

**Redton Resources Inc.**

**2022 DRILLING, GEOCHEMICAL, AND  
GEOPHYSICAL REPORT ON THE  
HEATH-FALCON PROPERTY**

Located in the Omineca Mountains,  
Omineca Mining Division  
NTS 93N/02 – Mason River  
55° 15' N Latitude; 125° 8' W Longitude

-prepared for-

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May 03<sup>rd</sup>, 2023

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## 1.0 INTRODUCTION

This report has been prepared for Redton Resources Inc. (“Redton”) to document the procedures and results of the 2022 mineral exploration work program on the Heath-Falcon Property and to satisfy assessment reporting requirements for the British Columbia Ministry of Energy, Mines and Low Carbon Innovation (“BCMELC”). Equity Exploration Consultants Ltd. (“Equity”) was engaged by Redton to prepare this assessment report based on personal observations, previous assessment reports filed, regional geological publications, data processing and interpretation by consultants, and the 2022 fieldwork undertaken by Equity and other subcontractors. A complete list of references is provided in Appendix A and an expenditure statement for the exploration program is included in Appendix B.

The units of measure used in this report are as per the International System of Units (S.I.) or metric, except for Imperial units that are commonly used in industry (i.e., ounces (oz.)) for the mass of precious metals from historic sources. Geographical references utilize the Universal Transverse Mercator (“UTM”) grid projection described in meters for North American Datum 1983 (“NAD83”) in UTM zone 10, or Latitude and Longitude coordinates in degrees.

## 2.0 SUMMARY

The Heath-Falcon Property (“Property”) is located within the Omineca Mining Division in northcentral British Columbia (“BC”) and is centred at 55° 15’ 00” north latitude and 125° 8’ 00” west longitude and is approximately 125 km north-northwest of Fort St. James.

The Property is situated on the very western margin of Quesnellia; cliffs with outcrops of rocks from the Cache Creek Terrane to the west are visible from the Property. The geology on the Property is dominated by Late Triassic to Early Jurassic intermediate to felsic rocks of the Hogen batholith, including monzonite, quartz monzodiorite, diorite, syenite, and hornblendite. However, large parts of the western claims of the Property are covered by till with no or only sparse, local outcrop. The very northwest corner of the Property exposes small areas of volcanic rocks, presumably Triassic Takla Group.

The Property is highly prospective for copper mineralisation with twelve MINFILE entries of described prospects (eleven for copper (“Cu”), one for molybdenum (“Mo”)), seven of which are classified as “porphyry” and others include “hydrothermal”, “magmatic”, and “epigenetic”. The historic work done includes extensive soil sampling surveys, geological mapping, rock sampling, ground geophysics, and small Winkie-style drilling campaigns – each campaign only covered small areas of the current Property, until Property-wide geophysics and diamond drilling at the Mo-prospect Falcon was conducted in the 2000s.

The technical program in 2022 comprised a Property-wide airborne magnetotellurics (“mMt”) survey of 437 line-km, approx. 9 km<sup>2</sup> of geological mapping and geochemical rock sampling (234 samples) over the Heath North, West Road, Heath West, Heath #1, Heath #3, TBOR, Contact, BOR, Falcon, near Mike, and Majazz targets, and top-of-bedrock RAB drilling at West Road and Heath West (19 holes for a total of 480.06 m).

The geophysical survey produced magnetic, very low-frequency (“VLF”), and electro-magnetic (“EM”) data over the full claim block; the magnetic and EM data were inverted in 2D and/or 3D. The data show several distinct zones of magnetic and conductivity anomalies that coincide locally to various degrees.

Mapping and rock sampling focussed on the delineation of mineralised systems and target generation. Before field work started, the results from previous programs were compiled and loaded into one consolidated database. The field work confirmed previous results for Cu and Mo mineralisation, extended the footprint of known systems, and added to the geological understanding of several targets, e.g., through the description of distal to more proximal porphyry type alteration and mineralisation.

The top-of-bedrock drilling focussed on areas from previous geophysical surveys and included magnetic and conductive targets under cover at West Road and Heath West. Only 4 of the 19 holes succeeded to hit

bedrock, all other had to be abandoned within overburden, which was a result of the combination of thick clay layers within the till blanket and the drill rig's capacity. The holes that intersected bedrock drilled into hornblendite or layered diorite with trace to weak chalcopyrite mineralisation.

While the geophysical survey and the mapping and sampling programs in 2022 added to the geological understanding, the drilling failed to explain all the geophysical anomalies it was set out to do. Further field work on the high-priority targets is recommended before drill testing them.

### 3.0 RELIANCE ON OTHER EXPERTS

In Section 4.0, the authors have relied entirely on the Mineral Titles Online (“MTO”) website for downloaded shapefile tenure data and claim information.

The authors have not relied upon report, opinion, or statement of another expert concerning legal, political, or tax matters relevant to this assessment report.

Experts relied upon for environmental and archaeological issues include Northern Habitat Solutions (“NHS”) and Ecofor Consulting Ltd. (“Ecofor”), respectively. For wildlife assessment, NHS have been contracted to compile a Wildlife Management Plan & Mitigation Strategy (Appendix C) and to conduct a Wildlife Assessment on-site (Appendix D). Ecofor were engaged to compile an Archaeological Overview Assessment (Appendix E).

Technical consultants contributed to evaluation and interpretation of the geophysical dataset, including Expert Geophysics Ltd. (“EGL”), Computational Geosciences Inc. (“CGI”), and in3D Geosciences Inc. (“in3D”).

### 4.0 PROPERTY DESCRIPTION AND LOCATION

The Heath-Falcon Property is approximately 8738.55 ha in size and is centred at 55° 15' 00" north latitude and 125° 8' 00" west longitude in northcentral BC (Figure 1). The property is on National Topographic Sheets (“NTS”) 93N/02 and is located approximately 45 km southwest of Manson Creek and 125 km north-northwest of Fort St. James.

The property comprises a contiguous block of 8 claims (Table 1 and Figure 2) and lies within the Omineca Mining District. Claim information and boundaries were downloaded from the MTO database. The boundaries of the Heath-Falcon Property claims are shown in Figure 2. All the claims are currently listed under Redton Resources Inc.

Redton's claim ownership entitles it to the subsurface mineral tenure only and exclude the right to explore for or mine coal, uranium, and thorium or placer deposits. Surface rights are held by the Crown, as administered by the Province of British Columbia. The ownership of other rights (timber, water, grazing, guiding, placer, etc.) over the Property has not been investigated by the authors.

In British Columbia, to keep the mineral claims in good standing the claim holder must on or before the expiry date register either exploration and development work performed on the claim or make a payment in lieu. Failure to maintain a claim results in automatic forfeiture at the end (midnight) of the expiry date. When work is registered, the claim can advance forward to any new date up to a maximum of ten years. When a payment in lieu is applied instead of work, the new date cannot exceed one year from the current expiry date. Upon registration of the work the title holder has 90 days to submit an assessment report of work completed.

The required expenditures to maintain a claim are:

- \$5.00 per hectare for anniversary years 1 and 2;
- \$10.00 per hectare for anniversary years 3 and 4;
- \$15.00 per hectare for anniversary years 5 and 6; and

- \$20.00 per hectare for subsequent anniversary years.

In British Columbia, a Mineral & Coal Exploration Activities & Reclamation Permit is required prior to any mechanized exploration as legislated under the BC Mines Act. The permitting process is managed by the BCMEMLC through a Notice of Work application, (“NoW”). The 2022 exploration program was conducted under Mines Act Permit: MX-100000239 issued for Mine Number 1300691 through the BCMEMLC.

The Property primarily lies within the traditional territory of the Takla and the Nak’adzli First Nations who are in active land claim negotiations with the British Columbia Treaty Commission (BC Treaty Commission, 2020). As such, land claims have not been settled in this part of British Columbia and their future impact on the property’s access, title or the right and ability to perform work remain unknown.

The Heath-Falcon Property has no royalties, back-in rights or other agreements and encumbrances. No significant environmental liabilities were noted by the authors while performing the work.

The authors are not aware of any other significant factors or risks that may affect access, title, or the right or ability to perform work on the Property now or into the future.

**Table 1. Heath-Falcon Property mineral claims showing new good to date following registration of exploration work.**

Title Number	Claim Name	Owner	Map Number	Issue Date	Good to Date	Area (ha)
1065288	HEATH NORTH	200961 (100%)	093N	2018/DEC/24	2030/SEP/20	921.03
1065289	HEATH MAIN	200961 (100%)	093N	2018/DEC/24	2030/SEP/20	442.28
1065290	FALCON NORTH	200961 (100%)	093N	2018/DEC/24	2030/SEP/20	1088.21
1065291	FALCON MAIN	200961 (100%)	093N	2018/DEC/24	2030/SEP/20	1660.94
1075750	HEATHROT	200961 (100%)	093N	2020/APR/16	2030/SEP/20	331.42
1083160	HEATH EAST	200961 (100%)	093N	2021/JUN/24	2030/SEP/20	1621.41
1083161	CHILE	200961 (100%)	093N	2021/JUN/24	2030/SEP/20	1180.20
1083396	PERU	200961 (100%)	093N	2021/JUL/15	2030/SEP/20	1493.06
<b>TOTAL</b>						<b>8738.55</b>

Note: Owner 200961 is Redton Resources Inc.

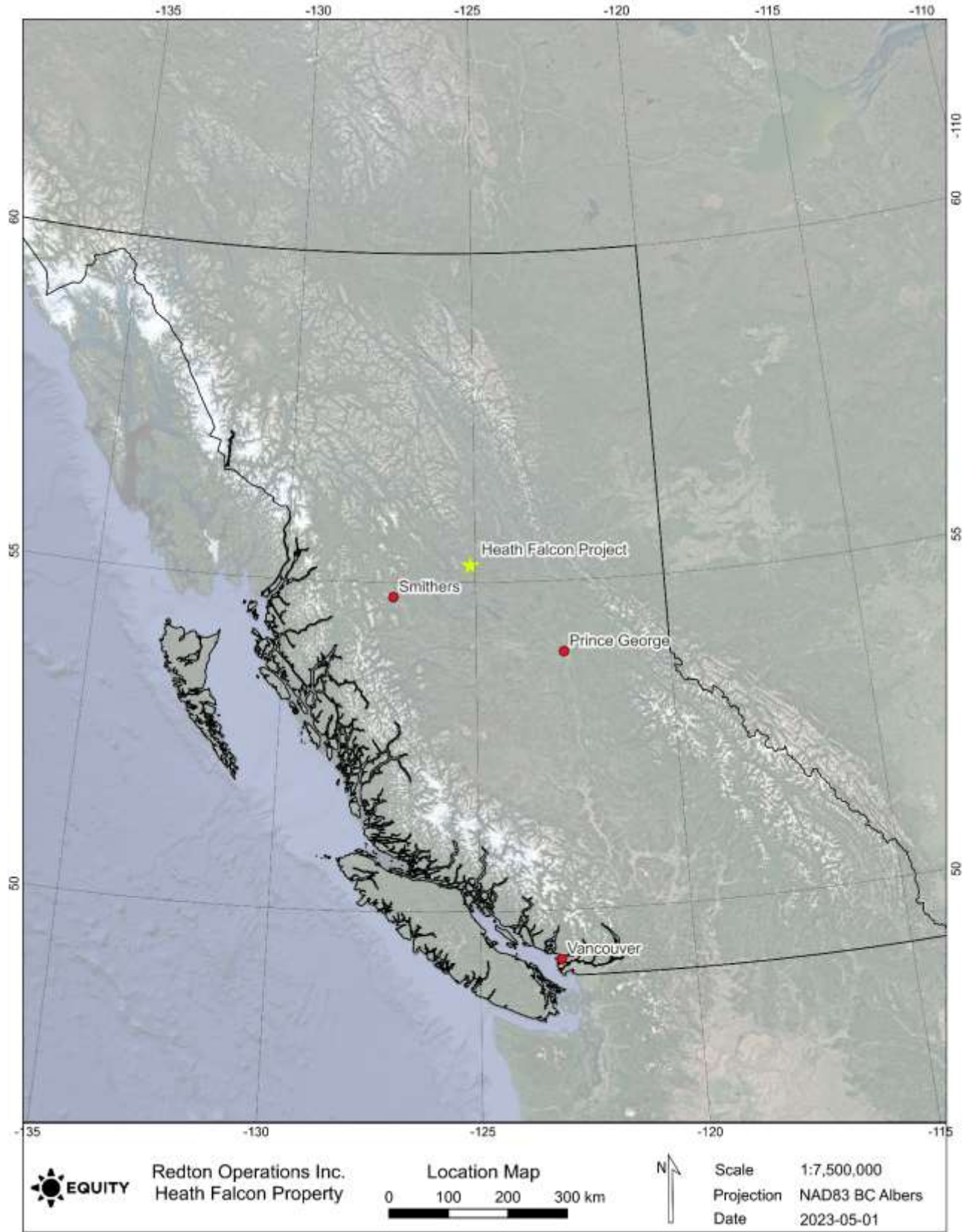


Figure 1. Location map for the Heath-Falcon Property.

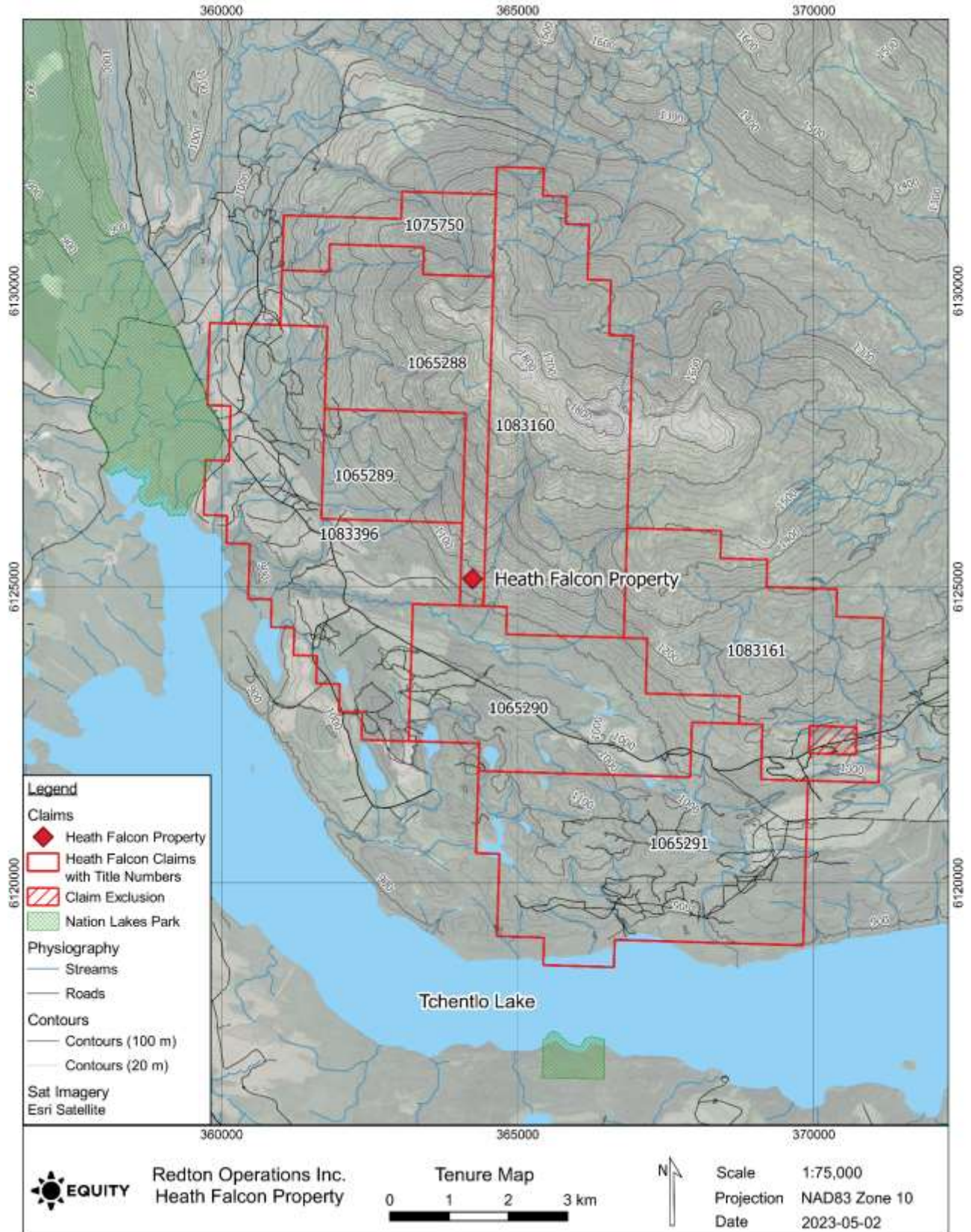


Figure 2. Claim map for the Heath-Falcon Property.

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

### **5.1 Access**

The Heath-Falcon Property is centred approximately 45 km southwest of Manson Creek and 125 km north-northwest of Fort St. James in north-central BC. Prince George is located approximately 285 km to the southeast and has daily scheduled flights to Vancouver.

The Property is road accessible from the west from public roads along the sealed Tachie road, then onto the unsealed Leo Creek/Driftwood/Tchentlo forest service roads (“FSR”), granting access to the western and southern portions of the property. Numerous forestry roads and tracks provide limited access to some parts of the property, but many are inactivated or overgrown and most areas, particularly in the eastern parts of the claim package, require helicopter transport for access.

### **5.2 Climate**

The climate is cool and moderate with warm, moist summers and cool winters. Snow accumulations during winters persist from late September through to May/June at higher elevations on the Property. Winter temperatures are commonly below freezing and can fall as low as  $-30^{\circ}\text{C}$  for short periods of time. The climate of nearby Fort St. James has an average annual precipitation of 480 mm falling mostly as snow in the winter. Here, winter temperatures average  $-3^{\circ}\text{C}$  to  $-10^{\circ}\text{C}$  and  $13^{\circ}\text{C}$  to  $15^{\circ}\text{C}$  in summer (Government of Canada, 2020). Exploration work on the property is most practical in the months of June to October but is ultimately controlled by the appearance and disappearance of the snowpack.

