

# **Technical Report on the ULTIMATE Property, Corbold Creek area, BC, Canada**



**Corbold Creek area, north of Pitt Lake, south-west British Columbia, Canada**

**Latitude: 49° 40' 3" north**

**Longitude: 122° 38' 30" west**

**NTS: 092 G/10**

**FOR:**

**Ivor Exploration Inc.**

**4550 Prime Street**

**North Vancouver BC V7K 2R4**

**By:**

**Sean P. Butler, P.Geo.**

**Report Date: October 24, 2019**

**Certificate of Author – Sean Butler, P.Geo.**

**I Sean P. Butler, P.Geo., do hereby certify that:**

1. I am a consulting geologist with residence at 3252 Ganymede Dr., Burnaby, BC, Canada, V3J1A4;
2. I am a graduate with a Bachelor of Science degree, in Geological Sciences from the University of British Columbia in 1982;
3. I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of British Columbia (Member # 19,233);
4. I have examined the ULTIMATE property on the 19th of November, 2018 which constitutes a Current Inspection of the property as defined by Part 6.2 of NI34-101. I also conducted exploration on the property from April 18 to 24, 1984 and a prior Site Inspection on the 30th of October, 2017;
5. I am independent of the ULTIMATE property and Ivor Exploration Inc. as defined in Part 1.5 of NI 43-101;
6. I have practised the geological profession for approximately 35 years since graduation from university. I have worked extensively exploring for both base and precious metals from early stage programs up to advanced underground exploration and mining;
7. I have read the definition of "Qualified Person" as set out in Part 1.1 of National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and previous relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101;
8. I am responsible for all of the report titled "Technical Report on the ULTIMATE Property, Corbold Creek area, BC, Canada" with the effective date of October 24, 2019 (the "Technical Report");
9. That as of the effective date of the Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form;
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this **24th** day of **October, 2019**.

“Signed and Sealed”

Signature of Qualified Person  
**Sean Butler, P.Geo.**

## SUMMARY

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The author, Sean Butler, P.Geo., was requested by the directors of Ivor Exploration Inc. to complete a Technical Report of the ULTIMATE property located in the Corbold Creek area of BC, Canada. The purpose of the report is for inclusion in a Prospectus. The sources of the information for this report are historic reports prepared by industry and government professionals and the author's observations during a five-day field program in 1984, a prior site inspection on October 30, 2017 and the Current Personal Inspection of the property conducted on November 19, 2018. The company name was changed in late 2017 from Ivor Ventures Ltd. to Ivor Exploration Inc.

The author completed a Current Personal Inspection site visit on November 19, 2018 with a prior Personal Inspection visit on October 30, 2017 as well as a five-day field program in 1984.

The property is located north of Pitt Lake in south-western British Columbia, Canada and consists of seven claims totalling 1,526.48 hectares. The claims straddle the ridge between Corbold Creek and Pitt River. The central claims date from 2012 and expire on May 14, 2023. The recently located claims expire on September 13, 2020. The recommended work program if completed will extend the expiry dates of the claims.

There are no royalties on the Ultimate group of claims.

Access is by helicopter from Pitt Meadows or a combination of trucks on roads and either boat or barge on Pitt Lake. There is an extensive logging road network on the ULTIMATE claims.

Climate in the area is generally moderate but at higher elevations especially in the winter can get significant snow falls. Field exploration can be completed for half the year and other activities may be possible year-round. There is no substantial infrastructure in the Pitt River valley, but its close proximity to Vancouver makes most requirements close by.

The earliest recorded work was in 1927 when claims were staked for molybdenum and trenching and a short adit were developed up to 1929. There is an unconfirmed report about drilling in the late 1950s. Starting in the 1960s, the property was explored for copper. Copper exploration occurred sporadically through the 1970s and 1980s.

The volcanic rocks of the Harrison Lake Formation form the Corbold Pendant of metamorphosed rock in the Coast Plutonic Complex. The later quartz-feldspar porphyry intrusion unit is the suggested source of mineralization. That intrusion provided sufficient heat to maintain the Corbold hydrothermal system and the late stage separation of fluids to a sulphide rich phase. Also present are late stage post-mineral fine-grained mafic dykes.

The target deposit type is a bulk tonnage porphyry copper-molybdenum system.

Ivor has conducted localized Mobile Metal Ion (MMI) soil geochemical surveys in 2012 and 2015 in a previously identified drainage to outline trends in the distribution of copper and molybdenum. In 2017 an airborne magnetic and radiometric study was completed over most of the property area. During August, 2017 a geological mapping and rock geochemical survey was conducted. This study determined the various major rock units and their relationships in time and space. The rock chip sampling was useful in defining the potassic alteration as well as drill-site selection purposes.

A few reported diamond drill holes in 1957 were completed with no record of the results known to the author or previous authors into the 1970s. No other drilling is reported.

No metallurgical work has been completed. No mineral resource or reserve estimates have been completed in the ULTIMATE property area.

The work completed to date has not conclusively determined that a porphyry copper molybdenum deposit exists on this property. There are multiple results consistent with the standard models of alteration and mineralization of a porphyry deposit. The anticipated mineralized targets are buried in the hillside and will require a direct sampling method such as diamond drilling to be determined conclusively.

Exploration to date has confirmed a large hydrothermal alteration system consistent with a porphyry copper deposit within the quartz-feldspar porphyry unit and surrounding andesites of the Harrison Lake Formation, that comprise the Corbold Pendant.

The airborne potassium-thorium ratio from the 2017 radiometric survey shows that potassic alteration extends beyond the airborne survey boundaries. The magnetic survey shows the deeper zones, closer to the intrusion, have likely had the magnetite from the earlier potassic alteration re-absorbed or destroyed. The resulting trends are consistent with the observed directions of the veining and contouring of the 2012 and 2015 Mobile Metal Ion (MMI) soil surveys.

The recommended exploration budget is below in Table 0-1.

<b>Phase One</b>			
<b>Item</b>	<b>Number of Units</b>	<b>Cost per unit</b>	<b>Total Cost</b>
Geological Mapping	35 days (2 men)	\$ 1,000 day (crew)	\$ 35,000
Sampling	300 samples	\$ 65 /sample	\$ 19,500
Barge access for vehicles, diesel and vehicle rental			\$ 15,000
Room and Board			\$ 13,000
Communication, field and office supplies			\$ 4,000
Planning, reporting, admin	35 days	\$ 600 day	\$ 21,000
<b>Phase One Budget Total</b>			<b>\$ 107,500</b>
<b>Assume with contingency</b>			<b>\$ 115,000</b>
<b>Phase Two</b>			
<b>Item</b>	<b>Number of Units</b>	<b>Cost per unit</b>	<b>Total Cost</b>
Permit preparation			\$ 10,000
Line Cutting (if required)	8 days (2 men)	\$ 1,100 day (crew)	\$ 8,800
Induced Polarization Survey	15 days (4 men)	\$ 5,500 day (crew)	\$ 82,500
Barge access for vehicles, diesel and vehicle rental			\$ 18,000
Room and Board			\$ 8,000
Communication, field and office supplies			\$ 3,000
Reporting			\$ 15,000
<b>Phase Two Budget Total</b>			<b>\$ 145,300</b>

**Table 0-1 Budget for Recommended Work Programs**



Results of the 2017 rock chip survey show a strong spatial correlation of elevated copper and molybdenum concentrations to the quartz-feldspar porphyry outcrops.

The author considers the results to date indicate further work should be done to better determine the potential of this property.

Phase One of the recommended exploration will include extension of the 2017 geological mapping to the complete area of the potassic alteration zone visually observable.

With continuing positive results in Phase One the next phase of work is to complete a surface Induced Polarization (IP) survey along several existing logging roads with the goal of developing drill targets.

**Cover Photo 0-1 View of the Corbold Creek Valley with roads and cut blocks at the ULTIMATE Property October, 2017**

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## 2 INTRODUCTION

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### 2.1 Terms of Reference

This report has been requested by the directors of Ivor Exploration Inc. (Ivor) to write a NI 43-101 compliant report for inclusion in a Prospectus. The company name was changed in late 2017 from Ivor Ventures Ltd. to Ivor Exploration Inc.

The author is independent of the Issuer, Ivor Exploration Inc. and the ULTIMATE property. This Technical Report was completed on a fee for time basis.

The report is prepared to be summarized as part of a Prospectus to allow an Initial Public Offering (IPO) on the Canadian Securities Exchange (CSE).

### 2.2 Sources of Information

Much of the information used in this Technical Report was published previously by industry professionals who have worked in the property area. Government data sources available online have also been accessed to support writing this report. Several of these technical reports were supplied by John Ostler (Cochrane, 1972 and Ostler 1983 and 2017) while the others are in the public record as assessment reports or government technical documents and located online. A summary list is outlined in the References section.

### 2.3 QP Personal Inspections of the Property

In 1984 the report author managed and completed a field program on the then named Ultimate claims that forms part of the present ULTIMATE property near the centre south area. It was five days on site and included geochemical surveying and is summarized in a report noted in the references (Butler, 1984).

#### 2.3.1 2018 Visit

A Current Personal Inspection of the ULTIMATE property in accordance with Part 6.2 of NI43-101 was completed on November 19, 2018 with Brent Hahn of Ivor Exploration. The same R-44 helicopter of Sky Helicopters as used in 2017 was used to access the site in 2018.

Two locations were visited on the property. The first was a quartz feldspar porphyry (QFP) outcrop area on a road and the other was part of the previous site visit. The first stop was to observe the QFP away from a contact. This site has various local alteration due to a fault observed as well as the remobilized alteration around a Tertiary mafic dyke in the QFP. The other site was chosen when the other site planned to be visited was found to have overgrown with trees and was not easily accessible by helicopter. No samples were collected during the 2018 visit. The Photo 2-1 and Photo 2-2 were taken by the report author in 2018.

Changes between the two visits are that the roads in the mid valley that were open and driveable in 2017 are now partly decommissioned with culverts pulled to limit any impacts. The other was the lowest roads on each side of Corbold Creek are still open and are actively used for helicopter logging projects. The road that accesses the higher areas of the north end of the ULTIMATE property and over the top of the ridge also



appeared to be open. Further logging in the mid valley seems to be planned to be helicopter supported in the future.



**Photo 2-1 View of the property in November 2018**



**Photo 2-2 Helicopter on the ground in November, 2018**



### 2.3.2 2017 Visit

A Personal Inspection of the ULTIMATE property was completed by the author on October 30, 2017 with John Ostler, P.Geo. property vendor and project geologist. Access was by R44 helicopter of Sky Helicopters from Pitt Meadows, BC. It included four stops on the property to look at rock outcrops on road cuts and a general overview of the property from the air. The helicopter landings were chosen in order to view a cross section of the Corbold hydrothermal system and a review of the major rock units of the property. Outcrops other than in road cuts and the major creeks are sparse.

No samples were collected on the 2017 site visit for analysis. The cover photo (Cover Photo 0-1) and photos in this section of the report (Photo 2-3 to Photo 2-5) were taken by the Technical Report author on October 30, 2017 at the ULTIMATE property. The photographs show the property in general as well as various significant geological units and their contacts and inter-relationships.



**Photo 2-3 Contact between the quartz-feldspar porphyry (top) and the hornfelsed andesite within the potassic alteration zone with hammer for scale**



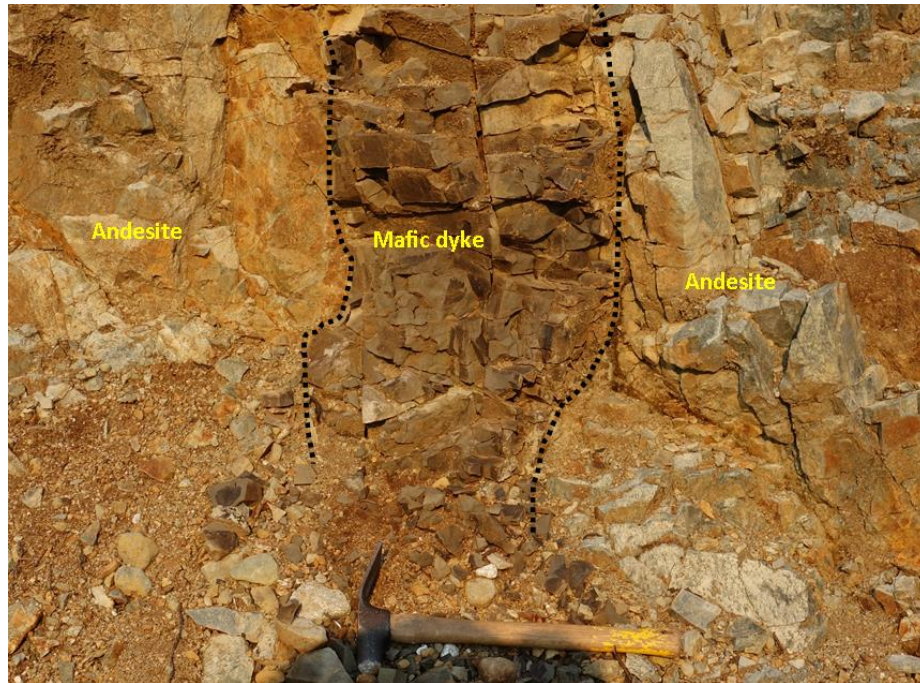


Photo 2-4 Late-Tertiary, unaltered mafic dyke intruding the andesite hornfels in the potassic alteration zone

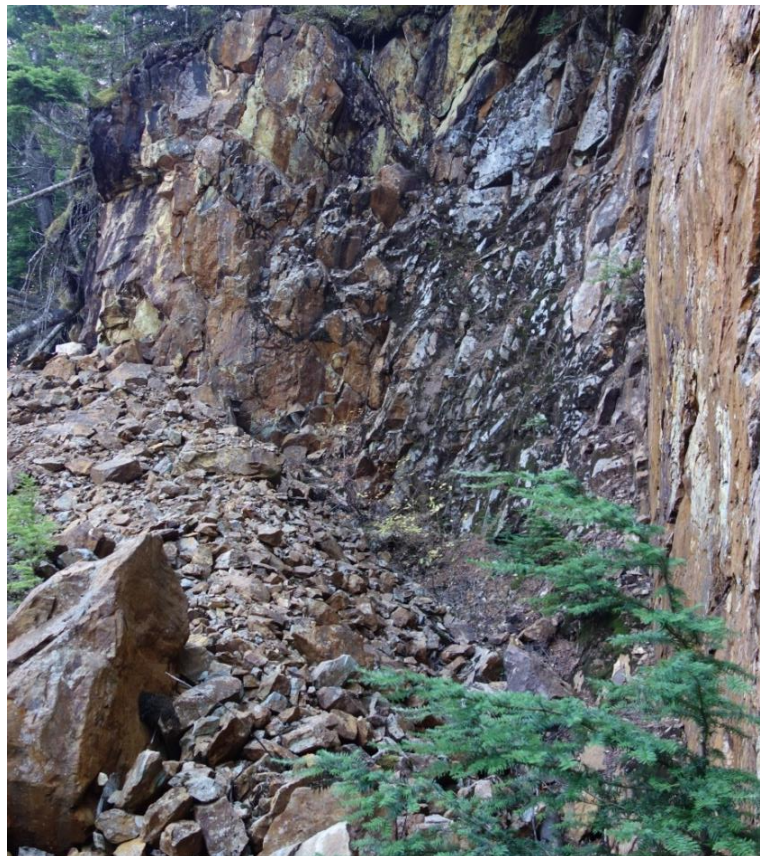


Photo 2-5 Road cut in the upper pyrite halo within the quartz feldspar porphyry

### 3 RELIANCE ON OTHER EXPERTS

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The author is not an expert on mineral property title issues. The author has relied on the online information provided by the Province of British Columbia regarding claim ownership and expiry date information. This information was accessed at the web site <https://www.mtonline.gov.bc.ca/mtov/home.do> multiple times with the last review on August 20, 2019.

### 4 PROPERTY, DESCRIPTION AND LOCATION

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In May, 2012 Ivor Ventures Ltd. (now Ivor Exploration Inc.) contacted John Ostler to find a property with exploration potential in British Columbia. Ostler having worked on the Ultimate claims in 1983 for Indian Gold determined the area underlying the ULTIMATE property was open and available to be claimed. John Ostler map-staked the ULTIMATE 1-4 (984143 to 984144 and 984146 to 984147) claims and sold them outright to Ivor Ventures Ltd. for \$8,000 (See Table 4-1 and Figure 4-2). On September 13, 2017 the remaining claims, ULTIMATE 5 to 7 (1054914-916), were map-staked directly by Ivor Ventures Ltd. (now Ivor Exploration Inc.).

#### 4.1 Location

The property is located in south-western British Columbia, Canada on the north-south trending ridge between the Pitt River and Corbold Creek, a tributary of Pitt River. Their confluence is about 11 kilometres north of Pitt Lake. The latitude of 49° 40' 3" north and longitude of 122° 38' 30" west in WGS84 datum is the approximate centre of the property. The property is in UTM Zone 10 N with centre coordinates of 525900 East and 5501700 North.

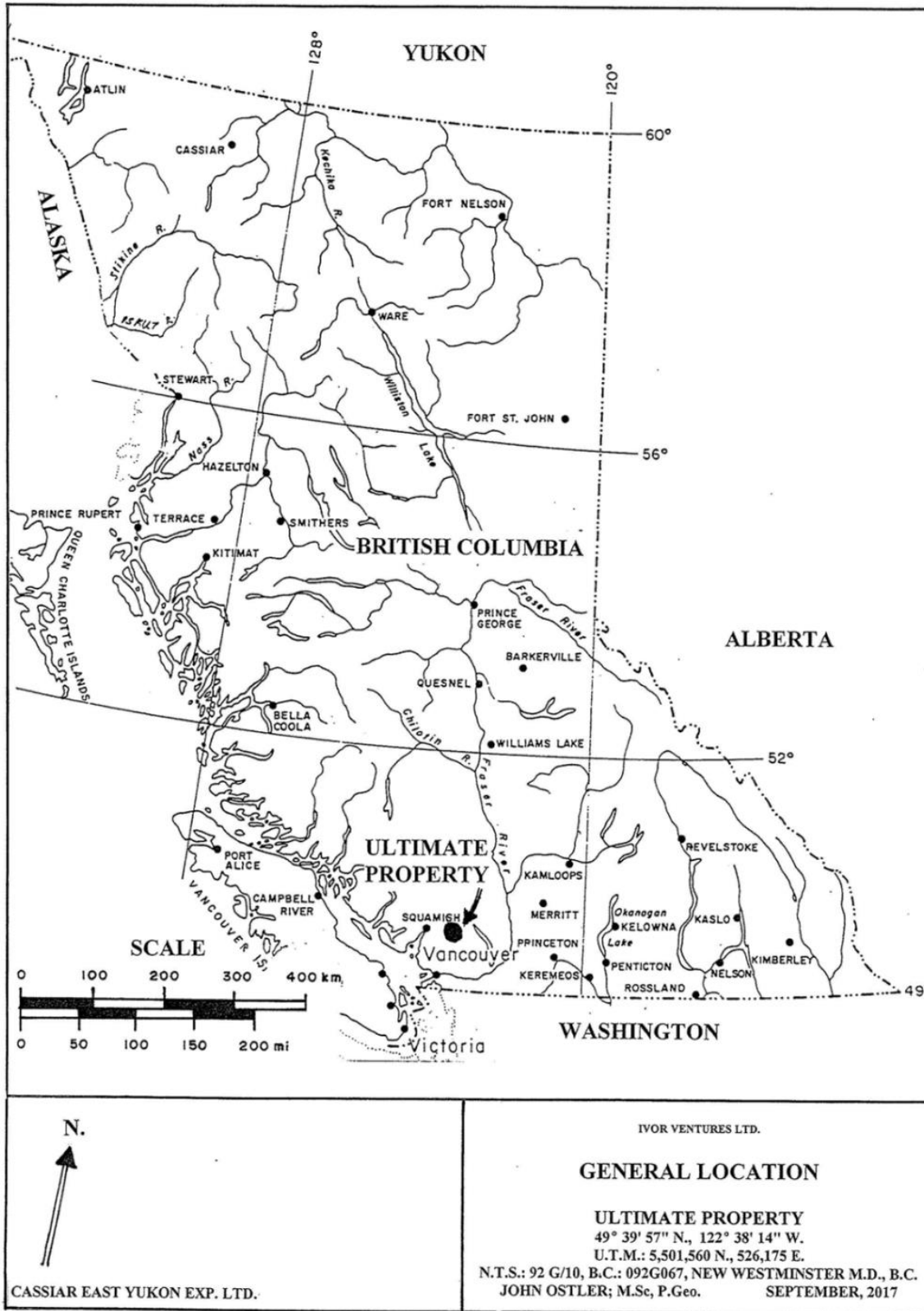
The property is located in the Pacific Ranges of the Coast Mountains in southwestern British Columbia as indicated in Figure 4-1 and Figure 5-1. The area of historic work is on the steep south-westerly facing side of the Corbold Creek valley. Most of the area of the historic work is now covered by the ULTIMATE 1 claim.

