MINE DEVELOPMENT ASSOCIATES
A Division of RESPEC

RESPEC

RUBY CREEK PROJECT
NORTHERN BRITISH COLUMBIA, CANADA

Submitted to:

STUHINI
EXPLORATION

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Report Date: April 22, 2022
Effective Date: March 10, 2022

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1.0 SUMMARY (ITEM 1)

1.1 Scope of Work

The authors, on behalf of Mine Development Associates ("MDA"), a division of RESPEC, have prepared this Technical Report on the Ruby Creek Project located in northern British Columbia, Canada (the "Ruby Creek Project") at the request of Stuhini Exploration Ltd. ("Stuhini" or the "Company"), a Canadian company based in Vancouver, British Columbia ("BC"), Canada. This Technical Report has been prepared in accordance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 ("NI 43-101"), Companion Policy 43-101CP, and Form 43-101F1, as amended, and supports the public disclosure of the mineral resources reported herein.

The purpose of this report is to provide an estimate of molybdenum mineral resources and a technical summary of the Ruby Creek Project, which is located approximately 24km northeast of Atlin, BC. Stuhini has been exploring for precious and base metals, but the Ruby Creek Molybdenum Deposit ("Ruby Creek Molybdenum Deposit" or the "Deposit"), located within the larger Ruby Creek Project, has become of significant interest since late 2020 when molybdenum prices began to climb.

The Ruby Creek Project is in the Atlin Mining Division at 59° 42' N / 133° 24'W. The road-accessible property covers an area of approximately 28,886ha with elevations ranging from 920m at Surprise Lake to 1940m in the northeastern part of the property.

1.2 Property Tenure

The Ruby Creek Project consists of a single, irregularly shaped block of 55 tenures covering an area from Birch Creek to Surprise Lake and from Mount Barham to Wright Creek in the Surprise Lake environs. Stuhini owns six of the 55 claims totaling 1,897ha, of which one claim was staked by Stuhini in 2020, and the other five were purchased from Brixton Metals Corporation in 2021. The remaining claims, which comprise most of the property area, and a mine lease, have been optioned by Stuhini Exploration Ltd from Global Drilling Solutions Inc. ("Global Drilling"). The molybdenum mineralization and published Mineral Resource Estimates for the Ruby Creek Project are located within the mine lease area of the claim package.

1.3 History

The Ruby Creek Molybdenum Deposit was discovered in 1905 but saw limited exploration prior to 1967, when it was staked by Adanac Mining and Exploration Limited ("Adanac Mining") and Canadian Johns Manville Limited. Since then, Adanac Mining, Kerr Addison Mines Limited ("Kerr Addison"), Climax

Molybdenum Corporation of British Columbia Limited ("Climax"), Placer Development Limited ("Placer"), and Adanac Gold Corporation, which became Adanac Molybdenum Corporation ("Adanac") have conducted exploration. Adanac fell into receivership in late 2008 and the Ruby Creek Molybdenum Deposit was purchased in 2016 by Global Drilling. Global Drilling optioned the Ruby Creek Molybdenum Deposit and a substantial land package around it to Stuhini in 2019. Stuhini's focus has been on grass-roots precious metals exploration with the Ruby Creek Molybdenum Deposit becoming of more significant interest to the company in late 2020 as molybdenum prices began to climb.

Each company that had control of the Property drilled exploration holes, by far dominated by diamond drilling. To date, there are 354 drill holes totaling 72,113m of drilling. Kerr Addison drove 589m of drift, 246m of crosscut, and 281m of raise in the higher-grade core of the deposit. There is no production history on the Ruby Creek Molybdenum Deposit, but 9,545 tonnes of mineralized material from the just-described workings were mined and processed on site for metallurgical and sampling studies. A feasibility study was done for Kerr Addison in 1971. Placer, circa 1980, did nearly all the work required for a feasibility study but did not complete it due to adverse molybdenum prices. In the mid-2000's Adanac did scoping and pre-feasibility work, leading to a feasibility study issued in 2006 with an update in 2007.

1.4 Geology and Mineralization

The Ruby Creek Molybdenum Deposit is a porphyry-type stockwork of molybdenite- and quartz-molybdenite-bearing veins. Most of the Deposit forms a sub-horizontal tabular deposit that becomes steeply dipping adjacent to the northeast-striking, northwest-dipping Adera fault zone. The mineralization is associated with granitic rocks of the Mount Leonard stock, which is part of the Surprise Lake Batholith. Within the mineralized body, the rocks are cut by multiple faults and mafic and feldspar porphyritic intrusive rocks, which are also mineralized. The mineralized zone reaches approximate maximum dimensions of 1,900m along strike, 1,200m wide and a vertical extent to 600m.

Molybdenite is the primary molybdenum mineral generally occurring within a stockwork of smoky-gray quartz veins, locally with orthoclase, biotite, sericite or fluorite. A significant component of this stockwork is a well-mineralized, sub-horizontal vein set with vein widths generally between 1 and 10mm, but locally wider. The sub-horizontal vein set is commonly cut by steep-dipping, narrow 1mm to 3mm quartz veins, which also contain molybdenite, although generally not as much as the shallow-dipping vein set. Molybdenite also occurs as coatings on quartz-free fractures, massive veinlets, rosettes, and clots. There is generally no significant disseminated molybdenite. The deposit is geochemically "clean".

1.5 Sampling and Data Verification

The authors have reviewed the extensive historical information that is available describing sampling and analytical procedures. During the period 2004 through 2008 the exploration program operated by Adanac included quality control and quality assurance ("QA/QC") programs that were and would still be considered consistent with modern practice. Earlier operators in the 1970s and 1980s did work that was of good quality by the standards of the times, including check sampling, check analyses and bulk sampling. Where original QA/QC data are available, the authors have done their own evaluations of the data rather than rely on earlier opinions.

Original digital data is available in primary sources for most of the work done in the 2004 to 2008 period. The authors have used original assay, drill location and downhole survey to check the database used for resource estimation.

For work done in the 1970s and 1980s the authors have checked assays and collar locations using information available in assessment reports filed with the B. C. Ministry of Energy, Mines and Petroleum Resources (now the Ministry of Energy, Mines and Low Carbon Innovation). Much but not all the historical work can be verified in this way.

In the opinions of the authors the quality and documentation of the data used in the resource estimate are suitable for that purpose.

1.6 Metallurgy

All metallurgical testwork is historic but it is substantial. It is expected that a process flow sheet will be standard with some variation of, for example, a gyratory crusher, High Pressure Grinding Rolls ("HPGR"), ball milling, froth flotation, dewatering and drying to produce and package a high-grade molybdenite concentrate (MoS_2). Flotation will comprise rougher/scavenger tank cells where rougher concentrate will be reground in a mill to a much finer state (P80 = 20 microns). Recoveries are projected to be 90% to 92%.

1.7 Resources

Resource estimates completed since the 1970s for the most part support each previous estimate although increasing in size with each progressive exploration and drilling program. All the previous resource estimates are superseded by the estimate presented in this report.

The Effective Date of the Ruby Creek area mineral resource estimate is March 10, 2022. The authors classify resources in order of increasing confidence in the amount and quality of underlying data, and geological interpretations, into Inferred, Indicated, and Measured categories to follow the "CIM Definition Standards - For Mineral Resources and Mineral Reserves" (2014) and therefore Canadian National Instrument 43-101.

Two domains of molybdenum mineralization were defined, a low-grade halo surrounding a higher-grade main zone. The estimate was based on 309 diamond-drill holes, 504 bulk-samples taken from underground workings entered in the estimation database as 17 "drill holes", and four rotary holes with 103 samples. There are 2,083 density measurements from which to determine rock density. Reported resources were estimated by inverse distance to the third power ("ID3") into 10m by 10m by 10m blocks. The Ruby Creek Molybdenum Deposit Mineral Resources are given in Table 1-1.

Table 1-1 Ruby Creek Project Mineral Resource Estimates

Entire Model - Measured			
Cutoff (Mo%)	**Tonnes**	**Mo%**	**lbs Mo (x1,000)**
0.020	49,638,000	0.065	71,351

Entire Model - Indicated			
Cutoff (Mo%)	**Tonnes**	**Mo%**	**lbs Mo (x1,000)**
0.020	319,760,000	0.051	361,640

Entire Model - M & I			
Cutoff (Mo%)	**Tonnes**	**Mo%**	**lbs Mo (x1,000)**
0.020	369,398,000	0.053	432,991

Entire Model - Inferred			
Cutoff (Mo%)	**Tonnes**	**Mo%**	**lbs Mo (x1,000)**
0.020	41,946,000	0.047	43,650

Mineral resources are not mineral reserves and do not have demonstrated economic viability.

1.8 Conclusions and Recommendations

The Ruby Creek molybdenum project is deserving of significant additional work. The Phase I recommended approach has two goals: a Preliminary Economic Assessment ("PEA") to update costs and prices from previous economic studies. The PEA would cost approximately C$360,000. The recommended PEA will also provide guidance for Phase II drilling. Recommended work in Phase II is dominated by drilling, which, regardless of the outcome of Phase I is justified. Only the objective and location Phase II drilling is contingent upon the result of Phase I. That drilling project would cost approximately C$2,600,000. The total recommended program cost is C$2,960,000. If either task is successful, the follow up Phase II work would be substantial and likely cost several times more than what is proposed for these two phases.

2.0 INTRODUCTION (ITEM 2)

The authors, on behalf of Mine Development Associates ("MDA"), a division of RESPEC, have prepared this Technical Report on the Ruby Creek Molybdenum Deposit located in northern British Columbia, Canada (the "Ruby Creek Project") at the request of Stuhini Exploration Ltd. ("Stuhini"), a Canadian company based in Vancouver, BC, Canada. Stuhini is listed on the TSX Venture Exchange (TSX-V: STU). This report has been prepared in accordance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 ("NI 43-101"), Companion Policy 43-101CP, and Form 43-101F1, as amended, and supports the public disclosure of the resources reported herein.

The Ruby Creek Molybdenum Deposit is a porphyry-type stockwork of molybdenite- and quartz-molybdenite-bearing veins. Most of the Deposit forms a sub-horizontal tabular deposit that becomes steeply dipping adjacent to the northeast-striking, northwest-dipping Adera fault zone. The mineralization is associated with granitic rocks of the Mount Leonard stock, which is part of the Surprise Lake Batholith. Within the mineralized body, the rocks are cut by multiple faults and mafic and feldspar porphyritic intrusive rocks, which are also mineralized. The mineralization -reaches maximum dimensions of 1,900m along strike, 1,200m wide and a vertical extent to 600m.

2.1 Project Scope and Terms of Reference

The purpose of this report is to provide an estimate of mineral resources and a technical summary of the Ruby Creek Project, which is located approximately 24km northeast of Atlin, British Columbia. Stuhini is currently exploring the Ruby Creek Project for precious and base metals, while at the same time studying the historically explored molybdenum deposit in Ruby Creek. This Technical Report builds upon and supersedes the Technical Reports of Palmer (2009) and all preceding Technical Reports.

The mineral resources were estimated and classified under the supervision of Steven Ristorcelli, C.P.G and Finley Bakker, P.Geo., independent geologists. Database auditing and quality assurance/quality control ("QA/QC") were done by and under the supervision of Peter Ronning, P.Eng., independent geological engineer. Metallurgical data were reviewed by John Eggert, P.Eng. Mr. Ristorcelli, Mr. Bakker, Mr. Ronning and Mr. Eggert are qualified persons under NI 43-101 and have no affiliations with Stuhini, or their subsidiaries, except that of independent consultant/client relationship. The mineral resources reported herein are estimated to the standards and requirements stipulated in NI 43-101.

The scope of this study included a review of pertinent technical reports and data provided to the authors by Stuhini relative to the general setting, geology, project history, exploration activities and results, methodology, quality assurance, interpretations, drilling programs, and metallurgy. This report is based almost entirely on data and information derived from work done by historical operators and Stuhini. Mr. Ristorcelli, Mr. Bakker and Mr. Ronning have reviewed much of the available data, visited the Project site, and made judgments about the general reliability of the underlying data. Where deemed either inadequate or unreliable, the data were either eliminated from use or procedures were modified to account for lack of confidence in suspect information. Mr. Ristorcelli, Mr. Bakker, and Mr. Ronning have made such independent investigations as deemed necessary in their professional judgment to be able to reasonably present the conclusions, interpretations, and recommendations presented herein.

Ristorcelli and Ronning visited the Ruby Creek Project on September 11 through 13, 2021 accompanied by Ehsan Salmabadi, Vice President Exploration, Janet Miller, Database Manager and Company Geologist and Barry Hanslit, Stuhini co-founder and consultant. This site visit included a review of drill core, field checks of drill collar locations, field visits to the resource area, and visits to other active exploration sites within the Property.

The Effective Date of this Technical Report is March 10, 2022.

2.2 Authorship

Steven Ristorcelli is an independent Professional Geologist who works in association with Mine Development Associates, a division of RESPEC. Peter Ronning is a Professional Engineer practicing as a sole practitioner. Finley Bakker is a Professional Geoscientist and proprietor of Finley Bakker Consulting. John Eggert is a Professional Engineer and President of Eggert Engineering Inc. Mr. Ristorcelli and Mr. Ronning have joint responsibility for sections 1 through 12, 25, 26 and 27. Mr. Ristorcelli and Mr. Bakker have joint responsibility for Section 14.0. Mr. Eggert has responsibility for Sections 13.0, and 17.0.

Throughout this report, the terms "the author" or "the authors" refer to the person or persons having responsibility for the report sections in which the terms appear.

2.3 Nomenclature

Most nomenclature that is unique to this report is defined where first used, but for additional clarity certain terms are explained here.

Ruby Creek Molybdenum Deposit Ruby Creek Deposit Deposit (capitalized)	All these terms refer to the molybdenum mineral deposit that is the principal topic of this report. This same deposit is also known as the "Adanac Molybdenum Deposit", but that name is not used in this report. Where "Adanac" appears in this report it refers to former operators that no longer have involvement in the project described herein.
deposit (all lower case)	May refer to any mineral deposit.
Ruby Creek Property Property (capitalized)	Both these terms refer to the contiguous group of mineral tenures controlled by Stuhini, within which is situated the Ruby Creek Molybdenum Deposit and the Mineral Resource described in this report.
property (all lower case)	Depends on context but may refer to past or present mineral tenures other than those now comprising the Ruby Creek Property.
Ruby Creek Molybdenum Project Ruby Creek Project Project	All these terms refer to the project operated by Stuhini, focused on evaluation of the Ruby Creek Molybdenum Deposit.
project (all lower case)	Depends on context, but may refer to any project of any type.

2.4 Frequently Used Acronyms, Abbreviations, Definitions, and Units of Measure

In this report, measurements are generally reported in metric units. Where information was originally reported in Imperial units, the authors have made the conversions as shown below. In some cases where there are tables of historical resource estimates or production totals, the authors did not convert the original units for historical completeness or to avoid changes to precision due to rounding.

Currency, units of measure, and conversion factors used in this report include:

Linear Measure		
1 centimeter	= 0.3937 inch	
1 meter	= 3.2808 feet	= 1.0936 yard
1 kilometer	= 0.6214 mile	
Area Measure		
1 hectare	= 2.471 acres	= 0.0039 square mile
Capacity Measure (liquid)		
1 liter	= 0.2642 Imperial gallons	
Weight		
1 gram	= 0.03215 troy ounces	
1 kilogram	= 2.205 pounds	
1 tonne	= 1.1023 short tons	= 2,205 pounds

Currency Unless otherwise indicated, all references to dollars ($) in this report refer to currency of the United States.

Frequently used acronyms and abbreviations

3D	three dimensional
BQ	core diameter of 1.433in. or 36.4mm
Ag	silver
Al	aluminum
As	arsenic
Au	gold
Bi	bismuth
Ca	calcium
cm	centimeters
cm^3	cubic centimeters
core	diamond core-drilling method and/or the resulting specimens
C	carbon
^{o}C	degrees Celsius
CRM	certified reference material
Cu	copper
CV	coefficient of variation
F	fluorine
Fe	iron

g	grams
GPS	global positioning system
ha	hectares
HQ	core diameter of 2.500in. or 63.5mm
ICP	inductively coupled plasma analytical method
ICP-MS	inductively coupled plasma mass spectrometry analytical method
in.	inches
K	potassium
kg	kilograms
km	kilometers
km^2	square kilometers
kW	kilowatt
l	liter
lbs	pounds
m	meters
Ma	million annum
mg	milligram
mm	millimeters
Mn	manganese
Mo	molybdenum
NAD 27	North American Datum of 1927 – a survey control datum
NAD 83	North American Datum of 1983 – a survey control datum
NQ	core diameter of 1.875in. or 47.6mm
Nb	niobium
O	oxygen
P	phosphorus
Pb	lead
ppm	parts per million
QA/QC	quality assurance and quality control
Rb	rubidium
S	sulfur
Sb	antimony
Sr	strontium
Std Dev or SD	standard deviation
t	metric tonne or tonnes
Th	thorium
Ton or ton	Imperial short ton
UTM	Universal Transverse Mercator - a plane coordinate survey grid system
V	vanadium
W	tungsten
Zn	zinc

3.0 RELIANCE ON OTHER EXPERTS (ITEM 3)

The report's authors are not experts in legal matters, such as the assessment of the validity of mining claims, mineral rights, and property agreements in British Columbia, Canada or elsewhere. Furthermore, the authors did not conduct any investigations of the environmental, social, or political issues associated with the Ruby Creek Project, and are not experts with respect to these matters. The authors have therefore relied fully upon information and opinions provided by Stuhini, with regards to the following:

- Sections 4.2 which pertains to mineral and land tenure; and
- Section 4.3, 4.4, 4.5 and 4.6 which pertain to legal agreements, encumbrances, environmental permits and liabilities and relations with First Nations.

Mr. Ehsan Salmabadi, P.Geo., Vice President Exploration for Stuhini, has reviewed Section 4.0 and its subsections including Sections 4.2, 4.3, 4.4, 4.5 and 4.6. Mr. Salmabadi has provided the authors with a letter dated April 13, 2022 stating that "the information contained in such sections of the Technical Report are to the best of my knowledge true and accurate."

4.0 PROPERTY DESCRIPTION AND LOCATION (ITEM 4)

4.1 Property Area and Location

The Ruby Creek Property is in the Atlin Mining Division at 59° 42' N / 133° 24'W), within portions of National Topographic Map Sheets 104N/11, 12 and 14 (1:50,000). The road-accessible Property is approximately 24km northeast of Atlin in Northern British Columbia (Figure 4-1). Elevations range from 920m at Surprise Lake to 1940m in the northeast part of the property.

4.2 Mineral Tenure

The Ruby Creek Project consists of a single, irregularly shaped block of 55 mineral tenures covering a nominal[1] area of approximately 28,886ha. It extends from Birch Creek to Surprise Lake and from Mount Barham to Wright Creek in the Surprise Lake environs. Stuhini owns six of the 55 claims totaling 1,897ha, of which one claim was staked by Stuhini in 2020, and the remainder purchased from Brixton Metal Corporation in 2021. Most of the claims and the mine lease have been optioned by Stuhini Exploration Ltd from Global Drilling Solutions Inc. ("Global Drilling") and the details of this 4yr option agreement are provided in Section 4.4. Twenty-eight (28) crown granted claims[2] are overstaked by Global Drilling in the furthest northwest corner of the Property around the historic Ruffner Silver mine as shown in Figure 4-2 outside of the resource area. Stuhini advises the authors that accounting for the crown granted claims, which are owned and controlled by other parties, the Property has an effective area of 28,631ha. As presented by the Company, the property claims are listed in Table 4-1 and shown on Figure 4-2.

The mineralization and published Mineral Resource Estimates for the Ruby Creek Project are located within the mine lease area of the claim package (Figure 4-2 and Figure 4-3).

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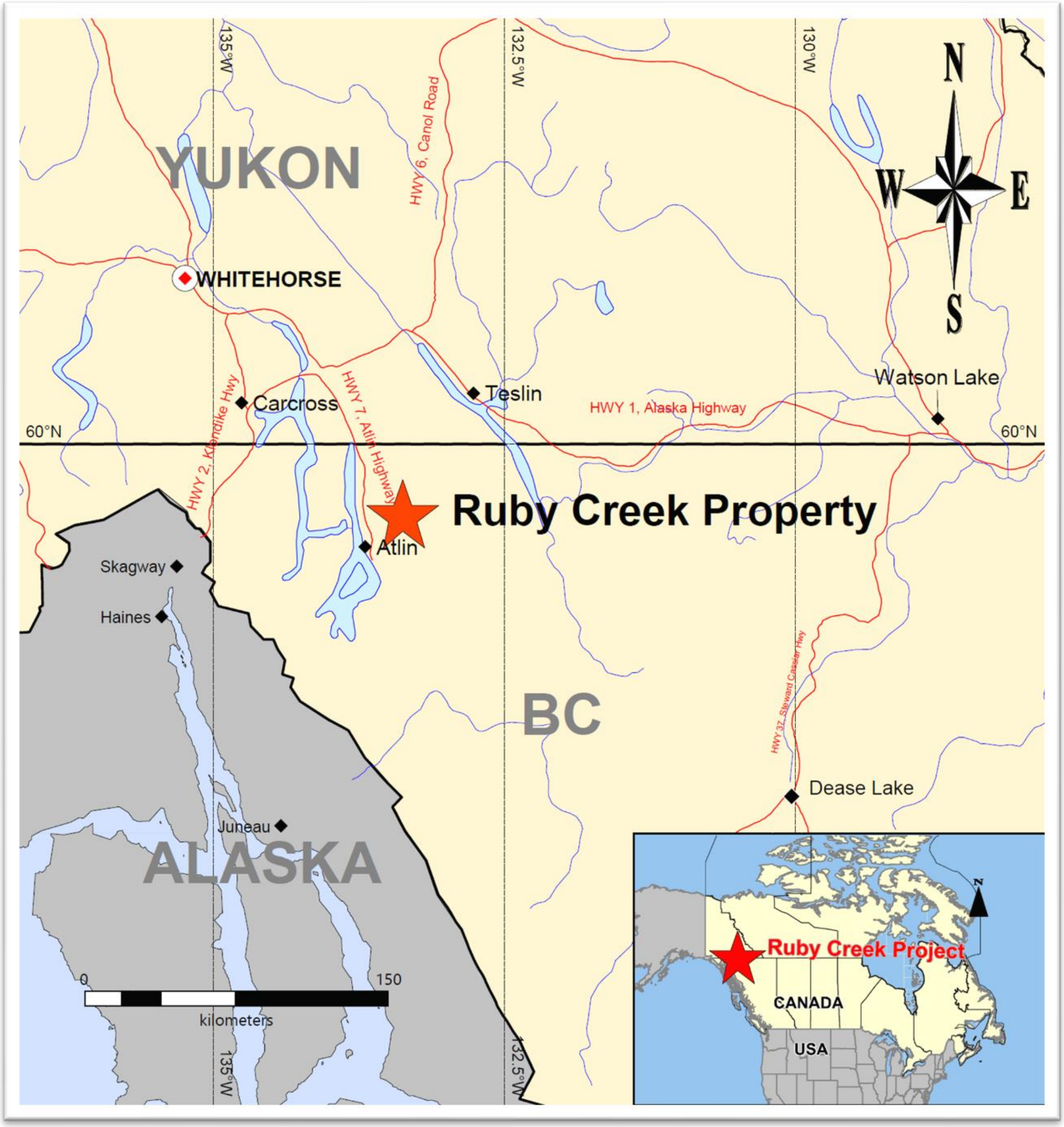
[1] For the purpose of this discussion, the nominal area of a claim is the area attributed to a claim in British Columbia's mineral titles records, which can be found online at: *https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/mineral-titles/mineral-placer-titles/mineraltitlesonline*.

[2] Crown granted mineral claims are an historical form of tenure that allowed the holders of mineral claims to obtain in effect privately-owned real estate with mineral rights. Such grants can no longer be obtained, but many still exist in old mining districts. Where Global Drilling overstaked crown granted claims Global did not acquire rights to any of the areas covered by the crown granted claims.

Figure 4-1 Location Map of Ruby Creek Project



(map provided by Stuhini)

Figure 4-2 Mineral Tenure Location Map, Ruby Creek Project
(*provided by Stuhini*)

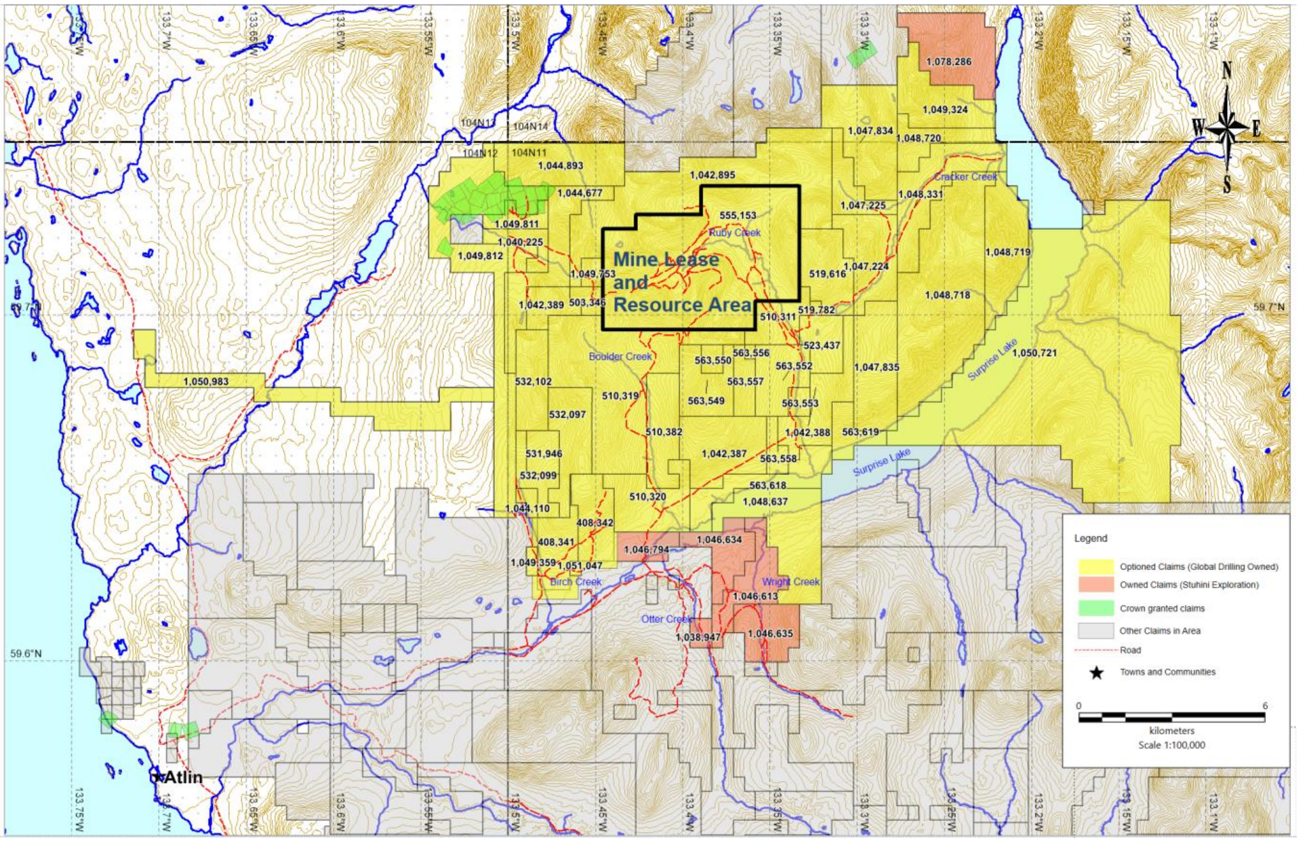


Table 4-1 List of Adanac Mineral Tenures in 2022

(Tenures in Atlin Mining Division)

Tenure	Good to Date	Tenure Type	Hectares	Owner	NSR
408341	30-May-24	Mineral Claim	450.00	Global Drilling	1% *
408342	30-May-24	Mineral Claim	450.00	Global Drilling	1% *
503346	30-May-24	Mineral Claim	81.66	Global Drilling	1% *
510311	30-May-24	Mineral Claim	245.02	Global Drilling	1% *
510319	30-May-24	Mineral Claim	1405.50	Global Drilling	1% *
510320	30-May-24	Mineral Claim	458.19	Global Drilling	1% *
510382	30-May-24	Mineral Claim	376.08	Global Drilling	1% *
519616	30-May-24	Mineral Claim	408.23	Global Drilling	1% *
519782	30-May-24	Mineral Claim	16.33	Global Drilling	1% *
523437	30-May-24	Mineral Claim	228.75	Global Drilling	1% *
531946	30-May-24	Mineral Claim	147.20	Global Drilling	1% *
532097	30-May-24	Mineral Claim	408.81	Global Drilling	1% *
532099	30-May-24	Mineral Claim	163.60	Global Drilling	1% *
532102	30-May-24	Mineral Claim	343.20	Global Drilling	1% *
555153	27-Mar-22	Lease	2466.00	Global Drilling	1% *
563549	30-May-24	Mineral Claim	343.20	Global Drilling	1% *
563550	30-May-24	Mineral Claim	65.36	Global Drilling	1% *
563552	30-May-24	Mineral Claim	343.19	Global Drilling	1% *
563553	30-May-24	Mineral Claim	65.39	Global Drilling	1% *
563556	30-May-24	Mineral Claim	16.34	Global Drilling	1% *
563557	30-May-24	Mineral Claim	147.09	Global Drilling	1% *
563558	30-May-24	Mineral Claim	98.14	Global Drilling	1% *
563618	30-May-24	Mineral Claim	392.70	Global Drilling	1% *
563619	30-May-24	Mineral Claim	179.90	Global Drilling	1% *
1040225	30-May-24	Mineral Claim	146.92	Global Drilling	1% *
1042387	30-May-24	Mineral Claim	556.08	Global Drilling	1% *
1042388	30-May-24	Mineral Claim	408.72	Global Drilling	1% *
1042389	30-May-24	Mineral Claim	179.66	Global Drilling	1% *
1042895	30-May-24	Mineral Claim	1435.83	Global Drilling	1% *
1044110	30-May-24	Mineral Claim	49.09	Global Drilling	1% *
1044677	30-May-24	Mineral Claim	522.44	Global Drilling	1% *
1044893	30-May-24	Mineral Claim	570.96	Global Drilling	1% *
1047224	30-May-24	Mineral Claim	473.50	Global Drilling	1% *
1047225	30-May-24	Mineral Claim	244.76	Global Drilling	1% *
1047834	30-May-24	Mineral Claim	685.04	Global Drilling	1% *
1047835	30-May-24	Mineral Claim	572.04	Global Drilling	1% *
1048331	30-May-24	Mineral Claim	587.46	Global Drilling	1% *
1048637	30-May-24	Mineral Claim	720.29	Global Drilling	1% *
1048718	30-May-24	Mineral Claim	1633.36	Global Drilling	1% *
1048719	30-May-24	Mineral Claim	555.11	Global Drilling	1% *
1048720	30-May-24	Mineral Claim	244.68	Global Drilling	1% *
1049324	30-May-24	Mineral Claim	489.19	Global Drilling	1% *
1049359	30-May-24	Mineral Claim	32.74	Global Drilling	1% *
1049753	30-May-24	Mineral Claim	65.31	Global Drilling	1% *
1049811	30-May-24	Mineral Claim	130.57	Global Drilling	1% *
1049812	30-May-24	Mineral Claim	1290.03	Global Drilling	1% *
1050721	31-Oct-23	Mineral Claim	5311.41	Global Drilling	1% *

Tenure	Good to Date	Tenure Type	Hectares	Owner	NSR
1050983	30-May-24	Mineral Claim	768.22	Global Drilling	1% *
1051047	30-May-24	Mineral Claim	16.37	Global Drilling	1% *
1078286	30-May-24	Mineral Claim	619.3762	Stuhini Exploration	N/A
1038947	30-May-24	Mineral Claim	65.5376	Stuhini Exploration	2%**
1046613	30-May-24	Mineral Claim	376.6705	Stuhini Exploration	2%**
1046634	30-May-24	Mineral Claim	311.0732	Stuhini Exploration	2%**
1046635	30-May-24	Mineral Claim	344.0704	Stuhini Exploration	2%**
1046794	30-May-24	Mineral Claim	180.0708	Stuhini Exploration	2%**

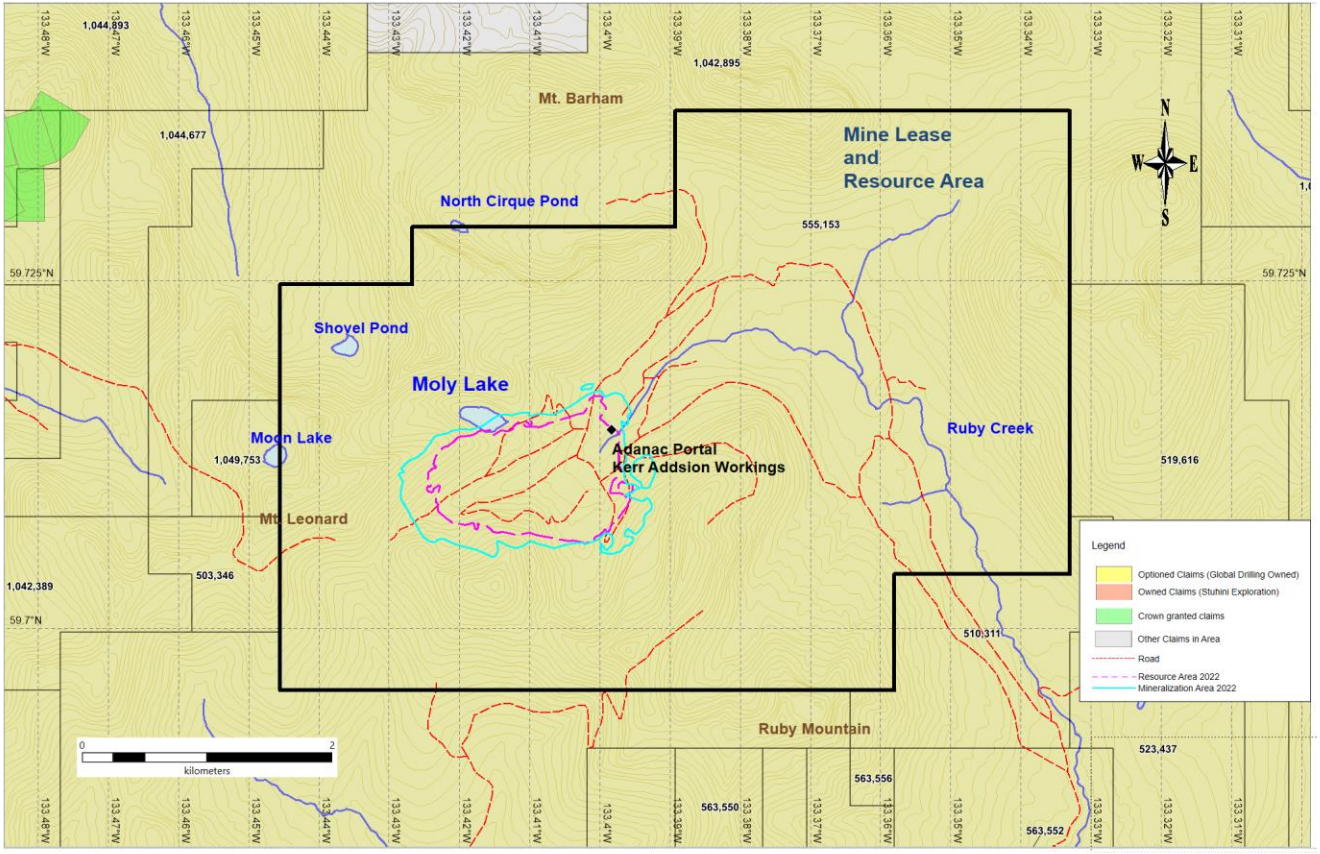
**As per option agreement detailed in section 4.5 ** Purchased from Brixton Metals Corporation (see Section 4.4)*

4.3 Property Boundaries

Stuhini holds a contiguous block of tenures from the historic Ruffner Silver Mine across Surprise Lake and encompassing part of the Birch, Otter and Wright Creek drainages and all the Ruby and Boulder Creek drainages (Figure 4-2). In 2006, Adanac surveyed in the two most important mineral tenures in the central part of the block as District Lots (DL7348 and DL7351). These cover the proposed pit, mill site and tailings pond. In March 2007, the mine lease (555153) (the “Mine Lease”) was issued. It covers the Deposit, the proposed processing areas and encompasses both surveyed lots.

The Ruby Creek Deposit is in the west-central part of the Mining Lease. The Deposit underlies the cirque at the head of Ruby Creek. Kerr Addison’s underground workings are approximately 400m to the southeast of the outflow of a small hanging lake, informally known as Moly Lake (a.k.a. Molly Lake; Figure 4-2 and Figure 4-3).

Figure 4-3 Detail of Mine Lease and Resource Area, Ruby Creek Project
(provided by Stuhini)



4.4 Royalties and Other Agreements

Forty-nine (49) of the tenures that comprise the Ruby Creek Project are owned by Global Drilling and are under option by Stuhini. Subject to the terms of an option agreement with Global Drilling, the Company can earn a 100% interest in the Project.

A summary of the option agreement between Global Drilling ("Optionor") and Stuhini ("Optionee") dated 29th July 2019 is presented below.

- The Optionor hereby grants to the Optionee the sole and exclusive right to acquire one hundred percent (100%) interest in the Property, free and clear of liens, royalties, claims, rights of any other person, other than permitted liens and the NSR (the "Option").
- The Option shall be in effect for four (4) years from the date that the Option is accepted or approved by the Exchange (the "Approval Date"). The Exchange approved the Option on December 31, 2019.
- In order to exercise the Option, the Optionee must according to the terms and conditions of the Option deliver to the Optionor common shares of the Optionee ("Shares") and cash payments spread over 4 years according to the following schedule:

1. Approval Date – 800,000 Shares – Issued to Global Drilling
2. 1st Anniversary of Approval Date – 1,250,000 Shares – Issued to Global Drilling
3. 2nd Anniversary of Approval Date – 1,750,000 Shares and $120,000 – Shares issued and Promissory Note issued to Global Drilling
4. 3rd anniversary of Approval Date - 1,750,000 Shares and $300,000
5. 4th anniversary of Approval Date – 1,750,000 Shares and $640,000

- During the term of the Option, the Optionee will have the exclusive right to enter the Property to conduct mining work, erect mining facilities it considers advisable, and conduct bulk sampling.
- Should the Option be fully exercised, the Optionor is entitled to a 1% net smelter royalty (“NSR”).
- The Optionor and the Optionee have the right to terminate the agreement in writing if the terms of the Option are not met.

It is reported by Global Drilling there are no underlying royalties, back-in rights, payments, or other agreements to which the Property is subject apart from those in the Stuhini Option agreement which includes a 1% NSR.

The claims (1038947, 1046613, 1046634, 1046635 and 1046794) purchased from Brixton Metals Corporation (“Brixton”) are subject to a 1.0% NSR payable to Brixton and an additional 1% NSR reserved to other arm’s length parties from whom Brixton originally purchased the claims.

Claim 1078286 was staked by the Company and has no underlying royalties.

4.5 Environmental Requirements and Other Permits

The Project received its Mines Act Permit (M-231) on June 24, 2008, that remains in good standing. The Project’s Environmental Assessment Certificate, which has since expired, was approved on September 10, 2007 (#M07-01). A Mines Act Permit is required to construct and operate a mine in BC. It also specifies the requirements for reclamation at the end of the mine life. Mines Act Permit M-231 allowed the construction and operation of the mine. When economic factors became less favorable for construction and operation of the mine in 2015, M-231 was amended to provide for care and maintenance of the site. Future development will require a submission for amendment back to an operating state.

Exploration is conducted under Stuhini’s Mines Act Permit MX-1-595 that expires March 31, 2026. A reclamation bond is in place with BC for permit M-231 by Global Drilling in the amount of C$100,000.00, and a reclamation bond is also in place for MX-1-595 on behalf of Stuhini in the amount of C$25,000.00.

Stuhini is not aware of any existing environmental liabilities on the Property.

4.6 First Nations

The project is located within the Traditional Territory of the Taku River Tlingit First Nation as identified in the Statements of Intents of the First Nations. The Taku River Tlingit First Nation maintains an office located in Atlin, BC and has been consulted on all existing permits and applications.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY (ITEM 5)

5.1 Accessibility and Infrastructure

The Ruby Creek Project is accessible via road from Atlin. By road the distance from the intersection of the Atlin Highway and Surprise Lake Road to the western edge of the property just past the Surprise Lake Bridge is approximately 19km on a public road. From the same intersection to the center of the Deposit is approximately 35km. The approximately 16km from the Surprise Lake Bridge to the Deposit is a mine access road built by Adanac in 2007/2008. Atlin is accessible via 100km of all-weather road south of Whitehorse, Yukon, and 90km of well-maintained chip-seal road, the Atlin Highway, south of Jakes Corner.

Kerr Addison's underground workings and pilot tailings pond are the only infrastructures remaining on the site. In 2007, Adanac moved its core processing building and drill-core racks off the Property, down to company-owned land close to Surprise Lake. Global Drilling has subsequently moved all drill core to secure storage on privately-owned land within the Property.