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

The nearby centres of Prince George and Smithers (populations of 74,000 and 5,300, respectively) have a strong mining history and can provide most of the necessary supplies and services to operate mineral exploration programs. Smaller population centres closer to the property are Takla Landing and Fort St. James with Fort St. James having fuel, accommodation, grocery supplies, a RCMP detachment, and medical facilities. An active railway line also passes through Fort St. James (approximately 125 km via road from the Property) that could be used to support any future mining operation.

Water is plentiful in the area through numerous lakes and streams. No studies have been done to access water supply for future larger operations given that the Property is at an early stage of exploration.

There are no permanently occupied structures located on the Property. There are several cabins, fishing lodges, and guiding camps within the area, including the Tchentlo Lake Lodge at 14 km on the Driftwood FSR. The Roger’s Paradise Lodge is located immediately south of the property and was used to house the field crews for the 2022 exploration program. Logging in the area is on-going with the most recent work taking place in the fall of 2022.

### **5.4 Physiography**

The Redton property lies within the Swannell Ranges of the Omineca Mountains and is bordered to the west and south by the Nation Lakes. The larger valley bottoms, including those containing the Nation Lakes, lie at  $\sim 900\text{--}1000\text{ m}$  above mean sea level (“AMSL”) and are host to thick forests of spruce, pine,

and balsam fir. Forests thin towards higher elevations and are eventually replaced by alpine vegetation (Figure 3). The highest elevations on the Property reach ~1800 m.



Figure 3. Physiography of the Heath-Falcon Property. Top: Looking north from Heath West, with contrasting cut blocks in lower elevations and the mountainous forested slopes in the background. Bottom: A view from Nation Mountain to Tchentlo Lake showing the flat lowlands.

## 6.0 HISTORY

### 6.1 Exploration by Previous Owners

Mineral exploration in the Omineca district started with placer gold prospecting in 1869, with copper exploration commencing ~100 years later (Buskas and Bailey, 1992). Since that time at least 150 assessment reports have been submitted for work completed within and around the area of the current claim group.

Redton staked the claims comprising the Heath-Falcon Property on the 12<sup>th</sup> of January 2005, at the initiation of online staking in British Columbia. In June 2005, Geoinformatics entered a joint venture with Redton and commenced work on the project. Historic work on the property and area is summarized in Table 2. Notable prospects are described further below.

A mixture of 'prospects' and 'showings' can be seen within the MINFILE database. Historic work on the property is described in an array of reports with differing years and operators/prospectors. The British Columbia Geological Survey ("BCGS") differentiates a prospect as an occurrence containing mineralisation which "warrants further exploration," and a showing as an occurrences hosting "minor in-situ mineralisation" (BCGS, 2007).

### 6.2 Summary of Previous Work Areas

#### 6.2.1 The Heath Prospect

Work on the Heath prospect began in 1968 with the excavation of hand trenches by Colin Campbell, followed by Amax Exploration's soil geochemical surveys in 1969 (Toohey and Donkersloot, 1990). The hand trenches exposed polymetallic (Au-Ag-Cu-Pb-Zn) chalcopyrite-magnetite fissure veins that form the heart of the occurrence (Heath #1 showing, BC MINFILE). No data, however, derived from these two initial programs was recorded for assessment.

In 1969, Mr. Campbell optioned the Heath claims to Senate Mining & Exploration Ltd. who conducted geological mapping, soil sampling, and ground-based magnetometer surveys (Dummett and Allan, 1969; Livgard, 1971b; Livgard, 1971a; Inglis, 1990). Results delineated a broad Cu-in-soil anomaly and identified several follow-up targets, but nonetheless the claims were returned to Mr. Campbell in 1972.

In 1972, the Heath claims were optioned to Nation Lake Mines Ltd., who worked them together with their CAT claim (Hallop and Mullan, 1973). Work included ~20 line-km of induced polarization geophysics ("IP"), which outlined several anomalous zones associated with Cu showings, and a magnetometer survey (Hallop and Mullan, 1973). The option was nevertheless dropped, and ownership returned to Mr. Campbell.

Ownership of the Heath claims was transferred to Indata Resources Ltd. in 1989 and was later that year optioned to Teck Co. ("Teck"). Additional staking by Teck more than doubled the number of claim units. Subsequently, an extensive program of geochemical, magnetic, and VLF surveys identified strong, poly-metallic, geochemical responses and NW- to NNW-trending EM conductors (Toohey and Donkersloot, 1990). An IP survey identified several anomalous zones that were unsuccessfully tested with a 10-hole diamond drilling program for a total of 969 m (Toohey et al., 1991). The claims were again returned to Mr. Campbell.

Since 1991, the work done on the Heath Property has been by its owner Mr. Campbell, including an X-Ray drill program in 2001 (Campbell, 2001) as well as soil sampling one line-km of magnetometer survey in 2007 (Campbell, 2007), and geological mapping and rock sampling by Barresi et al. (2013).

Redton carried out a soil sampling program in 2017 (Smyth, 2017) on the Heath North claim in follow-up to a 500 m long copper-in-soil anomaly (400 ppm to 2,000 ppm Cu) discovered there by Kiska Metals Corp. ("Kiska") in 2011 (Franz and Voordouw, 2011). Redton's work confirmed and extended the anomaly laterally upslope by 100 to 200 m with copper levels of 350 ppm to 900 ppm Cu. Also in 2017, Redton generated a collection of high-resolution orthophotographs over outcrop close to the above anomaly.

In 2021, Redton conducted an airborne magnetic survey, sampled various soil grids, and conducted geological mapping over the Heath prospect alongside a property-wide ground penetrating radar survey. The report recommended evaluating the data collected in conjunction with historic data to further define potential diamond drilling targets. It was also recommended that a structural study, further geophysics, and soil sampling should be undertaken to better understand the prospect in property-scale and regional-scale context.

### **6.2.2 The Falcon Prospect**

The first records of exploration on the Falcon prospect were published by Tchentlo Lake Mines Ltd., for soil sampling done on their Bal claims (Sinclair, 1970). This program identified two ~300 by 700 m zones with anomalous Cu + Mo, in addition to numerous smaller anomalies with intermediate values. Additional unpublished work included diamond drilling, presumably in 1971, trenching, and magnetometer and EM geophysical surveys (Halleran, 1990). Drilling and trenching tested pyrite-rich granitoids with minor molybdenite and chalcopyrite mineralisation.

A nearly two-decade hiatus followed before two small work programs were undertaken by Independence Mining Co., who optioned the re-staked Bal claims, then renamed as “Falcon”, from prospectors Halleran and Schmidt. The work programs included re-examination of the 1971 drill core (Halleran, 1990) and soil sampling, the latter defining several Cu-Mo anomalies (Forster, 1990).

Another ~15-year gap in exploration ended when, in 2005, Redton staked and immediately optioned their Redton property to Geoinformatics. In 2006, Geoinformatics carried out an extensive field program across most of the Property, including historical tenure which continued to the north (Worth and Bidwell, 2007). The program included soil sampling at Redton-South and was followed up with, among other projects, a ~8.8 line-km IP survey and a 2-hole, 818 m, diamond drill program on the Falcon Prospect in 2007 (Worth and Bidwell, 2008). The two 2007 drill holes intersected a broad zone of vein-hosted Mo-Cu mineralization associated with monzonite porphyry. Eight additional diamond drill holes, totaling 2966 m, were sunk in 2008, with five of these holes intersecting at least ~300 m of >0.03 % Mo (Bidwell et al., 2009). A subsequent AeroTEM survey identified 65 EM anomalies (Bidwell, 2010). In 2011, an IP survey was undertaken on the till-covered area of the Eagle North grid, just to the east of the Falcon prospect (Franz and Voordouw, 2011).

In 2013, Kiska conducted a geological review of the Falcon prospect (Roberts, 2014) and recommended extending existing IP survey lines, step-out drilling along strike and down dip of the identified mineralising dyke swarm, and drill-testing Cu-in-soil anomalies north-west of Falcon which are coincident with a 20 millisecond IP anomaly.

In 2014, Kiska undertook a 30-sample litho-geochemical study at Falcon which again highlighted the prospectivity of the area immediately north-west of the existing Falcon drill sites. The report recommended extending the study’s methodology to the available drilling data set of 1502 samples to generate vectors towards areas of higher-grade mineralisation.

In 2019, Redton completed the integration of all available geophysical data sets covering the claims (including Falcon) to assist with drill target generation (Smyth, 2019). Recommendations concluded were comparison of the litho-geochemical characterisation completed with the Endako Mo deposit, and evaluation of the 3D geochemical zones with other Mo deposits to vector towards higher grades of mineralisation.

In the following year, Redton conducted a series of work on the prospect encompassing vein sampling and orthophotography. The primary recommendation from this work was to undertake a detailed petrographic study on the samples, supported by age dating.

### **6.2.3 The Contact Zone Prospect**

Exploration of the Contact Zone Prospect was first recorded in 1969, when the NBC Syndicate conducted several soil sampling, geological mapping, and ground-based EM + magnetic surveys on their HI claims (Bacon, 1969; Bacon, 1970a; Bacon, 1970b). Soil sampling at the Contact Zone revealed a broad area

of elevated Cu-in-soil values and a few coincident but weak EM conductors. These claims were presumably allowed to lapse.

Placer Development Co.'s JP claims also covered part of the Contact Zone prospect and were staked in 1980. Subsequent geochemical and geophysical surveys identified several coincident Cu-in-soil and VLF anomalies (Buckley and Peters, 1981). These claims were presumably allowed to lapse, too.

The BOR and TBOR claims were staked in 1999 to cover new showings exposed by road building in the Contact Zone area (Warren, 2000). These showings include the BOR gravel pit, where rocks host open fractures filled with pyrite, magnetite, and chalcopyrite (Warren, 2000). The claims lapsed in 2003 and were then included into the Redton Property in 2005. Subsequent work on the Contact Zone by Geoinformatics included geochemical sampling (Worth and Bidwell, 2008) and airborne EM and magnetic surveying (Bidwell, 2010).

In 2011, an IP and magnetic survey was undertaken in the Contact Zone area along with additional soil sampling and prospecting (Franz and Voordouw, 2011).

In 2019, Redton completed the integration of all available geophysical data sets covering the claims (including the Contact Zone) to assist with drill target generation. The report recommended further assessment of potential drilling targets based on the re-gridding of the 2011 magnetic data.

In the following year, Redton undertook a reconnaissance trip to the prospect to establish the nature of the ground and took orthophotos of the area. It was recommended that a follow-up rock sampling campaign should be carried out over the prospect.

**Table 2. Overview of exploration work done on the Heath-Falcon Property.**

Year	Prospect (Current Target Area)	Operator	Geochemistry	Geophysics	Drilling	Other	Assessment Report (Reference)
1969	Heath, Heath Copper (Heath, Heath-North)	Mr. Campbell	Soils, silts, water, rocks	1 km Mag	58 m X-Ray drill		1965 (Dummett and Allan, 1969)
1969-70	Bal (Falcon)	Tchentlo Lake Mines Ltd.	Soils, rocks				2729 (Sinclair, 1970)
1969-70	HI (Contact Zone)	NBC Syndicate	Soils	Ground EM, Mag			1947 (Bacon, 1969); 2321 (Bacon, 1970a); 2617 (Bacon, 1970b)
1970-71	Heath, NS (Heath, Heath-North)	Senate Mining Co Ltd.	Soils	34 km ground Mag			2799 (Inglis, 1970); 3200 (Livgard, 1971a); 3201 (Livgard, 1971b)
1978-82	JP (Contact Zone)	Placer Development Ltd.	Soils, rocks	8.3 km ground VLF			9403 (Buckley and Peters, 1981)
1990-91	Falcon, Fal (Falcon)	Prospecting partnership	Soils, rocks				20272 (Halleran, 1990); 20825 (Forster, 1990)
1990-91	Heath (Heath, Heath North)	Teck Explorations Ltd.	Soils	79.4 km ground IP; 86 km ground EM & Mag	969 m diamond drill, 122 m Winkie drill		20552 (Toohey and Donkersloot, 1990); 21948 (Toohey et al., 1991)
2000	BOR, TBOR (Contact Zone)	Mr. Lorne Warren	Soils, rocks				26451 (Warren, 2000)

Year	Prospect (Current Target Area)	Operator	Geochemistry	Geophysics	Drilling	Other	Assessment Report (Reference)
2006-10	Redton (Falcon, Contact Zone)	Geoinformatics Exploration Canada, Kiska Metal Corporation	Soils, silts, rocks	8.8 km ground IP, ~150 km airborne EM & Mag	818 m + 2966 m diamond drill		29011 (Worth and Bidwell, 2007); 29891 (Worth and Bidwell, 2008); 31012 (Bidwell et al., 2009); 31933 (Bidwell, 2010)
2010	Redton (Falcon)	Kiska Metals Corporation		646 km AeroTEM			31933 (Bidwell, 2010)
2011-12	Redton (Falcon, Contact Zone)	Kiska Metals Corporation	Soils, silts, rocks				32504 (Franz and Voordouw, 2011)
2013	Redton (Falcon)	Kiska Metals Corporation				Core review	34720 (Roberts, 2014)
2014	Haloba Heath North and Falcon	Kiska Metals Corporation		11.2 km ground IP & Mag			34932 (Lui, 2014)
2015	Falcon	Redton Resources Inc.				Photogrammetric survey	35739 (Smyth, 2015)
2016	Falcon-Heath	Redton Resources Inc.				Photogrammetric survey	36416 (Smyth, 2016)
2017	Falcon-Heath	Redton Resources Inc.	Soils				37084 (Smyth, 2017)
2019	Falcon-Heath	Redton Resources Inc.				Geophysical study	38255 (Smyth, 2019)
2019	Falcon-Heath	Redton Resources Inc.				Data overview	39045 (Smyth, 2020)
2020	Falcon-Heath	Redton Resources Inc.				Orthophotography, petrography	39499 (Smyth, 2021a)
2021	Heath-Falcon	Redton Resources Inc.	Soils, rocks	562 km airborne Mag, ~21 km GPR			39663 (Smyth, 2021b)

## 7.0 PROCEDURES OF THE 2022 WORK PROGRAM

The 2022 work at Heath-Falcon comprised a multifaceted exploration program that included a wildlife survey, an mMT survey, geological mapping, rock sampling, rock geochronology, and RAB drilling of 19 holes totalling 480.06 m. The following sections describe the methods used during each work phase.

### 7.1 Wildlife Survey

As recommended by NHS in the Wildlife Management Plan & Mitigation Strategy ("WMPMS") (Appendix C), an on-the-ground wildlife inspection was undertaken on the Heath-Falcon Property on the 16<sup>th</sup> of July 2022 (Appendix D). The survey was conducted by NHS with a focus on assessing potential habitat use and occupation by caribou and mountain goat on Nation Mountain, prior to the mMT airborne geophysical survey which was scheduled for the 18<sup>th</sup> of July 2022.

Silver King Helicopters were commissioned to provide transportation for a crew of four, using a Eurocopter AS350 B2 helicopter, to the top of Nation Mountain. One crew was dropped at the western flank and another at the eastern flank of the mountain ridge. The two crews then walked towards each other, in a zig zag fashion for maximum terrain coverage, observing the terrain for evidence of the species of interest. The survey lasted ~6.5 hours with an additional 10-minute flight over the south slope at mid-elevation (Appendix D).

The survey found sufficient evidence of spring and summer habitat use by caribou, with hoof tracks and excrement present. No evidence of caribou antler drop was found, supporting that caribou do not occupy Nation Mountain during early to late winter (Appendix D). No caribou were observed during the ~6.5 hours on-the-ground survey or during the 10-minute flight over the mountain. A full report generated from the survey can be found in (Appendix D).

## 7.2 mMT Survey

A 437 line-km airborne mMT survey was flown over the Heath-Falcon Property to aid in understanding bedrock structure, lithology, and potentially alteration and mineralisation zones (Appendix L). The survey measured EM and magnetic data, and deliverables included 2- and 3D inversions of resistivity data, and maps with gridded magnetic data. The survey was undertaken by EGL using a Eurocopter AS350 B2 helicopter from Arrow Helicopters. The survey occurred between September 17<sup>th</sup> and September 19<sup>th</sup>, 2022.

The geodetic system NAD83 in UTM zone 10, Central Meridian 123°, was used for the airborne survey. The survey block covered an area of 107 km<sup>2</sup> and was flown at 250 m line spacing at a heading of 090°/270°, with tie lines flown at 2,500 m spacing at a heading of 000°/180°. Lines were flown at an average speed of 64.8 km/h, an average terrain clearance of 171 m for the helicopter, 90 m for the magnetometer, and 70 m for the electromagnetic sensor (Appendix L).

An EGL Computer/Pilot Steering Indicated was used to compute flight path grids in real-time onboard the helicopter to provide accurate navigational and positional information for the pilot. A proprietary GPS navigation system utilising a GPS receiver with Linx RXM-GNSS-TM GPS Engines was used to deliver positioning accuracy of 2.5 m. A Smartmicro model UMR-0A altimeter system was used to record the ground clearance to an accuracy of 3 % over a range of 0 to 500 m (Appendix L). The altimeter is interfaced to the navigation system and the data acquisition system with an output repetition rate of 10 Hz which was digitally recorded. An EGL PC-104-based data acquisition system was used for the survey. This system records data on an internal flash disk and displays it on a colour LCD display, at a repetition rate of 0.33 sec, for post-flight computer processing (Appendix L).

The MobileMT bird was a Matrix Plus system developed by EGL. It consists of an antenna comprised of three orthogonal coils (x,y,z; 1.4 m diameter each) used to measure natural occurring magnetic fields in the frequency ranges of 25 Hz to 20,000 Hz (Appendix L).

A Geometrics G822A cesium magnetometer sensor, also developed by EGL, was utilised, and installed on a separate tower-bird for measuring total magnetic intensity. The magnetometer has a sampling sensitivity of 0.001 nT/10 Hz.

A 4-channel mMT Ground Base Station was used to measure variations of the electric field in two directions with 2 pairs of electrodes. A GEM Systems GSM-19 Base Station Magnetometer, with 0.1 nT sensitivity was used as well as a Field Data Processing Workstation comprised of a full suite of software for quality control and preliminary processing of the data obtained in the survey (Appendix L).

The deliverables from the survey included processed magnetics and VLF-EM data in form of several maps, and resistivity data as 2- and 3D inverted maps, depth slices, and block models. Several maps for different frequencies of apparent conductivity were part of the delivered products.

