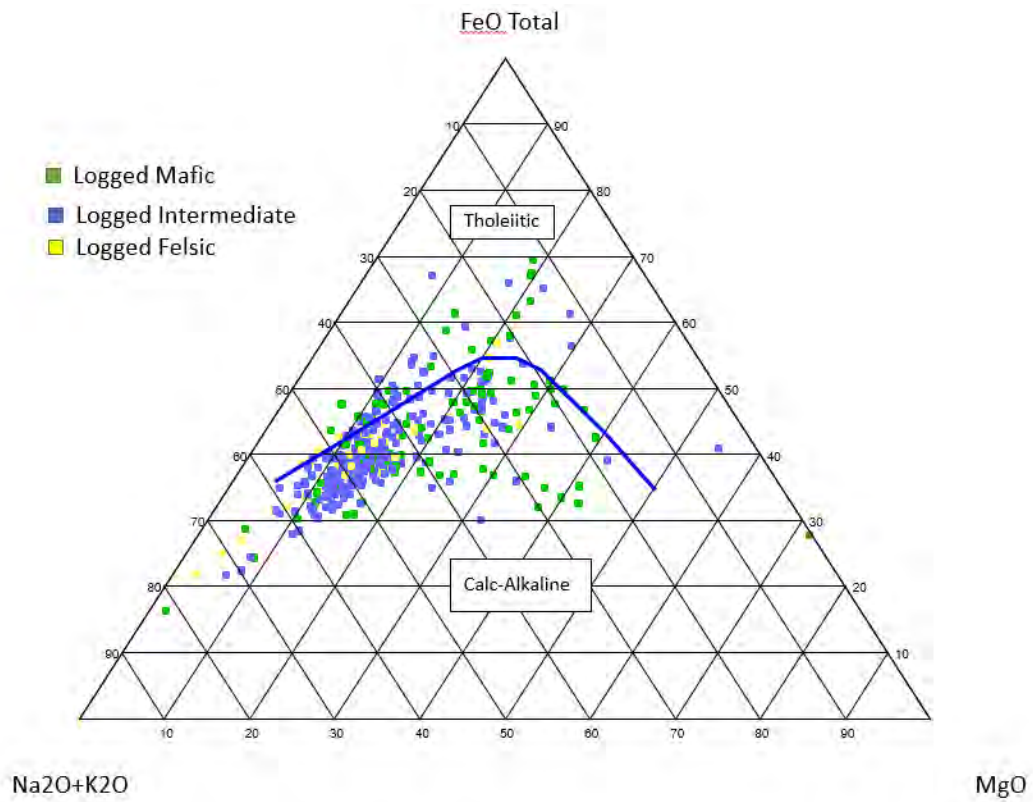


Figure 7-4: AFM plot of Volcanic Rocks.

### **7.4.3 Howie Diorite**

The Howie Diorite is a diorite/quartz diorite unit of tholeiitic affinity which intrudes the McNeely Sequence of the Confederation assemblage and is interpreted to be a sub-volcanic feeder to the Heyson Sequence (Sanborn-Barrie et al., 2004). The main body of the intrusion is located east of the Hasaga Property, though small fingers of it have been interpreted to intrude the McNeely stratigraphy on the eastern edge of the Hasaga Property.

### **7.4.4 Hasaga Porphyry**

The Hasaga Porphyry is approximately a 5 – 140 m wide quartz-feldspar porphyry intrusion that is hosted by both the Howey Diorite and Confederation volcanic rocks. This subvertical to steeply north dipping unit trends northeast-southwest (~240-250° trend), subparallel with the contacts of the volcanic rocks in which it is contained. The porphyry intrusion pinches and swells along strike and down dip, with multiple splays and separate lenses interpreted. It is intruded by mafic dykes which have also been mapped over most of its strike and trend subparallel with the porphyry and volcanic rock contacts. Open S-folds and left-stepping deflections are observed at the outcrop and property scales and are interpreted to be primarily the result of the D<sub>2</sub> deformation event.

This unit is the primary host for gold mined at the Hasaga and Howie mines and the Hasaga, Epp C and Epp D gold zones.

### **7.4.5 Dome Stock**

The Dome Stock granodiorite intrusion lies to the northwest of the regional unconformity and dominates the central and northern portions of the Hasaga Property. The  $2,718.2 \pm 1.1$  Ma intrusion contains mafic volcanic xenoliths believed to be from the Balmer Assemblage, which underlies the stock. The unit is weakly, locally deformed and foliated at a result of deformation during the D<sub>2</sub> event (Sanborn-Barrie et al., 2004). Stockwork quartz-tourmaline ± pyrite veins within this unit host gold within the Buffalo and Central Zones.

### **7.4.6 Lavery Dyke**

The Lavery Dyke is a north-northwest trending, steeply dipping gabbroic intrusion which cuts the Dome Stock in the northwestern portion of the Hasaga Property. It extends over 1.5 km along strike from the southeastern margin of the Dome Stock towards the northwestern boundary of the Hasaga Property and varies from under 5 to 15 m in thickness. Locally, the Lavery Dyke is cut by gold-bearing quartz-tourmaline veins equivalent to those cutting Dome Stock and is the primary host of one of the subzones of the Central Zone.



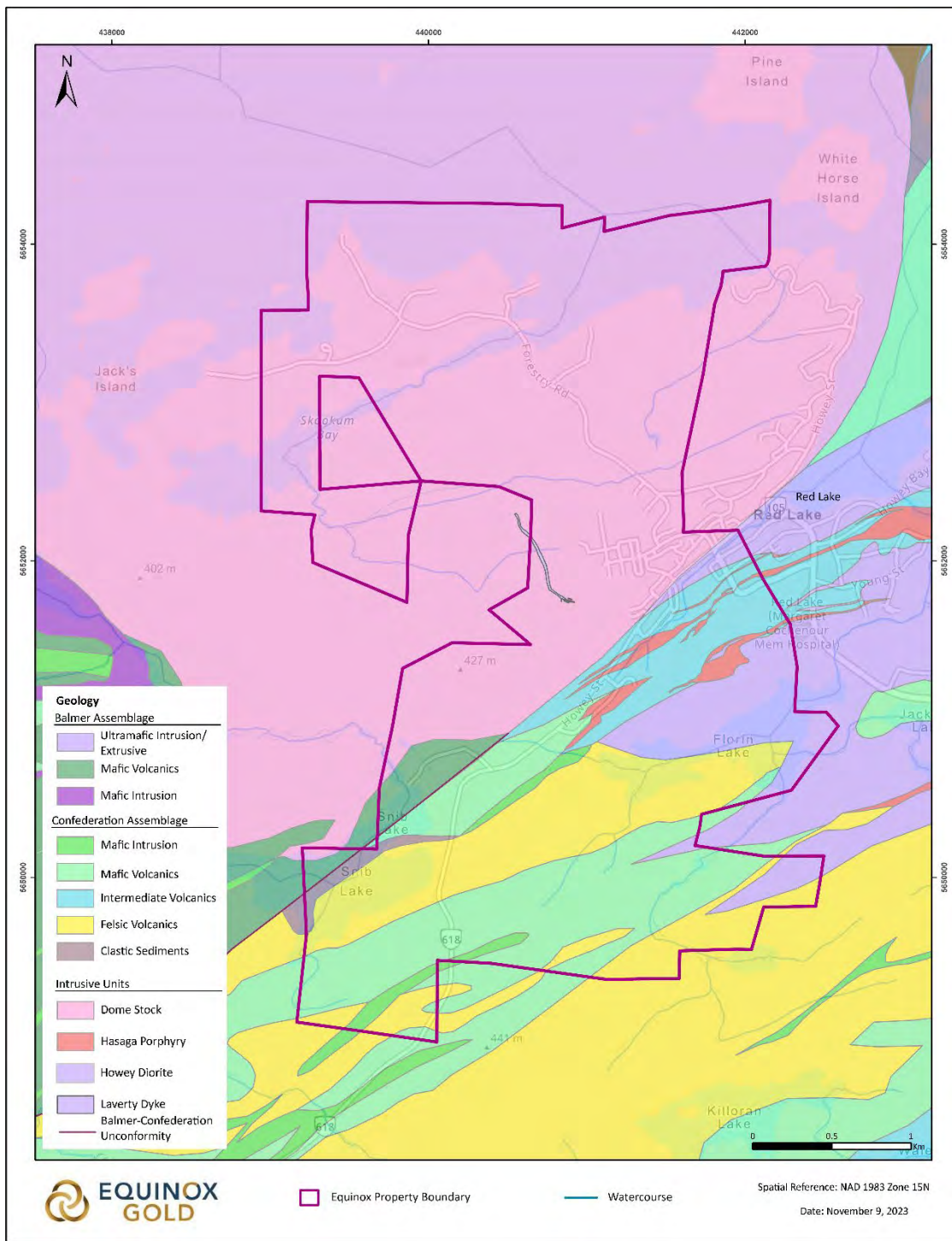


Figure 7-5: Hasaga Property Geology. Source: Equinox Gold, 2024.

## 7.5 Property Mineralization

Of the two main stages of gold mineralization present in the Red Lake area (see Section 7.3 for a full description of their characteristics), the earlier event primarily affected Balmer assemblage rocks and is responsible for most of the historical mining production in the region (e.g., the Campbell-Red Lake, Madsen and Cochenour deposits). The second event affected a larger variety and broader age range of host rocks, with examples hosted within both Balmer and Confederation assemblage rocks and intrusive bodies such as the Dome Stock.

All past gold production and currently defined Mineral Resources on the Hasaga Property are interpreted to have formed during the second, later gold event and are hosted primarily within felsic intrusive units with minor extensions into the surrounding volcanic rocks. In the case of the Central and Buffalo Zones, this host unit is the Dome Stock; in the case of the Hasaga Zones it is the Hasaga Porphyry. Post mineralization deformation within the Dome Stock is relatively minor, and as such the mineralized veins hosted within it have remained largely planar; exploration in these areas is primarily focused on discovering and defining structural corridors which contain sufficient vein density to be of economic importance. Deformation within the Hasaga Porphyry is more pronounced, with both the host and the gold-bearing veins displaying significant folding and transposition into the dominant  $F_2$  regional foliation. The basic exploration and modelling concept for gold mineralization within the Hasaga Porphyry is to discover and define lenses of these auriferous veins and associated shear zones within the property-scale structure which largely parallel the Hasaga Porphyry intrusion and includes the Hasaga and Howie mines as well as the Hasaga mineralized zones. Section 10.2.1 provides additional detail on this model and its application.

Gold on the Hasaga Property is predominantly hosted within two units: the Dome Stock and the Hasaga Porphyry. Description of gold-bearing rock within and in proximity to the Hasaga Porphyry (Section 7.5.1) is adapted from Clairet et al. (2020). The description of Dome Stock-hosted gold (Section 7.5.2) is taken from DeGasparis (2018).

### 7.5.1 Gold Hosted by Hasaga Porphyry

Five variations of structure host gold within and proximal to the Hasaga Porphyry (Table 7-1 and Figure 7-6). To a lesser extent, disseminated gold in very fine-grained siliceous groundmass is also present within the Hasaga Porphyry.

Veins are mainly composed of white to smoky quartz, typically with 2-15% pyrite (locally up to 35%). Other gangue mineral phases include: 1) coarse euhedral ankerite 2) mm to cm-scale layers or late veinlets of tourmaline 3) chlorite 4) red to honey-coloured sphalerite forming coarse clusters and likely pyrite replacements 5) fine to medium grained clusters of chalcopyrite 6) trace galena associated with the sphalerite 7) native gold and 8) native silver or tellurides (highly reflective, white-silver soft mineral).

The types of gold traps listed above can be characterized in terms of deformation style under which they may open (Table 7-1). Sheared veins and sericitic shear zones occur in a setting dominated by ductile deformation under which the hosting rock may react to deformation in a plastic way. This is in contrast to extensional quartz-pyrite or tourmaline quartz veins, as well as the various types of

chlorite or paragonite filled fractures or network which open under brittle deformation conditions. These changes in deformation type and gangue materials are important as they are related to areas of different Hasaga Porphyry competency and/or proximity to the main shear zone. The Epp C zone is located in an area where the Hasaga Porphyry is less thick, corresponding to a maximum stretching zone, allowing this relatively competent rock to fracture resulting in quartz-pyrite veins. By contrast, the Epp D zone is characterized by continuous shear zones cutting Hasaga Porphyry.

The two most common forms of gold in veins are as free gold within quartz (Figure 7-6 inset B and E) in pyrite crystals or concentrated at margins of pyrite edges. Sphalerite is the third dominant mineral within the high density of veins found in high-grade zones (for example in the Epp C zone). To a lesser extent, gold occurs in filling of late fractures in quartz crystals (Figure 7-6 inset A). A significantly high pyrite content (>15%) in veins seems correlated with higher gold grades (the sample of the vein in Figure 7-6 inset F returned 455 g/t gold for example). Non-gold-bearing Hasaga Porphyry contains a background concentration of ~0.5%, 2 to 4 mm wide continuous quartz-pyrite veins, in which sulphide content commonly exceeds 10%. This may be part of the broad low grade (< 0.3 g/t gold) footprint widely distributed throughout the Hasaga Porphyry. Tourmaline content in veins from the Hasaga Porphyry is highly variable and localized (Figure 7-6 inset D and J).

Within sericitic shear zones, gold occurs as sub-millimetre-scale needle-shaped grains, elongated along the foliation plane (Figure 7-6 inset K and N). This likely indicates that gold predates, or at very least is synchronous with, the peak deformation event which the area was subjected to.

Structural measurements of veins from the Hasaga Zone show a preferred orientation of 83/350 (dip/dip direction) (Figure 7-8) in the main dense cluster of vein attitudes, with a secondary distribution oriented more generally north-south. This corroborates the interpretation of vein geometries discussed by previous workers (e.g. Gauthier et al (1996)) and suggested by the geometry of stopes within the Hasaga Mine (Figure 7-7). This preferred vein orientation is slightly oblique to the strike of the primary host lithology (the Hasaga Porphyry), with isolated examples of mineralized veins extending tens of metres into the surrounding volcanic units. Observation of small-scale folding of mineralized veins in drill core, in conjunction with the patterns illustrated by historical levels plans, has informed the current interpretation of mineralization within the Hasaga Zone as being hosted in a series of roughly E-W trending stacked lenses which have locally been deformed and offset by small-scale S-shaped (sinistral) folding. The north-south trending veins are interpreted to be both splays off the main zones and smaller, attenuated hinges between the main E-W trending limbs of the S-folds; this is the same pattern observed both in the historical level plans and in an outcrop of mineralized Hasaga Porphyry mapped during the 2020 field season (see section 9.1). The current resource model has been constrained within a series of domains created based upon this interpretation (see Section 14).

*Table 7-1: Gold settings within the Hasaga Porphyry.*

<b>High grade / visible gold</b>	<b>Location</b>	<b>Deformation Type</b>
Compression or shear quartz-pyrite veins	All zones	<i>Ductile</i>
Sericitic-chloritic shear zones	All zones	<i>Ductile</i>
Extensional quartz-pyrite veins	Epp C Zone	<i>Brittle</i>
Light Blue Chlorite-paragonite filled fractures	Epp D Zone	<i>Brittle</i>
Tourmaline-quartz vein sets	Outcrop / HMP191	<i>Brittle</i>
<i>Disseminated within siliceous groundmass</i>	<i>All zones</i>	-



Figure 7-6: Photographs of Various Gold Occurrences Within The Hasaga Porphyry. Source: Claret et al, 2020.

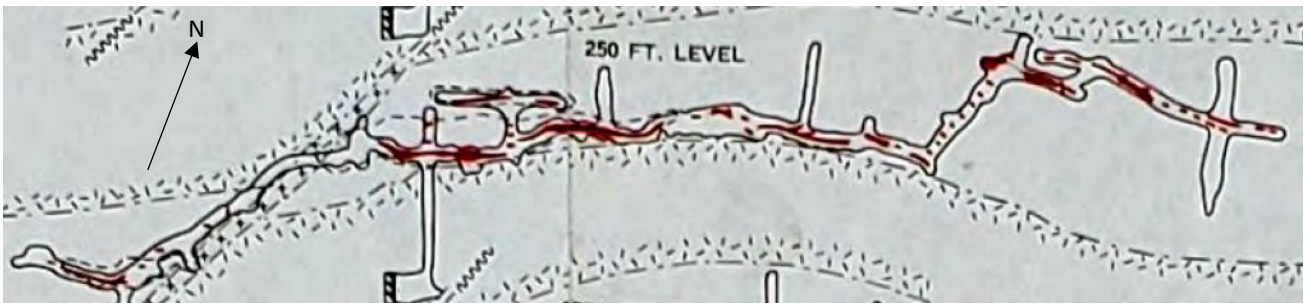


Figure 7-7: Level Plan of 250 ft Level of the Hasaga Mine. Ore / vein zones are illustrated in red. Source: Equinox Gold archive.

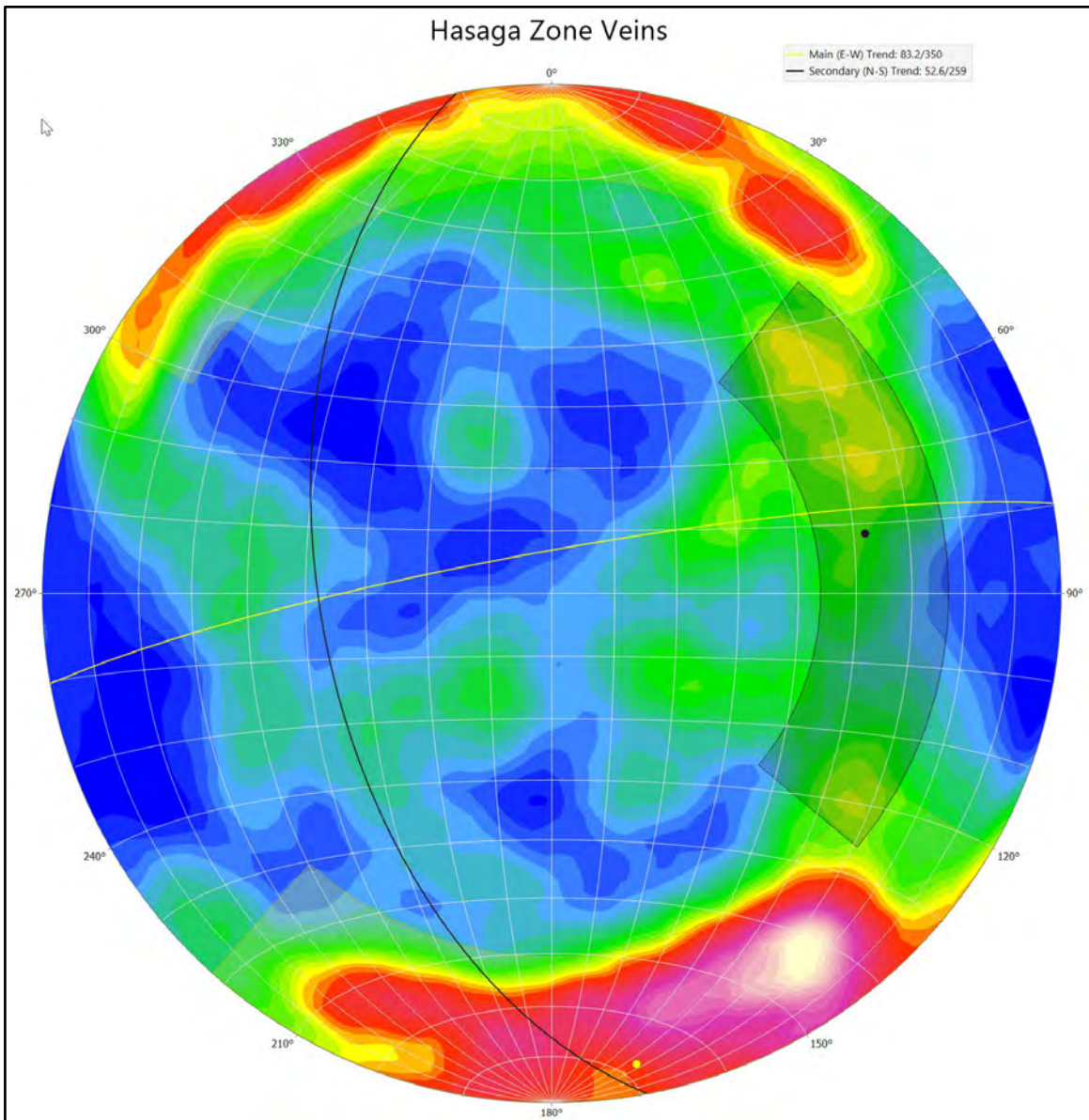


Figure 7-8: Stereonet Showing Density Contour of Vein Poles, and Mean Plane to Poles from Hasaga Porphyry.

### 7.5.2 Dome Stock Mineralization

The Central and Buffalo Zones are the primary gold-bearing zones within the Dome Stock, although exploration drilling to the north elsewhere in this unit at the historical Red Lake Gold Shore workings has returned some narrow high-grade intersections. Within the Dome Stock, gold occurs in a series of conjugate vein sets (NNW-SSE and WNW-ESE trending sets) with locally silicified and sericite altered granodiorite (Pettigrew, 1999). The gold-bearing quartz veins are offset by brittle millimetre-scale sericitic-chloritic “line” faults interpreted to have formed during late D<sub>3</sub> or D<sub>4</sub> deformation. These faults are clearly a conjugate set that may be a result of continued northward compression and/or due to relaxation.

Potassium feldspar alteration is common, especially within the Central Zone in contrast to the Buffalo Zone which is mainly silicified and sericitized due to a local shear zone (Pettigrew, 1999; Epp, 2013). Drill core from the Central and Buffalo Zones show visible gold in glassy blue quartz ± carbonate ± tourmaline ± pyrite ± chalcopyrite + trace molybdenite veins within silicified, sericitized and/or potassium feldspar altered granodiorite (Figure 7-9). Significant mineralization also occurs within the north-northeast trending gabbroic Lavery Dyke.

Gold within the Dome Stock granodiorite occurs as free gold within quartz ± carbonate ± tourmaline vein sets and/or within the wall rock proximal to these veins. This late infilling of gold and associated minerals is interpreted to be post Lavery Dyke emplacement during D<sub>3</sub> to D<sub>4</sub> deformation and associated retrograde greenschist facies metamorphism which produced a carbonate-epidote-chlorite alteration assemblage. Gold in both the Dome Stock granodiorite and the younger gabbroic Lavery Dyke is late- to post-potassic alteration occurring with epidote, pyrite and/or chalcopyrite. Higher grade gold tends to occur where there are higher percentages of pyrite and chalcopyrite within the quartz veins.

Though taken from a relatively small sub-set of Central zone drillholes, this oriented core data shows two clustered groups of vein orientations. The first and most abundant has an average dip/dip direction of 82/060; the second has an average dip/dip direction of 83/334 (Figure 7-11). Grade continuity between drillholes is relatively robust in this NNW-orientation and given the weight of geological evidence indicating an overall NNW trend to mineralization, this is the preferred direction of continuity used to create modelled resource domains at the Central Zone.

Mineralization intersected by Premier drilling at the Buffalo Zone is equivalent to that described by Pettigrew (1999), with gold hosted primarily in a set of conjugate quartz veins with relatively small and weak alteration halos cutting the Dome Stock. The larger and more continuous vein set has an average strike and dip of 119/73 and modelling of mineralized resource domains for the Buffalo zone has been informed by this preferred orientation. Though at a slightly different orientation to the mineralized domains at the Central Zone, mineralization at Buffalo is equivalent in character and host rock and is as such interpreted to be part of the same event.

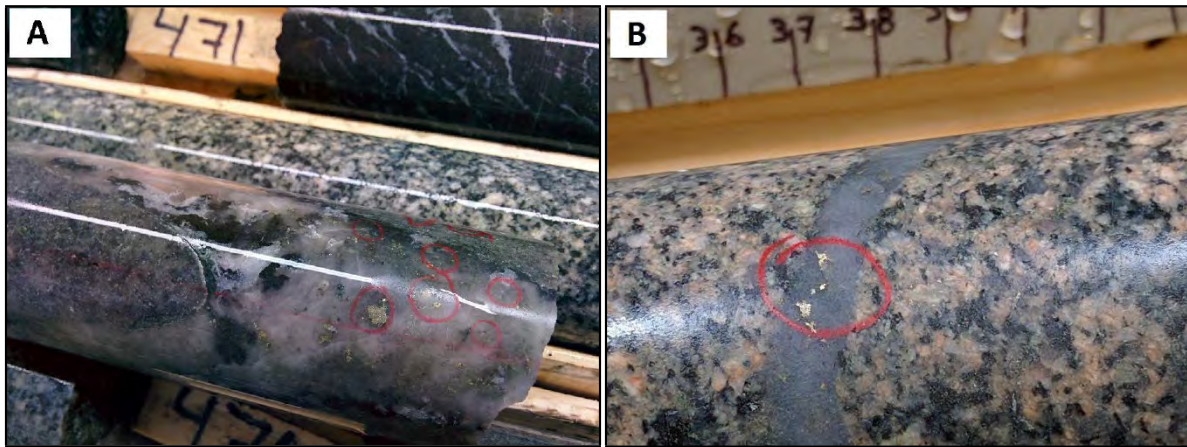


Figure 7-9: Photographs of Granodiorite Hosted Gold-Bearing quartz Veins. A) Quartz-carbonate-tourmaline-pyrite vein with gold within silicified and sericite altered granodiorite (HLD-031); B) Quartz-carbonate-pyrite-chalcopyrite vein with gold within granodiorite (HLD-060). Source: Clairet et al, 2020.