The town of Atlin is located within the Traditional Territory of the Taku River Tlingit First Nation as identified in the Statements of Intents of the First Nations. It is also a source for labor, fuel, groceries, accommodation, and charter aircraft services. Atlin has a BC Government Agent's office, Royal Canadian Mounted Police office, a Taku River Tlingit First Nations office, and a health clinic. Atlin is a three-hour drive from tidewater at Skagway, Alaska, and two hours by highway to the territorial capital of Whitehorse, Yukon. Whitehorse is the major supply center for the region, with daily commercial flights to Vancouver, British Columbia, and other southern Canadian hubs. Whitehorse also had the fastest growing population in Canada in 2021, rising more than 12% (Hatherly, 2022).

All power on the Property during the 2006 to 2008 exploration programs was provided by generators. Currently the community of Atlin receives electrical power generated by a 2.1-megawatt Pelton twin turbine generator that draws water from Surprise Lake 16 kilometers up-stream from Atlin town-site. This hydro-electric plant was installed by the Taku River Tlingit First Nation in 2009-2010. The Atlin Hydro Expansion project spearheaded by the Tlingit Homeland Energy Limited Partnership is currently underway and will generate an additional ~8MW of energy by constructing and operating two hydro power plants on Pine Creek and will be constructing ~92 km of transmission line along Atlin Road to deliver power to the Yukon (THELP, 2022).

Allowing for inliers such as the crown grants not controlled by Stuhini, the mineral claims owned or controlled by Stuhini cover an approximate area of 284.9km^2, of which 24.66km^2 are a surveyed Mining Lease. The Mining Lease was deemed sufficient to accommodate the mining infrastructure planned by a prior operator, Adanac, in 2009. It is reasonable to expect that should a larger area than contemplated by Adanac be required, the Mining Lease and the much larger claim block offer ample space. Any infrastructure outside the Mining Lease would probably require additional permitting.

The Property has an abundance of fresh water in Surprise Lake, Molly Lake, Ruby Creek, Boulder Creek, Cracker Creek, Birch Creek and others.

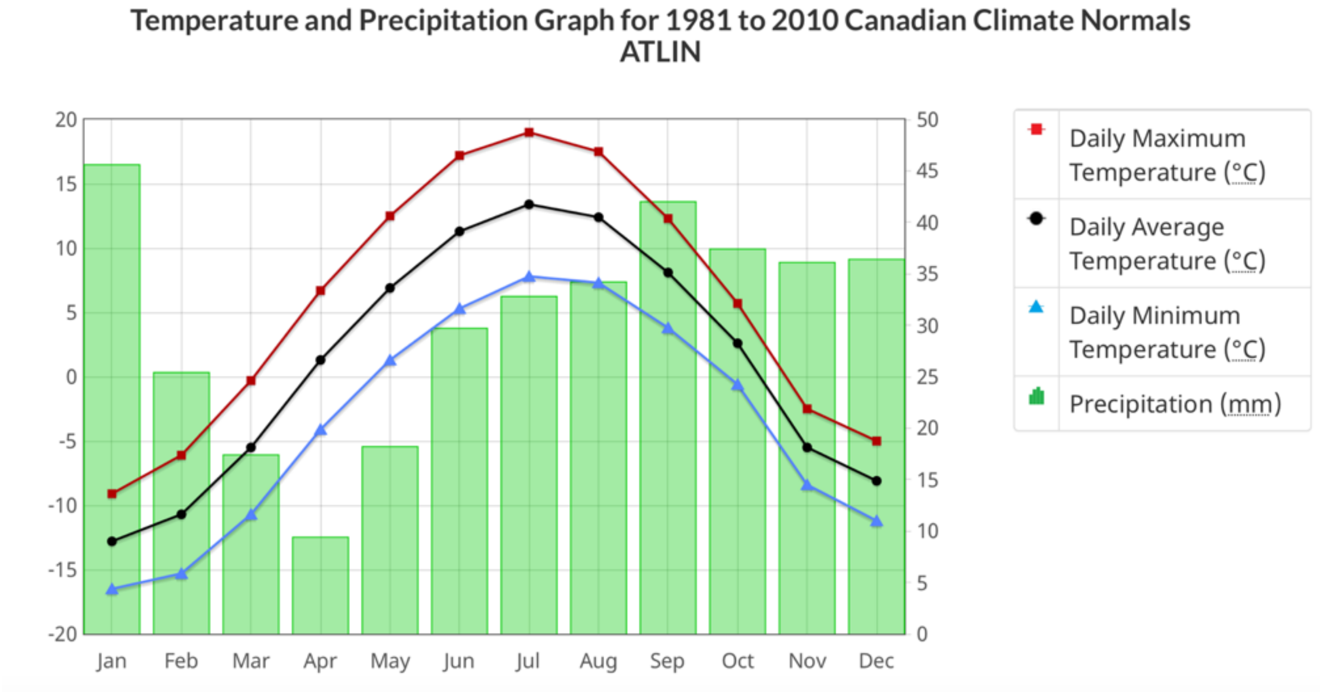
5.2 Climate, Vegetation and Physiography

The Ruby Creek Property is located within the Northern Alplands Biotic Area (alpine terrain) at an approximate elevation of 1,500m. The headwaters of Ruby Creek are located within the Property boundaries and flow into Surprise Lake as illustrated on Figures 4-2 and 4-3. The deposit underlies a flat, relatively unvegetated cirque near the head of the valley. The walls of the cirque are moderately steep, but the floor is glacially scoured and flat (see photograph on report cover).

The Property encompasses three Biogeoclimatic Zones: Boreal Altai Fescue Alpine ("BAFA"), Spruce-Willow-Birch ("SWB"), and Boreal White and Black Spruce ("BWBS"). The BWBS is present at the lowest elevations of the Property, along the shoreline of Surprise Lake. The Property is characterized by a temperate climate with mild summers averaging 200mm of rain and average summer temperatures between 7˚C- 19˚C with recorded highs of 31˚C. Winters tend to be cold and windy with 164mm snow and average temperatures ranging from -2˚C to -16˚C and a record low of -50˚C.

The graph in Figure 5-1 shows climate data for the Atlin area based on data from Environment Canada.

Figure 5-1 Temperature and Precipitation for 1981 to 2010



The ideal exploration and mining operating season in the Atlin region extends from late March/early April to late October during which time the mean daily temperatures are generally above freezing. The summer season is also enhanced by long hours of daylight - up to 20 hours in June and July. A limited mine-site weather-monitoring excerpt from the updated feasibility study by Rick Alexander in 2007 revealed that the resource area is annually 3°C colder than Atlin townsite and roughly 5°C cooler in the summer. The mean daily temperature rises above freezing in the resource area from June to September, but freezing temperatures can be encountered in any month. Temperature extremes in the area of interest can range from -53°C to +28°C. Historical precipitation data in the resource area over the summer months indicated the Ruby Creek had 1.6 to 2.2 times the rainfall measured in the Atlin townsite and the estimated mean annual precipitation was 715 mm (Alexander, 2007).

6.0 HISTORY (ITEM 6)

6.1 Ownership and Exploration History

Prospecting for placer gold in the Atlin area began in 1898, and the Ruby Creek Molybdenum Deposit was discovered in 1905. The Ruby Creek Deposit saw limited exploration prior to 1967, when it was staked by Adanac Mining and Canadian Johns Manville Limited. Adanac Mining acquired the controlling interest the following year, and in the following two years drilled 80 holes for an aggregate length of 12,775m. It optioned the property to Kerr Addison in 1970 (Sutherland Brown, 1970; Chapman et al., 1971).

Kerr Addison drilled another 47 diamond-drill holes for a total depth of 5,626m and drove 589m of drift, 246m of crosscut, and 281m of raise in the higher-grade core of the deposit, which underlies the floor of the valley. It extracted 9,545 tonnes of ore from the crosscuts and six raises and processed them on site to evaluate the nugget effect caused by coarse-grained molybdenite (Janes, 1971). Chapman et al. (1971) completed a feasibility study in 1971 and deemed the deposit to be uneconomic for reasons of location, infrastructure, and power costs. Kerr Addison relinquished ownership of the property.

In 1973, Climax drilled two diamond-drill holes for a total of 1,524m (Stewart, 1973). In 1974 Climax drilled seven holes and deepened two others, for a total of 1,407m (Ganster, 1974)[3]. Climax later released its option, but its staff went on to publish the first comprehensive geological description of the deposit (White et al., 1976). The property then remained dormant until metal prices improved in the late 1970s.

In 1978, Placer re-evaluated Kerr Addison's feasibility study, optioned the property and started a full-scale technical and socio-economic review. In 1979, Placer drilled 6,028m in 49 diamond holes in and around Kerr Addison's proposed initial pit (Tennant, 1979), and the following year it drilled 4,858m in 27 holes, in and around the margins of its proposed ultimate pit (Pinsent, 1980). Although Placer nearly finished all the work required for a formal bankable feasibility study, the study was never completed because the price of molybdenum, which had been rising in the 1970s, dropped sharply in 1982 to 1983. Placer held on to the option for a few years, but eventually returned the property to Adanac Mining. The claims lapsed in the late 1990s.

Andris Kikauka staked the deposit for Stirrup Creek Gold Ltd. in 2002. The authors are uncertain of the relationship between Stirrup Creek Gold Ltd. and Adanac Gold Corporation, which later became Adanac Molybdenum Corporation ("Adanac") but assessment reports from 2004 through 2008 mention only Adanac as the owner. In 2003, Adanac compiled a considerable amount of existing drill data, which included: the results of the Kerr Addison's work (from a file in the possession of Dr. Alastair Sinclair, formerly with the Department of Earth and Ocean Science, University of British Columbia (Sinclair, 2005)), a portion of Climax's drilling results (obtained from assessment reports), and Placer's results (also obtained from assessment reports). Adanac worked on a scoping study that led to the 2004 drill program. The program had three objectives: 1) to assess the quality of the old assay data, 2) to fill gaps in data

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[3] The present authors note that while the two assessment reports, Stewart (1973) and Ganster (1974), list eleven drill holes in total, the current project database contains only nine holes attributed to Climax. It is possible but the authors cannot prove that the two holes which Climax deepened in 1974 are attributed in the database to Kerr Addison.

distribution, and 3) to improve the company understanding of the extent of the deposit. In 2004, Adanac drilled 38 holes (including two redrills) for 9,087m. The program was designed with input on QA/QC procedures from Amec Americas Limited ("AMEC"), who later estimated the Mineral Resources reported in a NI 43-101 Technical Report (Blower, 2005).

In 2005, Adanac drilled 8,983m in 36 holes in-and-around the periphery of the previously proposed open-pit (Pinsent, 2005). Later that year, Adanac drilled another 19 holes for a total of 4,984m. Seven holes were collared in the proposed main pit area to provide material for metallurgical testwork and better understanding of the deposit. Six holes were angled into the walls of the proposed pit for geotechnical considerations, and six were drilled as exploration holes.

In 2006, Adanac concentrated its drilling in the main pit area, in the vicinity of the underground workings, where previous work by Kerr Addison and Placer had established the presence of a significant volume of relatively higher-grade mineralization. In total, the company drilled 3,920.7m in sixteen diamond-drill holes.

In 2007, Adanac focused its attention on the north zone, a block of mineralization that was interpreted to have been faulted down adjacent to the northwest margin of the proposed pit. Adanac also completed a condemnation drilling program farther down the valley (Pinsent, 2008b). Between the start of the 2007 program and the completion of the condemnation drilling in 2008, E. Caron Diamond Drilling Ltd. and Foraco (Connors) Drilling Limited completed 22 diamond-drill holes for a total of 6,550m.

In the spring of 2008, Adanac drilled in the north zone and the main deposit area. Foraco (Connors) Drilling Limited diamond-drilled 14,700m in 38 holes.

Adanac fell into receivership in late 2008 and the Ruby Creek Molybdenum Deposit was purchased in 2016 by Global Drilling. Global Drilling optioned the Ruby Creek Molybdenum Deposit and a substantial land package around it, now referred to as the Ruby Creek Project, to Stuhini Exploration Ltd. in 2019. Stuhini's focus has been on grass-roots precious metals exploration although the Ruby Creek Molybdenum Deposit has become of significant interest since 2021 when molybdenum prices began to climb.

6.2 Historical Resources and Reserves

Following systematic drilling and bulk sampling by Adanac Mining and Kerr Addison between 1969 and 1971, Kerr Addison retained Chapman, Wood & Griswold (Chapman et al., 1971) to undertake a feasibility study. That study showed the project to be uneconomic at the time due mainly to its remote location, lack of cheap power, and high transportation costs. Resources were not reported in that study. Chapman et al. (1971) wrote that the 1970 bulk sampling program demonstrated that molybdenum was lost from the drill core during drilling, so they adjusted the diamond drill core grade upward. The reserve Chapman et al. (1971) reported using a "Variable Adjustment" factor, which factors grades differently depending on the sample grade, is given in Table 6-2.

Placer evaluated the property in 1979 and 1980, but shelved plans for production when the price of molybdenum dropped in the early 1980s. Placer reported “geological ore reserves” of 186,831,000 grading 0.061% Mo (Table 6-1). Placer also reported “mineable reserves” of 151,971,000 tonnes grading 0.063% Mo at a cut-off grade of 0.04% Mo and a strip ratio of 1.43:1 (Table 6-2). Placer kriged their estimate into 30m by 30m by 12m blocks. A 12:1 search ellipse was applied during estimation with 50ft (15.24m) in the vertical and 600ft (182.88m) in the horizontal. All material north of the Adera fault was considered barren. The Placer model extended down to 1,292m elevation, about 150m below the valley floor. They used 2.65g/cm^3 for bedrock and 1.8g/cm^3 for alluvium (Brunette, J. A., 1980). The terms “geological ore reserves” and “mineable mineral reserve” are not defined terms in compliance with “CIM Definition Standards - For Mineral Resources and Mineral Reserves” (2014) (“CIM Standards)”. A qualified person has not done sufficient work to classify Placer’s estimate as current mineral resources or mineral reserves. Stuhini is not treating Placer’s estimate as current mineral resources or mineral reserves.

After Adanac acquired 100% ownership of the Ruby Creek Molybdenum Deposit in 2002, the company reviewed a substantial amount of old technical data and conducted their first drilling program in 2004. The following year independent consultant AMEC, using new and old data, estimated Mineral Resources reported in a NI 43-101 Technical Report (Blower, 2005). In May 2005, Adanac announced that the deposit had a Measured plus Indicated resource of 205,100,000 tonnes grading 0.062% Mo at a cutoff grade of 0.04% Mo and an Inferred resource of 20,700,000 grading 0.057% Mo (Table 6-1). Adanac’s 2005 resource estimate was prepared in compliance with the CIM Standards that were current at the time. However considerable work has been done since that time and Stuhini is not treating the 2005 estimate as current mineral resources or mineral reserves.

In 2005, Adanac diamond-drilled an additional 4,984.1m in 19 drill holes. Adanac revised the estimate and completed a full feasibility study. The feasibility study by Wardrop Engineering Inc. (“Wardrop”) and others reported a Measured and Indicated 206,375,000 tonnes grading 0.063% Mo at a cutoff grade of 0.04% Mo and an Inferred resource of 33,067,000 tonnes grading 0.06% Mo (Table 6-1). They also reported open pit Proven plus Probable reserves including stockpiles of 143,705,000 tonnes grading 0.059% Mo at 0.04% Mo cut-off deemed sufficient to feed a 20,000 tonnes/day flotation mill for approximately twenty years. The study presented an estimated strip ratio of 0.95 (waste) to 1.0 (ore) (Table 6-2). (Wardrop Engineering, 2006). These resource and reserve estimates were prepared in compliance with the CIM Standards that were current at the time. However considerable work has been done since that time and Stuhini is not treating these estimates as current mineral resources or mineral reserves.

In 2007, an updated resource estimate completed by Golder reported Measured and Indicated Resources of 212,907,000 tonnes grading 0.063% Mo at a cutoff grade of 0.04% Mo along with Inferred resources of 24,973,000 tonnes grading 0.054% Mo (Table 6-1). This was followed by a Technical Report by Adanac’s in-house professional staff, G&T Metallurgical Services Ltd. (“G&T”), SGS MinnovEX (“SGS”), Wardrop, Golder, Klohn Crippen Berger Consultants Ltd. (“Klohn Crippen”), and the CPM Group (“CPM”). The study determined Proven Reserves of 43,879,000 tonnes grading 0.072% Mo, Probable Reserves of 87,513,000 tonnes grading 0.055% Mo along with stockpile-grade Proven Reserves of 11,274,000 grading 0.049% Mo and stockpile-grade Probable Reserves of 15,019,000 grading 0.039% Mo or a total Proven and Probable 157,685,000 tonnes grading 0.058% Mo (Table 6-2). (Palmer, 2007).

Adanac's 2007 resource and reserve estimates were prepared in compliance with the CIM Standards that were current at the time. However, more work has been done since that time and Stuhini is not treating the 2007 estimates as current mineral resources or mineral reserves.

Golder updated the resource estimate yet again and Adanac announced in February 2009 a Measured plus Indicated resource of 275,354,000 tonnes grading 0.067% Mo at a 0.04%Mo cutoff and Inferred resources of 39,076,000 tonnes grading 0.062% Mo (Table 6-1). Golder's 2009 resource estimate was prepared in compliance with the CIM Standards that were current at the time. There has been no additional drilling within the resource area since that time, but Stuhini and the authors have reviewed all the available data and the authors have prepared a new resource estimate, as described in this report. Stuhini is not treating the 2009 estimate as current mineral resources.

The estimate presented in Section 14.0 of this report supersedes all previously completed and reported resource estimates.

6.3 Production

In 1971, Kerr Addison drove 589m of drift, 246m of crosscut, and 281m of raise in the higher-grade core of the deposit. They extracted 9,545 tonnes of ore from the crosscut and six raises and processed them on site to evaluate the nugget effect caused by coarse-grained molybdenite (Janes, 1971).

6.4 Feasibility Studies

A feasibility study was done for Kerr Addison in 1971 (Chapman et al., 1971). Placer, circa 1980, did nearly all the work required for a feasibility study but did not complete it due to adverse molybdenum prices (noted by Pinsent, 2005). In the mid-2000's Adanac did scoping and pre-feasibility work, leading to a feasibility study issued in 2006 with an update in 2007 (Philip, 2004, Golder, 2005, Wardrop 2005, Golder 2006, Wardrop, 2006, Alexander (Wardrop), 2007).

All the feasibility studies noted above are historic and are not current. As of the date of this report no current feasibility study exists.

Table 6-1 Historic Mineral Resource Estimates

1980			
Placer "Geological Ore Reserves"			
Cut-off (Mo%)	Tonnes	Mo%	Mo (lbs)
0.04	186,831,000	0.061	251,254,000
2005			
Adanac Measured and Indicated Resources			
Cut-off (Mo%)	Tonnes	Mo (%)	Mo (lbs)
0.04	205,100,000	0.062	278,100,000
Inferred			
0.04	20,700,000	0.057	26,000,000
2006			
Adanac Measured and Indicated Resources			
Cut-off (Mo%)	Tonnes	Mo (%)	Mo (lbs)
0.04	206,375,000	0.063	285,604,000
Inferred			
0.04	33,067,000	0.060	43,740,000
2007			
Adanac Measured and Indicated Resources			
Cut-off (Mo%)	Tonnes	Mo (%)	Mo (lbs)
0.04	212,907,000	0.063	295,699,000
Inferred			
0.04	24,973,000	0.054	29,730,000
2009			
Adanac Measured and Indicated Resources			
Cut-off (Mo%)	Tonnes	Mo (%)	Mo (lbs)
0.04	275,354,000	0.067	407,911,000
Inferred			
0.04	39,076,000	0.062	53,719,000

Notes: Placer's 1980 estimate was described as a "geological ore reserves" which is not a defined term in compliance with "CIM Definition Standards - For Mineral Resources and Mineral Reserves" (2014). A qualified person has not done sufficient work to classify Placer's estimate as current mineral resources or mineral reserves. Stuhini is not treating Placer's estimate as current mineral resources or mineral reserves.

Adanac's resource estimates were done in compliance with the CIM Standards as the standards were at the time. However, Stuhini is not treating any of Adanac's estimates as current mineral resources.

The resource estimate described in Section 14.0 of this report supersedes all prior estimates.

Table 6-2 Historic "Reserve” Estimates

<table>
<tr><th colspan="5">1971</th></tr>
<tr><td colspan="5">Kerr Addison "Mineable Open Pit Reserves"**</td></tr>
<tr><td>Cut-off (Mo%)</td><td>Tonnes</td><td>Mo%</td><td>Mo (lbs)</td><td>Strip Ratio</td></tr>
<tr><td>NA</td><td>104,234,000</td><td>0.16</td><td>333,548,800</td><td>1.25:1</td></tr>
<tr><th colspan="5">1980</th></tr>
<tr><td colspan="5">Placer "Mineable Reserves"**</td></tr>
<tr><td>Cut-off (Mo%)</td><td>Tonnes</td><td>Mo%</td><td>Mo (lbs)</td><td>Strip Ratio</td></tr>
<tr><td>0.04</td><td>151,971,000</td><td>0.063</td><td>211,074,000</td><td>1.43:1</td></tr>
<tr><th colspan="5">2006</th></tr>
<tr><td colspan="5">Adanac Proven and Probable Reserves</td></tr>
<tr><td>Cut-off (Mo%)</td><td>Tonnes</td><td>Mo%</td><td>Mo (lbs)</td><td>Strip Ratio</td></tr>
<tr><td>0.04</td><td>143,705,000</td><td>0.059</td><td>186,921,000</td><td>0.95:1</td></tr>
<tr><th colspan="5">2007</th></tr>
<tr><td colspan="5">Adanac Proven and Probable Reserves</td></tr>
<tr><td>Cut-off (Mo%)</td><td>Tonnes</td><td>Mo (%)</td><td>Mo (lbs)</td><td>Strip Ratio</td></tr>
<tr><td>0.04</td><td>157,685,000</td><td>0.058</td><td>200,856,000</td><td>1.1:1</td></tr>
</table>

Notes: Kerr Addison’s 1971 estimate was described as “mineable open pit reserves”, which is not a defined term in compliance with the CIM Standards.

Placer’s 1980 estimate was described as “mineable reserves”, which is not a defined term in compliance with the CIM Standards.

A qualified person has not done sufficient work to classify either Kerr Addison’s or Placer’s estimate as current mineral resources or mineral reserves. Stuhini is not treating either Kerr Addison’s nor Placer’s estimate as current mineral resources or mineral reserves.

Adanac’s reserve estimates were done in compliance with the CIM Standards as they were at the time. However, Stuhini is not treating any of Adanac’s estimates as current Mineral Reserves. The authors do not consider the Adanac deposit at Ruby Creek (Ruby Creek Molybdenum Deposit) to have a current Mineral Reserve.

7.0 GEOLOGICAL SETTING AND MINERALIZATION (ITEM 7)

The regional and local geological setting descriptions of the Ruby Creek Molybdenum Deposit are largely taken from reports by Pinsent (2005), Blower (2005) and Palmer (2006 and 2007). Details of the style of mineralization are augmented by the authors and Stuhini geologists. In the authors' opinion, geology of the Ruby Creek Deposit and the controls on mineralization are sufficiently well understood for resource estimation.

7.1 Regional Scale

The Ruby Creek Deposit is in the northwestern corner of British Columbia, approximately 35km by road northeast of Atlin, BC. The regional geology consists of low-grade greenschist-facies (Kikauka, 2002) ophiolitic rocks of the Pennsylvanian- and/or Permian-aged Cache Creek Complex rocks (Monger, 1975). These rocks include serpentinized peridotite, dunite and basalt as well as chert, shale, limestone, and sandstone, and are intruded by two younger batholithic rocks. North of Pine Creek, a Jurassic-age granodiorite to diorite intrusion is known as the Fourth of July Batholith. North and south of Surprise Lake, the stratigraphy is cut by a Cretaceous-age granitic to quartz monzonitic intrusion known as the Surprise Lake Batholith (Figure 7-1). Within the contact aureole of the intrusions, the Cache Creek Complex rocks are metamorphosed to hornfels, marble, and quartzite.

Immediately to the south of the Deposit, the granitic rocks of the Surprise Lake Batholith and Cache Creek Complex rocks are overlain by a sequence of Late Tertiary to Quaternary basalt flows that erupted from multiple edifices, including Ruby Mountain (Figure 7-1). The lower part of the Ruby Creek drainage is filled with columnar basalt and volcanoclastic debris, which unconformably overlie rich placer-gold-bearing gravels. The origin of the gold is debated and one of the more favored arguments is that the gold was sourced from auriferous quartz-carbonate veins hosted by shears that cut Cache Creek Complex rocks strata (Mihalynuk et al, 1992). However, more recent work has encountered gold mineralization hosted in the Surprise Lake Batholith and follow-up work by Sack and Mihalynuk (2003) suggest a placer source related directly to the Surprise Lake Batholith.

7.2 Property Scale

Most of the Ruby Creek Molybdenum Deposit forms a sub-horizontal tabular deposit that becomes in part sub-vertical adjacent to the steeply northwest-dipping Adera fault zone. The mineralization is associated with granitic rocks of the Mount Leonard stock, part of the Surprise Lake Batholith. Table 7-1 summarizes the lithology text codes applied to the 2004 to 2008 campaigns for mapping and core logging. The same codes, where possible, were applied to the older (pre-2004) drill hole data.

Figure 7-1 Geologic Map, Ruby Creek Project
(*Provided by Stuhini*)

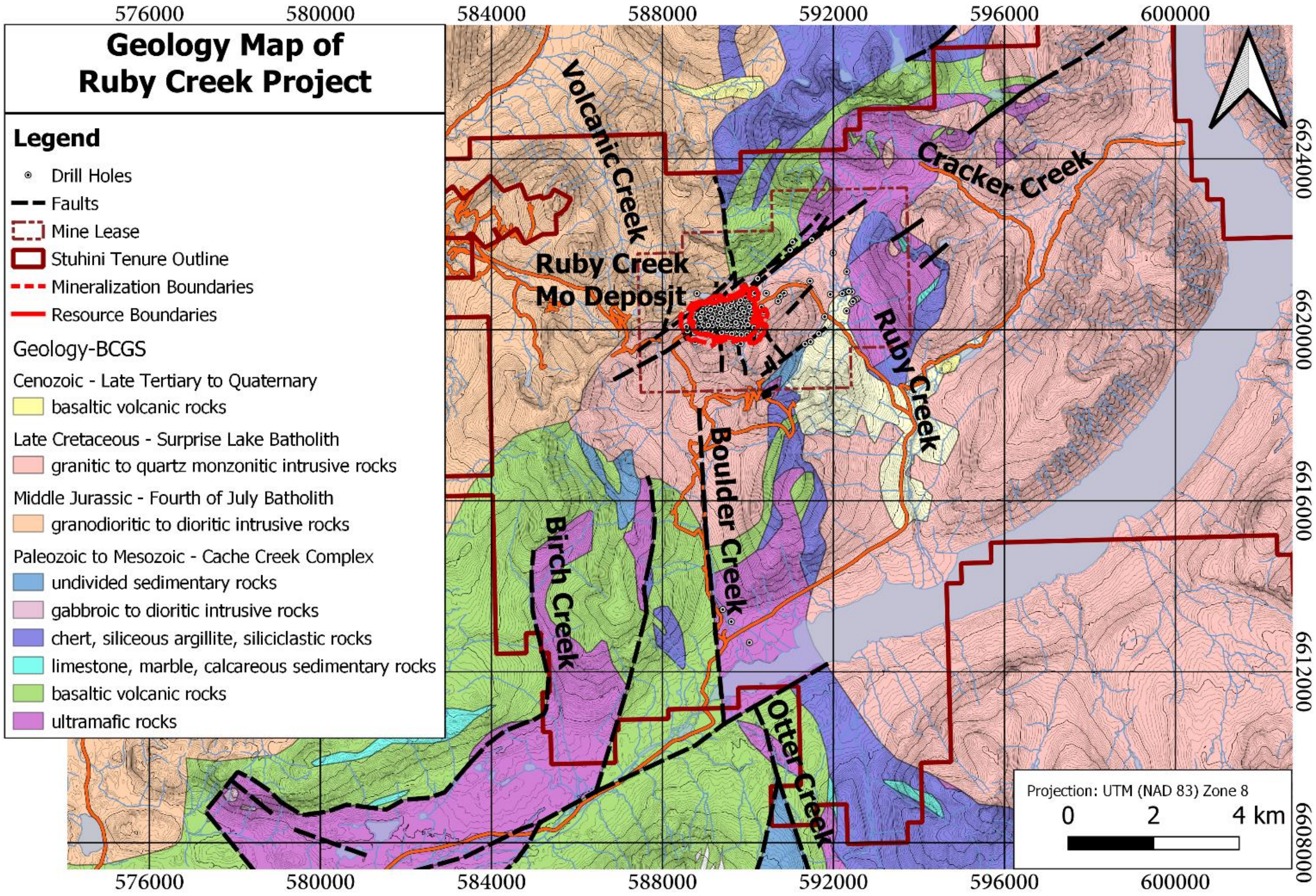


Table 7-1 Lithological Units at the Ruby Creek Project

Text Code	Description
CGQM	Coarse Grained Quartz Monzonite
CGQM-T; CGQM-H	CGQM – Transition and/or Hybrid Variety
CQFP	Crowded Quartz Feldspar Porphyry
SQFP	Sparse Quartz Feldspar Porphyry
MQMP	Mafic Quartz Monzonite Porphyry
SQMP	Sparse Quartz Monzonite Porphyry
CQMP	Crowded Quartz Monzonite Porphyry
FGQM	Fine-Grained Quartz Monzonite
MFP	Megacrystic Feldspar Porphyry
BSLT	Basalt

Within the mineralized body, the rocks are cut by multiple faults, and the deposit is situated near the projected intersection of two major fault systems: the northeast-striking Adera fault zone and the north-south-striking Boulder Creek fault (Smith, 2009 and Bloodgood et al., 1988). The Adera fault zone trends from southwest to northeast and defines much of the southern boundary of the Fourth of July Batholith. Figure 7.1 and Figure 7-2)

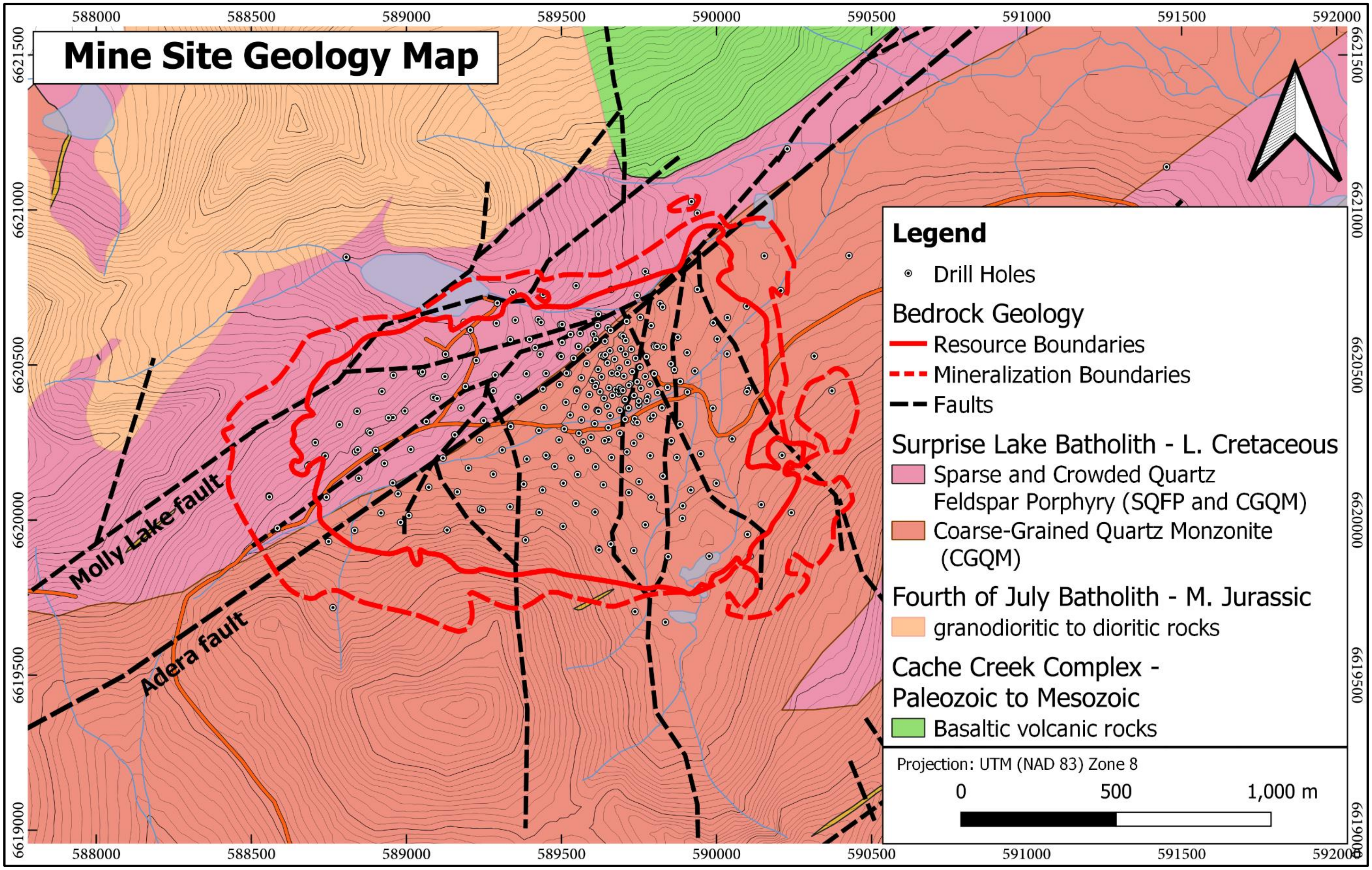
The term "Adera fault zone" is used to indicate the northeast-trending structural zone that can mean either both the combined Molly and Adera faults, or specifically the Adera fault zone, which is the south boundary of the structural zone.

7.2.1 Rock Types

The Mount Leonard stock, part of the Surprise Lake Batholith, underlies the Ruby Creek area and is characterized by two separate pulses of plutonic rock. The first pulse, which includes the contact phase between the stock and the Fourth of July Batholith, consists of a highly variably textured unit that grades from Coarse-Grained Quartz Monzonite ("CGQM") south of the Adera fault zone (Figure 7-2), through a number of texturally transitional phases including Transitional and/or Hybrid Coarse-Grained Quartz Monzonite ("CGQM-T" and "CGQM-H") and Crowded Quartz Feldspar Porphyry ("CQFP") to Sparse Quartz Feldspar Porphyry ("SQFP") upward and outward from the deposit. The latter is well exposed north of the Adera fault zone, near the diorite contact (Figure 7-2). These rock types are granite chemically.

The CGQM consists of pink to gray, equigranular, coarse-grained (0.5 to 3.0cm) quartz monzonite, containing equal amounts of orthoclase, plagioclase and gray quartz (Christopher and Pinsent, 1982). The feldspar is commonly seriate and, locally, includes a small amount of fine-grained (2 to 4mm) matrix. CGQM grades to SQFP with increase in matrix content, and increased isolation of constituent phenocrysts, particularly orthoclase and quartz.

Figure 7-2 Property Geology Map for the Ruby Creek Project including 2007 and 2008 drilling
(*Provided by Stuhini*)



The first phase of intrusion also includes a distinctive Mafic Quartz Monzonite Porphyry ("MQMP") unit that is present east of the Deposit. This distinctive, gray rock shows short intervals of porphyritic texture (phenocrysts 1 to 4mm). It is composed largely of chalky white plagioclase, disseminated biotite and phenocrysts of ragged plagioclase and lesser quartz. This rock (MQMP) underwent brittle deformation prior to emplacement of the second pulse of magma and in several places occurs as dikes and sills. The sills transition to dikes dipping steeply to the northwest parallel to the Adera fault zone.

There are three main distinctive phases to the second intrusive pulse (Figure 7-2). They include Crowded Quartz Monzonite Porphyry ("CQMP"), Sparse Quartz Monzonite Porphyry ("SQMP") and Fine-Grained Quartz Monzonite ("FGQM").

The CQMP has an average of 50% subhedral to euhedral plagioclase, orthoclase, quartz, and biotite phenocrysts (2 to 6mm) in an aphanitic matrix. The SQMP variety is similar but has fewer (10% to 30%) phenocrysts. The rocks are fresher and generally less deformed than the surrounding first phase intrusions, and they have a much finer, more chilled matrix. The SQMP phase is distinctively different to the SQFP phase described above. The second phase porphyries cut out the older rock units and are exposed locally in the floor of the valley. They are also found in the subsurface under the valley floor. Near the head of the valley, CGQM and its variants are intruded by SQMP.

The FGQM is a variably textured aplite that intrudes the CGQM (and its variants) and the MQMP, above and around the sparse and crowded porphyry intrusions. This rock type is not exposed on surface, but it forms a series of approximately 0.05m to 10m thick sills in the higher-grade (northeastern) portion of the deposit. There, some of the rock immediately north of Ruby Creek can best be described as plutonic breccias. FGQM dikes are found elsewhere around the buried sparse-porphyry cupola; however, they are generally less frequent and smaller, and occur as dikes.

In addition to these rock types, drilling at the southwest end of the Deposit has located a Megacrystic Feldspar Porphyry ("MFP"). This rock type is not well constrained by drilling; however, it appears to be a relatively young phase of the intrusion. It consists of rare to abundant large (>10mm), euhedral, orthoclase phenocrysts in a chilled, locally glassy, matrix. Coarse-grained quartz-feldspar pegmatite is also found locally within the deposit. It is not abundant but covers a wide area as small dikes and structurally controlled sills.

Figure 7-3 and Figure 7-4 are geologic cross sections through the Ruby Creek Deposit area. Figure 7-3 is a northwest-to-southeast section showing the mineralized stockwork as a sub-horizontal tabular body of mineralization that underlies the floor of the Ruby Creek valley and then dips down to the northwest along the Adera fault zone. Figure 7-4 is a southwest-to-northeast section south of but parallel to the Adera fault zone and it shows that the mineralization is a sub-horizontal tabular body occurring over the top of the SQMP, irrespective of host rocks.