Full procedures and methods of airborne survey operations and data processing can be found in Appendix L.

### 7.3 Geological Mapping, Rock Sampling & Geochronology Sampling

Reconnaissance geological mapping was conducted in conjunction with surface geochemical sampling to classify mineral prospects. Areas mapped and sampled were highlighted in a property-scale targeting exercise completed before fieldwork. This targeting exercise looked at the following data from previous work:

- Prospective lithologies;
- Alteration (inferred from SWIR);
- Cu mineralisation (chalcopyrite, bornite, chalcocite, malachite, azurite);
- Soil geochemistry;
- Geophysics;
- Structural geology.

Combining all prospective and otherwise interesting results of the selected properties from historical data sets provided insight into which areas are of interest for follow-up geological mapping and rock sampling.

Six targets were highlighted by the exercise, ranked 1-6 for priority:

- Heath Main (1);
- Heath West (2);
- Heath North (3);
- Contact Zone (4);
- Majazz (5);
- Falcon (6).

#### 7.3.1 Geological Mapping

The mapping program recorded outcrops and identified lithology, structure, mineralisation, veins, and alteration-specific minerals where they were present. Mapping was conducted using the UTM grid projected on the NAD83 in zone 10. A declination of 18° east was used to correct magnetic azimuths to true north.

Geological mapping was completed in QGIS using a ruggedized Toughbook™ laptop equipped with a built-in GPS, allowing for mapping with ~5 m accuracy. Geological fact data was recorded as outcrop polygons. Additional observations were recorded as point data which included:

- Geo\_stn – Point of geological interest, typically accompanied by a photograph, and descriptions of a feature.
- Vein\_fact – Observed vein type and vein percentage. Vein types important to the Heath-Falcon system include quartz, pyrite, chalcopyrite, bornite, K-feldspar, and epidote.
- Min\_fact – Cu mineralisation type and intensity (percentage) of pyrite, chalcopyrite, and bornite.
- Struc\_fact – Structural geology including, faults, fault zones, fractures, joints, beddings, or contacts. Structural measurements were corrected to true north and reported using the right-hand-rule (dip 90° east of strike).
- Alt\_fact – Alteration type and intensity of minerals of interest including K-feldspar, sericite, silica, epidote, biotite, calcite, actinolite, and tourmaline.

Geological interpretations of lithology contacts, vein, alteration, and mineralization zones, and linear structures of the following features was done on-site:

- Lith\_interp –Lithological interpretations extend over most of the Property. Data used included 2022 outcrop mapping, historical mapping, and geophysical data to extrapolate lithological contacts.
- Vein\_zone – Simplifies and summarises observed vein types into zones. Significant vein zones include quartz, pyrite, chalcopyrite, bornite, K-feldspar and epidote.
- Alt\_interp – Alteration zones were interpreted as patterns in mineral groups.
- Line\_interp – Was created for an interpretation of all linear features such as faults or fault zones.

A total of 5.62 km<sup>2</sup> was covered in 2022.

### **7.3.2 Rock Sampling**

In conjunction with the geological mapping undertaken, 234 rock samples were collected for multielement analysis. These samples were sent to ALS in North Vancouver, BC for preparation and analysis. The samples were prepared via PREP-31 (pulverise a rock sample until a split or total sample up to 250 g to 85 % passing 75 µm). All samples were submitted for Au-AA23 for Au analysis, which is a Fire Assay method with an atomic absorption finish from a 30 g aliquot. For 222 of the samples, trace elements were analysed using ME-MS61, a four-acid digestion followed by an ICP-MS finish. For the other 12 samples, whole rock geochemical analysis was completed using ALS' complete characterisation package (CCP-PKG03), including major elements by fusion/XRF, C and S by combustion analysis, base metals by four acid/ICP-MS, trace elements by fusion/ICP-MS, and volatiles by aqua regia/ICP-MS.

Sample descriptions can be found in Appendix R and certificates of analysis can be found in Appendix S.

Rock sampling was conducted across the Property, primarily focusing on areas prospective for copper mineralisation based upon historical mapping, surface geochemical (soil, silt, till, and rock), and geophysical data. Access was constrained by accessibility on foot. Bush conditions on parts of the property include significant deadfall, dense underbrush, and steep slopes. Forestry roads were utilised where possible to decrease hiking distance for crews.

With every rock sample collected for assay a small reference sample was collected. The representative reference sample was put into a small polybag and labelled with the sample number. At each sample station an aluminium tag with pink flagging tape was left with sampling information inscribed.

Data capture was done using a ruggedized Ulefone Armor Pro 8 smartphone with QField GIS software. The GPS accuracy of the smartphone is ~5 m depending on satellite coverage and foliage. The photographs taken of sample sites with the smartphone are geotagged. For the best potential spatial accuracy, the GPS on the smartphone was left to stabilize before a position was captured. Pre-set drop-down menus using the mapping codes were used in QField to maintain data consistency.

Rock samples were collected for a variety of reasons. If interesting alteration, veins, or mineralisation was noted, a sample was collected. Some of the samples were taken to represent the surrounding lithology; this was utilised for assisting in geochemically footprint the Property by providing “background” values of the host rock.

Once assay values were returned in December 2022, pXRF analysis of 218 rock sample pulps from ALS batch LL22245099 was undertaken to quantify SiO<sub>2</sub> values. A full report outlining analytical procedures can be seen in Appendix M, and sample descriptions and certificates of analysis can be found in Appendix R and Appendix S, respectively.

### **7.3.3 Petrographic Analysis**

Petrographic analysis from 31 selected samples collected during the 2022 mapping campaign was used to confirm lithological descriptions from the 2022 mapping campaign and clarify alteration assemblages. Analysis was undertaken by Fabrizio Colombo of Ultra Petrographic & Geoscience Inc. with the 31 samples cut and prepared as ~20 x 40 mm polished thin sections and analysed with a petrographic microscope under polarised transmitted, and polarised reflected light (Appendix Q).

## **7.4 RAB Drilling**

In 2022, Rotary Air Blast (“RAB”) drilling was used to test three target areas on the Heath-Falcon Property. A total of 19 RAB drill holes from 18 sites, for 480.06 m total length, were drilled at the West Road (Pit), Heath West – North, and Heath West – South targets to follow up on magnetic and conductive anomalies

from historic surveys and the 2022 mMT survey. Drilling occurred between the 8<sup>th</sup> of September and the 26<sup>th</sup> of September. All RAB holes were drilled vertically (-90° dip), details of the drilling program can be found Table 3. A map showing the location of the 2022 RAB drilling holes is included in Figure 5 and Appendix I.

Drill hole collars were spotted using QField on the Ulefone Armor Pro 8 mobile device. The final collar location coordinates were collected using a Garmin GPSMAP 64 unit.

All drilling was completed by Ground Truth Drilling Inc. (“Ground Truth”) of Dawson, Yukon using a rubber tracked platform GT RAB Drill. The rig had a wireless remote-control for drill moves, a hydraulic tilting mast assembly, and a rotary drill head.

Ground Truth’s RAB drill utilized a 4.5-inch ODEX casing system which advances casing behind the drill bit within the overburden. The ODEX drill bit has an eccentric component that drills a hole with a diameter slightly greater than that of the steel casing. As drilling progresses the 'shoulder' of the drill bit impacts a casing-shoe allowing the steel casing to advance simultaneously behind the drill bit allowing for advancement of casing whilst drilling unconsolidated ground. High pressure air discharged through ports in the face of the drill bit push the drill cuttings back up the casing through a diverter system. After drilling into bedrock, the ODEX drill bit is removed, and a 3.5-inch hammer bit is used to continue drilling into bedrock. Up to six metres of bedrock was drilled and sampled.

A 300/200 compressor was used to actuate the down-the-hole hammer and bring the hammered chips up to surface. Rock chips returning through the open hole in bedrock return to the surface inside of the casing which provides a moderate degree of protection from contamination of bedrock samples by overburden samples. However, because the rock chips return through an open bore hole outside of the drill pipe, within-hole cross-contamination between sample runs is possible. Overlying rock units and overburden can be incorporated into the drilled material during its ascent. The diverter system as well as cyclone and splitter are other sources of potential contamination, despite systematic flush between each run.

Each run of drill chips was placed into a rice bag and labelled by a drill sampler who wrote on the bags. The bags were placed away from the cyclone/splitter, in order of depth. A subsample was then collected from the bag, washed, and sieved and placed into a labelled chip tray. Drilling intervals were originally in feet and converted into metres.

If the sample consisted of overburden, no further sampling was conducted. The bedrock sampling procedure was to take at least four samples of the bedrock, taken from four continuous 1.5 m runs, i.e., drilling 6 m into bedrock. Each 1.5 m run was its own sample. If the sample was dry, it was run through a riffle splitter at the end of the run: 12.5% of the drill cuttings then went into a labelled analytical ore bag and 87.5% went into a plastic tote to be further split by hand. The 87.5% sample in the tote is the “retention” sample. A reference and an XRF sample was speared from the centre of the retention sample with a PVC spear.

The reference sample was shipped for storage in Vancouver in case of a desire to resample any of the chips. The XRF sample was also shipped to Vancouver for rapid analysis and return of preliminary results before the analytical sample assay was returned.

Each interval was classified as either “overburden”, “overburden/bedrock transition (implying a mix of both units), or “bedrock”. The chip tray sample was used for logging by the geologist on-site. Appendix T provides the drill hole logs, which include lithology, mineralisation (mineral species and abundance), alteration (mineral species and intensity) and veins (composition and density).

In total, 15 samples (including one blank) were collected during the drilling campaign. The rock chip samples were submitted to ALS in North Vancouver, BC, for four-acid digestion with multi-element ICP-MS (ME-MS61) and Au fire assay (Au-AA23) finish. A blank and a certified reference material (“CRM”) sample were inserted in the batch for QA/QC. Sample preparation included crushing (70% to <2 mm), splitting (1 kg) and pulverization (85% passing 75 microns; PREP-31B). A 100 to 200 g portion of each bedrock sample was collected for XRF analysis. The QA/QC protocol for RAB drilling involved blank material every 20 samples and a CRM every 20 samples as well. These were spaced so that every 10 samples a blank or CRM was inserted. Blank material comprises coarse, barren granodiorite sourced from the Cox Station quarry in Abbotsford, BC

and does not contain significant amounts of gold or copper. Two alternating CRM's were used (meaning a relative insertion of each CRM every 40 samples), OREAS 504c and OREAS 152a. OREAS 504c is porphyry Cu-Au-Mo ore from Cadia Valley, New South Wales in Australia, containing 1.48 ppm Au, 1.11 wt.-% Cu and 512 ppm Mo. OREAS 152a is porphyry Cu-Au ore from the Waisoi East and West deposit, Viti Levu in Fiji, containing 116 ppb of Au, 0.385 wt.-% Cu and 80 ppm of Mo.

Sixteen out of the 19 holes drilled resulted in abandoned holes. Only three of the RAB holes were classified as "completed". The abandonment was due to several issues including, but not limited to, thick swelling clay layers, rig casing capacity, collapsing holes, high speed spinning of the bit, intersection of pressurised water tables, and no sample being returned.

Table 3. RAB drilling completed at Heath-Falcon in 2022.

Hole ID	Easting (m*)	Northing (m*)	Elevation (m)	Length (m)	Azimuth	Dip	Hole Status	Reason for abandonment
HF-22-001	360368	6128614	939	16.76	0	-90	Completed	
HF-22-002	360038	6128249	929	19.81	0	-90	Completed	
HF-22-003	360469	6126704	922	33.53	0	-90	Abandoned	Clay swelling, high speed spinning of drill bit, no sample return
HF-22-004	360723	6126638	930	27.43	0	-90	Abandoned	Pressurised water intersected
HF-22-005	361099	6126491	928	22.86	0	-90	Completed	
HF-22-006	360924	6126090	917	35.05	0	-90	Abandoned	No sample return, rig capacity for casing, swelling clay
HF-22-007	361135	6126137	925	30.48	0	-90	Abandoned	Rig capacity for casing, swelling clay
HF-22-008	361321	6126220	932	16.76	0	-90	Abandoned	Pressurised water intersected, flowing water
HF-22-009	360296	6127568	918	25.91	0	-90	Abandoned	Hole collapsing in, unstable ground
HF-22-010	360620	6127495	938	33.53	0	-90	Abandoned	Hole collapsing in, unstable ground
HF-22-011	360986	6126621	928	10.67	0	-90	Abandoned	Hammer not firing, unconsolidated sands - air pushing material away
HF-22-012a	360294	6127976	939	16.76	0	-90	Abandoned	Casing sliding downhole, damaged equipment in bad ground
HF-22-012b	360294	6127976	939	28.96	0	-90	Abandoned	Casing getting tight in collapsing/packing sands
HF-22-013	361526	6126423	926	25.91	0	-90	Abandoned	Very sticky clay, casing tight, swelling clays
HF-22-014	362202	6125655	946	28.96	0	-90	Abandoned	Pressurised water intersected, flowing water
HF-22-015	362676	6125011	951	24.38	0	-90	Abandoned	Casing tight, swelling clay, damaged equipment
HF-22-016	362398	6125113	954	28.96	0	-90	Abandoned	Casing getting tight, clay clogging up bit
HF-22-017	362116	6125273	950	22.86	0	-90	Abandoned	Sandy clay clogging up bit, damaged equipment downhole
HF-22-018	363427	6125148	960	30.48	0	-90	Abandoned	Pressurised water intersected, tight casing in sticky clay

\*NAD83 zone 10

## 7.5 Ground Penetrating Radar

A Ground Penetrating Radar (“GPR”) survey was undertaken on September 21<sup>st</sup>, 2022, using an UltraGPR system from International GroundRadar Consulting Inc. (“GroundRadar”). The system uses a real-time Kinematic GPS with PGS and GLONASS coverage for positioning and a custom Android GPA as the datalogger (Appendix O). Data visualisation was undertaken by GroundRadar using a Geolix GPR data visualisation system.

A total of seven lines over ~6,945 m were surveyed along roads across the Heath North and Heath West target zones. The purpose of the survey was to establish the depth to bedrock from surface, during the RAB drilling program. With the 2021 GPR survey mis-interpreting the depth to bedrock (a reflective horizon between ~5 to ~30 m depth was interpreted as top of bedrock but was likely a dense clay layer within glaciolacustrine sediments), the 2022 survey attempted to reconcile the data from the RAB drilling with new GPR data to aid interpretation.

## 7.6 Orthophotography

Drone-based orthophotography surveys were carried out on May 19<sup>th</sup>, July 18<sup>th</sup>, August 21<sup>st</sup>, and September 21<sup>st</sup>-22<sup>nd</sup>, 2022. A total of 12 orthophotos were produced, across the Heath #1, Heath North, West Road, and Contact Zone targets over a total area of approx. 7.12 km<sup>2</sup> (Appendix P).

The purpose of these surveys was to aid geological mapping with a series of high-resolution images, particularly in areas with dense tree cover to assist with traversing terrain, finding clearings, and highlighting outcrops. These surveys were also used in preparation for the RAB drilling program for spotting drill-access roads and elucidating the geomorphological make-up/history of the areas being explored.

In certain areas there is considerable overlap between surveys flown in different months, where examination of the overlapping imagery highlights the obscuring of surface features from green vegetation growth, post-snow melt.

## 7.7 Archaeological Overview Assessment

Following the 2022 field season, an Archaeological Overview Assessment (“AOA”) was completed by Ecofor Consulting Ltd. The desktop review used a combination of topographical and physiographical parameters to identify areas with high potential for archaeological sites and culturally modified trees that are protected under the Heritage Conservation Act. The study used slope percentage, distance to streams, lakes and wetlands, paleoenvironmental features, caribou habitat, soils, and forest cover to review the archaeological potential of the entirety of the Heath-Falcon property. The report including maps with areas of archaeological potential can be found in Appendix E.

## 8.0 REGIONAL GEOLOGY AND MINERALISATION

### 8.1 Regional Geology

The Heath-Falcon Property is located within the Quesnel Trough (or Quesnellia), a Mesozoic island arc Terrane juxtaposed against the ancestral North American continental margin (Nelson and Bellefontaine, 1996). The Quesnel Trough largely comprises Upper Triassic and Lower Jurassic island arc volcanic and sedimentary units of the Takla Group (Triassic) and the Chuchi Lake and Twin Creek successions (Jurassic). The upper Triassic Takla Group is the oldest stratified sequence in the Quesnel Trough. It comprises a large and varied suite of island-arc volcanic and sedimentary units (Figure 4).

The Hogem intrusive suite in the area comprises Late Triassic and Early Jurassic composite plutons that are presumably the intrusive equivalents of the island arc volcanic units (Nelson and Bellefontaine, 1996).

Detailed descriptions of the regional geology are contained in various reports, with most of the content for the sections below derived from the BCGS bulletin 99 (Nelson and Bellefontaine, 1996).

## **8.2 Stratigraphy**

### **8.2.1 Takla Group**

The upper Triassic Takla Group is the oldest stratified sequence. It comprises a large and varied suite of island-arc volcanic and sedimentary units, including the Slate Creek, Plughat Mountain, Witch Lake, and Willy George successions. Although there are variations to the sequence, the Takla Group broadly represents an upward transition from basinal sediments through epiclastic to pyroclastic components, and finally to thick, localised, volcanic piles that suggest the Takla Arc comprised a series of discrete basaltic centres (Nelson and Bellefontaine, 1996).

## **8.3 Intrusions**

### **8.3.1 Hogem Intrusive Suite**

The Hogem intrusive suite comprises several different plutons with various ages and compositions. The alkaline porphyry Cu-Au deposits in the Quesnel Trough are hosted by early Jurassic components of the Hogem intrusive suite. Monzonitic “crowded porphyries” (Nelson and Bellefontaine, 1996) are commonly associated with porphyry Cu deposits, including Mount Milligan and Chuchi Lake.

### **8.3.2 Valleau Creek Intrusive Suite**

The Valleau Creek intrusive suite comprises late Triassic to early Jurassic diorite, gabbro, pyroxenite, and hornblendite. Within the project region area, gabbros of this suite have been mapped along the south-eastern margin of the Hogem batholith. These rocks have a prominent magnetic high signature in the regional aeromagnetic map.