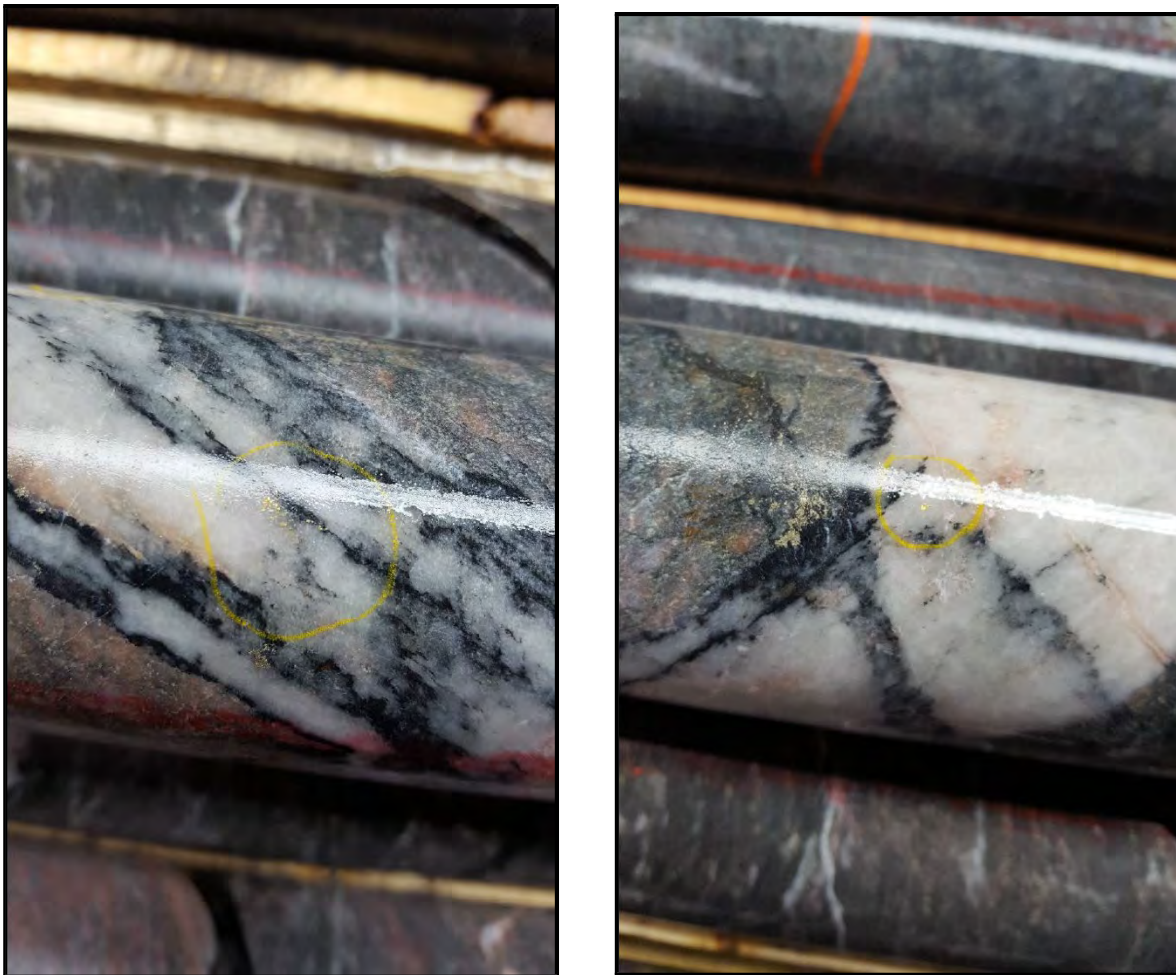
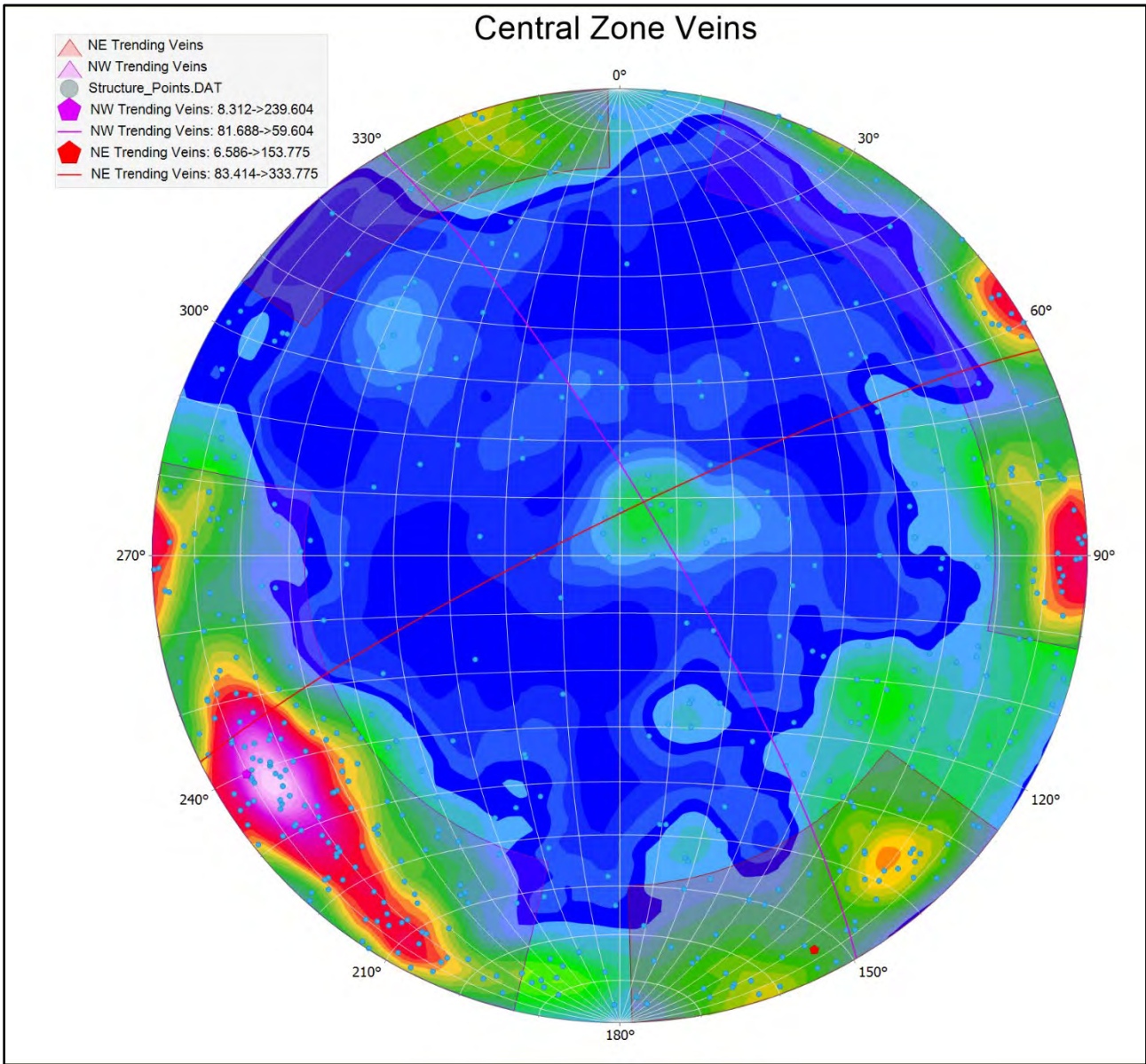


Figure 7-10: Gold in Quartz-Tourmaline-Calcite-Pyrite Veins from Buffalo Zone. A) Hole HMP168 at 287.1 m (Left); B) HMP168 at 292.15 m (Right). Source: Clairet et al, 2020.





*Figure 7-11: Stereonet Showing Point Density Contour of Poles to Veins and Average Vein Plane from Central Zone.*

## **8.0 DEPOSIT TYPES**

Gold deposits at the Hasaga Property, and within the broader Red Lake district, are orogenic gold deposits. Following Kerrich et al. (2000), orogenic gold deposits are typically associated with crustal-scale fault structures, although the most abundant gold mineralization is hosted by lower-order splays from these major structures. Deposition of gold is generally syn-kinematic, syn- to post-peak metamorphism and is largely restricted to the brittle-ductile transition zone. However, deposition over a much broader range of pressure-temperature conditions (200–650°C; 1–5 kbar) has been demonstrated. Host rocks are highly variable, but typically include mafic and ultramafic volcanic rocks, banded iron formation, sedimentary rocks and more rarely granitoid rocks. Alteration mineral assemblages are dominated by quartz, carbonate, mica, albite, chlorite, pyrite, scheelite and tourmaline, although there is inter-deposit variation.

## **9.0 EXPLORATION**

### **9.1 Surface Geochemistry**

Mechanized overburden stripping with accompanying channel sampling and outcrop mapping was conducted by Premier during 2016 on six areas of the Hasaga Property. Four of these areas are in the Central zone area and are described by Jourdain et al (2017); the description of sampling and work is taken from that report. The other two areas of sampling and stripping are along strike of the Hasaga mine; the larger and more northeastern of the two was mapped in detail and resampled as part of the 2020 exploration program (Clairet et al., 2020).

Prior to the completion of the channel sampling program in the Central zone, mechanized overburden-stripping was carried out. These outcrops were subsequently hosed off using water under high-pressure. Forty-five bedrock channels, with an aggregate length of 439.7 m were cut. A total of 455 samples were collected from these channels for gold analysis (Jourdain et al., 2017).

During the 2020 exploration program, an outcrop approximately 400 m southwest of the Hasaga #1 shaft was mapped in detail by Premier geologists (Figure 9-1). The outcrop is primarily composed of the Hasaga Porphyry and results of the mapping were used to inform a model of the structural behaviour of the Hasaga Porphyry as a whole and the related mineralization. In conjunction with the mapping 46 bedrock channel samples with an aggregate length of 18.1 m were taken and submitted for gold analysis (Clairet et al., 2020).

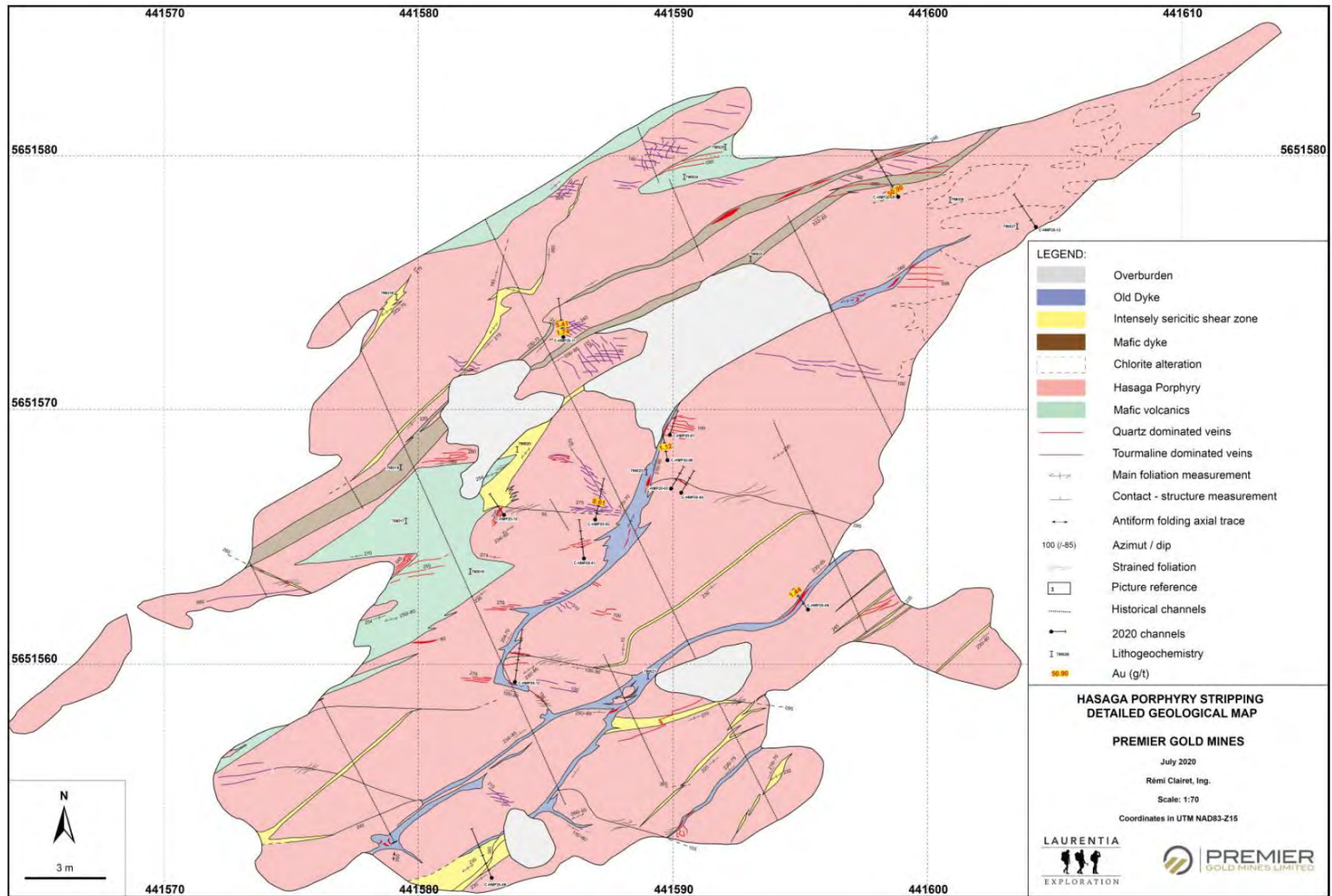


Figure 9-1: 2020 Outcrop map of the Hasaga Porphyry surface exposure. Source: Clairet et al., 2020.

## 9.2 Geophysical Surveys

Premier conducted a high-resolution drone magnetic survey over the Hasaga Property. The data collection was done in March 2020 by Vision4K with 50 m spaced lines flown in a north-south orientation. The entire Hasaga Property was covered for a total of 211 line-km, though data collection was not possible over areas of urban, highway or power transmission development. A detailed geological interpretation and 3D magnetic inversion was subsequently completed by MB Geosolutions (Boivin, 2020). No specific relationships between known mineralization and geophysical patterns were extrapolated by Boivin (2020); however, it is worth noting that the second order structural patterns interpreted from the data correlate generally with trends of mineralization described by historical workers (Figure 9-2). Within the Dome Stock two orientations of structure are present: roughly NW-SE and NE-SW which matches with the trends identified in the Dock Stock at the Buffalo Deposit (Pettigrew, 1999). South of the Dome Stock second order structures trend both E-W and NE-SW; this pattern is compatible with the trend of mineralization described in the Hasaga Mine (Horwood, 1946).

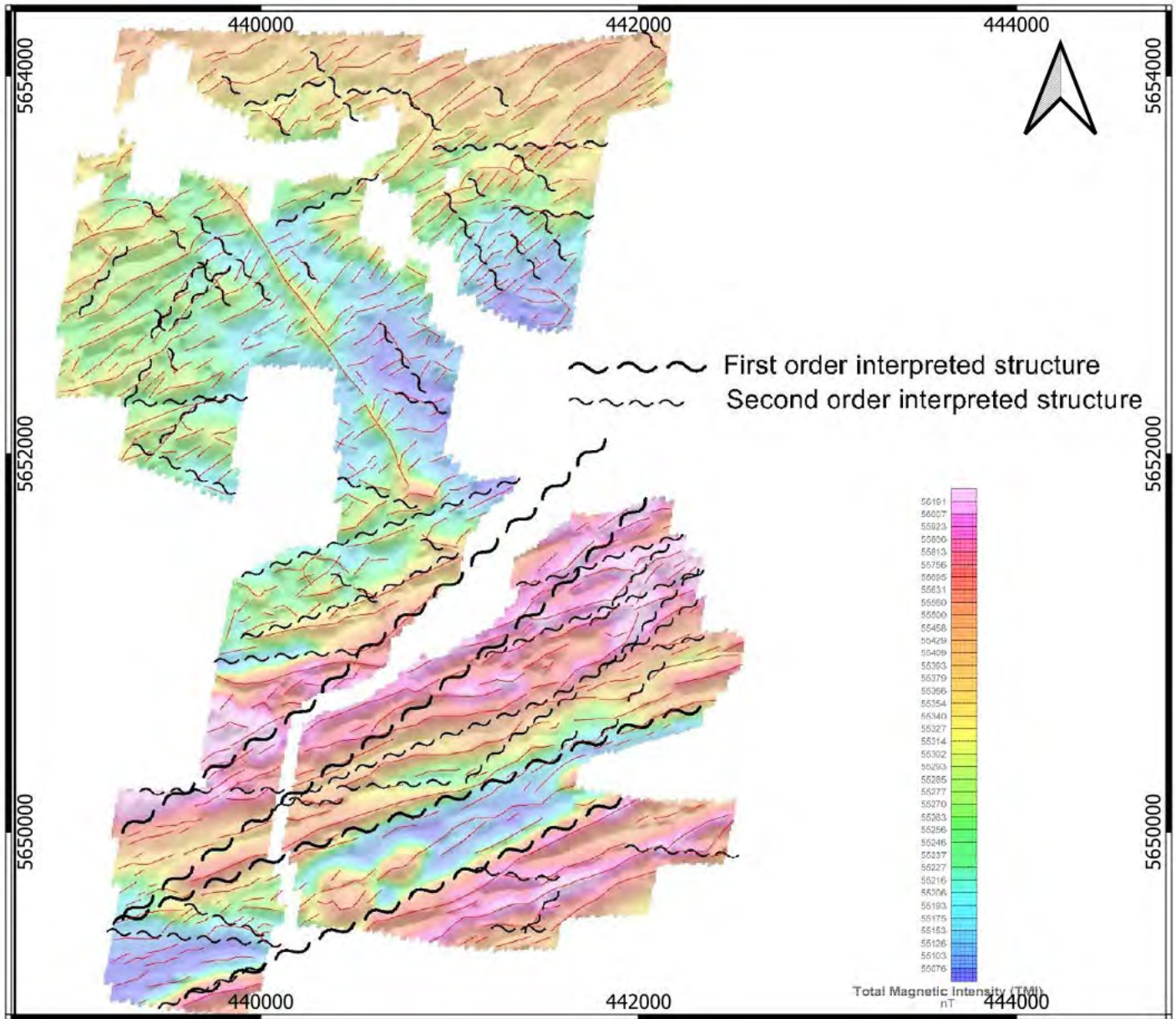


Figure 9-2: Interpreted Structures from 2020 Magnetic Survey Data. Source: Boivin, 2020.

### 9.3 Other Surveys

A high-definition Light Detection and Ranging (LiDAR) survey was flown in 2016 by Sumac Geomatics Incorporated of Thunder Bay. The LiDAR data was then used to create a digital elevation map (DEM) of the Hasaga Property. An updated LiDAR survey with accompanying high resolution airphoto was flown in May 2022 by KBM Resources Group of Thunder Bay. This survey was flown over an area that includes several neighbouring properties, including the Rahill-Bonanza (an Evolution Mining – Equinox Gold joint venture), North Madsen and Madsen claim groups and these were shared with Pure Gold Mining (at the time, the owners of the Madsen property).

A low-definition bathymetric survey of the flooded Buffalo Sector open pit was completed by Premier. The bathymetric survey utilized a canoe for conveyance and was carried out by Premier employees. A hand-held GPS was used to record station coordinates and a generic fish-finder for water depth determinations. The maximum water depth recorded was 2.75 m.

## 10.0 DRILLING

Premier conducted diamond drilling campaigns on the Hasaga Property from 2015 to 2018 and in 2020. A total of 174,204 m was drilled in 339 holes which represents 87% of the drilled metres on the Hasaga Property for which records exist and have been compiled. The remaining 13% was drilled by previous operators. Drilling was primarily focused on the Hasaga and Central Zone, with a lesser amount targeting along-strike extensions of the Hasaga trend and the Buffalo zone (Table 10-1, Figure 10-1). No significant drill testing has been conducted north of the Central Zone or south of the main Hasaga trend.

Equinox Gold conducted a geotechnical drilling program in 2023 to assess crown pillar stability at the Hasaga and Red Lake Gold Shore mines.

Table 10-1: *Summary of Diamond Drilling Conducted by Premier and Equinox Gold.*

Year	Number of Holes	Total Meterage	Areas tested	Primary Reference
2015	128	60,026	Hasaga, Central	(Jourdain et al., 2017)
2016	130	50,128	Hasaga, Central, Buffalo	(Jourdain et al., 2017)
2017	22	20,733*	Hasaga	(DeGasperis, 2018)
2018	28	19,529	Hasaga, Buffalo	(DeGasperis, 2018)
2020	31	23,789	Hasaga	(Clairet et al., 2020)
2023	8	232	Hasaga, Red Lake Gold Shore	
<i>Totals</i>	<i>347</i>	<i>174,436</i>		
<i>*Estimate based on subtraction of wedge depths from total end of hole depths of all holes</i>				

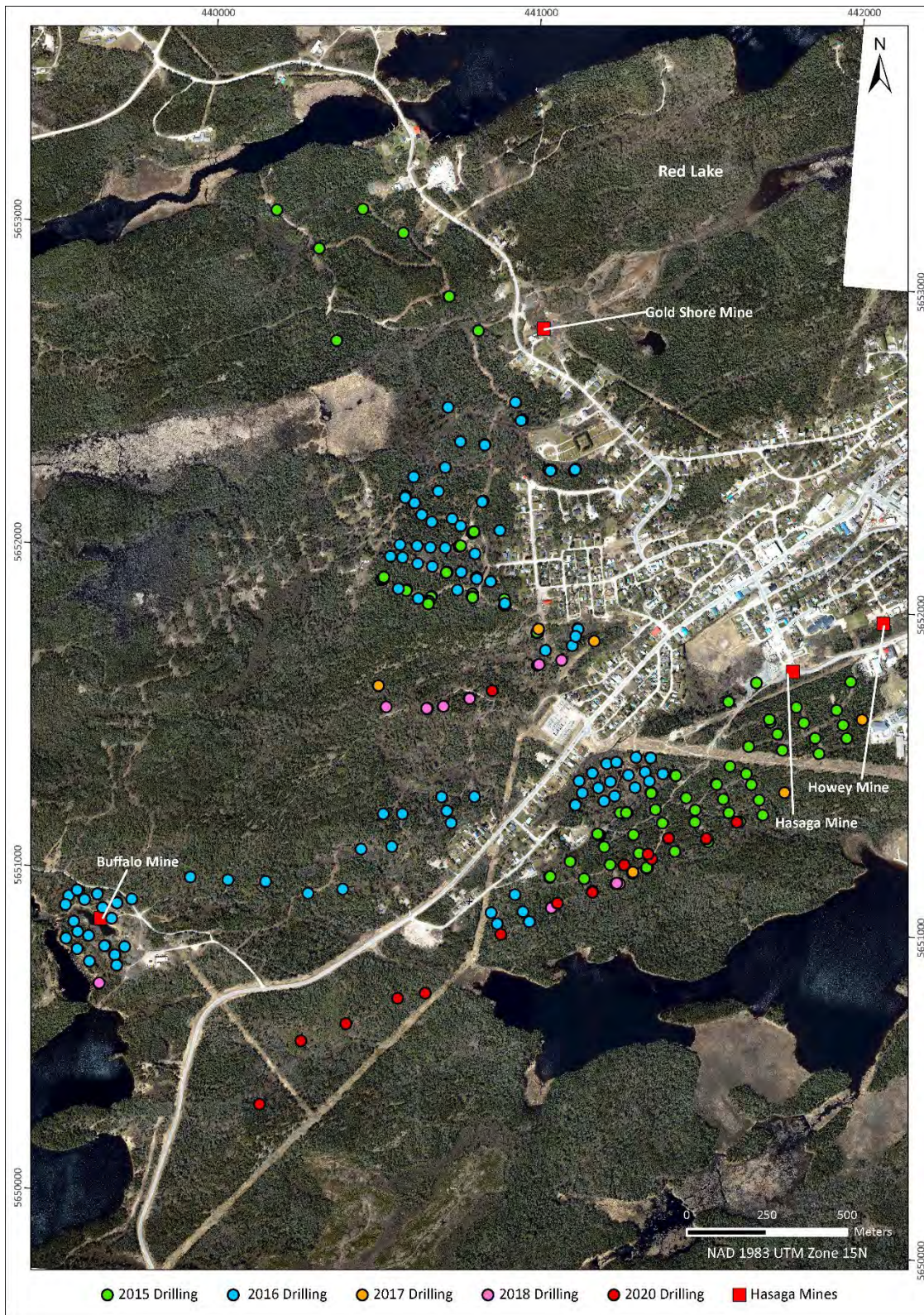


Figure 10-1: Plan Map of Drillhole Collar Locations Source: Equity, 2024.



## **10.1 Drilling Procedures**

All exploration diamond drilling was conducted with skid-mounted surface rigs operated by Chibougamou Diamond Drilling of Chibougamou, Quebec. All core recovered was of NQ size.

During the 2015 and 2016 programs drill sites were located and aligned using a Reflex Azimuth Positioning System (APS) and global positioning system (GPS) (Jourdain et al., 2017). During the 2017 and 2018 drilling programs holes were collared and aligned with a Devico Devisight GPS tool (DeGasperis, 2018). During the 2020 drilling program the holes were located with a handheld GPS unit and aligned with a Reflex TN14 north seeking gyrocompass (Clairet et al., 2020).

Downhole surveys were conducted on all holes drilled by Premier with the majority of holes surveyed with both magnetic and gyroscopic survey tools. Holes drilled during the 2015 and 2016 programs were surveyed during drilling with a Reflex EZTRAC tool (a magnetic based tool) and by a Reflex EZ-Gyro tool following completion of drilling. Nine holes were not surveyed with the EZ-Gyro for logistical reasons. During the 2017 and 2018 drilling programs downhole surveys were performed by Premier geological staff with an Axis Champ North-seeking gyroscopic survey tool (DeGasperis, 2018). During the 2020 drilling program drillholes were surveyed with a Reflex Gyro Sprint-IQ.

Drill core was oriented on a subset of holes drilled in 2016, 2017 and 2018. Details of the orientation tool are unknown.

Wedging from existing drillholes to create daughter holes for more cost-efficient testing of deep targets was undertaken during the 2017, 2018 and 2020 drill programs; wedges were oriented with either the EZTRAC or Reflex FlexIt tools, depending on which was in use for single shot surveys at the time.

Geotechnical drilling was conducted on the Hasaga Mine crown pillar and the Red Lake Gold Shore Mine crown pillar by Team Drilling of Saskatoon, Saskatchewan from September 10<sup>th</sup> – September 21<sup>st</sup>, 2023.

## **10.2 Drilling Details and Results**

### **10.2.1 Hasaga**

Initial drilling by Premier during the 2015 and 2016 seasons at the Hasaga target focused on areas less than 300 m from surface and along strike from the historical Hasaga Mine workings; this targeting approach informed the 2017 resource calculation of Jourdain et al (2017) which did not include any mineralization down-plunge of the historical workings. Much of this zone is included in the current modelling as the Hasaga Zone.

Drilling during the 2017, and 2018 and 2020 seasons was largely focused on deeper zones with all target points greater than 400 m below surface. The 2017 program primarily targeted the Epp C Zone, identified by previous programs and reports (Lortie (1987) and Gauthier (1996)) as an attractive exploration target down-plunge of the historical Hasaga Mine workings along the southwest plunge line which previous workers had interpreted to be a primary control on ore geometry (Horwood (1946) and Gauthier (1996)). Results of this drilling program confirmed and expanded upon favourable results from historical mining records, and follow up drilling into the Epp C zone was undertaken during 2018

(DeGasperis, 2018) and 2020 (Clairet et al., 2020). In addition to building significant drill density within the core of the Epp C Zone, these programs tested directly underneath the Hasaga Mine workings, down-plunge of the Hasaga mineralization, and down-plunge of the Epp C Zone. While drill results from directly below the Hasaga Mine were largely low grade, significant intercepts were returned from both down-plunge of Hasaga and Epp C (this zone has been termed Epp D). Drillholes were generally drilled at an azimuth roughly perpendicular to the strike of the dominant trend of mineralization, and at dips as shallow as reasonable for the target depths. As a result, intersection angles of drillholes to mineralization are generally oblique but not excessively so, as illustrated in Figure 10-2.

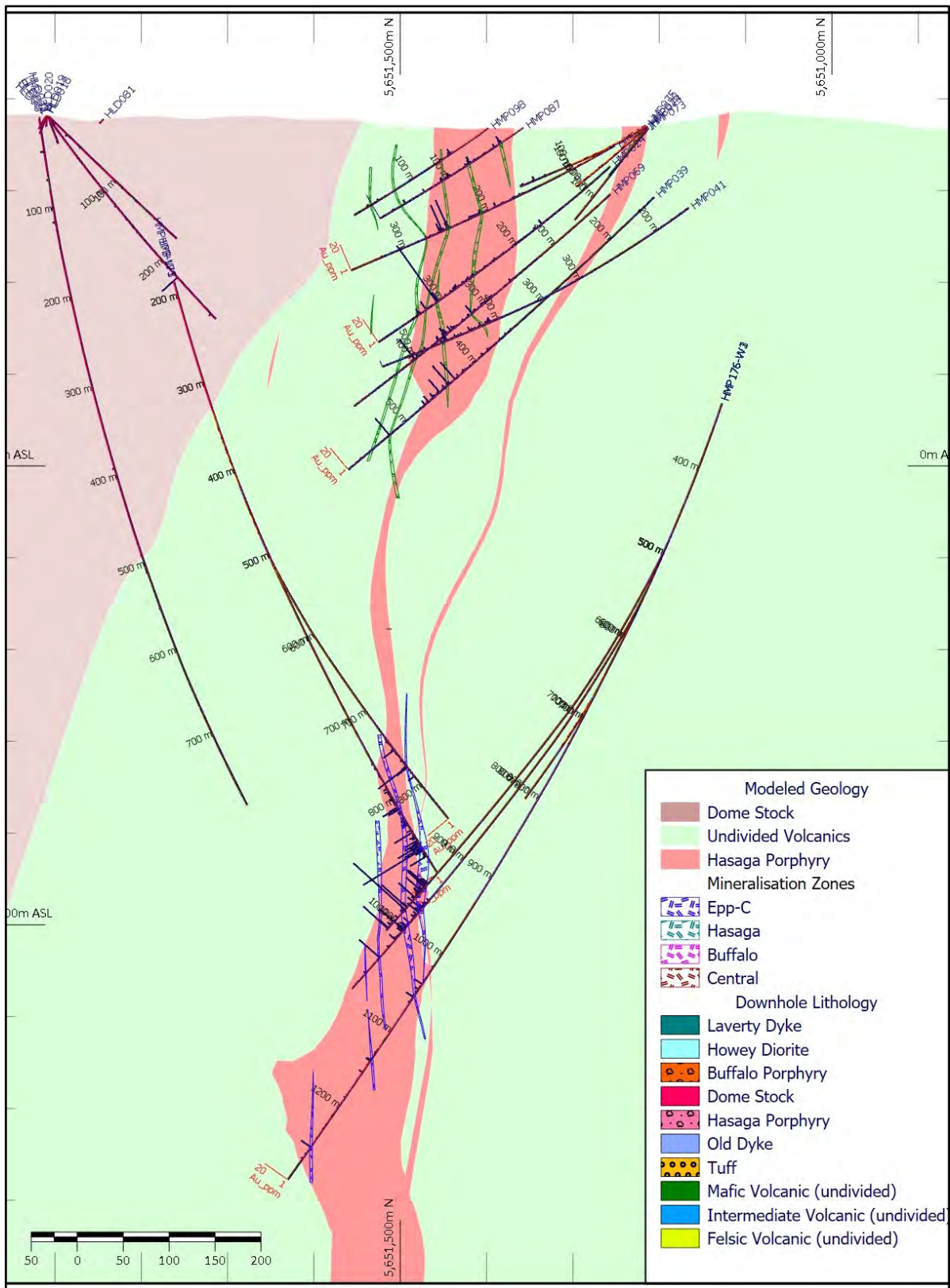


Figure 10-2: Representative Cross Section through Epp C and Hasaga Zones Looking 070°, centered at 441300mE Source: Equity, 2024.