Figure 7-3 NW-SE Geology Cross Section 1800

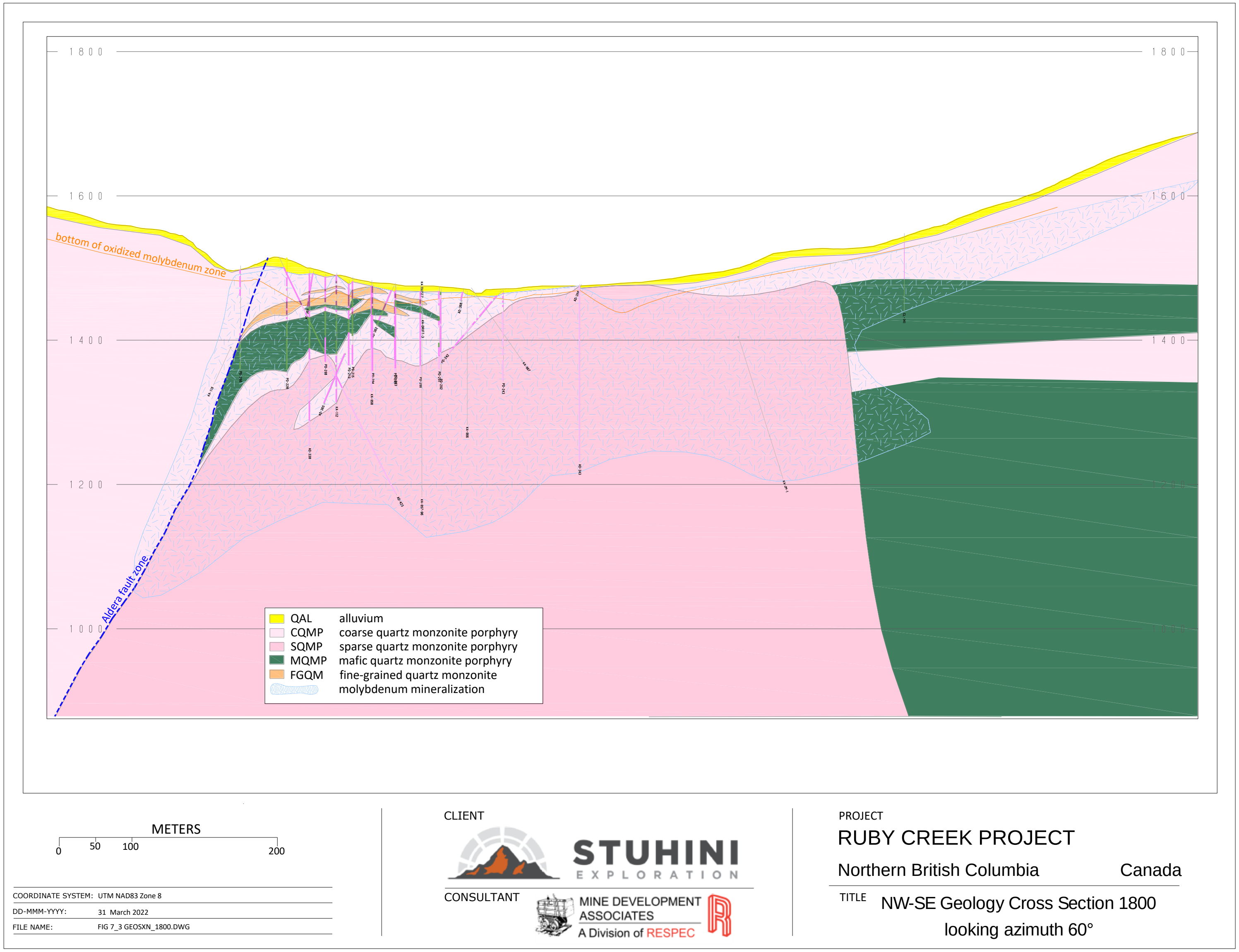
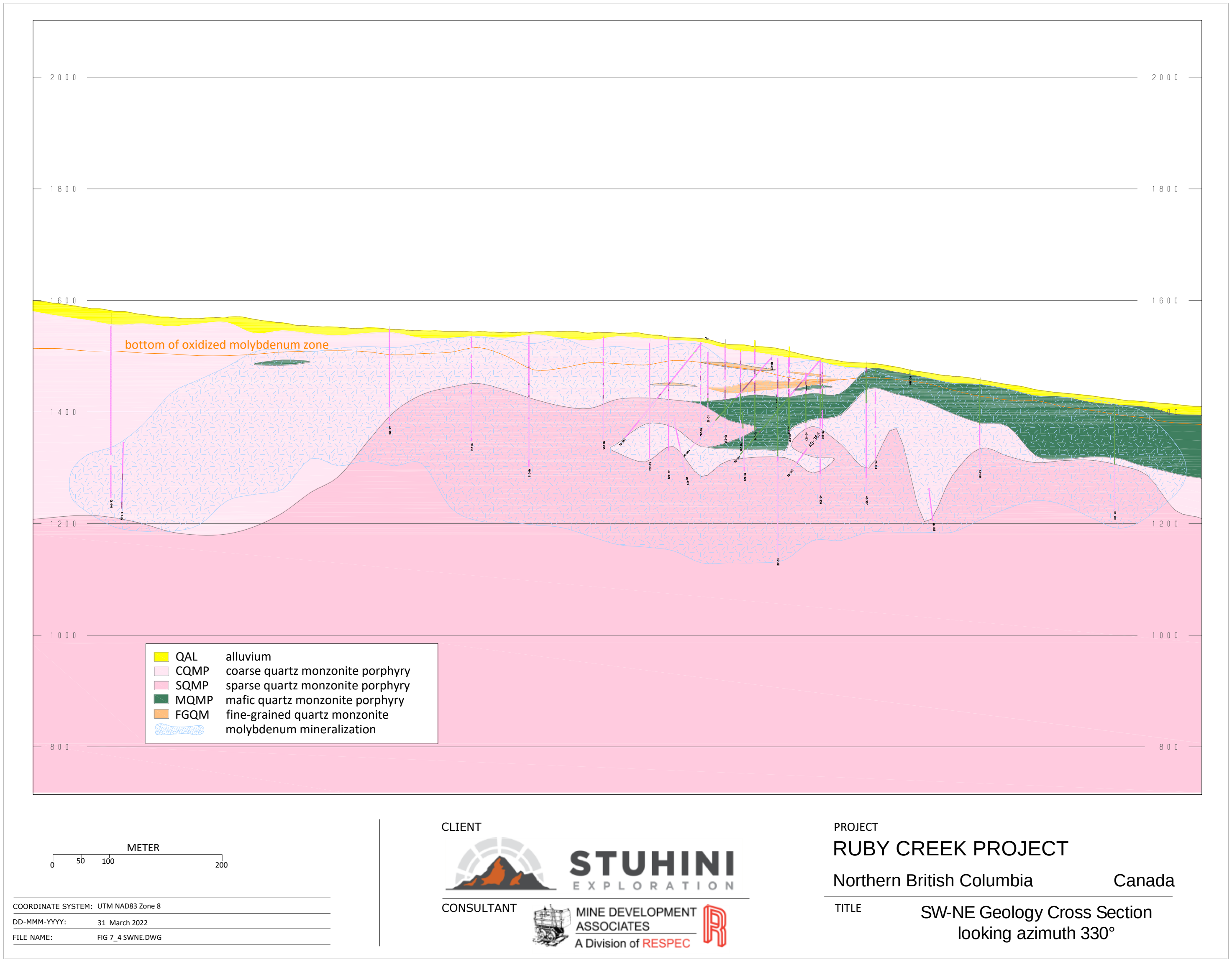


Figure 7-4 SW-NE Geology Cross Section



7.2.2 Structure

Most of the Ruby Creek Deposit forms a sub-horizontal tabular deposit that becomes steeply dipping near the northwest-dipping Adera fault zone. The mineralization is associated with granitic rocks of the Mount Leonard stock, part of the Surprise Lake Batholith. Within the mineralized body, the rocks are cut by multiple faults, the most significant of which is the Adera fault zone. The Adera fault zone strikes northeast and bounds the south side of the Fourth of July Batholith. The Adera fault zone is particularly important because it offsets and/or controls mineralization along the northwest margin of the deposit. It dips steeply to the northwest and appears to have both dropped down the northwestern part of flat tabular mineralization but likely also controlled some mineralization. The evidence for the latter is a preponderance of more steeply dipping mineralized fractures along the projection of the fault. The fact that the Adera fault zone appears to locally control mineralization and offset it suggests that it was active possibly pre- but certainly syn- to post-mineralization (see Section 7.2.5 for additional explanations). There is possibly a fault underlying Boulder Creek in the vicinity of the Deposit. Bloodgood et al., (1988) and Smith (2009) both interpreted a fault in this creek although without providing any evidence. Smith (2009) proposed that such a structure may be associated with late-stage porphyritic and aplitic intrusive rocks (Smith, 2009). Current mapping by Stuhini geologists has yet to identify any strong evidence regarding the nature of fault.

During the 2006 drilling program, eight inclined drill holes (AD-357, AD 359, AD-361, AD-363, AD-364, and AD-366 to AD-368) were surveyed with an optical televiewer camera to better understand the relationship between vein orientations, molybdenum mineralization and to determine dominant dip and dip directions of the mineralized veins. The veins form part of a stockwork. However, the televiewer study identified three dominant vein orientation sets:

- Set 1: 50 to 80° dip/170 to 195° dip direction;
- Set 2: 50 to 85° dip/300 to 310° dip direction (parallel to the Adera fault zone); and
- Set 3: 5 to 15° dip/350 to 010° dip direction (the dominant vein orientation in much of the deposit).

The 2006 drilling results indicate that high-grade mineralization occurred along both sub-vertical and sub-horizontal veins. Angled and vertical holes were drilled in 2007 and 2008 and help to better understand the relationship between sub-vertical and sub-horizontal vein orientations and higher-grade molybdenum mineralization. The structural data collected from the inclined holes were based on veins of three size ranges: <5 mm, 5-10mm and >10mm. Set 3 in the list above, the sub-horizontal veins, had the largest number of veins identified in the analysis, which supports previous geologic interpretations of most past operators that the bulk of molybdenum mineralization in the Deposit is hosted in these sub-horizontal veins. A study conducted by the authors indicated that, on average, angled drill holes are slightly higher grade than vertical drill holes suggesting that steeply dipping veins do contribute to the mineralization as much in vertical drill holes (see Section 10.9.3). Sub-vertical mineralized veins and veinlets (Sets 1 and 2) had been previously noted in the underground workings, but their orientations were poorly defined.

7.2.3 Alteration

Most alteration at Ruby Creek is hydrolytic, with feldspars and biotite altered to sericite, pyrite, and locally chlorite (herein referred to as sericitic alteration). This sericitic alteration is locally accompanied by silicification. Quartz-molybdenite veins generally do not have well-developed alteration envelopes and generally do not occur in zones of pervasive alteration. However, locally, quartz-molybdenite veins have secondary orthoclase alteration or sericite envelopes, typically a few centimeters wide. Pervasive potassic alteration is rare and only found in a few areas in the deposit. A petrographic study by the Mineral Deposit Research Unit ("MDRU") identified secondary orthoclase crystals partially altered to sericite, suggesting that the majority of the sericitic alteration occurred after molybdenite mineralization. However, Smith (2009) interpreted that some sericitic alteration was related to the molybdenite mineralization.

Fractured rocks have commonly undergone late hydrothermal alteration when near pre-, syn-, and post-mineralization faults. They are either weakly or strongly altered to a mixture of sericite, carbonate, clay and locally chlorite. The altered rocks are soft and friable and core recovery is lower than in fresh rock. Major faults commonly contain breccia cemented by a gray gouge, with or without smeared molybdenite. Some of the altered rocks contain late-stage quartz-carbonate-fluorite veins. Work by Placer in 1980 shows that most of the light-colored clay is montmorillonite; however, the gray clay in the Adera fault zone consists largely of kaolinite.

7.2.4 Mineralization

Molybdenite is the primary molybdenum mineral. To a much lesser extent (2% of the total main molybdenite zone), molybdenum oxides are found where molybdenite has been weathered and oxidized (henceforth 'mineralization' refers to both primary and oxidized types). Molybdenite generally occurs within a stockwork of smoky-gray quartz veins, locally with orthoclase, biotite, sericite or fluorite. This stockwork cuts the main granite body (MQMP and CGQM) and the crowded and sparse porphyries (CQFP and SQFP). A significant component of this stockwork is a well-mineralized, sub-horizontal vein set with vein widths generally between 1 and 10 mm, but locally wider. Such shallow-dipping veins, exposed in the underground development and found in drill core, contain coarse-rosettes of molybdenite up to 30mm in diameter with long axes oriented parallel to the plane of the vein. These coarse rosettes are more abundant at shallower levels of the Deposit than at depth. The sub-horizontal vein set is commonly cut by steep-dipping, narrow 1mm to 3mm quartz veins, which also contain molybdenite, although generally not as much as the shallow-dipping vein set. Molybdenite also occurs as coatings on quartz-free fractures and as streaks and smears in deformed rock and may locally be enriched in fault zones. There are small volumes of pegmatitic rock which contain molybdenite in the rock mass, but it is not clear if the molybdenum crystallized at the same time as the pegmatite. There is generally no significant disseminated molybdenite, confirmed by a study of 40 thin sections by Neugebauer (1972).

Near the surface, molybdenum occurs as molybdenum oxides, likely from weathering and oxidation of primary hypogene molybdenite. Molybdenum oxides can be found as deep as ~50m but typically occur to depths of at most a few meters or not at all. Ristorcelli defined and tabulated volumes of the zones where oxidized molybdenum (as assayed %MoO) is greater than about 10% of total Mo. This zone of oxidized molybdenum amounts to about 2% of the entire main zone at a cutoff of 0.02% Mo. The average percentage of oxidized molybdenum as part of total molybdenum in this zone is 60%. There is virtually no oxidized molybdenum outside this zone, and the contact of oxidized vs. unoxidized often corresponds with the contact between the halo (oxidized) and the main zone (unoxidized) (see Section 14.4 for descriptions of these domains). Chapman, et al. (1971) noted that the water table was found during rotary drilling 30 to 60m below the surface. This corresponds relatively well with the location of the contact between sulfide and oxidized molybdenum (see Figure 7-3, Figure 7-4, and Figure 14-2).

The Deposit contains minor copper and tungsten contained in chalcopyrite and wolframite, respectively. These minerals also occur in veins, although the exact paragenetic relationship to molybdenite mineralization is not known. In rare instances, fine-grained chalcopyrite occurs in quartz-molybdenite veins, locally with potassic vein envelopes. However, it also occurs in interpreted later-stage veins with sericitic vein envelopes. Wolframite also occurs in these later veins with sericitic vein envelopes, often with pyrite, pyrrhotite, galena, bismuthinite, and electrum, as identified by scanning electron microprobe ("SEM") analysis by MDRU.

Most of the economic molybdenum grades in the Deposit occur in a main zone of more dense veining. The main zone of mineralization is dominated by sub-horizontal veins (generally averaging 1 to 10mm wide with rare 200mm-wide veins). The lateral continuity of these veins is not known. However, one molybdenite-bearing quartz vein exposed on Thor Ridge, located about a kilometer east and southeast of the core of the Deposit, can be traced for about 20m, and Neugebauer (1972) reported some veins "*…have been traced continuously for as much as 90 feet* [27m] *along the drift walls; and they range up to 2 or 3 inches* [5 or 8 cm] *in width, but are generally less than 1 cm. in thickness."* Other veins and veinlets in the main zone occur oriented randomly within the stockwork and not uncommonly are steeply dipping. The main zone is surrounded by a halo of low-grade mineralization with less dense stockwork and some erratic and lower-grade spikes. The grade changes between the main zone and the halo are commonly quite abrupt.

The Adera fault zone contains the northwest portion of the mineralization along the northeast end of the Deposit and occurs within the mineralized body to the southwest controlling and offsetting mineralization. (Figure 7-2) Veins in the vicinity of the Adera fault zone are commonly steeply dipping (sub-parallel to the core) as noted during the site visit in drill hole AD-319. Between the Adera fault zone and the Molly fault to the northwest, the mineralization reverts to being dominantly contained within sub-horizontal veins and veinlets.

High-grade mineralization is found in patches throughout the Deposit generally as 'clots' and/or rosettes of molybdenite ranging from a few millimeters to several centimeters in size, or veinlets comprised almost entirely of molybdenite. Where these clots or molybdenite-only veins occur, molybdenum grades in 10ft-samples are usually higher than 0.2% Mo.

The Ruby Creek Deposit reaches maximum dimensions of 1,900m along strike (northeast), 1,200m wide (northwest) and a vertical extent to 600m (including down the dip of the Adera fault zone).

7.2.5 Geochemistry

Stuhini has a geochemical data set from close to 9,000 core drill samples with multi-element geochemical analyses on 43 elements. Much has been and much more can be gleaned from this information. Copper, lead and zinc grades are all low in the main zone mineralization, averaging 12, 39 and 47ppm, respectively.

Copper, lead and zinc grades in the halo are similar. All these metals are more abundant in the distal exploration drill holes. Descriptive statistics of selected elements in the main zone are given in Table 7-2.

Phosphorous, antimony and vanadium have materially different grades on each side of the Adera fault zone. Aluminum has a subtle difference in grade on either side of the fault. These rock-forming and hydrothermal metals indicate that there has been substantial post-mineralization movement across the fault, or the Adera fault zone had significant control on the emplacement of the intrusive rocks. Admittedly not geochemistry, but related to the topic of differences on either side of the Adera fault zone, there is also a small but notable change in rock density across the Adera fault zone.

Table 7-2 Descriptive Statistics of Selected Elements in the Main Molybdenum Zone

	Count	Median	Mean	Std Dev	CV	Min	Max	Units
Main molybdenum domain								
Mo	14,741	0.0390	0.0617	0.0926	1.50	0.00	3.838	%
Cu	5,036	8	12	23	2.0	0.30	864	ppm
Pb	5,036	21	39	144	3.7	5.20	4635	ppm
Zn	5,036	23	47	217	4.6	5.00	10000	ppm
Ag	5,036	0.06	0.22	1.01	4.53	0.05	50.30	ppm
Au	5,036	0.050	0.0504	0.009	0.17	0.050	0.400	ppm
W	5,036	29	46	48	1.0	0.50	490.00	ppm
Th	5,036	35	35	9	0.2	1.10	113.90	ppm
U	5,036	19	18	7	0.4	1.50	143.00	ppm

Drill hole AD-408 and nearby holes encountered modest gold, silver, base metal, antimony, and arsenic grades in the hanging wall northwest of the Adera fault zone and outside the defined molybdenum domains. This geochemical enrichment occurs in hydrothermal breccias and sheared massive-sulfide veins, with abundant sericitic alteration and local silicification. The geochemical enrichment as currently identified has unknown geometry and orientation.

Low but elevated concentrations of uranium and thorium occur with the molybdenum mineralization in the hanging wall of the Adera fault zone and in the central high-grade area around the underground workings. Tungsten concentrations, on the other hand, are generally elevated in the footwall of the Adera fault zone, mostly but not exclusively in proximity to the higher-grade molybdenum mineralization.

A detailed study of trace element geochemistry and zonation will not only benefit the understanding of the Deposit but might provide insight to guide exploration.

7.3 Description of the Different Mineralized Areas

7.3.1 Underground Workings Area

The geology in the vicinity of the underground workings is more complicated than elsewhere, possibly explaining the existence of higher grades. In that area, the coarse-grained quartz monzonite (CGQM) is cut by dikes and sills of fine-grained, aplitic to granitic (FGQM) and mafic quartz monzonite (MQMP) porphyries. The sills are flat-lying, concordant with large-scale apparent intrusive layering and the dominant mineralized quartz veins and veinlets. Approaching the Adera fault zone, the intrusive layering, the concordant sills, and some of the molybdenum veining change orientation to become sub-parallel to the fault (Figure 7-3). Some of the larger dikes and sills can be correlated between drill holes up to 200m apart. The smaller dikes and sills seen in the underground workings appear to wedge out to the southwest and they may terminate to the northeast.

Extensive drilling in the vicinity of the underground workings shows that the mineralized veins are well developed in coarse-grained quartz monzonites (CGQM-T and CGQM), mafic quartz monzonite porphyry (MQMP) and dikes of fine-grained quartz monzonite (FGQM) above and adjacent to their contact with the underlying sparse and crowded quartz monzonite porphyry (SQMP and CQMP) intrusions. The veins are most commonly without other potentially economic metals. Pyrite is found locally, and chalcopyrite has been observed. The Deposit contains traces of scheelite, orthoclase, fluorite, biotite, sericite and carbonate minerals.

7.3.2 Northwest of Adera Fault Zone

Northwest of the Adera fault zone the mineralization is almost entirely contained in the coarser-grained quartz monzonite units (CQFP, CGQM-T and CGQM), and in fine-grained quartz monzonite (FGQM) dikes intruded within them. Despite the general lithologic similarity of the CGMQ on either side of the Adera fault zone, the rock types have slightly different densities, whole rock, and geochemical differences particularly with P (maybe from apatite), V, Th and more subtle differences with Al. This could imply different phases of intrusive rocks or that there is substantial fault offset. Grades and distributions of secondary elements such as Ag, As, Sb, and variable high grades of Mn change across the Adera fault zone, too.

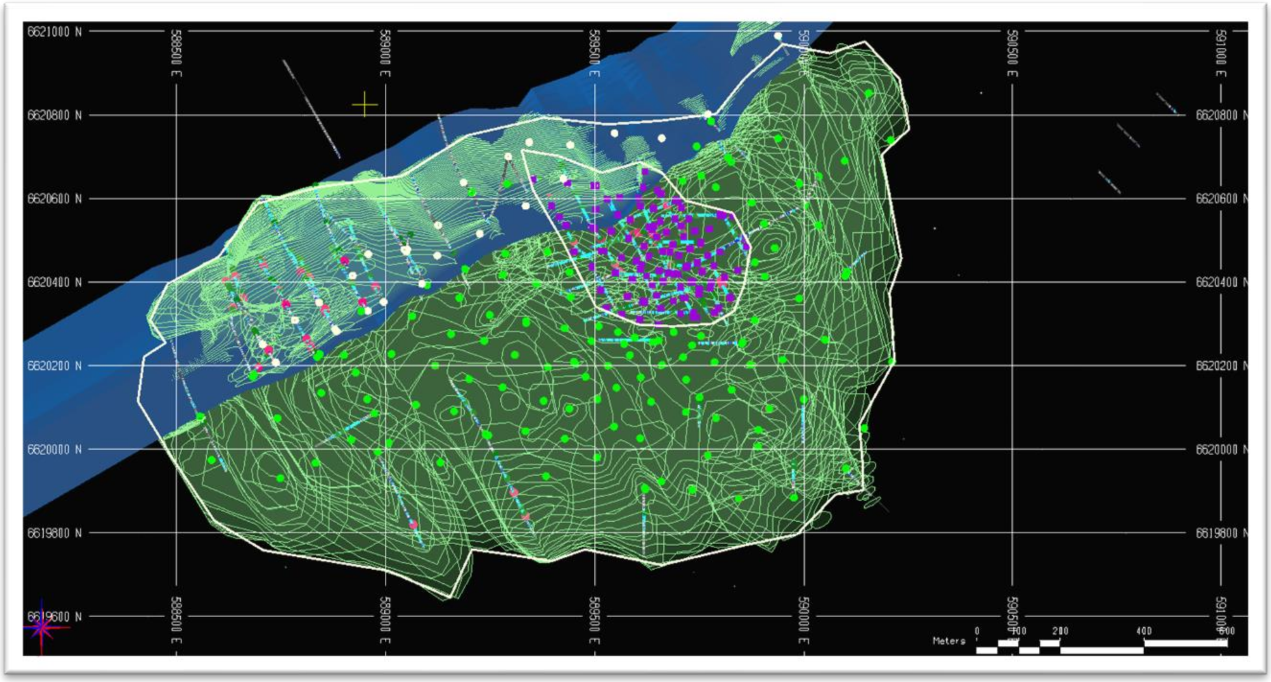
7.4 High-Grade Intercepts at the Ruby Creek Molybdenum Deposit

MDA studied the distribution of "high-grade hits" in the drill samples from the Ruby Creek Molybdenum Deposit. The objective of this study was to get a better sense of distribution of high-grade drill core intervals as they carry a disproportionally high amount of metal. The most extreme case of this is in the half core samples in the hanging wall of the Adera fault zone where those intercepts grading >0.2% Mo are only 2% of the samples and yet they contain 22% of the metal. These high-grade intervals pose a risk when projecting grades from the known points to the unknown volumes in the estimate. Variability of grades as defined between adjacent samples is much higher in the hanging wall of the Adera fault zone than it is in the footwall.

The study used only samples coded in the main mineralized domain, which has a low-end grade boundary of approximately 0.02 to 0.03% Mo. Those composites were grouped into footwall near workings around the underground workings (purple collars), footwall away from workings (green collars), and hanging wall (white collars) (Figure 7-5), as well as by size/type of sample (half core, whole core, underground). Counts and mean grades were made of samples with grades above 0.4% Mo and 0.2% Mo (Table 7-3). Figure 7-6 and Figure 7-7 show the results graphically.

The authors conclude that the impact of these high-grade clots of molybdenite introduce a risk of local over-estimation in the estimate. On the other hand, there are certainly other clots that have not been drilled, resulting in under-estimation, which will, hopefully, compensate for those areas where local overestimation of grade will inevitably have occurred. Sections 10.9 and 14.9 discussed the effect of this "nugget effect" on the estimate.

Figure 7-5 Explanation of Sample Locations



(footwall near workings around the underground workings (purple collars); footwall away from workings (green collars); and hanging wall (white collars); note that the red circles are some high-grade sample locations.)

Table 7-3 Descriptive Statistics of High-Grade Hits

Area	Sample	Total Count	% of Count >0.4%Mo	% of Mo in >0.4%Mo	Count >0.2%Mo	% of Mo in >0.2%Mo
Footwall near workings	**All**	**6,394**	**1%**	**7%**	**5%**	**20%**
	Half	2,591	1%	4%	3%	15%
	UG	236	1%	4%	16%	22%
	Whole	3,567	1%	9%	6%	22%
Footwall away from workings	**All**	**7,135**	**0%**	**2%**	**1%**	**9%**
	Half	3,596	0%	2%	1%	8%
	UG	75	0%	0%	0%	0%
	Whole	3,464	0%	2%	2%	10%
Hanging wall	**All**	**4,705**	**1%**	**13%**	**2%**	**22%**
	Half	4,509	1%	13%	2%	22%
	Whole	196	**0%**	**0%**	**1%**	**9%**
Total of All Samples in Study	**All**	**18,234**	**1%**	**7%**	**3%**	**17%**

Figure 7-6 Percent of >0.2% Mo Samples and their Collective Percent of Total Grade

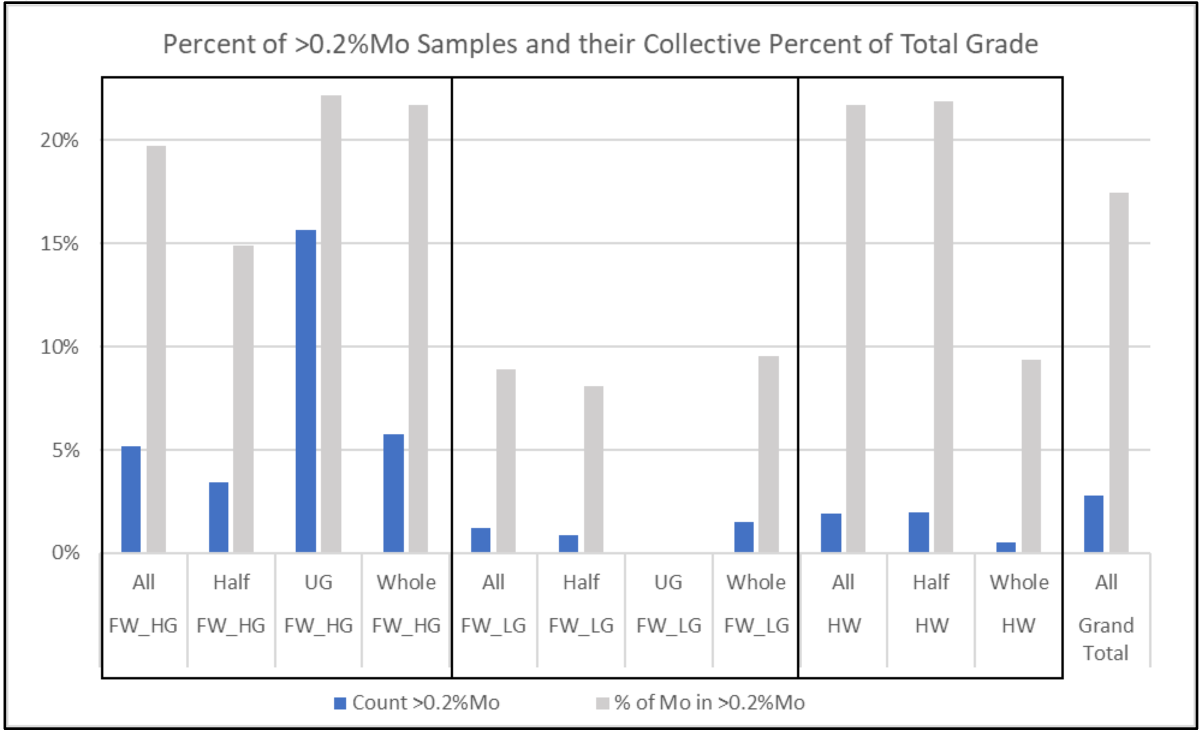
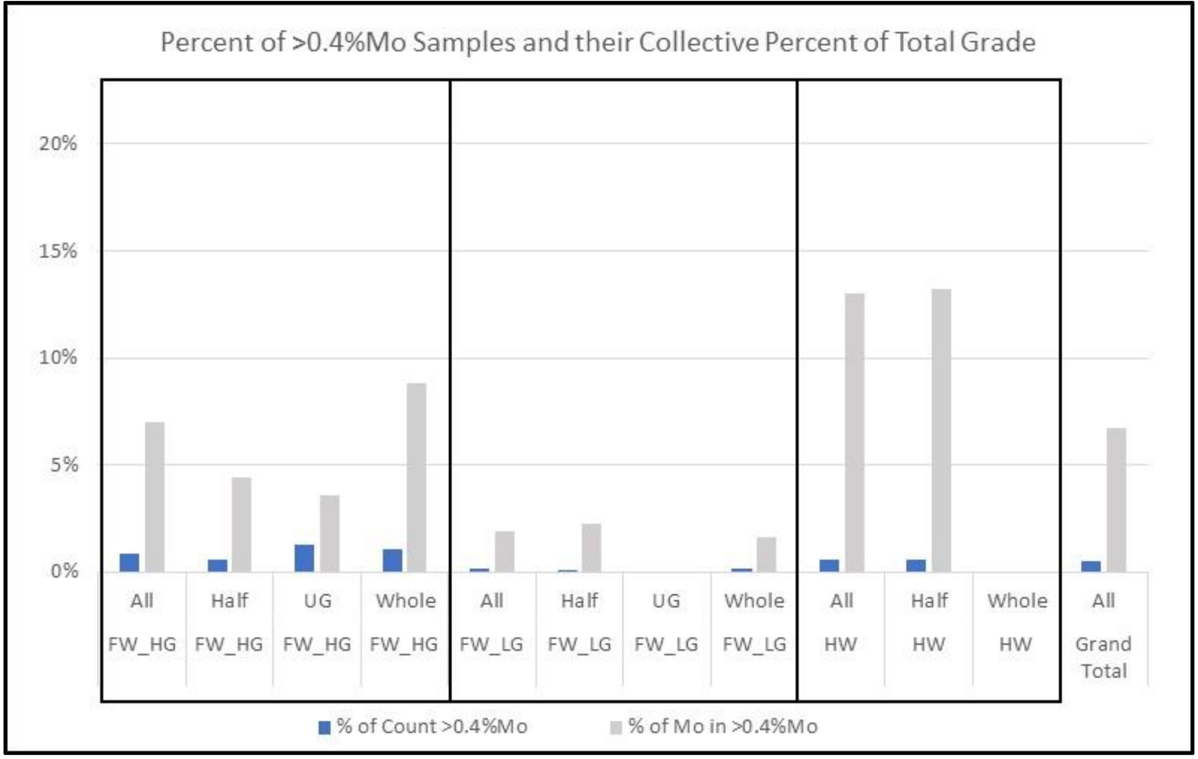


Figure 7-7 Percent of >0.4% Mo Samples and their Collective Percent of Total Grade



7.5 Surrounding Exploration Areas

7.5.1 Silver Surprise

The Silver Surprise exploration target is a silver target approximately 5km northeast of the Ruby Creek Molybdenum Deposit along trend of the Adera fault zone (Figure 7-8). Mineralization consists of fine-grained sulfides and sulfosalts hosted in quartz-carbonate veins. The steeply dipping veins strike northeast and are within the Surprise Lake Batholith, near a contact with rocks of the Cache Creek Complex. The thickest veins are up to approximately one-meter thick, and the spacing between veins is meters to tens of meters. Some very high silver grades have been obtained from samples collected by Stuhini (Table 7-4).

Figure 7-8 Surrounding Exploration Areas
(map provided by Stuhini)

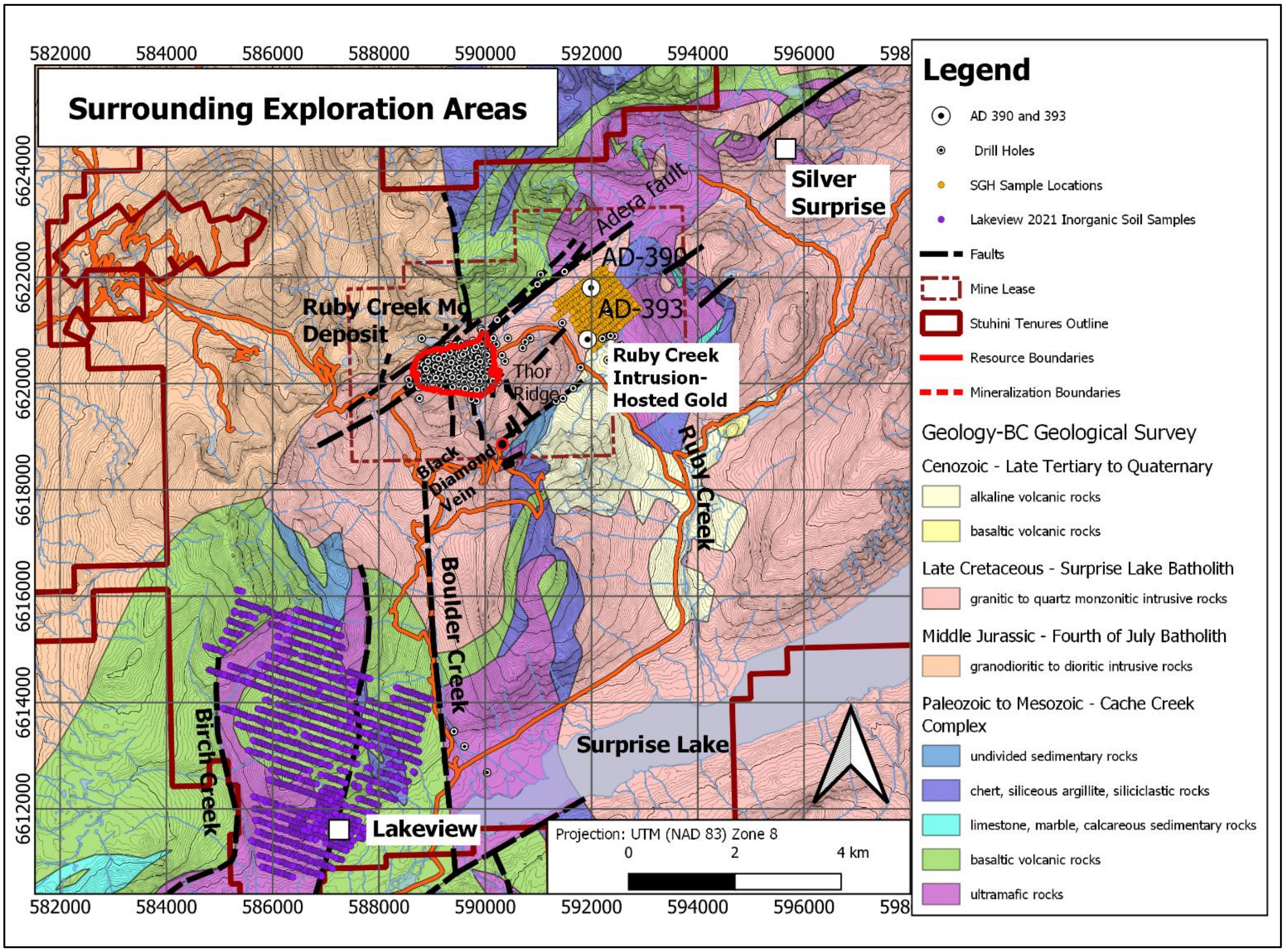


Table 7-4 Descriptive Statistics from Silver Surprise Rock Samples

	Count	Median	Mean	Std Dev	CV	Min	Max	Units
Ag	74	172.35	2447.87	3867.00	157.97	0.555	16030	ppm
Au	74	0.102	0.17	0.23	133.53	0.001	1.491	ppm
Cu	74	153.6	519.60	1284.02	247.12	1.6	10380	ppm
Pb	74	5949.81	13892.85	20346.87	146.46	5.03	137300	ppm
Zn	74	470.3	2388.18	8599.18	360.07	13.8	67300	ppm
Mo	74	9.195	30.86	47.13	152.71	0.025	222.43	ppm
W	74	4.45	18.04	31.73	175.92	0.4	146.6	ppm
As	74	3036.15	4733.74	4337.93	91.64	0.6	>10000	ppm
Bi	74	0.94	11.77	55.65	472.69	<0.04	469.78	ppm
Sb	74	102.25	491.22	875.61	178.25	0.46	>4000	ppm
Sn	74	63.65	405.90	622.77	153.43	0.4	>2000	ppm
Te	74	0.12	0.36	1.39	385.28	<0.05	11.8	ppm

Notes: All samples, except for three chip samples, are select grabs from outcrop, subcrop or felsenmeer.

“>” indicates “greater than”; the content of this element exceeds the upper limit for the analytical method. In statistical calculations the authors have used the limit.

“<” indicates “less than”; the content of this element is less than the lower detection limit for the analytical method. There are 5 such Bi values and 19 such Te values. The common practice of substituting half the detection limit for these negative values does not significantly affect the statistics presented in Table 7-4.

Stuhini speculates that the Silver Surprise target is a type of sub–epithermal mineralization (also known as Cordilleran-type or Butte-type), which generally occurs as vein-, fault-, or breccia-hosted Pb-Zn-Ag ± Au ± Cu mineralization on the periphery of porphyry systems. This type of mineralization is spatially and genetically related to cooling intrusions and is thought to be the roots of intermediate sulfidation epithermal systems (Sillitoe, 2010). However, sub-epithermal veins lack textures indicative of fluid boiling prevalent in classic epithermal deposits and form deeper than lithocaps and advanced argillic alteration (Sillitoe, 2010). The author’s brief inspection suggests that it could plausibly be of low-sulfidation epithermal style, but the question remains open. The Silver Surprise prospect merits further exploration due to silver grades from proximal float samples up to 16,030g Ag/t, but it remains a “grass-roots” prospect. Table 7-4 summarizes the distribution of grades from all the samples taken in the target area. All samples, except for three chip samples, are select grabs from outcrop, subcrop or felsenmeer. They should be considered as point samples and further work would be needed to evaluate continuity between sample sites. The sites are spread over approximately 500m up/downslope and 300m across slope.

On September 13, 2021, co-author Mr. Ronning visited the Silver Surprise showing in the company of Mr. Salmabadi, Vice President of Exploration for Stuhini. Working together they collected two grab samples at locations 225m apart. Each sample consisted of collections of pieces of rock selected for visible mineralization. They are thus biased samples whose purpose is only to confirm the presence of mineralization of the character described by Stuhini. They should be considered as point samples with no spatial dimensions attached to them. The assay results obtained from them are set out in Table 7-5.

Table 7-5 Silver Surprise Author's Samples

Sample ID	9167	9168
East m (UTM NAD 83)	595,656	595,588
North m (UTM NAD 83)	6,624,574	6,624,361
Ag ppm	11,440	16,030
Au ppm	0.446	0.238
Cu ppm	456.7	1,085.3
Pb ppm	20,800	36,900
Zn ppm	244	1,311.2
Mo ppm	12.31	179.66
W ppm	0.9	144.3
As ppm	>10,000	>10,000
Bi ppm	1.67	0.10
Sb ppm	2,599.47	646.4
Sn ppm	1,267.2	>2,000
Te ppm	0.11	0.11

Note: “>” indicates “greater than”; the concentration exceeds the upper limit for the analytical method.

7.5.2 Lakeview

The Lakeview prospect comprises at least three steeply dipping milky white quartz veins within rocks of the Cache Creek Complex. The thickest vein noted was almost a meter thick. Samples with variable gold grades with a high of 34.08g Au/t have been collected by Stuhini. Stuhini is currently compiling the results of a ~2300 soil-sample program that covers the Lakeview target and much of the southwest portions of the tenures (Figure 7.7). Results from soil sampling were not ready for dissemination at time of this report. The Lakeview prospect merits further exploration because of the occasional very high gold grades that Stuhini has obtained, but it remains a “grass-roots” prospect. Table 7-6 summarizes the distribution of grades from all rock samples taken in the Lakeview Area. All samples, except for 10 chip samples, are select grabs from outcrop, subcrop or felsenmeer. They were collected within an area of about 4.5km east-west and 5km north-south. They should be considered point samples and further work would be needed to evaluate continuity between samples.

Table 7-6 Descriptive Statistics of From Lakeview Rock Samples

	Count	Median	Mean	Standard Dev	CV	Min	Max	Units
Ag	205	1.594	33.954	83.868	247	0.01	494	ppm
Au	205	0.070	1.633	4.574	280	0.001	34.08	ppm
Cu	205	5.9	43.0	181.2	422	0.6	1989.5	ppm
Pb	205	7.15	331.41	1260.58	380	0.27	10600	ppm
Zn	205	20.0	79.4	306.0	385	0.6	3670.9	ppm
Mo	205	0.33	0.69	1.15	167	0.03	8.45	ppm
W	205	0.8	15.4	98.2	636	0.05	1200	ppm
As	205	15.1	63.1	199.1	315	<0.2	1755.2	ppm
Bi	205	0.35	45.96	302.66	659	<0.04	>4000	ppm
Sb	205	0.28	1.50	4.96	331	0.02	51.58	ppm
Sn	205	0.4	3.5	16.4	473	<0.1	193.3	ppm
Te	205	1.23	23.47	82.92	353	<0.05	>1000	ppm

Notes: “>” indicates “greater than”; the content of this element exceeds the upper limit for the analytical method. In statistical calculations the authors have used the limit.

“<” indicates “less than”; the content of this element is less than the lower detection limit for the analytical method. There are one such As value, 36 such Bi values, 46 such Sn values and 25 such Te values. The common practice of substituting half the detection limit for these negative values does not significantly affect the statistics presented in Table 7-6.

7.5.3 Ruby Creek Intrusion-Hosted Gold

The Ruby Creek gold target area begins approximately one-half kilometer east of the Ruby Creek Molybdenum Deposit and extends into upper Ruby Creek. Ruby Creek was the fourth-highest gold-producing creek in the Atlin Placer Camp.

The target area consists of four gold-bearing quartz-wolframite-scorodite-arsenopyrite-bearing structures on Thor Ridge located immediately east of the molybdenum deposit, within the Mine Lease (Figure 7-7). Bedrock mineralization is found in quartz veins, quartz-vein stockwork, and breccias hosted within the Surprise Lake Batholith. The highest-grade grab sample from the 2021 sampling program returned 28.5g Au/t. Other samples with important grades include a channel sample assaying 9.27g Au/t, 225g Ag/t, 0.30% Cu and 2.19% WO_3 over one meter within a 1.75 m section assaying 5.72g Au/t, 167g Ag/t, 0.18% Cu and 1.35% WO_3. Many of the assay results also came back with anomalous bismuth and antimony. Table 7-7 summarizes the distribution of grades from all the rock samples taken in the Thor Ridge Area. Of the total sample count for the area, three are channel-samples and the rest are select grab samples from outcrop, subcrop or felsenmeer. They should be considered point samples and further work would be needed to evaluate continuity between samples. They were collected within a zone about 2km long in a northeasterly direction and 1km wide along or near the top of Thor Ridge.