The property is on Canada N.T.S. map 092G/10 and on B.C. TRIM map 092G 067.

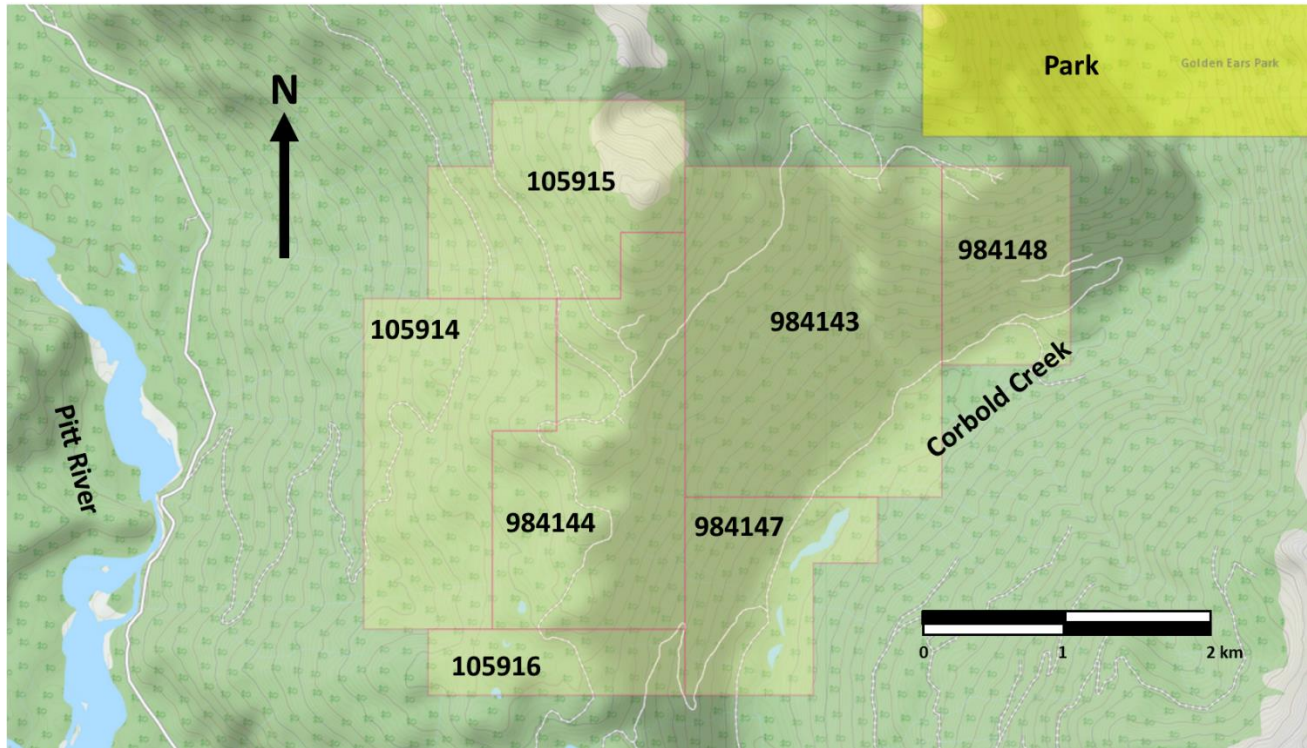
#### 4.2 Property Description

The ULTIMATE property consists of seven mineral claims map-staked under the BC Mineral Titles Online cell system. The claims were map-staked at two different times as noted in Table 4-1 below, which were confirmed at BC Mineral Titles Online on August 20, 2019. They cover an area of 1,526.48 hectares and are distributed as seen in Figure 4-2 and Figure 6-2. The claims are located in the New Westminster Mining Division, and the New Westminster Land District.





Source: John Ostler, 2017  
 Figure 4-1 Location of the ULTIMATE Property



Source BC MapPlace Website  
**Figure 4-2 Map of Mineral Claims**

Table 4-I below outlines the size and expiry dates of each claim.

Claim Name	Record Number	Area (hectares)	Record Date	Expiry Date	Registered Owner
ULTIMATE 1	984143	418.18	2012/MAY/07	2023/MAY/14	<b>IVOR EXPLORATION INC.</b>
	984144	292.78	2012/MAY/07	2023/MAY/14	
ULTIMATE 3	984147	146.41	2012/MAY/07	2023/MAY/14	
ULTIMATE 4	984148	125.44	2012/MAY/07	2023/MAY/14	
ULTIMATE 5	1054914	250.95	2017/SEP/13	2020/SEP/13	
ULTIMATE 6	1054915	209.05	2017/SEP/13	2020/SEP/13	
ULTIMATE 7	1054916	83.67	2017/SEP/13	2020/SEP/13	
<b>Total Area</b>		<b>1,526.48 hectares</b>			

Source: BC Mineral Titles Online Website, August 20, 2019

**Table 4-I Table of Mineral Claims**

The company name was changed in late 2017 from Ivor Ventures Inc. to Ivor Exploration Inc.

On September 10, 2018 a “Payment Instead of Exploration and Development work” (PIED as described below in Section 4.4) was made to extend the expiry date of the ULTIMATE 5, 6 and 7 claims to September 13, 2019. On August 19, 2019 a PIED payment was made to extend the last located claim expiry date to September 13, 2020.

All claim staking in British Columbia is performed using the “cell system” on BC Mineral Titles Online (<https://www.mtonline.gov.bc.ca/mtov/home.do>). This is a map-based system with the BC government having

pre-determined claim corners and locations as options that are chosen by the applicant to suit their needs. Although the boundaries of the ULTIMATE property have not been surveyed and their exact positions have not been defined on the ground the locations are defined precisely in the provincial mineral tenure grid. Consequently, there is no legal uncertainty regarding the location and the area covered by the ULTIMATE claims as well as no gaps between adjacent claims.

### 4.3 Agreements

In May 2012 the directors of Ivor commissioned John Ostler to find a mineral property for the company. Ostler map-staked the ULTIMATE 1, 3 and 4 plus the claim with “no name” (record number 984144) in 2012 and to transfer title for payment of \$8,000 to John Ostler for 100% of the first four claims in 2012 with no further payments. The 2017 claims the ULTIMATE 5 to 7 were map-staked directly for Ivor Ventures (now Ivor Exploration Inc.).

There was a 2% net smelter return royalty on the ULTIMATE property payable at 1% each to Brent Hahn and Barry Hartley. It was cancelled in September, 2019.

### 4.4 Mineral Title Maintenance Requirements

The current assessment work requirements in British Columbia are reflected below. The annual cost requirements for the ULTIMATE property are summarized in Table 4-2.

- \$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

Year (Work Due by Sept 13)	Property Area Requiring Annual Work (Ha)	Work Required at \$5/Ha	Work Required at \$10/Ha	Work Required at \$15/Ha	Work Required at \$20/Ha	Total Annual Work Cost Required
2020+2021	543.67	\$ -	\$ 5,436.70	\$ -	\$ -	<b>\$ 5,436.70</b>
2022	543.67	\$ -	\$ -	\$ 8,155.05	\$ -	<b>\$ 8,155.05</b>
2023	1,526.48	\$ -	\$ -	\$ 8,155.05	\$ 19,656.20	<b>\$ 27,811.25</b>
2024 and subsequent years	1,526.48	\$ -	\$ -	\$ -	\$ 30,529.60	<b>\$ 30,529.60</b>

**Table 4-2 Assessment Work Annual Cost Requirements to Maintain Mineral Title**

Any work completed in excess of the annual requirements can be applied to future years as reflected in this table. The Payment Instead of Exploration and Development work (PIED) rate has been set at double the value of the corresponding assessment work requirement as an alternative title maintenance option.



There are provisions for optionally decreasing the size of the claims.

There are no known environmental concerns or parks designated for any area contained within the claims although Golden Ears Provincial Park is nearby. There are no surface rights attached to the mineral title although they can be applied for if the project advances to a mining stage.

The Aboriginal Nations with Statements of Intent to the area underlying the ULTIMATE claims include the following:

- In-SHUCK-ch Nation
- Katzie Indian Band
- Stó:lō Xwexwilmexw Treaty Association

These groups have overlapping claims in the ULTIMATE property area. The Province of British Columbia is responsible for determining which of the First Nations with which the company is required to consult, determined at the permitting stage of the program.

There is a detailed process of environmental and social engagement required to develop an exploration project into a mining operation. The province will require a bond for any exploration work that is deemed to cause surface disturbance. The author estimates the reclamation bond at CAD\$10,000 for the proposed work program in the report recommendations which will be determined by provincial employees.

#### **4.5 Environmental Liabilities**

There are no known environmental liabilities from previous exploration or mining on the property. Environmental baseline studies will be required in the future if advanced development takes place on the property. Being situated on the side of a steep mountain, extra work will be required to maintain the safety of trails, roads, bridges, planned mining facilities, and associated pipelines.

There is no plant or equipment, inventory, mine or mill structures of any value on these mineral tenures. The mineral tenures have been intensively logged over the last 60 years as well as in the distant past and logging is currently continuing in this area. This logging activity including existing roads is the responsibility of the logging operator, the Teal Jones Group of Surrey, BC.

The Upper Pitt River Salmon Hatchery is located in the Pitt River valley near Corbold Creek as well as several fish rearing habitats downstream to the project area.

#### **4.6 Permits Required and Other Project Risks**

Any work that involves surface disturbance or cutting of merchantable timber in British Columbia will require a permit acquired through an online Notice to Work application. There are several options including one-time projects or a Multi-Year Area-Based Permit if a larger and longer program is budgeted. The first phase of exploration recommended in this report with the suggested geological mapping and sampling does not require a permit.

The line cutting, if it is required, will necessitate a Notice of Work application and a Mines permit approval before beginning. The approvals may not be required by locating most or all of the IP surveys on the existing roads and using GPS located IP survey locations when off the road and eliminating surface disturbance and tree cutting. The province will require a bond for any exploration work that is deemed to cause disturbance. If required, the author estimates the reclamation bond at CAD\$10,000 for the proposed work program in this report's recommendations but this will be determined by provincial staff.

The risk to mineral title is considered to be low because the project is located in British Columbia. Advanced mine permitting and environmental risks will be higher risk due to the proximity to the lower mainland and within the jurisdiction of British Columbia based on political considerations.

## 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

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### 5.1 Accessibility

Access is either by helicopter or road vehicle plus water taxi and/or barge on Pitt Lake.

Helicopters can be chartered in the Pitt Meadows airport, the nearest airport, and flown about 45 kilometres to the property. Other base locations for helicopter charter are also nearby.

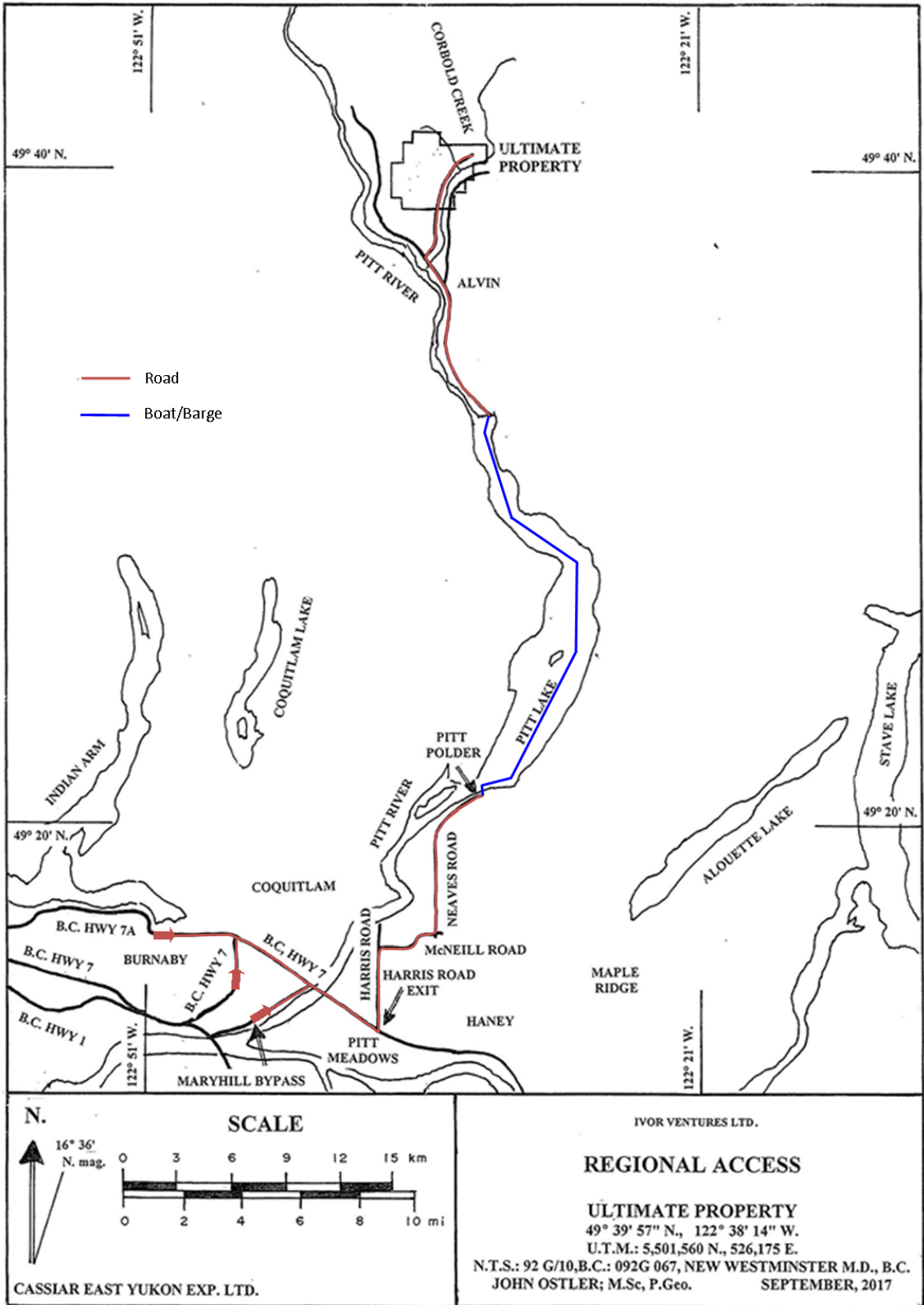
The alternative access is by truck and boat. A barge is required to transport a truck or supplies up Pitt Lake from the landing at the south end at Pitt Polder to the road at the north end of the lake. Alternatively, there are water taxis for personnel and small supply access (See Figure 5-1). Forrest Marine Ltd. of Port Coquitlam, BC is an option for barge access, as used in 2017 to access the area with a truck.

Road access to the barge and water taxi site is from Vancouver on Highway 7 in Pitt Meadows, BC by taking a left northbound at Harris Road, a right at McNeil Road and left on to Neaves Road. The road distance from Highway 7 in Pitt Meadows to Pitt Lake is about 21 kilometres. The roads are paved and generally well maintained up to Pitt Lake.

The gravel logging roads north of Pitt Lake are maintained by the Teal Jones Group of Surrey, British Columbia. They are radio controlled by B.C. Forestry frequency RR8 (150.32 MHz). The roads on the property are mostly recently built and in good condition. Some are now being decommissioned.

### 5.2 Climate

The climate for the area is generally moderate but the higher elevations do experience a cold winter with moderate to high snowfall accumulation. The lower elevations have a climate similar to the Fraser Valley at the south end of Pitt Lake with mild, wet winters and warm, moderately dry summers. Winter snow falls in the property area by November and stays on the ground until March at mid elevations and until May in higher areas in the northern part of the property. During a normal year, ground field work can be conducted from May until November at higher elevations and longer in the valley for activities such as drilling. Avalanches have to be considered for safe winter work.



Modified from: John Ostler, 2017

Figure 5-1 Regional Access Map

**Sean P. Butler, P.Geo.**

### 5.3 Local Resources

The lower mainland of British Columbia is located at the south end of Pitt Lake. With its population of about two million people and access to rail, road, air and ocean ports make it accessible for any needs required for exploration or mining in the future.

Barges can be towed directly to and from the Port of Vancouver or nearby up the Fraser River and Pitt River leading to the north end of Pitt Lake at the landing site. This is at the end of the road 14 kilometres south of the project. This could be an option for future operations to simplify access for large and/or heavy equipment. Pitt Lake is tidal and easily accessible by shallow draft vessels.

### 5.4 Infrastructure

There are gravel logging roads throughout the property. The roads lead to/from the boat/barge launch at the north end of Pitt Lake. Access is and will likely continue to be primarily by barge or boat up Pitt Lake. The surrounding valleys that could be alternatives for road access from communities such as Squamish are part of provincial parks and not likely to be accessible in the future.

There is no grid electricity in the upper Pitt River valley. There are a number of run-of-river electrical plants in nearby valleys but they are located on the other side of mountains and also the other side of Golden Ears or Pinecone-Burke Provincial Parks. There are proposed sites for run-of-river power in the upper Pitt River valley and tributaries that may provide alternative sources of electricity if required in the future. Presently, on-site power generation will have to be developed for the property area.

The creeks in the area have enough water to support exploration and by pumping from the creeks and/or river, mining operations could be supported in the future. There are areas near the bottom and top of the valley that are flat enough to support mining operation and processing sites.

### 5.5 Physiography

The elevation varies from about 300 metres in the southern end of the claims at Corbold Creek to just under 1,600 metres at the peak in the northern end of the claim block. The area consists of steep to moderate slopes along a north-south trending ridge between the Pitt River and Corbold Creek as seen in Figure 6-2. This ridge includes a number of lower sub-peaks along the crest with a north-easterly trending valley slope trending down to Corbold Creek.

The lower slopes were clear-cut logged in the 1960s and then recently the remaining areas plus some of the areas logged earlier have been logged again leaving a good network of logging roads crossing the property. The vegetation is a mixed forest of cedar, hemlock, spruce, and fir. The 1960s logging has left a combination of thick older forest where access is difficult to the recently clear-cut logged areas. There are also very old stumps with springboard slots in them to indicate that this area was also hand logged likely in the 1890s to 1910s. Rock exposure high up near the ridge crest is abundant but rare lower down, except in the road cuts and deeper creek valleys.

## 6 HISTORY

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As sourced and edited from Ostler, 2017.

In 1927 Marcus Cox of Vancouver, B.C. staked twenty-one 2-post claims as a block of claims three by seven. Mineralization was found to occur in a wide belt of light-coloured, pyritized, feldspathic rock. Pyrite and molybdenite occurred in small quartz veins and pods. A number of trenches and a short adit were excavated near the formerly named Canyon Creek (now Corbold Creek). The adit was not found in the 2017 exploration program and is now likely covered by road construction.

A report of progress on the Cox claims was reported in the B.C. Minister of Mines Annual Report for 1929 as follows:

“There are twenty-one claims on this belt, in which are small veinlets of molybdenite and molybdenite-bearing quartz. The formation is a wide belt, 4000 feet (1,219.2 m), or more, of light coloured, pyritized feldspathic rock, schistose in places, contained in the granodiorite of the Coast range. Not enough molybdenite has been exposed at any place to call for much work (they mined coarse-grained vein molybdenite in 1929), but many outcroppings showed it to be widely distributed and makes the belt worth systematic prospecting. (B.C. Min. Mines Ann. Rept.; 1929: p. 399)”

Likely the area was prospected several times from 1929 to the late 1950s, but there are no records of work found in this period.