### **8.3.3 Germansen Batholith**

The Germansen batholith is a large granite body situated along the eastern margin of the property. The batholith is early Cretaceous in age and is compositionally a coarse-grained, generally equigranular or orthoclase megacrystic hornblende-biotite granite. The Germansen batholith is not prospective for alkaline porphyry Cu-Au mineralisation, however it may be prospective for Mo mineralisation with several showings along its margins (Lui, 2014).

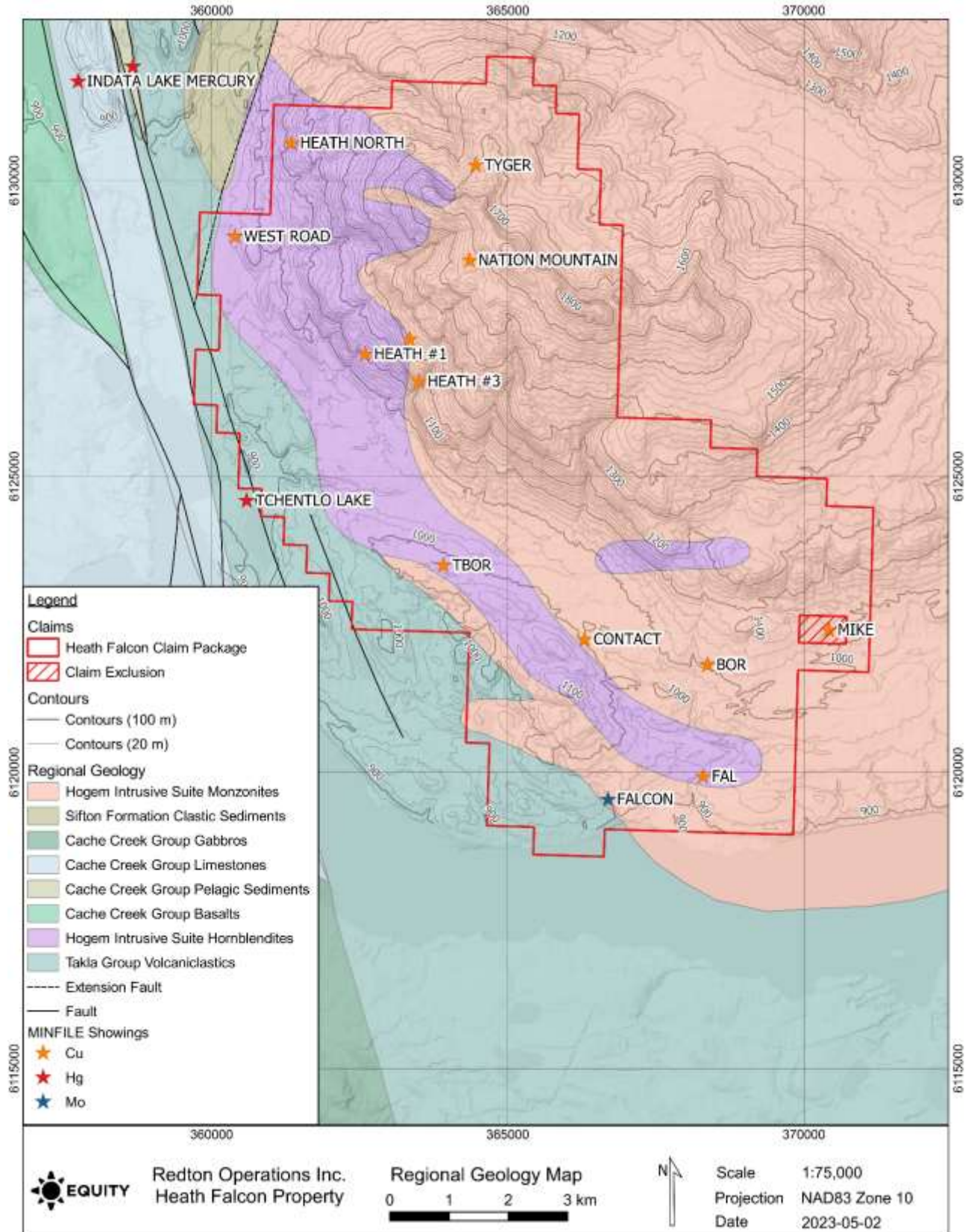


Figure 4. Regional geology of the Heath-Falcon area. Most of the property hosts monzonite and hornblende of the Hogem batholith with Takla Group volcaniclastic sediments in the west of the claim block and Cache Creek Group rocks to the west of the Pinchi fault (black lines).

## 8.4 Structural Setting

The Quesnellia Terrane is a structurally-emplaced island arc Terrane which was accreted onto the western margin of ancestral North America in the later part of the Early Jurassic (Nelson and Bellefontaine, 1996). Regional-scale dextral transcurrent faults bound and disrupt the Quesnellia Terrane, with the Pinchi Fault forming the western boundary to the project area and the Discovery Creek and Manson Fault systems the eastern boundary. Dextral movement of tens to hundreds of kilometres occurred mostly in the Cretaceous to Early Tertiary (Nelson and Bellefontaine, 1996). Geoinformatics also interpreted deep-level, belt-parallel structures from IP geophysical data (Bidwell and Worth, 2007).

Nelson and Bellefontaine (1996) suggest the tabular form of several intrusions indicate arc-parallel structures that were active during emplacement of the Hogem batholith. One such fault, the Valteau Creek fault, is proposed to have accommodated ~1,000 m of west-side down dip-slip (Nelson and Bellefontaine, 1996). Other proposed early faults include an east-west trending fault that may have guided emplacement of the southern Hogem batholith, as well as ENE- and N-S-striking structures (Nelson and Bellefontaine, 1996).

Geoinformatics recognized relatively evenly spaced (20-30 km intervals), deep-level NE-trending cross-arc structures that appear to post-date the belt-parallel structures but may have also been active during the island arc formation of the Quesnel Terrane (Bidwell and Worth, 2007).

Folding within the project area appears to be gentle, with dips on bedding measurements generally less than 30° except when close to intrusive margins or faults (Nelson and Bellefontaine, 1996).

## 8.5 Metamorphism

Stratified rocks within the region, including those of the Takla Group, have undergone metamorphism to prehnite-pumpellyite/zeolite grade. Locally, particularly adjacent to the Germansen batholith, greenschist facies mineral assemblages are abundant (Nelson and Bellefontaine, 1996).

## 8.6 Regional Mineralisation

The Heath-Falcon Property is prospective for several deposit styles including late Triassic to Early Jurassic alkaline porphyry Cu-Au, and relatively unexplored structurally hosted epithermal-style gold systems.

### 8.6.1 Alkaline Porphyry Cu-Au

The main mineralisation type in the region is alkaline porphyry Cu-Au. This style of mineralisation usually hosts moderately large tonnages and low to moderate copper and moderate Au grades in comparison with other porphyry copper deposits.

The porphyry Cu-Au deposits in this region are typically associated with relatively small, densely porphyritic, dioritic-monzonitic intrusions emplaced in high levels of the crust, and related hydrothermal breccias. These deposits are marked by overlapping alteration systems focused on an intrusive complex. The alteration systems typically comprise a potassic core enveloped by overlapping peripheral zones of sodic-calcic and/or propylitic alteration. These alteration assemblages may be overprinted by zones of phyllic alteration that are either zonal in distribution (between the potassic and propylitic zones) or structurally controlled. Abundant secondary magnetite is commonly associated with the potassic zones of these porphyry systems (Lui et al., 2019).

Copper mineralisation is commonly more abundant in the potassic core whereas Au mineralisation is more prevalent in the phyllic zone. Sulphide mineralisation comprises chalcopyrite, pyrite, bornite, and chalcocite at the Lorraine deposit. These sulphides are hosted in quartz veinlets, veins, breccias, disseminations, and replacements (Nelson and Bellefontaine, 1996; Jago et al., 2014; Giroux and Lindinger, 2016).

Late Triassic-Early Jurassic intrusions are associated with several alkaline Cu-Au porphyry deposits and prospects, including Mount Milligan (MINFILE Mineral Inventory 093N/191 Mt. Milligan (Southern Star); MINFILE Mineral Inventory 093N/194 Mt. Milligan) with 467.9 Mt proven and probable reserves at 0.188 % Cu and 0.3 g/t Au in December 2017 (Lui et al., 2019), the Lorraine Prospect (MINFILE Mineral Inventory 093N/002 Lorraine, p. 00) with an indicated resource of 6.4 Mt at 0.61 % Cu and 0.23 g/t Au and an inferred resource of 28.8 Mt at 0.45 % Cu and 0.19 g/t Au as of March 2012, and the Chuchi Lake Prospect (MINFILE Mineral Inventory 093N/007 Dorothy) with a non-NI43-101 compliant resource of 50 Mt at 0.21 to 0.4 % Cu and 0.44 g/t Au.

### 8.6.2 Structurally Hosted Epithermal Gold

There are several structurally controlled Au deposits in the region. The Takla-Rainbow deposit currently has a non-43-101 compliant resource of 321 kt grading 8.6 g/t Au (MacIntyre, 2004). Epithermal vein systems are known to be related to magmatic systems, with or without related porphyry systems (Eaton and Setterfield, 1993; Cooke and Simmons, 2000; Hedenquist et al., 2000; Sillitoe and Hedenquist, 2003; Cooke et al., 2014).

## 9.0 PROPERTY GEOLOGY AND MINERALISATION

### 9.1 Lithology

Bedrock exposure on the Heath-Falcon Property is limited. Most outcrop exposure is at the higher elevations, especially on hill tops and ridge crests, where they consist mostly of Hogem intrusive rocks. Hill and ridge flanks typically feature a mixture of felsenmeer-like rubbly outcrop and colluvium. Valley bottoms mostly lack outcrop and are usually covered with thick soil and/or till horizons, although a few scattered outcrops may occur along river banks and lake shores (Franz and Voordouw, 2011).

The Early Jurassic Hogem “monzodiorite” unit (“monzonite” in Nelson and Bellefontaine, 1996) is the most abundant and mineralised rock type on the Property, hosting all the MINFILE Cu-Au showings. These intrusives are elongate in shape and are oriented NW-SE (Franz and Voordouw, 2011).

All monzodiorite intrusions are composites, containing one or more sub-units of monzonite, diorite, and monzodiorite with lesser abundances of hornblendite and syenite. Mapping at 1:50,000 scale of the Falcon monzodiorite shows that it comprises a diorite core with monzonite margins, along with scattered exposures of hornblendite pods and syenite dykes (Table 4). Detailed mapping in the western half of the Heath Main monzodiorite also suggests it comprises a diorite core with monzonite margins, the latter containing relatively large, mineralized, hornblendite pods (Franz and Voordouw, 2011).

The different rock types comprising the monzodiorite unit are mostly medium-grained, equigranular, and massive, although in places a penetrative foliation is developed parallel to intrusive contacts (i.e., NW-SE trending). Typical mineral assemblages include K-feldspar, plagioclase, hornblende, biotite, and locally, up to ~10 modal-% magnetite, the latter resulting in a strong magnetic response that can be used to trace unexposed intrusive contacts. Minerals of lesser to accessory abundance include quartz and apatite, as well as disseminated pyrite and, rarely, chalcopyrite. Monzodiorite is typically pinkish grey; monzonite is a darker green and diorite lighter grey, presumably due to the relatively higher proportions of antiperthite + hornblende and plagioclase, respectively.

Hornblendite forms pod-like bodies that have gradational margins with both monzonite and diorite. They comprise a dark rock with less plagioclase (~10-20 %). Pods of hornblendite have been described from several prospects in the Heath-Falcon area (Toohey and Donkersloot, 1990) and in most cases are strongly correlated with mineralization (e.g., at the Heath North showing). Hornblendite pods show gradational contacts and mineralogy with surrounding monzonitic rocks. The high concentration of magmatic minerals with volatile components (i.e., hornblende) suggests a late origin and efficient concentration of deuteric fluids.

Magnetite-rich blebs and veins occur within Hogem monzodiorite that intrude the host rock as undulating dyke-like features; especially the blebs show clear late-magmatic textures. The blebs are therefore likely residual magmatic liquids (a similar origin can be postulated for the veins, too) suggesting magnetite-associated sulphide mineralisation is probably late-magmatic in origin (Franz and Voordouw, 2011).

**Table 4. Characterisation of geological units on the Heath-Falcon Property from study in preparation for field work (Voordouw, 2022).**

BCGS Unit	BCGS SubUnit	Property-scale unit	Defined by
Sifton formation			BCGS mapping
Hogem batholith	Mesilinka? Osilinka?	Falcon quartz diorite	142 Ma Mo age
		Others in south part of property?	e.g., Tonalite mapped by Makin (2021), under cover
	Thane Creek, Duckling?	Syenite dykes	
	Thane Creek	Mike Fe-diorite	High magnetics, hornblende-magnetite diorite, Cu showing (Mike)
		BOR monzodiorite	Magnetic low, hornblende monzodiorite
		Heath Fe-monzodiorite	High magnetics, hornblende-magnetite monzodiorite, abundant hornblendite and layered diorite, high Cu
		Contact Fe-diorite	High magnetics, hornblende-magnetite diorite, locally abundant layered diorite, Cu showings
	Less hornblendite, K-feldspar relative to Heath monzodiorite		
Takla Group/Hogem batholith		Takla Group/Marginal Zone	Generally low magnetics, low relief, 100% under cover

## 9.2 Alteration

Alteration across the Heath-Falcon Property can be subdivided into pervasive and structurally controlled types, both of which may be associated with veins. Pervasive alteration is related to regional metamorphism of the Takla Group rocks and deuteritic hydration (Hogem batholith), with neither presenting a significant vector towards a mineral deposit. The more focussed and stronger hydrothermal features indicated by structurally-controlled alteration and veins, on the other hand, can be more useful for mineral exploration targeting (Franz and Voordouw, 2011).

Takla Group rocks show regional metamorphism to zeolite- and greenschist-facies that suggests pervasive fluid flow at relatively low metamorphic temperatures (<450° C). The diffuse flow of fluids through the Takla Group is unlikely to have resulted in significant mineralisation. Lithologies of the Hogem batholith show weak pervasive alteration of hornblende and biotite to chlorite, and of feldspar to sericite (Franz and Voordouw, 2011).

Alteration on the Property was further divided into three distinct assemblages by Barresi and Bradford (2013), see below.

### 9.2.1 Propylitic

Propylitic alteration on the Heath-Falcon Property is predominately observed as epidote and chlorite veins, irregularly shaped clots of partial to complete epidote replacement, and chlorite replacement of hornblende and biotite crystals. The intensity is mostly moderate with sparse chlorite veins and rims on hornblende or biotite crystals (Barresi and Bradford, 2013).

### 9.2.2 Potassic

Barresi and Bradford (2013) subdivided potassic alteration into two discrete types, which are biotite dominant and K-feldspar dominant, respectively.

Biotite dominant alteration was further split into two distinct subtypes. The first is associated with low grade Cu mineralisation. This type has characteristic coarse-grained biotite crystals that are disseminated in the diorite, partly to completely replace hornblende crystals, and form up to 2 cm thick, irregular shaped biotite veins. The biotite dominant alteration was reported to not have any associated K-feldspar but actually does have some associated with narrow albite veins (Barresi and Bradford, 2013).

The second type is associated with high-grade Cu zones, coincident with layers/lenses of higher concentration fine-grained biotite  $\pm$  magnetite. The biotite lenses range from narrow  $<1$  cm wisps in “layered” diorite, to 20 cm thick discontinuous layers in banded mineralised zones. These higher concentration fine grained biotite domains often contain high proportions of disseminated and clotty chalcopyrite (Barresi and Bradford, 2013). Enclaves of high-concentration coarse biotite and magnetite are sometimes present on the Property in otherwise unaltered hornblende diorite (Barresi and Bradford, 2013). These pods are not fully understood, as they also occur in unaltered host rock. This may not be linked to alteration, with a potential explanation for their presence being tectonic-related.

Potassium feldspar dominant alteration is mostly represented on the Heath-Falcon Property as banded K-feldspar  $\pm$  epidote  $\pm$  quartz  $\pm$  calcite  $\pm$  biotite veins, and as partial to complete replacement of plagioclase  $\pm$  hornblende in the selvages of K-feldspar-quartz  $\pm$  magnetite veins (Barresi and Bradford, 2013).

Overall, the first type of biotite dominant alteration type is mostly observed in the SW region of the Property at lower elevations, with the second type mostly confined to structural zones across the whole property. The K-feldspar dominant alteration type is often found at higher elevation towards the NE (Barresi and Bradford, 2013).

### 9.2.3 Iron-Carbonate

Calcite and ankerite are abundant alteration minerals in some structural zones on the Property. They crosscut the diorite and form the infill material of fault breccias. Rocks affected by Fe-Ca alteration have a distinct orange colour. Potassic altered rocks are sometimes cross-cut and partially overprinted by Fe-Ca alteration (Barresi and Bradford, 2013). This alteration type cannot be used for effectively vectoring towards a mineral system as it is not directly associated with mineralisation.

## 9.3 Mineralisation

Currently recognized mineralisation styles on the Property include “calc-alkaline Cu  $\pm$  Mo  $\pm$  Au porphyry” and “alkalic Cu-Au porphyry”, each being described in Franz and Voordouw (2011).

### 9.3.1 Calc-Alkaline Cu-Mo $\pm$ Au Porphyry

Porphyry Cu-Mo  $\pm$  Au mineralisation is present at the Falcon prospect. This porphyry system is hosted by a composite monzonite-diorite unit that is cut by pyrite, quartz, and, less abundantly, carbonate veins. Molybdenite and chalcopyrite crystals occur on the margins of pyrite and quartz veins. The host rocks consist of equigranular hornblende-biotite diorite (or “granodiorite” in the 2007 and 2008 drill logs) that is cut by

equigranular hornblende monzonite. Alteration is predominantly chloritic and, to a lesser extent, phyllic, along with less abundant and patchy potassic and epidote-rich zones.

This prospect was drilled by Geoinformatics in 2007 and 2008 (Worth and Bidwell, 2008; Bidwell et al., 2009), with both drill programs intersecting >200 m intervals of sub-economic to economic Mo ± Cu mineralisation (Worth and Bidwell, 2008; Bidwell et al., 2009). In total, 3784.25 m were drilled in 10 holes.