Table 7-7 Descriptive Statistics of From Thor Ridge Rock Samples

	Count	Median	Mean	Std Dev	CV	Min	Max	Units
Ag	86	14.68	95.64	210.77	220.39	0.01	1431	ppm
Au	86	0.33	2.08	4.27	205.28	0.001	28.5	ppm
Cu	86	338.4	875.5	1887.8	215.6	13.2	13220	ppm
Pb	86	715.02	4809.85	11833.45	246.03	7.04	87700	ppm
Zn	86	57.7	160.0	311.8	194.9	5.4	2400	ppm
Mo	86	11.50	185.45	657.82	354.71	0.59	3772.44	ppm
W	86	400.00	6772.40	17521.07	258.71	6.8	135500	ppm
As	86	6482.1	5362.5	4540.8	84.7	3.1	>10000	ppm
Bi	86	60.04	319.03	602.35	188.81	0.49	>4000	ppm
Sb	86	123.22	701.83	1270.40	181.01	1.26	>4000	ppm
Sn	86	41.5	65.6	107.3	163.6	2.7	911.4	ppm
Te	86	1.22	4.75	9.77	205.53	<0.05	66.68	ppm

Notes: “>” indicates “greater than”; the content of this element exceeds the upper limit for the analytical method. In statistical calculations the authors have used the limit.

“<” indicates “less than”; the content of this element is less than the lower detection limit for the analytical method. The common practice of substituting half the detection limit for these negative values does not significantly affect the statistics presented in Table 7-7.

The target area also has two historic diamond-drill holes from 2008, AD-390 and AD-393. The two holes were part of the condemnation drilling for the proposed Adanac open-pit molybdenum mine. The holes are more than 950m apart and intersected 45.7m averaging 0.18g Au/t (AD-390) and 73.2m averaging 0.21g Au/t (AD-393), including a 3m sample assaying 0.6g Au/t in hole AD-393. MDRU at the University of British Columbia performed detailed analytical work on the gold intersections from these condemnation holes (now named AD-393 and AD-390). Using an SEM and an automated mineralogical procedure optimized to recognize gold, electrum was identified consisting of approximately half gold and half silver. The electrum is associated with bismite or bismuthinite and pyrite rimmed by pyrrhotite within a 20mm to sub-millimeter-wide quartz vein hosted within the Surprise Lake Batholith (AD-390 at 34.6m). Other veinlets with similar sulfide compositions also contained wolframite. The Ruby Creek Intrusion-Hosted Gold prospect merits further exploration due to the occasional very high gold grades that Stuhini has obtained, but it remains a “grass-roots” prospect.

8.0 DEPOSIT TYPE (ITEM 8)

This section of the report is based on reports by Sinclair (1995), Ray et al. (2000) Ludington and Plumlee (2009), Smith (2009), and Taylor et al. (2012). The Ruby Creek Molybdenum Deposit is a porphyry-style stockwork of molybdenite- and quartz-molybdenite-bearing veins.

Porphyry molybdenum deposits vary in shape from an inverted cup, to roughly cylindrical, to highly irregular due to multiple overlapping phases of mineralization. They are typically hundreds of meters across and range from tens to hundreds of meters in vertical extent. Mineralization is predominantly structurally controlled, consisting mainly of a stockwork of crosscutting fractures and quartz veinlets, with veins, vein sets and breccias. Molybdenite is the principal ore mineral; wolframite, scheelite, cassiterite, sphalerite, chalcopyrite, and galena may be present but are generally subordinate (Sinclair, 1995; Ludington and Plumlee, 2009; Taylor et al., 2012).

These deposits are thought to originate from large volumes of magmatic, highly saline aqueous fluids under pressure. Multiple stages of brecciation, related to explosive fluid pressure released from the upper parts of small intrusions, result in the deposition of potentially economic mineralization and gangue minerals in cross-cutting fractures, veinlets and breccias in the outer carapace of the intrusions and in associated country rocks. Incursion of meteoric water during the waning stages of the magmatic-hydrothermal system may result in late alteration of the host rocks but does not play a significant role in the mineralization (Sinclair, 1995).

These deposits are typically of the order of 100 Mt at 0.1 to 0.15% Mo. Some examples are provided below with tonnages and grades from Taylor et al., (2012) unless otherwise cited. The numbers provided by Taylor et al. (2012) merge Inferred resources with Measured and Indicated for the purpose of academic comparison. None are defined as Climax type.

Endako (B. C.):	777.26 million tonnes at 0.053% Mo
Boss Mountain (B. C.):	63 million tonnes. at 0.074% Mo
Kitsault (B. C.):	701.8 million tonnes at 0.071% Mo
Red Bird (B. C.):	151.6 million tonnes at 0.059 % Mo
Storie Moly (B. C.):	140 million tonnes at 0.064% Mo
Max (Trout Lake) (B. C.):	42.94 million tonnes at 0.12% Mo
Davidson (B. C.):	75.28 million tonnes at 0.177% Mo
Red Mountain (Yukon):	187.24 million tonnes at 0.100% Mo
Quartz Hill (Alaska):	1,600 million tonnes at 0.076% Mo
Thompson Creek (Idaho):	326.4 million tonnes at 0.068% Mo
Malala (Indonesia):	100 million tonnes at 0.084% Mo
Pine Nut (Nevada):	181 million tonnes at 0.060% Mo

Ray et al. (2000) interpreted that the Ruby Creek porphyry is a high-fluorine Climax-type based on F-Rb-Nb signatures. Smith (2009) came to the same conclusion based on Rb, Sr and weight % K_2O at 57.5 weight % SiO_2.. The whole-rock compositions and fluorine content are similar to those described by Westra and Keith (1981) for deposits of this type. They are characterized by a stockwork of molybdenite-bearing quartz veinlets and fractures in intermediate to felsic intrusive rocks. They typically have low-grade mineralization amenable to bulk-mining methods and commonly have higher-grade mineralization which may be suitable for underground mining. Previously, Ruby Creek had been classified as a low-fluorine porphyry molybdenum deposit (Sinclair, 1995). Such deposits do not normally have higher-grade portions suitable for underground mining.

9.0 EXPLORATION (ITEM 9)

The history of exploration on the Property includes prospecting, geological mapping, multi-element soil geochemical sampling, magnetic and induced polarization surveying, trenching and diamond and reverse-circulation drilling. Lode gold and sub-epithermal polymetallic silver veins have been the main target commodities since the early 20th century with some silver production from the Atlin-Ruffner Mine in the northwest corner of the Property tenures. Molybdenum only became a significant exploration priority in the late 1960's. Polymetallic skarns (W+Cu±Zn±Ag±Pb±Au) have also been explored but have yet to indicate a potential deposit size worthy of serious exploration efforts.

Since 2016, most exploration efforts have been on the precious metal potential of the tenures with grassroots exploration and historic data compilation being the primary focus. Global Drilling conducted field programs through 2019 consisting of prospecting, soil sampling, and ground magnetic and very low frequency ("VLF") electromagnetic surveys. The following sections focus on the exploration programs completed by Stuhini since they optioned the Property in July 2019.

Since Stuhini optioned the Property, the 2020 and 2021 exploration programs have consisted of approximately 2200 line-kilometers of airborne electromagnetic survey, rock geochemical sampling, and soil geochemical sampling on select historical prospects. The simultaneous geological mapping and re-examination of historic showings helped develop a better understanding of the spatial relationships of all the different styles of mineralization and alteration relative to geophysical responses that are observed. A 0.96km^2 survey of 3D Induced Polarization Geophysics ("3DIP") was conducted encompassing the southwestern portion of the Ruby Creek Molybdenum Deposit, extending 400m southwest past the limit of current drilling. The objective of that survey was to create a baseline understanding of the 3DIP response to the molybdenum mineralization and to be able to extrapolate the potential continuation of the molybdenum deposit beyond current drilling. The results of the 3DIP survey were not finalized at the time of this report.

Significant silver grades have also been encountered in multiple sub-epithermal polymetallic silver structures. Most of these structures are in the northeastern portion of the tenures near the historic Atlin-Ruffner and Brenda Mines. Other significant silver grades have been encountered to the east and northeast of the Ruby Creek Molybdenum Deposit at the Daybreak and Silver Surprise Showing. Notable silver assays include grabs samples up to 16,030g Ag/t as shown Table 7-4.

Notable gold grades received include grab samples up to 34.08g Au/t in the Lakeview area (Table 7-6; Miller et al., 2020). Adjacent to the Ruby Creek Molybdenum Deposit, channel samples up to 9.27g Au/t over one meter have been obtained from the northeastern continuation of the Black Diamond Vein on Thor Ridge. This is hosted in the Surprise Lake Batholith located approximately one kilometer southwest of the anomalous gold intercepts encountered in AD-390 and AD-393 (see Section 7.5.3). Based on significant difference in the relative abundance of mineral phases, these two assays either represent two different hydrothermal events or end members of the same event. The Cache Creek Complex-hosted gold mineralization is associated with significant silver and tellurium grades as shown in Table 7-6. The Surprise Lake Batholith hosted gold mineralization coincides with significant silver, tungsten, arsenic, bismuth, and antimony as shown in Table 7-7.

There are several small exoskarn bodies on the Ruby Creek Property. All the skarn bodies are along the contacts between the Surprise Lake Batholith and the Cache Creek Complex. Skarn mineralization is dominantly copper, zinc, lead and tungsten, with lesser gold, silver and tin. Higher-grade polymetallic skarn mineralization hosted within more pure crystalline marble units appears to have formed over multiple episodes with various metal endowments. Notable results obtained by Stuhini include a series of contiguous channel samples from a historic trench on the Silver Diamond skarn (Figure 9-1) containing length-weighted averaged grades as shown in Table 9-1.

Table 9-1 Silver Diamond Channel Sampling

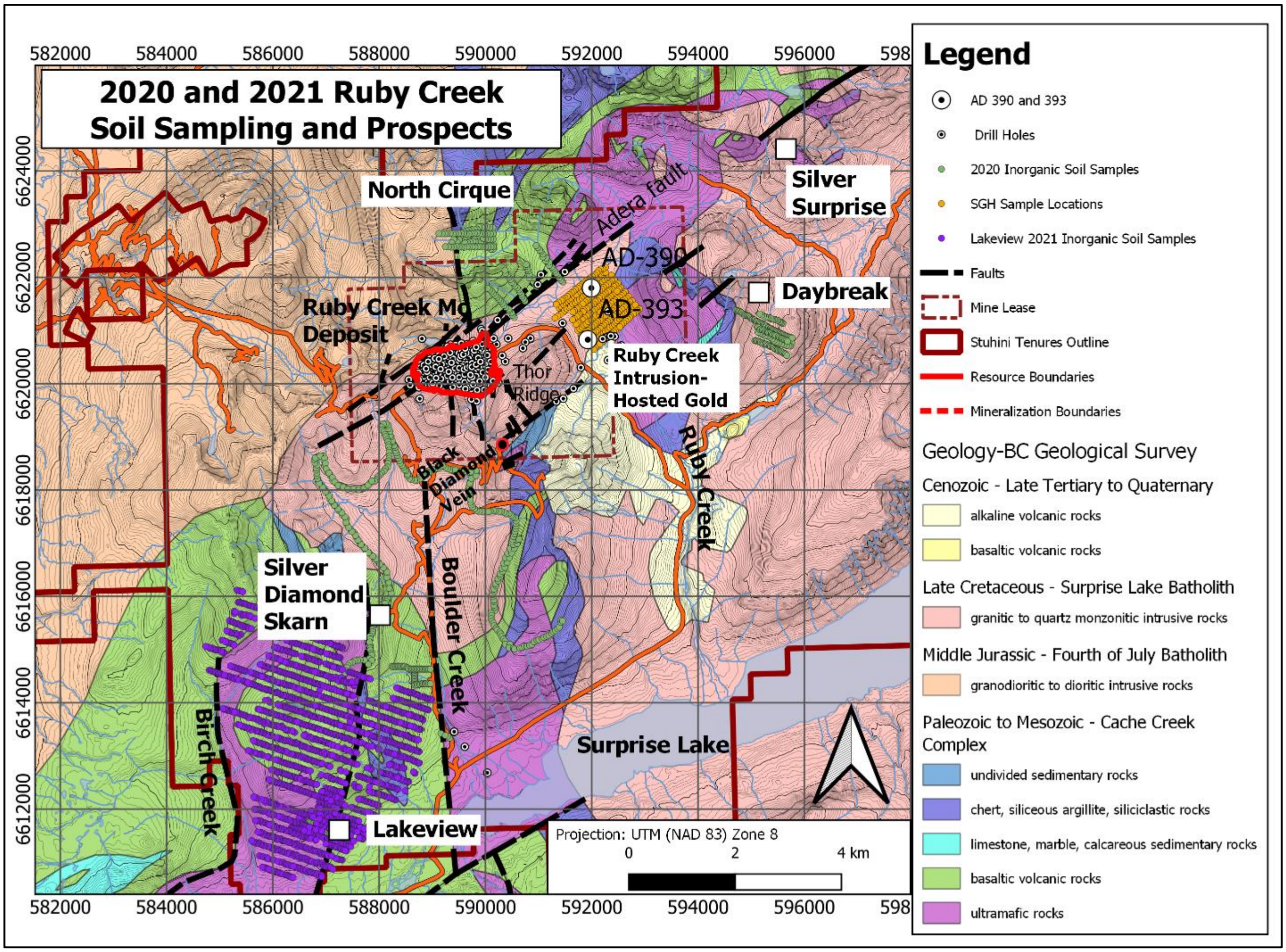
From m	To m	Length m	Cu %	Pb %	Zn %	g Ag/t	WO3 %
0	22	22	0.27	0.03	1.88	33.9	0.17
including							
0	15.5	15.5	0.30	0.02	0.05	21.45	0.24
also including							
18.5	22	3.5	0.28	0.11	11.55	116.8	0.01

Stuhini conducted several soil-sample surveys in 2020 and 2021 primarily to complete or to supplement pre-existing grids. Samples were taken where suitable soil profiles are developed. B-horizon soil samples were collected from several targets at the Ruby Creek Project, including Lakeview. Between 2020 and 2021, Stuhini collected a total of 2,951 samples for inorganic geochemical analysis. In 2020 several small reconnaissance grids and a contour soil survey on Boulder Creek were conducted to follow-up on historical targets and the 2020 airborne electromagnetic survey. The focus of the 2021 soil sampling program was in the southwestern portion of the tenures targeting gold-bearing veins hosted in the Cache Creek Complex in the Lakeview area (Figure 9-1). Sampling in the Lakeview area was conducted at 25m sample spacing along 200m spaced gridlines as a first pass to help identify high-priority areas for follow-up sampling and further investigation.

During the 2020 and 2021 field seasons, 260 soil-gas hydrocarbon (“SGH”) samples were taken in Ruby Creek valley every 50m along 100m spaced gridlines, covering the area between gold-bearing historic drill holes AD-390 and AD-393.

Several geological maps were generated by Stuhini encompassing almost all the Ruby Creek Project tenures west of Surprise Lake. The geology was mostly mapped at a scale 1:5000 to 1:2500, with some smaller scale maps for specific areas of interest such as Silver Surprise.

Figure 9-1 Soil-Sample Areas on other Exploration Prospects on the Ruby Creek Project
(map provided by Stuhini)



10.0 DRILLING (ITEM 10)

The Ruby Creek Molybdenum Deposit has undergone exploration drilling and underground bulk sampling since 1968 (Table 4-1). A map of the drilling is given in Figure 10-1. Descriptions of work done before 1971 are taken from Chapman, et al. (1971). Descriptions of drilling by Climax and Placer were taken from annual technical Assessment Reports submitted under the terms of the Mineral Tenure Act and the Regulations under the Act and maintained by B. C. Geological Survey. Descriptions of the work done in the 2000s are taken from previous Technical Reports by Palmer (2006 and 2007), Blower (2005) and Pinsent (2005). The holes were typically diamond-drill holes except for 12 rotary-drill holes drilled on the Property, only four of which were drilled into the deposit.

Table 10-1 Drilling on the Ruby Creek Project
(from Palmer, 2009 and modified by Stuhini)

Company	Years	Drill holes	meters
Adanac Mining & Johns Manville	1968 to 1970	80	12,775
Kerr Addison	1970 to 1972	47	5626
Climax	1973	9	2,672
Placer	1979 to 1980	76	10,886
Adanac	2004	38	9,087
Adanac	2005	19	4,984
Adanac	2006	16	3,921
Adanac	2007	22	6,568
Adanac	2008	38	14,708
Global Drilling	2016	4	378
Global Drilling	2017	7	1,794
Total		356	67,772

Notes: [1] Includes 2 re-drills of holes; [2] Includes 10 twinned holes; [3] Includes 6 geotechnical holes; [4] Includes 10 condemnation holes; Minor difference are noted between the above data and those in the resource database currently being used.

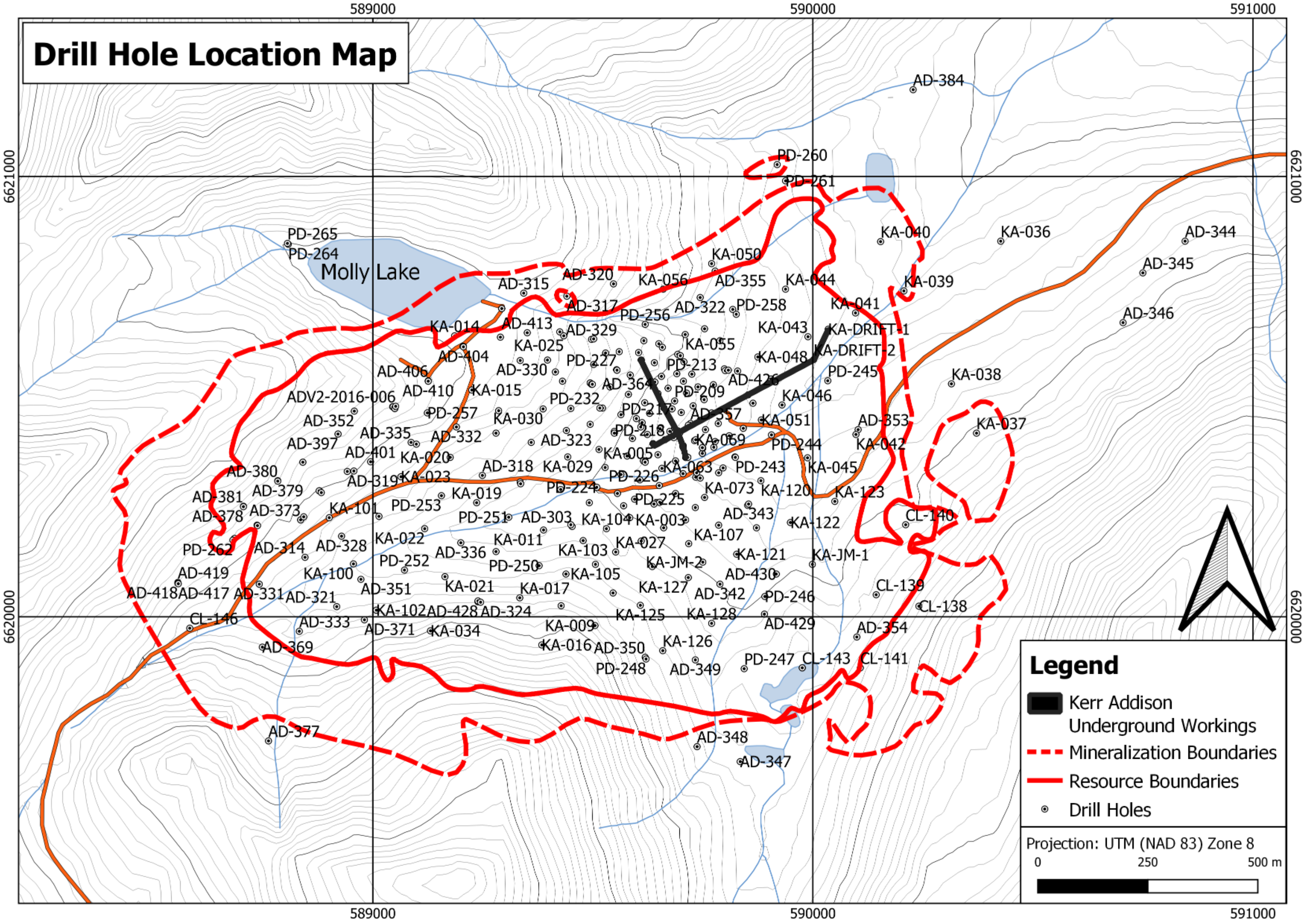
Not all the drill holes in the database have core sizes assigned. Table 10-2 summarizes the known core sizes. Just over 80% of the drilling in the deposit is vertical or close to vertical. Kerr Addison put in underground workings which were bulk sampled on a round by round basis, and these are entered into the database as “drill holes. The workings are no longer accessible.

Table 10-2 Summary of Drill Core Sizes

Core Size Name	Core Diameter mm	Number of Holes
unknown		134
HQ	63.5	6
NQ	47.6	150
NQ2	50.7	37
NQW/BQW		8
NTW/NQ	56/47.6	19

Notes: The number of holes in Table 10-2 is two fewer than in Table 10-1 because of re-drills.

Figure 10-1 Drill Hole Location Map on the Ruby Creek Project



10.1 Pre-1971 Drilling and Underground Sampling Program

As of 1971, 18,404m of drilling had been completed, almost entirely diamond-drill holes (Table 10-3). Most of the drilling took place in 1969 in the Ruby Creek Deposit area but also some at the proposed plant site and dam site (1,885m). During early exploration drilling, presumably during exploration by Adanac Mining and Johns Manville, 14 BQ-size core holes were drilled. Kerr Addison drilled later. After mid-1969 whole core was sent in for preparation and analysis; prior to that half core was sent in. At that time, extensive evaluations of sample-grade reproducibility and recognition of the importance of sample size caused a change to drill larger-diameter core. Sludge sampling was conducted to assess the potential of molybdenite loss during core drilling, but the effort was inconclusive.

Table 10-3 Drilling by Adanac Mining, Johns Manville and Kerr Addison
(from Chapman et al., 1971)

Company	Drill holes	meters
Deposit drilling	104	16,518
Plant site	16	791
Dam site	1	38
Johns Manville	6	1,056
Total	**127**	**18,404**

During late 1970, a seven-hole rotary drilling program was undertaken that totaled 369m of drilling (only four remain in the resource database; Table 14-1). Quoting Chapman, et al. (1971), "*the rotary drilling, as a method of sampling, was both cumbersome and tedious, especially while drilling wet. The results however, indicated a very close correlation between the rotary drilling grade and comparable bulk sampling grade*", a conclusion that the authors came to independently and discussed in Section 10.9.2. Water volumes exceeding 600gal in a 3.048m sample caused "*handing and drying problems*", which was probably an understatement. Extensive work was done on sample integrity, including comparing dry and wet rotary drilling, collecting exhaust dust while drilling dry, collecting the entire sample while drilling wet. Extensive and highly informative tests and observations were documented but are not included in this report because the rotary drilling is such a small and immaterial part of the drilling and sampling at Ruby Creek.

Drilling rotary indicated that the water table was between 30 and 60m where they drilled.

Sampling underground was described as "bulk sampling" by Chapman, et al. (1971). The primary objectives were to confirm grade, obtain samples for metallurgical tests, better understand the geology, and give access for visual observations. Approximately 9,525 tonnes of development material were sampled round-by-round by passing the material through a closed-circuit crushing and screening plant and an automatic sampling tower. A final sample of approximately 15lbs of -10mesh material was obtained from each ~18-tonne round. Each round was handled as a separate lot with cleaning the equipment between each lot.

10.2 Climax Molybdenum Corp. of B. C. Ltd.

The available descriptions of the Climax drilling are in two assessment reports, number 5071 (Stewart, 1973) and number 5351 (Ganster, 1974).

In 1973 Climax drilled 5,001ft (1,534m) of NQW core. There is no description of drilling equipment, drilling procedures or sampling procedures. Core logs in the assessment report show that the core was logged in a narrative form, with a paragraph for each ten-foot interval. Lithology, structure, alteration and mineralization are described. Each hole also has tabular coded logs with columns for various alteration types, mineralization types, textures, rock types, etc. Manpower lists mention a geologist and a mining engineer, suggesting that there was adequate professional oversight.

In 1974 Climax drilled 4,616ft (1,407m) of NQW and BQW core. Other aspects of the program were similar to those of the 1973 program. The assessment report for 1974 contains similar narrative drill logs to those in the 1973 report but lacks the tabular coded logs. Both a geologist and a mining engineer were present.

Both the 1973 and 1974 reports state that core was stored at the Ruby Creek campsite. Later reports, for example Blower (2005), state that operators prior to Adanac’s work in the 2000’s took whole-core samples, *“... saving only a small lithologically representative sample from each 10 ft interval*.” The authors do not know how to reconcile that with the statements by Stewart and Ganster that Climax stored core at the camp site.

10.3 Placer Development Limited

10.3.1 Drilling in 1979

Core drilling by Placer Development in 1979 is described in assessment report number 7727A (Tennant, 1980). Placer drilled in 39 holes using NQ wireline equipment. All holes were drilled vertically and averaged about 125m in length. Dip tests were not taken. Tennant reported that core recovery averaged greater than 90%. The core was logged and 10ft samples were “*made up*”. Sample preparation was done on the property in a “*well established bucking room*”. “*Considerable care was taken to standardize the procedure so as to have continuity of the sample handling*.” The entire core was crushed and prepared for assay. Samples were shipped to Placer Development’s metallurgical lab in Vancouver, where they were assayed for MoS_2, with the results recorded as Mo.

Drill logs by R.H. Pinsent from the 39 cores holes are contained in assessment report 7727C. Core was logged on paper forms with spaces for narrative descriptions of rock types and textures, alteration, mineralization, and remarks. In addition, there were columns for a graphic log, angles of structures to the core axis, percent pyrite, core recovery, sample numbers and copper and molybdenum assays.

Another assessment report, 7727B (Holt, 1979a) describes drilling and test pitting *“... designed primarily to provide soils engineering data. The work included 38 test pits and 10 core drill holes which explored the proposed plant site, tailing impoundment and water storage area.*” Because of their purpose “… *most of the holes received critical scrutiny in the overburden portion of the drilling*.” The ten drill holes amounted to 676.6m in total. All but one hole were vertical. No downhole surveys or dip tests are described.

In assessment report 7727B an included report by Klohn Leonoff Consultants Ltd. states that the drilling was done using a Longyear 34 core drill. Curiously, the Klohn Leonoff report only mentions six drill holes, not the ten described by Holt (1979a). The Klohn Leonoff report contains drill logs having an emphasis on geotechnical characteristics.

10.3.2 Drilling in 1980

Placer's 1980 drilling is described in assessment report number 8861 (Pinsent, 1980).

Placer drilled twenty-seven NQ wireline drill holes totaling 4,458.3m between June and October of 1980. Drill core was photographed (the authors are not aware of the locations of any surviving photos). It was logged using the "Geolog" system, an early computer-based logging system that entailed coding logs onto paper forms designed for input into the computer. The core was made up into a series of ten-foot composite samples. The ten-foot composites, minus a small character sample, were crushed on site and split into two equal parts, "a" and "b", which were shipped to Placer Development's metallurgical laboratory in Vancouver. The "a" series splits were then "further prepared for MoS_2 assay". For reporting, the MoS_2 values were converted to Mo.

Assessment report 8861 states that "the "b" series samples "will be selectively assayed in the same manner". The authors are not aware of the results of assays of any "b" series samples.

10.4 Adanac 2004-2006 Drilling Programs

(primarily from Palmer, 2009)

A total of 73 holes were drilled between 2004 and 2006 for an aggregate total of 17,992m.

Historical drilling has been described in Section 6.0. The historical drilling data was originally transferred from paper logs to electronic spreadsheets by Adanac and then entered into a database that was used for the April 2005 Mineral Resource Estimate (Blower, 2005). This database was provided to Golder as ASCII files and was incorporated in the 2006 Ruby Creek Datamine Database.

The 2006 Ruby Creek Datamine Database naming convention for drill holes is based on the various drilling campaigns and included four main groups. The original drill hole names were re-labelled during the 2005 Mineral Resource Estimate (Blower, 2005), and with the same naming convention continuing in the 2006 Ruby Creek Datamine Database. All drill holes were labelled with a prefix of KA for Kerr Addison, CM for Climax Moly, PD for Placer and AD for Adanac's 2004, 2005 and 2006 drilling. The "AD-###" nomenclature was continued for Adanac's 2007 and 2008 drilling. In this report, any specific reference to a drill hole by name uses this nomenclature, even if quoting from an original source that used the earlier drill hole names.

Adanac geology staff noted increased molybdenite mineralization in zones dominated by both horizontal and vertical veins-sets in the vicinity of the underground workings and, in 2006, began drilling inclined holes to potentially improve their chance of sampling both vein sets.

10.4.1 2004 Drilling

(primarily from Palmer, 2009)

Adanac conducted a major exploration drilling campaign in 2004. The company drilled 38 holes for a total of 9,087m, in-and-around the Deposit. Ten holes were twinned with drill holes from earlier campaigns to validate historic drilling (five twinned Kerr Addison holes and five Placer holes). The remaining holes were located to infill past drilling campaigns. The results were reviewed and validated, and mineral resources were first reported in the April 2005 Technical Report (Blower, 2005).

10.4.2 2005 Drilling

(primarily from Palmer, 2009)

In 2005, Adanac drilled 19 holes for a total of 4,984m in-and-around the Deposit. Five of the holes were geotechnical to gather the necessary parameters for pit-slope stability assessment. The remaining 12 were located to infill past campaigns and around the margins of the Deposit.

10.4.3 2006 Drilling

(primarily from Palmer, 2009)

In 2006, Adanac drilled 16 holes for a total of 3,921m in central deposit area as well as the south and southwest edges of the Deposit. All but one of the drill holes were drilled at dip angles of -50°.

10.4.4 2007-2008 Drilling

(primarily from Palmer, 2009)

In 2007, Adanac focused its attention on the hanging wall of the Adera fault zone along the northwest margin of the Deposit. The company also completed a condemnation drilling program farther down the valley (Pinsent, 2008b). Between the start of the 2007 program and the completion of the condemnation drilling in 2008, E. Caron Diamond Drilling Ltd. and Foraco (Connors) Drilling Limited (who took over in November) completed 22 diamond-drill holes (A-372 to A-393) for a total depth of 6,567.5m.

In the spring of 2008, the company drilled the main Deposit area and completed its previously planned program. Foraco (Connors) Drilling Limited completed 38 diamond-drill holes (AD-394 to AD-431) for a total of 14,707.82m.

10.4.5 Adanac 2007 Drilling Program

(primarily from Palmer, 2009 with some modifications)

In 2007, Adanac drilled eight angled holes and 14 vertical holes (A-372 to A-383) for a total of 6,556m in-and-around the northwest part of the Deposit.

The first five holes (A-372 to A-376) were collared to test the continuity of mineralization found in drill hole A-04-310, drilled in 2004. The latter returned an intercept of 109.73m averaging 0.108% Mo between 190.8m and 300.53m depth.

The sixth hole (A-377) was collared at high elevation on the southeast side of Ruby Creek. It was a vertical hole drilled to see if the mineralization drilled in A-369 extends to the south towards the neighboring Boulder Creek drainage. The hole was stopped prematurely and temporarily abandoned when the drill contractor (E. Caron Diamond Drilling Ltd.) left because of winter weather. It was not deep enough to reach mineralization. All the subsequent holes on the Property were drilled by Foraco (Connors) Drilling Limited.

E. Caron Diamond Drilling Ltd. Operated using a Val Dor 2 drill. Foraco (Connors) Drilling Ltd. used two (HH30 and L37) drills for the first phase of the program and a single L37 drill for the condemnation drilling program. The core barrels and rods were 10ft (3.048m) in length, and all on-site measurements were made in feet. NQ diameter drill core was placed in four-channel, wooden core boxes and transported to the company's processing facility. During the first phase of drilling, core processing facilities were on site. However, they were later moved to Adanac-owned land in the Pine Creek valley, near the mouth of Surprise Lake.

10.4.6 Adanac 2008 Drilling Program

(primarily from Palmer, 2009 with some modifications)

In 2008, Adanac completed 38 diamond-drill holes (A-394 to A-431) in the main Deposit for a total of 14,707.82m. Twenty-six holes (A-394 to A-419) were drilled north of the Adera fault zone and 12 holes (A-420 to A-431) south of the fault. Most of the sites have a vertical hole and a northwesterly-oriented, angled hole drilled to establish lateral and vertical continuity of mineralization in a northeasterly direction. Some have south to southeasterly-oriented angle holes attempting to define the location and orientation of the Adera fault zone.

Foraco (Connors) Drilling Ltd. used a Longyear L37 drill for the 2008 program, which was conducted using imperial-measure equipment. The core barrels and rods were 10ft (3.048m) in length, and all on-site measurements were made in feet. NQ diameter drill core was placed in four-channel, wooden core boxes and transported to the Company's processing facility on Adanac-owned land in the Pine Creek valley, near the mouth of Surprise Lake.

10.5 Global Drilling Solutions' 2016 Drilling Program

Drilling funded by Zinex Mining Corp. and carried out by Global Drilling Solutions Inc. in 2016 is described in assessment report 36658 (Hanslit and Miller, 2016). Global Drilling drilled four diamond-drill holes near Molly Lake, on the north edge of the molybdenum resource (ADV2-2016-003 to ADV2-2016-006) for a total of 377.65m. The goal of the drilling was to investigate the polymetallic silver mineralization encountered in A-408. Assaying focused on the polymetallic sulfide-rich zones. Most of the core was not assayed.

Global Drilling used a Zinex Mining Corp. A5 drill for the 2016 program with imperial-measure equipment. The core barrels and rods were 10ft (3.048m) in length, and all on-site measurements were made in feet. HQ diameter drill core was placed in four-channel, wooden core boxes and transported to Global Drillings' storage facility near Davie Hall Lake, north of Atlin, BC.

10.6 Global Drilling Solutions' 2017 Drilling Program

Global Drilling Solutions' 2017 drilling program is described in assessment report 37171 (Hanslit and Miller, 2017). The drill exploration target was native gold veins structurally controlled by the Boulder Creek Fault. Two holes were drilled for a total of 661.7m of HQ core. The first hole was drilled toward 275° inclined at -67° to cut the inferred fault trace. The second hole from the same set up was drilled to 005° inclined at -60° to investigate the Cache Creek Complex at depth.

Representative samples were taken from the core for analysis. Five-foot (1.5m) were flagged for sampling by the geologist and cut using a core saw. One half of the split was sent to Bureau Veritas for analysis.

Over the course of four man-days in the summer of 2017 a portable x-ray diffraction meter ("XRF") was used to scan core from the first drill hole. This is an analytical tool for quick in-field assay analysis. The work done in 2017 was an orientation survey to test the suitability of the tool for Global Drilling's purposes. Each ten-foot (3.048m) section of the drill hole down to 1,397ft (426m) was scanned twice with the XRF. Results obtained from the XRF for 17 elements were compared with assay results. Global Drilling concluded that for their purposes the XRF analyses were insufficiently accurate.

The 2017 drill holes did not encounter important mineralization. The two drill holes are not within the bounds of the resource block model described in this report.

10.7 Drill Hole Surveys

There is no mention of downhole surveying on holes drilled by Kerr Addison or its predecessors, and indeed there are no downhole surveys for any of those holes in the database.

All 2004 to 2008 drill-hole collars were surveyed at the end of each drill program by Underhill Geomatics Ltd. of Whitehorse, Yukon. The NAD 27 UTM coordinate system was used after the 2004 and 2005 programs, as well as after the historical drilling programs. From 2006 onward, the collars were surveyed using the NAD 83 UTM coordinate system and the old NAD 27 UTM coordinates were converted to NAD 83. The survey consulting company re-surveyed ten historical drill holes in the NAD 83 UTM coordinate system to confirm locations. They also surveyed the roads.

Following the decision to use the NAD 83 UTM coordinate system for future mine site construction, the company's entire database was converted to the NAD 83 UTM coordinate system. Thus, some of the holes have been surveyed in NAD 83 UTM and the others have been translated from NAD 27 UTM to NAD 83 UTM, by adding 174m N (Y), and subtracting 104m E (X).

The five 2005 geotechnical drill holes were downhole surveyed by Golder using an Optical Televiewer system. The drill-hole dip and azimuth direction as well as a video record of the borehole-wall information was recorded using the Televiewer. Thirteen inclined infill-holes were drilled in 2006 and eight of these were surveyed by Golder using the Optical Televiewer system.

From 2004 to late 2007, the drill-hole casing was left in the ground to mark the drill-hole collar. In 2007 and 2008, the company conducted downhole surveys after the completion of most of its drill holes.

Global Drilling did not do downhole orientation surveys during their 2016 and 2017 programs.

10.8 Results of the Condemnation Holes Drilling Program

Condemnation holes were drilled in the potential mill-site and tailings pond areas, downstream from the proposed pit. The results show that these samples contain very little molybdenum but are locally, weakly enriched in a variety of trace elements, including copper, lead, zinc, arsenic, silver, tungsten, and tin. The gold mineralization encountered, however, in AD-390 and AD-393 is significant as discussed in more detail in Section 7.5.3.

10.9 Sampling and the "Nugget Effect"

Molybdenite can occur at Ruby Creek as extremely coarse clots, rosettes, and massive-molybdenite veinlets as described in Sections 7.2.4 and 7.4 and shown in Figure 10-2. This occurrence has been recognized throughout the history of the Ruby Creek Project, as far back as Chapman, et al. (1971), who did extensive study on the matter. This style of mineralization even with the occurrence of more regular stockwork mineralization makes sampling methods, sample size and sample orientation extremely important. The authors undertook to compare different types and sizes of samples, collected by different operators as well as comparing angled versus vertical drill holes (Ristorcelli and Ronning, October 7, 2021; Ronning and Ristorcelli, August 31, 2021).

Figure 10-2 Examples of Drill Core with Coarse Molybdenite Mineralization

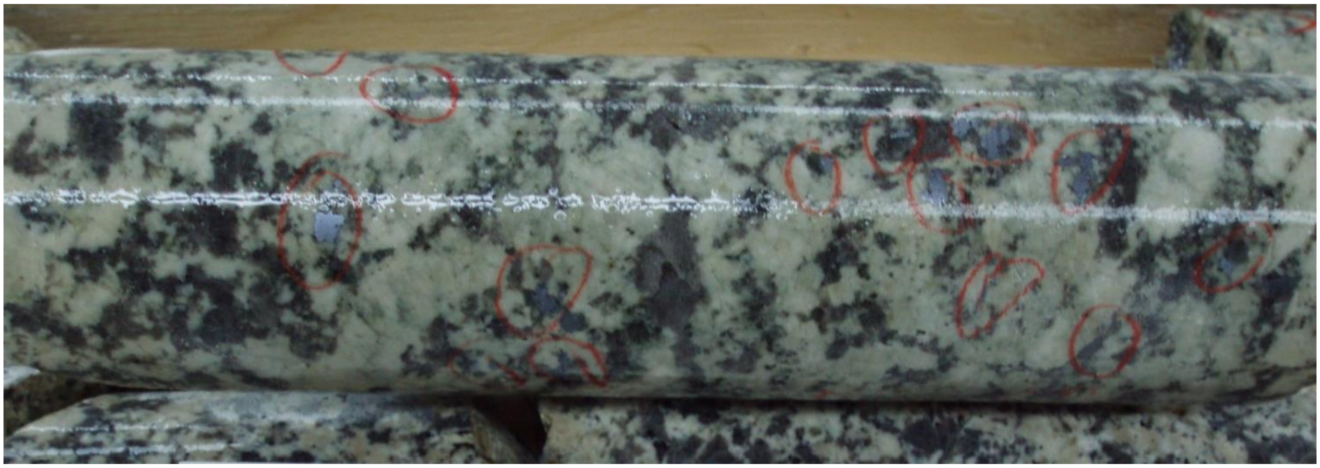
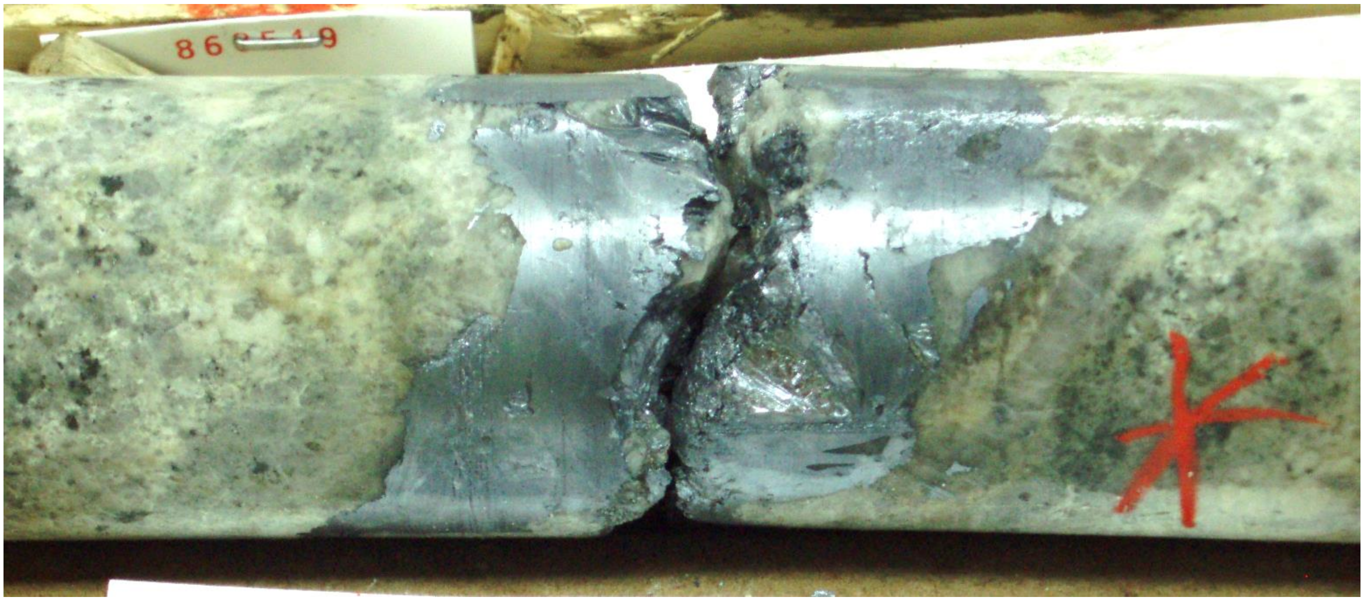


Figure 10.2 Examples with Coarse Molybdenite Mineralization
(continued)



For the studies described in this section, the authors calculated length-weighted molybdenum grades for equal-length downhole-composite samples, each 3.05m long to get equal support. Then the authors tabulated and compared grades of pairs of nearest composites of contrasting sample types. Searches were done within ten distance-range "bins", 0-5m, 5-10m etc. up to 45-50m. Thus, for example, from any given half-core sample (the "control" sample), a search was done for the closest whole-core sample (the "closest") within 50m. For each paired sample, the distance between them, the hole names, down-hole depths, and grades were compiled.