### 10.2.2 Central

Mineralization intersected by drilling at the Central Zone is typical of that found throughout the Dome Stock, the nature of which is described in detail in Section 7.5.2. The best grades and continuity are found in close proximity to, and paralleling, the NNW-trending Laverty Dyke (Figure 10-3). This dyke trends in the same orientation to the preferred attitude of quartz veins within the Dome Stock, as measured from oriented core drilled by Premier (Figure 7-11).

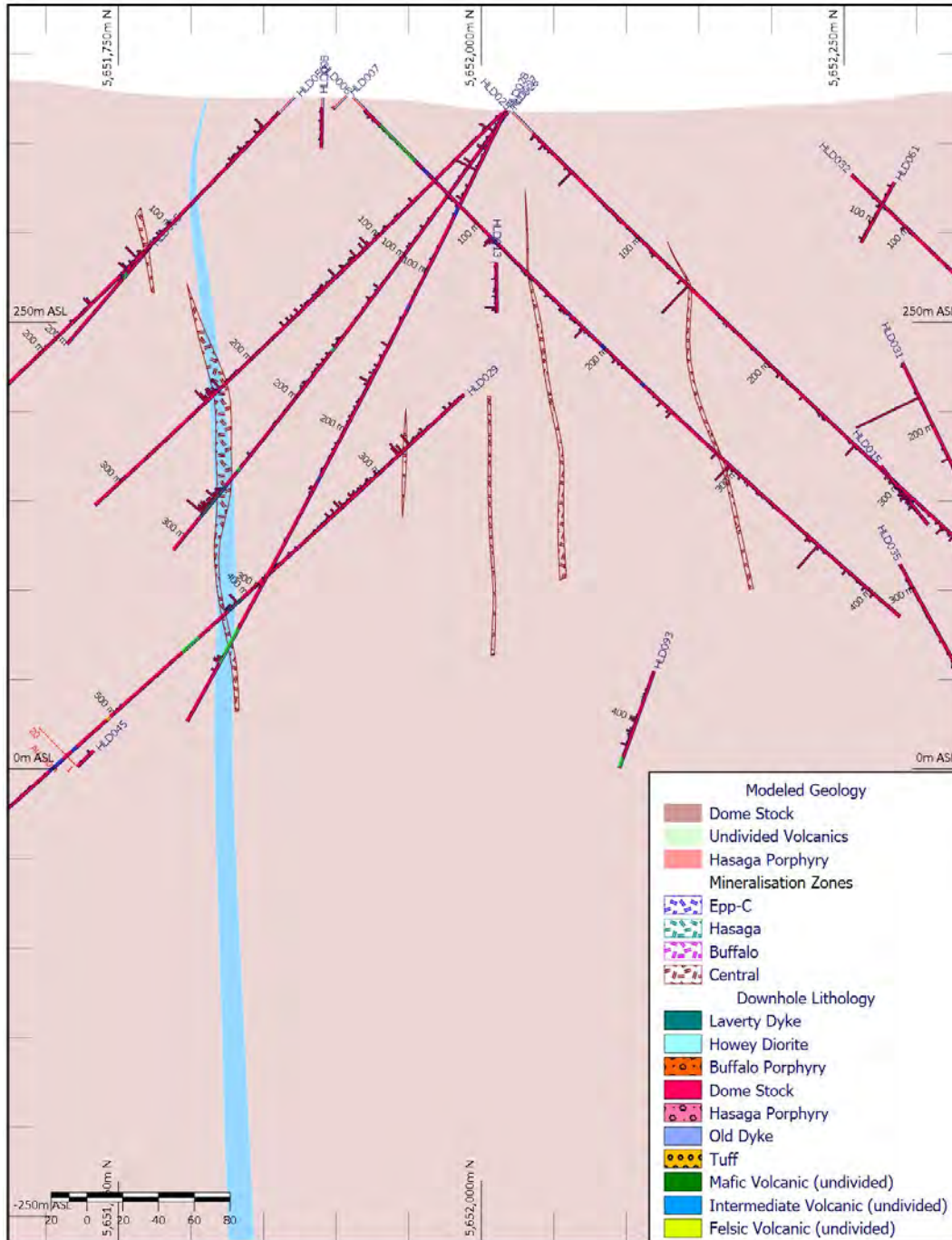


Figure 10-3: Representative Cross Section through the Central Zone. Looking 305°, centered at 440750 mE Source: Equity, 2024.

### 10.2.3 Buffalo

The Buffalo Zone was not a major component of the Premier exploration programs, with minor amounts of drilling devoted to it in the 2016 and 2018 programs. Work was focused on the area immediately below the historical mine workings. As with mineralization at the Central Zone, gold grades are somewhat sporadic, with locally high-grade values within larger intervals of low- to moderate-grade material (Figure 10-4). Results from the limited drilling done by Premier demonstrate that mineralization at the Buffalo Zone is open to depth and has the potential to return significant gold grades equalling or exceeding any obtained from the shallower portions of the zone which were mined during historical operation.

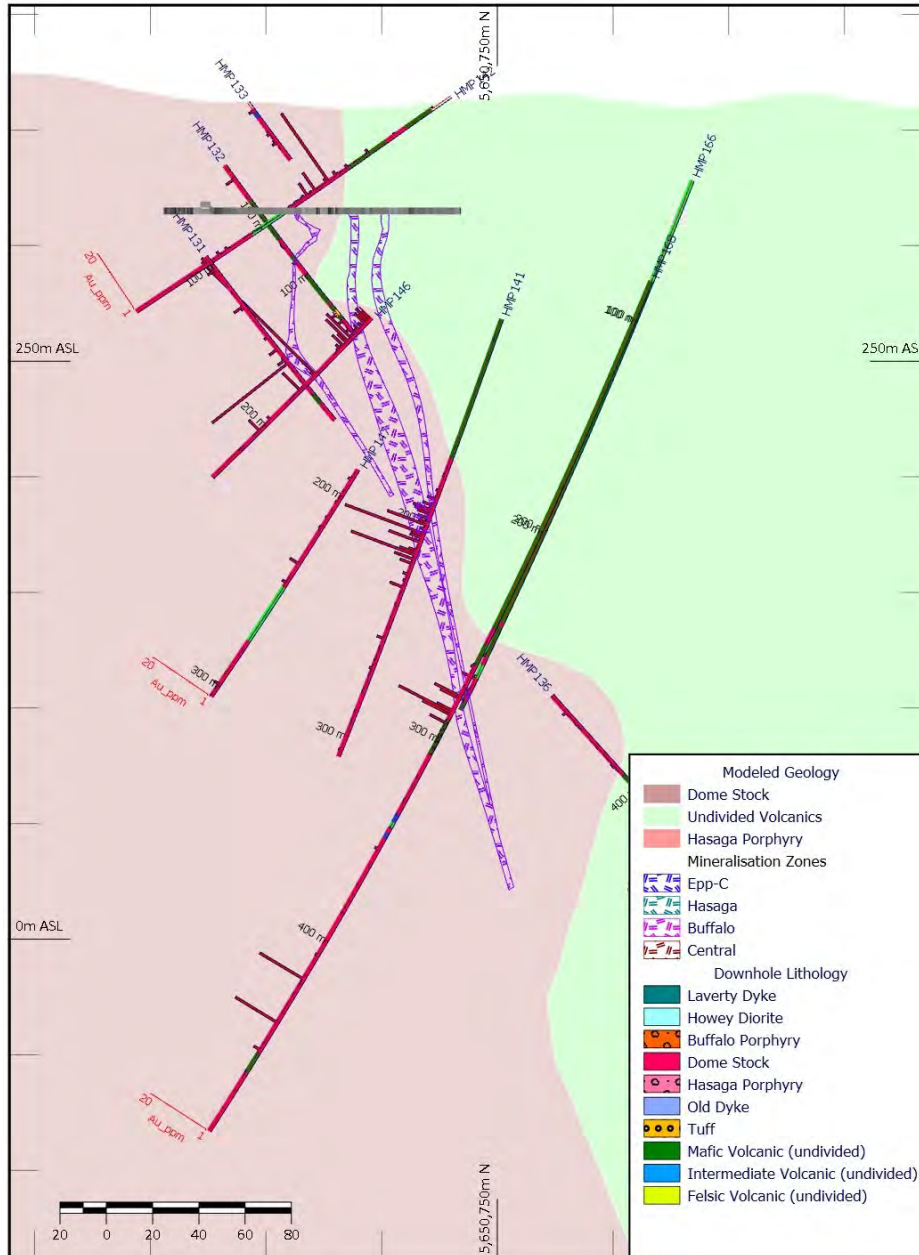


Figure 10-4: Representative Cross Section through Buffalo Zone. Looking 90°, centered at 439900 mE Source: Equity, 2024.

### **10.3 Data Adequacy**

It is the QP's opinion that the drilling procedures are adequate to support Mineral Resource estimation. There are no known drilling factors that could materially impact the accuracy and reliability of the results.

## 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

### 11.1 Sample Preparation and Security

Sample preparation and security procedures for the 2015 and 2016 drill program are documented in the 2017 Technical Report (Jourdain et al., 2017) and for the 2017/2018 and 2020 programs, the procedures are documented in the exploration reports for 2018 (DeGasperis, 2018) and 2020 (Clairet et al., 2020) respectively. The following descriptions are largely taken from those reports, in addition to examination of the Premier drillhole database and logging records.

Jourdain et al (2017) report that for the 2015 and 2016 drill programs drill core was placed sequentially in wooden core boxes at the drill. The core boxes were transported daily by Premier personnel to the core logging facility in Red Lake, where geo-technicians checked depth markers and box numbers and carefully reconstructed the core. The core recovery and rock quality designation (RQD) were then recorded and magnetic susceptibility readings taken. The RQD observations were collected on 3 m core-intervals, equivalent to the length of a single core-barrel, whereas magnetic susceptibility measurements were done at the mid-point of 1 m intervals. Exploration reports for later years do not explicitly report geotechnical logging procedures; however, examination of the drillhole data indicates that similar procedures were followed during the 2017, 2018 and 2020 programs. The only exception is that magnetic susceptibility data was occasionally collected on intervals other than 1 m; intervals of 0.5 and 1.5 are present in the 2017 and 2018 datasets, albeit at lower frequency than the standard 1 m interval.

Bulk density determinations were made on sample sections of core using a Model MS802S/03 Mettler-Toledo AG scale during the 2015 and 2016 programs. No record exists of the instrument used during later drill programs. Core sample intervals for bulk density measurement were collected approximately every 20 m to 30 m regardless of rock types or bias toward mineralized zones. Occasionally, additional samples were included to ensure that every rock type was represented. In some instances, longer intervals were left unsampled. Bulk density data were not collected for all drillholes completed by Premier, with data collected for 194 of 339 drillholes. The procedure involved recording the dry mass of an approximately 10 cm section of core, then recording its mass while fully submerged in water and calculating the sample's bulk density using the following formula:

$$\frac{\text{Dry Mass}}{\text{Dry Mass} - \text{Wet Mass}}$$

The core was logged and marked for sampling by Premier's geologists, who employed Geotic<sup>®</sup> logging software to log the Hasaga Property drill-core, recording lithologies, structure, alteration and mineralization. Logging and sampling information was entered into a spreadsheet-based template that could be easily integrated into the drillhole database.

Prior to sampling, all drill core was photographed using a standardized format and digital camera to provide a permanent pre-sampling record of each hole. All the core from Premier's drilling is cross-piled and secured at its core storage facility in Red Lake.

Core sample intervals were selected based on visible mineralization and geological contacts. Sample lengths for the majority of intervals (in both mineralized and unmineralized intervals) is 1.0 m,

although samples as short as 0.20 m and as long as 3.0 m are recorded in the drillhole database. Core marked for sampling was cut in half by an on-site technician using a stationary rock saw. Half the sampled core was returned to the original core box and retained for reference purposes, and the half to be assayed was placed in a plastic sample bag with a sample tag.

Jourdain et al (2017) reports that during the 2015 and 2016 seasons, core samples were tracked using three-part ticket books. One tag was stapled into the core box at the beginning of the assay interval, one tag was placed in the sample bag along with the sample, and the last tag was secured at Premier's Red Lake office. Core boxes were identified with aluminium tags and a permanent marker. In 2015 and 2016 the plastic bags containing the sample material were placed in larger rice bags (8-10 samples per bag), which were then secured with plastic tie wraps prior to shipping. Examination of stored core boxes from the 2017, 2018 and 2020 programs indicates that similar sampling procedures were followed; no record of the shipping procedure is recorded by subsequent exploration reports.

The core shack in Red Lake was either locked or under the direct supervision of Premier staff at all times. Samples were shipped directly to one of three independent analytical laboratories in Ontario: Activation Laboratories in Dryden during all drill programs, Accurassay in Thunder Bay during the 2015 program, and SGS Canada Laboratories in Red Lake during the 2016 season. SGS Red Lake is accredited to ISO/IEC 17025:2005 standards, Activation Labs in Dryden is accredited to ISO/IEC 9001:2015 standards and Accurassay in Thunder Bay was at the time accredited to ISO/IEC 17025:2005 standards. Each of the laboratories used for exploration drilling were independent of Premier.

All drill core samples were analyzed in sequential order with a 30 g fire assay with an atomic absorption spectroscopy finish (AAS). Over limit samples, which returned >10 g/t gold, were all re-analyzed via 30 g fire assay with gravimetric gold finish. In 2020, the overlimits or samples with visible gold were analyzed by screen fire assay whereby a 1 kg pulp was sieved with a 100 mesh (149 micron). The fire assay result is a weighted average calculated on the entire plus fraction and two splits of the minus fraction. The gold value recorded in the database for each sample is ranked based on the analysis, where the gravimetric or screen fire result ranks over the fire by AAS.

## **11.2 Quality Control / Quality Assurance Program**

Quality Assurance / Quality Control (QA/QC) by Premier consisted of regular inclusion of blanks, certified reference materials (CRMs) and duplicates into the analytical sample stream.

Blanks and CRMs were inserted in alternating sequence with each other at intervals of every 6<sup>th</sup>/12<sup>th</sup> sample or 8<sup>th</sup>/16<sup>th</sup> sample, with the specifics varying between programs. Averaged over the life of the exploration programs blank and CRM insertion rates are approximately 5% each, consistent with industry best practices.

Blanks were reviewed for carry-over contamination specifically where the assay value lower detection limit (LDL), equal to 0.005 g/t gold, was exceeded by five times the LDL, equal to 0.025 g/t gold. Blank performance was generally good, with 0.7% of blanks returning gold values greater than five times the detection limit of the analytical method (Figure 11-1).



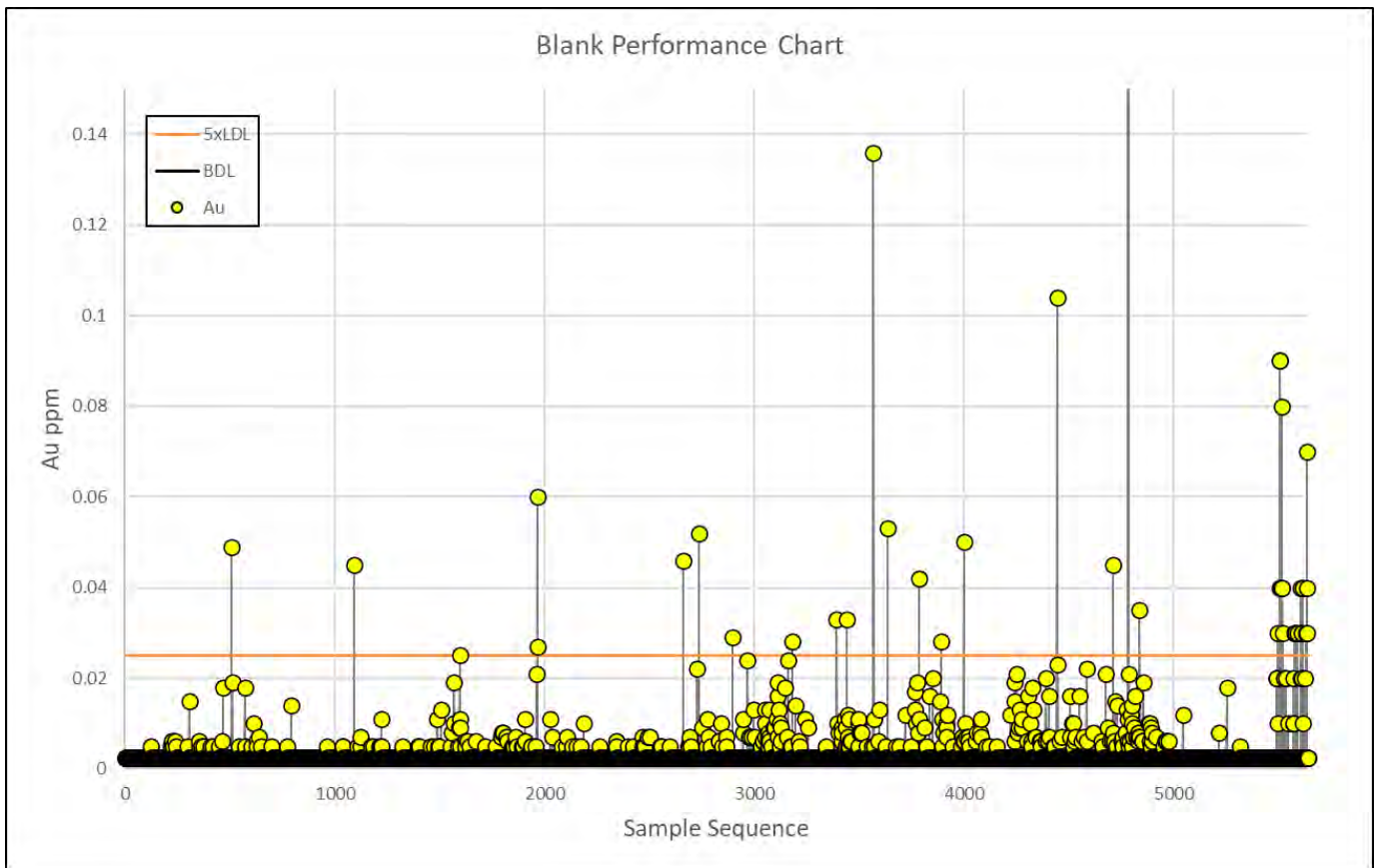


Figure 11-1: Blank Performance Chart Source: Equity, 2024.

The database contains a total of 5,626 CRM samples, of which 111 returned results +/- six standard deviations from the expected value and these were deemed handling errors, and assigned a new CRM ID of 'NR' and excluded from the dataset. A further 12 CRM samples were assigned different CRM IDs based on a combination of the reported assay result and comments in the standards table indicating the actual CRM inserted. In total, ~2% of the CRMs in the database were excluded as part of this review. In addition, anything +/- four standard deviations was flagged as a handling error and tabulated separately from the interpreted "true failures" (Table 11-1).

Once these samples were removed, failure rates (as defined by assay results having a Z-score higher than three, equating to more than three standard deviations of variation from expected) on sets of CRMs used in a statistically significant quantity (more than 50 times) are generally less than 5%. The exception to this is CDN-GS-5L and CDN-GS-9A, which failed in 8% and 7% of cases when analysed by fire assay with AAS finish. Though these are higher failure rates than would be desirable, there is no general systematic bias in failures above or below certified value for fire assay with AAS finish, indicating while precision is only moderate to poor, accuracy is acceptable, and no systematic bias has been introduced into the analytical dataset (Figure 11-2).

Table 11-1: Summary of CRMs and Analytical Results.

Standard ID (CRM)	Element	Certified Value (Au g/t)	Standard Deviation	Instances	Analytical Method	Average Result (Au g/t)	Bias	Total Fails	Handling Errors	True Fails	Failure Rate
GS-P4B	Au	0.417	0.023	524	FA_AAS	0.416	-0.23	29	9	20	4%
VMS2	Au	0.479	0.020	29	FA_AAS	0.464	-3.20	5	1	4	14%
GS-P5C	Au	0.571	0.024	847	FA_AAS	0.578	1.28	37	13	24	3%
GS-1P5K	Au	1.440	0.065	278	FA_AAS	1.437	-0.22	15	9	6	2%
GS-1P5L	Au	1.530	0.070	205	FA_AAS	1.507	-1.53	2	1	1	0%
GS-1P5P	Au	1.590	0.075	835	FA_AAS	1.600	0.61	5	1	4	0%
GS-04	Au	1.899	0.028	11	FA_AAS	1.934	1.86	1	0	1	9%
GS-09	Au	1.984	0.038	25	FA_AAS	1.929	-2.78	6	3	3	12%
HGS2	Au	3.729	0.156	13	FA_AAS	3.981	6.75	2	0	2	15%
HGS3	Au	4.009	0.125	17	FA_AAS	4.082	1.82	4	0	4	24%
GS-5L	Au	4.740	0.110	339	FA_AAS	4.622	-2.49	43	15	28	8%
GS-5R	Au	5.290	0.170	194	FA_AAS	5.196	-1.78	9	2	7	4%
GS-9A	Au	9.310	0.345	96	FA_AAS	9.097	-2.29	13	6	7	7%
GS-10D	Au	9.500	0.280	186	FA_AAS	9.338	-1.70	15	9	6	3%
GS-1P5K	Au	1.440	0.065	63	FA_GRAV	1.445	0.36	1	0	1	2%
GS-1P5L	Au	1.530	0.070	12	FA_GRAV	1.554	1.58	0	0	0	0%
GS-1P5P	Au	1.590	0.075	1	FA_GRAV	1.540	-3.14	0	0	0	0%
GS-5L	Au	4.740	0.110	185	FA_GRAV	4.721	-0.41	7	1	6	3%
GS-5R	Au	5.290	0.170	675	FA_GRAV	5.296	0.11	12	3	9	1%
GS-9A	Au	9.310	0.345	127	FA_GRAV	9.450	1.50	0	0	0	0%
GS-10D	Au	9.500	0.280	49	FA_GRAV	9.580	0.84	2	2	0	0%
GS-12A	Au	12.310	0.270	727	FA_GRAV	12.386	0.62	12	5	7	1%
GS-P5C	Au	0.571	0.024	4	SFA_AAS	0.578	1.14	0	0	0	0%
GS-1P5P	Au	1.590	0.075	25	SFA_AAS	1.658	4.28	2	0	2	8%
GS-5R	Au	5.290	0.170	23	SFA_AAS	5.320	0.56	1	0	1	4%
GS-12A	Au	12.310	0.270	3	SFA_AAS	12.300	-0.08	0	0	0	0%

FA\_GRAV = Fire Assay with Gravimetric Finish

FA\_ASS = Fire Assay with Atomic Absorption Spectroscopy Finish

SFA\_ASS = Metallic Screen Assay

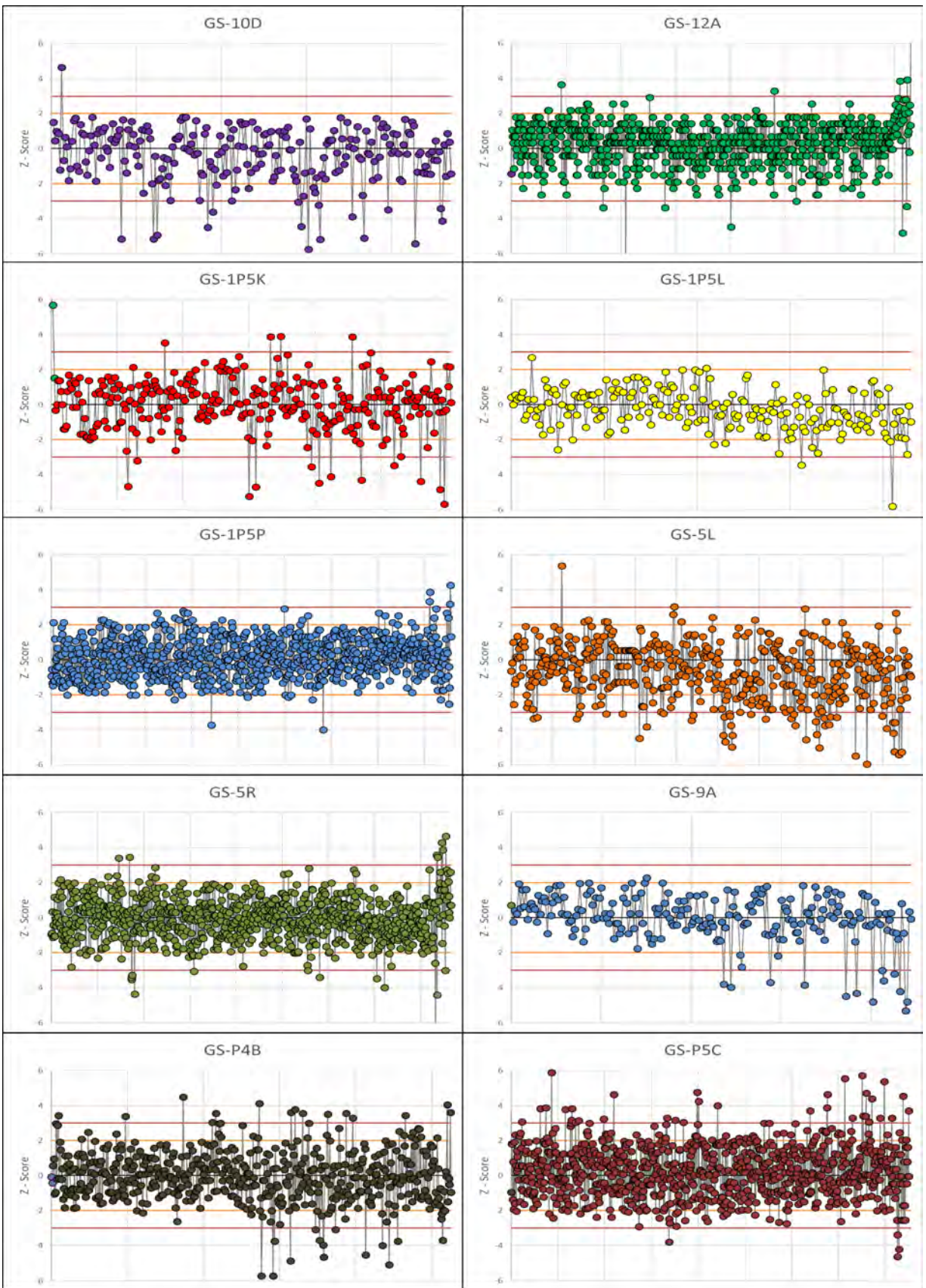


Figure 11-2: CRM Performance Charts Source: Equity, 2024.

A total of 5,385 duplicate pairs were inserted into the sample sequence, representing approximately 5% of the total dataset (Table 11-2 and Figure 11-3). Duplicates were paired using the duplicates' parent sample ID which is recorded with the duplicate sample. The mean, coefficient of variation (CV) and reduced major axis (RMA) were calculated for each pair. Correlation between primary and duplicate sample pairs was generally good for both AAS and gravimetric analysis methods; as would be expected, the largest relative variability is present at lower absolute values, closer to the detection limit of the analytical methods. No significant overall bias is present in the AAS analytical pairs, and a small negative bias in the duplicates is present in the gravimetric analyses. No record is made of whether these are field or preparation duplicates, making a determination of the source of duplicate variability impossible. Nevertheless, the magnitude of the differences between analytical pairs are in the range expected for orogenic gold deposits, and overall correspondence between duplicate pairs is within acceptable limits.

It is not recorded whether QA/QC performance was actively monitored as the drilling programs were ongoing; such an approach should be used any future drill programs with failures promptly investigated and appropriate measures undertaken. Despite this lack of active monitoring, results of the QA/QC program indicate that analytical quality was adequate overall and acceptable for use in resource estimation and exploration targeting work.