### 9.3.2 Alkaline Cu-Au Porphyry

Alkaline porphyry Cu-Au mineralisation is the most widespread on the Property, with showings observed at the Heath North and Contact Zone prospects. Historic work reports showings that comprise the Heath North prospect consist of malachite- and chalcopyrite-bearing monzonite-hornblendite spread over a ~500 by 1000 m area. Mineralised samples comprise an estimated <1 % of all outcrops and mineralised rocks typically contain <0.5 % malachite + chalcopyrite.

Historic work at the Contact Zone prospect highlights disseminated pyrite ± chalcopyrite and malachite-bearing fractures and joints within monzodiorite (Bacon, 1969). Sulphide-bearing quartz stringers and pods are reported for several other prospects on the Property and in the nearby area (Bacon, 1969; Gatenby, 1971; Leriche and Faulkner, 1992). These reports suggest a close association between this style of mineralisation and the chalcopyrite- and malachite-coated fractures described below, as well as possible associations between mineralisation and ~N-S trending structures and intrusive contacts.

Integration of field data by Franz and Voordouw (2011) suggests that alkaline porphyry Cu-Au showings comprise irregular stringers, fracture-controlled veinlets, stockwork, and disseminations of pyrite, chalcopyrite, and malachite. This work also shows that veins may consist entirely of sulphide and magnetite, as they do at the Heath Prospect (up to ~40 cm wide), or contain carbonate, quartz, epidote, and/or chlorite. Vein strikes range from ~NW-SE to ~N-S, parallel to intrusive contacts and structures inferred to have been active during emplacement of the Hogem monzodiorite. Host rocks show mostly propylitic alteration with less abundant and more localised patches of phyllic or carbonate alteration. Carbonate-altered host rocks are associated with Pb and Zn mineralisation (Franz and Voordouw, 2011). There is consensus in most literature that mineralisation is mostly concentrated in structures orientated along the extensive NW fabric on the Property.

The following types of alkaline porphyry Cu-Au mineralisation were outlined in Barresi and Bradford (2013):

- Low-grade Cu mineralisation occurs in association with intense K-feldspar alteration, where chalcopyrite is disseminated in K-feldspar veins.
- Coarse biotite alteration is sometimes associated with visible disseminated chalcopyrite; when no chalcopyrite is visible the rock often contains 0.03-0.05 % Cu.
- Sheeted magnetite veins, often spaced as closely as 10 cm apart, are commonly malachite stained and contain trace amounts of chalcopyrite.

### 9.3.3 Prospects

There are 12 MINFILE occurrences on the Property (Table 5 and Figure 4). The Falcon prospect is the only occurrence that is not primarily classified as Cu-bearing, rather it is a Mo prospect; the other 11 have Cu as their primary commodity. Four occurrences are listed as 'prospects' namely, Contact, Heath North, Falcon, and Heath #1 (Table 5).

**Table 5. MINFILE occurrences located on the Heath-Falcon claims.**

Number	Name	Status	Commodity	Deposit Type	Deposit Characteristic	Deposit Class
093N 113	NATION MOUNTAIN	Showing	Copper	Alkaline porphyry Cu-Au	Disseminated	Magmatic
093N 173	TYGER	Showing	Copper	Alkaline porphyry Cu-Au	Shear	Hydrothermal
093N 230	TBOR	Showing	Copper	Porphyry Cu +/- Mo +/- Au	Disseminated	Porphyry
093N 069	FAL	Showing	Copper	Alkaline porphyry Cu-Au	Disseminated	Hydrothermal
093N 071	HEATH #3	Showing	Copper	Alkaline porphyry Cu-Au	Disseminated	Hydrothermal
093N 257	WEST ROAD	Showing	Copper	Alkaline porphyry Cu-Au	Vein	Porphyry
093N 229	CONTACT	Prospect	Copper	Porphyry Cu +/- Mo +/- Au	Disseminated	Porphyry
093N 231	BOR	Showing	Copper	Alkaline porphyry Cu-Au	Breccia	Epigenetic
093N 253	HEATH NORTH	Prospect	Copper	Alkaline porphyry Cu-Au	Disseminated	Porphyry
093N 068	FALCON	Prospect	Molybdenum	Alkaline porphyry Cu-Au	Stockwork	Porphyry
093N 072	HEATH #1	Prospect	Copper	Alkaline porphyry Cu-Au	Vein	Porphyry
093N 252	HEATH EAST	Showing	Copper	Alkaline porphyry Cu-Au	Vein	Porphyry

#### 9.4 Structures

Data collected from historic geological mapping and lineament analysis shows four distinct groups of structures. These were first outlined and described by Franz and Voordouw (2011).

The oldest structure on the Heath-Falcon Property area is likely the “Dia Lake shear zone” (Franz and Voordouw, 2011). This subvertical NW- to NNW-trending shear zone comprises a prominent topographic and magnetic lineament that is bound on either side by ductile fabrics, including penetrative igneous foliation, preferred orientation of tablet-shaped xenoliths, and gneissic foliation. Ductile fabrics are suggestive of Early Jurassic shear deformation whereas the predominantly granitic composition of sheared rocks and low magnetic response suggest the shear zone is mostly inhabited by granite. An alternative interpretation is that the Dia Lake shear zone comprises only a granite sheet with strongly deformed margins. Within the project area, the Dia Lake shear zone is inferred to measure ~3.0-4.5 km wide and ~45 km long (Franz and Voordouw, 2011). Its ~NNW to ~N orientation is parallel to many other Early Jurassic intrusive contacts and dykes in the project area (Adamson, 1971; Bacon, 1972; Bacon, 1975; Fraser, 1980; Toohey and Donkersloot, 1990; Paterson and Barrie, 1991).

Many other ~NNW- to ~N-trending structures, which collectively form the so-called “N–S” group, lack correlation with ductile fabrics. This group includes the prominent Pinchi Fault zone as well as many other apparently more brittle lineaments that cut through the intrusive bodies. Faults of similar orientation are also described in several assessment reports (MacGregor, 1967; Gatenby, 1971). The structures in this group show an anomalously strong association with Cu-Au showings and, in some places, trace amounts of multielement soil anomalies. Their trend is locally parallel to intrusive contacts of the Hogem batholith and it is likely that they were active in the Early Jurassic, suggesting they are of similar age to the Dia Lake shear zone (Franz and Voordouw, 2011).

East-west trending structures are one of the most predominant structural groups within the Heath-Falcon area. Major faults striking ENE have been mapped near the Heath showing (Garnett, 1978) and demonstrate apparent sinistral strike-slip movement with horizontal displacements of up to 6 km. These structures cut through all lithological units in the work area and were therefore active as late as the Upper Cretaceous to Lower Tertiary. However, it is unclear if all ~E-W structures developed at this time or whether they are older, periodically re-activated, structures (Franz and Voordouw, 2011).

The final group of structures trend ~NE-SW. These structures were identified as topographic and magnetic lineaments (MacGregor, 1967). The orientation of these structures is perpendicular to the older NW-trending structures, and parallel to the so-called cross-arc structures (Franz and Voordouw, 2011). These

structures are estimated to make up ~1 % of lineaments on the Property (Franz and Voordouw, 2011), therefore their association with mineralisation and relationship with older structures is unknown.

### **9.5 Veins**

Epidote- and K-feldspar-rich veins are described in several assessment reports (Toohey et al., 1991; Leriche and Faulkner, 1992). Most of these veins are single-generation and ~N- to NW-trending, and are parallel to intrusive contacts and penetrative fabrics (Franz and Voordouw, 2011).

Magnetite-rich blebs and veins occur within Hogem monzodiorite, the blebs especially showing late-magmatic textures. The most notable examples of this type of mineralisation are the magnetite-chalcopyrite fissure veins of the Heath prospect (Toohey et al., 1991).

Quartz veins and silicification occurs in scattered localities and, in places, appears to show a close link to mineralisation. The best example of this is at the Falcon prospect, which features molybdenite- and chalcopyrite-bearing, massive to vuggy quartz veins occurring along with pyrite veins. The orientation of these quartz veins is not well-defined.

Strong carbonate veining is recognised on the Heath-Falcon Property (Toohey et al., 1991) and outcrops within the Pinchi Fault Zone. Some exposures in the Pinchi Fault Zone contain up to ~25 vol.-% carbonate veins. On the Heath-Falcon Property, localised very intense carbonate alteration occurs in close association with wall rock Pb-Zn-Ag-Au mineralisation (Toohey et al., 1991). Hematite-coated fractures are widespread and abundant, and likely related to surficial weathering (Franz and Voordouw, 2011).

## **10.0 RESULTS OF THE 2022 WORK PROGRAM**

The 2022 technical work program completed at Heath-Falcon included an mMT survey, a geological mapping and rock sampling campaign, and 480.06 m of RAB drilling in 19 drill holes (Figure 5 and Appendix F). The following sections describe the main results of this work.

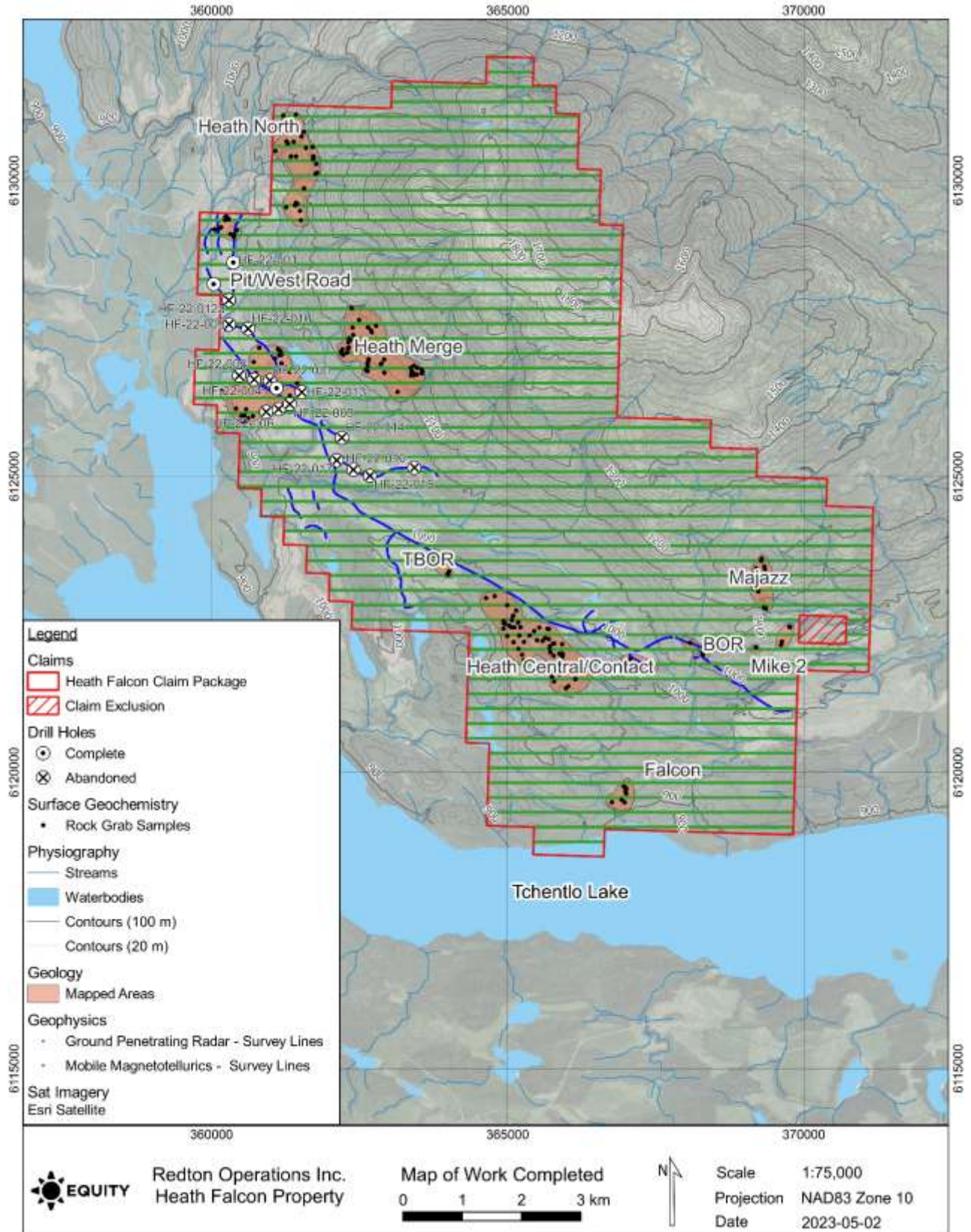


Figure 5. Location of work completed in 2022 on the Heath-Falcon Property, including the mMT survey lines (green), the GPR survey liens (blue), the mapped areas (orange polygons), rock grab sample locations (black dots), and RAB drill hole collar locations (black and white dots).

### 10.1 Mobile Magnetotellurics Survey

A 437 line-km mMT survey was flown over the Heath-Falcon Property to aid in understanding structures, lithology, and potentially alteration and mineralisation zones. Procedures, methods, and results of the survey are described in the EGL report in Appendix L. The following summarises the significant results of the survey.

Figure 6 and Appendix G show a rendering of total magnetic intensity (“TMI”) data reduced to the pole (“RTP”) with three distinct zones of high magnetic susceptibility. A large, incoherent zone in the northwest of the Property, an elongated, northwest-trending feature in the southwest, and a small, discrete anomaly in the east of the Property. The elongated magnetic high roughly stretches along the eastern margin of the conductivity anomaly described above and there is some significant local overlap between the two. There is some small, local overlap between the other two magnetic and conductive anomalies in the eastern and northern parts of the property, but in both cases the spatial agreement is less pronounced than between the elongated anomalies. A resistor stretches northwest in the centre of the Property and is somewhat coincident with a moderate magnetic low anomaly in the same area.

Parts of these anomalies are coincident with resistivity low anomalies shown in Figure 7 Appendix H shows a map with a depth slice of the 2D-inverted resistivity at an elevation of 700 m AMSL, i.e., approx. 200 m below surface in the western part of the claims and >1100 m below the highest point of the Nation Mountain area. The warm colours on the map indicate areas of elevated conductivity, while cold cool colours show high resistivity. There are three distinct areas of high conductivity: An L-shaped high that veers off to the northeast in the northcentral area of the Property; a truncated, northwest-trending high in the southwest, and a moderate anomaly in the very east of the Property.

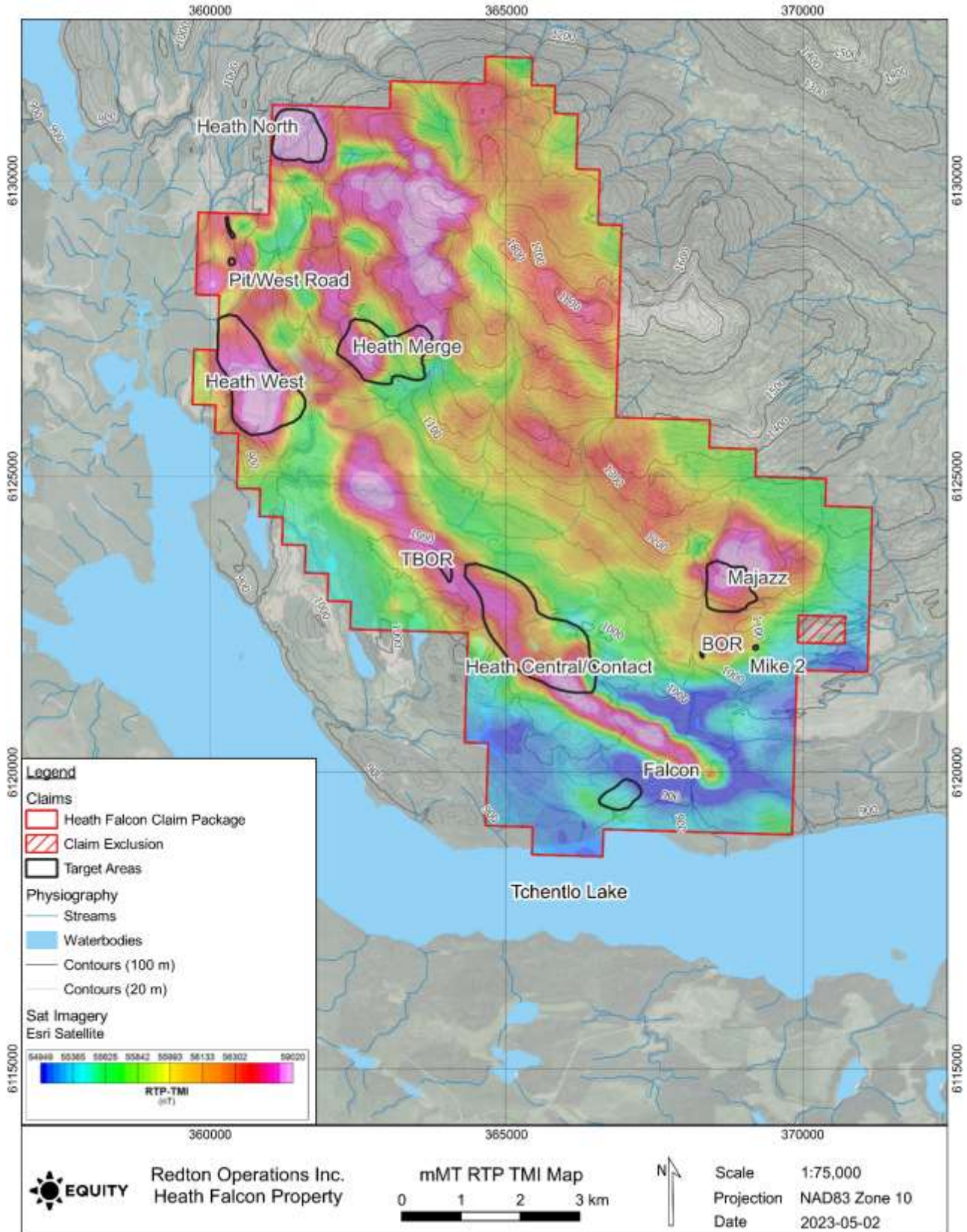


Figure 6. Gridded magnetic results (reduced-to-pole total magnetic intensity) from the 2022 mMT survey over topography.