These studies gloss over some deficiencies, the most obvious of which is that they take no account of variations between drill campaigns. They assume that when and by whom the drilling, sampling, and assaying were done is irrelevant to the grade statistics, which of course is not the case.

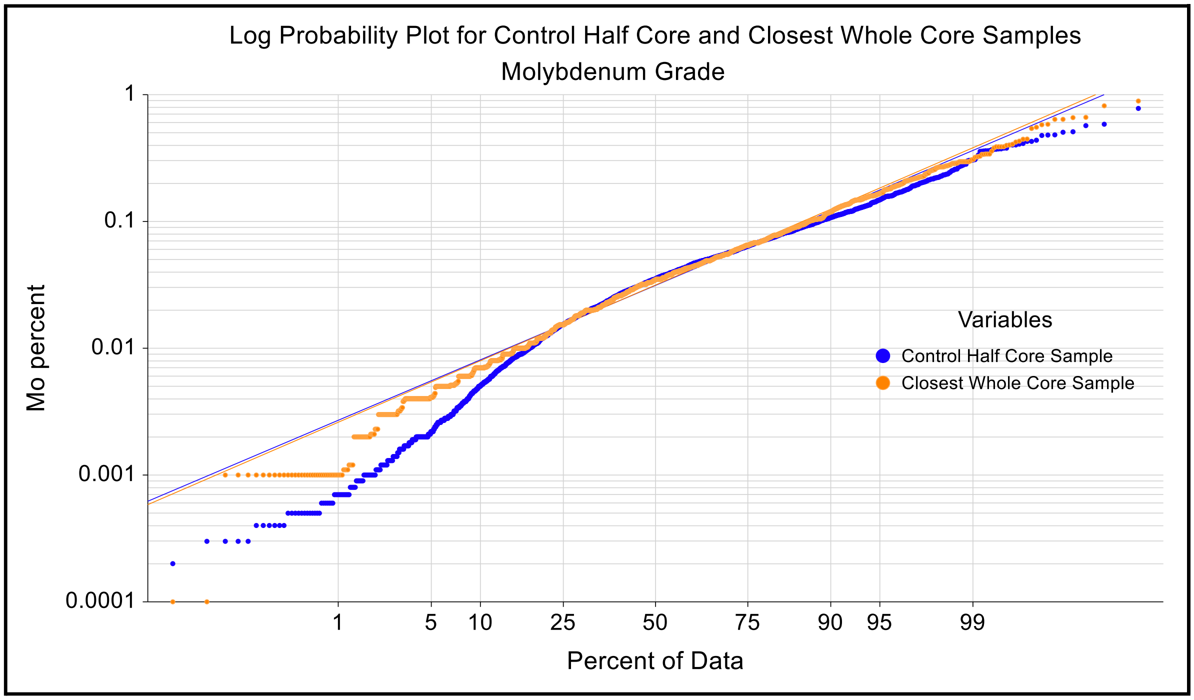
Despite the deficiencies, these relatively simple studies show that there is evidence that the types and sizes of the samples collected and whether holes are drilled vertically or at an angle to vertical in the Adanac deposit affect the grade statistics. Understanding why this is the case is a geological question that number crunching alone won't answer.

10.9.1 Whole Core versus Half Core

It is generally presumed that, all else being equal, larger samples should yield more reliable results, particularly for the style of mineralization that exists at Ruby Creek. An important conclusion from the authors' studies is that, although different core sizes introduce some differences in measured grades, so does drilling by different operators using different analytical methods. Comparisons by core size and by operator show the grade populations to be similar. Having stated above that the populations of grades resulting from different core sizes are similar, it is nevertheless also reasonable to state that at Ruby Creek samples from larger core do in general yield incrementally higher molybdenum grades than samples from smaller core. This is more likely in the highest-grade parts of the deposit.

Figure 10-3 presents a log probability plot of half-core and whole-core grades. The highest grades (above ~0.1% Mo) are slightly higher grade in the whole core but the lowest grades (below ~0.1% Mo) are substantially higher grade. Both observations agree with expected results from the styles of mineralization at the Ruby Creek Molybdenum Deposit.

Figure 10-3 Log Probability (QQ) Plot: Control Half-core and Closest Whole-core Samples



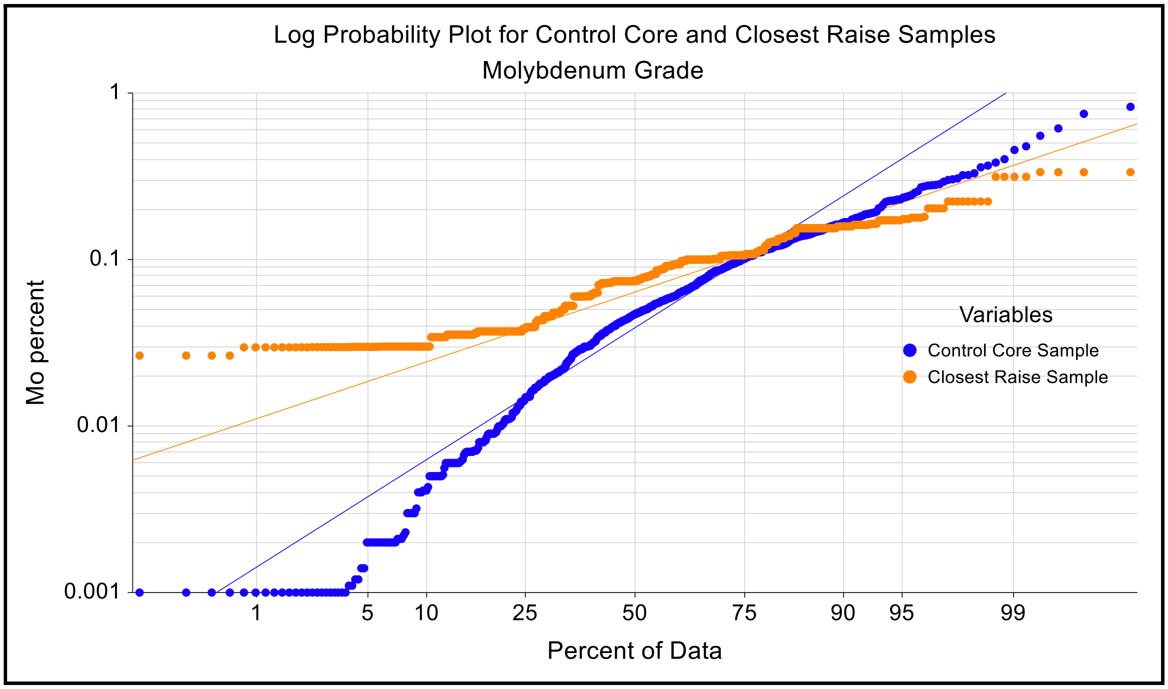
Note: The horizontal axis in is a normal (gaussian) probability scale. The vertical axis in is grade on a logarithmic scale. Regression lines are based on quartiles, passing through the first and third quartiles of the horizontal and vertical variables.

This study is not sufficiently quantitative to determine an optimum sample size, for example, an optimum core diameter for future drilling. Nor should one expect to quantify the increase in average grades that might be achieved by increasing the sample size (although Chapman et al., (1971) did). However, the authors believe there is ample evidence that, all else being equal (which it never is), drilling larger-diameter core is likely to yield incrementally higher grades. Importantly, the expected higher grades with larger core samples are expected given the style of mineralization with clots and veinlets of massive molybdenite.

10.9.2 Core Sample Grades versus Bulk-Sample Grades from Raises

Comparing core samples to other types of samples presents additional insight and still within expectations of the style of mineralization. For example, rotary drill and underground sample grades show similar relationships to core-sample grades. Figure 10-4 shows how the highest grades (above ~0.2% Mo) are substantially higher in the core but below ~0.1% Mo the raise samples are substantially higher. This is readily explained and can easily be accepted: the highest grades in much smaller-volume core samples are substantially more affected by clots, rosettes and massive-molybdenite veins (Figure 10-2) than they are in the 18-tonne rounds of material, while the 18-tonne rounds of material will much more likely get more of those clots, rosettes and massive-molybdenite veins (Figure 10-2).

Figure 10-4 Log Probability (QQ) Plot: Control Core and Closest Samples from Raises



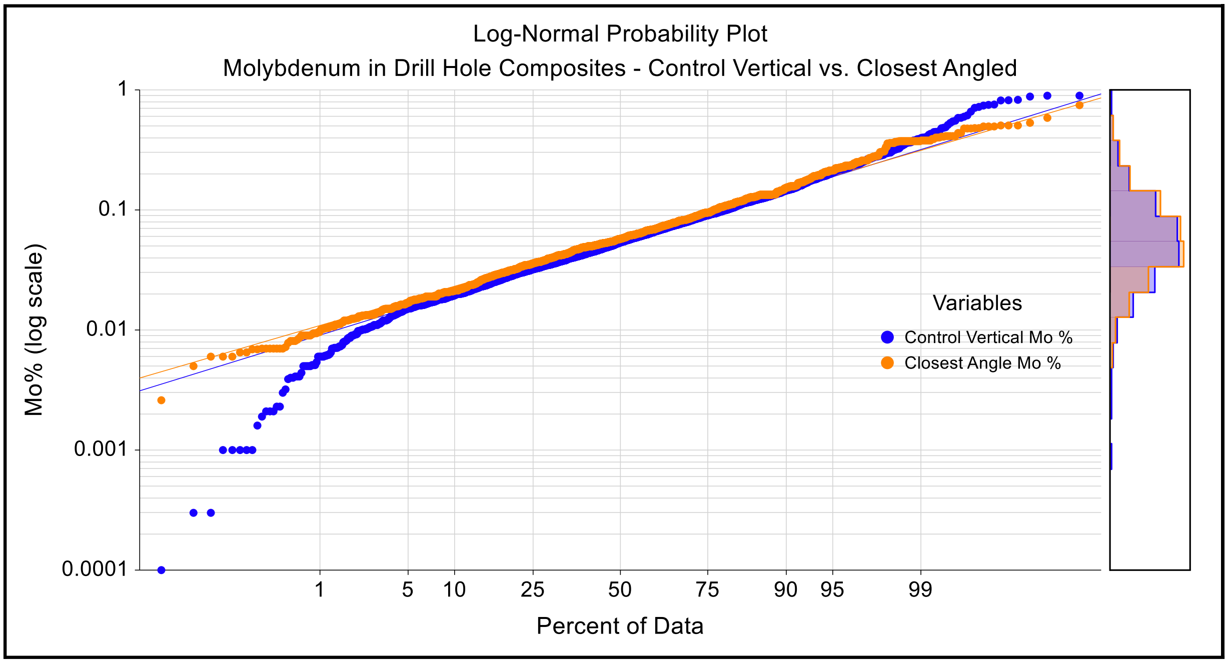
Note: The horizontal axis is a normal (gaussian) probability scale. The vertical axis is grade on a logarithmic scale. Regression lines are based on quartiles, passing through the first and third quartiles of the horizontal and vertical variables.

10.9.3 Angled versus Vertical Drill Holes

There has been discussion among historic and current operators working on the Ruby Creek Molybdenum Deposit as to whether the orientation of drill holes, vertical or angle, influences the grades obtained. Historically the structural controls on the mineralization have been thought to be predominantly horizontal to shallow dipping, but there has been a recognition in the mid-2000s and continues to be recognition that steeply dipping veins also contribute to the grades of mineralization. Most drill holes have been vertical, particularly those drilled early in exploration, but in the later years of the Project a significant number of angle holes were drilled. The authors undertook a nearest-sample grade comparison of vertical vs. angle composite samples to assess if there is a statistically meaningful difference. The methods used for this type of nearest-sample study were described in Section 10.9. For this study we limited the holes selected to the main Deposit area, avoiding holes in the vicinity of the Adera fault zone and on the northwest side of the fault.

Simple statistical comparisons show that the angled holes are at least 5% higher grade than the vertical drill holes. Log-normal probability plots such as shown in Figure 10-5 show a consistently higher grade over almost the entire grade range.

Figure 10-5 Molybdenum in Drill Hole Composite Samples - Vertical to Angle



10.10 Discussion and Conclusion

The style of mineralization at the Ruby Creek Molybdenum Deposit affects sampling reliability. Coarse clots and rosettes and veins of massive molybdenite make sample size crucial. Samples that are small, including diamond-drill core drill samples, introduce increases in grade variability in grades and a low bias in lower (but economic) grades. Furthermore, like any molybdenite deposit, handling molybdenite during sampling and sample preparation is just as important as sample size because the loss of molybdenite is close to unavoidable if there is any water in the sampling and handling process. Chapman et al. (1971) performed and recorded exhaustive studies documenting these observations. They also derived a minimum sample size of 57kg to be crushed to 3/8in to get to a 95% confidence level using Gy's sampling theory. That means that more than half of HQ sized core should be processed for proper sub-sampling to obtain sufficient repeatability of the sample grades. That does not mean that HQ-size core is appropriate to adequately sample the "nuggety" molybdenite, however.

Based solely on evidence that rotary samples from 4 7/8in. diameter drill holes have approximately 90kg of sample material from 3.048m of drilling and that the grades from those "behave" similarly to the samples from the underground raises, one can assume that this is an adequate sample size. Sample sizes could be smaller and still be adequate, but the available information is insufficient to determine an optimal size. The authors conclude that the actual grade of the Deposit may in fact be higher than that portrayed by the current samples, but caution that no such assumptions should be relied upon in any decision-making about the economics of the deposit.

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY (ITEM 11)

Palmer (2009) includes a comprehensive description of Adanac's sample preparation, analysis and security procedures during the period 2004 – 2008. In Sections 11.2 through 11.7 of this report, Palmer's descriptions are presented almost verbatim except where deviations from Palmer's text are noted by the present authors. Text obtained verbatim from Palmer (2009) is presented in an italic font in the present report. The authors have carefully reviewed Palmer's descriptions and have read the sources he cites, including all the available assessment reports filed by Adanac. While choosing to use Palmer's descriptive text the authors are not relying on Palmer's conclusions as to the quality and suitability of the Project data. The author's statements concerning the quality and suitability of the Project data appear in section 11.10.

Such minimal information as the authors have about Placer Development's sample preparation, analysis and security procedures is described in Section 10.3 and is not reproduced here in Section 11.0 or its subsections.

The authors have no information about Climax's sample preparation, analysis, and security procedures.

11.1 Pre-2004 Sampling Programs

11.1.1 Kerr Addison's Diamond and Rotary Drilling and Underground Sampling

The following descriptions were adapted from Chapman et al. (1971). Some changes conveying the authors' interpretations of the original text were made to add clarity.

Prior to 1970, samples were prepared for assay in various laboratories, though mostly by Coast Eldridge in Vancouver, B. C. However, Whitehorse Lab, Loring Laboratories Ltd. ("Loring") in Calgary, Alberta, Seymour Laboratory, and Metallurgical Lab in San Francisco, were also used. Evaluations of duplicate pulp samples showed high variability so a more rigid set of standards for sample collection, preparation and assaying were implemented by Kerr Addison in 1970, after which all samples taken in 1970 were processed in the Adanac field laboratory. Without explicitly attributing the procedures to a specific lab, Chapman et al. (1971) report that a colorimetric-spectrophotometric analysis was used for "*normal reserve grade samples and for pilot mill tailings determinations*". A gravimetric method was employed for the "*higher grade or mill product*" samples.

Four pulps per sample were prepared in the bucking room. For each bulk sample, a duplicate sample was sent to Loring and compared "exceptionally well" to the mine lab (see Section 11.9.7 for additional discussion on the authors' evaluation). In addition to the check assays done by Loring, two sets of control samples were sent to Hazen. The results from the check assays are deemed reasonable. Because the 1968 and 1969 samples showed "*unacceptable discrepancies*", reject drill core was resampled, prepped, and re-assayed such that 90% of the core and 100% of the bulk sampling was re-assayed. (Chapman et al., 1971). The care and diligence described indicate to the authors that the information derived from this historic work should be reliable.

11.2 Adanac 2004-2006 Sampling Programs

(*text in italics is from Palmer, 2009*)

11.2.1 Core logging and Sampling Procedures

After drilling was completed, all new core boxes were taken to a central building for processing. Groups of 4 boxes were placed on an angled stand, wetted down and photographed using a digital camera. The boxes were then placed on open-air benches and the core logged and marked-up for processing. Each 10-foot interval was: 1) given a multi-digit (assay tag) sample number; 2) measured for percentage recovery; 3) measured for RQD (Rock Quality Designation–the cumulative length of core pieces longer than 10 centimeters measured in between natural breaks); and 4), where appropriate, marked with a wax crayon to indicate the required orientation of the core to go through the saw or the splitter. The boxes were then affixed with aluminum tags on one end showing the drill hole number, the box number, and blocks inserted to mark depth. During the core logging process, samples were selected for assaying. All drill holes were sampled from the bedrock interface. No overburden samples were collected for assaying in the 2004, 2005 and 2006 drill programs. Sample selection was based on a combination of lithology type and length. However, in practice the typical sample-length was 3.05m (10ft) which was the same length as the drill core run and similar to historical sample lengths previously collected. The maximum (4.8m) and minimum (1.2m) sample lengths collected in 2004, 2005 and 2006 programs were typically the first or last samples collected in each drill hole.

The drill core logging procedures for 2004 to 2006 were observed during the 2005 site visit by Paul Palmer. All core logging and sampling by the Adanac geologists was first entered on paper logs and later entered electronically onto computers for permanent storage as Excel spreadsheets. There was no core stored on site or available prior to the 2004 drilling program. After the core from the 2004 and 2005 programs was sampled from the core trays, any remaining core (typically half) was stored on wooden-rebar rack structures in their original open core trays. The core rack structures are stored outside but are protected under wooden roofs. Each core rack structure is labelled with the drill-hole name. During the 2006 site visit, it was noted that new core racks had been constructed to store the 2006 drill core and that there was split core stored from the 2004 and 2005 programs (excluding any samples that used whole core for duplicate sampling, metallurgical and specific gravity testing) still on site.[4]

11.2.2 Samples Collection

All samples that were collected from the 2004, 2005 and 2006 drilling programs by Adanac were either sawed or split in half so as to obtain a sample and retain material in an archive of core samples. The archive is complete, with the exception of selected duplicate, metallurgical, geochemical and specific gravity samples collected from the split core and a few holes that were sampled in their entirety in order to compare assay results with historical data. These archived split samples are stored on the permanent core racks on the property site.[4]

In practice, the drill core was processed in three ways. The competent sections of the drill holes were either split using a classic hand-cranked core splitter or sawed using an Almonte core saw. In each case, half the core was returned to the box and half was bagged for further processing. Core intervals that were

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[4] As of February 2022, the core is no longer stored on site. It is now stored on a private property near Atlin, B C.

structurally weak and/or too poorly consolidated to split were totally crushed and then passed through a riffle splitter three times to homogenize the sample before being split into two halves. One half was then treated in the same way as the other half-core, crushed samples obtained by cutting and/or sawing, and the other was double-bagged and stored as a primary crush reject.

In 2004, Adanac submitted 2,830 samples for molybdenum assaying. Additionally, 256 samples were collected for specific gravity testing by ALS Chemex Laboratories (ALS Chemex) in Vancouver, BC. During the 2004 drilling program, three drill holes were totally crushed to reproduce the sample-handling processes of Kerr Addison and Placer Development. These holes (AD-303, AD-307 and AD-308) were "twins" collared adjacent to pre-existing holes drilled by Kerr Addison (KA-60-117) and Placer (PD-221 and PD-227). The data from these holes was reviewed in Blower (2005).

Drill core sampling for the 2005 drilling program was the same as the 2004 QA/QC program developed by Adanac. A total of 1,559 drill core samples were submitted to ACME Analytical Laboratories (ACME) in Vancouver, BC, for analysis. The seven holes internal to the established deposit, AD-337 to AD-343, were submitted for molybdenum assays. The three short distal exploration holes, AD-344 to AD-346, were submitted for molybdenum analysis as a trace element. The remaining drill holes (including geotechnical holes), AD-347 to AD-355, were also analyzed for molybdenum as a trace element. Additionally, 60 samples from seven drill holes (AD-337 to AD-343) were submitted for assay checks to ALS Chemex as part of the quality control program.

A total of 615 samples were also collected for specific gravity testing. They were also submitted to ALS Chemex. The samples selected for specific gravity testing included 332 samples from 19 drill holes in the 2005 program and 283 samples from 30 holes in the 2004 drilling program. The specific gravity data are similar to the testing results presented in Blower (2005). Results of the specific gravity testing program are summarized in Section 17.1.2. The drill core sampling protocol for the 2006 drilling program was also based on the 2004 and 2005 QA/QC program developed by Adanac. A total of 1,238 drill core samples were submitted to ACME in Vancouver, BC, for analysis, including 295 samples from drill holes AD-356 to AD-368 which were also submitted for molybdenum oxide analysis. For quality control purposes, samples from drill holes AD-369 to AD-371 were also analyzed for molybdenum as a trace element and analyzed for 40 other elements. Additionally, 186 samples from 13 drill holes (AD-356 to AD-368) were submitted to G&T Metallurgical Services for metallurgical testing. A total of 176 samples from the 2006 drill program were submitted to ALS Chemex for specific gravity testing. One sample was selected approximately every 50 linear feet.

11.2.3 Sample Quality and Recovery Factors

As part of Adanac's QA/QC program, approximately 5 percent of the (split sample) material left in the boxes was analyzed as "core" duplicate samples. In addition to these breaks in the archive, several sets of representative samples (0.5m to 0.1m long) were collected and removed for specific gravity, acid-generating potential determination, and metallurgical testing. A total of approximately 1,000 samples have been collected from the 2004, 2005 and 2006 drilling programs for specific gravity testing alone (approximately one per 50-ft spacing). The residual core left on site is incomplete. (text deleted by authors[5]) *Although the process of sawing or splitting the core can cause some loss of molybdenite, it is worth noting that the measured drill hole recoveries obtained in the 2004 through 2006 programs were often higher (>95%). This is high when compared to the losses through downhole erosion reported by Kerr Addison and Placer Development.*

11.3 Adanac 2007-2008 Sampling Programs

(*text in italics is from Palmer, 2009*)

11.3.1 Core Logging and Sampling Procedures

During the 2007 and 2008 drilling programs the boxes of core were examined in the open air during the summer, and they were taken into a custom-built laboratory for examination over the fall and winter. The boxes were placed on an angled stand, wetted down and photographed using a digital camera. The photographs provide back-up information on recovery, geology, structure and mineralization. The core was then marked for processing and logged. Each 10-foot interval was: 1) given a multi-digit (assay tag) sample number that was stapled into the box, 2) measured for percentage recovery, 3) assigned an RQD value, and 4) logged by a qualified geologist.

The core boxes were affixed with aluminum tags showing the drill hole number, the box number, and the depths of some of the included footage blocks to show the approximate starting and ending footage of the box. In some cases the actual footages were noted. The boxes are stored, with those from 2004 to 2006 in racks at Adanac's processing facility at Surprise Lake.[6]

During the 2007 and 2008 site visits conducted by Golder, the logging and sampling procedures were reviewed. Drill blocks were checked and RQD and recoveries were estimated prior to logging and sampling. Paper sample tickets were stapled to the core boxes at the appropriate position. All logging was carried out in imperial units due to the core barrels being 10 feet in length[7]*. Each 10-foot run was labelled with a rock-type based on the dominant type in that run. Contacts were also noted. The sampling procedure was the same as that described in Palmer (2007) by Golder.*

During the 2008 site visit the core storage facility was inspected. Drill hole core (split and sawed) is stored in racks at the Surprise Lake office site. The company's intention is to store the pulps, presently located at ACME, and the coarse rejects, located in shipping containers, at the same site as the core.[6] *No core prior to 2004 has been stored as the previous owners sampled the entire core.*

11.3.2 Sample Collection

During the 2007 and 2008 campaigns, the core was examined and sampled systematically at 10-foot (3.048-metre) intervals and it was then processed to produce crushed material for shipment.

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[5] Golder had stated that "… *most of the specific gravity and representative samples taken from the 2006 drill core are in the Company's office in White Rock, B. C.*" As of February 2022, Stuhini believes that these samples are in the company's storage facility at Whistler, B. C.

[6] As of February 2022, the core is no longer stored at Surprise Lake. It is now stored on a private property near Atlin, B. C. Pulps and rejects are stored at the same location.

[7] In the current project database, all drill hole information has been converted to metric units.

Adanac analyzed half the core from all the holes drilled in the mill-site and tailings pond area in 2007-2008. The competent sections of core were sawn using an Almonte core saw, and the incompetent sections were split by hand. In each case, half the core was returned to the box and half was bagged for further processing. The boxes were then placed in covered core racks. The bagged half-core samples were processed on site. They were crushed to less than approximately 10mm (3/8in) using a compressed-air-cleaned, Nelson Machinery "Atlas" core crusher. The crushed sample was then weighed (6.0 – 8.0kg) and subjected to a systematic splitting process using an industry standard riffle splitter. Samples from holes AD-372 to AD-390 were mixed by being passed through the splitter several times. They were then split into two half-samples that were, in turn, split into (four) smaller samples. Two of these (one from each of the original splits) were assigned to a reject bag and the remaining two were split again to produce four, approximate 1kg samples. Two of these (again, one from each of the original 4kg splits) were then mixed to form the "main" assay sample. Where appropriate, the remaining two were also mixed to make a primary crush "duplicate". Those samples ("main" and "duplicate") destined for analysis were then weighed, assigned their assay tags and sealed using a single-use cinch-tie. For these holes, "core duplicates" were also collected and processed in the same way. These are randomly selected samples of the second half of the core that were taken from the box and processed to test for any bias introduced through cutting. The reject material from each sample was double-bagged and stored on site in sea-cans.[8]

The sampling procedure was simplified for drill holes AD-391 to AD-393. For these holes, the samples were mixed and split once. From that point on, the material from one side of the splitter was reduced in size down to approximately 1.0kg to create the "main", and the residue from the last split was, where appropriate, designated the "duplicate" sample. The reject material from each sample is double-bagged and stored on site, in sea-cans.[8] *The samples were shipped to ACME Analytical Laboratories in Vancouver, BC, in rice sacks, where they were processed for analysis.*

11.4 Field Sample Preparation Procedures

11.4.1 Adanac 2004- 2006

The sample preparation procedures used by Adanac in the 2004-2006 period are described in Pinsent (2005), and this description is a paraphrased and abbreviated version of Pinsent's description. Half-core samples were crushed on site to less than approximately 10mm using a compressed-air cleaned Nelson Machinery "Atlas" core crusher. The crushed sample was weighed, typically being 8kg to 10kg, and then run through a sequential splitting process as illustrated in Figure 11-1. For example, an original 8kg sample would have been split into two 4kg samples which were in turn split into four 2kg samples. Two of the latter, one from each of the 4kg splits, were assigned to a reject bag. The remaining two were split to produce four 1kg samples. Two of these, one from each of the original 4kg splits, were then mixed to form the "main" assay sample. Where appropriate, the remaining two 1kg samples were also mixed to make a primary crush "duplicate". Those samples destined for analysis, the "main" and "duplicate" were then weighed, assigned their assay tags and sealed using a single-use cinch-tie.

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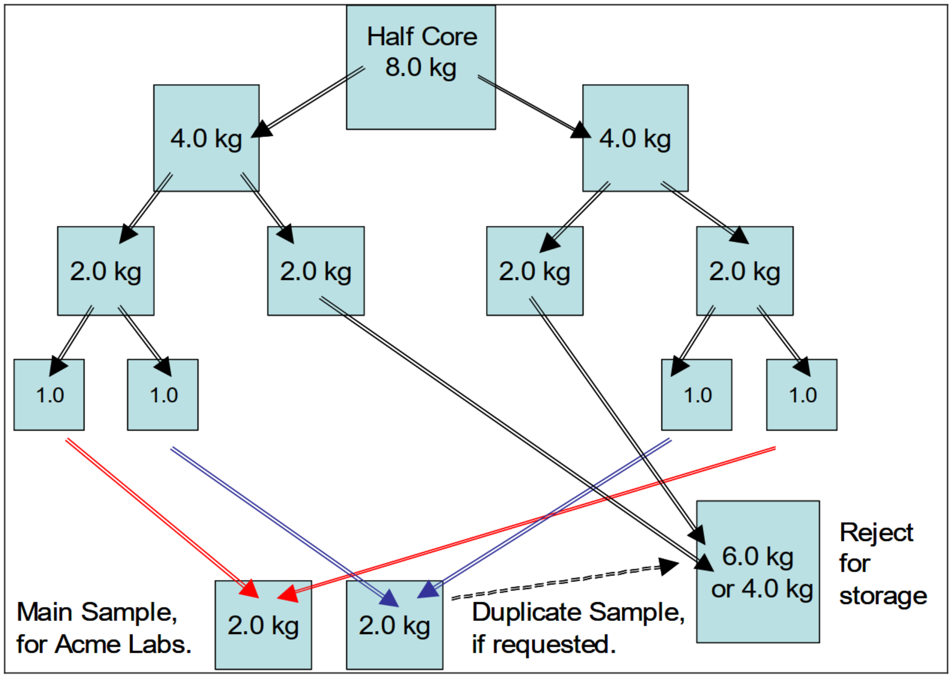
[8] This material is now (in 2022) stored on a private property near Atlin, B. C.

Figure 11-1 Adanac Field Sample Preparation Procedures from 2004 to 2006



Note: This figure appeared in Palmer, 2009. It was copied from Pinsent, 2005, with minor modifications by Palmer for clarity and presentation.

11.4.2 Adanac 2007-2008

(*text in italics is from Palmer, 2009*)

During the 2007 and 2008 campaigns, the core was examined and sampled systematically at 10-foot (3.048-metre) intervals and was then processed to produce crushed material for shipment. The field sampling procedures for the 2007 and 2008 programs are detailed in Section 11.3 of this report.

11.5 Laboratory Sample Preparation Procedures

(*text in italics is from Palmer, 2009*)

Samples from the 2004 to 2008 drilling programs were submitted to ACME Laboratory in Vancouver, BC, for molybdenum analysis and trace element analysis. ACME Laboratory (was at the time[9]) *accredited under the International Standards Organization (ISO) 9001 Model for Quality Assurance and ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories.*

Check sampling and specific gravity sampling was submitted to ALS Chemex Laboratory in Vancouver, BC. ALS laboratories (operated at the time[7]) *in compliance with ISO17025. Additionally, a total of 186 crushed reject samples from 14 drill holes (AD-356 to AD-368) were submitted to G&T Metallurgical Services for flotation testing. G&T Metallurgical Services* (were at the time[7]) *registered under ISO9001:2000 certification.*

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[9] Changed to the past tense by the present authors to reflect the historical nature of the information.

11.6 Analytical Procedures and Results

(*text in italics is from Palmer, 2009*)

11.6.1 Adanac 2004- 2006

Analytical procedures for samples assayed prior to 2004 are summarized from Palmer (2006 and 2007) and Blower (2005). Before analysis, samples were crushed to 70% passing - 10 mesh (1.70 mm) and splits weighing 250g were then pulverized to 95% passing -150 mesh (105 microns). The molybdenum assaying method that was applied to all the 2004 to 2006 samples (including blanks, duplicates and standard samples) by ACME was the multi-element method. This method (took[5]*) a 1.0 gram split pulverized sample, first digested by aqua regia, and then (analyzed*[5]*) the resultant solution for molybdenum (% Mo) using Inductively Coupled Plasma Emission Mass Spectrometry ("ICP-MS").*

Trace element assaying of the 2004 to 2006 samples by ACME was prepared the same as described above and then a 0.25 gram sample was heated in HNO3-HCLO4-HF to fuming and taken to dryness. The residue sample was dissolved in HCL and the resultant solution was then analyzed for 41 elements (in parts per million) using ICP-MS.

The Mo values returned (were[5]*) the total molybdenum content of the rock, as the assay method (vaporized*[5]*) both sulfide and any oxide components of molybdenum that may (have been*[5]*) present. Previous work showed that there is little or no molybdenum present in oxide form.*

11.6.2 Adanac 2007-2008

11.7 Analytical Procedures

(*text in italics is from Palmer, 2009*)

The pulps and standards from holes AD-372 to AD-393 were all analyzed using ACME's 41-element "1EX" package. A 0.25g sample was heated in nitric (HNO3), perchloric (HCL04) and hydrofluoric (HF) *acid to dryness, dissolved in hydrochloric (HCL) acid and analyzed by ICP-Mass Spectrometry. The elements reported include molybdenum, copper, lead, zinc, silver, gold, arsenic, uranium, tin and tungsten, in parts per million (ppm) and sulfur in percent (%).*

There is an upper limit of 0.4% Mo inherent in the "1EX" procedure and those samples that assayed in excess of that value were re-assayed using ACME's "7TD" total-digestion procedure. This procedure was applied to samples from drill holes AD-372 to AD-377. A one-gram sample was digested by aqua regia (HCL-HNO3-H2O) and the resultant solution was analyzed for molybdenum (% Mo) by ICP Emission Spectrometry. The same samples were also analyzed for fluorine by Specific Ion Electrode analysis. For 2008 samples, a 0.5 gram sample was dissolved in a similar manner to the above and was analyzed by ICP-Emission Spectroscopy. The values reported are for the total amount of molybdenum (oxide and sulfide) in the rock.

The company received the analytical data in digital form and merged it with the shipping data. As well as providing field data, the "LabUse files" show the distribution of duplicates and quality control samples in each of the drill hole batches. The results initially obtained for drill hole AD-425 were questioned and the samples were re-run. The second set was used in the resource calculation.

Although there was only a minor amount of near-surface oxidation; ACME analyzed near-*surface*[10] *samples from each hole for molybdenum in oxide form. One gram of rock pulp from each of the samples was digested in 30 ml of 30% hydrochloric acid (HCl) and analyzed for molybdenum (% Mo) by ICP Emission Spectrometry. This procedure does not dissolve molybdenite* (MoS_2) *and so the resultant values are for non-recoverable, oxide-related molybdenum. The amount determined was subtracted from the total molybdenum content obtained by "1EX" and/or "7TD" digestion to provide sulfide molybdenum data which was then used for the resource estimation.*

11.8 Stuhini Analytical Procedures

All rock samples were assayed by four-acid digestion and Ultratrace Inductively Coupled Plasma Mass Spectroscopy ("ICP-MS") analysis for 59 elements. Fire assay analyses for gold, platinum and palladium were performed on all samples. Samples with over-limit copper, lead, zinc, and silver grades were analyzed by multi-acid digestion and Inductively Coupled Plasma Emission Spectroscopy ("ICP-ES"; specific procedure MA370). Over-limit tungsten was analyzed with lithium borate fusion X-ray fluorescence ("XRF"; specific procedure XF750). Silver samples with grades over 1,500g Ag/t were also analyzed by fire assay (specific procedure FA530) and lead samples >10% with titration (specific procedure GC817). Over-limit tungsten was analyzed with lithium borate fusion XRF (XF750). Soil samples underwent multi-element and gold analysis at Bureau Veritas in Vancouver, using a four-acid digestion ICP methods and fire assay with atomic absorption finish for gold.

11.9 Quality Assurance and Quality Control

Most of the QA/QC data described herein was produced by Adanac Molybdenum Corporation or its predecessor Adanac Gold Corporation during the period 2004 through 2008. During that period Adanac operated a QA/QC program that would be considered modern and up to industry standards even now.

There is little QA/QC information available from the work of prior operators, although some check or replicate assay data is available in maps and memoranda. These are discussed following the discussion of Adanac's data. While there is little QA/QC data available, Chapman, et al. (1971) described an extensive amount of check assaying and sampling indicating that they were aware of quality issues in the early 1970s.

The authors did a thorough evaluation of QA/QC data and most of section 11.9 is the authors' work. Some text from Palmer (2009) is presented herein for historical context, is in an italic font, and is clearly identified as being copied from Palmer (2009). The authors have not relied upon the conclusions expressed in Palmer (2009).

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[10] "surface" changed to "near-surface" by the present authors for clarity.

11.9.1 Adanac's Standards

Standards, also known as "certified reference materials" ("CRMs") are samples with a well-established concentration of the material of interest, known within specified limits. Standards are typically finely ground and homogenized powder, inserted into the sequence of samples sent to the laboratory to check that the laboratory analyses report the known concentration, within reasonable limits.

Adanac obtained 982 analyses from seven different standards over the course of the period 2004 to 2008. The results are summarized in Table 11-1.

Table 11-1 Summary of Results for Analyses of Standards

								Performance per Supplier Specs					Internal Specs	
								Failure Counts		Bias pct	Pp	PpK	Failure Counts	
Standard ID	Start Date	End Date	Count	Target	Average	Maximum	Minimum	High	Low				High	Low
HV-2	21-Aug-07	31-Oct-08	140	480	460	630.8	382.7	1	3	-4.2	1.3	1.0	1	3
MP-2	07-Sep-04	21-Jan-08	148	2800	2802	2967.7	2351.8	0	0	0.1	4.4	4.4	1	4
CU 107	27-Sep-04	07-Feb-06	151	310	308	350	170	4	9	-0.7	0.6	0.5	1	1
CU 111	15-Aug-05	20-Oct-08	252	1160	1104	1233.5	300	0	11	-4.8	1.0	0.6	0	5
CU 132	15-Aug-05	01-Aug-08	161	460	431	480	86.3	0	28	-6.3	0.8	0.4	0	2
CU 134	01-Jul-08	31-Oct-08	112	400	400	444.6	363	1	0	0.0	0.9	0.9	0	0
CU 159	06-Oct-08	31-Oct-08	18	1040	1007	1065.9	943	0	0	-3.2	1.2	0.9	0	0
Minimum	07-Sep-04	07-Feb-06	18	310	308	350	86.3	0	0	-6.3	0.6	0.4	0	0
Maximum	06-Oct-08	31-Oct-08	252	2800	2802	2967.7	2351.8	4	28	0.1	4.4	4.4	1	5
Count or Sum			982					6	51				3	15

Explanations

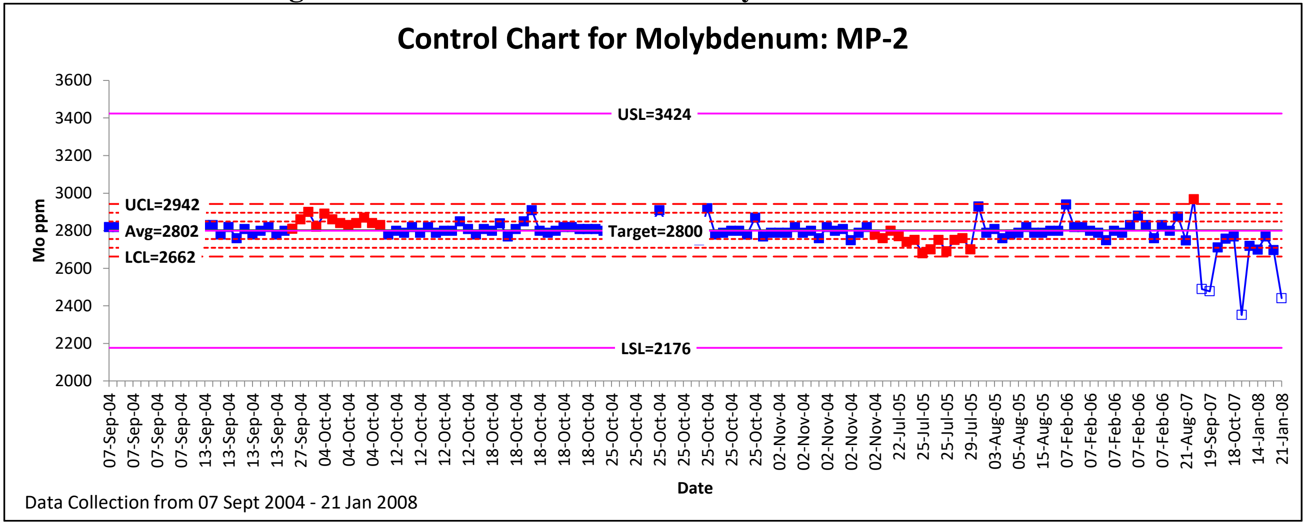
Supplier Specifications	the expected or target value and standard deviation (“sd”) provided by the supplier of the standard. The upper and lower specification limits (“USL” and “LSL”) are calculated as target ± 3sd and assays falling outside these limits are deemed to be failures.
Internal Specifications	the average and standard deviation obtained by the users in actual analyses. The upper and lower control limits (“UCL” and “LCL”) are calculated as average ± 3sd and assays falling outside these limits are deemed to be failures.
Bias	(average obtained – target value) ÷ target value
Pp (performance ratio)	a term used in industrial process control. As used here it is the ratio of *expected standard deviation ÷ achieved standard deviation*
Ppk	similar to Pp but recognizes bias. Calculated as *minimum of: (USL-avg)/3sd or (avg-LSL)/3sd* where USL and LSL are specification values whereas avg and sd are achieved values.