In the report Cochrane (1972) described early work on the then Bor claims, currently covered by the ULTIMATE property, as:

“There is some evidence that suggests that the present Bor claims are located on what was formerly known as the Cox claims ... However, the early reports discuss molybdenum (up to 0.35%) but very little has been found in place, although moderate amounts are present in the silt and soil samples, and mineralized float has been found on the property. The showings were apparently re-staked in the 1950s and limited diamond drilling and trenching was conducted in 1957 by Pitt Lake Mines Ltd. The (1957-era) claims were allowed to lapse shortly thereafter.”

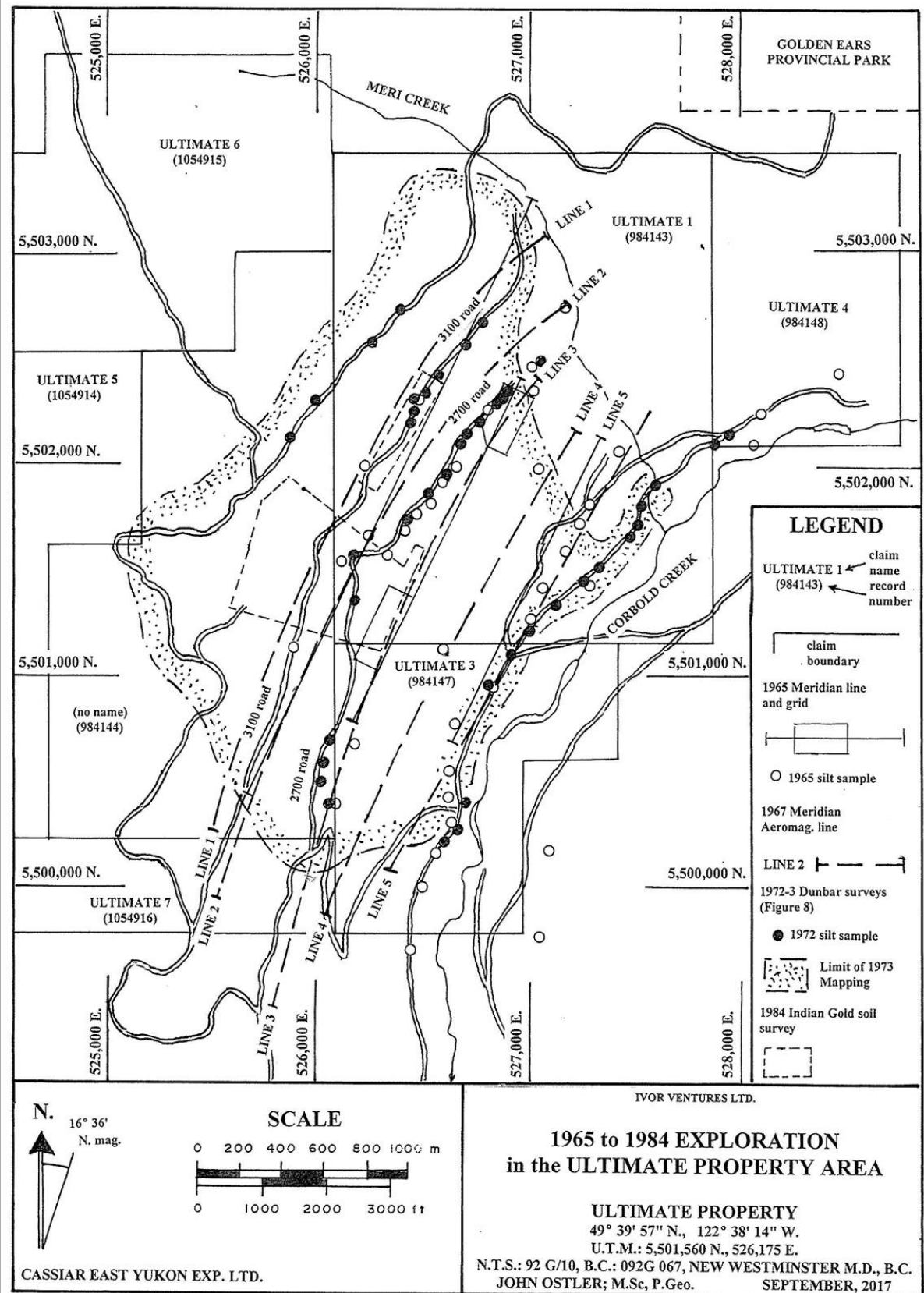
D.R. Cochrane of Vancouver, B.C. recorded the Max 1 to 11 two-post claims for the Meridian Exploration Syndicate on June 25, 1965.

Cochrane and Wolfe conducted stream sediment sampling, taking 25 samples on and around the Max. The results described in Cochrane (1966) of the 1965 silt survey were:

“The copper content of stream silts ranged from 23 parts per million to 800 p.p.m. and the greatest percentage were well above background for the Pitt River drainage (background approximately 50 p.p.m.).

Molybdenum content of the stream silts ranged from less than 2 p.p.m. to 18 p.p.m. A background of between 3 and 4 p.p.m. was established earlier. Thus, several silts were anomalously high in Mo, but these were erratically distributed. Since only traces of molybdenite were observed in preliminary work, the soil samples were assayed for copper only.”



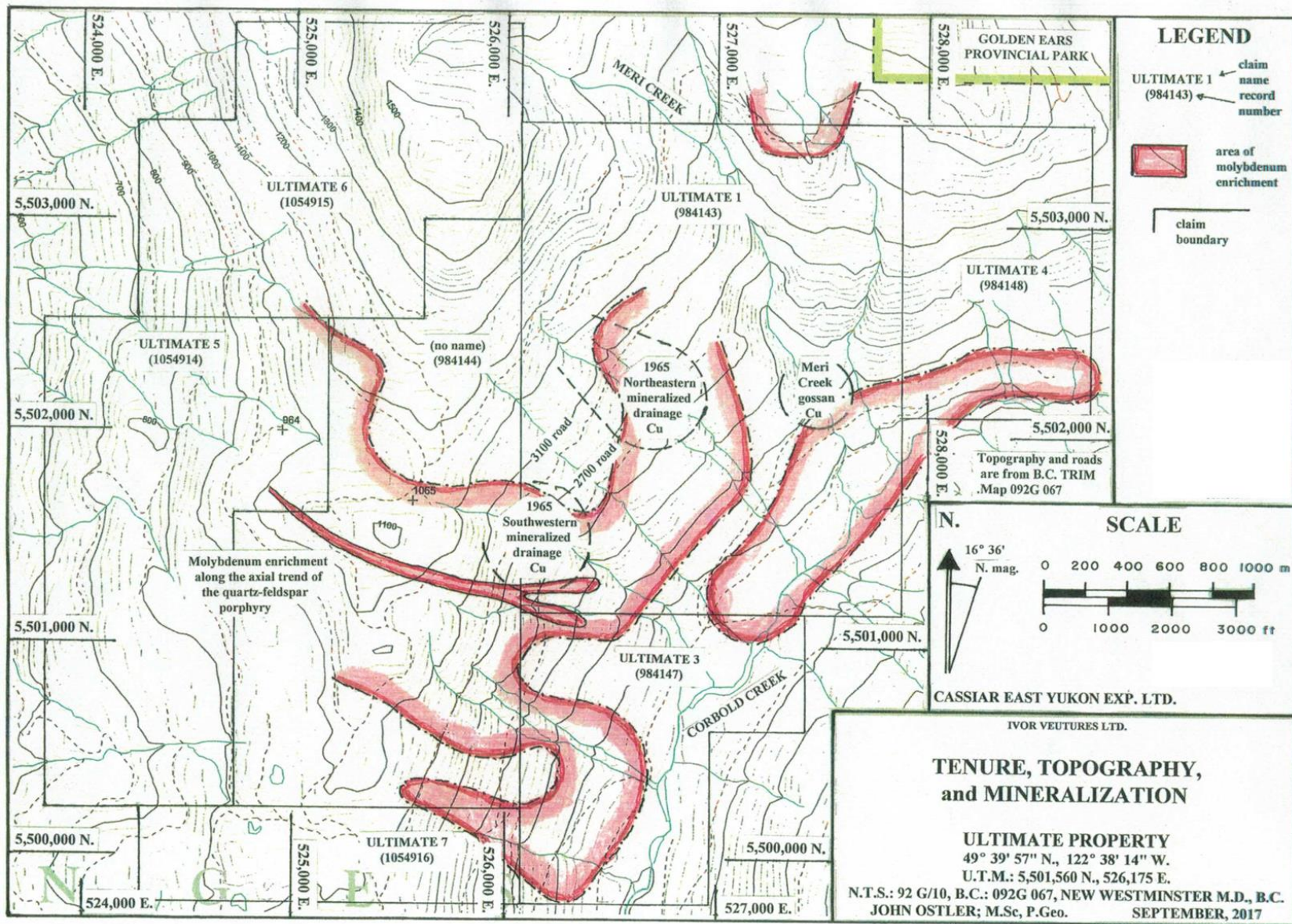


Source: John Ostler, 2017

Figure 6-1 Map of Locations of Historic Sampling and Surveys

Sean P. Butler, P.Geo.





Source: John Ostler, 2017

Figure 6-2 Mineralization Areas Defined by Historical Studies

From September 17 to 27, 1965 J.R. Montgomery, A. MacDonald, D.R. Cochrane and R. Wolfe established several small grids that were laid out along the medial claim line of the Max claims. They then took 215 soil samples. Four soil-copper anomalies were identified. The two most important anomalies were located in two drainages half way up the slope northwest of Corbold Creek, (Cochrane, 1966, see Figure 6-2 and Figure 6-3). The notes in Cochrane, 1972, regarding the 1970s era located Bor claims covering the previous Max and within the present ULTIMATE claims reports the following with details summarized in Figure 6-2 and Figure 6-3:

“In 1965, Meridian Syndicate found that the small streams draining the area now covered by the Bor claims contained up to 600 parts per million (p.p.m.) Copper and 19 p.p.m. molybdenum. ...Some limited soil sampling follow-up work was conducted by Meridian Syndicate and four distinct “anomalous” areas were indicated. Copper values ranged as high as 2175 p.p.m. ... This high sample was collected in an overburdened area above the 2700 foot road and trenching is required to examine bed rock in the area.”

An aeromagnetic survey was completed in 1967 by GeoX Surveys of Vancouver, B.C. conducted 14.73 km of airborne magnetic survey over the current ULTIMATE property area for D.R. Cochrane of the Meridian Syndicate as shown in Figure 6-4. Five northeast-southwest lines were flown along the slope of the ridge by a Heliocourier aircraft at an average elevation of 210 metre above ground at about 80 kilometres per hour (50 mph). The lines were from 200 to 400 metres apart. A total of 14.73 km was flown. Readings were taken with a Sabre fluxgate magnetometer. D.R. Cochrane and R. Wolfe, 1968, described the results of the survey as follows and mapped in Figure 6-4:

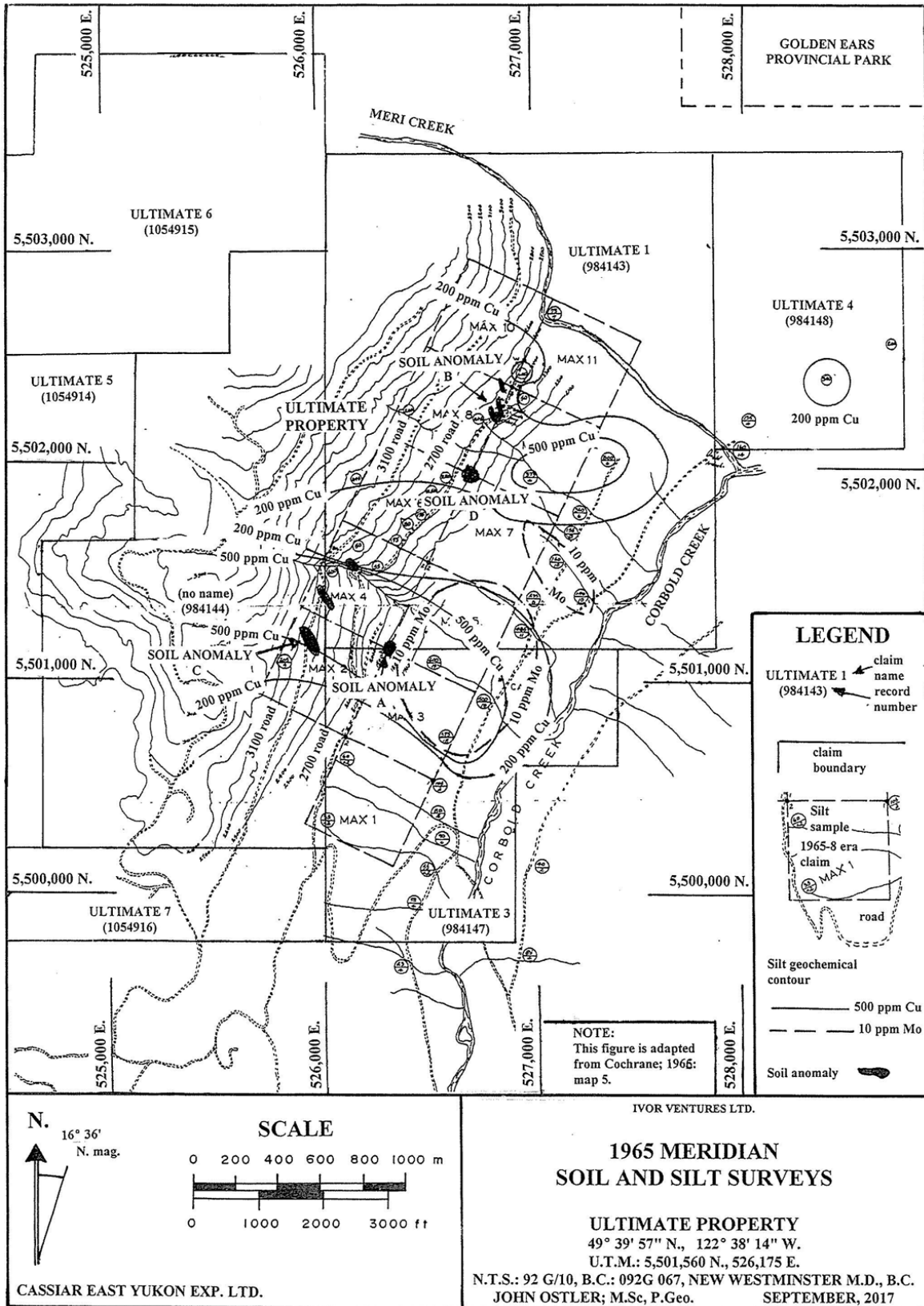
“... Magnetic response varied in amplitude from -925 gammas (nanoteslas) on flight line 2, to +370 gammas on flight line 5. This in general, is only a moderate range of values. Most of the area surveyed lies within a +/- 200 gamma magnetic plane

Magnetic trends are northeast to east, and in general, form an arch which runs almost parallel to Corbold Creek. A deflection is evident somewhat to the north of the property claims where isometric lines cross Meri Creek. Corbold Creek also swings easterly in this area.

The highest positive response is situated close to the mutual west corner of Max 11 and Max 9 claim. A corresponding small negative flanks it to the south. The highest amplitude negative response is situated primarily on the Max 10 claim. One small -400 gamma area, is situated on the Max 8 claim. A second, larger -400 gamma zone (is) on Max No. 9, and to the east of Max No. 7. The rest of the claim group lies within +/- 200 gammas (nanoteslas) of the zero magnetic datum.”

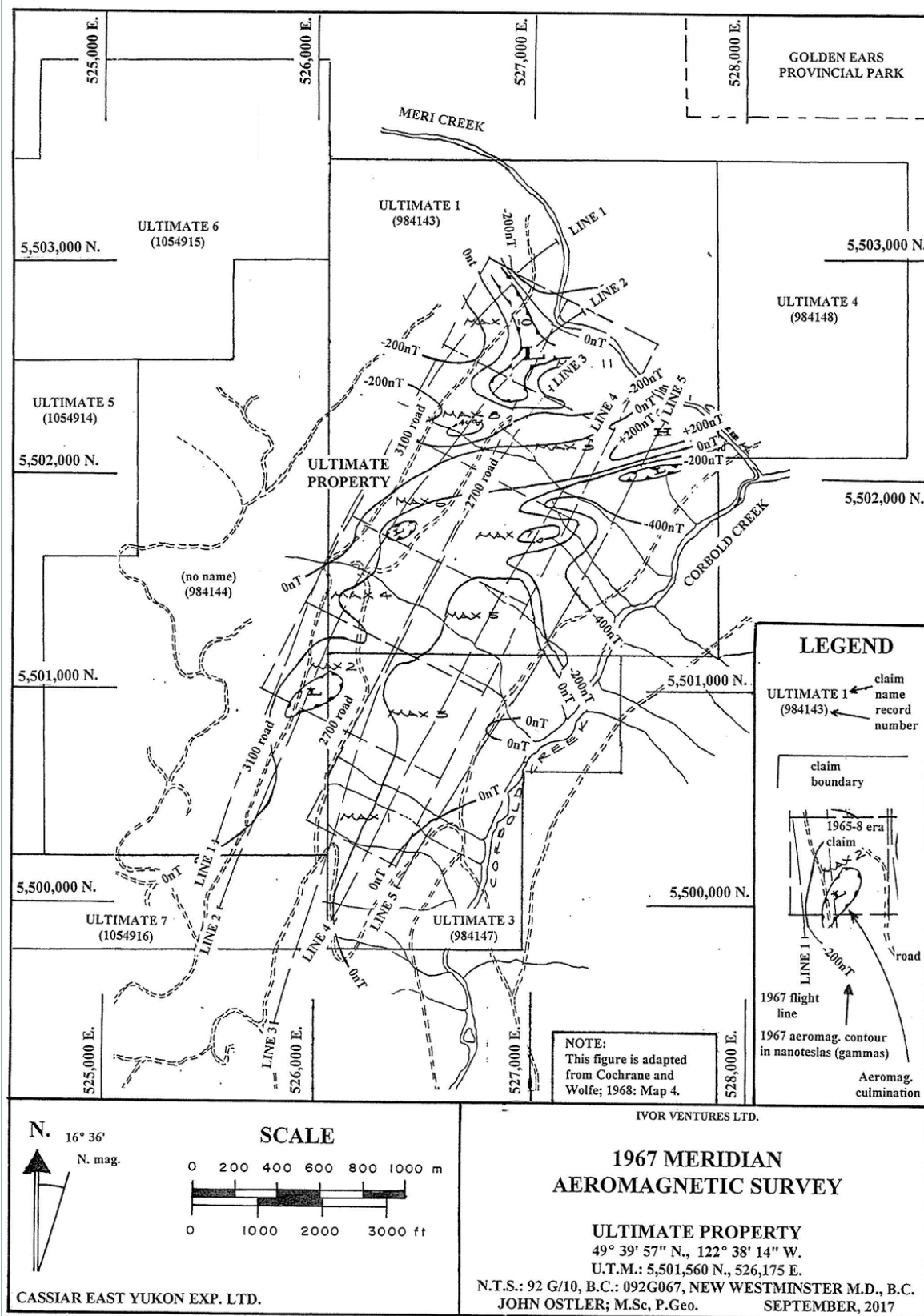
The Max claims later lapsed after the Meridian Syndicate dissolved. There were some overlying claims located by a R. Ernawin in this area with no work recorded and they lapsed.





Source: John Ostler, 2017

Figure 6-3 Meridian 1965 Soil and Silt Surveys



Source: John Ostler, 2017

Figure 6-4 Map of Meridian Aeromagnetic Survey 1967 Results

The Bor 1 to 24 claims were located by John McGoran over the north-western valley side of Corbold Creek after the Ernawin claims lapsed and before the summer of 1972. In 1972 the ownership was transferred to Dunbar Resources Ltd. of Vancouver, B.C. A. Homenuke (1972) of Tri-Con Explorations was contracted by Dunbar and reported the following describing a silt sampling program with many of these areas on Figure 6-2:

“...there are two extensive anomalous drainage areas and one anomalous drainage, the extent of which is presently unknown.

The first area, covered by the Bor 1 to 4 and 15, 20 and 21 is also the area from which the highest assay values were recovered.

The second area, covered by claims Bor 5 to 8 and 12 to 14 claim had the highest recorded values, 1000 and 1550 p.p.m. copper.

The third area of interest is indicated by a single silt sample obtained from Meri Creek which contained 562 p.p.m. Cu, but the creek is 15 feet (4.57 m) wide therefore the sample must be considered significant.”