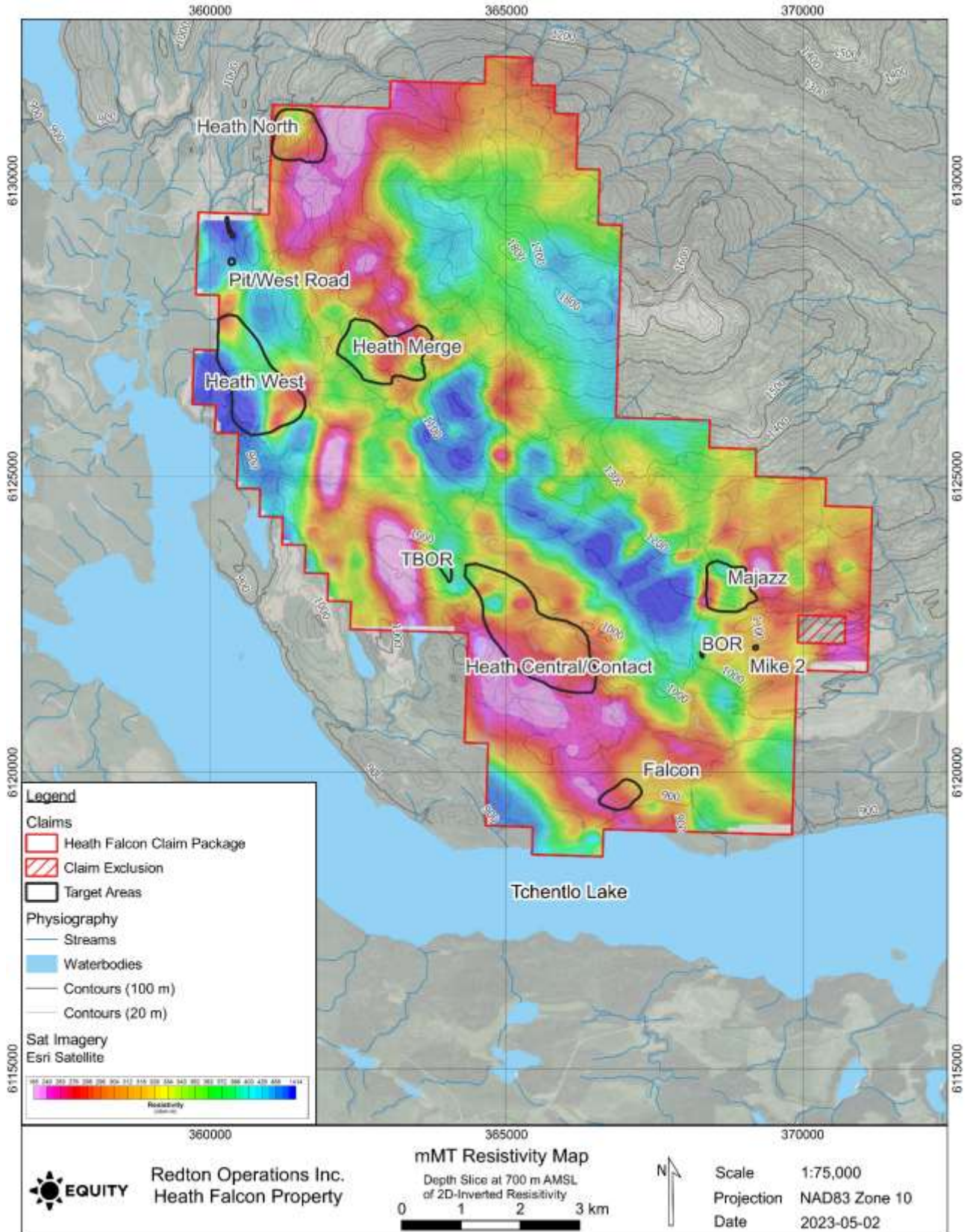


Figure 7. Gridded resistivity results (depth slice of 2D-inverted resistivity data at 700 m AMSL) from the 2022 mMT survey over topography (warm colours = higher conductivity; cool colours = higher resistivity).

### 10.1.1 Constrained Inversion

Computational Geosciences Inc. was contracted to compile inversion models on the data derived from the 2022 mMT survey. In addition to the unconstrained inversions delivered by EGL, the inversion models by CGI were constrained by lithological models derived from the results of the field work conducted in 2022, including geological mapping and rock sampling, as well as from the magnetic, conductive, and resistive data from the mMT survey.

A 3D geological model was built around three east-west cross-sections over the Property and was based on data from surface geology and geochemistry, and 3D geophysical data. This model was used by CGI to start their constraining process and as reference model. Petrophysical properties were attributed to the block model based on statistics of the unconstrained inversions from EGL within each lithological unit. The layered diorite unit was split into two subunits based on the distribution of their physical properties in histograms (Phillips, 2023).

The deliverables of this project included several dozen block models of different parameters. Other products included cross plot heatmaps of conductivity and MVI; domains derived from these were used to compile block models of 4, 6, and 16 domains, respectively. K-means clustering of MVI, and conductivity data produced block models with 8 and 10 domains, respectively. Constrained inversions were also compiled for MVI (see below), magnetic susceptibility, and conductivity.

The constrained and unconstrained MVI inversions show three similar large-scale magnetic high anomalies: An incoherent anomaly between Heath North, Heath West, and Heath Merge, an elongated anomaly stretching northwest and southeast of Central, and discrete anomaly at Majazz. Magnetic lows are located west of Central and south of Majazz. The magnetic highs of the unconstrained inversions are spatially more constrained and discrete.

## 10.2 Geological Mapping and Rock Sampling

Reconnaissance geological mapping was conducted in conjunction with surface geochemical sampling to identify mineral prospects and give geochemical anomalies identified geological context. In total, an area of 5.62 km<sup>2</sup> was covered, with 233 rock samples collected. One additional rock sample from historical Falcon drilling was also sent for analysis, giving a total of 234 samples analysed in 2022.

### 10.2.1 Geology

Figure 9 shows photographs of typical samples from the main lithologies encountered, which include:

- Monzonite: Main phase of Hogem batholith in the area, not considered prospective to directly host Cu mineralisation.
- Quartz monzodiorite: Later intrusive phase, not considered prospective for large Cu deposits.
- Diorite: Host of most significant alteration and mineralisation consistent with porphyry Cu deposits at Heath #3, including magnetite breccias with quartz veins with chalcopyrite mineralisation.
- Layered diorite: The layers within the diorite are elongated mafic enclaves comprised of hornblende and locally host semi-massive sulphide lenses/blebs with pyrite-chalcopyrite. These semi-massive occurrences are predominately located at Heath Main and at Heath North, where they are hosted in hornblendite.
- Hornblendite: Hornblende- and magnetite-rich holo-mafic rock associated with layered diorite and local spatially constrained occurrences of high-grade chalcopyrite.

The lithologies diorite/layered diorite/hornblendite are texturally very variable and have locally gradational contacts. Makin (2021) and (Barresi and Bradford, 2013) described them as part of appinite suite rocks.

The current interpretation of the mapped geology of the property is shown in Figure 10 and Appendix I. The main lithologies are monzonite (the Hogem batholith main phase on the Property), diorite at Heath #3, West Road, and to some extent at Contact Zone, layered diorite along Contact Zone, Majazz, Heath #1, and Heath North, and hornblendite at Majazz, Heath West, and Heath North. Quartz monzodiorite was mapped south of Heath Main and southeast of Majazz. Mapped outcrops are in solid colours, interpreted areas in-between are in paler tones.

### 10.2.2 Geochemistry

The maps in Figure 11 & Appendix J and Figure 12 & Appendix K show Cu and Mo assay results from the 2022 grab rock sampling, respectively. The units of interest for Cu mineralisation include the diorites and the hornblendite at Heath North, Heath Main, and Contact Zone. Copper mineralisation characteristics include disseminated chalcopyrite, vein-hosted chalcopyrite, and semi-massive pyrite-chalcopyrite±bornite. The first two are associated with alteration and vein styles consistent with porphyry deposits and are located at Heath #3 and Contact Zone, while the association of the latter one is unknown (located at Heath Main and Heath North).

Smaller Cu occurrences include Falcon (which is a Mo-Cu porphyry), BOR, and West Road. Majazz shows a Cu-in-soil anomaly (from previous work), however, similarly anomalous results have yet to be produced from rock samples.

The median value for Cu and Mo from the 234 samples was 242 ppm and 0.72 ppm, and a mean of 1,469.14 and 11.17 ppm respectively (Table 6).

### 10.2.1 Whole Rock Analysis

Eleven rock grab samples and one drill core sample from Falcon core were submitted to ALS for whole rock analysis. Figure 8 shows a comparison between the field names of the samples and the lithologies after the Total Alkali Silica ("TAS") diagram. Apart from the "granodiorite" sample, most names largely fall within or close by their respective TAS fields. However, three diorite samples (see square symbols in Figure 8) fall into the gabbroic fields. These samples have hornblende contents of >25% and are part of the very variable diorite-layered diorite-hornblendite rock suite (cf. chapter 10.2.1).

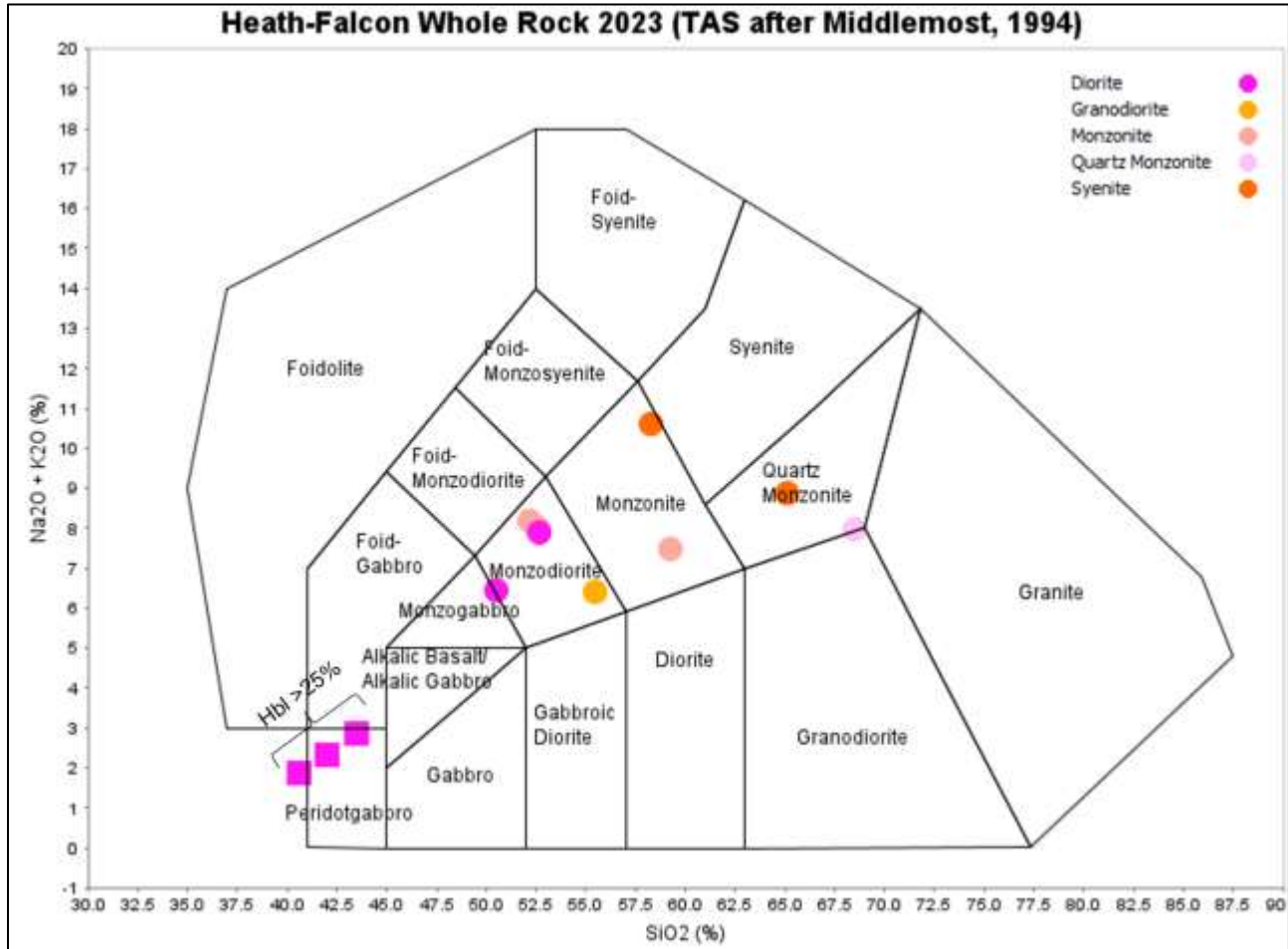


Figure 8: Total Alkali Silica diagram after Middlemost (1994) for the rock samples collected for whole rock analysis. The diagram compares the field sample names to the lithologies after TAS.

## 10.2.2 Target Descriptions

### 10.2.2.1 Heath North

The main lithologies at Heath North are layered diorite and hornblendite. The greatest abundance of disseminated Cu mineralisation observed on the Property in 2022 was at Heath North in the hornblendites there with <1% to 1-3% chalcopyrite at m-scale outcrops. The mineralisation (chalcopyrite ± bornite) is disseminated and occurs in semi-massive sulphide blebs and spatially limited lenses within hornblendite. Mineralisation is associated with overall trace to weak sericite, K-feldspar, biotite, magnetite, epidote, and amphibole alteration. Veining is limited to minor quartz ± pyrite veinlets associated with the disseminated sulphides. Cu assays returned a range of values from 87.2 to 11,300 ppm, with eight samples >2,000 ppm. Mo values range from 0.2 to 4.06 ppm.

### 10.2.2.2 West Road

The West Road target hosts a suite of intrusive rocks with diorites, syenites, monzonites, mafic intrusives, and volcanics in the area. Copper mineralisation (chalcopyrite ± bornite) is disseminated within diorites peripheral to syenites and monzonites. Alteration is limited, but sericite, K-feldspar, biotite, magnetite, and epidote alteration are all present, mostly categorised as 'trace' in abundance (<1 %). Iron-carbonate veining is prevalent in the area, with epithermal-style textures (colloform/crustiform) locally observed. Potassium feldspar ± quartz veins were noted within monzonite and 103 ppm Cu.

Results of rock sampling in the area returned Cu values ranging from 62.9 to 3,560 ppm, with four samples >500 ppm associated with syenite. At the West Road target, the highest Mo results coincide with the highest Cu occurrences, however, the correlation coefficient for Cu:Mo from all 234 samples collected in the 2022 campaign is 0.00 (Table 6). Overall, it appears that most Mo results on the Property are relatively low, with occasional higher values directly correlating with higher Cu. It is likely that due to most of the Mo values having a small range of 0.05 to ~1 ppm (median of 0.72; Table 6), the higher occurrences, coincident with the higher Cu, are not well represented in the correlation coefficient for all samples.

#### 10.2.2.3 Heath #1

Heath #1 hosts the highest Cu values from the 2022 rock sampling campaign. The host rock is a combination of diorites and layered diorites. The strongest Cu mineralisation (chalcopyrite) is confined to ultramafic lenses/enclaves and chalcopyrite ± pyrite veins within the layered diorites. The ultramafic lenses were observed to be parallel, stacked, and traceable along strike of the magmatic foliation. Various types of alteration minerals were observed including K-feldspar and biotite associated with high-grade Cu mineralisation within layered diorite, and sericite and epidote alteration along a NE-trending corridor without positive spatial correlation with significant Cu mineralisation. Magnetite alteration does not have a positive correlation with Cu grade.

Rock sampling results returned values of 26.3 to 98,000 ppm Cu and 0.18 to 10.4 ppm Mo. The two highest Cu values, 98,000 ppm and 78,000 ppm, are coincident with the two highest Mo values in rock samples at this target, 3.97 ppm and 10.4 ppm respectively. There are four samples that returned >2,000 ppm Cu within layered diorite and associated with a 1 cm wide semi-massive sulphide vein with biotite envelope.

#### 10.2.2.4 Heath #3

Heath #3 is host to the most proximal hydrothermal activity observed during the 2022 program, with north-striking magnetite breccias with magnetite ± quartz breccias hosting pyrite ± chalcopyrite, K-feldspar-actinolite veins, and magnetite-quartz-epidote-K feldspar ± actinolite-chalcopyrite-pyrite veins with minor supergene Cu staining, consistent with alteration associated to porphyry deposits. Diorite is the host rock, with varying levels of alteration intensity, including K-feldspar, actinolite, biotite, magnetite, and epidote.

The rock samples from the area include twelve samples >1,000 ppm, six of them >2,000 ppm Cu are associated with magnetite ± K-feldspar veins/breccias, all hosted within diorite. Copper values range from 58.4 to 5,260 ppm. Molybdenum is also significant in the area with some of the highest Mo values observed on the Property (aside from at Falcon), with a range of 0.33 to 66.3 ppm. Aside from the 0.33 ppm Mo value, all the other samples returned Mo values of at least x2 the median value for the dataset (Table 6), with most results being x10 or higher.

#### 10.2.2.5 Heath West

Geological mapping and rock sampling at Heath West was undertaken to help inform RAB drilling. However, all rock samples collected in this area were classified as glacial float, since no outcrop could be mapped due to extensive till cover. Rock composition was relatively consistent with a mixture of monzonites and diorites. Sample results yielded low Cu and Mo values, with 4.2 to 387 ppm and <0.05 to 4.03 ppm respectively; the highest grades were derived from diorite float.

#### 10.2.2.6 Majazz

The Majazz target hosts a mix of diorite and hornblendite rocks with cross-cutting aplitic dykes. Alteration is limited to trace-weak sericite, biotite, and K-feldspar within layered diorite. Veining is sparse with occasional quartz-pyrite ± chalcopyrite, also hosted by layered diorite. Mineralisation is limited to trace amounts of chalcopyrite within the quartz-pyrite ± chalcopyrite veins. This lack of alteration, veining, and mineralisation is reflected in the rock sample results, with a range of 2.2 to 236 ppm Cu and 0.09 to 1.66 ppm Mo.