If the laboratory were to achieve results identical to specifications, Pp and Ppk would both be exactly one. In reality values near one are good. If *(Pp or Ppk) << 1* the laboratory is operating at much lower precision or accuracy than is implied by the specifications for the standard. If *(Pp or Ppk) >> 1* the standard has variance that is too large to adequately monitor the performance of the lab.

The results summarized in Table 11-1 are based on control charts and statistical evaluations. Note that two sets of "Failure Counts" are included in the table. Normally the authors make pass/fail judgments based on specifications provided by the suppliers of the standards ("per Supplier Specs" in the table). In this case the authors chose to also do pass/fail evaluations using statistics based on the entire sets of analyses obtained by Adanac during its years on the project ("Internal Specs" in Table 11-1). For some of the standards, notably MP-2 and CU 132 this latter set of pass/fail evaluations using "Internal Specs" gives a more realistic picture of assay performance over the course of Adanac's years of exploration.

Note that in Table 11-1 MP-2 has "Pp" and "PpK" (terms explained on page 75 below Table 11-1) of 4.4. Taken at face value this number would imply that the standard has too large a variance and is unsuitable for monitoring assays at the desired accuracy and precision. The control chart for this standard is illustrated in Figure 11-2.

Figure 11-2 Control Chart for Molybdenum in MP-2

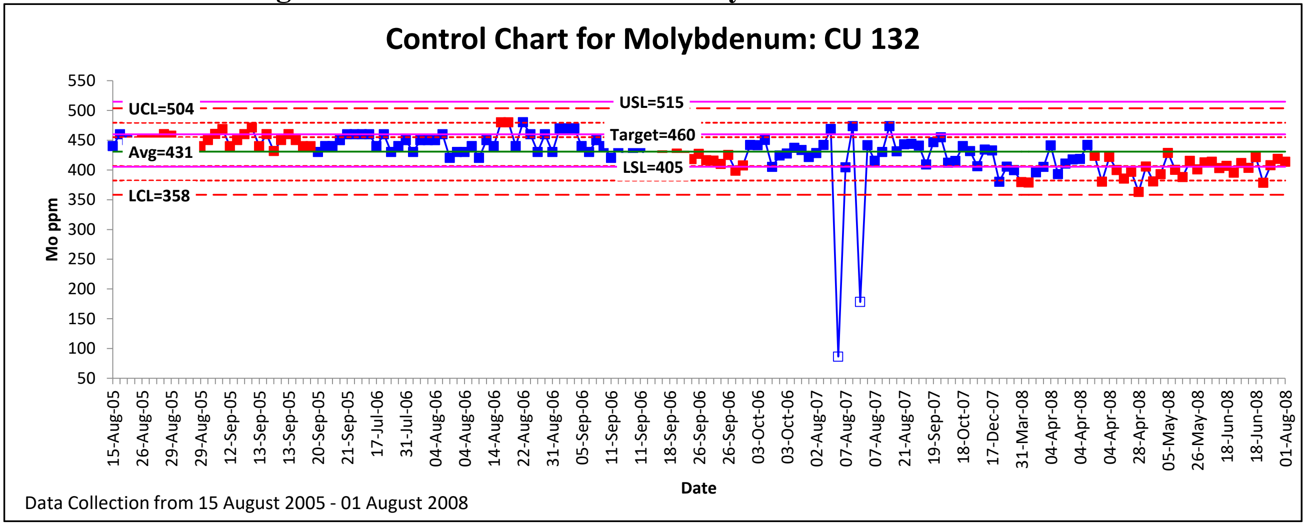


The specification limits for MP-2, the "USL" and "LSL" are shown in magenta on Figure 11-2. These were not provided by CanMet, the supplier of the standard, so the authors calculated them based on raw analytical data in "M38-13-83-14-eng.pdf", a file downloaded from the CanMet web site on December 23, 2021. The resulting limits are too broad to be useful in monitoring the analyses of this standard. The 148 analyses obtained by Adanac between 2004 and 2008 occupy a much narrower band inside the calculated specification limits. If the author's calculated "specification limits" are used, no failures are identified, yet clearly there are four low failures towards the right end of the chart, occurring between September 2007 and January 2008. These four failures were correctly identified using the "Internal Specifications", with control limits, "UCL" and "LCL" shown on Figure 11-2 as long-dash red lines.

Another standard to take note of is Cu 132. The control chart for this standard is illustrated in Figure 11-3.

In Table 11-1 a very large number of low failures, 28, are listed for CU 132 under "per Supplier Specs". Results for this standard have the largest-magnitude bias, -6.3%, and the PpK is a very low 0.4, indicating a mismatch between the supplier specifications and the assays obtained by Adanac for this standard. This mismatch is illustrated in Figure 11-3 by the closeness of the average obtained (green line) to the lower specification limit ("LSL", lower magenta line).

Figure 11-3 Control Chart for Molybdenum in CU 132



Despite the low bias of the analyses obtained for CU 132, the results show reasonable precision, as evidenced by the detection of only the two obvious low-side failures using “Internal Specifications”. In the author’s opinion, it is more reasonable to attribute two failures to CU 132 than 28. The discrepancy between those two numbers is attributable to bias, which though important to be aware of, is different from failure.

The bias in the results for CU 132 changed over time. In 2005, the analyses were mostly biased high, highlighted by the large number of red markers above the green line at the left end of the chart in Figure 11-3, indicating long sequences of results exceeding the overall average. By 2008, most of the analyses were below the overall average, indicated by the sequences of red markers below the green line at the right end of the chart.

There will almost always be some biases between the expected values for standards and the average values that any single lab will achieve. The average biases listed in Table 11-1 for the standards are predominantly negative, indicating that on average the lab has produced analyses of the standards that are slightly lower than expected. This does not necessarily mean that on average the real molybdenum contents of the actual samples are slightly higher than the assays obtained.

In the opinion of the author, the results obtained by Adanac from molybdenum analyses of standards are acceptable.

11.9.2 Adanac’s Duplicates

The project database contains results for four types of duplicate samples analysed as part of Adanac’s QA/QC program. Table 11-2 contains descriptions of the duplicate types as described in project reports.

Table 11-2 Types of Duplicate Samples

Type Name	Description (from database)
Core Duplicate	Randomly selected samples of the second half of core from the box and processed to ensure no bias during cutting
Field Duplicate	Reported to be a second split from the coarse crush material, collected by Adanac at site while they were crushing samples on site. (MacKenzie & Pinsent, Aug. 2008)
Pulp Duplicate	ACME inserted “pulp duplicates”, a second split from the original pulp, in the run-stream where requested by Adanac
Preparation Duplicate	Duplicate Reject -ACME inserted “reject duplicates”, pulps from a second 250 grams, split from the original sample where requested by Adanac

The authors evaluated the results for the duplicate samples using descriptive statistics, correlation coefficients, scatterplots, QQ plots, relative difference plots and histograms. Most of these terms are familiar or can be found in standard statistical texts. The authors use relative differences calculated in two ways:

Equation 1 $$100\,x\,\frac{(Duplicate - Original)}{Lesser\ of\ (Duplicate, Original)}$$

Equation 2 $$100\,x\,\frac{(Duplicate - Original)}{Mean\ of\ (Duplicate, Original)}$$

The authors used both methods of calculating relative differences in the evaluation of Adanac’s duplicates, but only the relative differences based on Equation 1 are presented in this discussion.

The results obtained for the duplicates are summarized in Table 11-3. It should be noted that summarizing these results in this tabular form, making liberal use of averaging, obscures much detail that is evident when looking at complete data using charts.

The results for the core duplicates in Table 11-3 look good. The average grades for the originals and duplicates are very similar, and the average relative difference, at +1%, indicates that bias is not a concern. This suggests that Adanac’s core sampling was done well.

In the case of “Field Duplicates”, which are coarse crush duplicates collected by Adanac at their on-site sample preparation facility, the results for 2008 are separated from the results for earlier periods in Table 11-3. The reason for separating them can be seen in the relative differences, +2% for the period 2004-07, but +12% in 2008. The results for the earlier years are typical of those the authors have seen for those types of duplicates. Why the results for 2008 should be so different is unknown to the author.

The results for the preparation duplicates have also been separated into pre-2008 and 2008 in Table 11-3 because the results have markedly different characters in those two periods. In 2004-07 the average relative difference is significant at +8%, the average absolute relative difference is a mild +26% and the correlation coefficient is good at 0.96. In 2008 those numbers switch to a surprising -19% relative difference, a high 74% absolute relative difference and a lower correlation coefficient of 0.84. The contrast in relative differences is illustrated by comparing Figure 11-4 and Figure 11-5. In Figure 11-4 the positive relative difference is driven by a number of high positive values (duplicate >> original), whereas in Figure 11-5 the strong negative relative difference is driven by many strongly negative values (duplicate << original). The reason for this change in performance isn’t known to the author.

Table 11-3 Summary of Results Obtained for Duplicates

Type	Period		Counts of Pairs			RMA Regression	Grade Averages, Mo ppm		Averages as Percent		Correlation Coefficients
	Start Date	End Date	All	Used	Outliers	(y = dup, x = orig)	Originals	Duplicates	Rel Pct Diff	Abs Rel Pct Dif	
Core Dup Mo All*	27-Sep-04	4-Apr-08	330	324	6	y = 1.055x - 15.6	320	322	1.0	65.0	0.78
Field Dup Mo All	13-Sep-04	2-Sep-08	420	419	1	y = 0.969x + 15.99	290	297	5.0	45.0	0.76
Field Dup Mo 04 07	13-Sep-04	17-Dec-07	330	329	1	y = 0.906x + 31.08	320	321	2.0	43.0	0.85
Field Dup Mo 08	14-Jan-08	2-Sep-08	90	86	4	y = 0.906x + 10.912	148	145	12.0	49.0	0.91
Prep Dup Mo All	27-Sep-04	31-Oct-08	622	618	4	y = 0.998x + 9.728	364	373	-6.0	51.0	0.88
Prep Dup Mo 04 07	27-Sep-04	17-Dec-07	321	319	2	y = 1.049x – 0.856	344	360	8.0	26.0	0.96
Prep Dup Mo 08	27-Dec-07	31-Oct-08	301	298	3	y = 0.977x + 13.809	383	388	-19.0	74.0	0.84
Pulp Dup Mo All**	27-Sep-04	31-Mar-08	331	327	4	y = 1.025x - 6.225	329	331	-1.0	15.0	0.99

Notes: *All except 14 of the core duplicates were from the 2004-2007 period.

** All except 8 of the pulp duplicates were from the 2004-2007 period.

Outliers were not used in the statistical evaluations.

For the field and preparation duplicates the 2004-2007 data are separated from the 2008 data because the outcomes of the duplicate tests seem different in the latter year.

Figure 11-4 Molybdenum Relative Percent Difference - Prep Duplicates 2004-2007

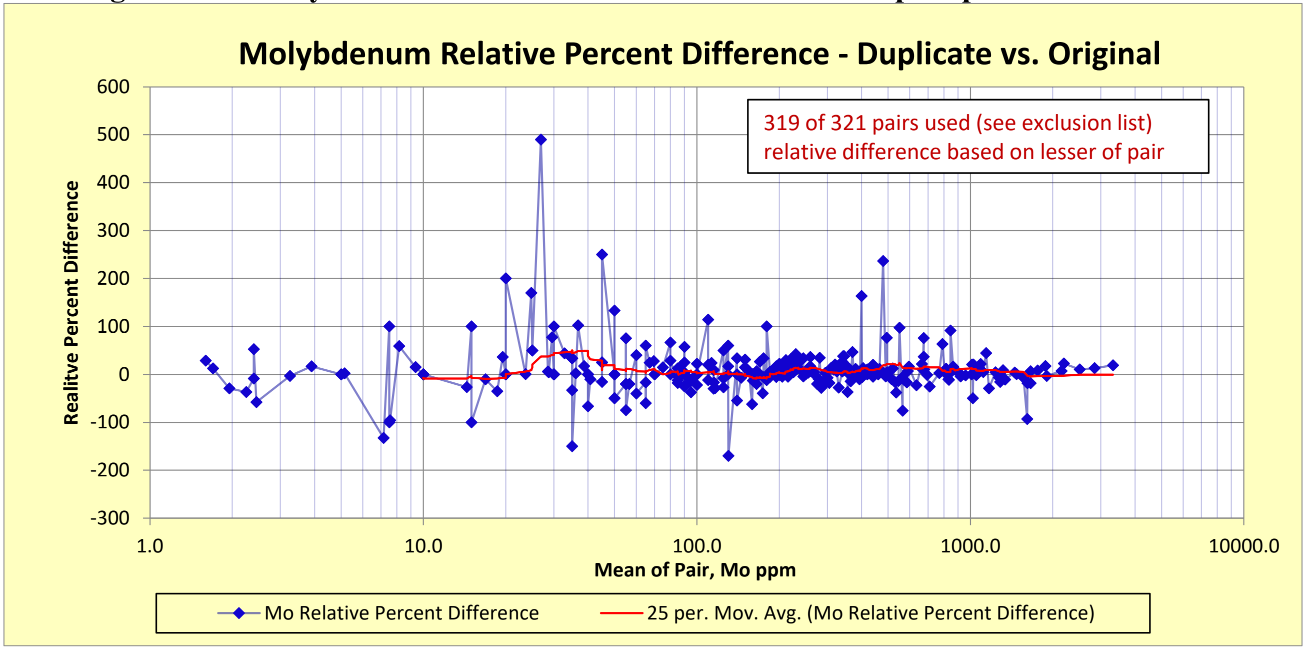
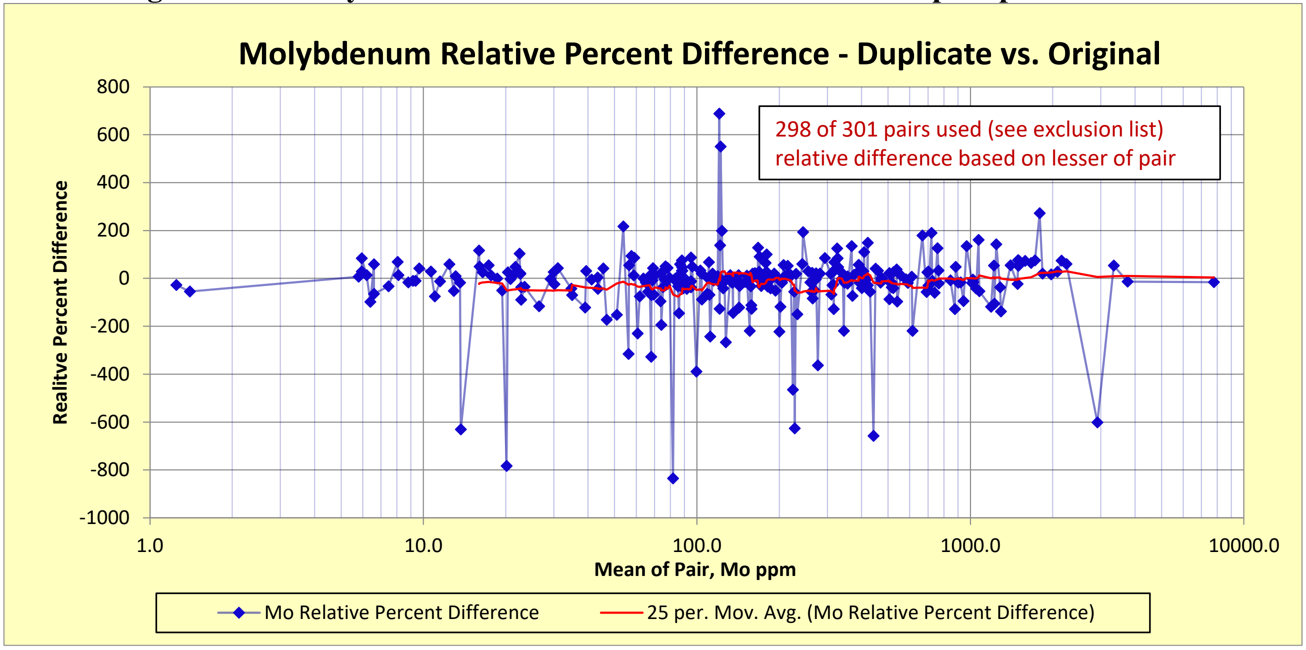


Figure 11-5 Molybdenum Relative Percent Difference - Prep Duplicates 2008



The results obtained for the pulp duplicates, as shown in Table 11-3, are good.

As general comments about the information obtained from Adanac's duplicates:

- Core sampling seems to have been done well, imparting no significant bias. This is notable because sampling core in this style of mineralization containing large rosettes of coarse flaky molybdenite is challenging.
- Analytical precision, as indicated by the pulp duplicates, was good.

- Sub-sampling and grinding through pulverizing imparted some bias, as indicated by the field and preparation duplicates.
- The variation of precision over the different stages of sampling, preparation and analysis, as indicated by the absolute relative differences in Table 11-3 follows an expected pattern, having greater differences in the core duplicates (65%), lower differences in the field and preparation duplicates (45% and 51% respectively), and the lowest differences, 15% in the pulps. These are not unexpected numbers, and the results can be used for resource estimation. They also highlight the importance of careful sampling and sample preparation, which will become critical in the event that the Deposit is mined.

11.9.3 Adanac's Blanks

There are two types of blanks in the project database. One type is labelled "Blank" and the other "Blank-S". Based on descriptions in Palmer (2009) the authors believe that the ones labelled "Blank" were not processed in the main sample-preparation stream at the project site. Some consisted of commercial "poultry grit" which was not crushed at the site and some consisted of dolomitic limestone that was crushed at the site but not in the same batches as the samples. "Blank" was intended to test the cleanliness of the lab's grinding and pulverizing circuits.

The authors believe that blanks labelled as "Blank-S" consisted of material that was crushed at the site as part of the main sample-preparation stream. They probably consisted of scoria prior to 2008, and dolomitic limestone in 2008. The "Blank-S" blanks were intended to test the cleanliness of the on-site crushing process, but also, like the "Blanks", passed through the analytical laboratory's grinding and pulverizing circuits.

The authors evaluated both types of blanks by preparing charts having the analyses of the both the blanks and the samples immediately preceding them in the sample stream on the same chart, plotted against a scale using drill hole numbers as a proxy for time. If there is a tendency for the crushing and grinding circuits to be contaminated by mineralized samples and inadequately cleaned between samples, then the analyses for blanks and for preceding samples should spike upwards in tandem on the charts.

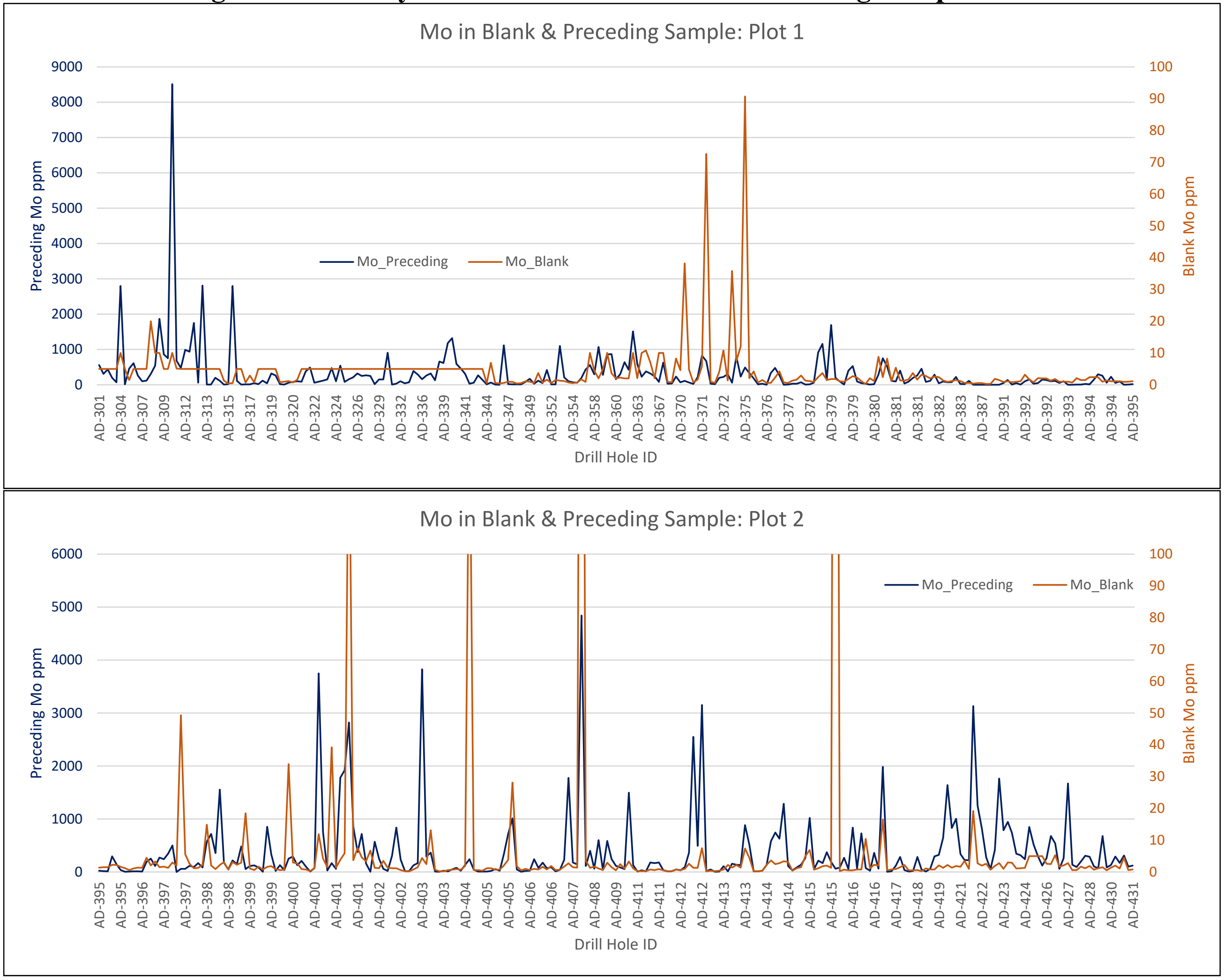
The type of plot described is useful only if the sequence of samples through the preparation circuits is known. In most cases, when blanks are used for monitoring the preparation process, samples are processed in numerical sequence. The authors infer this to have been the case for Adanac's sample processing but do not have documentation to prove it.

Figure 11-6 shows plots for the "Blanks", of which there are 482. Two plots are shown, "Plot 1" and "Plot 2". Two plots are used because putting all the data on a single plot rendered it too cluttered to be legible. Plot 2 is simply a continuation of Plot 1.

A simple visual scan of the plots in Figure 11-6 suggests that over most of the project time span, covered by Plot 1, there was little tendency for the grades of blanks to be influenced by the grades of the preceding samples. In Plot 2, which mostly covers data from 2008, there is some tendency for the grades of the blanks and preceding samples to rise in tandem, though not consistently.

There are a few unusually high grades in blanks, on both plots, that show no apparent relationship to grades in preceding samples. There are four cases of such spikes exceeding 100 ppm Mo, the highest of which is 421 ppm, off the scale of the plots in Figure 11-6.

Figure 11-6 Molybdenum in "Blanks" and Preceding Samples



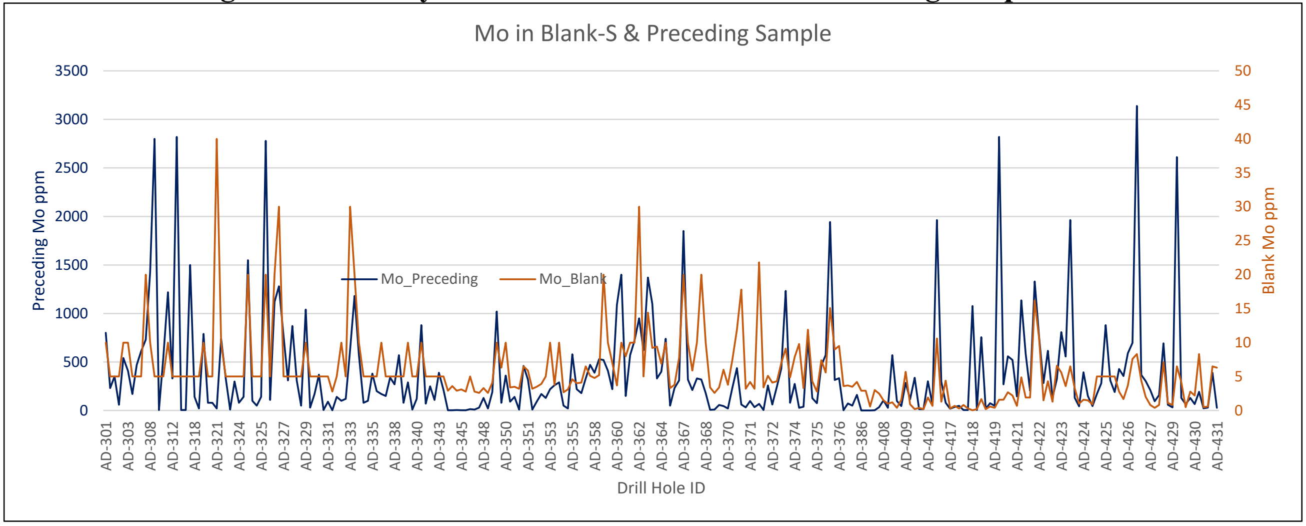
Notes: Grades of blanks are plotted against the right-most vertical axes.
Grades of the preceding samples are plotted against the left-most vertical axes.

Figure 11-7 shows a plot for 251 analyses of Blank-S and the preceding sample. This is the blank intended to test the cleanliness of the on-site sample crushing facility. A visual inspection of the plot shows some tendency for the grades of the blanks and preceding samples to rise together, suggesting some degree of contamination from mineralized samples in the crushing circuit. It should be noted, however, that since these blanks also passed through the laboratory's grinding and pulverizing circuit, it is not possible to separate the effects of the on-site circuit and the laboratory circuit from each other.

The highest molybdenum grade reported for an analysis of Blank-S was 40 ppm Mo.

The results obtained from analyses of Adanac's "Blank" and "Blank-S" show that, unsurprisingly, some contamination occurred in the crushing, grinding and pulverizing circuits. The frequency of contamination, if it occurred similarly in the processing of real samples, was not sufficient to have a material effect on the outcome of a resource estimate. The intensity of some samples' contamination is a concern mollified only by the general infrequency. It is noteworthy that soft and malleable molybdenite smearing did not contribute to greater contamination.

Figure 11-7 Molybdenum in "Blank-S" and Preceding samples



11.9.4 ACME Interlab Pulp Duplicates

(*text in italics is from Palmer, 2009, except drill hole identifiers have been modified to match the current database*)

Pulps from 22 holes drilled in 2007 and 2008 were sent from ACME to ALS-Chemex and analyzed in two batches. The first, including samples from 13 holes (AD-372 to AD-376, AD-378 to AD-383 and AD-395 to AD-396) was re-assayed as ALS-Chemex batch VA08099694 and the second, including pulps from nine holes (AD-397 to AD-402, AD-412 to AD-413 and AD-416) was re-assayed as batch VA08130224. Interlab pulp duplicates submitted by ACME to ALS Chemex show good correlation. There is no bias but the precision is moderate (±19%).

11.9.5 Interlab Crushed Duplicates

(*text in italics is from Palmer, 2009, except drill hole identifiers have been modified to match the current database*)

Selected duplicate samples of crushed core from 15 holes drilled in 2008 were shipped to ALS-Chemex (AD-417 to AD-431), and samples from nine holes (AD-417 to AD-419, AD-425 to AD-426 and AD-428 to AD-431) were shipped to Eco Tech Laboratories for check analysis. The samples were collected as part of the same process that led to the selection of the equivalent ACME sample. The samples were shipped with the same combination of blanks, duplicates and standards as the main ACME batch. For the first three holes sampled for Eco Tech (AD-417 to AD-419), the samples selected were different from those selected for ALS-Chemex. However, for the remaining six holes (AD-425 to AD-426 and AD-428 to AD-431), the intervals sampled were the same as for ALS-Chemex and there is direct correlation between the three laboratories.

Selected samples from 15 holes drilled relatively late in the program (AD-417 to AD-431) were submitted to ALS Chemex Analytical Laboratories, in North Vancouver, BC, for check analysis. In each case, between nine and 13 crushed core samples were submitted with one or two "duplicates", "blanks" and "standards" in a similar fashion to the samples submitted to ACME. The samples were crushed such that 70% passed 2 mm, and then a 250 gram subsample was pulverized down to 85% less than 75 microns. A 0.25 gram aliquot was digested with HCL04, HNO3, HF, and HCL acids, and topped up with dilute hydrochloric acid. The resultant solution was analyzed for 33 elements including molybdenum, copper, lead, zinc, silver, arsenic, uranium and tungsten in parts per million (ppm) and sulfur in percent (%) by ICP-Atomic Emission Spectroscopy (ALS Chemex ME-ICP61). The procedure provides Mo determinations in the range 1 to 10,000ppm. The method used is equivalent to that described above for ACME and the results serve as a check on equivalent primary samples submitted to ACME Analytical Laboratories.

Samples from nine holes (AD-417, 418, 419, 425, 426, 428, 429, 430 and 431) were sent to Eco Tech Laboratories Limited, in Kamloops, BC. Of these, the samples from six (AD-425, 426, 428, 429, 430 and 431) were cut from the same intervals that were submitted to ACME Analytical Laboratories and to ALS Chemex (above) and serve as a check on both primary and secondary analytical results. The others are only a check on the ACME results. The Eco Tech samples were prepared in a similar way to the others. A 0.5g pulp was digested with HCL04, HNO3, HF, and HCL. The sample was taken to dryness and re-dissolved in 3 ml of HCl, HNO3 and H2O (in a 3:1:2 ratio). It was then diluted to 10ml with water. The solution was analyzed by ICP-Atomic Emission Spectroscopy for 44 elements, including molybdenum, copper, lead, zinc, silver, arsenic, uranium and tungsten, all as ppm. Interlab crushed duplicates were submitted by Adanac to ACME, ALS Chemex and EcoTech Laboratories. ACME vs. ALS Chemex comparison shows poor precision (Figure 13-4). ACME vs. EcoTech comparison also shows poor precision (Figure 13-3). The interlab comparison of crushed duplicates shows high variability (poor precision) as would be expected due to the coarse particle size of the crushing (2mm) and the presence of relatively coarse bladed molybdenite. Statistical analysis of this data for bias is not appropriate due to the significant variability.

11.9.6 Summary Statement Respecting Adanac's QA/QC

In the author's opinion the results from Adanac's QA/QC program support the use of the assays obtained by Adanac in a resource estimate.

11.9.7 Kerr Addison's Underground Samples

Stuhini has a blueprint copy of a map prepared by Kerr Addison in 1970, illustrating the underground workings. The workings were bulk sampled on a round-by-round (blast-by-blast) basis as they were being driven. The Kerr Addison map has underground samples plotted on it, with two MoS_2 assay values for each sample. One assay value is from the "mine lab", Kerr Addison's on-site laboratory. The other is from "Loring Lab", Loring Laboratories Limited of Calgary, Alberta. Chapman et al. (1971) report that a colorimetric-spectrophotometric analysis was used for "*normal reserve grade samples and for pilot mill tailings determinations*" and a gravimetric method for the "*higher grade or mill product*" samples but they are unclear as to which lab used these methods or if both did. The Loring assays were done on pulps prepared by Kerr Addison.

The authors extracted 374 assay pairs from Kerr Addison's underground map using manual data entry. The Loring assays were treated as a form of check assay. The authors evaluated them using methods like those described in section 11.9.2, with a few additional tests as described or listed below.

As check assays, the Loring assays confirm the mine lab assays, with minor differences.

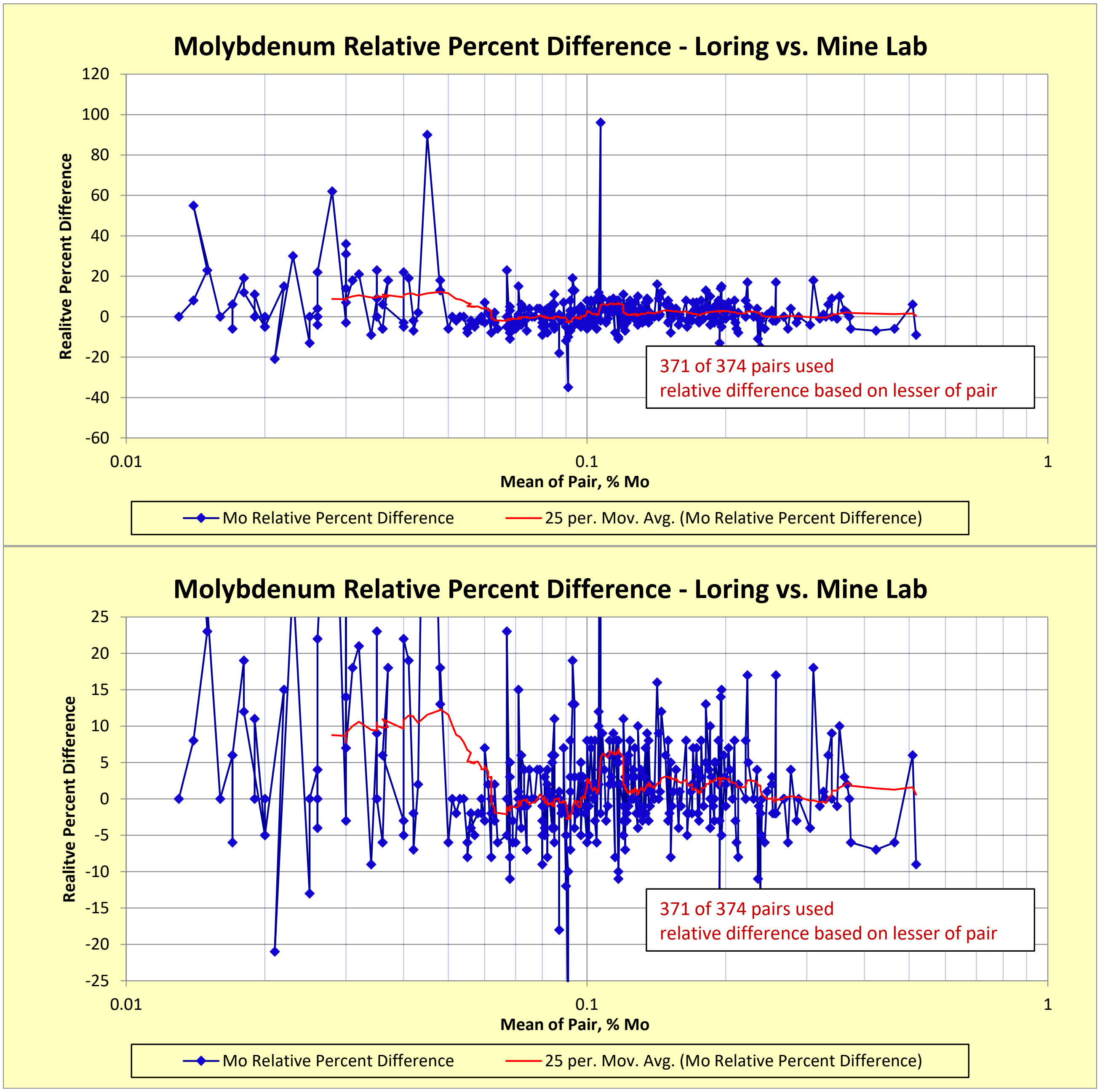
- Converted to Mo%, the mine lab assays average 0.12% Mo whereas the Loring assays average 0.13% Mo.
- The relative difference is +2.4%, with Loring being higher.
- The correlation coefficient is 0.99, a very close correlation.
- A paired-sample T-test for similarity of the means at 95% confidence indicates that the means of the mine lab and Loring assays are probably not the same.
- A paired-sample T-test for equivalence at an alpha level of 0.05 indicates that the difference of the means likely lies between -0.005% Mo and +0.005% Mo.

Figure 11-8 is a relative difference plot for the Loring vs. mine lab assays. The two images show the same data. The vertical scale on the lower plot is zoomed in to emphasize the red moving-average line. It shows that at grades up to about 0.06% Mo the Loring assays are, on average, as much as 10% higher than the mine lab assays. From about 0.06% to 0.10% Mo the average Loring assays are similar to or even slightly lower than the average mine lab assays. Above 0.10% Mo the average Loring assays are variably higher than the mine lab assays, between 0 and approximately 5%.

In the current Ruby Creek database, the grades for the underground samples appear to be averages of the mine and Loring lab assays. The authors do not know whether the grades assigned to Kerr Addison's drill holes are also averages because there are no original Kerr Addison data. This complicates comparisons of drill hole assays to underground assays.

In the authors' opinion the Loring assays support the mine lab assays from an analytical perspective. The differences are within the normal range of differences between two laboratories. The authors have relied on their own evaluation, but note that it is corroborated by Chapman et al. (1971) who stated "*In general the mine lab results compared exceptionally well with Loring*."

Figure 11-8 Molybdenum Relative Percent Difference - Loring vs. Mine Lab



11.9.8 Climax "Replicate" Assays

Stuhini gave the authors a copy of an internal memorandum written by staff of Placer Development in 1979. Among other things, it contains a listing of a set of 39 "replicate" assays from a Climax drill hole, originally designated "06W - 08N" and now identified as CL-145 in the project database. There is no description of these repeat analyses beyond their description as "replicates". The authors evaluated them using methods similar to those described in section 11.9.2. The replicates confirm the original assays, with negligible differences:

- Converted to ppm Mo, the original assays average 684ppm Mo whereas the replicate assays average 682ppm Mo.
- The relative difference is -1.6%, with the replicates being lower.
- The correlation coefficient is 1.00, effectively a perfect correlation.
- A paired-sample T-test for similarity of the means at 95% confidence indicates that the means of the original and replicate assays are probably the same.
- A paired-sample T-test for equivalence at an alpha level of 0.05 indicates that the mean of the differences likely lies between -10 ppm Mo and +10 ppm Mo.

The Climax replicate assays support the originals. The lack of supporting information means that this conclusion, while favourable, is of lesser significance than it might have been with full supporting documentation.

11.10 Authors' Summary Statement

In the authors' opinion, the sample preparation, analyses and QA/QC measures described in this section are sufficient to determine that the sample assays in Stuhini's database for the Ruby Creek Project are suitable for use in the resource estimate described in this report.

12.0 DATA VERIFICATION (ITEM 12)

Section 12.1 is copied largely from Palmer (2009). It describes the most recent data verification done prior to the authors' work. The authors' have not relied upon the conclusions expressed in Palmer (2009) but present the description here for historical context.

The data verification done by the authors is described in section 12.2, and the authors' opinion as to data verification is presented in section 12.2.5.

12.1 Historical Drill Data Verification

(*text in italics is from Palmer, 2009*)

12.1.1 Golder 2007 Data Verification

The data verification checks that were completed on the drill hole data prior to them being used in the February 22, 2007 Mineral Resource Estimate included the following:

- *a check of the drill hole data against original spreadsheet records in the database;*
- *a review of the 2006 blanks, duplicates (Q-Q plots) and standards; and*
- *a site visit was completed on August 22, 2006 to review core logging and sampling procedures.*

No independent samples were collected during the site visit, but visible molybdenum mineralization was observed and independent samples were collected in 2004 (Blower, 2005) and 2005 (Palmer, 2006).

Verification checks were completed on the 2005 and earlier data and are provided in the Technical Reports by Palmer (2006) and Blower (2005). The data verification checks completed on the 2006 data are discussed above with the exception of the drill hole coordinate translation from UTM NAD-27 to UTM NAD 83 described in the following sections. No drilling was occurring during Paul Palmer's site visit (August 24 and 25, 2005), but core logging, handling, sampling and storage were observed. Two drills were on the property and in the process of moving to other drill hole set-ups. Additionally, no access was available to the underground adits during the site visit and it has been that way since Adanac has owned the property.