The results of the 1965 Meridian Silt survey were confirmed in this program See Figure 6-1 and Figure 6-3 for locations.

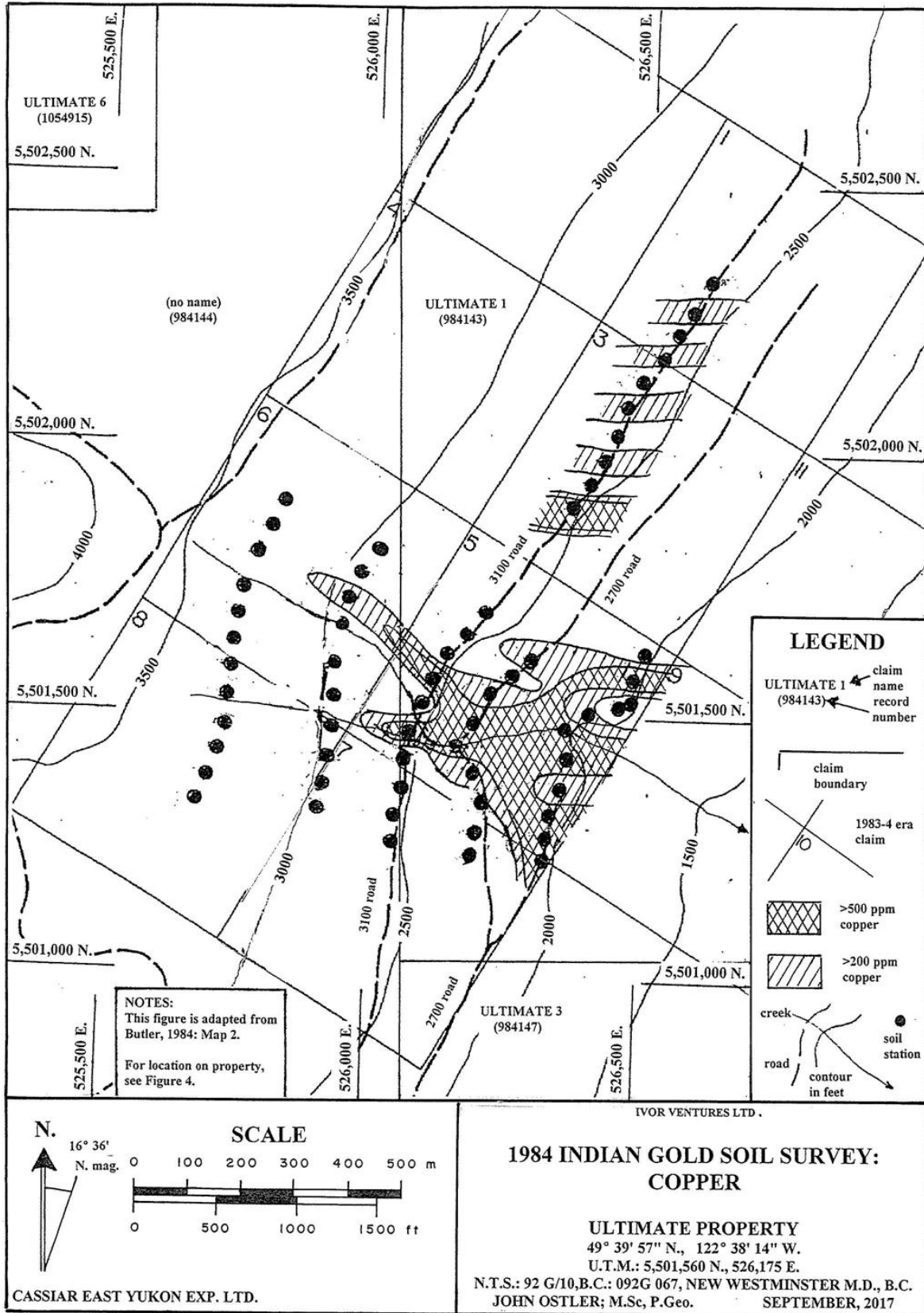
Dunbar Resources Ltd. had Homenuke return to the Bor property for a geological mapping and sampling program (Homenuke and Cochrane, 1973). The mapping covered most of the current ULTIMATE property area as outlined on Figure 6-1. The results as reported were:

“The mapping indicated the claims to be underlain by meta-volcanic rocks of the Corbold pendant of the Harrison Lake Formation and by plutonic rocks of the Coast Plutonic Complex. Two extensive shear zones were mapped, the northernmost bearing some copper sulphide mineralization.”

MINFILE occurrence 092GNE 014 states, “In 1979, the property was submitted to Kerr Addison Mines Ltd. by Mel De Quadros, who currently owned the property.” No further details are known to the author of this period of time.

In the early 1980s a rush for molybdenum properties occurred as the price of the metal exceeded \$8/lb. In March 1982 the Max 1 and 2, and Cox 2 modified grid claims were located by unknown entities. This property was centred on the 1965 Meridian stream silt molybdenum anomalies near Corbold Creek and covered the south-eastern part of the current ULTIMATE property area. These claims lapsed with no record of work found.

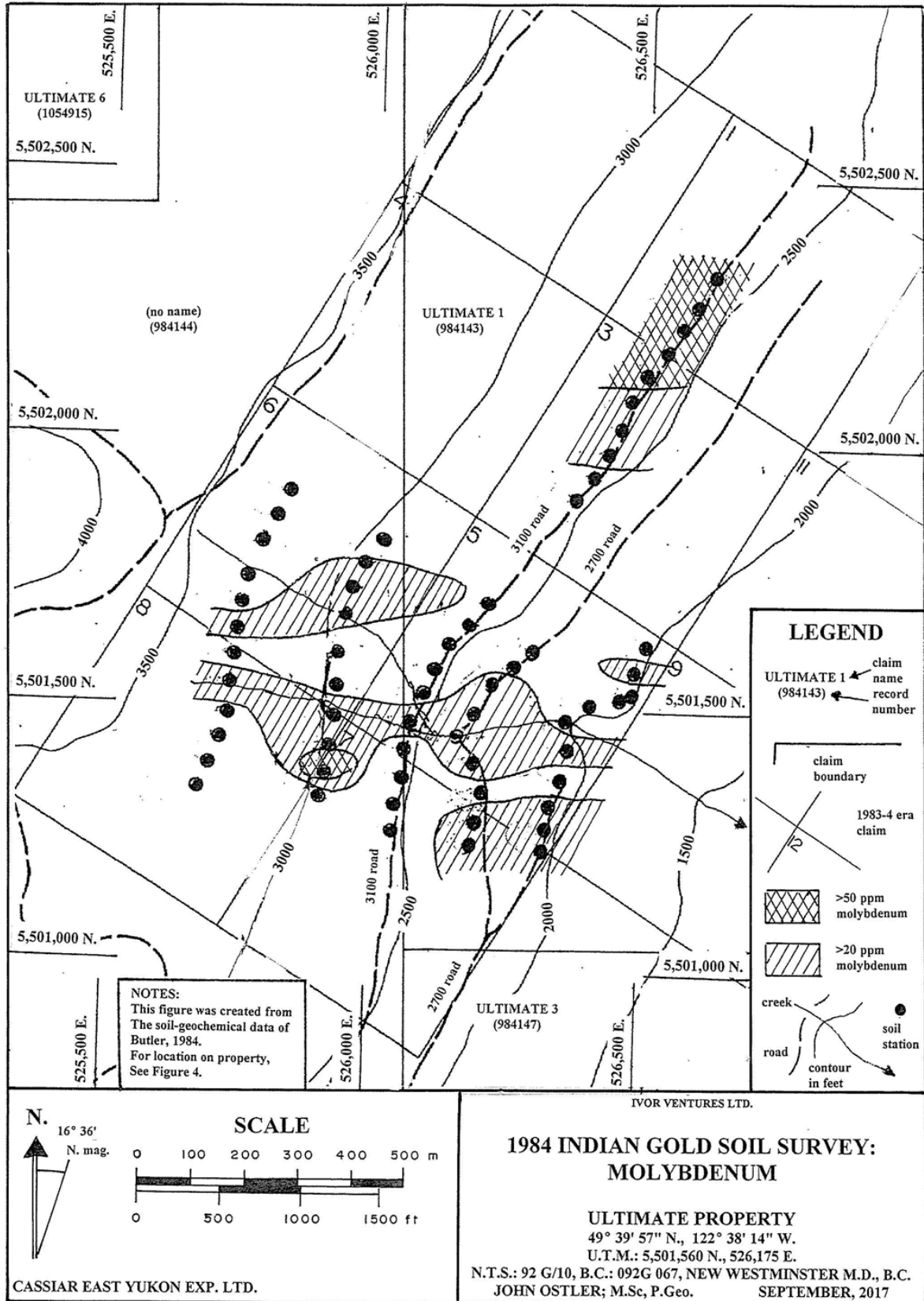




Source: John Ostler, 2017  
Figure 6-5 Soil Survey 1984 Copper

Sean P. Butler, P.Geo.





Source: John Ostler, 2017  
 Figure 6-6 Soils Survey 1984 Molybdenum

Sean P. Butler, P.Geo.

In June 1983 the Ultimate 1 to 16 2-post claims (NOTE: not the same ULTIMATE claim group as present) were located by D. Heyman and S. Caulfield. The property covered 327.9 hectares centred on the two mineralized drainages in the central part of the current ULTIMATE property.

The project was acquired by Indian Gold Resources Ltd. later that month. On June 26, 1983, John Ostler, 1983 examined the property to prepare a qualifying report for the company's initial public offering.

Indian Gold Resources Ltd. contracted Brohm Developments Ltd. to conduct a soil survey across the two mineralized drainages which was completed by the report author (Butler, 1984). The work was done in April, 1984 and included five contour lines of 60 soil samples along the slopes. See Figure 6-5 for copper and Figure 6-6 for molybdenum soil results.

Copper results in soil were up to 965 ppm with 23 of the 60 samples greater than 200 ppm copper. Molybdenum results in soil were up to 123 ppm with 28 of the 60 samples greater than 20 ppm.

After 1984, no exploration activity in the ULTIMATE property area is known to the author until the 2012 work by Ivor which is summarized in the Exploration section of this report.

No resource estimates or reserves have been completed for the Ultimate property.

## 7 GEOLOGICAL SETTING AND MINERALISATION

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### 7.1 Regional Geology

Between 1953 and 1955, J.A. Roddick of the Geological Survey of Canada mapped the region including the ULTIMATE property. In Roddick, 1964 a map at a scale of 1: 253,440 (See Figure 7-1 for the portion near Corbold Creek) was produced. The map showed the area of Corbold Creek as a series of roof pendants of the Jurassic-age Harrison Lake Formation in intermediate intrusions on the Coast Plutonic Complex.

Roddick, 1964 includes the description of the geology around Corbold Creek:

“... a body of complex rock which does not fit well as a whole the classification used in this report. The rock has few consistent characteristics except the general alteration of mafic minerals to chlorite. Most specimens fall into the quartz diorite group, but diorite and granodiorite are also present. Textures are irregular, and though medium grain sizes dominate, fine-grained rocks are common, and coarse grained ones are found, especially in the vicinity of Fourmile Creek. The mafic minerals fluctuate widely in amounts probably averaging about 15 per cent of the rock, rendering them slightly darker than the average plutonic rock of the region. In many specimens the mafic minerals are wholly altered to chlorite, and in virtually all some such alteration was noted. Where quartz is present, it is unusually abundant.”

Ostler, 2017 suggests the quartz diorite and diorite samples referred to by Roddick may have been melted and hornfelsed meta-andesites in the potassic alteration zone of the Corbold hydrothermal system. The diorite and granodiorite referred to by Roddick may have been pyroxene monzonite and quartz-feldspar porphyry mapped during the current 2017 work program. Roddick described the complexity to include migmatite and south of the property large blocks of near pendant size of the Harrison Lake Formation.

The area around the ULTIMATE property includes marine volcanic flows, pyroclastics, and sediments which became the rocks of the Middle Jurassic-age Harrison Lake Formation, which originally had a much larger extent. Ostler, 2017 stated that the Harrison Lake Formation correlates with the Hazelton Group of northern British Columbia based on the similar age of included fossils dated between 200 to 167 million years ago. These are the oldest rocks found in the ULTIMATE property area.

Harrison Lake Formation sedimentation ended at the onset of the Nassiuman Orogeny which lasted from about 167 to 163 million years ago. The event included granitic intrusion on Vancouver Island and regional uplift of the western Cordillera and creation of sediment filled basins throughout the cordillera.

In the Late Jurassic to Late Cretaceous Period the Columbian Orogeny occurred from about 142 to 88 million years ago. This event included the uplift and creation of the Coast Mountains in BC and the emplacement of the Coast Plutonic Complex. Deformation throughout the accreted terranes on the western margin of proto-North America also occurred.

Igneous intrusion of the Columbian orogeny was represented in the property-area by the emplacement of a quartz diorite that is exposed about 400 m south of the property's southern boundary as seen in Figure 7-4.

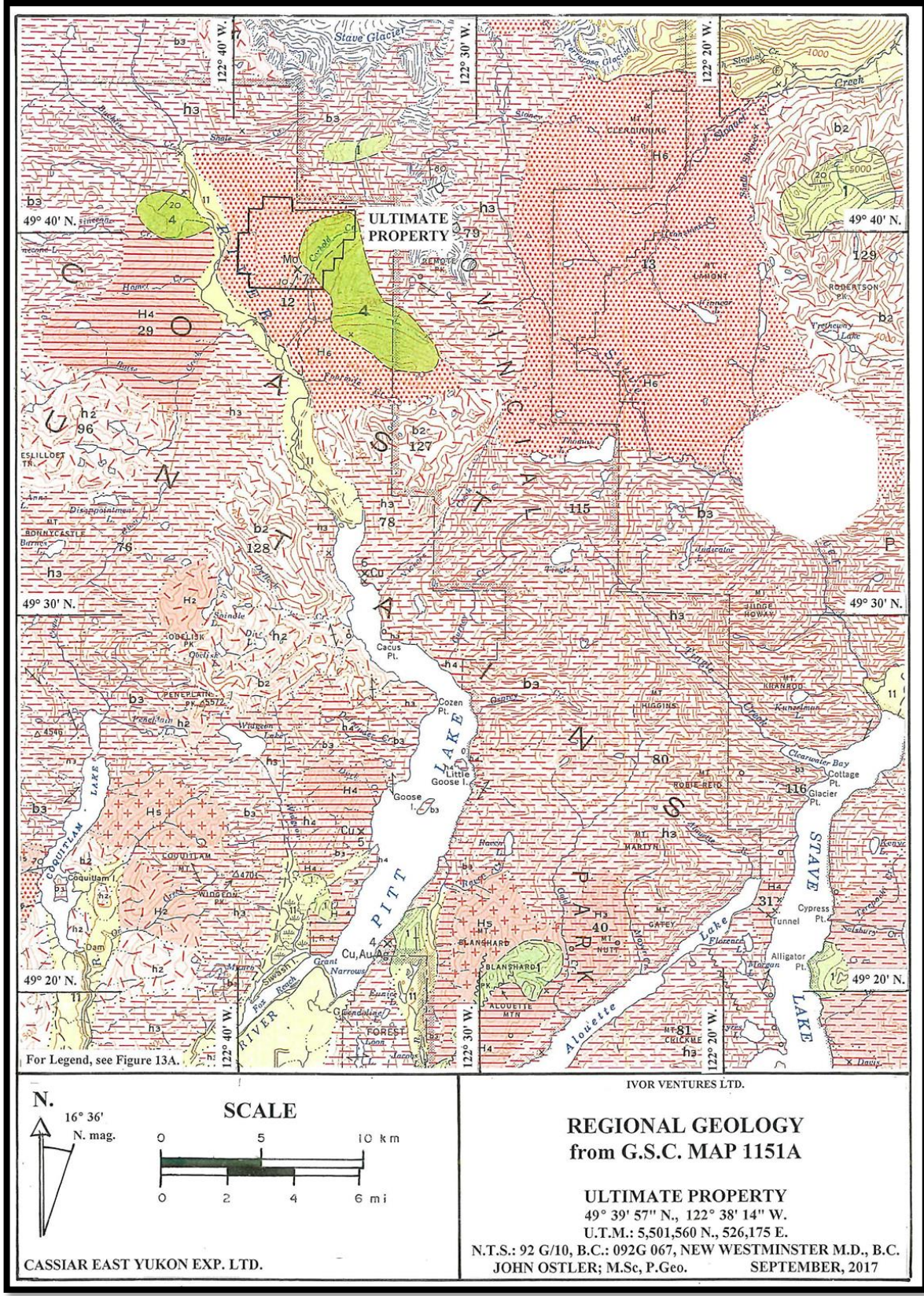
The last major regional uplift that occurred in southwestern British Columbia was the Laramide Orogeny. Between about 75 and 30 million years ago, in Late Cretaceous to Oligocene time the whole region was uplifted and slightly modified. This is the event that Ostler, 2017 suggested resulted in the intrusive event that generated the porphyritic intrusion that provided the heat for the deposition of the copper and molybdenum mineralization found in the Corbold Creek area.

Eocene age tension cracks resulted in the formation of the Kamloops Group flood basaltic and andesitic strata on the early Tertiary-age erosional surface. The fine-grained brown mafic dykes seen in the Corbold Creek area are likely related to this event. They are not metamorphosed and unaltered likely indicated they are the youngest rocks in the area.

The late Tertiary age included regional erosion resulting in isostatic adjustment and local shearing. This event is recorded in the local offset and gentle folding of the mafic dykes by the later faults and folds.

The final major regional events are the glaciation of the Pleistocene age that rounded hills and etched out generally fault defined valleys. These landforms have been extended by later creek erosion following isostatic uplift after the glacial cover melted.