*Table 11-2: Summary of Duplicates.*

Duplicate Type	Count	Mean - Original Assays (Au g/t)	Mean-Check Assays (Au g/t)	Bias	CV (%)	Intercept	Slope	95% CI	R <sup>2</sup>
Duplicates – Au AAS finish	5,281	0.265	0.264	0%	29.15	0.00	0.98	0.52	0.96
Duplicates – Au Gravimetric finish	104	7.172	6.882	4%	15.52	0.58	0.88	3.42	0.99

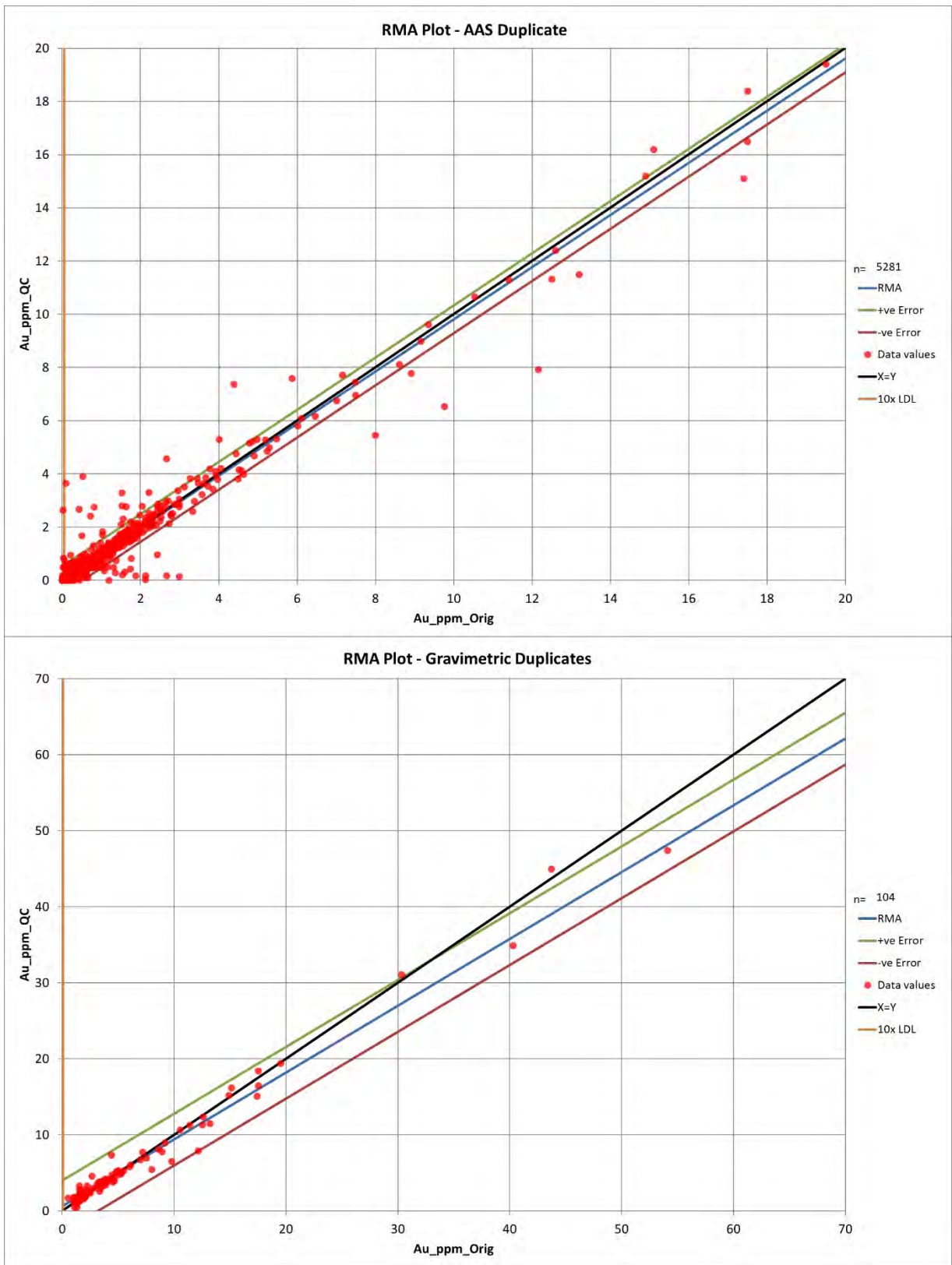


Figure 11-3: RMA Analysis Plots of Duplicate Pairs Analyzed by Fire Assay with AAS and Gravimetric Finishes Source: Equity, 2024.

### **11.3 Database**

The drillhole database supporting the Hasaga Property was provided by Equinox Gold as a Microsoft Excel file from a Geotic database export. Equity performed an audit of the database and found multiple validation and data handling issues that were resolved and incorporated into a Dashed database.

### **11.4 Data Adequacy**

It is the QP's opinion that the sample preparation, security, and analytical procedures are adequate to support Mineral Resource estimation.

## **12.0 DATA VERIFICATION**

### **12.1 Site Visit**

Dave Swanton visited the Hasaga Property between the dates of June 24 – June 30, 2021. During the site visit outcrop and drill collar locations were located and verified, archived drill core was examined and samples were selected from pulps and core stored at the Buffalo Mine site. The QA/QC in Section 11.2 was analysed and graphed by the QP, as was the independent verification sampling described in Section 12.6.

### **12.2 Resource Data**

A drillhole database was received from Equinox Gold. Each table was imported into MaxGeo's Dashed software. Micromine™ 3D software was utilized for spatial validation. Spatial 2D and 3D files were provided as DXFs and shapefiles.

The QP has undertaken the following steps to verify the database, including:

- independently loading digital laboratory analytical certificates against the delivered database
- independently reviewing and plotting QA/QC results
- analysis and verification of the pulp and core duplicates sampled by Equity
- in-field drillhole location verification
- in-field validation of the logged geological data
- verification of bulk density determinations
- validation of the drillhole database using Micromine™ software drill database validation tools

### **12.3 Historical Drilling**

Approximately 13% of drilling data (based on total drilled meterage) in the drillhole database is historical data that has been collected by previous operators and has subsequently been digitised by Premier or previous operators. Most of this historical data (64% of metres drilled and 95% of drillholes) is located in the Buffalo Zone, and it is only for this zone that historical data forms a significant portion of the data used in the current Mineral Resource model.

Checks of 12% of the historical drillholes from the Buffalo Zone were completed. These random checks included checking the original hard copy drillhole logs and assay certificates and comparing them to those recorded in the database, in addition to reviewing historical maps indicating the drillhole locations with respect to historical workings. Original assay values for gold in the hard copy lab certificates are recorded in ounces per short ton and converted to grams per tonne. The conversion factors were completed correctly, and drillhole locations recorded on maps match the recorded locations of the historical drillholes occurring in the database.

#### 12.4 Drillhole Location Verification

Sixteen drillhole collar locations were located by the author; in all instances, the casings were found to be in good condition with clear hole ID labels in metal flags attached to the casing caps. Drillhole collar coordinates were recorded with a Garmin GPSMap64s handheld global position system (GPS) and compared to locations recorded in Equinox Gold's drillhole database (Table 12-1). Horizontal accuracy for the located holes are within the accuracy tolerance of a handheld GPS device. Such devices are generally accurate to within  $\pm 5$  m, making an offset of 10 m between original and measured readings entirely possible. The largest offset (Northing) for HMP189 is only slightly outside this tolerance, and all others fall within it. Elevation offsets are considerably larger (up to 28.5 m from HLD048); however, the accuracy of elevation readings from handheld GPS units is considerably poorer than horizontal ones and as such these offsets are also within the expected tolerance range. A comparison of elevation values from the database to those derived from the 2022 LiDAR survey is likewise generally good, with only three holes having an offset of  $>5$  m, and those three are still within the range expected for measurement with a low precision hand-held GPS device.

Overall, drillhole location verification by the Author indicates that drillhole collar location data collection by Premier was done correctly within the limitations of the devices used. However, positional accuracy of drillhole collar locations could be significantly improved with better survey equipment.

To verify collar locations for surface and underground drilling conducted by Wilanour Resources, original hard copy maps and sections were examined and compared to collar locations recorded in the digital dataset. Though collars were originally located in a local mine grid for which a translation to UTM space does not exist, recorded locations with respect to historical mine workings and geographic reference points on surface were found to be accurate.



Table 12-1: Collar Location Verification Results.

HoleID	Zone	Year	Measured Easting	Measured Northing	Measured Elevation	East Offset (m)	North Offset (m)	Calculated Horizontal Offset (m)	Elevation Offset from Database (m)	DB Offset from 2022 DTM (m)
HLD048	Central	2016	440749.04	5652088.02	395.70	-0.47	0.02	0.47	28.56	0.296
HLD059	Central	2016	440940.97	5652241.97	396.74	-0.53	-0.03	0.53	19.94	0.288
HLD069	Central	2016	440929.98	5652078.06	396.64	-0.52	0.06	0.52	27.67	0.152
HMP026	Hasaga	2015	441381.37	5651239.8	363.20	-2.63	1.8	3.19	-8.26	0.153
HMP027	Hasaga	2015	441773.28	5651480.83	380.50	-0.52	-2.38	2.43	-5.76	0.06
HMP035	Hasaga	2015	441272.81	5651009.81	358.39	-1.19	-6.19	6.3	-27.65	0.275
HMP106	Hasaga	2016	441304.63	5651321.75	359.07	0.73	-3.05	3.14	-8.98	0.045
HMP135	Buffalo	2016	439955.76	5650921.73	367.50	0.76	0.13	0.77	-4.75	0.392
HMP141	Buffalo	2016	439924.1	5650714.57	366.67	-1.11	0.17	1.12	-0.2	-0.008
HMP143	Buffalo	2016	439829.75	5650801.52	363.06	-0.65	3.52	3.58	-1.21	0.053
HMP163	Hasaga	2017	440804.43	5650682.4	388.65	1.33	0.6	1.46	-1.25	2.406
HMP186	Hasaga	2020	441108.83	5650898.57	370.59	2.03	-6.53	6.84	5.49	-17.169
HMP187	Hasaga	2020	441272.11	5651009.93	369.68	-1.89	-6.07	6.36	-16.32	0.211
HMP188	Hasaga	2020	440804.11	5650685.18	388.63	1.01	3.38	3.53	-1.27	2.652
HMP189	Hasaga	2020	440880.32	5650715.89	378.54	-6.68	11.89	13.65	10.54	-7.663
HMP198	Hasaga	2020	440878.25	5650712.91	378.68	-8.75	8.91	12.5	10.68	-7.9

## 12.5 Geological Data Verification

Drill core from Premier’s exploration drill programs is stored at two separate locations. Core from earlier programs is stored in fenced facilities on Premier-owned property near Red Lake town, while core from later programs is stored at the Buffalo Mine site. At both locations core is stored either cross-stacked on pallets or in racks. All core is in relatively good condition as of the Author’s site visit and was accessible for examination.

A total of twelve drillholes in the core storage areas were examined with emphasis on verifying the quality of geologic logging and accuracy of recorded versus actual sampling intervals. Two of the drillholes from the Buffalo Zone, seven from the Hasaga Zone and three from the Central Zone were reviewed. In all instances sampling intervals observed in the core boxes corresponded to those recorded in the database, and the paper sample tags were correctly placed in the boxes. There is no indication of deficiencies in the adherence to proper sampling procedures by Premier geologists.

Documenting lithology, alteration, veining and mineralization in the appropriate areas of the logging software appears to have been rigorous, and where errors were apparent, they are related to gradational or judgement-based classifications. For example, several instances were observed of strong alteration overprints being logged as discrete lithologies despite this not being part of the standard procedure observed elsewhere throughout the logs. The core review indicates that there are also multiple examples of logged intervals being mislocated by metres to tens of metres. In all cases there were features present which could explain the contact localizations, though it does not appear

that their presence or absence was universally applied as a rationale for identifying logged features. Overall, the quality of core logging was generally acceptable, with the caveat that minor irregularities exist between drillhole programs and even between adjacent drillholes. All these irregularities are of a scale which does not render the geological dataset un-usable or inappropriate for use in property-scale lithological modelling, and the dataset is judged to be acceptable quality for this work. However, a closer examination of logging data in conjunction with examination of the drill core would be required for modelling of detailed features such as volcanic sequence stratigraphy or zones of alteration intensity.

## **12.6 Assay Verification**

In order to verify the assay data from the historical drilling by Wilanour Resources at the Buffalo Zone, original hard copy logs were examined and checked against the digital dataset. In all but one of the instances, examined assay values and hole depths matched between hard copy and digital datasets. The single exception was from a sample which was re-assayed in the original dataset; this re-assay value was incorrectly recorded in the digital dataset.

In order to verify the assay data from the Premier database, a set of samples was selected from the pulps and core available at the storage facility at the Premier facility at the Buffalo Mine site and submitted for check assay to ALS Global's (ALS) preparation facility in Thunder Bay. A total of 296 samples were selected from 12 drillholes, with samples selected from the Buffalo, Central and Hasaga zones (Table 12-2). Seventeen of the samples were half core duplicates taken by sampling the core remaining in the stored boxes at the mine site; all of these samples were from one hole (HMP168) from the Buffalo Zone. All remaining samples were pulps retrieved from the storage facility onsite at Buffalo. The selection of samples and preparation for shipping was personally completed by the Author; samples were placed in rice sacks sealed with individually numbered straps and transported to ALS' preparation laboratory by an employee of Equity under supervision of the Author.

The mean, coefficient of variation (CV), and reduced major axis (RMA) were calculated and reviewed for each pair. Duplicate pairs were reviewed using guidelines for coarse-grained gold mineralization presented by Abzalov, M.Z. (2008). Examination of a plot of the coefficient of variation against grade (Figure 12-1) shows that for pulp duplicates there is a gradual decrease in variation as grade increases; this is an expected result and likely due to an increase in relative precision of the analytical method with an increase in grade. Core duplicates have a much higher variation overall, even with increasing grade. This is an expected result; variability between different halves of drill core introduces a large source of variation absent in reanalysis of homogenized pulps.

Figure 12-2 and Figure 12-3 plot original versus re-assay grade for core duplicates and pulp re-assays (respectively) with average trendlines and 95% confidence interval (CI) error ranges derived through a RMA analysis. Results indicate that there is significant and systematic variation between the original and re-assayed core duplicate populations, albeit at levels that are consistent with coarse to medium grained gold deposits according to Absalov (2008).

The 95% confidence interval for this data set is  $\pm 7$  g/t gold, with all but one of the re-assay results returning lower values than the original assay. Despite the confidence interval returning a high

value, it is within reasonable tolerance given the low number of samples and ore deposit type; orogenic gold systems can exhibit a high nugget effect. Results from pulp re-assays are significantly better, as would be expected, since all sampling variability has been removed and the difference between analytical labs/techniques is all that is being represented. In this case correlation between original and re-assay data sets is quite good, with a slope of 0.997 (1.0 being perfect correlation), a difference between mean values of 0.007 g/t gold, and a 95% confidence interval for the dataset of 0.48 g/t gold. Note that this analysis was conducted with two outlier data points removed. These levels of variation between assays done years apart, by different labs with slightly different analytical techniques, is within expected ranges and indicates that both analytical precision and accuracy of the gold analyses contained within the Premier database is adequate for Mineral Resource estimation and future targeting.

*Table 12-2: Summary of Samples Submitted for Assay Verification.*

Hole ID	Year	Zone	Number of Samples	Sample Type
HLD038	2016	Central	25	Pulp
HLD050	2016	Central	26	Pulp
HLD058	2016	Central	20	Pulp
HLD067	2016	Central	36	Pulp
HLD074	2016	Central	30	Pulp
HLD075	2016	Central	20	Pulp
HMP100	2016	Hasaga	44	Pulp
HMP168	2016	Buffalo	17	Drill core
HMP175	2018	Hasaga	24	Pulp
HMP176	2018	Hasaga	28	Pulp
HMP177	2018	Hasaga	6	Pulp
HMP187	2020	Hasaga	20	Pulp

*Table 12-3: Summary Statistics of Original Versus Assay Verification Samples.*

Duplicate Type	Mean Original Assays (Au g/t)	Mean Check Assays (Au g/t)	Bias	CV (%)	Intercept	Slope	95% CI	R <sup>2</sup>
Core Duplicates	3.009	2.441	19%	43.453	-0.856	1.096	14.033	0.243
Pulp Re-assay	1.184	1.177	1%	22.007	-0.003	0.997	0.965	0.971

*Table 12-4: Coefficient of Variation Average Value Returned (%) Best & Acceptable Practise Values for Coarse to Medium Grained Gold.*

Deposit Type	Duplicate	Best CV (%)	Acceptable CV (%)
Coarse- to Medium-Grained Gold	Field	20	30-40
	Pulp	10	20

Source: Abzalov, M. (2008)

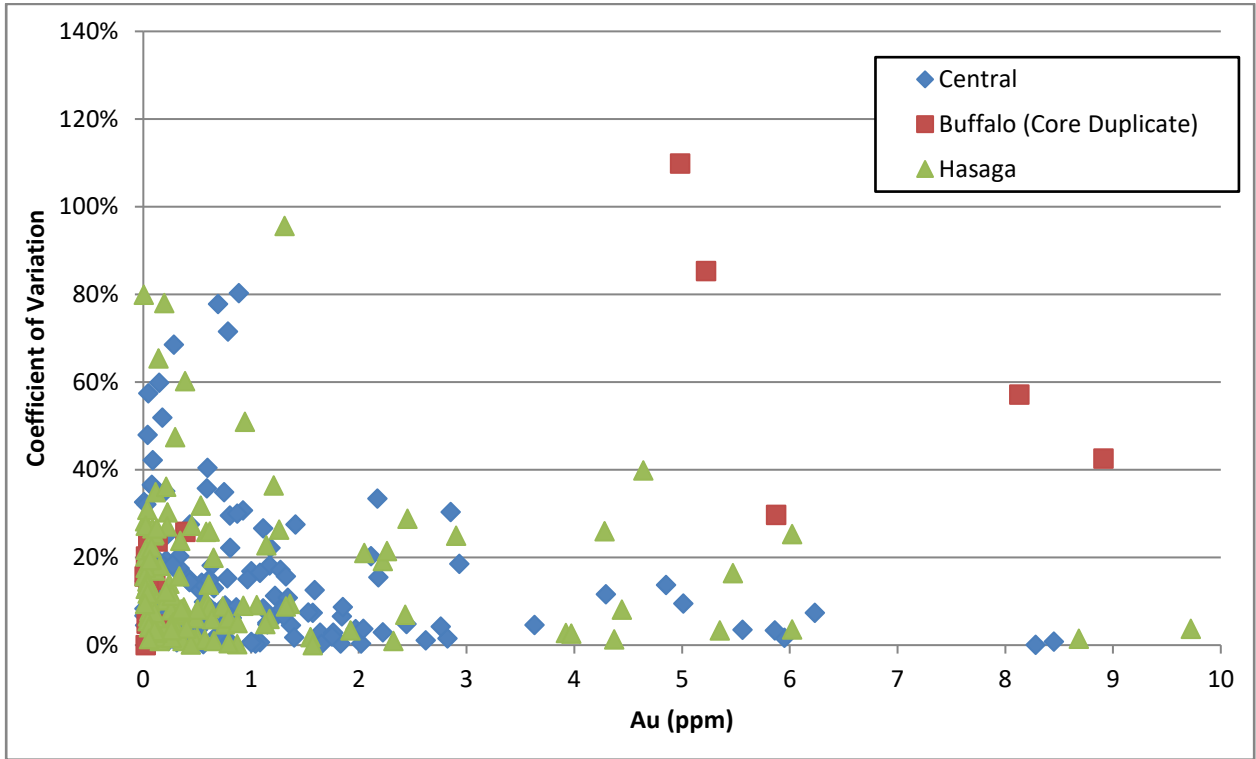


Figure 12-1: Scatterplot of Assays Versus Coefficient of Variation for Check Assays. Source: Equity, 2024.

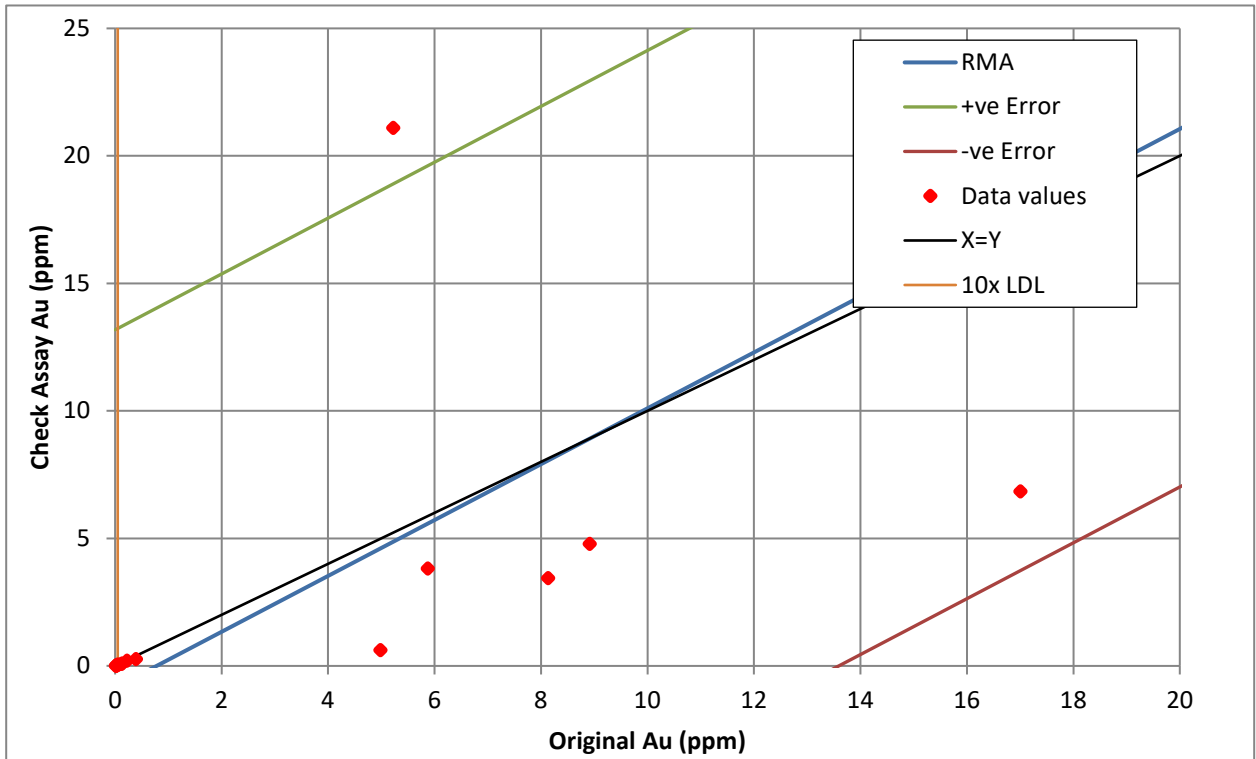


Figure 12-2: Reduced Major Axis (RMA) Plot of Core Duplicate Assays. Source: Equity, 2024.

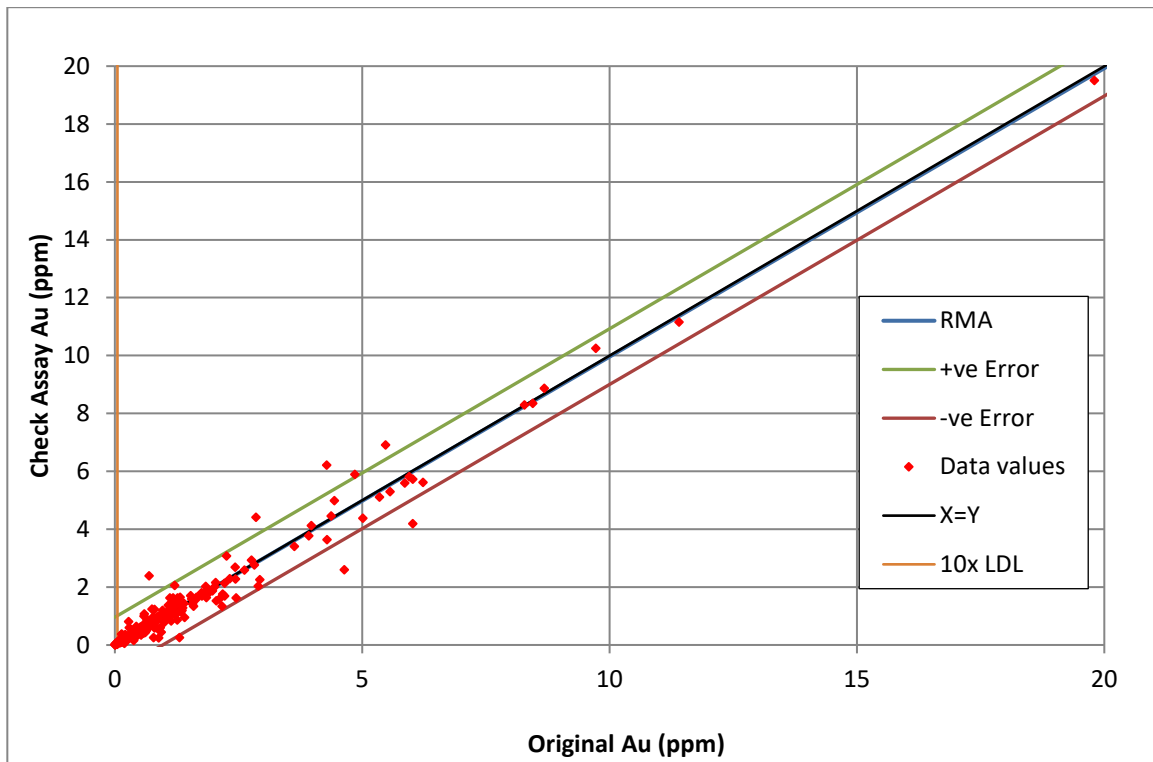


Figure 12-3: Reduced Major Axis (RMA) Plot for Pulp Assay Verification. Source: Equity, 2024.

### 12.7 Data Adequacy

The results of the data verification demonstrate the data are adequate for use in preparation of a Mineral Resource Estimate.

A review of the original metallurgical testwork reports was completed. The technical information presented in Section 13 is a reasonable summary of the mineral processing and metallurgical testing conducted to date.

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

Two phases of metallurgical test work were conducted by Jacobs Engineering Group (Jacobs) on behalf of Premier prior to completion of the 2017 NI 43-101 report and Mineral Resource Estimate. Results are summarized by Jourdain et al (2017), and the following description is taken directly from that report. Instances of the term "project" used in this section refer to the contemplation of advancing the Hasaga Property to the exploitation phase.

### **13.1 Metallurgical Testwork (Phase 1)**

Phase one of a metallurgical scoping testwork program on five composites from the Hasaga Zone and six composite samples from the Central Zone was completed.

Gold extraction by whole ore cyanidation for both zones was good for all grade ranges with the five Hasaga Zone composites yielding an average extraction of 94.7% and the six Central Zone composites having an average extraction of 96.1%.

The major conclusions and data summaries from the testwork are as follows:

- the metallurgical scoping tests indicate that the Hasaga and Central zone composite samples are not refractory and should be amenable to conventional whole-ore cyanidation, and yield gold extractions above 90%;
- the scoping tests indicate that there is a “nugget” effect in gold mineralization that should be investigated by further metallurgical testing and drill-core interval assaying;
- the limited metallurgical tests indicate that a significant portion of the gold in both the Central and Hasaga zones is likely recoverable using gravity concentration; however, additional testing will be required to determine if this will be beneficial in a process flow-sheet;
- results of the metallurgical tests indicate that the geochemistry and precious metal occurrence and association have significant effects on metal extractions, leach kinetics, and slurry properties that will need further investigation in order to fully understand and incorporate these parameters into a resource model, as the Hasaga Property advances;
- based on the limited testing, there do not appear to be unusual or significant deleterious factors that would seriously impact processing of the resources, or impair future development of a project; however, additional testing, particularly pre-feasibility level metallurgical testing and environmental testing, will be needed to fully determine and assess factors that could have significant or deleterious effects.

Gold extraction by whole ore cyanidation for both zones was good for all grade ranges with the five Hasaga Zone composites yielding an average extraction of 94.7%, and the six Central Zone composites yield an average extraction of 96.1% (Table 13-1).