Approximately 5 percent of the 2006 drill hole Excel spreadsheets were visually reviewed against the Datamine drill hole database. The drill hole samples in the database prior to 2004 were provided as ASCII files. These ASCII files were provided by Adanac based on electronic spreadsheets from AMEC. These drill hole samples were added to the Ruby Creek Datamine Database created in 2006 and were visually checked against the 3D geological and mineralization models created. Excel spreadsheets of the geological and assaying data for the 2006 drilling program were reviewed by Golder and included in the Ruby Creek Datamine Database.

No significant discrepancies were encountered during the check. The collar locations for drilling data from 2005 and earlier have undergone a conversion and translation from UTM NAD-27 to UTM NAD 83. Some drill hole samples (pre-2004 historical data) did not have information pertaining to percent recovery and main lithology identification but were still included in the Mineral Resource Estimate since assay data was available. All drill holes with missing information (e.g., no Mo assay values for overburden samples) were flagged with a negative value (typically -2) and were not included in the mineral estimate.

The QA/QC program was reviewed during the site visit by Paul Palmer and was consistent with the previous site visit and, in Golder's opinion, demonstrated that it was appropriate for the data to be used in the February 22, 2007 Mineral Resource Estimate. A review of the 2006 sampling data including blanks, duplicates and standards was completed and is described in Section 13.4.1.

Golder concluded that the assay and survey data used in the January 2006 mineral estimate were appropriate for resource estimation of the Ruby Creek Molybdenum deposit.

12.1.2 Golder 2008 Data Verification

The data verification checks that were completed on the drill hole data prior to them being used in the April 2009 Mineral Resource Estimate included the following:

- *A check of the Adanac database against original spreadsheet records.*
- *A review of the 2005-2007 and 2008 blanks, duplicates (Q-Q plots) and standards.*
- *Site visits to the Ruby Creek Project were conducted by Kevin Palmer on September 25, 2007 and between September 14 and 16, 2008 to review the 2007 and 2008 drilling progress, drill setups, geological logging, sampling and storage facilities. No limitations were placed on Golder during the data verification process.*

12.1.3 Verification of the ADANAC Database

The database provided by Adanac in December 2008 was extracted from Minesight and contains collar, survey, lithology, recovery, assay and density data for the drill holes. Golder reviewed 5 percent of the drill holes for lithology, recovery and density data. A 100-percent check was conducted for assay data and collar positions. Downhole survey data were reviewed when original information was available (on most of the 2007-2008 holes, some of the older holes). Some discrepancies were encountered during the check, and corrected for the final estimation database:

- *Collar database: Some of the 2005 and earlier collar locations which had undergone a conversion and translation from UTM NAD-27 to UTM NAD 83 had been physically surveyed by Underhill in 2006 but not modified in the database. The old translated coordinates have been replaced by the physical 2006 Underhill survey.*
- *Survey database: Only a few discrepancies were observed and corrections have been made in the database when necessary based on Adanac downhole probe data and Golder 2006 downhole surveys.*
- *Lithology and Recovery database: Some of the geological and core information in 2004-2006 Kerr Addison and Placer Dome holes was either incomplete or missing from the database. The database was updated by Adanac following Golder's request.*
- *No major discrepancies were observed in the Assay and Density databases.*

After the necessary corrections had been made to the database, Golder concluded that the assay and survey data were sufficiently free of error to be adequately used for the resource estimation update of the Ruby Creek Molybdenum deposit.

12.2 Current (2021-22) Drill Data Verification

The authors verified the project data from original sources to the degree possible. For the work done by Adanac in the 2004 to 2008 period, there is a large amount of original data available in digital form, and the authors used the original digital sources to the degree possible to verify the data now in the project database. In terms of the chain of custody all the digital data in the authors' possession came from Stuhini, which obtained the data from Adanac.

For data from work prior to 2004, the original sources are in paper format and are incomplete. Nevertheless, the authors were able to check a significant number of the earlier assays, as is described in following sections. Much of the paper data is in assessment reports. In terms of the chain of custody of the information, the authors received paper copies of assessment reports and some other government reports from Stuhini, but also downloaded digital copies from the BC Ministry of Energy, Mines and Petroleum Resources[11] ARIS and Geological Survey web sites.

12.2.1 Assay Table

The authors audited the molybdenum assays reported in the project assay table by checking them against original or near-original sources to the extent such sources were available. Table 12-1 summarizes the numbers of checks that the authors were able to do, by project operator.

Table 12-1 Summary of Assay Table Audit

Operator	Period	Counts of Assays		Check Sources
		Total	Checked	
Adanac	2004-2008	12,272	12,269	digital assay data files and/or certificates
Placer Dome	1979-1980	3,094	3,094	drill logs in assessment reports
Climax	1973-1974	555	269	drill logs in assessment reports
			197	third party memorandum
Kerr Addison	1970	5,967	366	underground mine map

12.2.1.1 Adanac Molybdenum Corporation Assays

The molybdenum assays attributed to Adanac were audited by checking them against primary digital sources.

The chain of custody of the sources is Adanac – Stuhini – the authors. In some of the digital data files there is evidence that they were re-formatted slightly, presumably by Adanac, but occasional checks against certificates showed the assay values to be the same.

To check Adanac's molybdenum assays in the assay table, the authors used the original assay data files to construct a new assay table and then used querying tools in Microsoft Access™ to compare the

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[11] Officially the "Ministry of Energy, Mines and Low Carbon Innovation", but the earlier name is still used on the web site.

molybdenum values in its assay table to the values in Stuhini's database. The authors' independently constructed assay table was used only for this purpose. The assay table used for estimation is Stuhini's.

In a few cases differences were found between molybdenum values in the digital data files and those in the database. Stuhini and the authors made joint decisions about any corrections to the Adanac assays. The authors consider the Adanac assays in the database to be fully audited and to accurately represent the assays as reported by the lab.

12.2.1.2 Placer Development Molybdenum Assays

The authors checked Placer Development's molybdenum assays against those reported in drill logs included in assessment reports. Assessment reports cover all the known Placer drill holes, and the authors were able to check all of Placer's molybdenum assays. A few discrepancies were noted and in such cases the database was changed to match the logs. Drill logs are not primary sources for assays. The authors consider them to be secondary sources, providing reasonable confidence but not certainty that assays were transcribed correctly into the logs.

12.2.1.3 Climax Molybdenum Corporation

Like Placer, Climax filed assessment reports, and almost half of the Climax molybdenum assays in the project database can be found in assessment reports. Climax's original drill-hole names are quite different than the names now used for the same holes in the database. The authors used the depths of the holes to make matches between the database and the original drill logs.

Climax's assays were reported as percent MoS_2. The authors converted these to percent Mo using a factor based on the chemical formula and atomic weights. The authors' calculated molybdenum values match those found in the database, so it is likely that the compiler(s) of the database used the same conversion factor. As with the Placer drill logs, the authors consider the Climax logs to be secondary sources providing reasonable confidence but not certainty.

Some Climax assays were checked using a "third party memorandum" (Table 12-1). This was an internal memorandum for Placer Development dated March 5, 1979, in which the MoS_2 assay results for Climax's hole 6W – 8N are listed. This drill hole is named CL-145 in the current database. The authors converted the MoS_2 assays in the memorandum to Mo and compared them to the assays in the database for hole CL-145.

In the database the molybdenum results for hole Cl-145 are reported to the nearest 10 ppm Mo, and using that degree of precision, 192 of 197 assays in the Placer memorandum match those in the database. The five that do not match differ by between 59 and 6,123 ppm Mo. The failed matches appear to be due to different placements of decimal points in otherwise-similar sets of digits.

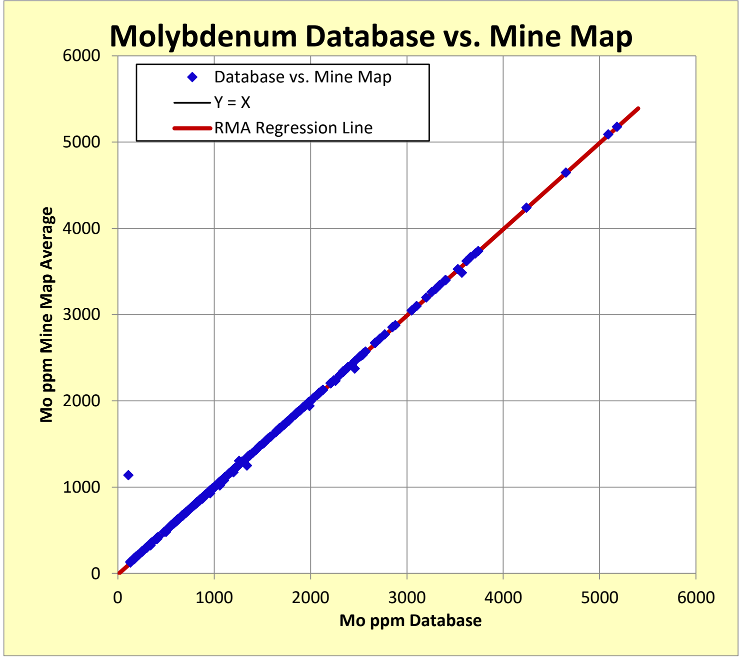
Given that the molybdenum assays in the memorandum for hole CL-145 would have been typed by someone working for Placer some five years after the Climax drilling, the authors consider the memo to be a tertiary source and elected not to assume that the assays in the Placer memo are more correct than those now in the database. The fact that 192 of 197 molybdenum assays in the memo do match those in the database adds somewhat to our confidence that the Climax assays have been accurately transcribed into the database.

12.2.1.4 Kerr Addison Mines

The assays that the authors have had the least ability to verify are the ones attributed to Kerr Addison. No data exist that would allow for verification of Kerr Addison's drill data. Stuhini does have blueprint copies of a map of Kerr Addison's underground workings, prepared by Kerr Addison in 1970. That map has MoS_2 assays plotted along the drifts, crosscuts and raises. These workings are represented as "drill holes" in the project database, with molybdenum assays entered along the lengths of the "holes". Sampling is described in Section 10.1.

The samples on the mine map each have two assays, one by the "Mine Lab" and one by Loring Lab. In Figure 12-1 the averages of each set of two molybdenum assays from the mine map are plotted against the molybdenum assay reported in the database. As can be seen, with a single exception, the mine map assays and those in the database correspond very closely. That single exception is a case of similar sets of digits with the decimal point placed differently. The authors have no way of knowing which is correct.

Figure 12-1 Molybdenum in Database vs. Mine Map



The close correspondence between the assays in the mine map and those in Stuhini's database shows that some of the molybdenum assays in the database that are attributed to Kerr Addison closely match those on the surviving document (the mine map) prepared by Kerr Addison at the time of their work on the Deposit. This by no means proves that the majority of Kerr Addison's assays, most of which are in drill holes, have been accurately entered into the database, but it provides a small measure of comfort that the database compilers had the ability to retrieve Kerr Addison's data and accurately compile it.

12.2.1.5 Summary Comment Respecting the Assay Table

The authors have strong confidence that the molybdenum assays attributed to Adanac's work are accurate versions of the assays reported by the lab. The authors have good confidence that Placer Development's assays are accurately represented but acknowledge that drill logs are a secondary source for verifying assays, not a primary source such as a laboratory data file or a certificate. Similarly, the Climax assays verified from drill logs merit good confidence. The Climax assays checked against a memo written by another company, Placer Dome, some years after the fact, cannot be accorded as much confidence, but are corroborating evidence.

The authors have good confidence that the assays in the database from Kerr Addison's underground workings accurately represent the results obtained at the time of Kerr Addison's work. No supporting documentation has yet been found for the assays attributed to Kerr Addison's drill holes.

In the authors' opinion the assay table is a sufficiently accurate compilation of historical assays for use in a resource estimate, providing that the varying levels of supporting documentation are taken into account.

12.2.2 Collar Coordinates

12.2.2.1 Checks Against Adanac Source Documents

The database contains 132 drill holes attributed to Adanac or its predecessor company. The authors were able to check 116 of these using coordinates obtained from three Microsoft Excel™ spreadsheet files provided by Stuhini. The file names indicate that they represent the 2004, 2005 and 2008 data, respectively. The files appear to have been created by members of Adanac's geological staff. The coordinates are presumed to have been provided by survey contractors, but this is not stated in the Excel files. Mr. Ronning did observe control survey posts in the field, demonstrating that professional surveyors had been present.

The coordinates in the database are UTM coordinates based on the NAD 83 datum. The coordinates in the Excel file for 2008 use the same coordinate system, and they match those in the database exactly.

The coordinates in the Excel files for 2004 and 2005 contain UTM coordinates based on the NAD 27 datum. These would have been converted to the UTM NAD 83 coordinates that are in the database at some time. To compare the coordinates in the 2004 and 2005 spreadsheets to those in the database, the authors converted them to UTM NAD 83 using GIS software, Manifold System 8. Given the proximity of the Adanac deposit to Whitehorse in Yukon, the authors assumed that the original coordinates might have used a version of NAD 27 described in the software as "Canada – Yukon". Converting the 2004 and 2005 coordinates from this coordinate system to UTM NAD 83 yielded a set of coordinates that closely matches those in the database. Eastings are within one meter and northings are within three meters. In the authors' experience, conversions done using various off-the-shelf consumer-level GIS packages typically differ from each other by amounts of this magnitude.

In the author's opinion, the coordinate data from the spreadsheets supports the coordinates listed in the database for Adanac's drill holes.

12.2.2.2 Checks Against Placer Assessment Reports

The two assessment reports referenced in section 10.3 describing the drilling by Placer Development Limited contain listings of the drill-hole collar coordinates. However, they do not describe the reference basis for the coordinates. They look like UTM coordinates, but there is no statement to this effect and no mention of a datum. As an experiment, the authors converted the coordinates to UTM NAD 83 based on the same assumptions described in the third paragraph of Section 12.2.2.1. This worked reasonably well. Of 66 Placer drill holes, the converted coordinates were close in 64 cases. Eastings were within less than a meter and northings were within less than three meters. Of the two holes that did not match that closely, the database coordinates for PD-215 are about eight meters farther east than the converted coordinates and the database coordinates for PD-217 are about 20 meters farther north than the converted coordinates.

The authors elected not to assume that the collar coordinates in the assessment reports are more correct than those in the current database without more corroborating evidence, so did not change the coordinates for PD-215 and PD-217 in the database.

In the opinions of the authors, the fact that 64 of 66 Placer Development drill-hole collar locations could be matched to those in assessment reports based on reasonable assumptions adds to the overall confidence that, despite two discrepancies described, the locations of Placer's drill holes in the database are reasonable.

12.2.2.3 Field Checks

On September 13, 2021, one of the authors, Peter Ronning, checked the locations of fifteen collars in the field with a handheld GPS, a Garmin Oregon 550, to confirm the locations of drill holes (Table 12-2). The handheld GPS does not have the precision of survey-quality differential GPS but is adequate to show whether drill holes are where they are expected to be, based on the collar table in the database.

Table 12-2 Checks of Drill-hole Collar Locations

Drill Hole ID	Differences, meters			Description
	East	North	Elevation	
AD-353	-0.88	0.92	-5.62	Well marked with orange pipe in ground
KA-042	n/a	n/a	n/a	Not found. Site probably destroyed to make pad for AD-353
KA-123	0.188	14.5	-2.16	Marked by a nearly vertical weathered 2x4 wooden post
KA-122	-0.014	2.188	-2.181	Disturbed area, old casing, cans, bits of wood, oil filter
KA-026	0.5	-0.5	-5.93	Disturbed, bits of lumber, vertical casing
AD-366	n/a	n/a	n/a	Reclaimed site; exact location of hole indeterminate
AD-376	-2.705	0.634	-7.402	Disturbed area, casing at about 330/-60 (same as database)
AD-332	2.188	-23	-13.89	Wooden 2x4 post with tag, lying on ground. Probably bulldozed off road upslope to north.
KA-031	-5.938	-5	-10.33	Vertical casing cut off at an angle
AD-412	n/a	n/a	n/a	Reclaimed site; exact location of hole indeterminate
AD-406	n/a	n/a	n/a	Reclaimed site; exact location of hole indeterminate
KA-028	2	1.5	-9.21	Near-vertical casing about 3-inch diameter
AD-303	0.125	1	-8.25	Wooden 2x4 sticking out of ground with aluminum tag.
KA-011	n/a	n/a	n/a	Bits of wire, lumber, and other debris; no casing or clear-cut evidence of exact location
PD-250	0.125	1.5	-5.32	6-inch wooden peg in ground with plastic label
AD-336	-1.625	-0.5	-8.6	Drill hole, no casing, looks vertical

Notes: Differences are calculated as *"measured location - database location."*

GPS readings were not taken at reclaimed sites. The reclaimed sites are where they are expected to be based on the recorded collar locations.

Elevations obtained from a hand-held GPS without differential corrections are only expected to be accurate to within ± 10 meters.

Of the sixteen sites listed in Table 12-2:

- Nine collars were identified by casing or marker posts at the expected locations and within the expected accuracy of a hand-held GPS.
- Mr. Ronning found three reclaimed sites where it was not possible to determine exactly where the original drill collar was. Mr. Ronning checked each of these by walking to the location listed in the database and finding that the location is within the reclaimed site. The authors count these three as successful tests.
- Like the reclaimed sites, there is evidence of having been activity where KA-011 was expected to be found, even if the exact collar couldn't be identified. The authors count this as a successful test.
- The post for AD-332 was lying on the ground, downslope from a reclaimed road. The easting is approximately correct, but the post was 14m south of the expected location which is within the recently bulldozed area of the reclaimed road. The post was probably bulldozed away from the correct location, and the authors conclude that the location in the database is probably correct.

- The weathered vertical 2x4 wooden post that may mark KA-123 is 14.5m south of the expected location. It is possible that KA-123 is mis-located in the database, but it is also possible that the post marks the location of a hole that is not in the database.
- A collar for KA-042 couldn't be found, but the expected location is within the area disturbed to make the site for AD-353. The authors do not count KA-042 among the holes successfully identified.

The authors consider the field collar location checks of both Adanac and pre-Adanac drill holes to have been as successful as can be expected, given the elapsed years and the reclamation work that has been done. Of the fifteen holes located (KA-042 is excluded), only KA-123 wasn't within GPS accuracy of where it was expected to be.

12.2.2.4 Summary Comment Respecting Drill-Hole Locations

In the authors' opinion, the drill hole locations in the database are sufficiently accurate for use in a resource estimate. Locations of most of Adanac's drill holes are well documented. There is little documentation available for the locations of earlier drill holes. Locations are available in drill logs for Placer and Climax drill holes, but these are on a local grid and the authors do not have a key for converting local grid references to UTM. However, field checks of the locations of a small number of holes did indicate that the conversions from local grid to UTM were reasonably well done.

12.2.3 Downhole Surveys

The authors have 48 Excel™ files containing near-original downhole survey data for 48 of Adanac's later drill holes, starting with AD-378. The instrument used was a Reflex EZ-Shot, a downhole single-shot magnetic instrument with on-board storage of recorded data. The data in the Excel™ files are described as near original because the Excel files are probably not the original data files put out by the instrument. The dates on the files indicate that they would have been nearly contemporaneous with the original surveys.

Being a magnetic instrument, the EZ-Shot measures azimuths relative to magnetic north. These recorded azimuths must be adjusted to account for magnetic declination to obtain azimuths relative to true north. Adanac apparently used 23° east as the compass declination to convert the magnetic azimuths provided by the EZ-Shot to azimuths relative to true north. Using an online calculator[12] to check for the appropriate declination to use for measurements taken in mid-June of 2008, the authors obtained a value of 22° 53' east. Using 23° east was reasonable at the time of Adanac's surveys.

The authors compiled the available downhole-survey data into a single file and then used query tools in Microsoft Access™ to compare the data to the information in the survey table of Stuhini's database.

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[12] The calculator is provided by NOAA, The National Centers for Environmental Information at *https://ngdc.noaa.gov/geomag/calculators/magcalc.shtml?useFullSite=true* . The authors used this US-based calculator because a similar online calculator that has in the past been available from Natural Resources Canada was offline at the time the authors checked, on January 21, 2022.

Most of the drill holes in the database are vertical. Downhole surveys, while useful in any drill hole, are most important in angled (non-vertical) drill holes because changes in azimuth have greater influence in non-vertical holes.

There are 74 angled drill holes in the project database, sixty of which were drilled by Adanac. The sources in the authors' possession enabled the authors to check the downhole surveys in 28 of them.

The downhole survey data recorded in the database was found to be largely correct. A few differences were corrected and some surveys which had been omitted from the database were added to it.

12.2.4 Site Inspection

During the period September 10 to September 13, 2021, authors Ristorcelli and Ronning conducted a site inspection of the Ruby Creek Project area. They spent time at the Ruby Creek Molybdenum Deposit site itself and spent hours reviewing drill core, which is stored off-site near Atlin. Ristorcelli and Ronning visited other prospects on Stuhini's claim holdings, including Silver Surprise, Lakeview and Thor Ridge. Many discussions were held with project geologists and other field personnel.

Mr. Ristorcelli, assisted by Stuhini field assistants, collected seven quarter-core samples of drill core. These samples were kept in the custody of the authors until they were sealed in plastic bags and closed with numbered single-use plastic "zap straps" (aka "security tags"). They were then transferred to the custody of Stuhini for delivery to Bureau Veritas in Whitehorse.

In an email dated April 11, 2022, the Branch Supervisor for Bureau Veritas in Whitehorse reported that "All Security tags were received and bags were intact".

The molybdenum assays obtained from the authors' quarter-core samples are summarized in Table 12-3. The original samples collected by Adanac were half-core samples whereas the authors' samples were quarter core. The mineralization is locally heterogeneous on a scale of centimeters. For these reasons the authors did not expect that the molybdenum grades in the quarter-core samples would closely mimic those in the original half-core samples. In the authors' opinion the quarter-core re-sampling confirms the existence of molybdenum grades of magnitudes like those of the original half-core samples.

Table 12-3 Molybdenum Assays of the Authors' Quarter-Core Samples

Drill Hole	From ft	To ft	From m	To m	Original Mo ppm	Re-Sample Mo ppm
AD-374	755	765	230.12	233.17	374	507
AD-362	500	509.8	152.4	155.39	190	227
AD-374	745	755	227.08	230.12	739	631
AD-362	510	520	155.45	158.5	730	567
AD-400	205	215	62.484	65.532	709	228
AD-400	215	225	65.532	68.58	101	45
AD-400	225	235	68.58	71.628	48	32

12.2.5 Authors' Summary Statement Respecting Drill Data

In the opinions of the authors, the assays, drill hole locations and downhole surveys recorded in the Project database are of sufficient quality to support the resource estimate described in this report. Inspections of drill core and surface geology in the field indicate that the character and interpretations of the Deposit as set out in this report and used in the estimate are realistic.

12.3 Exploration Assay Verification

The purpose of this report is to support and document the molybdenum resource estimate described in Section 14.0. However, certain other prospects are described in Section 7.5 and statistical summaries of assay results are presented in Table 7-4, Table 7-6, and Table 7-7. Stuhini provided Mr. Ronning with the assay tables underlying the statistics, and with related assay certificates. Mr. Ronning checked the assay tables against the certificates and verified the statistical calculations. The assay statistics in the referenced tables are correctly reported.

Table 9-1 in Section 9.0 sets out the results obtained from what is described by Stuhini as a "channel sample" from the Silver Diamond skarn. Mr. Ronning obtained the related assay certificates from Stuhini and checked the calculations of average grades in the table. The grade calculations are correctly reported.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING (ITEM 13)

No new testing or plant design work was undertaken for this report. All the testing and design summaries were developed or summarized by others in previous reports. This report summarizes historic mineral-processing testing. Previously reported interpretations of that testing provide recommendations for future mineral processing testing.

The recoveries of metals to concentrate and concentrate grade assumptions used in this update are based on extensive metallurgical testing. The testing results or summaries available to the authors were as follows:

- Britton Research Limited – Extensive testing, including pilot plant work. 1971
- Wardrop Engineering Inc. – Ruby Creek Project, Preliminary Feasibility, Volume 1, 2005
- Polysius Research Centre – High Pressure Grinding Tests, Knecht (2006)
- SGS Minnovex Technologies Inc. – HPGR Characteristics, 2006
- G&T Metallurgical Services Ltd. – An Assessment of Metallurgical Response, Shouldice et al. (2006)
- Golder Associates – Ruby Creek Feasibility Update, 2007
- Golder Associates – Ruby Creek Mineral Resource Update (Palmer, 2009)

13.1 Britton Research Limited

In 1969, Kerr Addison contracted Britton Research to perform extensive and comprehensive testing on Ruby Creek material. Technology has advanced substantially since this work was performed; however, some of the results are still relevant. These are the approximate recoveries of metal to concentrate and the grinding characteristics. The testing indicated recoveries of more than 90% of molybdenum to concentrate. Bond work indices ranged from a low of 8 kilowatt hours per short ton (kWhr/st) to a high of 20 kWhr/st. The majority of the testing indicated results between 11 kWhr/st and 14 kWhr/st.

13.2 Wardrop Preliminary Feasibility

The Wardrop Engineering Inc. report of August 2005 refers to testing performed by Minnovex Technologies Inc. The actual test report was not available for review by the author. The Britton report referenced above was also noted. Wardrop asserts that the Minnovex testing indicated a recovery of 90% of the molybdenum to concentrate and a Bond ball mill work index of 12.2 kWh/metric tonne.

13.3 Polysius Research Centre – High Pressure Grinding Test, 2006

Wardrop authored a report primarily focused on changes resulting from modifying the comminution circuits. Testing was performed by the Polysius division of Thyssen Krupp. The major adjustment detailed is the potential for High Pressure Grinding Rolls (“HPGR”).

HPGR is a relatively new, but now established technology. The study indicated that there will be increased availability of the grinding circuit if HPGR is used rather than a semi-autogenous grinding (“SAG”) mill. This will have the added but difficult to quantify benefit of reduced variability in the operation of the flotation circuit.

HPGR, when appropriate, has cost advantages over conventional crushing/grinding circuits and "SAG" circuits.

In addition to the changes required for the switch to HPGR, the study included a detailed equipment listing for the entire processing facility. Detailed flow sheets were included in an appendix to the report, though this was not available to the author.

The additional testing performed for the purposes of the report did not include testing to further quantify process efficiency downstream of comminution. As such, grade and recovery information did not change.

13.4 Golder Associates Feasibility Study Update

In order to improve the understanding of process, additional testing was performed by SGS Minnovex and G&T Metallurgical in 2006. The SGS testing improved the understanding of the HPGR process. The G&T work focused on flotation performance. The G&T work included testing to the pilot plant stage. The new information was combined with previous work to generate an update on the project feasibility. This was completed by Golder Associates in 2007. Although the G&T work projected recoveries of 92% of molybdenum to a saleable concentrate, the update continued to use the more conservative 90% recovery to concentrate.

13.5 Mineral Processing

A gyratory crusher, HPGR, ball milling, froth flotation, dewatering and drying will be used to produce and package a high-grade molybdenite concentrate (MoS_2). Run-of-mine ("ROM") ore will be dumped into the gyratory crusher. Crusher discharge will be conveyed to the coarse ore stockpile. From there it will be reclaimed and conveyed to screens. The screen undersize will be the finished product which will go to the HPGR units. Screen oversize is crushed in one of two cone crushers with cone-crushed product recycled to the screens. Screen undersize will be fed to the high-pressure grinding rolls in open circuit. A small amount of "edge recycle" of HPGR product is allowed for, but otherwise, all product will be fed directly into the ball mill. Ball mill product will be classified through cyclones. Oversize material will recycle to the ball mill.

Flotation will comprise rougher/scavenger tank cells where rougher concentrate will be reground in a mill to a much finer state (P80 = 20 microns). This product will then be cleaned in a series of stages; trace impurities will be reduced to a minimum and the final molybdenum concentrate will be a high-grade product.

Ruby Creek mineralization contains minimal trace impurities which are pyrite, chalcopyrite, sphalerite, galena, and bismuthinite. The extensive mineralogy work shows almost all are liberated in the grinding and regrinding stages and can be mostly removed in the cleaning stages with the uses of depressant in reasonable amounts. Other reagents for flotation are diesel (kerosene) and pine oil which are used at natural pH (7.8-8.2) in the milled pulp. Final concentrates are thickened and settled with aid of flocculant and dewatered in a pressure belt press. Filter cake is dried in a rotary hearth drier, cooled in a storage bin, and afterwards packaged in tote bags (approximately 2 tonne capacity), weighed and moved to a storage area.

13.6 Project Risks

The comminution downstream of the coarse ore stockpile includes cone crushers, followed by the HPGR circuit. Future work should re-examine availability assumptions for this circuit to assure that the stated availabilities are achievable. If the use of the cone crushers reduces the availability of the ball milling circuit, a storage bin between the cone crushers and HPGR will be necessary to bring availability back to over 90%.

14.0 MINERAL RESOURCE ESTIMATES (ITEM 14)

14.1 Introduction

The Effective Date of the Ruby Creek area mineral resource estimate is March 10, 2022. Ristorcelli and Bakker classify resources in order of increasing geological and quantitative confidence into Inferred, Indicated, and Measured categories to follow the "CIM Definition Standards - For Mineral Resources and Mineral Reserves" (2014) and therefore Canadian National Instrument 43-101. CIM mineral resource definitions are given below, with CIM's explanatory material shown in italics:

> **Mineral Resource**
>
> *Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.*
>
> A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.
>
> *Material of economic interest refers to diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals.*
>
> *The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of Modifying Factors. The phrase 'reasonable prospects for eventual economic extraction' implies a judgment by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. The Qualified Person should consider and clearly state the basis for determining that the material has reasonable prospects for eventual economic extraction. Assumptions should include estimates of cutoff grade and geological continuity at the selected cut-off, metallurgical recovery, smelter payments, commodity price or product value, mining and processing method and mining, processing and general and administrative costs. The Qualified Person should state if the assessment is based on any direct evidence and testing.*
>
> *Interpretation of the word 'eventual' in this context may vary depending on the commodity or mineral involved. For example, for some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage 'eventual economic extraction' as covering time periods in excess of 50 years. However, for many molybdenum deposits, application of the concept would normally be restricted to perhaps 10 to 15 years, and frequently to much shorter periods of time.*

Inferred Mineral Resource

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.

There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.

Indicated Mineral Resource

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Pre-Feasibility Study which can serve as the basis for major development decisions.

Measured Mineral Resource

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient

> to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.
>
> *Mineralization or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade or quality of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability of the deposit. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit.*
>
> **Modifying Factors**
>
> Modifying Factors are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.

The authors report resources at cutoffs that are reasonable for deposits of this nature given anticipated mining methods and plant processing costs, while also considering economic conditions, because of the regulatory requirements that a resource exists "*in such form and quantity and of such a grade or quality that it has reasonable prospects for eventual economic extraction*."

14.2 Ruby Creek Area Database

The Effective Date of the Ruby Creek database on which this estimate is based is January 27, 2020. The Ruby Creek Project database has 354 drill holes (samples from underground workings are entered in 17 "drill holes") for a total of 72,113m of drilling (Table 14-1). Within the Ruby Creek block-model limits, there are:

- 305 diamond drill holes,
- underground workings entered as 17 "drill holes" with 504 samples included in the database, and
- four rotary holes with 103 samples.

Of these in-block-model-limit sample intervals, 21,260 have molybdenum assays (Table 14-2). The database contains logged lithology and structure data as well as close to 9,000 multi-element geochemistry analyses of 41 elements.

Table 14-1 Ruby Creek Resource Database Drill Holes and Underground Workings

Year/Type	Number	Meters
1972		
Core	101	16,566
Rotary	12	627
Underground	17	1,005
1973		
Core	8	1,758
1974		
Core	1	301
1979		
Core	39	5,116
1980		
Core	30	4,953
2004		
Core	37	9,015
2005		
Core	19	4,979
2006		
Core	16	3,921
2007		
Core	22	6,557
2008		
Core	38	14,703
2016		
Core	7	819
2017		
Core	7	1,794
Grand Total	354	72,113

Note to table: 28 holes are outside the model area

Table 14-2 Ruby Creek Resource Database: Descriptive Statistics

All Data								
	Count	**Median**	**Mean**	**Std Dev**	**CV**	**Min**	**Max**	**Units**
From	21,915	0.00	0.00	0.00	0.00	0.00	606.71	m
To	21,915	0.00	0.00	0.00	0.00	1.52	609.76	m
Length	21,915	0.00	0.00	0.00	0.00	0.01	301.00	m
Mo	21,260	0.0240	0.0455	0.0814	1.7899	0.0000	3.838	%
Mo Oxide	1,833	0.0020	0.0048	0.0091	1.9227	0.0005	0.122	%
Cu	8,831	8	15	126	8.65	0.10	10000	ppm
Pb	8,831	24	59	1325	22.44	0.70	308800	ppm
Zn	8,831	25	56	327	5.89	5.00	42200	ppm
Ag	8,831	0.1	0.4	10.9	26.84	0.05	2308.0	ppm
Au	8,829	0.05	0.05	0.04	0.87	0.00	4.4	ppm
W	8,831	24	41	45	1.11	0.30	490	ppm
Th	8,831	35	35	8	0.24	0.40	114	ppm
U	8,691	18	18	7	0.38	0.30	143	ppm
Core Rec.	20,399	97	92	14	0.15	0.00	200	%
RQD	11,777	51	51	29	0.56	0.00	153	%
Specific Gravity	2,083	2.58	2.57	0.05	0.02	2.12	2.87	g/cm3
CV is the Coefficient of Variation = Standard Deviation / Mean								

14.3 Ruby Creek Geologic Model

The Ruby Creek area geologic model was based on geologic logging in the database. All rock types except for the alluvium are phases of plutonic rocks. While multiple plutonic-rock lithologies have been logged, the only units modeled were the sparse quartz monzonite porphyry (SQMP), mafic quartz monzonite porphyry (MQMP), and feldspar quartz monzonite porphyry (FQMP) leaving the remainder as background and composed mostly of coarse quartz monzonite porphyry. The top of the sparse quartz monzonite porphyry is within or below the molybdenum mineralization. The mafic and feldspar quartz monzonite porphyries seem to parallel the top of the sparse quartz monzonite porphyry in a sub-horizontal almost tabular form. Each of these units dip northwest along and near the Adera fault zone. (Figure 7-3 and Figure 7-4) The authors are using historical field terms for rock types knowing that there remain some unsettled differences in professional opinions.

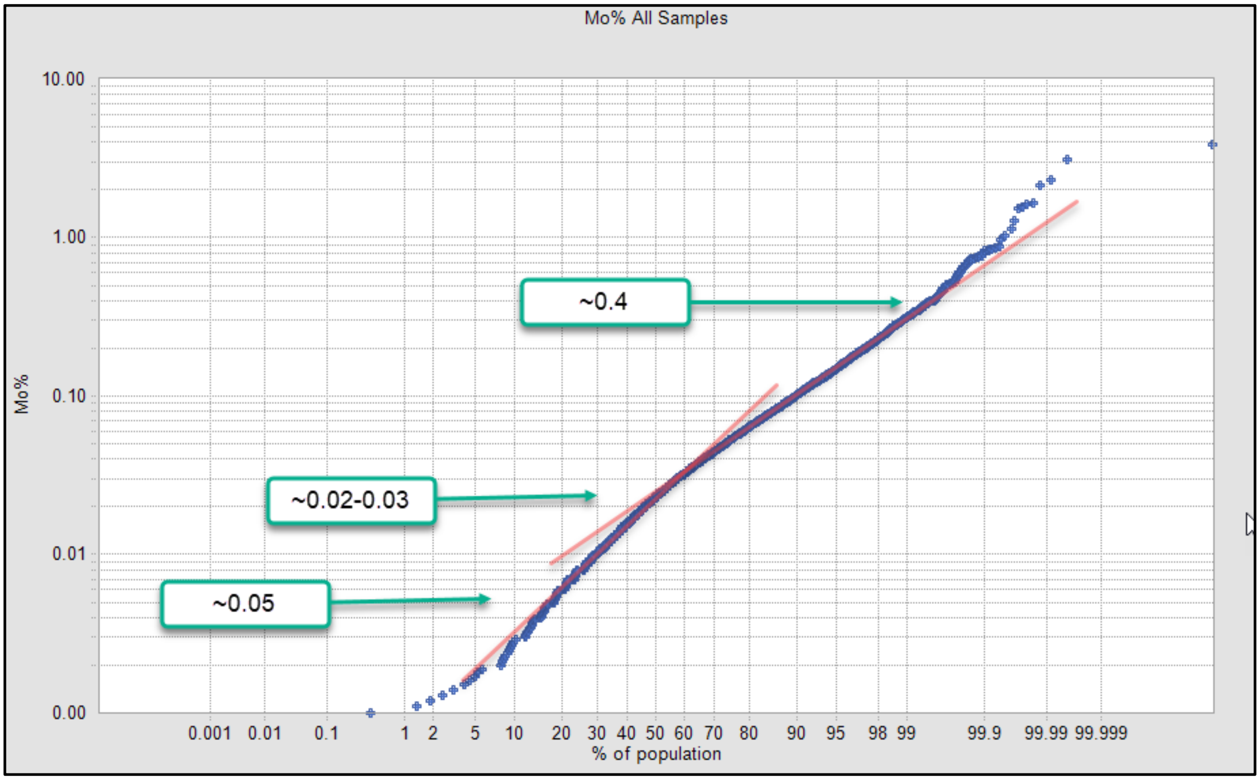
The limits of oxidization were not included in the database so could not be modeled. However, 1,833 analyses for the oxidized phase of molybdenum exist. These analyses gave a reasonable sense of depth of oxidation as it affected the molybdenum mineralization. For the most part, higher percentages of oxidized molybdenum occur near only near the surface (Figure 7-3, Figure 7-4 and Figure 14-2) ranging from 5 to 100m below the surface but averaging maybe about 20m (including the thickness of the overburden). Generally, the depth of oxidation is greater in the halo or outside the mineralized zones, decreasing dramatically at the contact of the main mineralized domain, possibly a function of molybdenite's habit. It is noteworthy that water table was estimated from RC drilling to be between 30 and 60m (Chapman, et al., 1971).

The geologic interpretations modeled on 50m-spaced sections were snapped to drill holes in three-dimensional space. Those sections where then sliced to plan, one for each 10m bench, and remodeled, effectively making a solid.

14.4 Ruby Creek Mineral Domains

Using the geologic model as a guide, molybdenum domains were interpreted based on drill-sample grades on the same 50m-spaced sections on which the geologic model was interpreted. The domain grade boundaries were initially determined by population breaks for molybdenum on cumulative probability plots of each metal (Figure 14-1). The geologic model was used to guide the definition of geometry including a) horizontal tabular mineralization paralleling the top of the sparse quartz monzonite porphyry and b) moderate to steeply northwest-dipping mineralization at, adjacent to and parallel to the Adera fault zone and mafic and feldspar dikes where they dip to the northwest. Most mineralization lies in the footwall of the Adera fault zone in the sub-horizontal tabular-shaped deposit. Evidence for the mineralization paralleling the Adera fault zone includes an increase in high angle to core axis mineralized veinlets adjacent to the Adera fault zone. Also, the pre-mineralization feldspar and mafic dikes change in dip from horizontal in the footwall of the Adera fault zone to dipping parallel to the Adera fault zone (Figure 7-3). The distribution of molybdenum grades is more erratic in the hanging wall with greater variability and relatively more high-grade samples, possibly because of the change in controls of mineralization.

Figure 14-1 Cumulative Probability Plot of Molybdenum Grades in Samples



The main mineralized domain has grades of ~>0.02 to 0.03% Mo although lower-grade volumes with more erratically distributed mineralization occur along the eastern ends of the Deposit. The contact of this domain is relatively abrupt in most locations. Otherwise, mineralization within this domain for the most part is homogeneous, except for the sporadic high-grade "outliers" grading ~>0.2 to 0.4% Mo. Reviewing the occurrence of these high-grade samples shows them to be pockets or blebs up to 5cm in diameter (though mostly a centimeter or so) within the rock or within veins, or as veinlets composed of massive molybdenite (Figure 10-2). This main zone of mineralization is surrounded by a halo of more erratically mineralized but lower-grade halo (Figure 14-2).

The domains modeled on 50m-spaced sections were snapped to drill holes in three-dimensional space. Those sections where then sliced to plan, one for each 10m bench and remodeled, effectively making a solid.