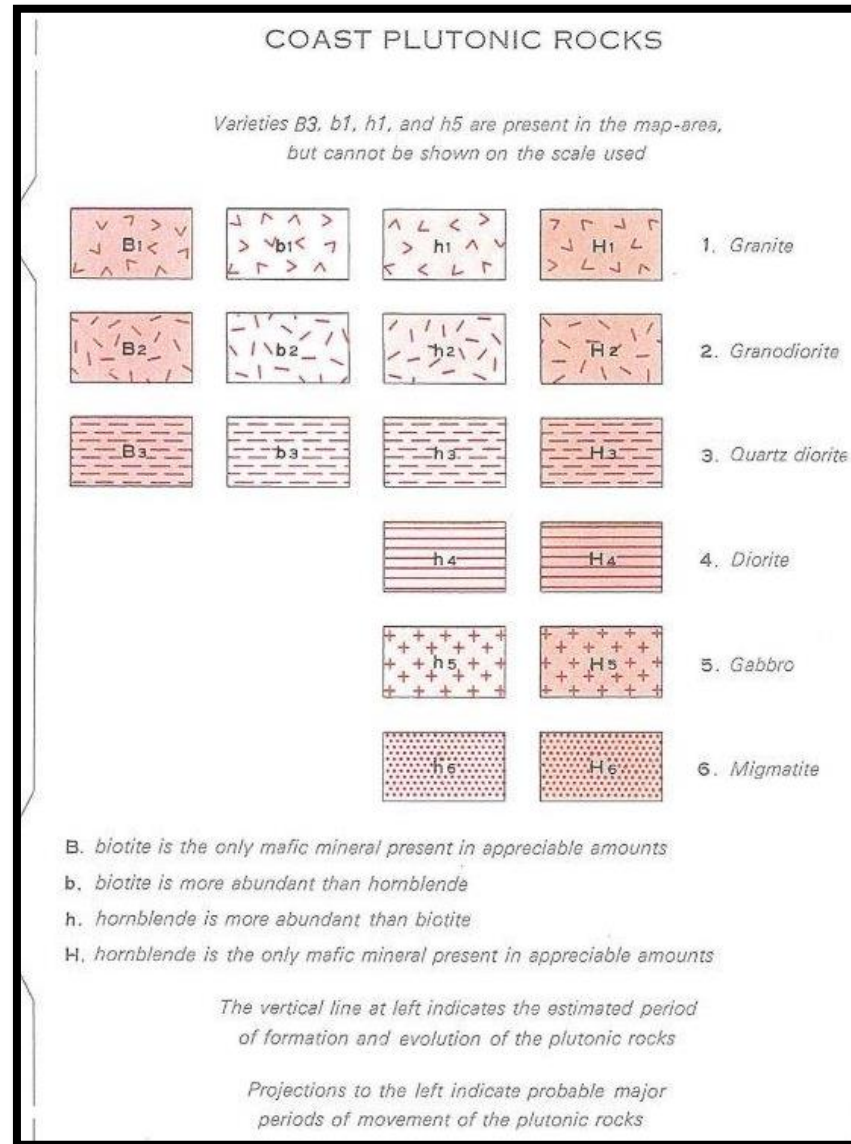
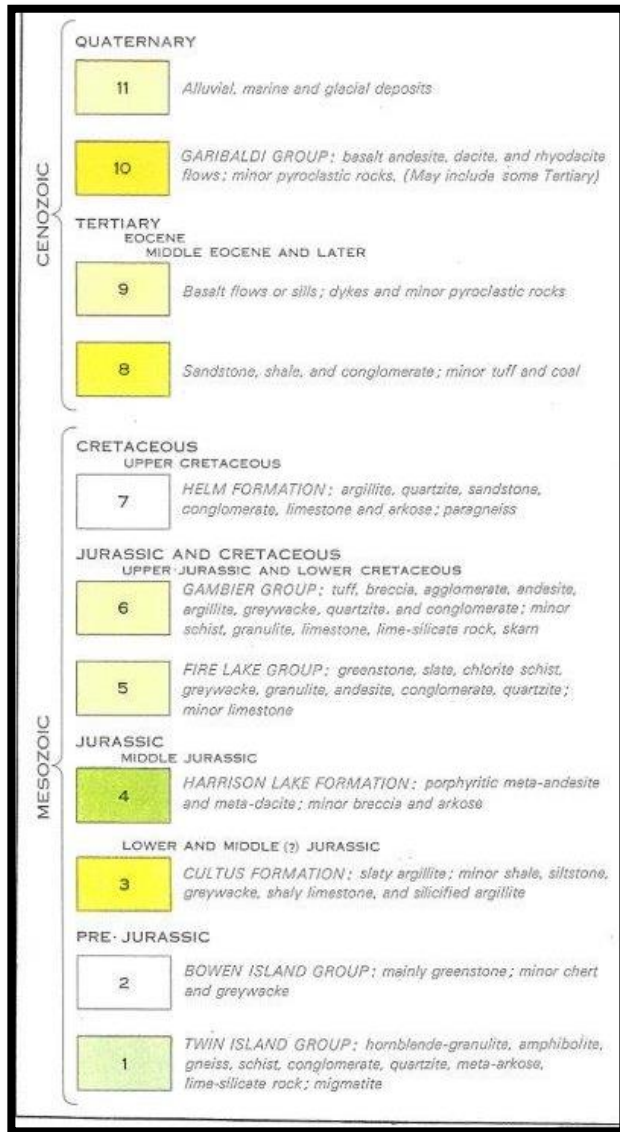




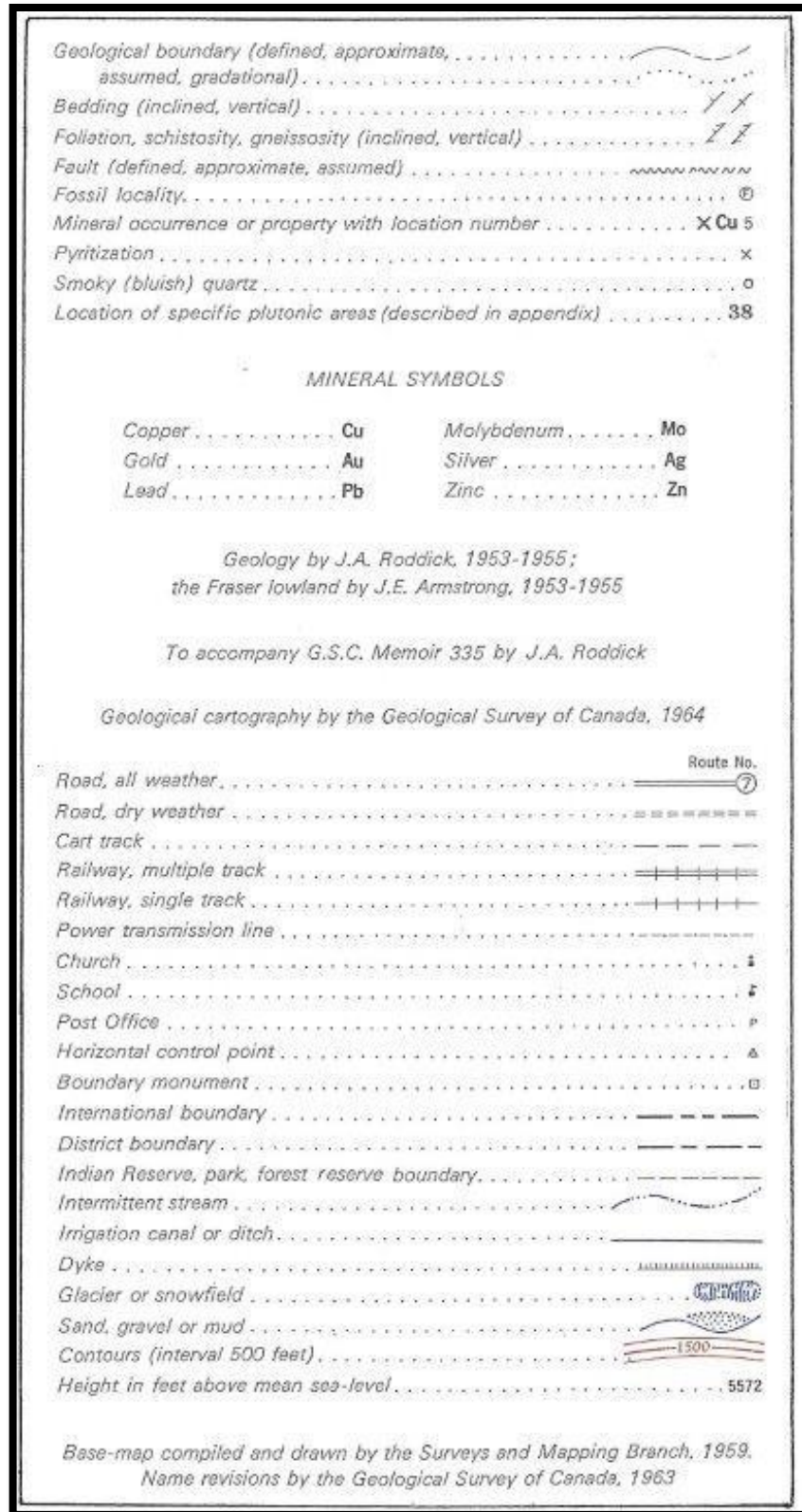
Source: John Ostler, 2017  
Figure 7-1 Regional Geology Map

Sean P. Butler, P.Geo.





Source: John Ostler, 2017  
 Figure 7-2 Geological Map (Figure 7-1) Rock Unit Legend



Source: John Ostler, 2017  
**Figure 7-3 Geological Map Legend**

A summary of geological events as sourced from Ostler, 2017 is seen below in Table 7-1:

Time (youngest to oldest)	Formation or Event
Recent 0.0-0.1 my.	Valley rejuvenation, down cutting of stream gullies through till, development of soil profiles
Pleistocene 1.6-0.01 my.	Glacial erosion and deposition: removal of Tertiary-age regolith, deposition of till and related sediments at lower elevations, smoothing of the Tertiary-age land surface
Eocene to Pliocene 57.1-1.6 my.	Erosion, incision of the land surface. Shearing due to isostatic readjustment during unroofing of the Coast Plutonic Complex.
Eocene 54-35 my.	Regional tension: development of normal and transcurrent faults. Kamloops Group equivalent brown mafic dykes were intruded in the Ultimate property area.
Late Cretaceous to Paleocene 75-54 my.	Laramide Orogeny: Folding and faulting MINERALIZATION: Development of the Corbold hydrothermal system and intrusion of the quartz-feldspar porphyry in the Ultimate property area.
Middle to Late Cretaceous 88-75 my.	Erosion
Late Jurassic to Middle Cretaceous 144-88 my.	Columbian Orogeny: Development of the Coast Plutonic Complex emplacement of the quartz diorite south of the Ultimate property
Middle Jurassic 167-163 my.	Nassian Orogeny: Re-emergence of the Stikine Arch, deepening of flanking basins regional deformation and metamorphism, overriding of Cache Creek Terrane rocks onto Quesnel Terrane Rocks to the east and Stikine Terrane (Hazelton Group) and Harrison Lake Formation rocks to the west along thrust faults
Early to Middle Jurassic 200-167 my.	Harrison Lake Formation and Hazelton Group deposition: basal conglomerate followed by andesitic volcanic and open-basin sedimentary deposition
Late Triassic to Early Jurassic 200-188 my.	Inklinian Orogeny: Deformation producing the Stikine Arch, intrusion of granitic bodies, rapid unroofing and deposition of basal conglomerates on an erosional surface along the flanks of the arch
m.y. = million years	Sourced from Ostler, 2017

Table 7-1 Sequence of Geological Events in the Corbold Creek area

## 7.2 Local Geology

The most complete description of the local geology is in Ostler, 2017 and the following description is derived from this report.

Previous mapping in the 1960s and 1970s was hampered by a then lesser understanding of the porphyry copper mineral deposit models which only began to be published in detail in the mid-1970s. The amount of information on zonation of mineralization in porphyry copper deposits has increased greatly since then and been applied to the recent mapping by Ostler, 2017.

Recent logging has resulted in greater access by roads as well as more outcrops in road cuts and opened the forest in much of the lower ULTIMATE property area for efficient geological mapping. Access to areas off the roads was often very difficult during the author’s 1984 field work due to thick bush resulting from logging about 15 to 20 years prior to then in the late 1960s. The author’s fieldwork did not include time for geological mapping. This thick bush has matured allowing much clearer lower growth or has been recently logged again. This increased access allowed Ostler to see more of the property geology and resulted in an increase in the understanding of the Corbold Creek hydrothermal systems and the quartz-feldspar porphyries that are suspected of generating the local copper mineralization.

Early to Middle Jurassic-age Harrison Lake Formation rocks, primarily submarine mafic andesitic and basaltic volcanic rocks covered the area of Corbold Creek initially. Locally hints of pillows can be seen in some of the least altered outcrops near Corbold Creek. As well a 150 metre thick unit of silty carbonate sediment occurs on the property (Ostler, 2017). This is assumed to be due to near-shore sedimentation in an island arc setting. Also, there are andesitic tuffaceous and lapilli units found within the Harrison Lake Formation (Roddick, 1984). This is an indication that there was some sub-aerial volcanic deposition.

This unit has been pervasively metamorphosed to biotite facies of the upper greenschist grade. This was suggested by Ostler, 2017, to likely be related to the Middle Jurassic-age Nassian Orogeny, with open to closed folding also related to this event.

About 500 metres south of the ULTIMATE property a granodiorite intrusion is exposed as shown in Figure 7-4. This unit is related to the Coast Plutonic Complex of the Cretaceous-age Columbian Orogeny. The adjacent Harrison Lake Formation meta-andesites show signs of contact hornfelsing. One of the phases within this complex unit is quartz diorite. The folds in the Harrison Lake formation were also tightened during this event.

Between the Late Cretaceous Period and the Palaeocene, the hydrothermal system that resulted in the copper mineralization at Corbold Creek occurred locally. The poor permeability due to the contact hornfelsing between the andesites and the Coast Plutonic Complex resulted in limited alteration within 200 metres of this contact south of the property as seen in Figure 7-4.

The hydrothermal system driven by the plutonic complex resulted in a large prograde propylitic alteration zone that extends beyond the existing property. This alteration is seen as epidote, chlorite, biotite, pyrite calcite and quartz occurring on fracture surfaces.

Potassic alteration in the Harrison Lake Formation meta-volcanic rocks is the result of hydrothermal fluids migrating outward. It is seen as potassium feldspar with minor amounts of brown biotite and magnetite deposited on brittle fractures and in veins, from which it spreads out into the rock matrix. Ostler, 2017 estimated that this phase of alteration occurred at temperatures between 300°C and 400°C. Brown biotite and magnetite were only observed in the peripheral part of the potassic zone having been destroyed during later anatectic hornfelsing and melting that followed the initial potassic alteration in the central part of the zone.

The anatectic melting was centred on the potassic zone and completely overprinted much of this Harrison Lake Formation metavolcanics. The meta-andesites were re-crystallized and coarsened during anatexis (melting of the existing rock in place). Both potassic and prograde propylitic alteration minerals were recrystallized and migrated into the andesitic ground mass producing a rock with up to 30% orthoclase. Evidence within the anatectic zone of previous alteration was lost as minerals in earlier fractures were absorbed.

A gneissic texture has been developed locally in the southern part of the property deeper in the system from plastic deformation at high temperature. Further heating and the resulting anatexis, in the core of this zone resulted in an igneous rock comprised of clinopyroxene, plagioclase, and orthoclase, with minor amounts of chlorite and quartz termed a pyroxene monzonite. Ostler describes this rock type as:



“Complete melting of the feldspars in that rock indicate that the temperature prevailing during its formation may have exceeded 500°C, depending in part on local water contents. Occurrences of pyroxene monzonite (PM) are small and round, normally covering only a few hectares. It is expected that they may represent the tops of heating centres within the hydrothermal system.”

Prior to the intrusion of the quartz-feldspar porphyry there was significant cooling of the country rock as evidenced by the contact phase exhibited in the contacts as seen in Photo 2-3 and noted elsewhere by Ostler. The quartz-feldspar porphyry may have been emplaced during several intrusion pulses.

The only intrusive rock found on the ULTIMATE property by Ostler is the quartz-feldspar porphyry (QFP). It represents the most expansive development phase of the Corbold hydrothermal system. It is exposed just west of the centre of the zone of potassic alteration and subsequent anatexis. This unit has subhedral to euhedral orthoclase and plagioclase phenocrysts along with sub-rounded quartz phenocrysts supported in a commonly fine-grained blue-grey felsic matrix.

Silicification, possibly related to intrusion of the quartz-feldspar porphyry, occurs in andesitic host rocks adjacent with it, resulting in hardening and apparent fading of the colour of the andesitic rocks. It is most common at elevations above 1,000 metres a.s.l. along the ridge in the central part of the property area. It is suggested by Ostler it developed mostly above and among the rising bodies of quartz-feldspar porphyry. The surface extent of the porphyry is seen in Figure 7-4. Ostler, 2017 states:

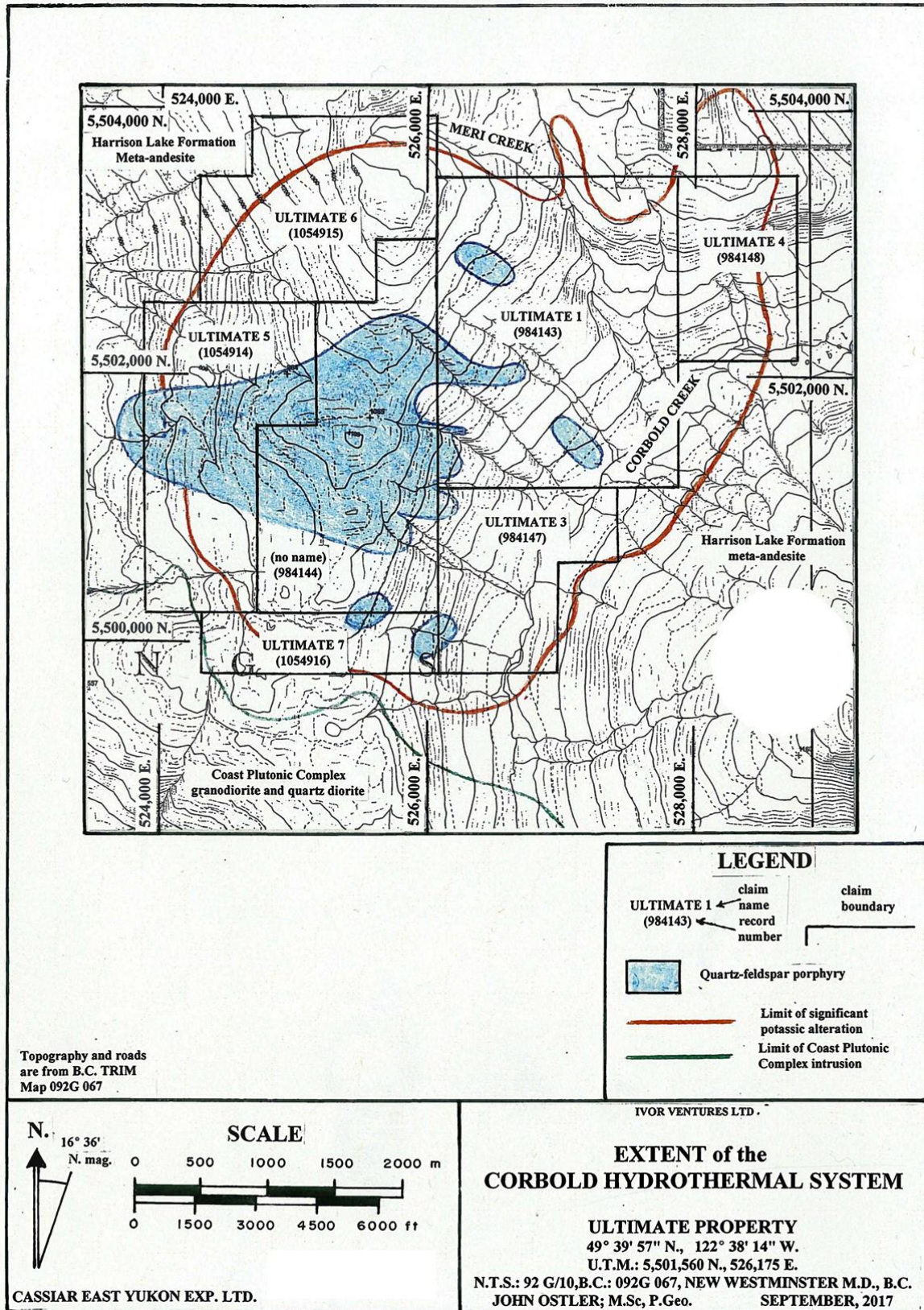
“The location of significant silicification only at high elevations may indicate that it is associated with advanced argillic alteration and oxidation penetrating downward into the hydrothermal system during its waning stage. Presently, the author prefers silicification due to quartz-feldspar porphyry emplacement, but can not totally dismiss silicification related to advanced argillic alteration.

The silicate and sulphide phases of the quartz-feldspar porphyry separated in a magma chamber at depth. On surface, the sulphide phase is expressed as pyrite-quartz veins and brittle fracture fillings that have developed throughout the porphyry and spread out into adjacent rocks. The best exposure of such veins is the 20 cm (7.9 inch) thick vertical vein exposed in the pit wall at station UL28... These veins are responsible for the development of the Meri Creek gossan around mapping station UL58 in mostly andesitic hornfels... Pyritic veins and fractures have brittle margins, and probably were formed at temperatures below 450°C.

After emplacement of the quartz-feldspar porphyry, the Corbold hydrothermal system waned. Hydraulic gradients reversed and retrograde propylitic alteration spread downward into fractures in the rocks exposed in the ULTIMATE property area. Retrograde propylitic alteration minerals are the same as those of the prograde propylitic alteration. They can be specifically be identified by fracture relations and host rock type. For example, only retrograde propylitic alteration can occupy fractures in the quartz-feldspar porphyry because that rock unit did not exist until after prograde propylitic alteration development ended.

Late sericite and muscovite development in a few areas above 1,100 m (3,609 ft) elevation a.s.l., ... indicate that advanced argillic alteration extended downward just to the current level of exposure of the Corbold hydrothermal system.”

The Corbold Creek hydrothermal system had shut down by the Eocene. Unmetamorphosed and unaltered dykes of dark brown basalt intrude the various units as seen in Photo 2 3 are the youngest rock unit found in the area. Isostatic adjustment during the late Tertiary resulted in brittle shearing. These shears provided the breaks needed for the emplacement of these dykes. Shearing was most well-developed in the andesitic hornfels between lobes of quartz-feldspar porphyry where rheological differences were enhanced.



Source: John Ostler, 2017

Figure 7-4 Extent of the Corbold Creek Hydrothermal System



### 7.3 Local Mineralization

Early exploration was focused on the molybdenum in quartz veins.