### **13.2 Metallurgical Testwork (Phase 2)**

A second phase of metallurgical testing was conducted to test low-grade gold samples, one from the Hasaga Zone, and four from the Central Zone, with the following objectives:

1. to test the amenability of the samples to heap leaching using cyanidation;

2. to add to the initial baseline metallurgical database to evaluate metallurgical recovery of the Hasaga and Central zone.

The Phase 2 scoping program also included initial baseline testing on a sample from the Buffalo Zone with the objective to develop initial baseline metallurgical data for the Buffalo Zone.

The scoping tests performed on the samples included:

- Head assaying;
- Whole ore bottle roll cyanidation;
- Knelson gravity test;
- Bottle roll cyanidation of gravity tailings;
- Comminution tests: bond work index (BWI), abrasion, and SAG mill comminution (SMC)

The following are the key conclusions from the Phase 2 testwork:

- the Phase 2 baseline metallurgical scoping tests indicate that the Hasaga, Central and Buffalo zone composite samples are not refractory and should be amenable to conventional milling using whole ore cyanidation, and should yield gold extractions at or above 90% when ground to an 80% passing size of 200 mesh (74 microns);
- the bottle roll heap leach amenability tests on the low-grade single Hasaga Zone composite sample and on the four Central Zone composite samples indicate that heap leaching of the low-grade material does not appear to be feasible at this point, as maximum gold extractions were only 40%, using a fine crush size of -1/4 inch. Typically gold heap-leach extractions need to be in the range of 60% to 70% recovery for positive economics;
- test results for the single Buffalo Zone composite sample indicate that a significant portion of the gold in the sample may be recoverable using gravity concentration; however, additional testing will be required to determine if this will be beneficial in a process flow-sheet;
- as was noted in the Phase 1 test results, the geochemistry and precious metal form and associations appear to have significant impacts on metal extractions, leaching rates, and reagent consumptions, and will need to be investigated further as the project advances;
- based on the limited testing, there do not appear to be unusual or significant deleterious factors that would seriously impact processing the resources or impair the project; however, additional testing, particularly pre-feasibility level metallurgical testing and environmental testing, will be needed to fully determine and assess factors that could have significant or deleterious effects on the project;
- gold extraction evaluations by whole ore bottle-roll-cyanidation using an 80% minus 200 mesh (74 micron) grind for the Phase 2 composites from all three zones were good. The Hasaga Zone low-grade composite yielded an extraction of 89.5%, slightly lower than the reported Phase 1 response. The four Central Zone composite samples resulted in an average extraction of 93.2%, whereas the Buffalo Zone composite sample returned a 96.2% extraction (Table 13-2).

For more details of the Phase 1 and Phase 2 metallurgical studies, the reader is referred to the original reports by Jacobs Engineering Group Limited that are included as Appendix IV and Appendix V of Jourdain et al (2017).

*Table 13-1: Summary of Gold Bottle-Roll-Cyanidation Tests - Phase 1.*

Comp	Zone	Feed Size P <sub>80</sub> , µm	Head Au, g/t		Residue g/t Au	Au % Recovery CN (Unit)					Reag. Consumption kg/t of CN Feed	
			Calc	Direct		2 h	6 h	10 h	24 h	48 h	NaCN	CaO
1	Hasaga	72.0	0.90	0.76	0.07	8	83	85	87	92.8	0.64	0.28
2	Hasaga	76.0	1.38	1.42	0.06	3	85	87	94	95.8	0.64	0.29
3	Hasaga	72.0	0.65	0.96	0.04	2	77	86	89	93.8	0.63	0.24
4	Hasaga	80.0	1.54	1.45	0.11	10	83	84	88	93.2	0.55	0.28
5	Hasaga	70.0	1.07	1.19	0.03	1	55	68	92	97.7	0.68	0.27
<b>Averages</b>	<b>Hasaga</b>	<b>74.0</b>	<b>1.11</b>	<b>1.16</b>	<b>0.06</b>	<b>5</b>	<b>77</b>	<b>82</b>	<b>90</b>	<b>94.7</b>	<b>0.63</b>	<b>0.27</b>
6	Central	71.0	4.59	2.95	0.05	1	48	70	89	98.9	0.68	0.21
7	Central	72.0	1.86	1.66	0.06	5	58	73	91	96.8	0.71	0.25
8	Central	76.0	3.03	3.13	0.20	70	90	87	93	93.4	0.09	0.32
9	Central	72.0	0.49	0.60	0.02	3	65	83	89	95.9	0.62	0.21
10	Central	71.0	1.48	2.31	0.07	1	30	48	81	95.3	0.70	0.19
11	Central	74.0	0.55	0.61	0.02	3	38	54	83	96.4	0.55	0.19
<b>Averages</b>	<b>Central</b>	<b>72.7</b>	<b>2.00</b>	<b>1.88</b>	<b>0.07</b>	<b>14</b>	<b>55</b>	<b>69</b>	<b>88</b>	<b>96.1</b>	<b>0.56</b>	<b>0.23</b>
<b>Averages</b>	<b>Hasaga &amp; Central</b>	<b>73.3</b>	<b>1.59</b>	<b>1.55</b>	<b>0.07</b>	<b>10</b>	<b>65</b>	<b>75</b>	<b>89</b>	<b>95.5</b>	<b>0.59</b>	<b>0.25</b>

Source: Jourdain et al (2017).

*Table 13-2: Summary of Gold Bottle-Roll-Cyanidation Tests - Phase 2.*

Comp #	Drill Hole	Zone	Feed Size P <sub>80</sub> , µm	Head Au, g/t			Residue, g/t Au	Au % Recovery CN (Unit)					Reag. Consumption kg/t	
				Calc	SM Direct	FA Direct		2 h	8 h	24 h	32 h	48 h	NaCN	CaO
12	HMP 107	Hasaga	75	0.99	1.12	1.08	0.10	4.5	79.3	85.3	90.0	89.5	0.72	0.30
13	HLD 050	Central	79	1.10	1.20	1.54	0.05	1.4	61.9	88.6	78.4	95.8	0.64	0.27
14	HLD 052	Central	74	1.08	1.07	1.05	0.06	1.4	71.7	93.7	88.7	94.8	0.61	0.41
15	HLD 071	Central	77	0.31	0.69	0.25	0.04	4.9	53.3	77.3	68.2	87.5	0.58	0.24
16	HLD 072	Central	78	1.02	0.69	0.97	0.05	1.5	40.8	81.1	78.6	94.7	0.69	0.27
17	HMP 147	Buffalo	73	2.51	4.06	2.16	0.09	35.5	82.4	92.5	92.6	96.2	0.38	0.39

Source: Jourdain et al (2017).

### 13.3 Data Adequacy

It is the opinion of the QPs that the sample preparation and metallurgical procedures are adequate to inform the metallurgical response.



## 14.0 MINERAL RESOURCE ESTIMATE

The current Mineral Resource Estimate (MRE) of the Hasaga Property comprises the Hasaga, Epp C, Epp D, Buffalo and Central zones. This MRE supersedes the historical MRE, which had an effective date of December 30, 2016 (Jourdain et al., 2017). The effective date of the MRE presented here is June 30, 2024.

### 14.1 Methodology

The main steps in the methodology included:

- Review and validation of the database
- Preparation of geological and mineralization models consistent with the current geological understanding of the Hasaga Property
- Validation of the intervals selected for the mineralization models
- Geostatistics of the sample assay data followed by capping and compositing
- Validation of the grade estimates
- Mineral Resource classification
- Applying reasonable prospects of economic extraction to the resource model
- Preparation of a Mineral Resource statement

Geologic models and wireframes representing gold mineralization were created in Leapfrog 2021.1 and Micromine 2021.5. Geostatistical evaluation of the data was completed using Leapfrog and Micromine. Micromine was used for estimation of gold grades and editing of the block model.

### 14.2 Geologic Model

A geologic model was prepared representing the lithological framework of the Hasaga Property and known vein systems with a detailed description in Section 14.3. Four main lithology types were modelled: Laverty Dyke, Dome Stock, Hasaga Porphyry, and undivided volcanics—a composite of Balmer and Confederation assemblages (Figure 14-1). A three-dimensional solid representing overburden was also generated using casing depths recorded in drillhole logs.

Lithology was coded to the block model using the numeric codes summarised in Table 14-1.

*Table 14-1: Block Model Lithology Codes.*

Lithology	Code
Overburden	0
Laverty Dyke	1
Dome Stock	2
Hasaga Porphyry	3
Undivided Volcanics	4

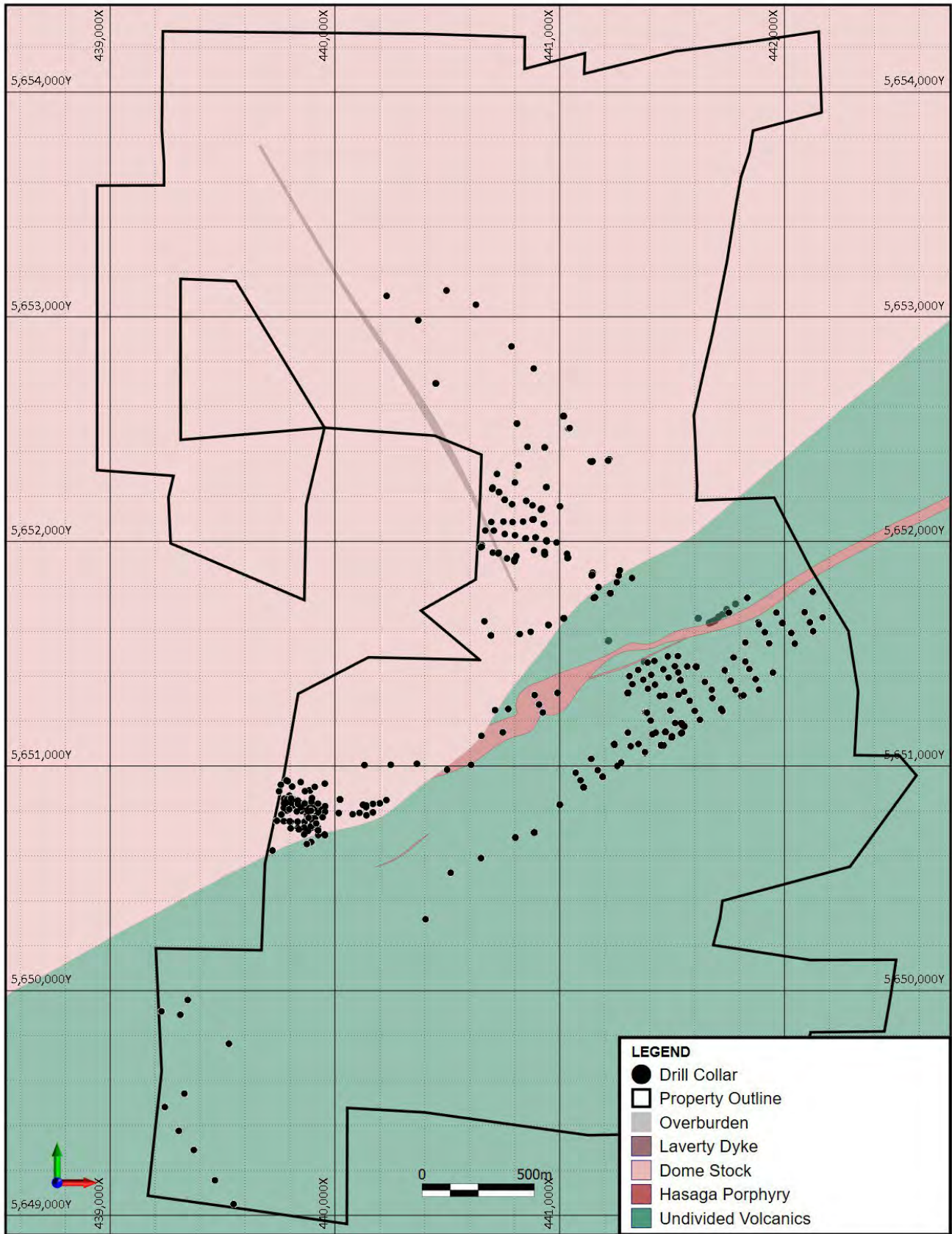


Figure 14-1: Hasaga Property Geologic Mode. Source: Equity, 2024.

### 14.3 Mineralization Models

Five separate vein systems representing the Hasaga, Epp C, Epp D, Central and Buffalo zones were generated (Figure 14-2). Vein systems for most areas consist of a series of main veins and secondary vein-splays. Splays of the veins typically terminate against the main veins for each zone. Intervals included in the vein models are primarily based on logged lithology, logged vein density, gold grade and downhole structural measurements from oriented core. Alteration and mineralization logging data were used to inform these vein system models in cases where the primary inputs were not sufficient to resolve inconsistencies or construct a coherent model. The extents of the vein systems are defined by drilling density, and are generally extrapolated 60 m beyond drilling except for Epp D Zone, which was extended to 100 m beyond drilling. Mineralization models were assigned to the block model by zone using the individual domain codes summarised in Table 14-2.

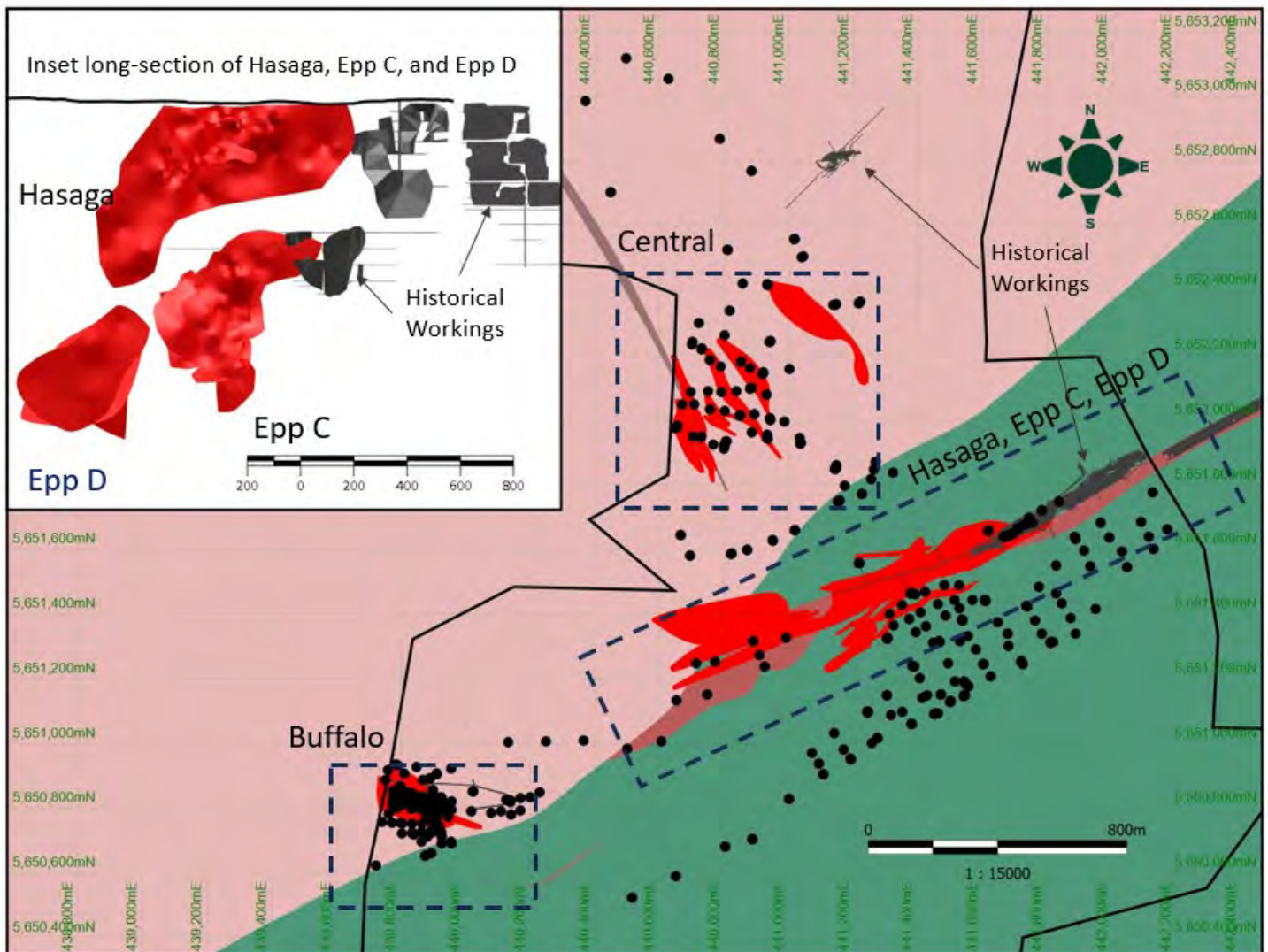


Figure 14-2: Hasaga Mineralization Models. Source: Equity, 2024.

Table 14-2: Summary of Mineralization Models by Zone.

Zone	Mineralization Model Name	Domain Code
Central (100)	Lavery Lens	150
	Lavery SW Splay	151
	Lens 1	111
	Lens 1a	110
	Lens 2	120
	Lens 2a	121
	Lens 3	130
	Lens 4	140
Buffalo (200)	Main	200
	North	210
	South	220
Epp C (300)	Main	300
	North 2	312
	North 3	313
	North	311
	South Splay	321
Epp D (400)	Central	410
	North	420
	South	430
Hasaga (500)	Main	500
	North 1	510
	North Splay 1	511
	South 1	520
	South Splay 1	521
	South Splay 2	522

### 14.3.1 Hasaga, Epp C, and Epp D Zones

The Hasaga, Epp C and Epp D zones (inset of Figure 14-2) are hosted primarily within the Hasaga Porphyry and to lesser extent in the undivided volcanics. The mineralization strikes 075° and dips steeply (70°) to the southeast, and locally to the northwest. A representative cross section for the Hasaga Zone is shown in Figure 14-3.

Small scale sinistral folds occur within the Hasaga Zone. Folding introduces 5 m to 25 m displacement of mineralization to the north along strike. A moderately shallow deposit scale plunge of 40° towards the southwest controls the overall geometry of the Hasaga Zone, while steeper second order, subvertical plunge controls are present within the Epp C and Epp D zones.

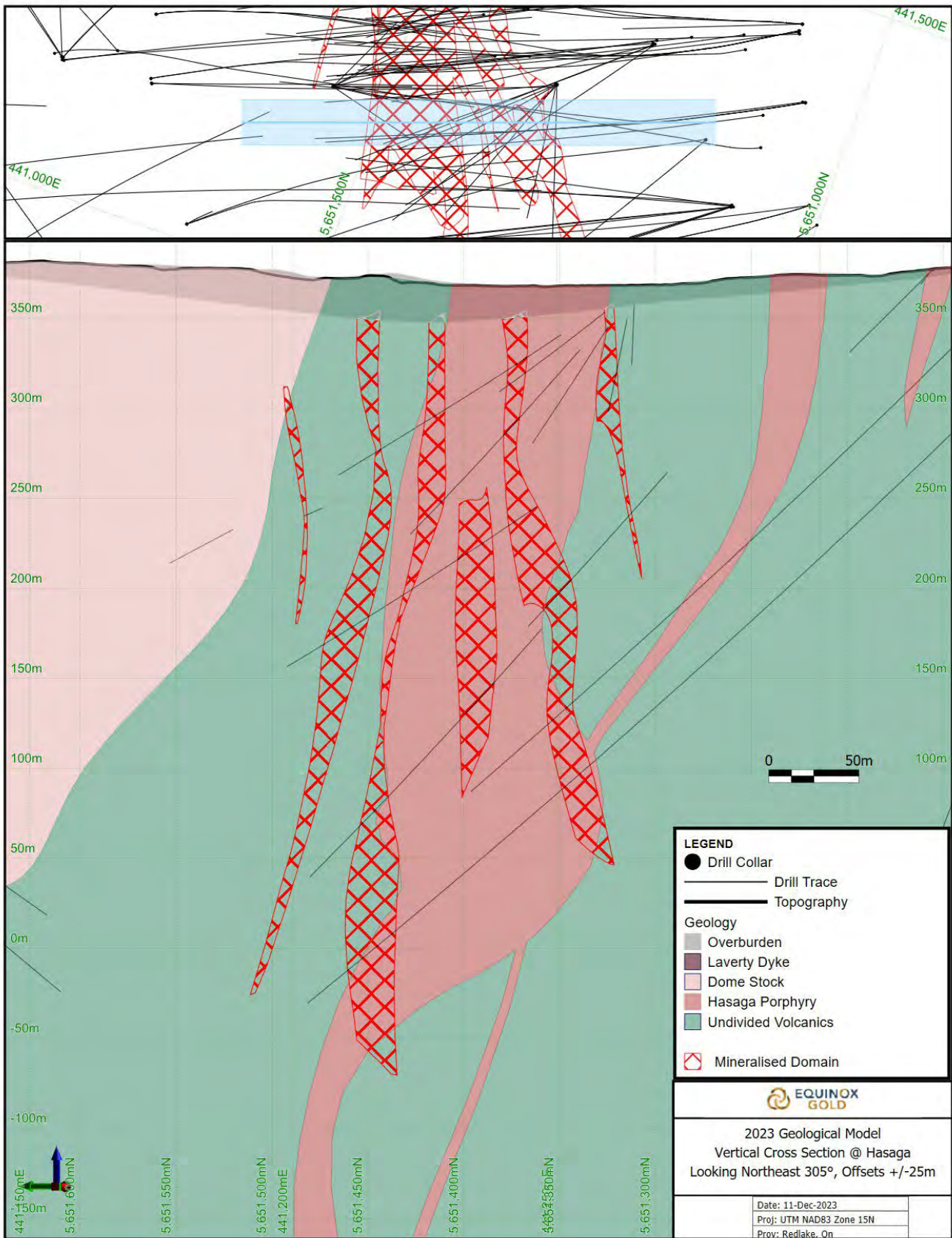


Figure 14-3: Cross Section Showing Hasaga Zone. Source: Equity, 2024.

### **14.3.2 Buffalo Zone**

Three mineralized domains comprise the Buffalo Zone: North, Main, and South. The Buffalo Zone's mineralization style, distinct from Hasaga, Epp C, and Epp D zones, is characterized by swarms of gold-bearing centimetre-scale quartz-carbonate-tourmaline veins hosted in Dome Stock granodiorite. Mineralized zones strike  $120^{\circ}$  and dip steeply to the southwest ( $80^{\circ}$ ). Pinch outs within the north Buffalo Zone occur where the vein swarms approach mafic volcanics or moderately sheared areas that include a melange of mafic volcanics and granodiorite (Kita, 1982). A representative cross section of the Buffalo Zone is shown in Figure 14-4.

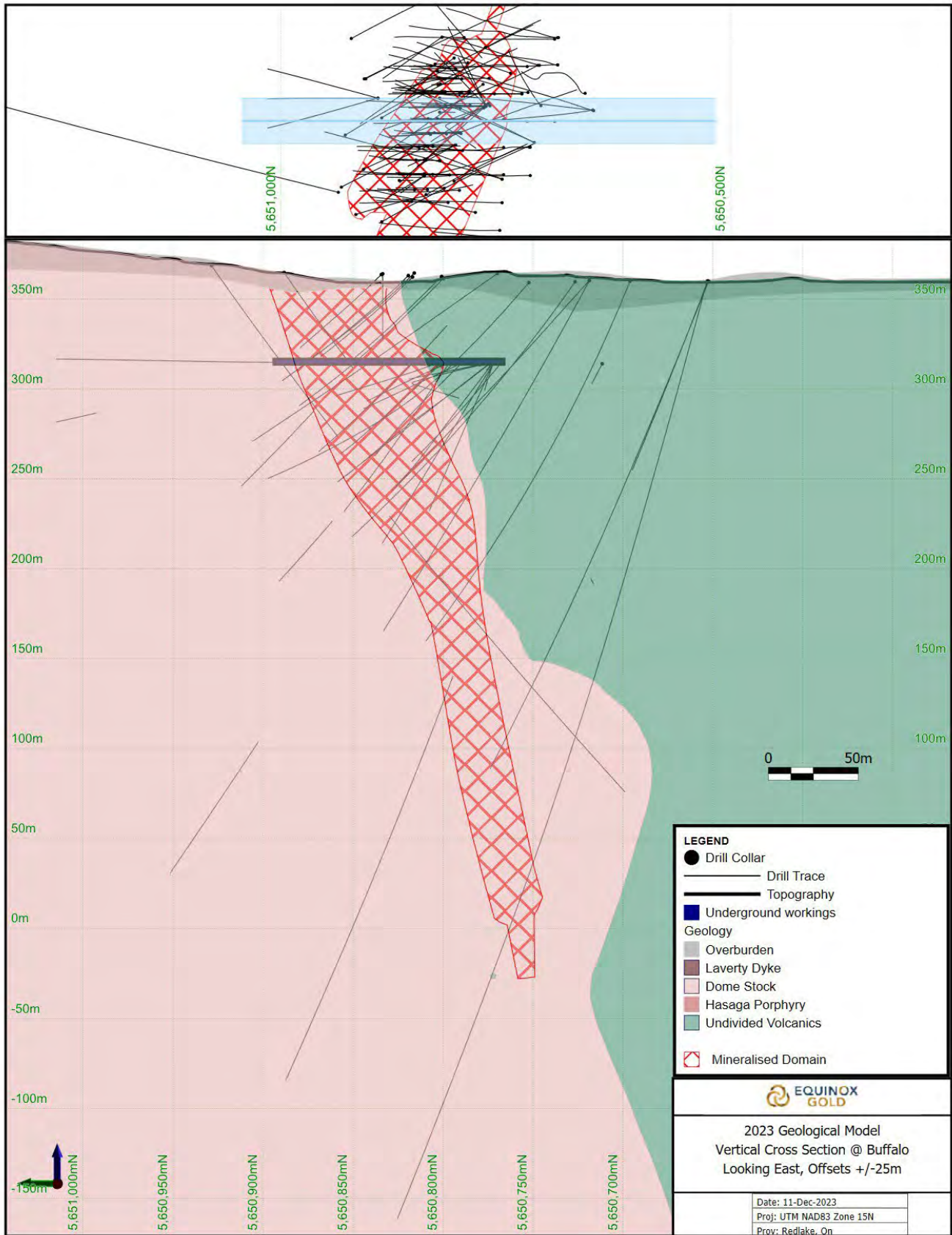


Figure 14-4: Cross Section Showing Buffalo Zone. Source: Equity, 2024.

### 14.3.3 Central Zone

The Central Zone includes eight mineralized domains of which one is hosted within the Lavery Dyke (Figure 14-5). The remaining seven domains are hosted in the Dome Stock granodiorite and are similar to the style of mineralization occurring at Buffalo, as swarms of centimetre-scale gold-bearing quartz-carbonate-tourmaline veins. Veins generally strike 150° and dip steeply (70°) to the southwest.