### 10.2.2.7 Contact Zone

The Contact Zone area contains a mixture of layered diorite, diorite, syenite, and monzonite. Copper mineralisation (chalcopyrite ± bornite) is disseminated, and, within the layered diorites, vein-hosted. Alteration within layered diorite is varied with albite, pyroxene, epidote, sericite, and weak to moderate K-feldspar and biotite. Tourmaline-calcite-chalcopyrite veining is present in the layered diorites, as well as epidote, K-feldspar, and carbonate veins. Rock sample results exhibit a range of 15 to 1915 ppm Cu, and 0.12 to 4.46 ppm Mo within layered diorite. Seventeen samples have values >500 ppm Cu, including six >1,000 ppm; the high-grade Cu is associated with disseminated chalcopyrite within the layered diorite. TBOR was visited with the best rock sample returning 557 ppm Cu from diorite float.

### 10.2.2.8 BOR

BOR is a discrete Cu anomaly with sericite, K-feldspar, and epidote alteration in a dioritic host. Copper mineralisation (chalcopyrite) is disseminated and hosted in quartz-pyrite ± chalcopyrite veins in weak to moderate K-feldspar-sericite altered layered diorite. Four samples were taken from the area, with a range of 301 to 5,040 ppm Cu and 2.04 to 43 ppm Mo. The highest-grade Cu values are from layered diorite with pyrite-chalcopyrite veins

### 10.2.2.9 Falcon

A total of eight rock samples were collected in 2022. Surface geological mapping identified a dioritic host rock with amphibole alteration, pyrite veining, and a combination of disseminated chalcopyrite and molybdenum mineralisation. Cu assays from the surface samples range from 137.5 to 786 ppm, with three samples >500 ppm within layered diorite. The one re-analysed drill core sample returned 858 ppm Cu and 229 ppm Mo from granodiorite. The rock samples also contained 2.58 to 948 ppm Mo, with two samples >500 ppm, from the high-grade Cu samples.



Figure 9. a) Hornblendite from Heath North (D721520), dominated by hornblende (~80%), plagioclase (~10-15%), and magnetite (~5-10%). b) Layered diorite from Heath Main (D721538) with higher amounts of plagioclase and lower amounts of hornblende and magnetite than the hornblendite. The transition between hornblendite and layered diorite is often gradational. c) Diorite from Heath Main (D721536) with even lower mafic constituents and higher plagioclase content than the two previous units. d) Quartz monzodiorite from near the Mike showing (D721655) with feldspar (~75%), quartz (~15%), and minor biotite. e) Porphyritic syenite (D721541) with K-feldspar (~80%), plagioclase (~10%), biotite (~5%), and magnetite (~1%) from a dyke at Heath Main.

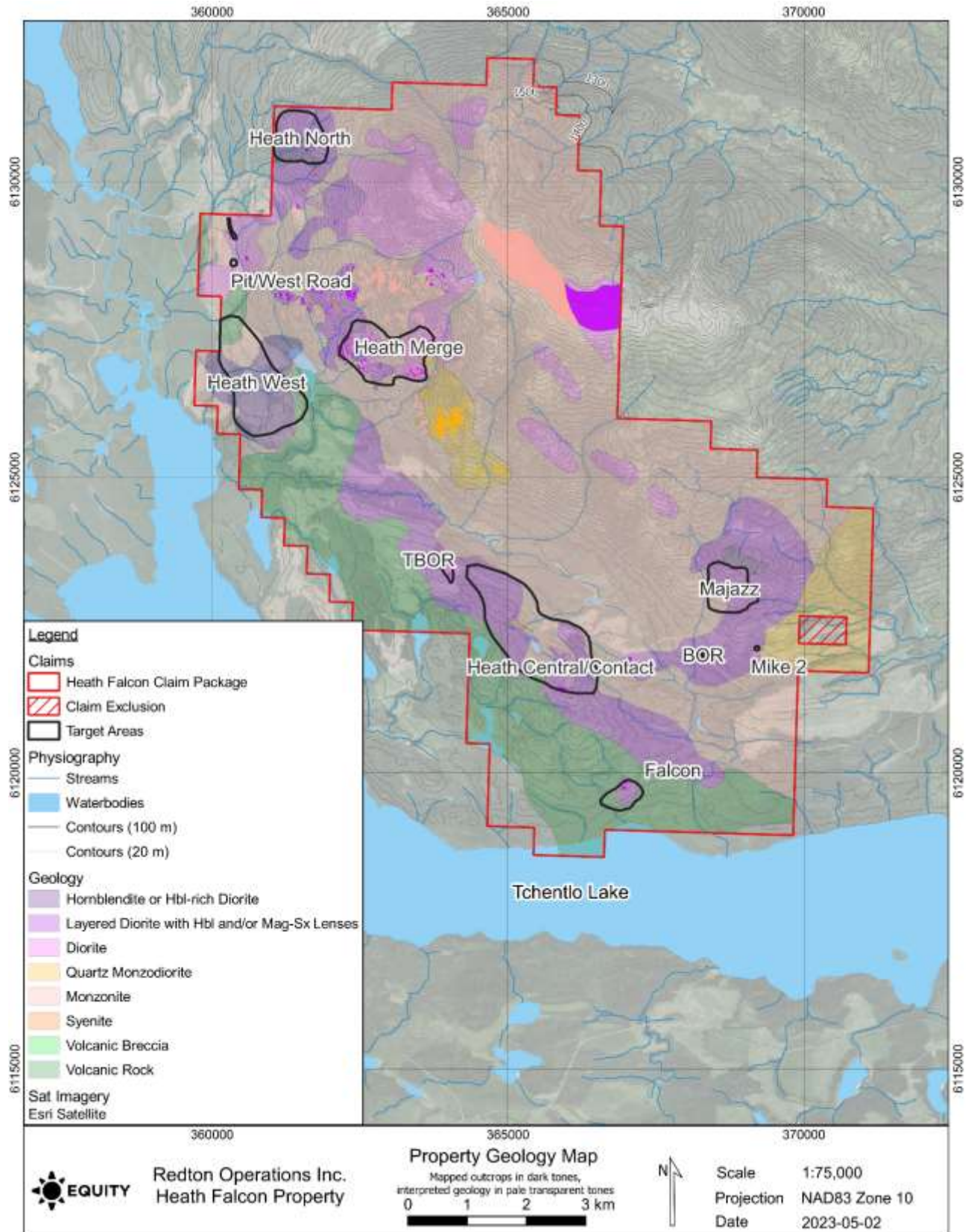


Figure 10. Property geology at Heath-Falcon as interpreted from historic and 2022 data.

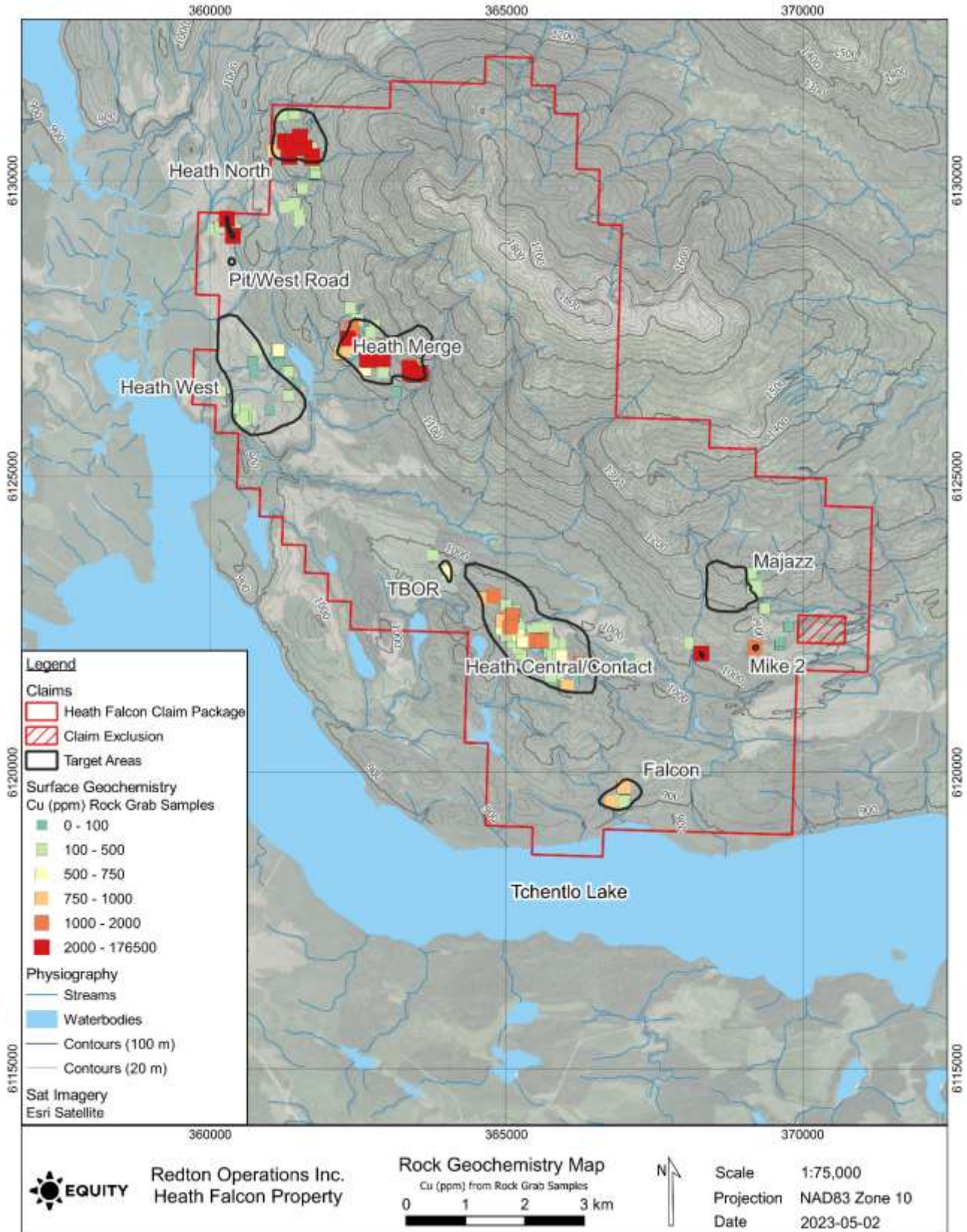


Figure 11. Copper assay values from rock grab samples taken from the Heath-Falcon Property in 2022.

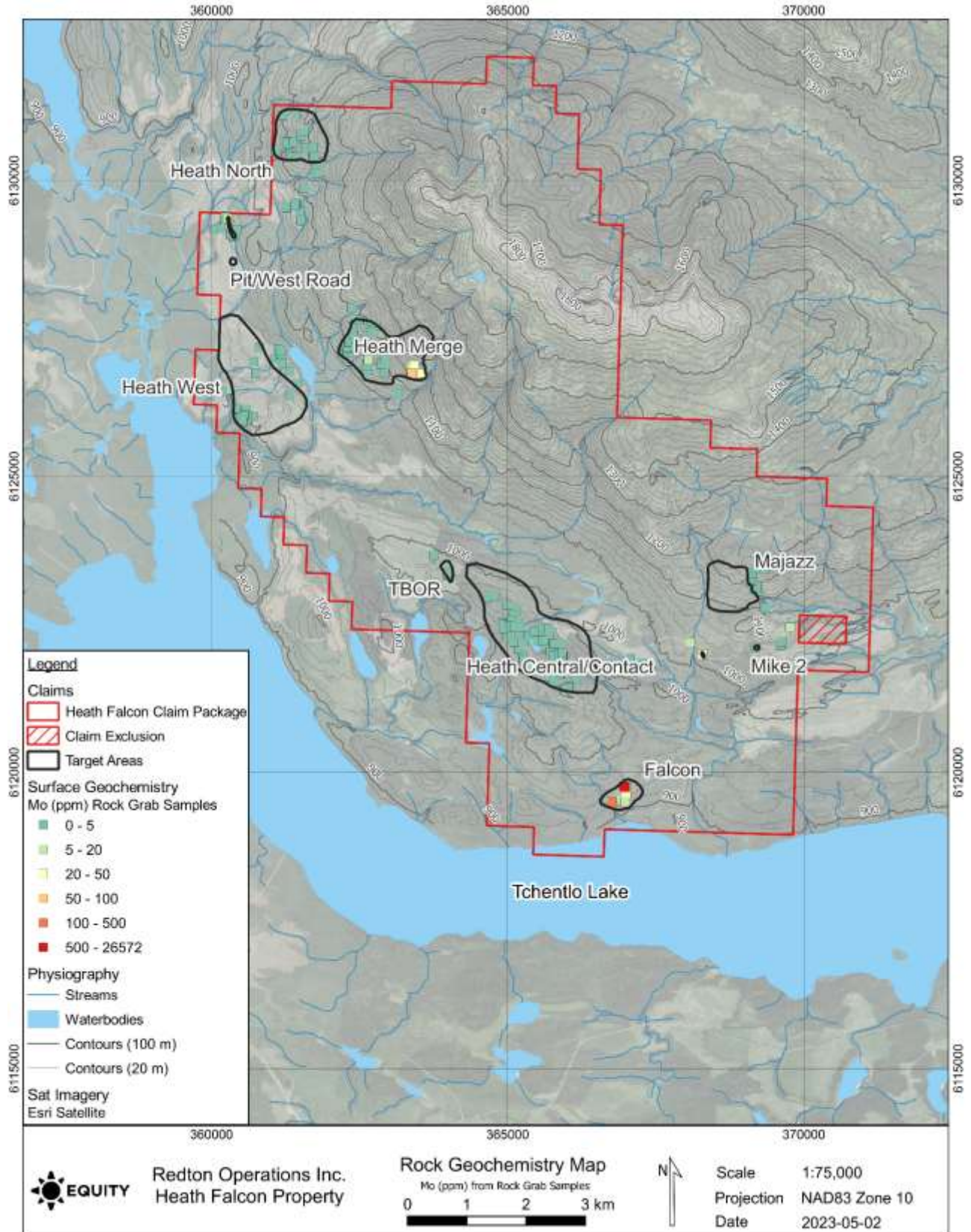


Figure 12. Molybdenum assay values from rock grab samples taken from the Heath-Falcon Property in 2022.

**Table 6. Statistical analysis of selected elements of interest for all 234 rock samples collected in 2022 on the Heath-Falcon Property. Crustal abundance values from Haynes et. al. (2016).**

	Dete ction Limit	Minimum	Median	90th P	95th P	Maximum	Mean	Above Detection Count (Absolute)	Above Detection Count (Relative)	CRC Crustal Abundance (ppm)	P95 10x CRC C.A.	P100 10x CRA C.A.
Cu ppm	0.2	1.00	242.00	1,745.00	3,928.50	98,000.00	1,469.14	234	100%	60	YES	YES
Au ppm	0.005	0.01	0.01	0.05	0.10	0.72	0.03	120	51%	0.004	YES	YES
Ag ppm	0.01	0.01	0.18	2.48	4.49	87.90	1.40	222	95%	0.075	YES	YES
Mo ppm	0.05	0.09	0.72	7.64	24.05	948.00	11.17	230	98%	1.2	YES	YES
As ppm	0.2	0.30	5.90	22.76	34.58	359.00	12.59	233	100%	1.8	YES	YES
Bi ppm	0.01	0.01	0.04	0.53	0.96	16.35	0.34	230	98%	0.0085	YES	YES
Sb ppm	0.05	0.05	1.07	6.67	11.24	93.10	3.31	234	100%	0.2	YES	YES
Pb ppm	0.5	0.50	5.70	14.16	17.58	176.00	10.30	233	100%	14	NO	YES
Cd ppm	0.02	0.02	0.11	0.31	0.60	21.80	0.35	220	94%	0.15	NO	YES
Zn ppm	2	9.00	98.00	172.10	203.45	2,050.00	119.23	234	100%	70	NO	YES
Mn ppm	5	112.00	1,380.00	2,198.00	2,588.00	4,320.00	1,443.04	222	95%	950	NO	NO
Fe ppm	100	12,300.00	93,300.00	175,750.00	208,950.00	377,000.00	101,611.26	222	95%	56,300	NO	NO
S ppm	100	100.00	600.00	8,660.00	16,880.00	100,000.00	3,558.85	209	89%	350	YES	YES
Se ppm	1	0.20	1.00	3.00	5.09	35.00	1.94	123	53%	0.05	YES	YES

Table 7. Correlation coefficients of selected elements from all 234 rock samples collected in 2022 on the Heath-Falcon Property.

Correlation coefficients - All Rock Samples												
Cu:Au	Cu:Ag	Cu:Mo	Cu:As	Cu:Bi	Cu:Sb	Cu:Pb	Cu:Cd	Cu:Zn	Cu:Mn	Cu:Fe	Cu:S	Cu:Se
0.62	0.99	0.00	0.13	0.20	0.02	0.03	0.18	-0.07	-0.08	0.31	0.78	0.95
	Au:Ag	Au:Mo	Au:As	Au:Bi	Au:Sb	Au:Pb	Au:Cd	Au:Zn	Au:Mn	Au:Fe	Au:S	Au:Se
	0.63	0.09	0.03	0.08	0.03	-0.02	0.05	-0.10	0.06	0.37	0.47	0.66
		Ag:Mo	Ag:As	Ag:Bi	Ag:Sb	Ag:Pb	Ag:Cd	Ag:Zn	Ag:Mn	Ag:Fe	Ag:S	Ag:Se
		0.00	0.15	0.26	0.03	0.10	0.18	-0.08	-0.09	0.32	0.79	0.96
			Mo:As	Mo:Bi	Mo:Sb	Mo:Pb	Mo:Cd	Mo:Zn	Mo:Mn	Mo:Fe	Mo:S	Mo:Se
			-0.03	0.03	-0.03	-0.01	-0.01	-0.02	-0.09	-0.03	0.23	0.09

Correlation coefficients:	
-1	Exactly -1. A perfect negative (downward sloping) linear relationship
-0.7	A strong negative (downward sloping) linear relationship
-0.5	A moderate negative (downhill sloping) relationship
-0.25	A weak negative (downhill sloping) linear relationship
0	No linear relationship
0.25	A weak positive (upward sloping) linear relationship
0.5	A moderate positive (upward sloping) linear relationship
0.7	A strong positive (upward sloping) linear relationship
1	Exactly +1. A perfect positive (upward sloping) linear relationship

### 10.3 RAB Drilling

A total of 19 RAB drill holes from 18 sites, totalling 480.06 m were drilled on the Heath-Falcon Property between September 8<sup>th</sup> and September 26<sup>th</sup>, 2022. In total, six holes were drilled at the West Road target, eight at the Heath West – North target, and five at the Heath West – South target area. Drill targets were identified by magnetic and EM data from historic geophysical surveys, and results from the 2022 mMT survey.