Starting in the 1960s the copper potential of the property was the focus of exploration. D.R. Cochrane, 1972, summarized copper mineralization encountered in the current ULTIMATE property, named the Bor claims in 1972, as follows:

Copper occurs in four geological environments on the Bor claims:

1. In fractured and sheared zones as fine-grained chalcopyrite and copper stain in pyritized areas,
2. In irregular pods as massive bornite and blebs of chalcopyrite,
3. As chalcopyrite with magnetite in very small “skarn like” zones, and
4. As chalcopyrite blebs in quartz veins and veinlets.

Cochrane described the four types of mineralization that have been found to date on the south-western facing hill side which is mainly drift covered. Most of the rock exposure occurs in the road cuts on three subparallel logging roads spaced approximately 300 metres apart (the 2700, 3100 and ridge roads as seen in Figure 9-1) and some creek valleys.

The significant copper anomalies were in two drainages along the 2700 and 3100 roads as illustrated in Figure 6-2 and Figure 6-3. Silt molybdenum anomalies were found downhill, deeper in the system, from the copper anomalies. The larger southwestern molybdenum silt anomaly was near the location of the 1927-era Cox adit.

Cochrane, 1972 noted as follows:

“Very impressive “hand specimens” of massive bornite and chalcopyrite were uncovered in a side hill road cut now covered by the Bor No. 1 claim. The “pod” was very irregular, varying from a few inches to just under 2 feet wide and was exposed for only a few feet in length (private report, Meridian Syndicate). Assays of over 10 percent copper across very narrow widths were obtained. A grab sample from this zone taken by Mr. Homenuke assayed 10.9 percent Cu, 0.008 oz. Au/ton and 6.26 oz. Ag/ton. This area has now sloughed in and covered the pod and trenching could be conducted in this area to once again expose the zone. Sheared zones containing copper stain and chalcopyrite occur on the common boundary of the Bor 1 and 4 claims, and again on the Bor No. 6 claim, on the 2700 foot logging road. Low grade copper is present and observable in these areas across widths of about 100 feet. However, fairly extensive leaching of the primary metalization has obviously taken place.

A few small trenches in the Bor 16 claim expose silicified zones with chalcopyrite, and chalcopyrite with magnetite. The trenching was probably conducted by Pitt Lake Mines. The extent of the mineralization is unknown, however the airborne magnetometer survey (Figure 6-4) revealed a small magnetic high exists in this area and is some 800 feet long and a few hundred feet wide.

Quartz veins and veinlets containing blebs of chalcopyrite are common at higher elevations on the west side of the claims. Pyritization is extensive and occurs in rather irregular zones especially through the center south portion of the claims (the southern parts of the ULTIMATE I (984143)



and (no name) (984144) claims). The overall picture is confused by the extensive drift cover and steep topography, however some suggestions of a pyritic halo is easily obtained on examination of the property.”

Ostler, 2017, opined on this:

“The preceding account of mineralization in the current ULTIMATE property area is consistent with partial melting of porphyry-style vein copper and molybdenum mineralization along with whatever syn-genetic sulphide mineralization was already in the meta-andesitic rocks.”

There is some zonation of the metals observed in the field that is consistent with the porphyry copper model described in section 8 as observed by Ostler, 2017. The early exploration focused on molybdenum and it is noted in early reports and seen in the 1960s silt surveys, as noted in Figure 6-3. These target areas are exposed in the Corbold Creek valley bottom at elevations between 400 and 700 metres.

Above the molybdenum system is a more copper-rich zone in reports of copper pods and blebs in quartz pyrite veins associated with the quartz- feldspar porphyry at elevations from 700 to 1,000 metres.

The sites on the ridge above 1,000 metres elevation may be an expression of the base of a pyritic halo above copper and molybdenum mineralization. This is seen in the northern part of the property. The quartz- pyrite vein and strong disseminated pyrite associated with the quartz-feldspar porphyry as seen in Photo 2-5 is an example of this.

The 2017 mapping has better defined the extents of the hydrothermal system as illustrated in Figure 7-4. As well noted in Ostler, 2017 is a description of the alteration zones:

“The prograde propylitic alteration zone covers a broad area that extends out beyond the visible part of the potassic zone for at least 2 km (1.2 mi). As mapped, the potassic alteration zone covers a roughly circular area covering at least 24.75 km<sup>2</sup> (9.2 mi<sup>2</sup>) or 2,475 ha (6,113.25 acres). The centre of the potassic zone which is also near the centre of the hydrothermal system itself, is located near U.T.M.: 5,501,700 N., 526,665 E., in the western part of the ULTIMATE I (984143) claim.”

Ostler, 2017, also discussed metal distribution:

“The molybdenum distribution in the current (2017) rock chip survey area indicates that molybdenum mineralization occurred as part of late deposition of a sergregated sulphide phase of the quartz-feldspar porphyry and that it is probably most abundant at depth close to the porphyry intrusion.

Molybdenum is most abundant along a generally east-west trend that transects the central cord of the main quartz-feldspar porphyry intrusion. East of the porphyry intrusion, areas of high molybdenum concentration form arcs around the main porphyry body (Figures 14 and 20).

The copper distribution in the current (2017) rock chip survey area is more complex than that of molybdenum... Unlike molybdenum, copper existed in significant quantities in the Harrison Lake Formation mafic volcanic rocks before the development of the Corbold hydrothermal system. Also, copper seems to have been more mobile than molybdenum after development of the hydrothermal system had ceased, and was re-deposited in late fault systems. However, near the eastern margin of

the quartz-feldspar porphyry, the distribution of elevated copper contents in meta-andesites is similar to that of elevated molybdenum contents.”

Throughout the historical records are notes of copper and molybdenum veining, generally too narrow to be of interest in itself. This confirms the regional hydrothermal system contains both copper and molybdenum, it just is not exposed on surface in the road cuts or creek sides where most rock is visible now.

Ostler, 2017 describes his assessment of the quartz-feldspar porphyry intrusion and potential for copper and molybdenum porphyry mineralization at Corbold Creek below:

“In the author’s experience in British Columbia, quartz-feldspar porphyry bodies are intimately related with calc-alkalic porphyry copper and molybdenum mineralization. The quartz-feldspar porphyry at the Corbold hydrothermal system has a particularly intense sulphide phase that has segregated from the silicate phase of the porphyry as quartz-sulphide veins. On surface, the veins contain pyrite and quartz and may represent a pyritic halo.”

This report’s author concurs with this assessment of the potential of copper mineralization at Corbold Creek.

## 8 DEPOSIT TYPES

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The target deposit type on the ULTIMATE property is a calc-alkaline porphyry copper-molybdenum deposit. The results of geological mapping and airborne geophysics to date indicate the potential for mineralization in the area of the quartz-feldspar porphyry and within the surrounding andesites. The alteration patterns described below are commonly used a vector toward the highest mineralized zones. The field mapping completed in 2017 and recommended in this report is focused on the alteration and mineralization as outlined below. The following text is sourced from Panteleyev, 1995 along with Figure 8-1 from Kirkham and Sinclair, 1996, indicating an idealized cross section of the major zones of a porphyry copper deposit.

### 8.1 Calc-alkalic Porphyry Copper-Molybdenum Deposit

Porphyry Cu +/- Mo +/- Au L04

#### IDENTIFICATION

SYNONYM: Calcalkaline porphyry Cu, Cu-Mo, Cu-Au.

COMMODITIES (BYPRODUCTS): Cu Mo and Au are generally present but quantities range from insufficient for economic recovery to major ore constituents. Minor Ag in most deposits; rare recovery of Re from Island Copper mine.

EXAMPLES (British Columbia (MINFILE #) - Canada/ International):

- Volcanic type deposits (Cu + Au +/- Mo) - Fish Lake (092O 041), Kemess (094E 021, 094), Hushamu EXPO, (092L 240), Red Dog (092L 200), Poison Mountain (092O 046), Bell (093M 001), Morrison (093M 007), Island Copper (092OL 158); Dos Pobres (USA); Far Southeast

(Lepanto/Mankayan), Dizon, Guianaong, Taysan and Santo Thomas II (Philippines), Frieda River and Panguna (Papua New Guinea).

- Classic deposits (Cu+Cu+/-Au - Brenda (092HNE 047), Berg (093E 046), Huckleberry (093E 037), Schaft Creek (I 04G 015); Casino (Yukon, Canada), Inspiration, Morenci, Ray Sierrita-Experanza, Twin Buttes, Kalamazoo and Santa Rita (Arizona, USA), Bingham (Utah, USA), El Salvador, (Chile), Bajo de Alumbraera (Argentina).
- Plutonic deposits Cu+/-Mo - Highland Valley Copper (092ISE 001, 011, 012, 045), Gibraltar (093B012, 007), Catface (092F 120); Chuquicamata, La Escondida and Quebreda Blanca (Chile).

## GEOLOGICAL CHARACTERISTICS

### CAPSULE DESCRIPTION:

Stockworks of quartz veinlets, quartz veins, closely spaced fractures and breccias containing pyrite and chalcopyrite with lesser molybdenite, bornite and magnetite occur in large zones of economically bulk-mineable mineralization in or adjoining porphyritic intrusions and related breccia bodies. Disseminated sulphide minerals are present, generally in subordinate amounts. The mineralization is spatially, temporally and genetically associated with hydrothermal alteration of the hostrock intrusions and wallrocks.

### TECTONIC SETTINGS:

In orogenic belts at convergent plate boundaries, commonly linked to subduction-related magmatism. Also in association with emplacement of high-level stocks during extensional tectonism related to strike-slip faulting and back-arc spreading following continent margin accretion.

### DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING:

High-level (epizonal) stock emplacement levels in volcano-plutonic arcs, commonly oceanic volcanic island and continent-margin arcs. Virtually any type of country rock can be mineralized, but commonly the high-level stocks and related dykes intrude their coeval and cogenetic volcanic piles.

### AGE OF MINERALIZATION:

Two main periods in the Canadian Cordillera: the Triassic/Jurassic (210-180 Ma) and Cretaceous/Tertiary (8 5-45 Ma). Elsewhere deposits are mainly Tertiary, but range from Archean to Quaternary.

### HOST / ASSOCIATED ROCK TYPES:

Intrusions range from coarse-grained phaneritic to porphyritic stocks, batholiths and dyke swarms; rarely pegmatitic. Compositions range from calcalkaline quartz diorite to granodiorite and quartz monzonite. Commonly there is multiple emplacement of successive intrusive phases and a wide variety of breccias. Alkalic porphyry Cu-Au deposits are associated with syenitic and other calcalkalic rocks and are considered to be a distinct deposit type.

### DEPOSIT FORM:

Large zones of hydrothermally altered rock contain quartz veins and stockworks, sulphide-bearing veinlets; fractures and lesser disseminations in areas up to 10 km<sup>2</sup> (3.72 mi<sup>2</sup>) in size, commonly coincident wholly or in part with hydrothermal or intrusion breccias and dyke swarms. Deposit boundaries are determined by economic factors that outline ore zones within larger areas of low-grade, concentrically zoned mineralization. Cordilleran deposits are commonly sub-divided according to their morphology into three classes - classic, volcanic, and plutonic ...

- Volcanic type deposits (e.g. Island Copper) are associated with multiple intrusions in subvolcanic settings of small stocks, sills, dikes and diverse types of intrusive breccias. Reconstruction of volcanic landforms, structures, vent-proximal extrusive deposits and subvolcanic intrusive centers is possible in many cases, or can be inferred. Mineralization at depths of 1 km (0.61 mi) or less, is mainly associated with breccia development or as lithologically controlled preferential replacement in host rocks with high primary permeability. Propylitic alteration is widespread and generally flanks early, centrally located potassic alteration; the latter is commonly well-mineralized. Younger mineralized phyllic alteration commonly overprints the early mineralization. Barren advanced argillic alteration is rarely present as a late, high-level hydrothermal carapace.
- Classic deposits (e.g Berg) are stock related with multiple emplacements at shallow depth (1 to 2 km, 0.6 to 1.2 mi) of generally equant, cylindrical porphyritic intrusions. Numerous dykes and breccias of pre, intra, and post-mineralization age modify stock geometry. Orebodies occur along margins and adjacent intrusions as annular ore shells. Lateral outward zoning of alteration and sulphide minerals forming a weakly mineralized potassic/propylitic core is usual. Surrounding ore zones with potassic (commonly biotite-rich) or phyllic alteration contain molybdenite +/- chalcopyrite, then chalcopyrite and a generally widespread propylitic, barren aureole or 'halo'.
- Plutonic deposits (e.g. the Highland Valley deposits) are found in large plutonic to batholithic intrusions immobilized at relatively deep levels, say 2 to 4 km (1.2 to 2.4 mi). Related dikes and intrusive breccia bodies can be emplaced at shallower levels. Host rocks are phaneritic coarse-grained to porphyritic. The intrusions can display internal compositional differences as a result of differentiation with gradational to sharp boundaries between different phases of magma emplacement. Local swarms of dikes, many with associated breccias, and fault zones are sites of mineralization. Orebodies around silicified alteration zones tend to occur as diffuse vein stockworks carrying chalcopyrite, bornite and minor pyrite in intensely fractured rocks but, overall, sulphide minerals are sparse. Much of the early potassic and phyllic alteration in central parts of orebodies is restricted to the margins of mineralized fractures as selvages. Later phyllic argillic alteration forms envelopes on the veins and fractures and is more pervasive and widespread. Propylitic alteration is widespread but unobtrusive and is indicated by the presence of rare pyrite with chloritized mafic minerals, saussuritized plagioclase and small amounts of epidote.

**TEXTURE / STRUCTURE:**

Quartz, quartz-sulphide and sulphide veinlets and stockworks; sulphide grains in fractures and fracture selvages. Minor disseminated sulphides commonly replacing primary mafic minerals. Quartz phenocrysts can be partly resorbed and overgrown by silica.

**ORE MINERALOGY (Principal and subordinate):**

Pyrite is the predominant sulphide mineral; in some deposits the Fe oxide minerals magnetite, and rarely hematite, are abundant. Ore minerals are chalcopyrite; molybdenite, lesser bornite and rare (primary) chalcocite. Subordinate minerals are tetrahedrite/tennantite, enargite and minor gold, electrum and arsenopyrite. In many deposits late veins commonly contain galena and sphalerite in a gangue of quartz, calcite and barite.



**GANGUE MINERALOGY (Principal and subordinate):**

Gangue minerals in mineralized veins are mainly quartz with lesser biotite, sericite, K-feldspar, magnetite, chlorite, calcite, epidote, anhydrite and tourmaline. Many of these veins are also pervasive alteration products of primary igneous mineral grains.

**ALTERATION MINERALOGY:**

Quartz, sericite, biotite, K-feldspar, albite, anhydrite/gypsum, magnetite, actinolite, chlorite, epidote, calcite, clay minerals, tourmaline. Early formed alteration can be overprinted by younger assemblages. Central and early formed potassic zones (K-feldspar and biotite) commonly coincide with ore. This alteration can be flanked in volcanic hostrocks by biotite-rich rocks that grade outward into propylitic rocks. The biotite is a fine-grained 'shreddy' looking secondary mineral that is commonly referred to as an early developed biotite (EDB) or a "biotite hornfels". These older alteration assemblages in cupriferous zones can be partially to completely overprinted by later biotite and K-feldspar and the phyllic (quartz-sericite-pyrite) alteration, less commonly argillic, and rarely, in the uppermost parts of some ore deposits, advanced argillic alteration (Kaolinite-pyrophyllite).

**WEATHERING:**

Secondary (supergene) zones carry chalcocite, covellite and other  $Cu^2S$  minerals (digenite, djurleite, etc.), chrysocolla, native copper, and copper oxide, carbonate and sulphate minerals. Oxidized and leached zones at surface are marked by ferruginous 'cappings' with supergene clay minerals, limonite (goethite, hematite and jarosite) and residual quartz.

**ORE CONTROLS:**

Igneous contacts, both internal between intrusive phases and external with wallrocks; cupolas and the uppermost, bifurcating parts of stocks, dike swarms. Breccias, mainly early formed intrusive and hydrothermal types. Zones of most intensely developed fracturing give rise to ore-grade vein stockworks, notably where there are coincident or intersecting multiple mineralized fracture sets.

**ASSOCIATED DEPOSIT TYPES:**

Skarn Cu (K01), porphyry Au (K02), epithermal Au-Ag in low sulphidation type (H05) or epithermal Cu-Au-Ag as high-sulphidation type enargite-bearing veins (L01), replacements and stockworks; auriferous and polymetallic base metal quartz and quartz-carbonate veins (I01, I05), Au-Ag and base metal sulphide mantos and replacements in carbonate and non-carbonate rocks (M01, M04), placer Au (C01, C02).

**COMMENTS:**

Subdivision of porphyry copper deposits can be made on the basis of metal content, mainly ratios between Cu, Mo, and Au. This is a purely arbitrary, economically based criterion, an artifact of mainly metal prices and metallurgy. There are a few differences in the style of mineralization between deposits although morphology of calcalkaline deposits does provide a basis for subdivision into three distinct subtypes - the 'volcanic, classic, and plutonic' types. A fundamental contrast can be made on the compositional differences between calcalkaline quartz-bearing porphyry copper deposits and the alkalic (silica undersaturated) class ...

**EXPLORATION GUIDES****GEOCHEMICAL SIGNATURE:**

Calcalkalic systems can be zoned with a cupriferous (+/-Mo) ore having a 'barren', low-grade pyritic core and surrounded by a pyritic halo with peripheral base and precious-metal bearing veins. Central zones with Cu

commonly have coincident Mo, Au and Ag with possibly Bi, W, B and Sr. Peripheral enrichment in Pb, Zn, V, Sb, As, Se, Te, Co, Ba, Rb and possibly Hg is documented. Overall the deposits are large-scale repositories of sulphur, mainly in the form of metal sulphides, chiefly pyrite.

#### GEOPHYSICAL SIGNATURE:

Ore zones, particularly those with higher Au content, can be associated with magnetite-rich rocks and are indicated by magnetic surveys. Alternatively the more intensely hydrothermally altered rocks, particularly those with quartz-pyrite-sericite (phyllic) alteration produce magnetic and resistivity lows. Pyritic halos surrounding cupriferous rocks respond well to induced polarization (I.P.) Surveys but in sulphide-poor systems the ore itself provides the only significant I.P. response.

#### OTHER EXPLORATION GUIDES:

Porphyry deposits are marked by large-scale, zoned metal and alteration assemblages. Ore zones can form within certain intrusive phases and breccias or stockworks are present as vertical 'shells' or mineralized cupolas around particular intrusive bodies. Weathering can produce a pronounced vertical zonation with an oxidized, limonitic leached zone at surface (leached capping), an underlying zone with copper enrichment (supergene zone with secondary copper minerals) and at depth a zone of primary mineralization (the hypogene zone).

### ECONOMIC FACTORS

#### TYPICAL GRADE AND TONNAGE:

Worldwide based on a subdivision of 55 deposits into subtypes according to metal ratios, typical porphyry Cu deposits contain (median values):

Porphyry Cu-Au: 160 Mt with 0.55% Cu, 0.003% Mo, 0.38 gm/mt Au and 1.7 gm/mt Ag.

Porphyry Cu-Au-Mo: 390 Mt with 0.48% Cu, 0.015% Mo, 0.15 gm/mt Au, and 1.6 gm/mt Ag.

Porphyry Cu-Mo: 500 Mt with 0.41% Cu, 0.016% Mo, 0.012 gm/mt Au, and 1.22 gm/mt Ag.

A similar subdivision using a larger data base results in:

Porphyry Cu: 140 Mt with 0.54% Cu, <0.002% Mo, <0.02 gm/mt Au and <1 gm/mt Ag.

Porphyry Cu-Au: 100 Mt with 0.5% Cu, 0.002% Mo, 0.38 gm/mt Au and 1 gm/mt Ag.

(This includes deposits from the British Columbia alkalic porphyry class)

Porphyry Cu-Mo: 500 Mt with 0.42% Cu, 0.016% Mo, 0.012 gm/mt Au and 1.2 gm/mt Ag.