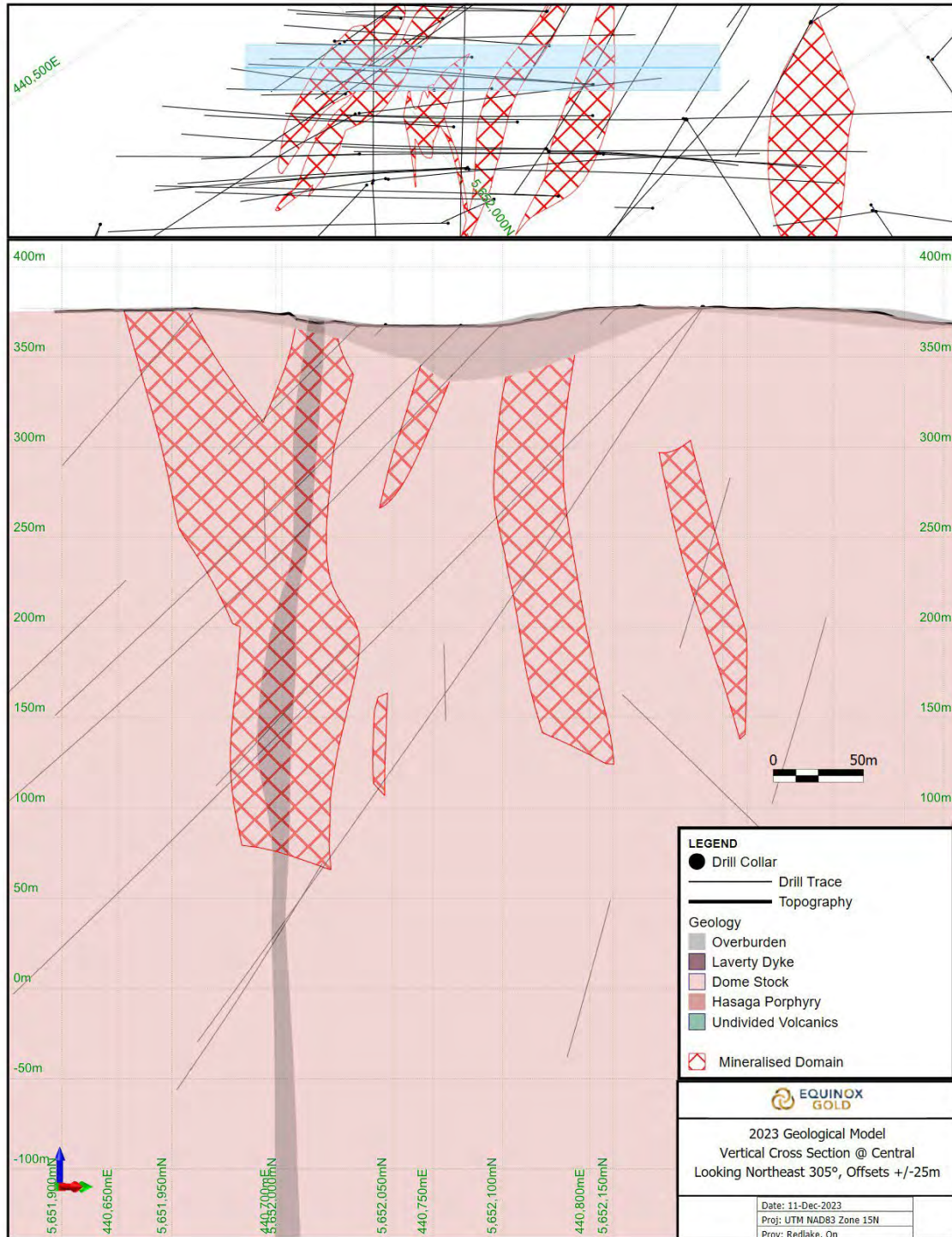


Figure 14-5: Cross Section Showing the Central Zone Source: Equity, 2024.



#### 14.4 Underground Workings

The Hasaga and Buffalo zones are within the immediate vicinity of underground workings. Underground workings as-builts were compared to end-of-mine long sections and level plans for the Hasaga, Epp C and Buffalo zones. Some detail from the hard copy long sections are not captured in the as-builts. Therefore, exclusion zones (Figure 14-6) were prepared around areas where discrepancies were observed between the as-builts and hard copy mining records where past mining activity is suspected to have occurred. The exclusion areas were then used to cut the mineralization models and exclude blocks from consideration as Mineral Resources.

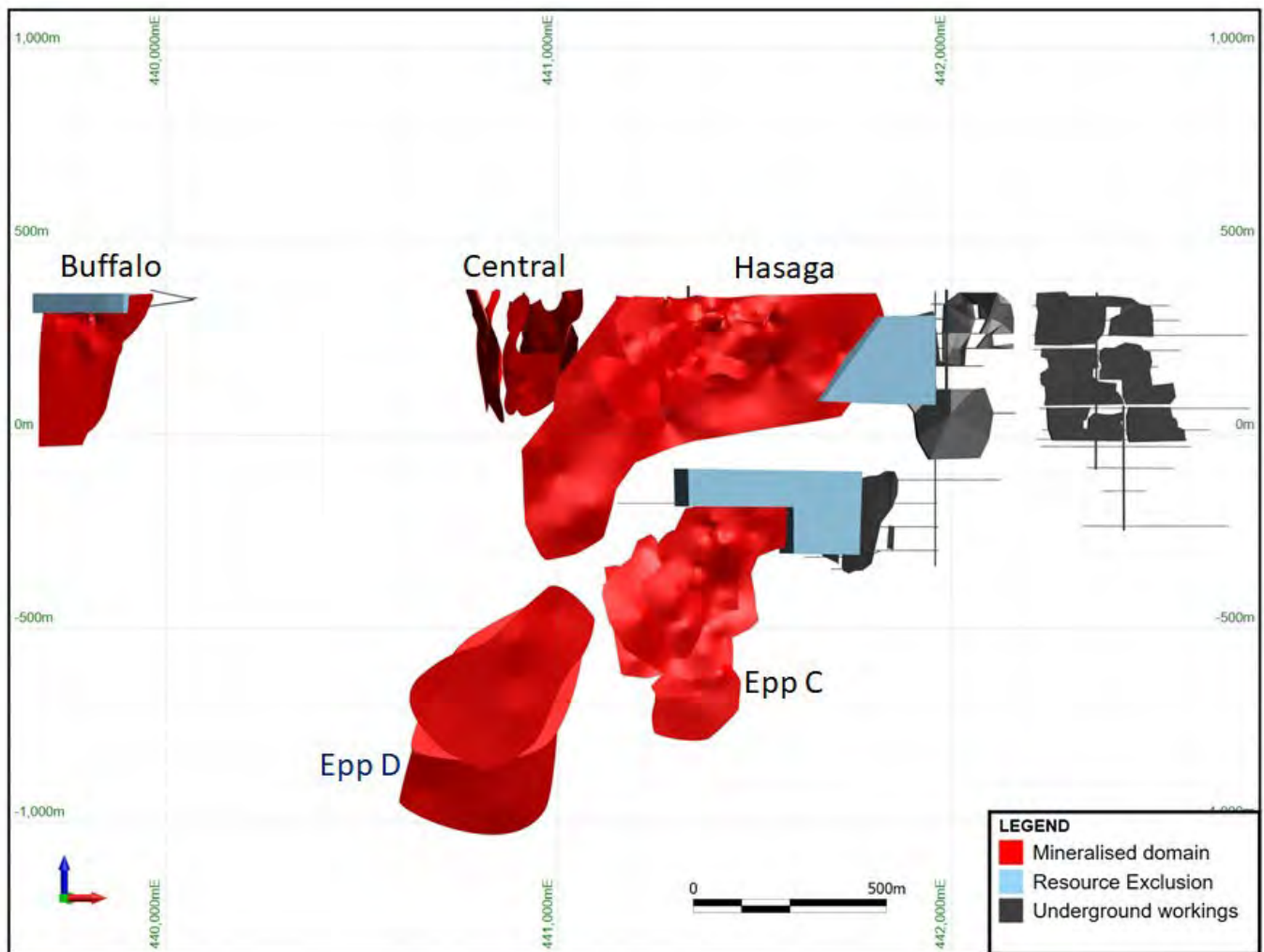


Figure 14-6: Resource Exclusion Zones Near Historic Mine Workings Source: Equity, 2024.

## 14.5 Editing of the Block Models

A single block model was created covering the extents of the Hasaga Property zones. The block model definitions are provided in Table 14-3. For estimation of the Epp D Zone, a block model with 10x10x10 m blocks was used with the same base point utilising the larger block size (Table 14-4). Estimated grades for Epp D were then assigned back to the 5x5x5 m block model.

*Table 14-3: 5x5x5 m Block Model Index.*

Axis	Block Size (m)	Rotation	Base Point	Block Count
X	5	0	439700	620
Y	5	0	5649900	580
Z	5	335	600	440
<b>Total</b>				158,224,000

*Table 14-4: 10x10x10 m Block Model Index.*

Axis	Block Size (m)	Rotation	Base Point	Block Count
X	10	0	439700	310
Y	10	0	5649900	290
Z	10	335	600	220
<b>Total</b>				19,778,000

### 14.5.1 Topography

A topographic surface was generated using point cloud data from the 2016 Light Detection and Ranging (LiDAR) survey described in Section 9 and augmented with 10 m Natural Resources Canada (NRCAN) digital elevation model (DEM) beyond the extents of the 2016 LiDAR survey. Partial percent of blocks above topography were coded to the block model. Figure 14-7 shows the data sources used for the topographic surface.

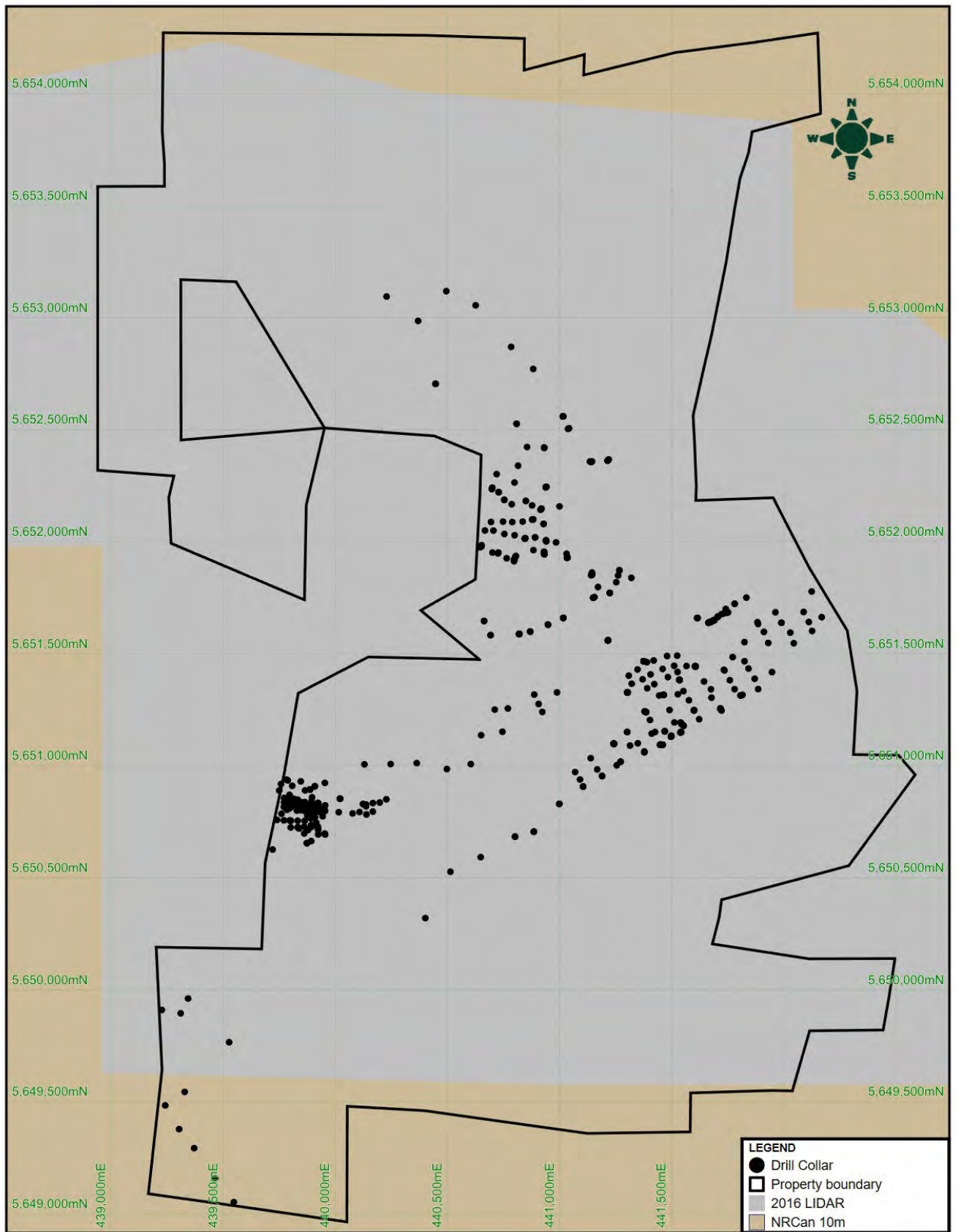


Figure 14-7: DEM Data Sources Source: Equity, 2024.

### 14.5.2 Domain Assignment

The geological and mineralization domains were coded to the block model based on the percentage of each block contained within each domain as described in Section 14.2 and and 14.3. For each mineralization model, partial percentages of the domains were assigned to each block in addition to assigning partial percentage of the combined mineralization domains.

### 14.5.3 Density

Too few samples exist to support density estimation; therefore, densities corresponding to the mineralized zones and geologic model were explored (Table 14-5). There are 43 density determinations that occur within the various mineralization domains (Table 14-6). In general, the average density values within the mineralized and non-mineralized zones are comparable to the host lithology and therefore density was assigned to the model based on the geologic model and corresponding lithology.

*Table 14-5: Density Values by Modelled Lithology.*

Lithology	Number of Samples	Average Density (g/cm <sup>3</sup> )
Hasaga Porphyry	656	2.68
Dome Stock	1,480	2.71
Laverty Dyke	18	2.83
Undivided Volcanics	2,414	2.75

*Table 14-6: Density Values Within Mineralized Zones and Host Lithologies.*

Zone	Host Lithology	Number of Samples	Average Density (g/cm <sup>3</sup> )
Hasaga	Hasaga Porphyry	7	2.67
Epp C	Hasaga Porphyry	18	2.68
Epp D	Hasaga Porphyry	4	2.64
Buffalo	Dome Stock	10	2.74
Central	Dome Stock	3	2.72
Central	Laverty Dyke	8	2.83

### 14.6 Drillhole Database

The drillhole database supporting the Hasaga Property Mineral Resource was provided by Equinox Gold. Minor errors in the drillhole database found during validation were corrected. Drillholes that included significant sample gaps, excessively long sample intervals or composite sample intervals were excluded which resulted in the removal of 23 historical drillholes. Other modifications to the drillhole database used for resource estimation are as follows:

- Intervals representing less than detection limit, missing samples, or unsampled intervals, regardless of analytical method, were assigned grades of 0.0025 g/t gold.
- Samples from drillholes lacking QA/QC were flagged, but not removed from the database to be factored into Classification.

Statistics for the drillholes and samples within the database used for the Mineral Resource estimation are summarised in Table 14-7.

*Table 14-7: Drillhole Database Summary.*

<b>Number of Drillholes</b>	<b>Total Metres</b>	<b>Total Number of Samples</b>
456	201,262.37	125,037

### **14.7 Gold Grade Capping**

Codes corresponding to the zone and also individual mineralization domains were assigned to raw assay data. Statistics on the raw assay data were generated initially for grouped zones. Top cut values for grouped zones were defined by decile analysis and log-scaled probability plots. The top cuts defined for the grouped zones were then evaluated for individual mineralization domains. Portions of the mineralization models have too few samples, or broader sample spacing, which warranted additional investigation because top-cut values based on the grouped zone were deemed to be inadequate. Follow-up capping analysis was completed using individual mineralization models. A top-cut summary for all the mineralization domains is provided in Table 14-8.

Table 14-8: Capping Summary by Domain.

Domain	Samples (n)	Sample Average (Au, g/t)	CV	Top Cut Value (Au, g/t)	Samples Capped (n)	Capped Average (Au, g/t)	Capped Sample CV	Composites (n)	Composites Average (Au, g/t)	Net Change (Composite-Assay)	Percent Change (Net Change / Assay)
100 to 151	624	2.47	1.9	20	6	2.31	1.4	624	2.31	-0.16	-7%
200	462	5.65	2.0	45	10	5.21	1.7	416	5.12	-0.54	-10%
210	148	2.63	2.4	30	2	2.51	2.2	136	2.45	-0.18	-7%
220	289	3.81	2.3	45	3	3.41	1.9	256	3.46	-0.35	-9%
300	245	11.73	3.0	60	4	8.90	1.5	247	8.95	-2.78	-24%
311	36	6.94	1.3	20	4	6.13	1.1	36	6.18	-0.76	-11%
312	41	3.91	2.1	20	2	3.19	1.8	41	3.33	-0.59	-15%
313	20	7.71	3.3	10	2	2.47	1.4	19	2.76	-4.94	-64%
321	129	7.69	1.7	60	2	7.29	1.5	130	7.27	-0.42	-5%
410	53	5.80	3.0	20	2	3.46	1.4	43	3.07	-2.72	-47%
420	32	4.06	1.4	10	3	3.20	1.0	27	3.31	-0.75	-19%
430	29	2.83	1.8	-	0	2.83	1.8	25	2.69	-0.15	-5%
500	220	4.69	1.9	35	4	4.29	1.6	219	4.32	-0.37	-8%
510	117	2.52	3.7	20	2	1.84	2.0	146	1.71	-0.81	-32%
511	11	4.00	1.4	5	2	2.31	0.8	16	2.36	-1.64	-41%
520	74	7.05	4.7	15	3	3.04	1.2	79	3.04	-4.01	-57%
521	49	5.23	1.9	20	2	4.17	1.3	49	4.20	-1.03	-20%
522	91	3.72	1.9	13	4	2.97	1.1	92	2.91	-0.81	-22%

## 14.8 Compositing

Prior to compositing, original sample length statistics within the mineralization domains were evaluated. Original sample lengths were taken predominantly at 1 m intervals and range from 0.4 m to 4.72 m. Samples were composited to 1 m intervals with residual sample lengths less than 0.25 m backstitched to the previous interval. Composites were broken at domain boundaries, honouring original sample intervals. A boxplot of the composites and summary statistics by domain are shown in Figure 14-8.

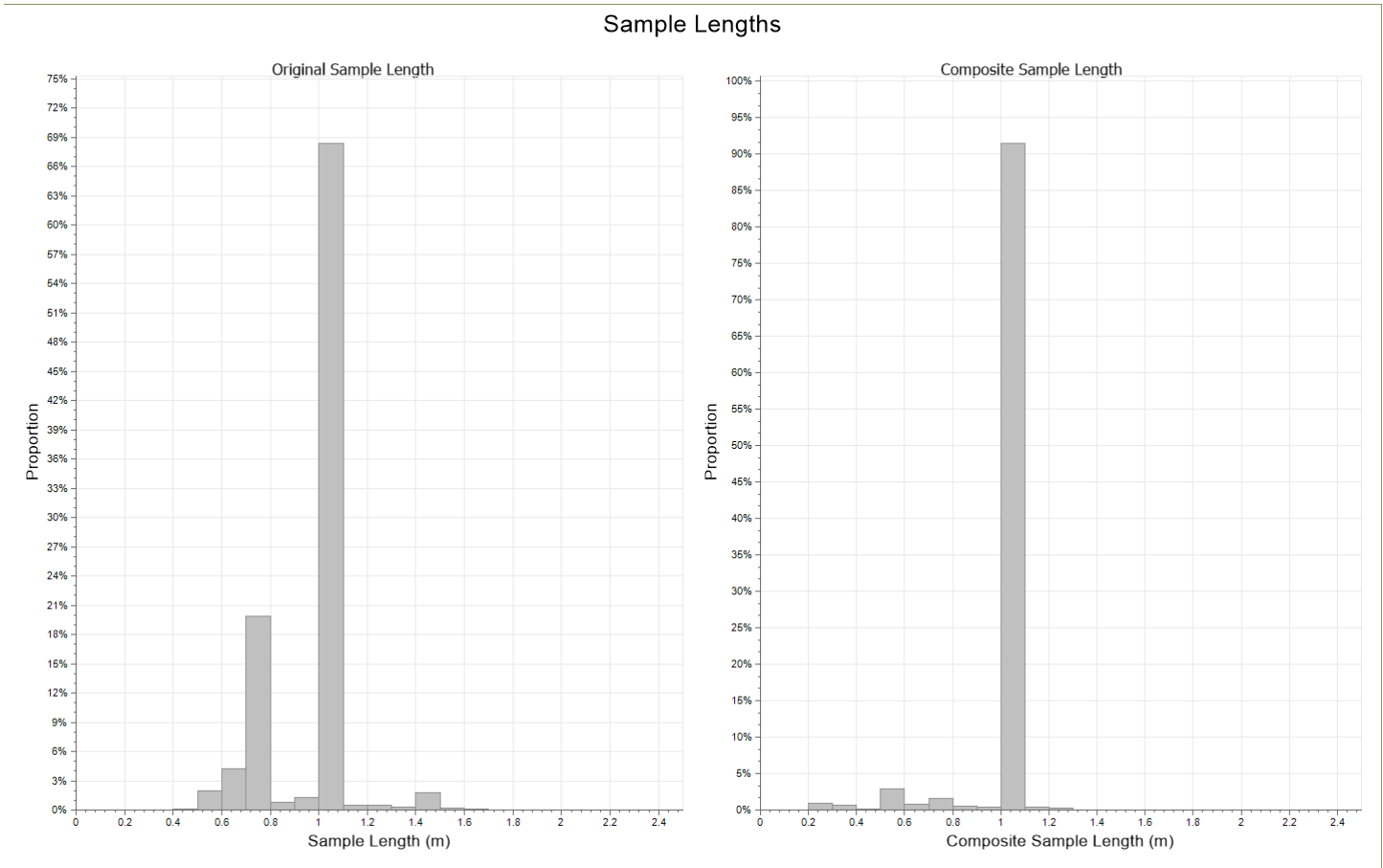
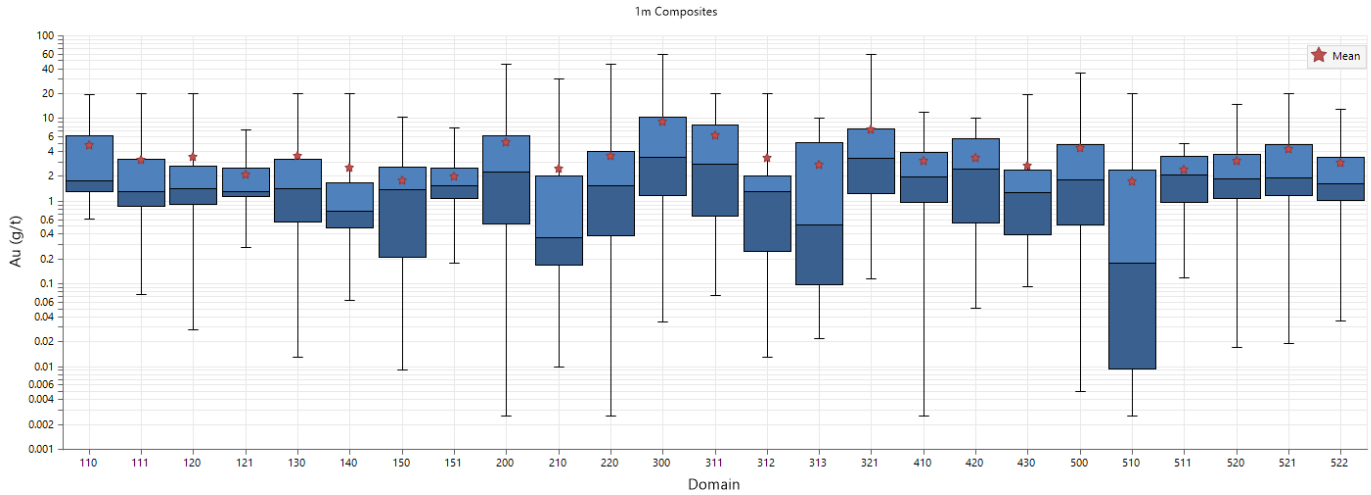


Figure 14-8: Histograms of Original Sample and Composite Length.

## Hasaga Composite Statistics



Domain	110	111	120	121	130	140	150	151	200	210	220	300	311	312	313	321	410	420	430	500	510	511	520	521	522
No of Points	12	41	87	19	27	54	323	61	416	136	256	247	36	41	19	130	43	27	25	219	146	16	79	49	92
Minimum	0.603	0.075	0.028	0.276	0.013	0.064	0.009	0.177	0.003	0.010	0.003	0.035	0.072	0.013	0.022	0.115	0.003	0.051	0.093	0.005	0.003	0.120	0.017	0.019	0.036
Maximum	19.711	20.000	20.000	7.230	20.000	20.000	10.376	7.610	45.000	30.000	45.000	60.000	20.000	20.000	10.000	60.000	11.900	10.000	19.400	35.000	20.000	5.000	15.000	20.000	13.000
Mean	4.734	3.110	3.429	2.081	3.488	2.547	1.756	1.959	5.115	2.449	3.464	8.946	6.179	3.327	2.765	7.270	3.073	3.306	2.685	4.320	1.708	2.355	3.039	4.204	2.914
Variance	36.7	19.1	27.3	2.54	25	22.9	3.31	1.93	57.1	27.8	34.1	175	47.5	31.8	12.6	116	10.1	9.67	19.6	45.8	10.9	3.25	12	26	10.4
Std Dev	6.06	4.37	5.22	1.59	5	4.79	1.82	1.39	7.56	5.27	5.84	13.2	6.89	5.64	3.55	10.8	3.18	3.11	4.43	6.77	3.3	1.8	3.47	5.1	3.22
CV	1.28	1.4	1.52	0.765	1.43	1.88	1.04	0.708	1.48	2.15	1.69	1.48	1.12	1.7	1.29	1.48	1.04	0.941	1.65	1.57	1.93	0.765	1.14	1.21	1.11
Quartile 1	1.308	0.872	0.907	1.145	0.567	0.471	0.211	1.090	0.528	0.170	0.379	1.185	0.653	0.245	0.097	1.228	0.970	0.549	0.396	0.524	0.009	0.958	1.085	1.169	1.011
Median	1.768	1.320	1.430	1.290	1.410	0.764	1.390	1.540	2.280	0.358	1.540	3.420	2.835	1.300	0.511	3.269	1.967	2.421	1.266	1.790	0.177	2.086	1.840	1.893	1.613
Quartile 3	6.105	3.240	2.666	2.545	3.230	1.690	2.575	2.540	6.240	2.030	3.991	10.313	8.295	2.020	5.155	7.530	3.940	5.730	2.351	4.820	2.353	3.520	3.715	4.816	3.384

Figure 14-9: Boxplot and Summary Statistics by Domain.

### 14.9 Variography

Variograms were calculated and modelled within the grouped domains for the Hasaga, Epp C, Buffalo and Central zones using traditional directional variograms. Epp D had too few samples to generate a stable variogram; therefore, a pairwise variogram was calculated and used as the basis for modelling. To avoid mixing individual domains from each zone, bandwidths of the calculated variograms were restricted to less than 20 m for major and semi-major directions. The resulting modelled variogram parameters are summarised in Table 14-9. The variogram models provide a baseline assessment of continuity for each zone. Calculated variograms showed greater stability in the semi-major direction for the Central Zone due to the limited drilling at depth. Variogram distances in the major directions (down dip) range from 60 to 80 m, while variogram distances in the semi-major directions (along strike) range from 40 to 90 m.



Table 14-9: Variogram Model Parameters by Zone.

Zone	Direction	Dip Direction (°)	Dip (°)	CC	Distance (m)	Nugget
Central (100)	Major	70	75	0.6	70	0
				0.4	70	
	Semi-Major	160	0	0.6	60	
				0.4	90	
	Minor	250	15	0.6	1.5	
				0.4	6.0	
Buffalo (200)	Major	200	70	0.13	15	0.1
				0.77	60	
	Semi-Major	290	0	0.13	30	
				0.77	40	
	Minor	20	20	0.13	2.0	
				0.77	7.0	
Epp C (300)	Major	150	85	0.5	9.0	0
				0.5	70	
	Semi-Major	240	0	0.5	20	
				0.5	60	
	Minor	330	5	0.5	0.5	
				0.5	6.0	
Epp D (400)	Major	160	85	0.8	70	0.2
	Semi-Major	250	0	0.8	70	
	Minor	340	5	0.8	4.0	
Hasaga (500)	Major	335	85	0.7	80	0.2
				0.1	80	
	Semi-Major	56	0	0.7	60	
				0.1	60	
	Minor	155	5	0.7	1.0	
				0.1	5.0	

#### 14.10 Gold Grade Estimation

Gold grade estimation for the Hasaga Property was completed using inverse distance cubed (ID<sup>3</sup>). A single block model for all zones was generated using the model interpolation parameters in Table 14.10 and Table 14.11. Estimates were generated using the 5x5x5 m block model for all zones except for Epp D, which used a 10x10x10 m block model due to the broader drillhole spacing. Block models were rotated 335° clockwise to match the strike of the modelled zones.

Estimates were generated using two estimation passes with 1 m composite samples where capping was performed on raw assays prior to compositing. Locally varying anisotropy was used for all

zones using vein reference surfaces from Leapfrog. Average orientations of the vein reference surfaces for all domains are summarised in Table 14-12.