The drilling did not intersect bedrock due to thicker than expected till and clay depths in 16 holes. Most of the drilling intersected thick seams of clay at depths greater than 30 m that may have acted as radar refractors and were not penetrated by the 2021 GPR survey. The northernmost drillholes at West Road (Pit) were successful in intersecting bedrock. HF-22-001 intersected layered diorite with 1,990 ppm Cu over 1.53 m at a depth of 13.72 to 15.24 m. HF-22-002 intersected hornblendite with 423 ppm Cu over 1.53 m at a depth of 16.76 to 18.29 m. All the drillholes to the south failed to intersect bedrock except one at Heath West which could have intersected bedrock or possibly a large a boulder (>6 m in penetrated size) and 23.6 ppm Cu was intersected within this drillhole over 1.53 m in hornblendite (Table 8). The other holes are dominated by till and clay even where holes are closer to known outcrops and distal from the lake margin, as in holes HF-22-010 and HF-22-018.

A map showing the location of 2022 RAB drill holes is included in Figure 5, drill hole logs are attached in Appendix T, drill hole cross sections in Appendix U, and all certificates of analysis are attached in Appendix V. Significant analytical results from the 2022 drilling program are summarised in Table 8.

**Table 8: Significant analytical results from the 2022 RAB drilling program at Heath-Falcon.**

Target	Hole	From (m)	To (m)	Interval (m)*	Au (ppm)	Cu (ppm)	Ag (ppm)	Mo (ppm)
West Road	HF-22-001	10.67	12.19	1.52	0.013	203	0.09	1.23
West Road	HF-22-001	12.19	13.72	1.53	0.021	286	0.13	0.58
West Road	HF-22-001	13.72	15.24	1.52	0.052	1990	0.46	0.94
West Road	HF-22-001	15.24	16.76	1.52	0.022	610	0.27	0.82
West Road	HF-22-002	13.72	15.24	1.52	0.009	70.1	0.06	0.87
West Road	HF-22-002	15.24	16.76	1.52	0.014	109.5	0.08	0.76
West Road	HF-22-002	16.76	18.29	1.53	0.033	423	0.13	1.05
West Road	HF-22-002	18.29	19.81	1.52	0.005	26.9	0.03	0.62
Heath West	HF-22-005	16.76	18.29	1.53	-0.005	14.7	0.03	0.46
Heath West	HF-22-005	18.29	19.81	1.52	-0.005	11.8	0.03	0.4
Heath West	HF-22-005	19.81	21.34	1.53	-0.005	23.6	0.06	0.37
Heath West	HF-22-005	21.34	22.86	1.52	-0.005	16.9	0.02	0.48
Heath West	HF-22-009	22.86	24.38	1.52	0.005	86.5	0.08	1.05
Heath West	HF-22-009	24.38	25.91	1.53	0.015	105	0.11	1.31

\*Note: Differing intervals lengths due to conversion of depths from feet to meter (one drill run was always 5 foot).

### 10.4 Ground Penetrating Radar

A total of seven survey lines over ~6,945 m were completed on September 21<sup>st</sup>, 2022. The seven survey lines in the map of Figure 5 show colour-coded points with warm colours indicating greater depths to bedrock (7.5 to 31.6 m) and cooler colours more shallow depths (1 to 7.5 m). The four lines around the Heath North target zones in general show greater depths to bedrock, while the three lines east of Heath West indicate more moderate depths.

This contradicts other geological observations, such as abundant outcrop right next to the survey lines indicating deep overburden at Heath North and more moderate overburden thickness in an area with mapped till blanket at Heath West.

## 11.0 CONCLUSIONS AND RECOMMENDATIONS

The 2022 exploration program at Heath Falcon comprised an airborne magnetotellurics survey, a mapping and rock sampling campaign, and RAB drilling. The addition of property-wide electromagnetic data through the mMT survey provides insight into the structural architecture of the Property, while the mapping and rock sampling increased the data density of geological and geochemical data in areas that were accessible/provided outcrop. The RAB drilling to test geophysical anomalies did not succeed in explaining all targets.

Further exploration approaches should include several considerations:

- The geological understanding of mineralisation type of the semi-massive Cu in layered diorite and hornblendite and the exploration implications.
- The potential for Cu porphyry mineralisation at Heath #3 and along strike due NW and SE.
- The potential for significant Cu mineralisation at Central Zone.
- The extent and structural relationship between Mo and Cu mineralisation at Falcon.

A multi-pronged, step-by-step approach of detailed mapping, surface geochemistry, followed by data integration and interpretation, and eventually drilling, is recommended to answer the questions related to the points above and to graduate those occurrences to drill targets.

Respectfully submitted,

*Signed*

*Signed and Sealed*

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Logan Belcher

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Matthias Lindhuber

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**Appendix B: Statement of Expenditures**

**Statement of Expenditures for Mineral Exploration Work Conducted on the Heath-Falcon Claims between January 1st, 2022 and March 31st, 2023**

Exploration Work Type	Comment				Totals
Personnel (Name) / Position	Field Days (list actual days)	Days	Rate	Subtotal	
Logan Belcher / Project Geologist (project management, mapping, logging)	May 16 to May 19, August 1 to August 24, September 5 to 29, 2022	53.00	\$ 790.00	\$ 41,870.00	
Eric Latkin / Project Coordinator (subcontractor management, sampling, logistics support)	May 16 to May 19, July 15 to 20, August 1 to August 28, September 10 to 14, 2022	43.00	\$ 680.00	\$ 29,240.00	
Rachael Kramer / Project Geologist (mapping, data evaluation)	August 1 to August 28, 2022	28.00	\$ 790.00	\$ 22,120.00	
Danny Datson / Geologist (sampling)	August 1 to August 28, 2022	28.00	\$ 680.00	\$ 19,040.00	
Daniel Lui / PGeo (site visit, program review)	August 23 to 28, 2022	6.00	\$ 870.00	\$ 5,220.00	
Matthias Lindhuber / PGeo (site visit, program review)	August 23 to 28, 2022	6.00	\$ 870.00	\$ 5,220.00	
Lily Ranger / Level 3 First Aider	September 5 to 28, 2022	24.00	\$ 480.00	\$ 11,520.00	
Reece Hett / Level 3 First Aider	September 28 to 29, 2022	2.00	\$ 480.00	\$ 960.00	
Fabien Rabayrol / Project Geologist (mapping, sampling, drill rig setup support)	September 5 to 14, 2022	10.00	\$ 790.00	\$ 7,900.00	
Clinton Smyth / Exploration Manager (site visits)	May 16 to 20, July 15 to 19, August 21 to 23, September 19 to 23, 2022	18.00	\$ 850.00	\$ 15,300.00	
				\$158,390.00	\$ 158,390.00
<b>Office Studies</b>	<b>List Personnel (note - Office only, do not include field days)</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal</b>	
Program management, project coordination, data evaluation and interpretation, technical reporting	Logan Belcher / Project Geologist	79.18	\$ 790.00	\$ 62,548.30	
Program management, project coordination, data evaluation and interpretation, technical reporting	Matthias Lindhuber / PGeo	35.22	\$ 870.00	\$ 30,641.40	
Health Safety & Environmental documentation/logistical support	James Heimbach / Project Coordinator	8.88	\$ 680.00	\$ 6,038.40	
Database compilation/GIS project setup/Support for structural data analysis	Rachael Kramer / Project Geologist	8.77	\$ 790.00	\$ 6,928.30	
Database compilation of legacy geological and surface geochemical data	Richard da Silva / Project Geologist	8.75	\$ 790.00	\$ 6,912.50	
Petrographic analysis	Daniel Lui / PGeo	8.13	\$ 870.00	\$ 7,073.10	
Project oversight/project support	Eleanor Black / PGeo	7.39	\$ 870.00	\$ 6,429.30	
Permit application work	Chris Hughes / PGeo	6.63	\$ 870.00	\$ 5,768.10	
Structural data analysis and interpretation	Ronald Voordouw / PGeo	5.76	\$ 870.00	\$ 5,011.20	
Technical reporting - Figures for assessment report	Jared Liimu / Project Geologist	5.38	\$ 790.00	\$ 4,250.20	
Database management and QA/QC	John Bligh / Database Support	4.75	\$ 880.00	\$ 4,180.00	
Logistical support/subcontractor management	Eric Latkin / Project Coordinator	4.63	\$ 680.00	\$ 3,148.40	
Technical reporting - surficial geology	Aaron Hantsche / Project Geologist	4.50	\$ 790.00	\$ 3,555.00	
GIS Support/software management	Bahram Bahrami / GIS Support	4.27	\$ 880.00	\$ 3,760.00	
Laboratory work via pXRF	Clinton Smyth / Exploration Manager	4.00	\$ 850.00	\$ 3,400.00	
Technical reporting - geochronology	Fabien Rabayrol / Project Geologist	3.44	\$ 790.00	\$ 2,717.60	
Database compilation of legacy geological and surface geochemical data	Danny Datson / Geologist	3.00	\$ 680.00	\$ 2,040.00	
Health Safety & Environmental documentation	Cameron Chisholm / Project Geologist	2.63	\$ 790.00	\$ 2,077.70	
Database compilation of legacy geological and surface geochemical data	Stephanie Schweighart / Geologist	1.63	\$ 680.00	\$ 1,108.40	
Logistical support/expediting	Margot Kupper / Logistic Support	1.56	\$ 640.00	\$ 1,000.00	
Health Safety & Environmental documentation	Piotr Angiel / Project Geologist	1.50	\$ 790.00	\$ 1,185.00	
Software support - Soil geochemical data validation	Mikayil Naghiyev / Project Geologist	1.38	\$ 790.00	\$ 1,090.20	
Database compilation of legacy geological and surface geochemical data	Nathan McKinley / Geologist	1.00	\$ 680.00	\$ 680.00	
Logistical support/warehouse	Scott Parker / Logistic Support	0.73	\$ 880.00	\$ 640.00	
Health Safety & Environmental documentation	George Pietrusinski / Project Coordinator	0.63	\$ 680.00	\$ 428.40	
				\$172,611.50	\$ 172,611.50
<b>Drilling</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
RAB Drilling (Rotary Airblast Drilling)	Ground Truth RAB drilling contract for 19 drill holes, incl. equipment, personnel, travel, and consumables (except diesel)	1	\$101,487.83	\$101,487.83	
				\$101,487.83	\$ 101,487.83
<b>Geophysical Surveying</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
mMT Survey (Airborne Electromagnetic Survey)	Expert Geophysics mMT survey contract for 410 line-km, incl. equipment, personnel, travel, freight, helicopter cost (except Jet-A), data processing, and reporting	1.0	\$120,480.00	\$120,480.00	
Constrained Inversion	Computational Geosciences Inc. - constrained inversion of 2022 mMT survey data	1.0	\$ 20,000.00	\$ 20,000.00	
Geophysics Consulting	in3D Geoscience Inc. - processing and interpreting of geophysical data and technical discussions (per hour)	52.7	\$ 150.00	\$ 7,897.50	
				\$148,377.50	\$ 148,377.50
<b>Geochemical Surveying</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Petrographic Analysis	Petrographic analysis of rock samples of interest (n=31) - Ultra Petrography	1.0	\$ 9,582.00	\$ 9,582.00	
Assay of Rock, Chips, and Whole Rock	Collected August 1 to August 28 (rock n=218 via ME-MS61 & Au-AA23), September 10 to 14, 2022 (chips n=15 via ME-MS61 & Au-AA23, rock n=13 via ME-MS61 & Au-AA23, whole rock n=12 via CCP-PKG03 & Au-AA23) - ALS Minerals	1.0	\$ 17,854.99	\$ 17,854.99	
				\$ 27,436.99	\$ 27,436.99
<b>Transportation</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Airfare	Flights from Vancouver/Kamloops to Prince George and return for Equity crew in support of field days in "Personnel Time" above	1.0	\$ 25,165.64	\$ 25,165.64	
Truck rental	Truck rentals from Visa Truck Rental Prince George for Equity and Ground Truth crews	1.0	\$ 29,108.54	\$ 29,108.54	
Automotive Fuel	Fuel for rental trucks travelling to/from site	1.0	\$ 2,776.76	\$ 2,776.76	
Automotive Expenses	Vehicle repairs, cost of CAT loader tyre & service fee	1.0	\$ 2,744.05	\$ 2,744.05	
Taxi	From Vancouver/Kamloops airport to personal homes	1.0	\$ 529.37	\$ 529.37	
Parking	Prince George airport parking	1.0	\$ 13.33	\$ 13.33	

Bulk Fuel	Diesel bulk tank (RAB drilling), gas drums (trucks), jet A drums (wildlife survey and mMT survey)	1.0	\$ 39,149.71	\$ 39,149.71	
Helicopter	For wildlife survey, 3.5 hours - Silver King Helicopters	1.0	\$ 7,464.10	\$ 7,464.10	
				\$106,951.50	\$ 106,951.50
<b>Accommodation &amp; Food</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Accommodation	At Roger's Paradise Lodge and Purvis Camp for field personnel (incl. wildlife survey, mMT survey, mapping, and drilling)	1.0	\$ 50,410.89	\$ 50,410.89	
Camp food	Additional food supplies for camp	1.0	\$ 2,734.14	\$ 2,734.14	
Meals	Meals bought whilst travelling to/from site	1.0	\$ 781.34	\$ 781.34	
				\$ 53,926.37	\$ 53,926.37
<b>Miscellaneous</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Field consumables	Stationary, lumber, HSE supplies, vehicle safety gear for rental trucks	1.0	\$ 882.94	\$ 882.94	
Plot charges	Cost of map printing for technical discussions	1.0	\$ 88.68	\$ 88.68	
Materials and Supplies	ALS tag books, OREAS CRMs, wobble pump, rice bags, poly bags, flagging tape	1.0	\$ 2,591.97	\$ 2,591.97	
				\$ 3,563.59	\$ 3,563.59
<b>Equipment Rentals</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Communication Devices Rental	Rental of radios, satellite internet, InReach devices, satellite phones, magnetic susceptibility meter	1.0	\$ 7,054.69	\$ 7,054.69	
CAT Loader Rental	Rental of a CAT from Finning PG for moving RAB drill gear	1.0	\$ 11,234.55	\$ 11,234.55	
Leapfrog Software	Rental of Leapfrog license from Equity (per day)	3.0	\$ 225.00	\$ 675.00	
Micromine Software	Rental of Micromine license from Equity (per hour)	41.0	\$ 55.00	\$ 2,255.00	
Ruggedised field phone/tablet	Rental of field phones for digital sample capture from Equity (per day)	74.0	\$ 5.00	\$ 370.00	
Specialised Field Computer	Rental of specialised field computers from Equity (per day)	78.0	\$ 40.00	\$ 3,120.00	
				\$ 24,709.24	\$ 24,709.24
<b>Permitting</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Wildlife Survey	Northern Habitat Solutions 2022 survey and Wildlife Mitigation Plan	1.0	\$ 7,348.00	\$ 7,348.00	
				\$ 7,348.00	\$ 7,348.00
<b>Freight</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Freight	Shipping of field supplies to/from Vancouver to/from site, RAB drill delivery	1.0	\$ 48,148.27	\$ 48,148.27	
				\$ 48,148.27	\$ 48,148.27
<b>Total</b>					\$ 852,950.79
PSC	Equity's Project Supervision Charge ("PSC") on activities ran by Equity				\$ 102,901.47
PST	Provincial sales tax paid				\$ 4,514.06
<b>GRAND TOTAL</b>					\$ 960,366.32

**Appendix W: 2022 Geologist Certificates**

GEOLOGIST'S CERTIFICATE

Logan R. Belcher  
3550 W 13<sup>th</sup> Ave  
Vancouver, BC, Canada

I, **Logan R. Belcher**, do hereby certify that:

1. I am presently a Project Geologist with Equity Exploration Consultants Ltd. with offices at 1238-200 Granville Street, Vancouver, British Columbia.
2. I am a graduate of the University of Exeter/Camborne School of Mines in Penryn, UK, with a Master of Science degree in Mining Geology in 2020.
3. I have been involved in the natural resources industry since 2019 and conducted mineral exploration for base and precious metals in Canada and Ireland.
4. I am a Geoscientist-in-Training in good standing registered with Professional Geoscientists Ontario (#11397).
5. I am the co-author of the report titled "2022 Drilling, Geochemical, and Geophysical Report on the Heath-Falcon Property" prepared for Redton Resources Inc.
6. I was directly involved with the co-management and execution of the 2022 exploration programme at Heath-Falcon.

Dated at Vancouver, British Columbia, this 31<sup>st</sup> day of March, 2023.

"signed"



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Logan Belcher, M.Sc., G.I.T

GEOLOGIST'S CERTIFICATE  
Matthias J. Lindhuber  
4025 Mountain Highway  
North Vancouver, BC, Canada

I, **Matthias J. Lindhuber**, do hereby certify that:

1. I am presently a Senior Project Geologist with Equity Exploration Consultants Ltd. with offices at 1238-200 Granville Street, Vancouver, British Columbia.
2. I am a graduate of Eberhard Karls University in Tübingen, Germany, with a Master of Science degree in Geosciences/Mineralogy in 2011.
3. I have been involved in the natural resources industry since 2008 and conducted mineral exploration for base and precious metals in North America and Australia.
4. I am a Professional Geoscientist in good standing registered with Engineers and Geoscientists of British Columbia (#52715) and the Association of Professional Geoscientists of Ontario (#3393).
5. I am the co-author of the report titled "*2022 Drilling, Geochemical, and Geophysical Report on the Heath-Falcon Property*" prepared for Redton Resources Inc.
6. I was directly involved with the co-management and execution of the 2022 exploration program at Heath-Falcon

Dated at Vancouver, British Columbia, this 31<sup>st</sup> day of March, 2023.



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Matthias J. Lindhuber, MSc, PGeo