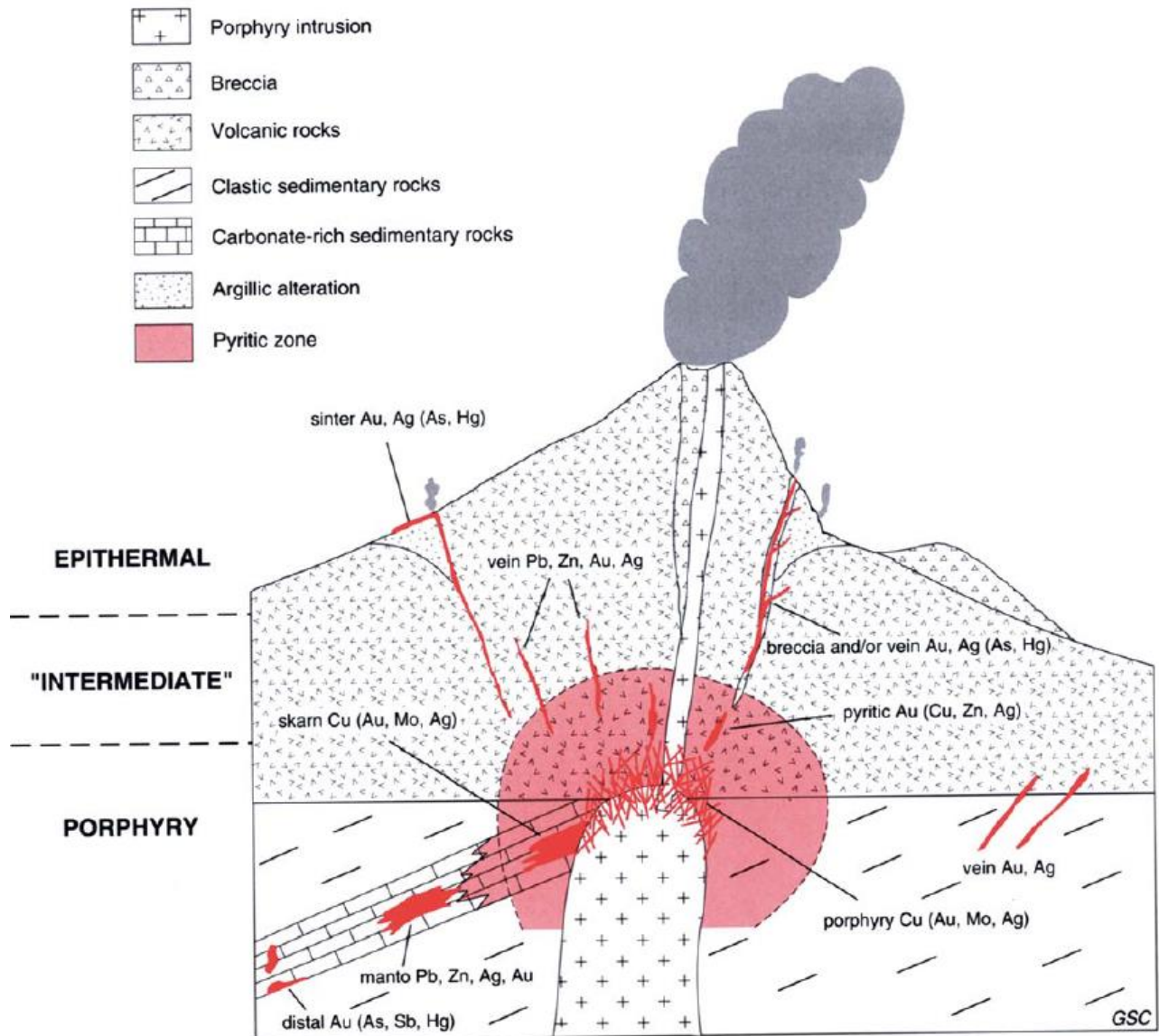
British Columbia porphyry Cu+/-Mo+/-Au deposits range from <50 to >900 Mt with commonly 0.2 to 0.5% Cu, <0.1 to 0.6 gm/mt Au, and 1 to 3 gm/mt Ag. Mo contents are variable from negligible to 0.04% Mo. Median values for 40 B.C. deposits with reported reserves are: 115 Mt with 0.37% Cu, 0.01% Mo, 0.3 gm/mt Au and 1.3 gm/mt Ag.

**ECONOMIC LIMITATIONS:**

Mine production in British Columbia is from primary (Hypogene) ores. Rare exceptions are Afton mine where native copper was recovered from an oxide zone, and Gibraltar and Bell mines where incipient supergene enrichment has provided some economic benefits.

**IMPORTANCE:**

Porphyry deposits contain the largest reserves of Cu, significant Mo resources and close to 50% of the Au reserves in British Columbia.



**Figure 19-10.** Schematic diagram of a porphyry copper system in the root zone of an andesitic stratovolcano showing mineral zonation and possible relationship to skarn, manto, "mesothermal" or "intermediate" precious metal and base metal vein and replacement, and epithermal precious-metal deposits.

Source: Kirkham and Sinclair, 1996

**Figure 8-1 Idealized Porphyry Copper Cross Section Model**

## 9 EXPLORATION

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Soon after the initial claims were staked in 2012, Geotronics Consulting Ltd. was contracted by Ivor Ventures to re-interpret the government regional airborne geophysical surveys and regional stream sediment sampling programs.

As well in 2012, a mobile metal ion (MMI) soil survey was conducted by Geotronics along 900 m of the 5000 East Line near the 2700 road as seen in Figure 9-1. This test line was completed to confirm if the method would be valuable or responsive for future larger surveys. Nineteen MMI samples were collected at 50-m intervals along the 5000 East Line (Mark, 2012).

The MMI geochemical sample collection was done in June 2012. Copper anomalies in the north-eastern mineralized drainage from earlier conventional soil surveys were confirmed (See Figure 9-1, Figure 9-2 and Figure 9-3).

In November, 2015, Geotronics completed a further 2,250 m of MMI sampling on three lines 200 m apart run along the east-west U.T.M. lines as seen in Figure 9-1 to Figure 9-3 with samples collected every 50 metres along the lines (Mark, 2015) The survey had 48 samples collected and were reported as stacked histograms along with several other elements. Copper and molybdenum were plotted by Ostler, 2017 on maps and reference here as Figure 9-2 and Figure 9-3.

In July, 2017 Precision GeoSurveys Inc. (Precision) of Langley, BC flew a helicopter-borne magnetic and radiometric surveys on a grid covering the ULTIMATE 1, 3 and 4, and (no name) (984143, 984147, 984148, and 984144) claims that comprises the eastern and central parts of the present property (Keyser and Poon, 2017). Flight altitude was nominally 40 m above the ground. The Figure 9-4 and Figure 9-5 show the results of this survey which consisted of 153-line kilometres of flight lines along north south UTM lines at 100 metres spacing plus four perpendicular tie lines for control. The data was processed but not interpreted by Precision, therefore Figure 9-4 and Figure 9-5 were reproduced here to highlight the most useful maps of the 20 produced by Precision.

The magnetic field results seen in Figure 9-4 indicate the deeper destruction of magnetite originally part of the property wide potassic and related magnetite emplacement. This relationship is consistent with lower areas near the creek being altered by the later emplacement of the quartz-feldspar porphyry and destruction of magnetite deeper down during anatexis. Beyond the elevation related general trend there is north-west – south-east trend of highs and lows in the data. These are likely to be related to a developed fracture pattern in the roof pendant that was used as a preferential conduit for intrusive emplacement and hydrothermal fluid flows resulting in vein networks oriented along these trends. It is hard to be sure, due to topographic down slope effects, but these trends in the total magnetic field is also consistent with the contouring of the results in Figure 9-2 and Figure 9-3.

Figure 9-5 showing the potassium to thorium ratio indicates a large widespread potassic alteration that seems to extend beyond the survey area. This would be consistent with the observed early potassic alteration that was later overprinted and redistributed by the quartz-feldspar porphyry intrusion.

In August, 2017, John Ostler and an assistant (Ostler, 2017) completed a 1:5,000 scale geological mapping and rock chip sampling program over about 700 hectares of the ULTIMATE property. The area mapped is indicated on Figure 9-1. As well a road-based reconnaissance program to the east and south was completed

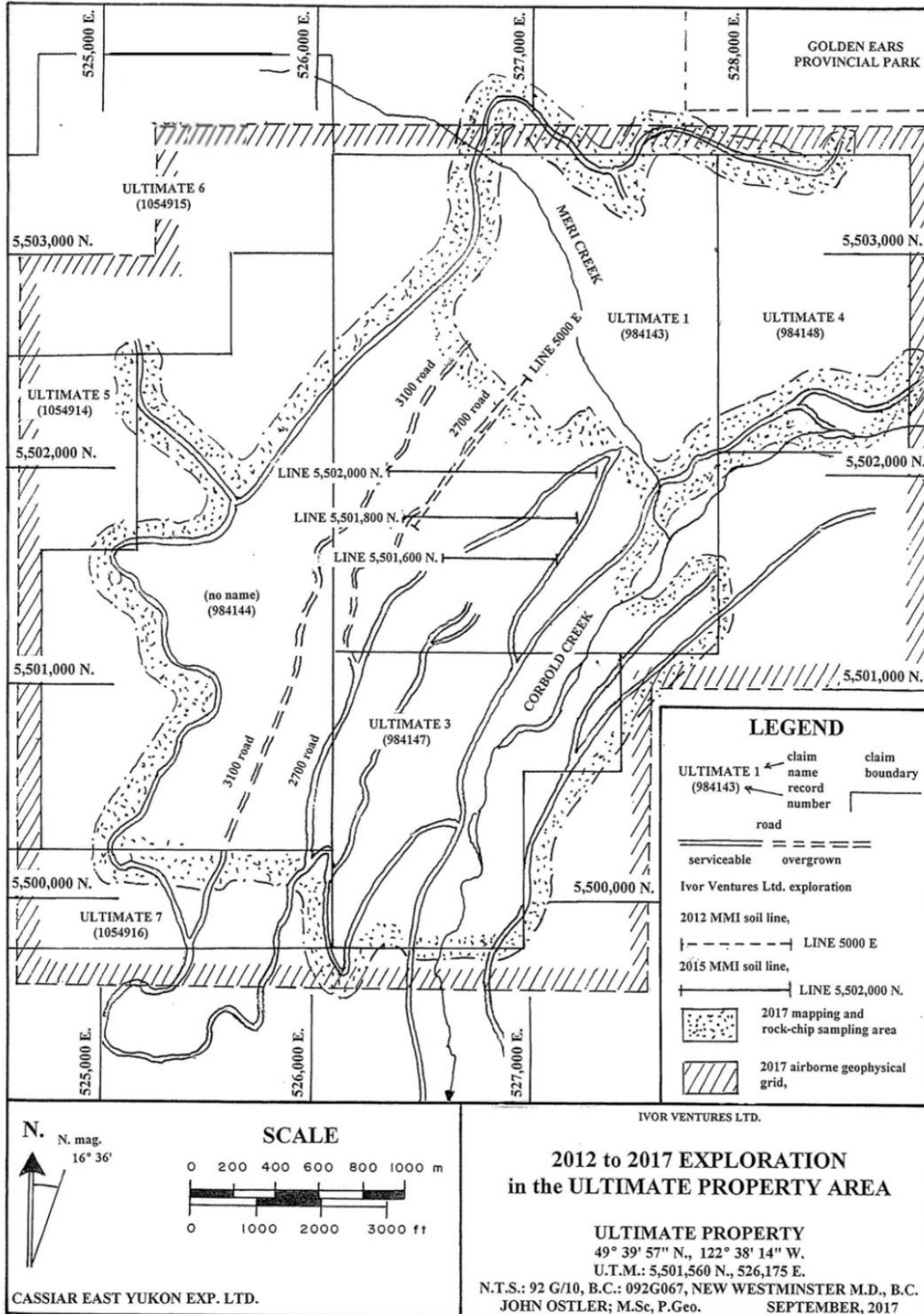


to determine the extent of the Corbold hydrothermal system as seen in Figure 7-4. A total of 91 rock-chip samples were collected at 85 locations.

The mapping and sampling allowed for field observation of the various rock units discussed in this report plus the related alteration phases overprinting the units. This field work added to the understanding and time line outlined in Table 7-1.

This work done at Ultimate was while the company's name was Ivor Ventures Ltd.

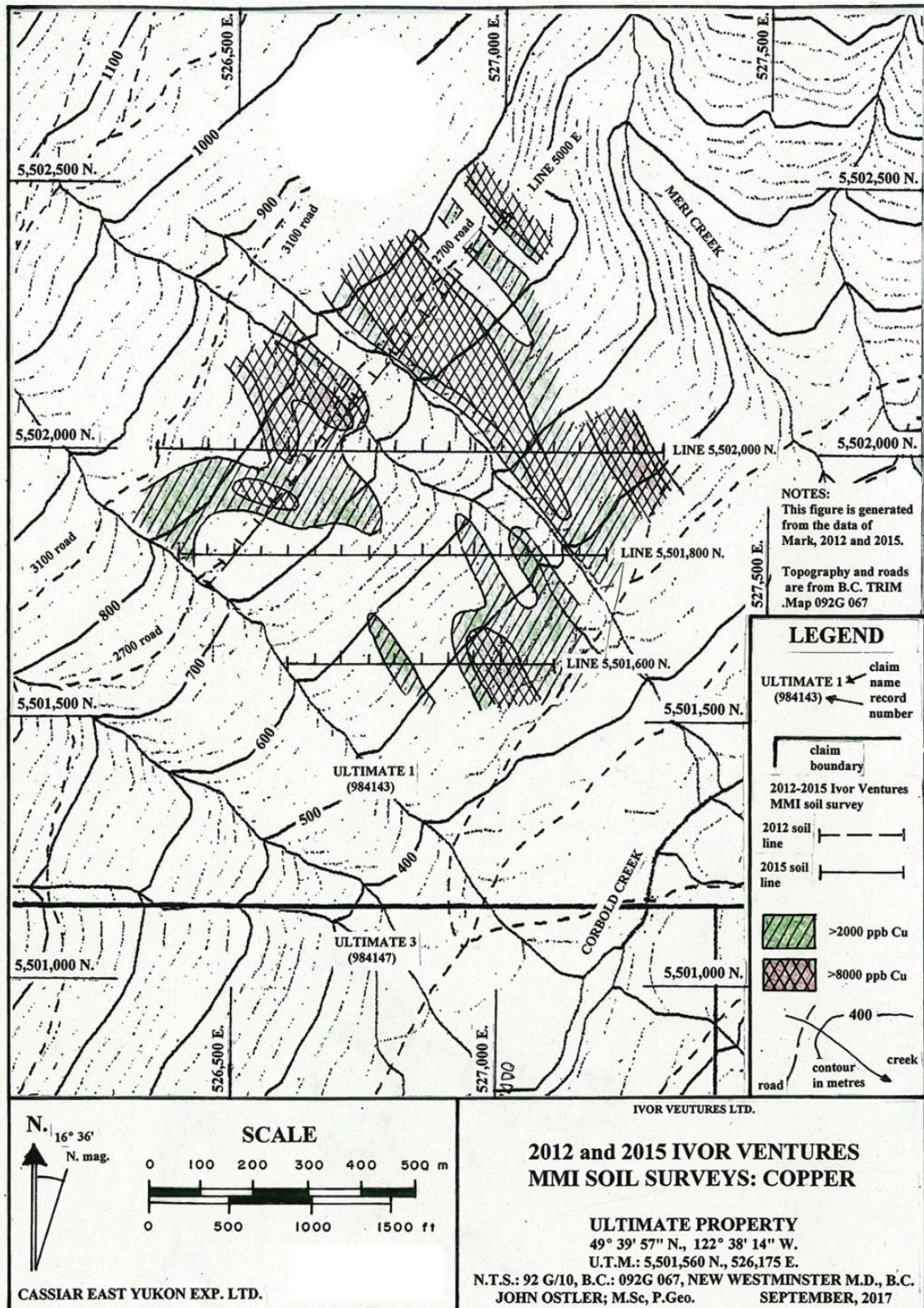
There has been no work done on the ULTIMATE property after October 2017.



Source: John Ostler, 2017

Figure 9-1 Map of Exploration areas completed by Ivor Exploration Inc.