*Table 14-10: Interpolation Parameters – Search Criteria.*

Pass	Number of Samples		
	Minimum	Maximum	Max Per Hole
1	5	22	7
2	2	22	7

*Table 14-11: Interpolation Parameters - Search Distances by Zone.*

Zone	Pass	Search Radius (m)		
		X	Y	Z
Central (100)	1	70	90	15
	2	105	135	30
Buffalo (200)	1	60	40	15
	2	90	60	30
Epp C (300)	1	70	60	12
	2	105	90	24
Epp D (400)	1	70	70	15
	2	105	105	30
Hasaga (500)	1	80	60	10
	2	120	90	20

*Table 14-12: Interpolation Parameters - Search Orientation by Domain.*

Domain	Azimuth (°)	Plunge (°)	Rotation (°)
110	239	75	0
111	212	85	0
120	53	81	0
121	21	80	0
130	58	77	0
140	70	80	0
150	53	90	0
151	72	75	0
200	208	77	0
210	207	69	0
220	204	74	0
300	155	70	0
311	169	83	0
312	150	83	0

Domain	Azimuth (°)	Plunge (°)	Rotation (°)
313	172	88	0
321	142	56	0
410	162	83	0
420	344	78	0
430	334	85	0
500	336	74	0
510	338	66	0
511	155	88	0
520	154	79	0
521	139	83	0
522	139	79	0

### 14.11 Validation of Grade Estimates

Grade estimates were validated using a combination of swath plots, cross validation, and comparisons to other estimators. Vertical swath plots and swath plots along strike are shown for Central, Buffalo, Hasaga and Epp C in Figure 14-10 and Figure 14-11. In each swath plot, distinct components are delineated: red lines illustrate nearest neighbor (NN) grade estimates, blue lines signify ID<sup>3</sup> gold grade estimates, blue bars represent composite sample count, and black lines denote composite sample grade. Additionally, grey lines portray the Block Composite Average (BCA), which represents the average of composite grades contained within each block.

Validation results of the swath plots show good reproduction of grade trends for the Buffalo, Hasaga, Epp C and Central zones.

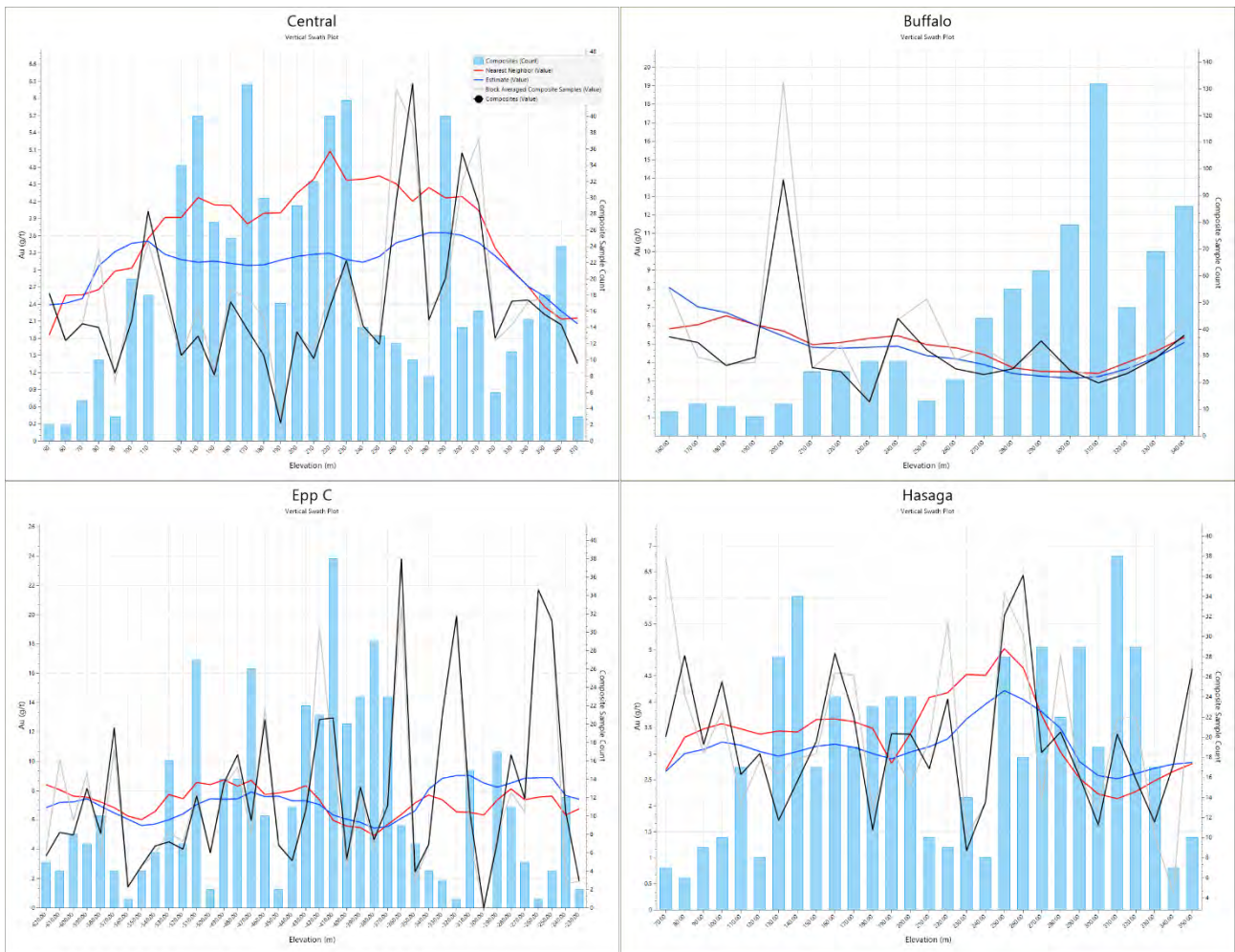


Figure 14-10: Vertical Swath Plots by Zone.

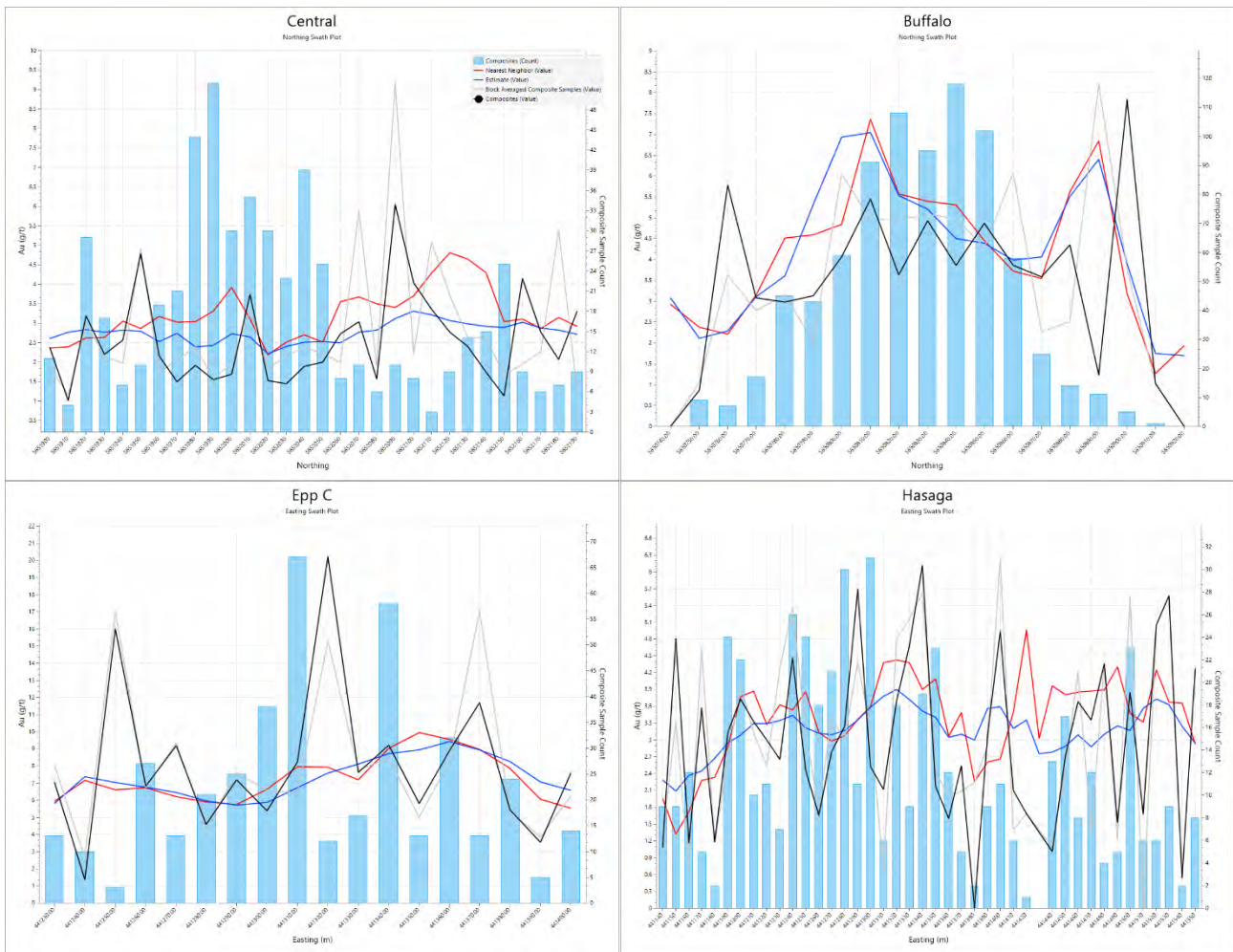


Figure 14-11: Swath Plots Along Strike by Zone.

Block estimates were compared to the BCA for all zones (Table 14-13). All zones show good local reproduction of grade estimates to within 8% of the BCA.

Table 14-13: Summary of Cross Validation Results.

Zone	Number of Pairs	Average Grade (Au, g/t)		Correlation Coefficient
		BCA	Estimated Blocks	
Central	237	2.55	2.58	0.76
Buffalo	306	4.70	4.63	0.84
Hasaga	214	3.37	3.14	0.87
Epp C	184	7.31	7.69	0.85
Epp D	149	2.96	3.06	0.81

## 14.12 Classification

Mineral Resources were classified in accordance with the CIM Definition Standards for Mineral Resources and Mineral Reserves (May, 2014) by Trevor Rabb, P.Geo. (EGBC #39599), an appropriate independent QP for the purpose of NI 43-101.

Mineral Resource classification is subjective in nature and is guided by the data used in preparing the estimate. Classification of resources has considered geological continuity, data spacing, data type, data source, data quality, and geostatistical evaluation of these data. Wireframes were generated using the criteria for Mineral Resource classification summarised in Table 14-14. A 25 m area of influence was used to generate the wireframes to smooth the Mineral Resource classification and prevent isolated blocks with dissimilar classification.

*Table 14-14 Resource Classification Criteria.*

Classification	Criteria for Resource Classification				
	Number of Holes Used	Average Distance to Samples (m)	Distance From Sample (m)	Number of Holes with QAQC	Drillhole Spacing (m)
Indicated	≥ 3	≤ 70	≤ 35m	≥ 2	≤ 55
Inferred	≥ 1	> 70	> 35 m	-	> 55, < 100

Estimated blocks were classified as Indicated Mineral Resources if the average distance to samples was 70 m or less and within 35 m from samples, and the block is estimated from at least three holes with at least two holes including analytical QA/QC. All other blocks were assigned to an Inferred classification.

The average drillhole spacing for Indicated Mineral Resources is 38 m with a maximum of 55 m. Average drillhole spacing for Inferred Mineral Resources is 80 m and is less than 100 m, and within 100 m of drillholes located near the edges of the Mineral Resource model.

## 14.13 Reasonable Prospects of Eventual Economic Extraction

The CIM Definition Standards on Mineral Resources and Reserves (CIM Definition Standards, May 2014) state that:

*“A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.”*

To sufficiently test the reasonable prospects for eventual economic extraction by underground mining, the mining cost assumptions presented in Table 14.15 were used to establish the reported cut-off grade of the Mineral Resource statement and as parameters to produce a constraining wireframe.

*Table 14-15: Underground Mining Cost Assumptions.*

Parameter	Unit Cost	Amount
Gold Price	US\$ per Au oz	\$1,700
Payability	%	99
Exchange Rate	C\$ to US\$	0.77
Refining/Transportation	US\$ per Au oz	\$4.62
Royalty	%	3
Mining Costs	US\$/t	\$83.93
Process Costs	US\$/t processed	\$30.80
G&A	US\$/t processed	\$23.10
Sustaining Capex	US\$/t processed	\$26.18
Process Recovery	%	90
Minimum Width	m	1.0

Constraining wireframes were generated from the block model that represent continuous blocks greater than or equal to 4 g/t gold, minimum true thickness greater than 1 m and volumes greater than 120 kt. Blocks outside the constraining wireframes are not included in the Mineral Resource statement. Cross sections showing the constraining wireframes and the resource models for Hasaga, Buffalo, and Central are shown in Figure 14-12 to Figure 14-14.

To determine the sensitivities to gold price, constraining gradeshells were generated using gold prices ranging from US\$1,500 to US\$2,000 per gold ounce at US\$100 increments and the corresponding gold cut-off grades. The results summarised in Table 14-16 are for comparative purposes only and are not to be considered Mineral Resources.

*Table 14-16: Mineral Resource Gold Price Sensitivities.*

Gold Price	Gold Cut-off Grade	Resource Classification	Tonnes	Gold Grade	Contained Gold
US\$ per Au oz	(g/t)		(kt)	(g/t)	(koz)
\$1,500	4.50	Indicated	1,288	9.30	385
		Inferred	1,696	8.01	437
\$1,600	4.20	Indicated	1,406	8.88	401
		Inferred	1,968	7.55	478
<b>\$1,700</b>	<b>4.00</b>	<b>Indicated</b>	<b>1,470</b>	<b>8.64</b>	<b>408</b>
		<b>Inferred</b>	<b>2,059</b>	<b>7.31</b>	<b>484</b>
\$1,800	3.70	Indicated	1,636	8.22	432
		Inferred	2,429	6.95	543
\$1,900	3.50	Indicated	1,792	7.83	451
		Inferred	3,039	6.31	616
\$2,000	3.30	Indicated	1,892	7.61	463
		Inferred	3,310	6.08	647

#### **14.14 Mineral Resource Statement**

A summary of the Indicated and Inferred Mineral Resources within the constraining wireframes described in Section 14.13 and shown in Figure 14-12 to Figure 14-14 are summarised in Table 14-17. There are no known factors related to environmental, permitting, legal, title, taxation, socio-economic, marketing, or political issues which could materially affect the mineral resource estimates.



Table 14-17: Hasaga Property Mineral Resource Statement.

Classification	Area	Gold Cut-off Grade (g/t)	Tonnage (kt)	Gold Grade (g/t)	Contained Gold (koz)
Indicated	Epp C	4.0	893	9.58	275
	Hasaga	4.0	346	7.06	79
	Buffalo	4.0	158	8.17	41
	Central	4.0	73	5.66	13
	<b>Total</b>	<b>4.0</b>	<b>1,470</b>	<b>8.64</b>	<b>408</b>
Inferred	Epp C	4.0	728	8.59	201
	Hasaga	4.0	507	6.35	103
	Epp D	4.0	322	6.46	67
	Buffalo	4.0	259	7.09	59
	Central	4.0	243	6.81	53
	<b>Total</b>	<b>4.0</b>	<b>2,059</b>	<b>7.31</b>	<b>484</b>

1. Mineral Resources are reported using a cut-off grade of 4.0 g/t gold based on the following costs and assumptions: US\$1700 per oz gold price, 0.77 C\$ to US\$ exchange rate, US\$4.62 per gold oz refining and transportation costs, 3% royalty, US\$83.93/t mining costs, US\$30.80/t process costs, US\$23.10/t G&A costs, US\$26.18/t sustaining capital, 90% process recovery and 1m minimum width.
2. Mineral Resources are reported at a gold price of US\$1700 /oz gold.
3. Mineral Resources are constrained using wireframes representing continuous blocks with estimated gold grades  $\geq 4$  g/t gold, continuous volumes representing  $>120$  kt, and minimum thickness of 1.0 m.
4. The Hasaga Property Mineral Resource statement has been prepared by Trevor Rabb, P.Geol. who is a qualified person as defined by NI 43-101.
5. The Hasaga Property Mineral Resource statement has been prepared in accordance with NI 43-101 standards of Disclosure for Mineral Projects (May 2016) and the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014).
6. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
7. The number of metric tonnes and gold ounces are rounded to the nearest thousand. Any discrepancies in the totals are due to rounding effects.
8. Mineral Resources from the Hasaga Property presented herein have an effective date of June 30, 2024.

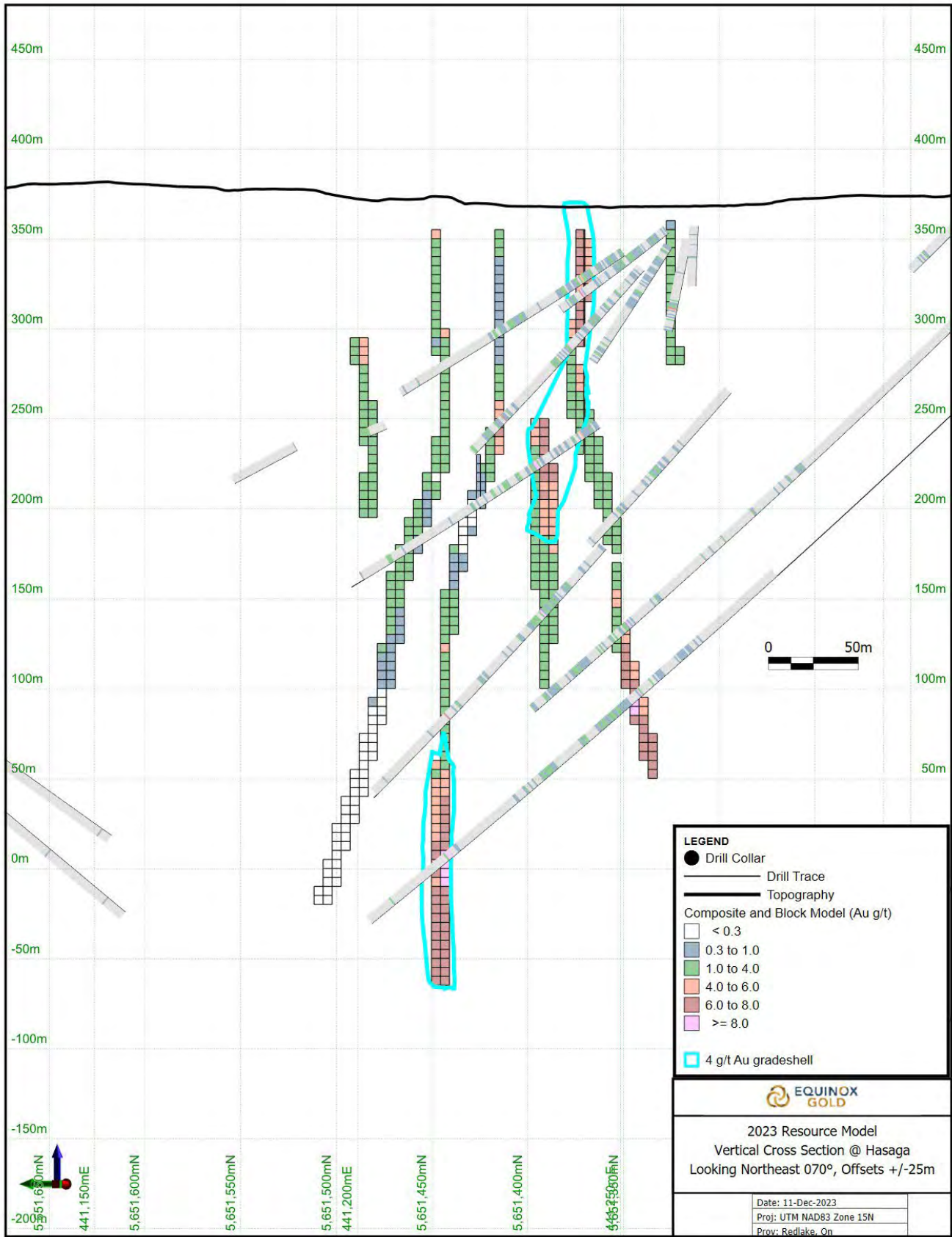


Figure 14-12: Hasaga Resource Model Source: Equity, 2024.

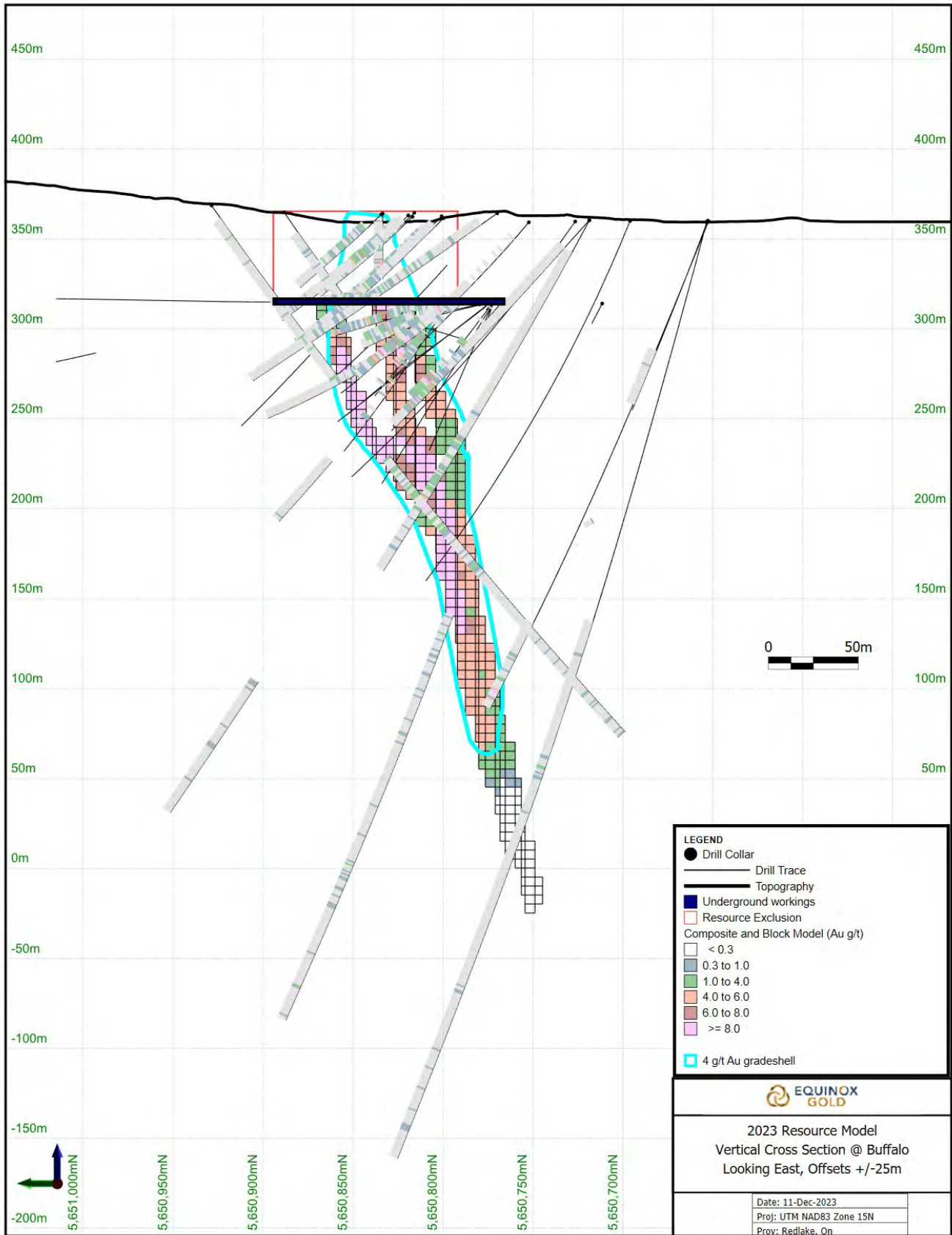


Figure 14-13: Buffalo Resource Model Source: Equity, 2024.

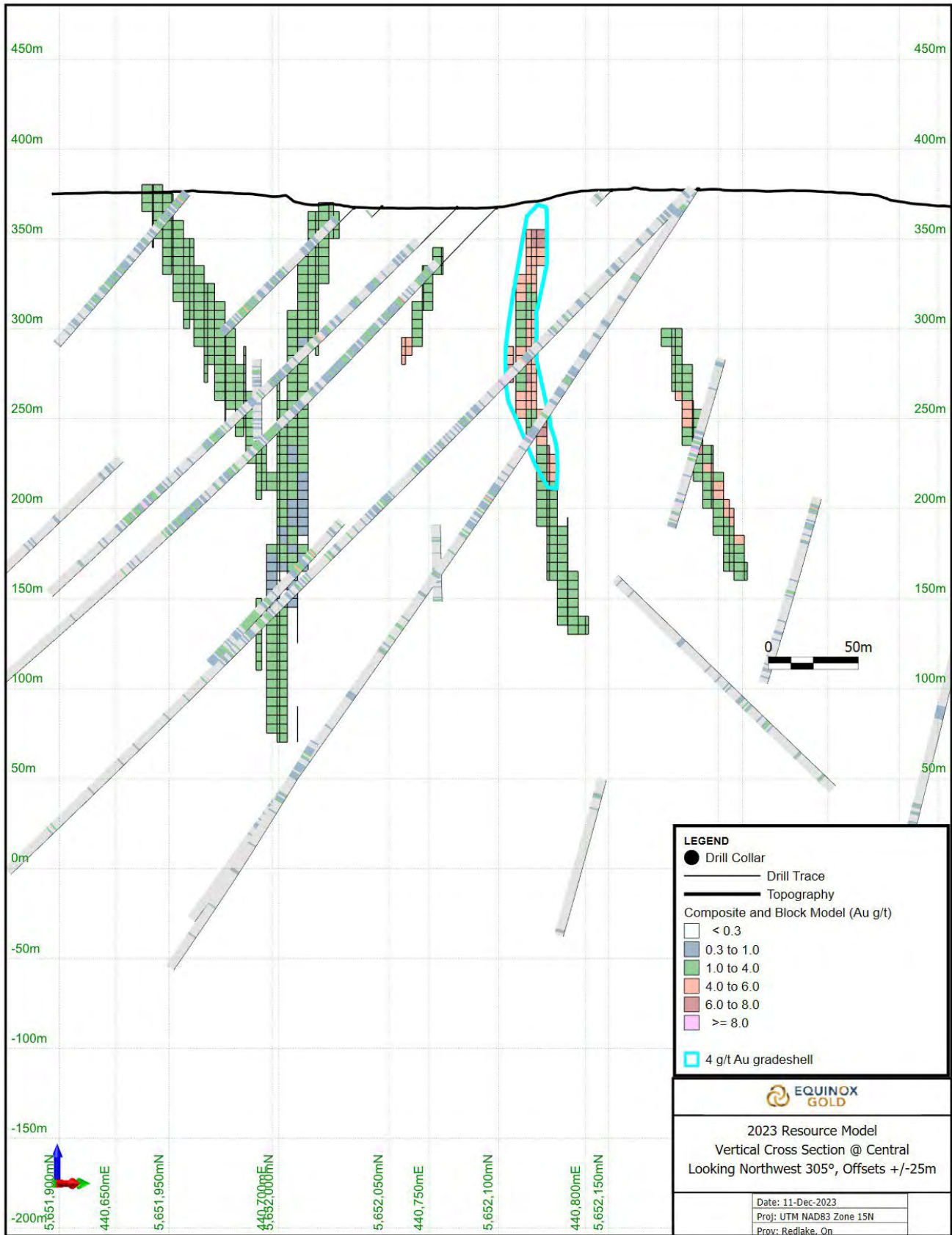


Figure 14-14: Central Resource Model Source: Equity, 2024.

## 23.0 ADJACENT PROPERTIES

There are five properties of relevance adjacent to the Hasaga Property. Namely, these include the Red Lake Mine Complex, Rahill-Bonanza, Madsen, Howey and North Madsen. The QP has been unable to verify the information regarding these properties and the information is not necessarily indicative of mineralization on the Hasaga Property.

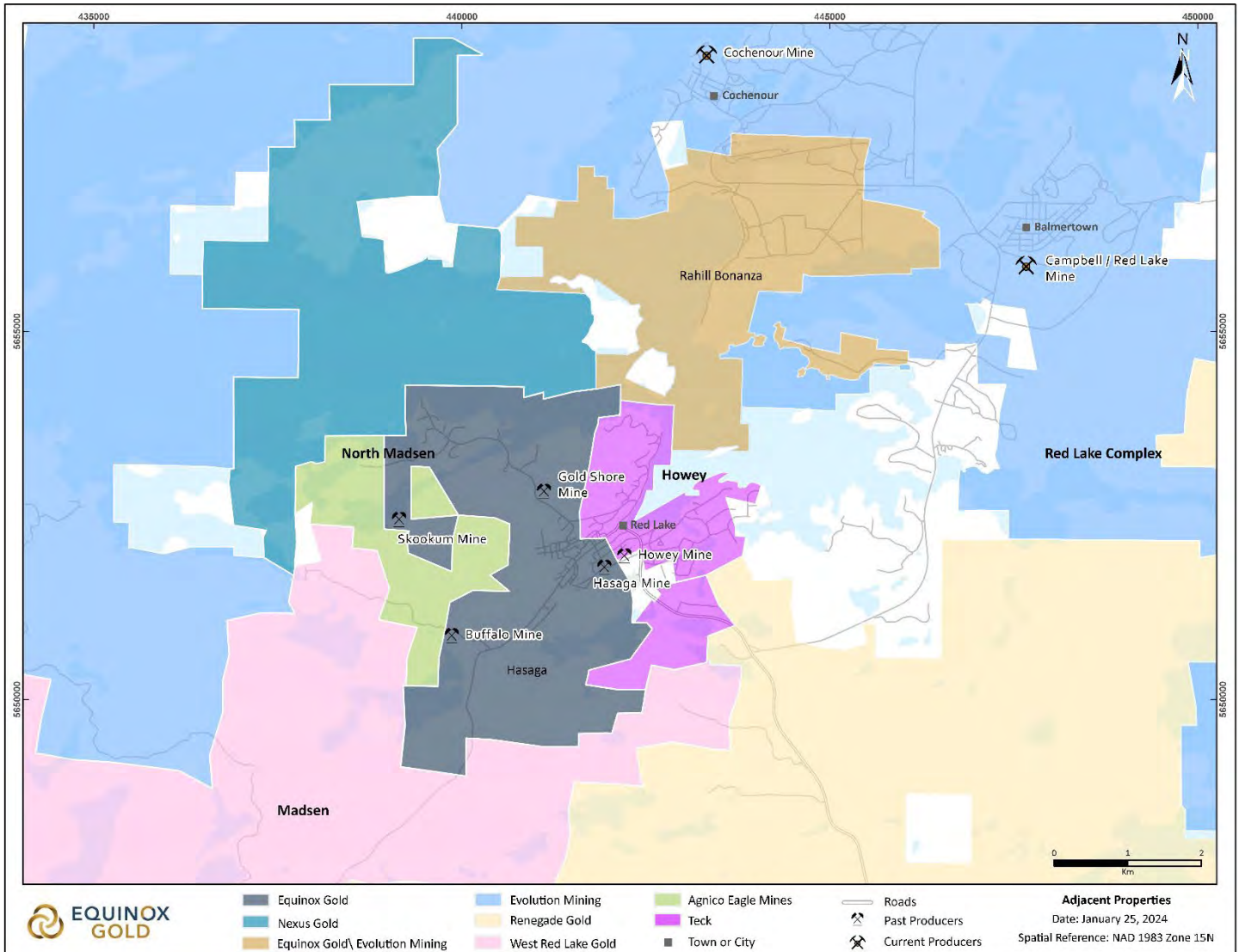


Figure 23-1: Adjacent Properties. Source: Equinox Gold, 2024.

### 23.1 Red Lake Mine Complex

Evolution Mining's 100% owned Red Lake Operation is a complex of mines including the Red Lake, Campbell and Cochenour mines approximately 7 km northeast of the Hasaga Property. The Campbell and Red Lake portions of the complex were host for the bulk of historical gold production from the Red Lake Greenstone Belt, with over 25 million ounces of gold produced. The following

description is taken from Evolution Mining's 2024 Annual Mineral Resources and Ore Reserves statement (Evolution Mining, 2024).

Red Lake mineralization is hosted in the Red Lake greenstone belt. Mineralization is associated with multiple episodes of volcanism, sedimentation, plutonism and deformation and is hosted in a variety of rock types within the Red Lake Greenstone Belt. Economic zones of mineralization are characterised by vein-hosted gold systems accompanying sulphide replacement within sheared mafic to komatiitic basalts.

As of December 31, 2023, Evolution Mining reports a Mineral Reserve for the entire Red Lake Operation of 12.4 Mt at 6.87 g/t gold containing 2,748 koz of gold. Stated Indicated Mineral Resources of 32.4 Mt at 6.89 g/t gold containing 7,174 koz of gold and Inferred Mineral Resources of 22.72 Mt at 6.1 g/t gold containing 4,456 koz of gold, in accordance with JORC Code 2012 requirements are inclusive of Reserves.

The QP has been unable to verify the information and the information is not necessarily indicative of mineralization on the Hasaga Property.

### **23.2 Rahill-Bonanza**

The 1,182-hectare Rahill Bonanza Property is a joint venture between Evolution Mining (52% interest and operator) and Equinox Gold (48% interest) (area weighted) that is contiguous with the northeast corner of the Hasaga Property. The property is the site of the past-producing Wilmar Gold Mine that produced 52,204 ounces of gold between 1967-1971 at an average grade of 9.0 g/t gold (Durocher et al., 1987). The property hosts the Rahill-Bonanza Zone along with several other mineralized zones including the Wilmar Mine, Wilmar West Zone and Arsenopyrite Zone. The property also hosts approximately 6 km of Balmer Unconformity strike length. This unconformity is located in close proximity to many of the large gold deposits in the Red Lake Camp and is therefore a prospective setting in which to explore for additional zones of mineralization. Geology on the property is comprised of rocks from the Balmer, Confederation and Bruce Channel Assemblages. Mineralization on the property is hosted in a variety of settings, including quartz-carbonate veining with basalt of the Balmer Assemblage, quartz-tourmaline veins within granodiorite and shears within the Bruce Channel Assemblage (Mason-Apps, 2013). The QP has been unable to verify the information and the information is not necessarily indicative of mineralization on the Hasaga Property.

### **23.3 Howey**

The Howey Property is directly adjacent to the eastern edge of the Hasaga Property and is owned by Teck Resources who acquired it in 1963 (Durocher et al., 1987). The Howey Property hosts the historical Howey Mine that is directly on strike with the historical Hasaga Mine. The Howey Mine was in production from 1930-1941 and produced 421,593 oz Au. The two deposits are both situated on the same structure and both have gold mineralization in quartz veins in the quartz porphyry that cuts across the properties. Ore from the Howey Mine was brought to surface by a shaft and winze that reached a depth of 615 m, the ore was milled on site. The mine ceased production in 1941 when the crown pillar failed. The site is currently fenced and monitored for ground movement.

## **23.4 Madsen**

The Madsen Project is currently owned by West Red Lake Gold, which is working to re-open the Madsen Mine following its closure in 2022 by its previous owner (Pure Gold). The mine itself is located 4.5 km southwest of the edge of the Hasaga Property.

Gold mineralization in the majority of the mineralized zones at the Madsen Mine is primarily hosted in different rock types than the significant mineralized zones on the Hasaga Property, both lie along the same regional-scale geological structures. Additionally, all logistical factors that are of relevance to the Madsen Mine (permitting, local infrastructure, labour, etc) apply equally to any potential future development on the Hasaga Property.

The most recent NI 43-101 compliant Mineral Resource estimate for the Madsen Property was published in 2024, with the majority of resources in the main Madsen Zone and minor contributions from the satellite Fork, Russet South and Wedge zones. Table 23-1 summarizes the Indicated and Inferred Mineral Resources for the Madsen Project with an effective date of December 31, 2021 reported at a cut-off grade of 3.38 g/t gold (Revering et al., 2024). The QP has been unable to verify the information and the information is not necessarily indicative of mineralization on the Hasaga Property.

Table 23-1: Madsen Project Mineral Resource Statement.

Classification	Deposit - Zone	Tonnes	Gold Grade (g/t)	Gold Troy Ounces
Indicated	Madsen – Austin	4,147,000	6.9	914,200
	Madsen – South Austin	1,696,000	8.7	474,600
	Madsen – McVeigh	388,700	6.4	79,800
	Madsen – 8 Zone	152,000	18.0	87,700
	Fork	123,800	5.3	20,900
	Russet	88,700	6.9	19,700
	Wedge	313,700	5.6	56,100
	Total Indicated	6,909,900	7.4	1,653,000
Inferred	Madsen – Austin	504,800	6.5	104,900
	Madsen – South Austin	114,100	8.7	31,800
	Madsen – McVeigh	64,600	6.9	14,300
	Madsen – 8 Zone	38,700	14.6	18,200
	Fork	298,200	5.2	49,500
	Russet	367,800	5.8	68,800
	Wedge	431,100	5.7	78,700
	Total Inferred	1,819,300	6.3	366,200

Source: Revering et al. (2024)

Notes:

- 1) Mineral resources are not mineral reserves and do not have demonstrated economic viability.
- 2) Mineral resources are reported at a cut-off grade of 3.38 g/t Au
- 3) Mineral resources are reported using a gold price of US\$1800/oz
- 4) Excludes depletion of mining activity during the period from January 1, 2022 to the mine closure on October 24, 2022 as it has been deemed immaterial and not relevant for the purpose of this report.
- 5) All figures have been rounded to reflect the relative accuracy of the estimate

### 23.5 North Madsen

The North Madsen Property, contiguous with the western edge of the Hasaga Property, is 100% owned by Agnico Eagle Mines, which has held the property since its acquisition of the Canadian assets of Yamana Gold in March of 2023 (Agnico Eagle, 2023). Historic exploration efforts focused on the granodioritic Dome Stock which is host to all known mineralization at the North Madsen Property. This is the same unit that hosts the Central and Buffalo zones on the Hasaga Property which indeed are interpreted to trend into the North Madsen Property. The QP has been unable to verify the information and the information is not necessarily indicative of mineralization on the Hasaga Property.



## **24.0 OTHER RELEVANT DATA AND INFORMATION**

There is no other relevant data or information necessary to make this technical report understandable and not misleading.

## 25.0 INTERPRETATION AND CONCLUSIONS

After the Red Lake Goldshore, Buffalo and Hasaga mines closed in the 1950's, minimal exploration was undertaken near these historical mines and the Hasaga Property was not a focus of sustained work by any of the subsequent owners. Premier successfully acquired and amalgamated the entire trend in 2015 and subsequent exploration work significantly advanced the understanding of geological controls and style of gold deposits and occurrences on the Hasaga Property.

Premier's exploration approach targeted broad, low-grade bulk tonnage gold deposits, such as that mined at the Buffalo Mine, and but ultimately focused on delineating high grade vein zones such as those exploited at the Hasaga and Red Lake Goldshore mines. Most of the significant gold production in the Red Lake area has been from the underground mining of high-grade vein zones and that approach is favoured in the current modelling and resource estimation presented in this report. Exploration work has focused on three main areas with resource growth potential, of which the Hasaga trend is the most prospective and accounts for the majority of the presently defined mineral resources on the Hasaga Property. A primary goal of any future exploration work should be to discover and delineate additional zones comparable to Epp C or those developed at the historical Hasaga Mine.

Prospectivity to host a high-grade deposit is largely determined by host rock and structure, with the Hasaga Porphyry unit representing the primary exploration target. The Hasaga Porphyry is a series of porphyritic felsic intrusions which intruded both Balmer Assemblage and Confederation Assemblage rocks. The Hasaga Porphyry intrusions generally trend subparallel to the regional unconformity, which separates those two supracrustal sequences. The age of mineralization is not well constrained, though gold-bearing veins are present (at least to a minor degree) within all rocks on the Hasaga Property, indicating mineralization post-dates deposition and emplacement of the youngest rock unit. Mineral resources are present in both the Dome Stock (the Central and Buffalo zones) and Hasaga Porphyry (the Epp C, Epp D and Hasaga zones), with minor extensions of mineralized veins into the volcanic host rock surrounding the Hasaga Porphyry. Mineralized zones have not been delineated within the volcanic units, although this may be partially due to a lack of exploration since exploration to date has focused on the felsic intrusive units. This is significant because gold-bearing veins are present within volcanic rock in immediate contact to these intrusions and they represent an under-explored target.

Gold within both the Dome Stock and Hasaga Porphyry mainly occurs within quartz±tourmaline±sulphide veins. Veins hosted by the Hasaga Porphyry are generally larger, more deformed, display greater along-strike continuity and are associated with wider and more strongly developed wallrock alteration zones which locally also contain significant gold. The similarity of mineralogy between veins in these different host rocks strongly suggests a single common mineralizing event, though this has not been conclusively demonstrated.

The Central Zone lies near the centre of the Dome Stock and comprises swarms of centimetre-scale veins which form a corridor stretching from the historical Buffalo to Red Lake Goldshore mines. The resource zones are NNW trending corridors of increased vein density within a broader envelope of low vein density and consequently lower-grade gold. Growth potential in this zone exists (especially along strike of the historical Red Lake Goldshore mine) but is likely limited by the small scale and chaotic orientation of the veins themselves.

The Buffalo Zone occurs on the southern margin of the Dome Stock characterized by a particularly well-developed vein density. The Buffalo veins have a slightly different geometry (WNW trending) than the sub-zones which comprise the Central Zone. Drilling completed below the historical underground workings demonstrates that gold mineralization continues below the workings and that potential exists for resource growth in this zone. Growth potential is limited along strike by contact with the surrounding volcanic rocks on one side and a property boundary on the other, so the main exploration focus in this area should be down-dip and down-plunge.

The three mineral resource zones within the Hasaga Porphyry share similar geological characteristics including their steeply dipping geometry, the ENE trend of the zones of significant alteration and they share similar vein density. Within the main mineralized plane, gold is enriched within SW-plunging zones. This strong plunge control is potentially defined by the intersection of a controlling structure with prospective host rocks (i.e. Hasaga Porphyry).

The Epp C and Epp D zones occur southwest along this plunge direction from the historical Hasaga and Howie mine workings and are interpreted to represent the continuation of the same mineralized trend which formed those deposits. The Epp C Zone has been known about since the operation of the historical Hasaga Mine, but until recently it was not well defined or tested. Recent exploration has resulted in a resource estimate that exceeds both the grade and tonnage of all gold extracted from the historical Hasaga Mine. The Epp D Zone is a new discovery further down plunge which demonstrates that, as with other major deposits in the belt, the Hasaga system extends to a significant depth (at least 1.25 km). Significant potential for resource growth and resource category upgrading exists both within the Epp C Zone itself, and downdip and down plunge towards the Epp D Zone.

The Hasaga Zone is interpreted to be a parallel plunge line to the trend which hosts the historical Hasaga and Howie mines as well as the Epp C and Epp D zones. As present, the Hasaga Zone hosts grade and tonnage similar to that extracted from the historical Hasaga Mine, but none of it has been exploited by mining operations. A significant implication of this interpretation is that potential exists down plunge of this zone for the existence of zones similar to Epp C and Epp D, making it an extremely attractive exploration target.

The work conducted by Premier is of good quality and is reliable for the purposes of Mineral Resource estimation and exploration targeting. Issues identified in the dataset or with QA/QC are generally minor and not expected to materially impact the findings of this report. Older generations of data are of lower reliability, though are still judged to be adequate for the time period during which they were collected. The only area significantly affected by potential issues with older data is the Buffalo Zone. In this area much of the Mineral Resource estimate is based on data from the 1980s which completely lacks QA/QC documentation. Given the operational context and time period, this is not outside of expected practices; it does, however, imply that a limited program of redrilling to modern standards to verify the historical data would be advisable. Drilling completed by Premier within the Buffalo Zone confirms some of the historical drilling results.

In summary, geologic modelling and Mineral Resource estimation based on modern and historical exploration data, has found that the mineralized system along the Hasaga trend is significant

in scale and gold content. There is potential for growth of existing zones and discovery of new ones through additional exploration. Most of this potential is present along the Hasaga trend southwest of the historical Hasaga Mine and within the Hasaga Porphyry unit. Other mineralized zones within the Dome Stock contribute minimally to the total Mineral Resources on the Hasaga Property, with likely lower potential compared to the Hasaga trend. The gold grades and tonnages in the Hasaga Mineral Resource Estimate align with those of other notable deposits in the region. The Hasaga Property's proximity to established infrastructure and a local community with a mining history suggests that potential development of a mining operation could be feasible. As a result, additional exploration work is recommended.

## **26.0 RECOMMENDATIONS**

### **26.1 Program Description**

Work conducted by Premier from 2015 – 2020 consisted almost exclusively of diamond drilling, with only minor data compilation and surface geologic sampling. Surface exploration is relatively inexpensive compared to extensive drilling campaigns but has the potential to identify prospective exploration targets and also provide a meaningful base for interpreting drilling data. Currently, the Hasaga Property lacks a unified surface geologic interpretation map. Additionally, little effort appears to have been devoted to developing a comprehensive understanding of the sub-surface geologic framework; the modelling presented herein is based on the logging data available, the detail of which is relatively low outside of the main mineralized intervals.

It is recommended that the Hasaga Property be geologically mapped at a detailed (outcrop) scale and that these data be integrated with a seamless, subsurface 3D geologic model.

In conjunction with these geologic evaluations and early-stage exploration activities, follow up drilling should be conducted on the established resource zones with the aim of upgrading resource categories and expanding the total resource base. There are also numerous high-grade drill intercepts from previous drilling campaigns that lie outside the presently defined resource areas which have the potential to be brought into the resource inventory with follow-up drilling.

#### **26.1.1 Data Compilation**

Despite more than 90 years of exploration and exploitation history, no effort was made by Premier to compile the results of this work into a unified digital database which could inform exploration targeting and prevent duplication of historical work where unwarranted. Equinox Gold possesses a large collection of hard copy records and reports relating to this work, and it is likely that more are available in public archives. A systematic program of scanning and digitizing these records is recommended. Once this is completed, a full evaluation of the data set should be conducted prior to initiation of additional exploration work. Based on the known quantity of data, 20 – 30 person-days of work by data digitization personnel should be sufficient to complete this work, with an additional five days of interpretation and targeting work by a senior geologist.

#### **26.1.2 Surface Work**

As discussed above, no systematic geologic mapping or geochemical sampling covering the full extent of the Hasaga Property has been conducted. The northern half of the Hasaga Property is underlain by the Dome Stock and likely will not require a significant investment of time and effort in terms of geologic mapping. However, the southern portion of the Hasaga Property appears (from what information exists) to be underlain by relatively complex and poorly understood geology. Access is excellent with a provincial highway transecting the area; no portion of the Hasaga Property is more than 2 km from paved roads. Systematic mapping and sampling is recommended. Thirty field days for a two-person team should be sufficient to complete a detailed map and collect samples from prospective outcrops.

### **26.1.3 Relogging**

Geologists should systematically relog all available Premier drill core, with the aim of resolving inconsistencies in the existing drillhole database and constructing a coherent geologic framework which can be used in future drilling campaigns. There is also significant opportunity to discover additional gold intervals not previously sampled by Premier geologists. Sampling during the previous drill campaigns appears to have been restricted to the expected gold-bearing zones but many unsampled core intervals in archived core stacks were identified that are characterized by veins similar to those which host gold.

This work should be conducted prior to any additional drilling. It will be of relatively significant scope, with at least a month required for two geologists and two geotechnicians to examine and sample sufficient drill core to accomplish the program's objectives.

### **26.1.4 Drilling**

It is recommended to undertake infill (to upgrade the resource category of known gold zones), step-out (of already-defined resource zones), and pure exploration drilling at the Hasaga Property.

Infill drilling at the Epp C, Hasaga and Buffalo zones is warranted and has the potential to substantially increase the confidence level of the Mineral Resource estimates while at the same time having a meaningful chance of increasing the total resource base. As Epp C forms a large proportion of the current gold resource, much of the recommended infill drilling targets this zone. Infill drilling is also warranted on the Hasaga Zone, as the majority of resource in this area is classified as inferred. Infill drilling at the Buffalo Zone will primarily serve to verify historical data to allow resource category upgrading, though effort should also be devoted to downdip expansion. Drilling at the Epp D Zone is more exploratory than at the other three zones; drilling is relatively sparse in this zone and additional work will allow better modelling of the mineralized lenses. Growth on the edges of all resource zones is likely possible so it is recommended to allocate sufficient budget to target down-dip of Epp C, down-dip of Buffalo and down-plunge of Hasaga.

Discovery stage exploration drilling is also warranted on the Hasaga Property, and it is recommended to allocate sufficient budget to evaluate any compelling targets which emerge from the data compilation, surface work and relogging portions of the program. Upon initial inspection of available data, there are multiple targets along trend from the Hasaga / Epp C zones, south of the Hasaga trend along a geophysical anomaly within the Confederation Assemblage and along trend from the Red Lake Goldshore Mine. Refinement of these target ideas and identification of others is possible but should be based on results of the recommended early-stage work.

## **26.2 Budget and Work Summary**

The outlined exploration program should be conducted in two phases, with the first phase primarily focused on geological information gathering, infill drilling and model validation at the significant resource zones. Drilling of the second phase would be contingent on positive results from the first phase. The recommended work program and related budget estimates are presented in Table 26-1.

Table 26-1: Recommended Work Program Budgets.

<b>Phase 1</b>		
<i>Work Description</i>	<i>Scope of Work</i>	<i>Cost (C\$)</i>
Data Compilation	3 - 4 weeks office time	\$29,000
Surface Mapping	3 - 4 weeks field time	\$102,000
Relogging	1 month field time	\$204,000
Drilling - infill and model validation (Epp C)	1250 m	\$539,000
Drilling - infill and model validation (Hasaga)	750 m	\$230,000
Drilling - infill and model validation (Buffalo)	500 m	\$159,000
Drilling - Discovery	1000 m	\$302,000
<b>TOTAL</b>		<b>\$1,565,000</b>
<b>Phase 2</b>		
<i>Work Description</i>	<i>Scope of Work</i>	<i>Cost (C\$)</i>
Drilling - infill and growth (Epp C)	1250 m	\$539,000
Drilling - infill and growth (Hasaga)	750 m	\$230,000
Drilling - infill and growth (Buffalo)	500 m	\$159,000
Drilling - infill and growth (Epp D)	2000 m	\$889,000
Drilling - growth (Epp C downdip)	1000 m	\$449,000
Drilling - Discovery	1000 m	\$302,000
<b>TOTAL</b>		<b>\$2,568,000</b>

Respectfully submitted,

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Dave Swanton, P.Geo.

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Trevor Rabb, P.Geo.

EQUITY EXPLORATION CONSULTANTS LTD.

Vancouver, British Columbia

Paul J Brugger, P.Eng.

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Effective Date: June 30, 2024

Signed Date: September 11, 2024



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## QUALIFIED PERSON'S CERTIFICATE

I, David Swanton, P.Geo., am employed as an Exploration Manager with Equity Exploration Consultants Ltd. (Equity), PGO Certificate of Authorization No. 90334. Equity is a mining exploration and management and consulting company located at 1238-200 Granville Street, Vancouver, British Columbia V6C 1S4.

This certificate accompanies the Technical Report on Hasaga Property prepared for Equinox Gold Corp (“Equinox Gold”) with an effective date of June 30, 2024.

I hereby certify the following:

- 1) That I am a member in good standing of the Association of the Professional Geoscientists of Ontario (PGO) since 2017 (PGO Membership #2748). Prior to and concurrent with my membership with PGO I was a member in good standing with Geoscientists Nova Scotia (Membership #199) from 2013 until 2020.
- 2) That since 2006, I have managed mineral exploration projects for gold, silver, copper, lead, zinc, nickel and rare earth elements in British Columbia, Yukon Territory, Nunavut, Ontario, Quebec and Alaska. As a result of my experience I am a Qualified Person as defined in NI43-101.
- 3) That I graduated from the Acadia University with a Master’s Degree (Science) in geology in 2010, and have been active in the mineral exploration industry since 2006.
- 4) I have read the definition of “Qualified Person” in National Instrument 43-101 – Standards of Disclosure for Mineral Projects (“NI 43-101”) and according to NI 43-101 I am a qualified person owing to my education, experience and registration with professional associations.
- 5) I completed a site inspection of the Hasaga Property on June 24 – June 30, 2021. From May to December 2021, I completed a review of data provided by Equinox Gold and publicly available assessment reports.
- 6) I am responsible for sections 1 to 3, 4.1, 4.2, 4.3, 4.5, 5 to 13, and 15 to 27 of this Technical Report and confirm they have been prepared in accordance with NI 43-101.
- 7) I am independent of Equinox Gold and all their respective subsidiaries as defined by Section 1.5 of NI 43-101 and have had no previous involvement with the Hasaga Property.
- 8) As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am an author or co-author contain all scientific and technical information that is required to be disclosed so as to make the Technical Report not misleading.
- 9) I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective date: June 30, 2024

Signed date: September 11, 2024

*Signed and Sealed: “David Swanton”*

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David Swanton, MSc, PGeo

Equity Exploration Consultants Ltd.

## QUALIFIED PERSON'S CERTIFICATE

I, Trevor Rabb, P.Geo., am employed as a Resource Geologist and Partner of Equity Exploration Consultants Ltd. (Equity). Equity is a mining exploration management and consulting company located at 1238 – 200 Granville Street, Vancouver, British Columbia, V6C 1S4, PGO Certificate of Authorization No. 90334. This certificate accompanies the technical report titled Technical Report on Hasaga Property (the “Technical Report”) prepared for Equinox Gold Corp. (“Equinox Gold”) with an effective date of June 30, 2024.

I hereby certify the following:

- I am a registrant in good standing with Engineers and Geoscientists of British Columbia as a Professional Geoscientist (P.Geo.), membership #39599 since December 10, 2013.
- I graduated from Simon Fraser University (2009) with a Bachelor of Science degree in Geology. I have practiced as a professional geologist continuously since 2013.
- I have sufficient relevant experience having been directly involved in managing mineral exploration programs since 2009, and practising geostatistics, resource modelling and estimating Mineral Resources since 2016. I have specialised in geochemistry, geostatistics and resource modelling for eight years on various underground and open pit base metal and gold deposits in Canada, the United States, Central and South America. I have practiced mineral resource estimation for seven years on various underground and open pit base metal and gold deposits in Canada, the United States, Central and South America.
- As a result of my experience and qualifications, I am a Qualified Person as defined in NI 43–101.
- I have not visited the Hasaga Property.
- I am responsible for sections 14 and those portions of the Introduction, Interpretations and Conclusions and Recommendations that pertain to those sections. of the Technical Report.
- I am independent of Equinox Gold as described by Section 1.5 of the instrument.
- I have had no previous involvement with the Hasaga Property.
- I have read NI 43–101 and the sections of the technical report for which I am responsible for, and that have been prepared in compliance with NI 43-101.

As of the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections of the Technical Report that I am responsible for, contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading.

Effective date: June 30, 2024

Signed date: September 11, 2024

*Signed and Sealed: “Trevor Rabb”*

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Trevor Rabb, PGeo

Equity Exploration Consultants Ltd.

## QUALIFIED PERSON'S CERTIFICATE

I, Paul Brugger, P.Eng., am self employed as a Engineer of Brugger Enterprises Inc. of Campbellford, Ontario.

This certificate accompanies the technical report titled Technical Report on Hasaga Property (the "Technical Report") prepared for Equinox Gold Corp. ("Equinox Gold") dated with an effective date of June 30, 2024.

I hereby certify the following:

- I am a member in good standing of Professional Engineers Ontario, membership # 5737408 and have been a member in good standing since 1982. I graduated from Queen's University (1980) with a Bachelor of Science degree in Mining Engineering.
- I have practiced my profession for over 40 years since graduation with the last 25 years spent in the mine closure field where I have decommissioned 10 legacy mine sites, and provided support directing closure, routine long term care and maintenance activities, third party environmental studies at 16 other mine sites in Ontario, Quebec and Nunavut.
- As a result of my experience and qualifications, I am a Qualified Person as defined in NI 43-101 for the purposes of this report.
- I visited the Hasaga Property from October 15 to October 20, 2021.
- I am responsible for section 4.4 and those portions of the Introduction, Interpretations and Conclusions and Recommendations that pertain to those sections of the Technical Report.
- I am independent of Equinox Gold as described by Section 1.5 of the instrument.
- I have had no previous involvement with the Hasaga Property.
- I have read NI 43-101 and the sections of the technical report for which I am responsible for, and that have been prepared in compliance with NI 43-101.

As of the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections of the Technical Report that I am responsible for, contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading.

Effective date: June 30, 2024

Signed date: September 11, 2024

"signed and sealed"

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Paul Brugger, P.Eng  
Brugger Enterprises Inc.