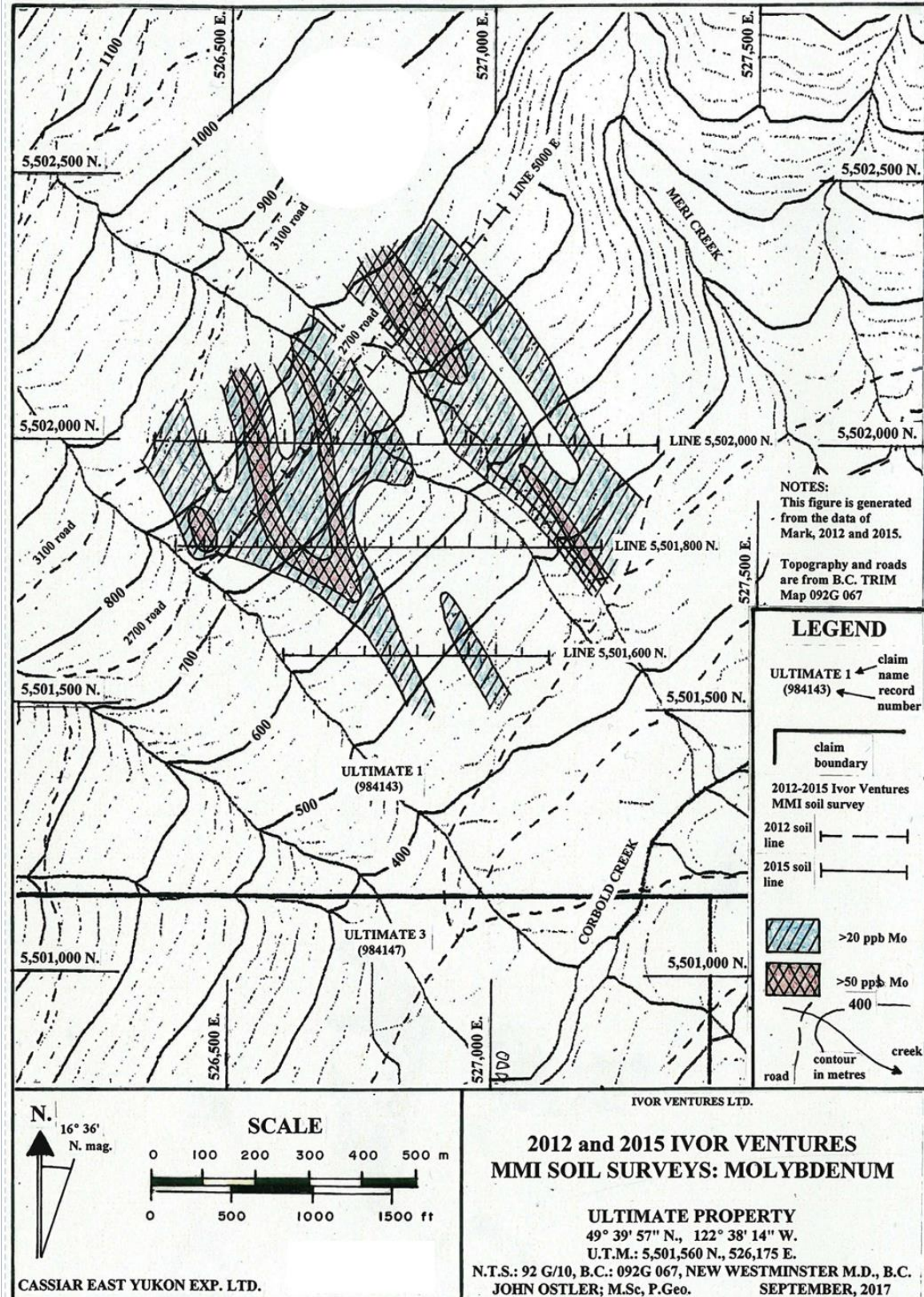


17.5

Source: John Ostler, 2017

Figure 9-2 Copper MMI surveys for Ivor Exploration in 2012 and 2015

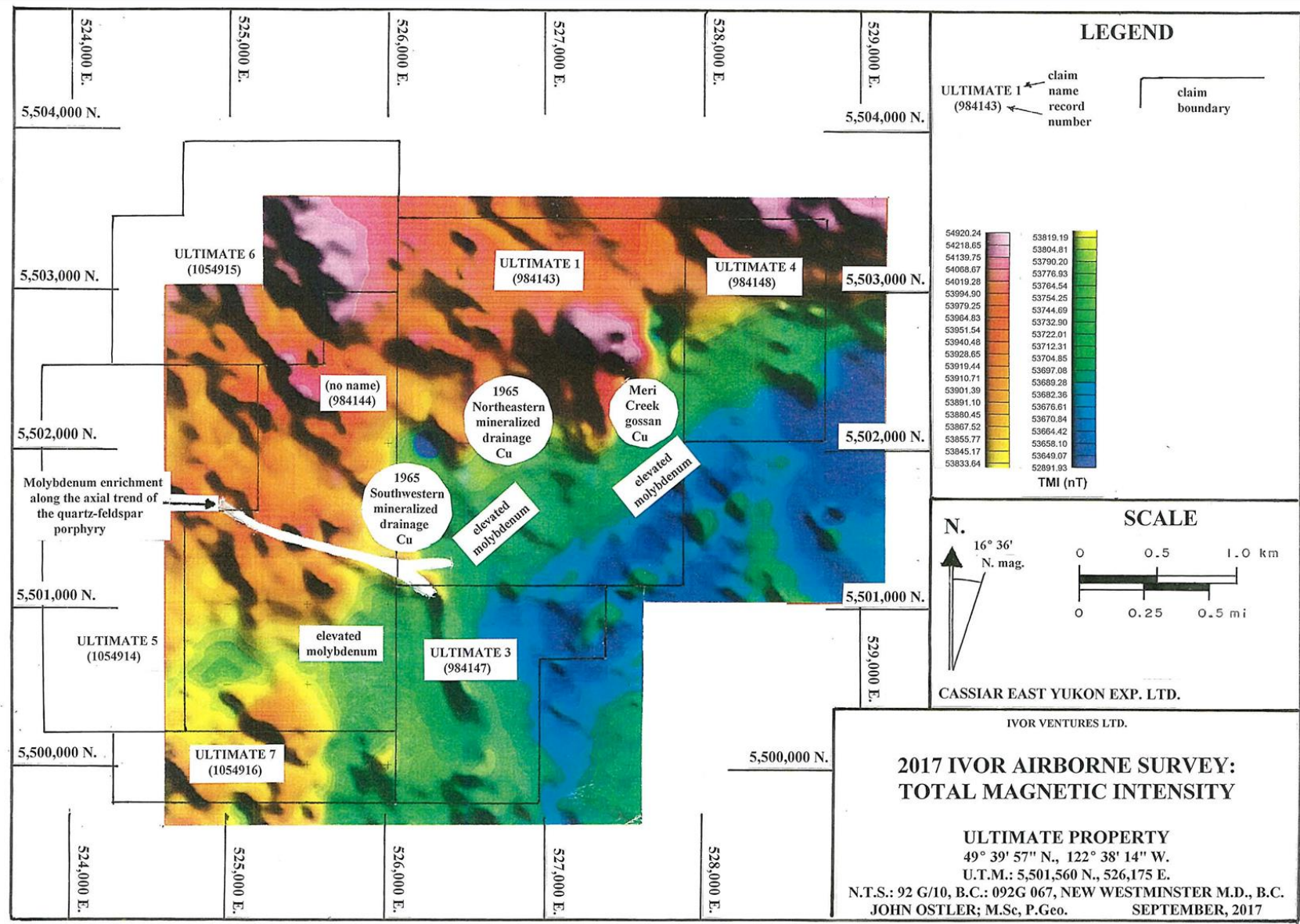




Source: John Ostler, 2017

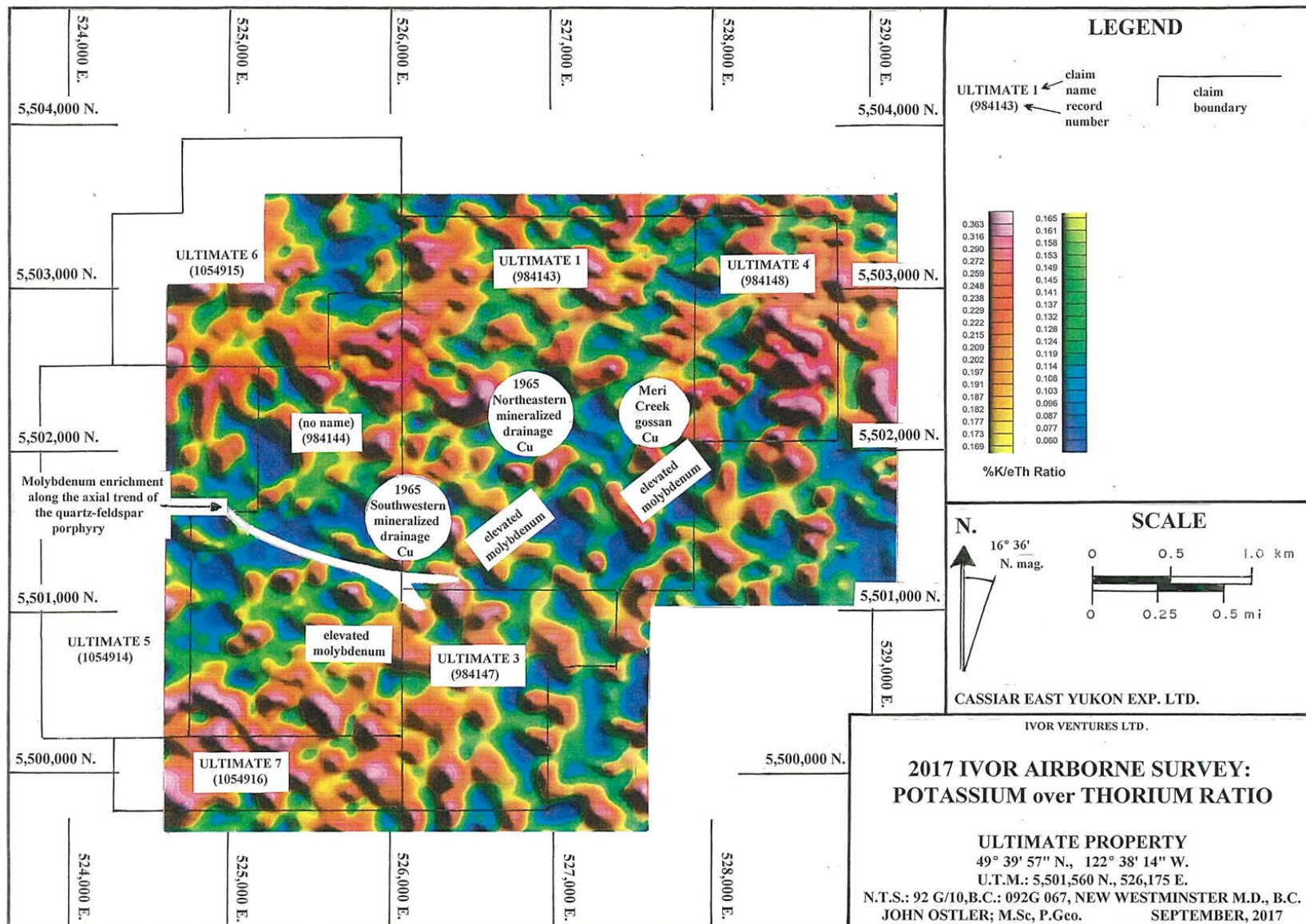
Figure 9-3 Molybdenum MMI surveys for Ivor Exploration in 2012 and 2015





Source: John Ostler, 2017

Figure 9-4 Airborne Total Magnetic Intensity in Ivor Exploration 2017 Survey



Source: John Ostler, 2017

Figure 9-5 Airborne Potassium/Thorium ratio in Ivor Exploration 2017 Survey



## 10 DRILLING

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There has been no drilling completed by Ivor Exploration Inc. in the ULTIMATE property area.

## 11 SAMPLE PREPARATION, ANALYSES AND SECURITY

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During 2012 and 2015 a program of Mobile Metal Ion (MMI) soil geochemistry was completed on the property by Geotronics (Mark, 2012 and 2015). MMI is a proprietary sample preparation and analysis method provided by SGS Canada Inc. SGS Canada Inc. is an accredited laboratory to ISO/IEC 17025:2005 standards as confirmed by the Standards Council of Canada.

Mark, 2015 described the MMI field methods as:

“The sampling procedure was to first remove the organic material from the sample site (A0 layer) and then dig a pit over 25 cm deep with a shovel. Sample material was then scraped from the sides of the pit over the measured depth interval of 10 centimeters to 25 centimeters. About 250 grams of sample material was collected and then placed into a plastic Zip-loc sandwich bag with the sample location marked thereon. The 308 samples were then packaged and sent to SGS Minerals located at 1885 Leslie Street, Toronto, Ontario.”

The laboratory procedure involves weighing out 50g of material and adding 50 ml of the MMI\_M leach solution. It is agitated and left for overnight reaction. The solution is then diluted 20 times for a total dilution factor of 200 times and then transferred into plastic test tubes, which are then analysed on ICP-MS instruments.

Both the 2012 and 2015 soil geochemistry survey data for copper and molybdenum were plotted and contoured on the map in Ostler, 2017 as seen in Figure 9-2 and Figure 9-3 .

During the 2017 exploration program 91 rock samples were collected from outcrops across the property (Ostler, 2017). This was an early stage geological program and the geochemistry data was collected as a low-cost method to determine whole rock composition and assist with alteration definition and future drill targeting, including six samples of sulphide bearing rocks.

Rock chips were sealed in plastic sample bags and delivered by John Ostler to ALS Canada Ltd. in North Vancouver, British Columbia. ALS Canada is an ISO/IEC 17025:2005 accredited laboratory as confirmed by the Standards Council of Canada. They were prepared and analysed using the following procedures:

- Prep 31 –crush, riffle split and pulverize rock
- Me-MS61 (ICP) – four acid digestion and 48 element analysis by ICP-AES/ICP-MS
- AuICP22 - 50g fire assay for gold with ICP-AES finish

These outline sample preparation and analysis of the samples submitted for analysis in the most recent exploration program.

The work in 2017 is an early stage project and insertion of standards and blanks was not required or done due to the qualitative nature of the resulting uses in alteration determination and future drill targeting. Once

sampling is systematic and requires to be quantitative and may be applied to a future resource determination or similar activities, such as continuous surface channel or drill sampling, a program of quality control with insertion of standards, blanks and reference samples to other accredited laboratories will be necessary.

For this stage of the program and the uses of the data, the procedures applied by Mark, 2012 and 2015, and Ostler, 2017 in sampling and data management are adequate.

## 12 DATA VERIFICATION

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The report author visited the property on November 19, 2018 and October 30, 2017. The 2018 visit is the Current Personal Inspection of the ULTIMATE property. It is summarized in Section 2.3 of this report along with the 2017 visit. The author also completed a field exploration survey in 1984 within the property.

In the copper stream sediment sampling, both the government's regional RGS and multiple surveys back to 1965 confirm the same tributary streams to have higher concentrations than surrounding streams. The methods used for analysis vary so the numerical results are different, but the local samples are often anomalous. These tributary's locations also closely relate to elevated soil geochemistry concentrations. This validates this method as reproducible and consistent and better defines the ULTIMATE property as a copper target.

There have been several soil geochemical sampling programs, both conventional in 1965, 1972 and 1984 plus the MMI method in 2012/2015. The numerical results of these programs return different concentrations, likely due to laboratory technology variances and field sampling methods, but the anomalous areas frequently coincide when plotted on maps. Also, the report author, having done the 1984 field work personally and comparing it to rest of the studies, is reassured of the validity of the other results since they compare well to his work. The various methods are reproducible in respect to the location of anomalous concentrations and are deemed valid and the quality of historic information is adequate for the purposes used.

Airborne magnetic geophysics from 1968 and 2017 were visually compared. The technology used, line spacing and flight elevation above the ground were dramatically different with the 2017 survey having more lines spaced closer, lower flight elevation and higher resolution data sampling. The data presentation is much different but there are some similarities in trends that are generally north-east/south-west.

The quality of sampling methods used, analysis, data management and presentation are adequate for the data uses of the geochemical and airborne magnetic results at this early stage of the existing program.

## 13 MINERAL PROCESSING AND METALLURGICAL TESTING

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There is no mineral processing or metallurgical testing completed on this project area.

## 14 MINERAL RESOURCE ESTIMATES

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There are no mineral resource estimates completed on the ULTIMATE project area.



## **15 MINERAL RESERVE ESTIMATES**

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There is no mineral resource estimate or advanced economics completed on this project area. There are no reserves on this project.

## **16 MINING METHODS**

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This is not an advanced stage report and this section is not part of this review.

## **17 RECOVERY METHODS**

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This is not an advanced stage report and this section is not part of this review.

## **18 PROJECT INFRASTRUCTURE**

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This is not an advanced stage report and this section is not part of this review.

## **19 MARKET STUDIES AND CONTRACTS**

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This is not an advanced stage report and this section is not part of this review.

## **20 ENVIRONMENTAL STUDIES, PERMITTING AND COMMUNITY IMPACT**

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This is an early stage program and no environmental studies have been done.

For exploration the Province of British Columbia is responsible for Indigenous Consultation and will assign to the company the band or bands that Ivor must also consult. There are a few full-time residents on the upper Pitt River.

The hillside of Corbold Creek shows signs of having three generations of logging including the recent clear-cutting. Rehabilitation of this is the responsibility of the logging company, but the author recalling the hillside in 1984 with about 15 to 20-year-old trees and then having been recently logged again, the site is temperate and trees grow quickly compared to other locations known to the author. There is a salmon hatchery downstream on Corbold Creek before the Pitt River, which will have to be considered in any future environmental impacts.

Social and community impact, in particular the aboriginal communities outlined in Section 4.4 will require communication and consultation as determined by the Province of BC before any activities that may have a surface disturbance.

## 21 CAPITAL AND OPERATING COSTS

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This is not an advanced stage report and this section is not part of this review.

## 22 ECONOMIC ANALYSIS

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This is not an advanced stage report and this section is not part of this review.

## 23 ADJACENT PROPERTIES

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A review of the map at BC Mineral Titles Online on October 16, 2017 indicated no adjacent properties.

## 24 OTHER RELEVANT DATA AND INFORMATION

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There is no other relevant data or information known to the report author not included in this report.

## 25 INTERPRETATION AND CONCLUSIONS

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After a review of the project data and two personal visits and the work program in 1984 to the Corbold Creek area it is concluded that this area is likely the location of a buried mineralized system consistent with a calc-alkaline porphyry copper-molybdenum deposit. The surface expression is of the higher and outer areas of the system (pyrite halo) at the top of the hill and ridge and the lower sides of the valley are of prograde propylitic alteration. A broad potassic alteration system is found in the valley related to an earlier non-mineralizing event that is seen to be regionally overprinted by the later mineralizing hydrothermal event related to the quartz-feldspar porphyry intrusion.

The work completed to date has not conclusively determined that a porphyry deposit exists on this property. There are multiple results consistent with the standard models of alteration and mineralization that a porphyry deposit could be here. The anticipated mineralized targets are buried in the hillside and will require a direct sampling method such as diamond drilling to be determined conclusively. Further work outlined in the recommendations section of this report is required to adequately target the drill holes.

The general geological history is summarized in Table 7-1 and described here. In the Jurassic, the Harrison Lake Formation (HLF), a mafic submarine volcanic and carbonate rich sedimentary unit in an island-arc environment covered the property. During the Columbian Orogeny, the HLF rocks were deformed during continental collision and mountain building. The intrusion of the Coast Plutonic Complex from below resulted in the HLF rocks becoming a roof pendant next to a quartz-diorite intrusion.

During the Laramide Orogeny between the Late Cretaceous Period and the Palaeocene stage, the Corbold hydrothermal system occurred. These include:

1. Extensive prograde propylitic alteration
2. Potassic alteration
3. Heating to greater than 500°C and anatectic melting of contact Harrison Lake Formation (HLF) resulted in hornfelsed and gneissic versions of previous potassically altered HLF andesite. Partial anatectic melting destroyed the brown biotite and magnetite and the orthoclase moved from the veins to the groundmass. Anatectis culminated in the creation of small pyroxene monzonite bodies.
4. The andesitic hornfels unit cooled to under 400°C during emplacement of the quartz-feldspar porphyry.
5. Intrusion of the silicate phase of the quartz-feldspar porphyry along north-west - south-easterly trending fractures culminating in a stock with a 4 km<sup>2</sup> surface area. Some contacts are plastic and others are brittle.
6. Shattering of the quartz-feldspar porphyry allowed for the intrusion of its sulphide hydrothermal phase in a plethora of veins throughout the silicate phase of the intrusion and out into surrounding andesitic rock. Sulphides of iron, molybdenum and copper were included in the sulphide phase.
7. Cooling of the hydrothermal system, inversion of thermal gradients and development of advanced argillic alteration at elevations above 1,100 metres a.s.l. near the northern boundary of the property.

In the Eocene stage a series of fine-grained narrow mafic intrusive dykes likely related to the Kamloops Formation flood basalts was emplaced.

Exploration to date has confirmed a large hydrothermal alteration system consistent with a porphyry copper-molybdenum deposit within the quartz-feldspar porphyry unit and surrounding andesites of the Harrison Lake Formation in the Corbold Pendant. The airborne potassium/thorium ratio shows that the potassic alteration extends beyond the survey boundaries. The magnetic survey shows the deeper zones, closer to the intrusion, have had the magnetite from the earlier potassic alteration absorbed or destroyed. The resulting trends are consistent with the observed directions of the veining and contouring of the MMI soils surveys. The 2017 rock chip survey shows a strong spatial correlation of elevated copper and molybdenum results to the quartz-feldspar porphyry outcrops.

The author considers the results to date indicate further work should be done to better determine the potential of this property.

## 26 RECOMMENDATIONS

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The author recommends a two-phase exploration program be conducted in the ULTIMATE property area. The target is a calc-alkaline porphyry copper-molybdenum system that is buried in the Corbold Creek hillside. The goal of the two phases of work is to develop drill targets to test the buried system.

The first phase of the program should comprise expansion of the 2017 geological field mapping to cover currently unmapped areas of the property and additional rock chip sampling to better detail the rock types, copper and molybdenum metal content and potassic alteration.

The budget for the recommended work is below in Table 26-1.

Phase One			
Item	Number of Units	Cost per unit	Total Cost
Geological Mapping	35 days (2 men)	\$ 1,000 day (crew)	\$ 35,000
Sampling	300 samples	\$ 65 /sample	\$ 19,500
Barge access for vehicles, diesel and vehicle rental			\$ 15,000
Room and Board			\$ 13,000
Communication, field and office supplies			\$ 4,000
Planning, reporting, admin	35 days	\$ 600 day	\$ 21,000
<b>Phase One Budget Total</b>			<b>\$ 107,500</b>
<b>Assume with contingency</b>			<b>\$ 115,000</b>
Phase Two			
Item	Number of Units	Cost per unit	Total Cost
Permit preparation			\$ 10,000
Line Cutting (if required)	8 days (2 men)	\$ 1,100 day (crew)	\$ 8,800
Induced Polarization Survey	15 days (4 men)	\$ 5,500 day (crew)	\$ 82,500
Barge access for vehicles, diesel and vehicle rental			\$ 18,000
Room and Board			\$ 8,000
Communication, field and office supplies			\$ 3,000
Reporting			\$ 15,000
<b>Phase Two Budget Total</b>			<b>\$ 145,300</b>

**Table 26-1 Budget for Recommended Work Programs**

If positive results are returned in Phase One then it is suggested Phase Two can be started. The induced polarization (IP) survey is to be conducted on lines run along the numerous north-easterly to north-westerly trending logging roads that transect the property area. The IP survey is targeting a chargeable zone consistent with an area of concentrated sulphide minerals. By staying on the existing roads for the IP survey and accessing all other areas by foot then the resulting lack of surface disturbance during the activities recommended in Phase One it is anticipated to not require a Notice of Work and permitting.

Line cutting will be confined closely to the sections of 2700 and 3100 roads that have overgrown and have not recently been used for logging. The roads in 2018 are no longer in use and will now begin to overgrow due to decommissioning and no truck traffic and may add more line cutting as further growth occurs depending how soon it is completed.



Due to the disturbance of vegetation in line-cutting, albeit on an existing road and in an area of recent logging with young trees, a Notice of Work to the Province of BC and possibly a reclamation bond may be required. If a bond is required, an additional \$10,000 should be budgeted for the preparation of the Notice of Work and a refundable reclamation bond.

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