14.5 Ruby Creek Area Density Data

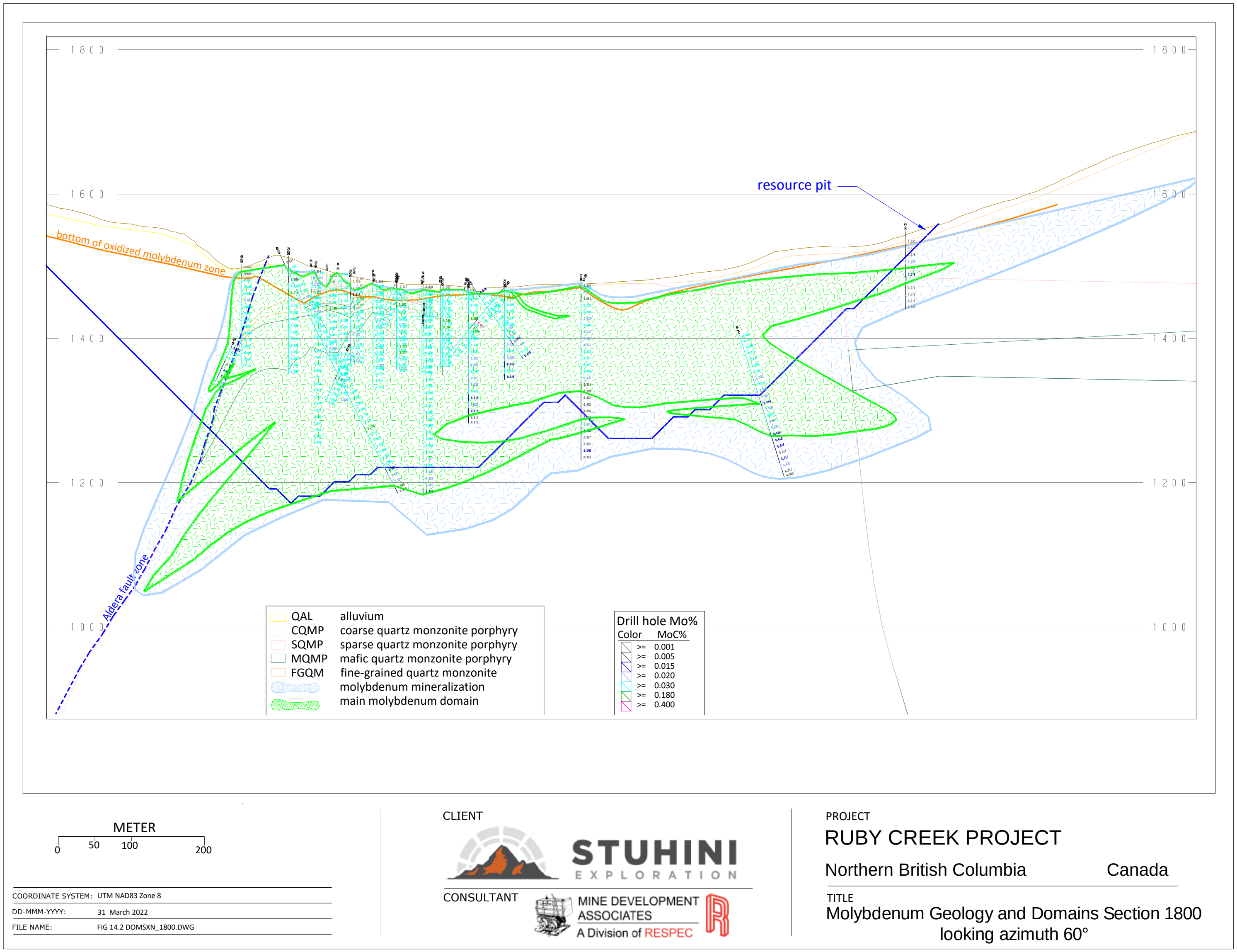
There are 2,083 density measurements in the Ruby Creek resource database. Table 14-3 summarizes some simple statistics of the density values coded to each of the main rock types and the density value assigned to the block model. There is little to no difference between the density values of the different igneous lithologies, nevertheless, different values were assigned.

Table 14-3 Density Measurements and Values Applied to the Ruby Creek Area Block Model

Rock unit	Count	Median	Mean	Assigned Value	Units
sparse quartz feldspar porphyry	418	2.59	2.58	2.59	g/cm3
background, quartz feldspar porphyry	1,549	2.58	2.56	2.57	g/cm3
mafic quartz feldspar porphyry	92	2.60	2.60	2.60	g/cm3
feldspar quartz feldspar porphyry	24	2.57	2.57	2.57	g/cm3
overburden	0			1.80	g/cm3

Kerr Addison extracted 9,545 tonnes of ore from the crosscuts and six raises and processed them on site to evaluate the nugget effect caused by coarse-grained molybdenite (Janes, 1971). These tonnes have not been deducted from the Mineral Resource Estimate as they are not material relative to the over 400million tonnes of resources.

Figure 14-2 Molybdenum Domains and Geology –Section 1800



14.6 Ruby Creek Composites

Once the molybdenum domains were defined and interpreted on the cross sections looking along azimuth 60^{o}, the drill samples were coded by domain. Cumulative probability plots were made of the coded assays and each of the capped values was viewed on screen. The drill samples were capped to different grades depending on the domain and whether the sample was in the hanging wall or footwall. The halo had capping values of 0.18 and 0.16% Mo for the footwall (two samples) and hanging wall (nine samples), respectively. The main mineralized domain had capping values of 0.90% Mo and 1.5% Mo for the footwall (four samples) and hanging wall (six samples), respectively. The outside domain had 89 samples capped to 0.03% Mo. Along the southwest end of the Deposit, drilling is widely spaced, and the outlier grades projected improbable volumes of high-grade molybdenum in the model. Consequently, samples in the main zone in that area were capped to 0.4% Mo in four holes (AD-381, AD-400, AD-416, and AD-417) and one area internal to the drilling was unconstrained so the same was done for PD-251.

Descriptive statistics were calculated (Table 14-4). To compensate for the relatively high variability, the projection distances of higher grades in and outside all the domains were restricted during the estimation process.

Table 14-4 Descriptive Statistics of Coded Samples at Ruby Creek

	Count	Median	Mean	Std Dev	CV	Min	Max	Units
Molybdenum halo domain								
Mo	3,416	0.0080	0.0112	0.0139	1.24	0.00	0.274	%
Mo Capped	3,416	0.0080	0.0111	0.0129	1.16	0.0000	0.180	%
Specific Gravity	400	2.5800	2.5730	0.0450	0.02	2.3400	2.710	g/cm3
Main molybdenum domain								
Mo	14,741	0.0390	0.0617	0.0926	1.50	0.00	3.838	%
Mo Capped	14,741	0.0390	0.0606	0.0756	1.25	0.0000	1.500	%
Specific Gravity	1,271	2.5800	2.5660	0.0540	0.02	2.2200	2.870	g/cm3
Outside of molybdenum domains								
Mo	3,103	0.0021	0.0059	0.0165	2.81	0.00	0.525	%
Mo Capped	3,103	0.0021	0.0047	0.0064	1.36	0.0000	0.030	%
Specific Gravity	412	2.5800	2.5720	0.0460	0.02	2.1200	2.770	g/cm3

Note to table: The means of the composites do not match the means of the samples because the composite domain coding was done after compositing. Therefore, some higher-grade samples get included in the halo and some lower-grade material becomes included in the main domain.

Once the capping was done, the drill holes were downhole composited to 9.15m lengths, honoring only the overburden but no other lithologic contacts. Once composited, the composite samples were then coded by the sectional domain polygons. In so doing, the molybdenum domain boundaries are smoothed out a bit. The descriptive statistics of the composite database are given in Table 14-5.

Table 14-5 Descriptive Statistics of Coded Composites at Ruby Creek

	Count	Median	Mean	Std Dev	CV	Min	Max	Units
Molybdenum halo domain								
Length	1,146					0.00	9.150	m
Mo	1,139	0.0102	0.0132	0.0285	2.16	0.0010	0.662	%
Mo Capped	1,139	0.0102	0.0124	0.0132	1.07	0.0010	0.261	%
Main molybdenum domain								
Length	4,916					0.00	9.150	m
Mo	4,902	0.0457	0.0611	0.0577	0.94	0.0000	0.952	%
Mo Capped	4,902	0.0457	0.0602	0.0514	0.85	0.0000	0.574	%
Outside of molybdenum domains								
Length	1,402					0.00	9.150	m
Mo	1,147	0.0036	0.0063	0.0117	1.84	0.0002	0.176	%
Mo Capped	1,147	0.0036	0.0052	0.0062	1.20	0.0002	0.124	%

Note to table: The means of the composites do not match the means of the samples because the composite domain coding was done after compositing. Therefore, some higher-grade samples get included in the halo and some lower-grade material becomes included in the main domain.

Correlograms were built on composited molybdenum grades and those showed good structure. For combined domains and areas, the nugget is 70% of the total sill; the first sill is 15% of the total sill and ranges are generally approximately 60 to 100m; and the second sill is 15% of the total sill and ranges are generally approximately 200m. Anisotropy is minimal.

14.7 Estimation of Ruby Creek Resources

Four estimates were completed: polygonal, nearest neighbor, inverse distance to the fourth power (“ID^3”), and kriged. The latter three estimates were run more than 20 times in order to determine sensitivity to and optimize estimation parameters. The ID^3 estimate is the reported estimate and the high power (for a porphyry) was justified to minimize overestimating the mid-grade and low-grade tonnes.

The estimate was done in two passes in each of the halo and main molybdenum domains. A quadrant search with a maximum of two composites per quadrant was used in the domains because of the significantly clustered data. Volumes outside the domains were estimated with a single pass. Range restrictions for the higher grades were applied within each of the domains and outside the molybdenum domains; the latter high-grade restrictions on projecting grades were severe because there is no deemed continuity. Estimation parameters are given in Table 14-6. The three estimation domain orientations were horizontal (at and near the top of the sparse quartz monzonite porphyry), dipping steeply to the northwest along the Adera fault zone, and shallow dipping in the footwall of the Adera fault zone. The orientations for each of these estimation areas were 0º / 0º/ 0º, 330º / -65º/ 0º and 330º / -30º/ 0º, respectively.

Assays from surface rock samples were not used in the estimation passes, but the underground samples were used in estimation. While the search range of 450m is long, only 8% of all blocks were estimated from samples farther than 200m.

The block model is rotated -30^{o} in the horizontal (with the "north" or "y" direction oriented 330^{o}), and the blocks are 10m by 10m by 10m vertical. The block dimensions were chosen to best reflect potential block sizes for open-pit mining.

Table 14-6 Estimation Parameters

Description	**Parameter**
Molybdenum halo	
Samples: minimum/maximum/maximum per hole	2 / 12 / 2
Search (m): major/semimajor/minor (vertical) – first pass horizontal – first pass Adera – first pass footwall to Adera	450 / 450 / 150 450 / 450 / 113 450 / 450 / 113
Search (m): major/semimajor/minor (vertical) – second pass horizontal – second pass Adera – second pass footwall to Adera	200 / 200 / 67 200 / 200 / 50 200 / 200 / 50
Inverse distance power	3
High-grade restrictions (grade in g/t and distance in m) – first pass – second pass	0.03 / 75 0.04 / 75
Main molybdenum domain	
Samples: minimum/maximum/maximum per hole	2 / 12 / 2
Search (m): major/semimajor/minor (vertical) – first pass horizontal – first pass Adera – first pass footwall to Adera	300 / 300 / 100 300 / 300 / 75 300 / 300 / 75
Search (m): major/semimajor/minor (vertical) – second pass horizontal – second pass Adera – second pass footwall to Adera	125 / 125 / 31 125 / 125 / 31
Inverse distance power	3
High-grade restrictions (grade in g/t and distance in m) – first pass – second pass	0.7 / 20 0.7 / 20
Outside molybdenum domains	
Samples: minimum/maximum/maximum per hole	2 / 10 / 2
Rotation/Dip/Tilt (variogram and searches):	0º / 0º / 0º
Search (m): major/semimajor/minor (vertical)	100 / 100 / 50
Inverse distance power	3
High-grade restrictions (grade in g/t and distance in m)	0.01 / 10

14.8 Ruby Creek Mineral Resources

The estimated resources are based on open-pit mining and processing by flotation. The authors classified the Ruby Creek resources considering the confidence in the underlying database, sample integrity, analytical precision/reliability, and geologic interpretations. While there is high confidence in overall shape of mineralization, there is less confidence that we can properly account for the concentration of and location of clots and extremely high-grade veinlets. This issue is a greater problem in the areas with widely spaced drilling in the southwest (drill spacing ~95 to 110m) and less so where there is closely spaced drilling in the northeast and near the workings (drill spacing ~35m).

Classification of resources considers geologic understanding, database and sample integrity, and estimation parameters. The classification criteria are given in Table 14-7.

Table 14-7 Mineral Resource Classification

Description	Parameter
Measured	
In domains and	
Minimum holes; minimum composites; maximum distance to closest comp	4; NA; 20m
and	
Average distance of all composites used to estimate the block	<20m
and	
Block is influenced predominantly by Adanac drill holes and Kerr Addison underground workings	
Indicated	
In domains and	
Minimum holes; maximum distance to closest composite; maximum distance to farthest composite; average distance to all comps	3; 75; 125; 100m
or	
Minimum holes; maximum distance to closest composite; average distance to all composites	2; 75; 60m
or	
Minimum samples; maximum distance to closest comp	2; 40m
Inferred in Domains	
Any block within the domains not classified as Measured or Indicated	
Inferred outside Domains	
Number of composites	2
Range to closest composite (m)	25
Note: There is an extreme restriction limiting the projection of high grades outside the mineral main and halo	

The authors used their judgment with respect to the technical and economic factors likely to influence the "*prospects for eventual economic extraction*" and believe that all cutoff grades listed below could eventually be a basis for economic extraction of the resource. Those technical factors include anticipated metallurgical recoveries, operating costs for mining and processing, and metal prices that have been seen in recent times. These resources are reported at a cutoff of 0.02% Mo, calculated and supported by costs existing today for envisioned open-pit flotation scenarios.

To determine the *"reasonable prospects for eventual economic extraction"* the authors had a series of optimized pits run using variable molybdenum prices (from $3.5/lb to $30/lb), mining costs, flotation processing costs, and anticipated metallurgical recoveries. These resources are reported at a cutoff of 0.02% Mo which approximates anticipated internal economic cutoff grades based on operating-cost estimates for an envisioned open-pit mining and flotation processing scenario. The authors chose to report the resource considering mining costs of $2.00 per tonne and G&A costs of $1.00 per tonne. Flotation costs were $5.00 per tonne and recoveries were assumed to be 92%. The price of molybdenum used for the resource pit was $15/lb Mo. In addition, the optimization applies a roasting charge of $1.77/kg of molybdenum. The metal price was chosen because it is similar to but lower than metal prices at the time of this Report's publication but higher than the long-term average. The price of molybdenum was ~$19.85 per pound of molybdenum at the time of completion of this report.

Table 14-8, Table 14-9, Table 14-10 and Table 14-11 present the estimates of the Measured, Indicated, Measured and Indicated and Inferred resources at Ruby Creek, respectively. The authors believe that all these cutoffs meet the requirement of "*reasonable prospects for eventual economic extraction*". A cross section of the molybdenum block models is given in Figure 14-3.

Table 14-8 Ruby Creek Project Measured Molybdenum Resources

Measured			
Cutoff (Mo%)	**Tonnes**	**Mo%**	**lbs Mo (x1,000)**
0.015	52,381,000	0.063	72,406
0.020	**49,638,000**	**0.065**	**71,351**
0.025	46,478,000	0.068	69,780
0.030	42,768,000	0.072	67,509
0.035	38,876,000	0.076	64,709
0.040	35,037,000	0.080	61,563
0.045	31,495,000	0.084	58,256
0.050	28,462,000	0.088	55,092
0.060	22,272,000	0.097	47,578
0.070	16,997,000	0.107	40,059
0.080	12,838,000	0.117	33,228
0.090	9,416,000	0.129	26,820
0.100	7,025,000	0.141	21,836

Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Table 14-9 Ruby Creek Project Indicated Molybdenum Resources

Indicated			
Cutoff (Mo%)	**Tonnes**	**Mo%**	**lbs Mo (x1,000)**
0.015	339,798,000	0.049	369,320
0.020	**319,760,000**	**0.051**	**361,640**
0.025	292,988,000	0.054	348,150
0.030	260,435,000	0.057	328,420
0.035	225,623,000	0.061	303,920
0.040	190,874,000	0.065	275,210
0.045	160,121,000	0.070	246,400
0.050	132,529,000	0.075	217,670
0.060	89,244,000	0.084	165,270
0.070	59,170,000	0.094	122,490
0.080	38,188,000	0.104	87,890
0.090	24,436,000	0.116	62,330
0.100	16,184,000	0.127	45,130

Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Table 14-10 Ruby Creek Project Measured and Indicated Molybdenum Resources

Measured and Indicated			
Cutoff (Mo%)	**Tonnes**	**Mo%**	**lbs Mo (x1,000)**
0.015	392,179,000	0.051	441,726
0.020	**369,398,000**	**0.053**	**432,991**
0.025	339,466,000	0.056	417,930
0.030	303,203,000	0.059	395,929
0.035	264,499,000	0.063	368,629
0.040	225,911,000	0.068	336,773
0.045	191,616,000	0.072	304,656
0.050	160,991,000	0.077	272,762
0.060	111,516,000	0.087	212,848
0.070	76,167,000	0.097	162,549
0.080	51,026,000	0.108	121,118
0.090	33,852,000	0.119	89,150
0.100	23,209,000	0.131	66,966

Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Table 14-11 Ruby Creek Project Area Inferred Molybdenum Resources

Inferred			
Cutoff (Mo%)	**Tonnes**	**Mo%**	**lbs Mo (x1,000)**
0.015	52,578,000	0.041	47,640
0.020	**41,946,000**	**0.047**	**43,650**
0.025	36,404,000	0.051	40,850
0.030	31,666,000	0.055	38,050
0.035	26,998,000	0.058	34,700
0.040	23,062,000	0.062	31,420
0.045	19,666,000	0.065	28,270
0.050	15,739,000	0.070	24,180
0.060	10,521,000	0.077	17,880
0.070	6,175,000	0.086	11,710
0.080	2,891,000	0.099	6,280
0.090	1,773,000	0.108	4,210
0.100	926,000	0.119	2,430

Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Figure 14-3 Molybdenum Block Model Section 1800

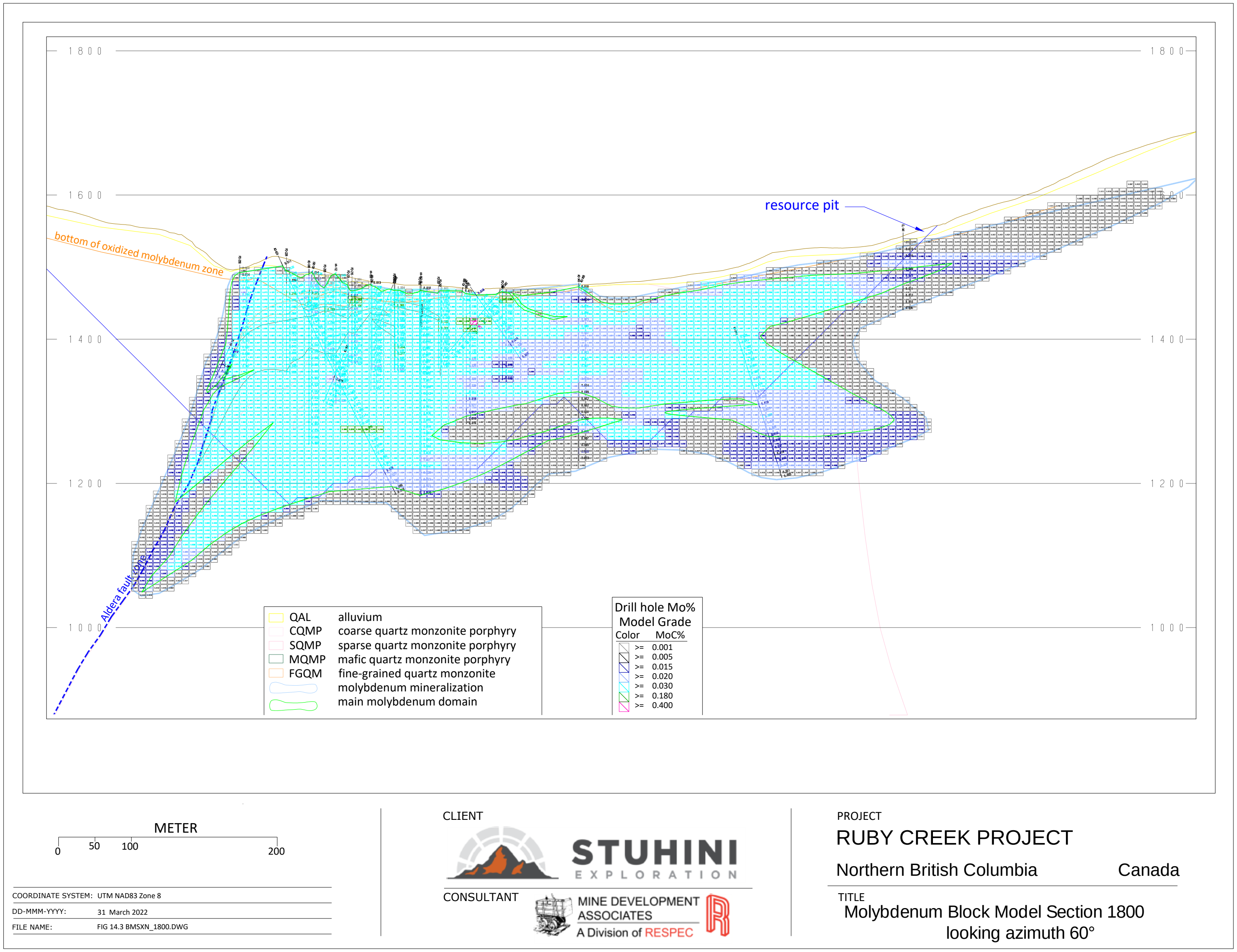


Figure 14-4 Molybdenum Block Model Section 1500

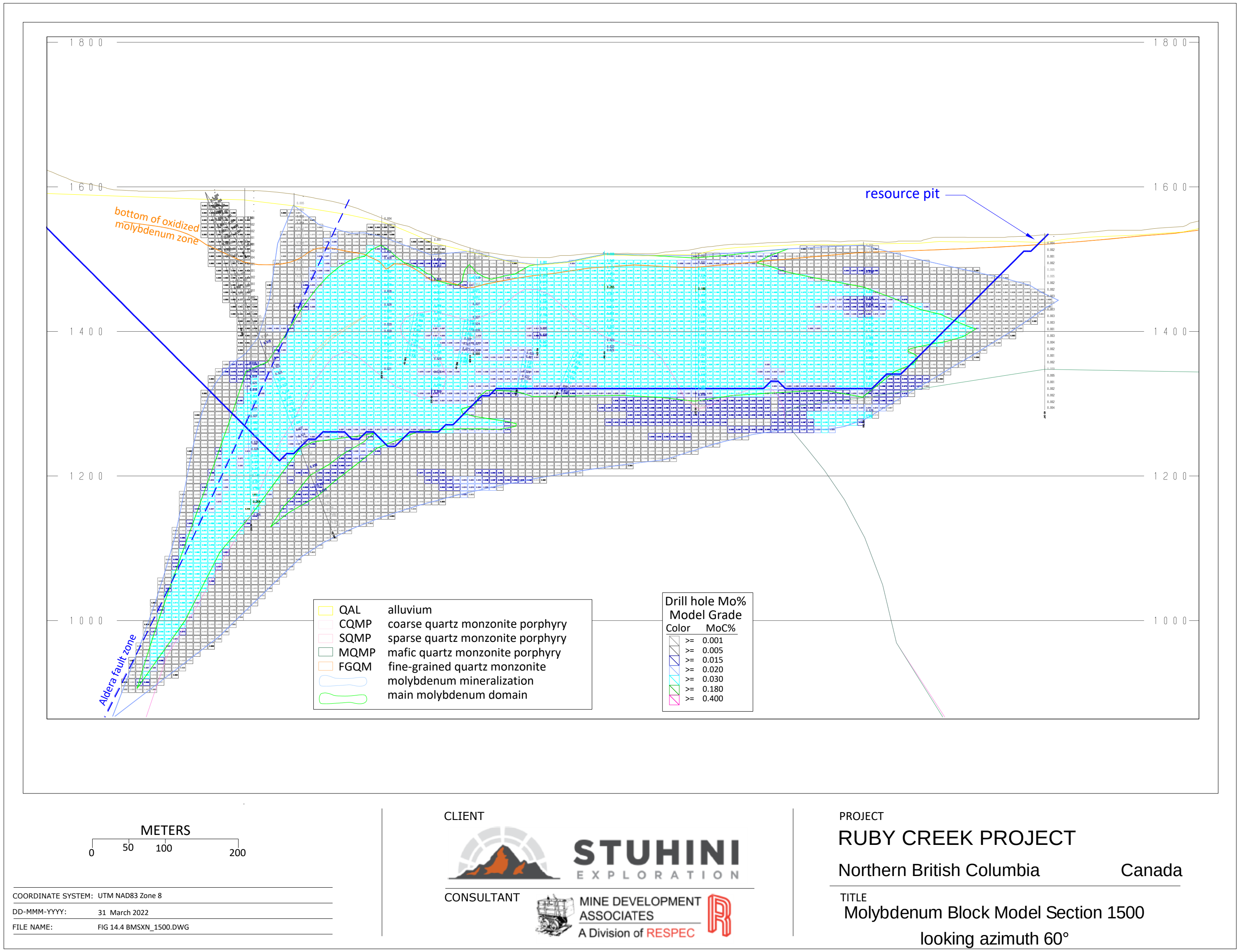
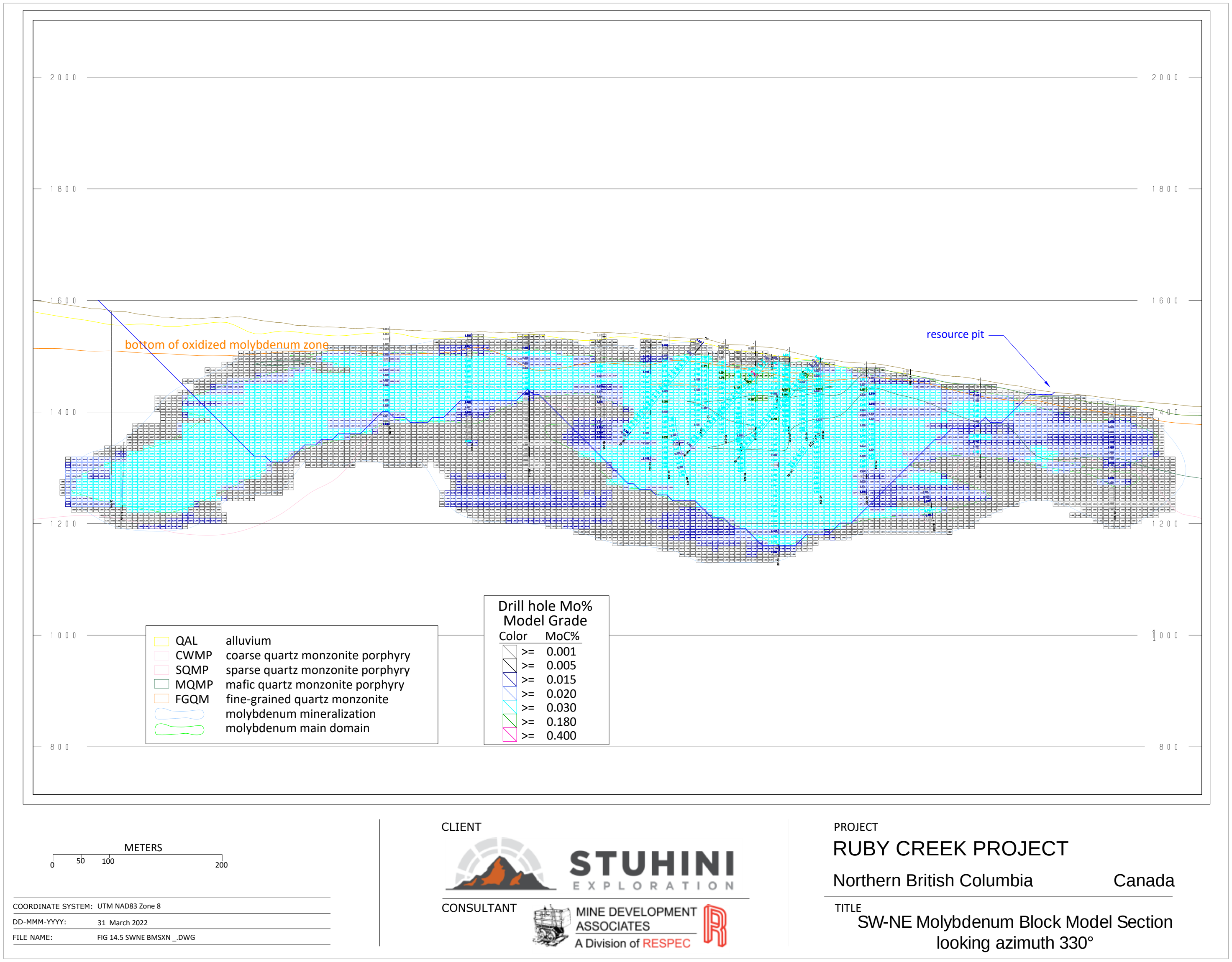


Figure 14-5 SW-NE Geology Cross Section



14.9 Discussion of Ruby Creek Resources

The Ruby Creek Molybdenum Deposit is a predictable deposit that presents few risks but is not without risks introduced from a data, modeling and estimation standpoint. Much of the data is historical, exploration was well done and by well-known companies, producing samples that should provide a solid foundation from which to model and estimate. While there are some exploration campaigns for which there is no primary source data, there is secondary source data for most. Only Kerr Addison's drill data has no supporting data of any kind. Block grades estimated dominantly by Kerr Addison's holes could be no higher classification than Indicated. Anytime that additional historical information has been found, it has supported what exists in the database. Furthermore, historical data from different campaigns for the most part corroborate each other. (See Sections 10.0, 11.0, and 12.0)

There is risk presented by the occurrence of extremely high-grade molybdenite clots and veinlets in estimating the amount of molybdenum (see Sections 7.2.4, 7.4 10.9 and 10.10). The clot distribution certainly does not have continuity and yet when clots present in core causing outlier grades, one cannot eliminate these samples from estimation and expect to get a reasonable estimate. This risk is minimized in areas of closely spaced drilling, like around the underground workings where drill spacing averages ~35m. But outside this area, drill spacing ranges from 95m to 110m on average, and those "outlier" grades are therefore projected farther because there are fewer nearby samples to moderate grade projection. Special and discrete capping and estimation pullbacks were applied in areas with relatively wide-spaced drilling and extreme outlier grades. While these efforts did reduce the impact of extreme "outliers", there remains a risk of some local overestimation. At the same time there is a risk that grade is underestimated because the drill holes may not have intersected a representative number of those clots of high-grade molybdenum, even though the clots may be present within the volume of mineralization estimated using such holes.

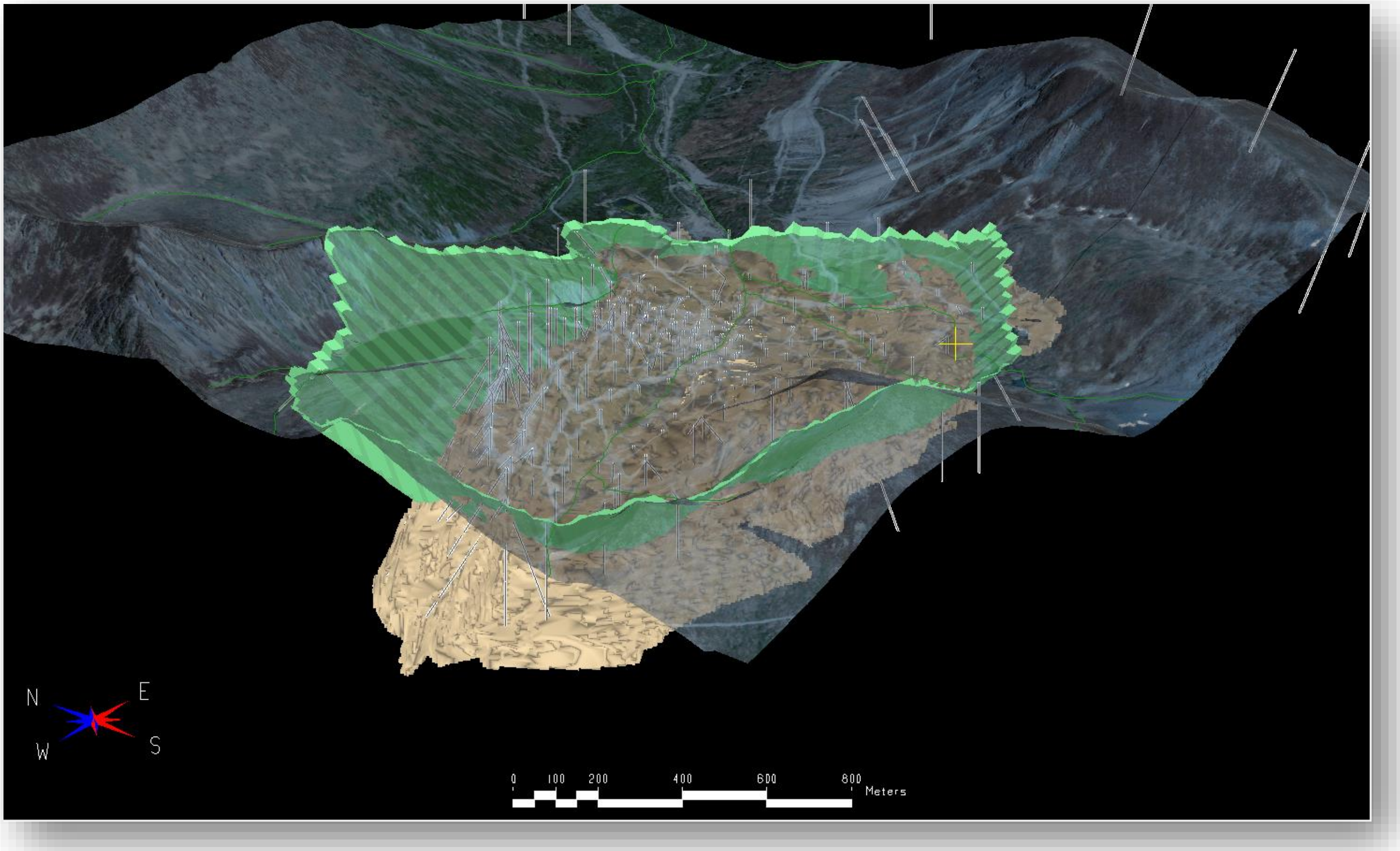
Sample size influences assayed grades (see Sections 10.9.1 and 10.9.2). Underground bulk samples are shown to be higher grade overall than the core drilling. The style of mineralization and occurrence of molybdenite implies that the underground samples may well reflect grades more accurately than the core-sample grades. Furthermore, angled drill holes have a slightly higher average grade than vertical holes (10.9.3). Underground bulk samples and angled-hole samples are much less common in the database than core samples and vertical-hole samples. In summary, it is assumed that estimation of grades may locally be too high but on average should be accurate or possibly lower than true grades.

The Deposit is open to the east, south and southwest and at depth down dip along the Adera fault zone.

Mineralization was projected as far as geologically reasonable, but to fulfill the regulatory requirement of that a resource exists "*in such form and quantity and of such a grade or quality that it has reasonable prospects for eventual economic extraction*", pit optimizations were run to limit the material to within the pit. Consequently, some mineralization is estimated but not reported (tan grade shell in Figure 14-6).

Figure 14-6 Estimated Ruby Creek Mineralization at 0.02% Mo and the Resource Pit

(tan is the mineralization estimated above 0.02% Mo; green is the resource-constraining pit; looking 50° -30°)



15.0 MINERAL RESERVE ESTIMATES (ITEM 15)

There are no estimated mineral reserves for the Ruby Creek Molybdenum Property at this time.

16.0 MINING METHODS (ITEM 16)

This section is not applicable to the Ruby Creek Molybdenum Property.

17.0 RECOVERY METHODS (ITEM 17)

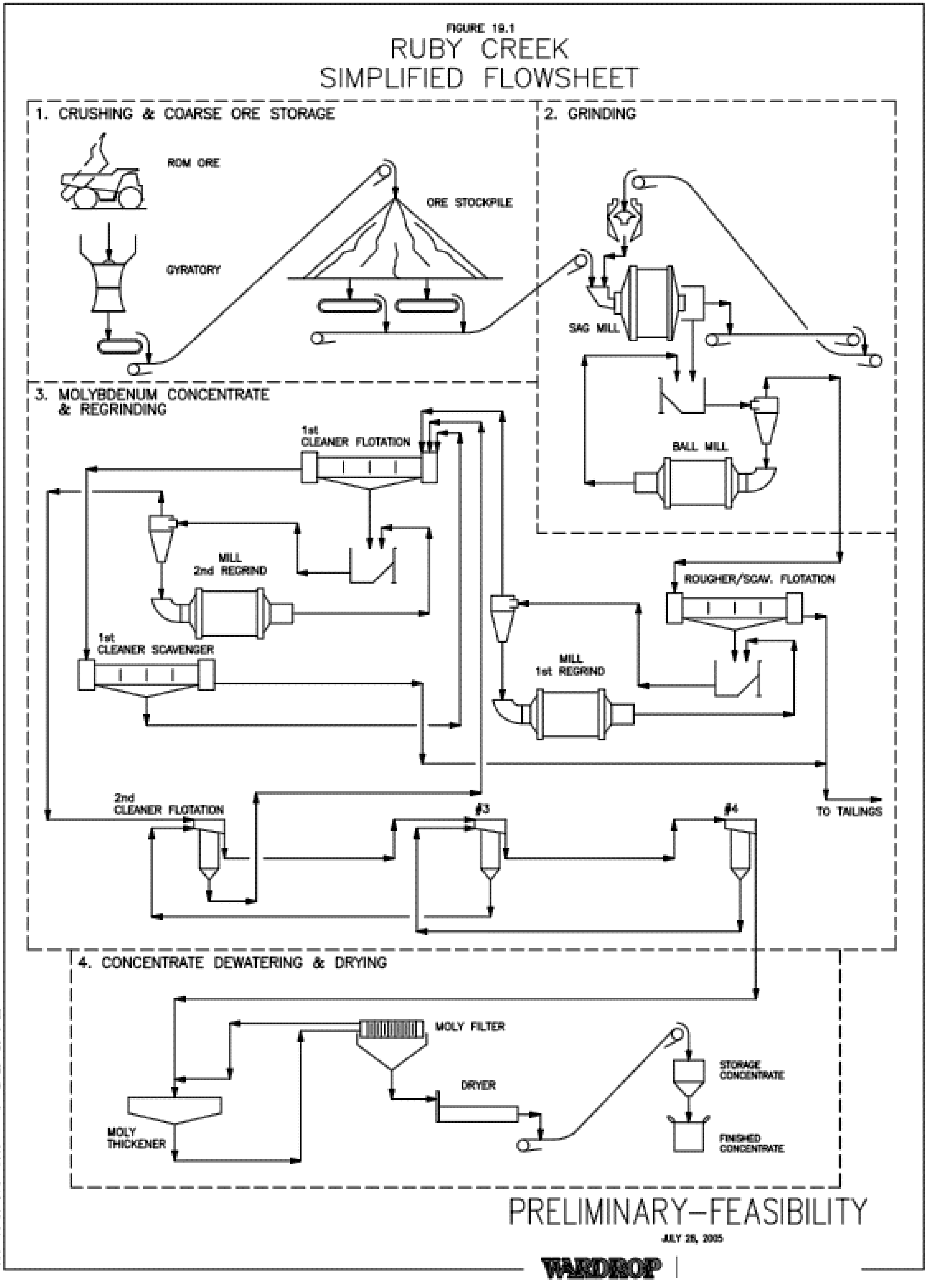
There are no changes to the recovery methods previously detailed in the document: “Ruby Creek Project Preliminary Feasibility, Volume 1, August 2005, Revision 1” and the updated comminution previously detailed in the document: “Ruby Creek HPGR Feasibility, July, 2006” both by Wardrop Engineering, and outlined below:

- The mill process design was based on the grinding and flotation studies conducted by MinnovEX, which predicted that a final concentrate with 54% molybdenum grade and overall recovery of 90% can be achieved from mill feed with 0.087% molybdenum grade by applying two stages of re-grinding followed by four cleaning stages. This has been used as the basis for the process plant design.
- The flow sheet developed represents a typical molybdenum circuit utilizing primary and secondary crushing, followed by HPGR crushing, ball milling, and conventional flotation to produce a final molybdenite (MoS_2) concentrate with 54% molybdenum content.
- The mill is designed to operate at 20,000 metric tonnes per day average throughput with a plant availability of 92% and an overall molybdenum recovery of 90%. The use of HPGR may increase this availability, but will not significantly impact the size and arrangement of downstream process equipment.
- The front-end of the circuit comprises run-of-mine material feeding directly into a gyratory crusher. The product from the crusher feeds the coarse-ore stockpile. Ore from the stockpile is crushed to –6mm in an HPGR circuit. The product from the HPGR circuit feeds a ball mill and the ball mill product, after size classification, is fed to the flotation circuit, which includes rougher, scavenger, and cleaner stages. Tanks cells are used in the rougher and scavenger stages and column cells are used for four stages of cleaning.
- The mill is designed to operate seven days per week and 24 hours per day. There will be four mill crews each working 12hr shifts on a two-weeks turnaround. A total of 85 operating personnel and 35 maintenance staff are required to operate the plant. In addition, a total of 6 persons are required for power supply and surface facilities. General and administrative staff are 25 for an overall total of 151. Table 17-1 shows the manpower requirements.
- Two re-grinding stages are included in the cleaner flotation section to improve the molybdenum grade in the final concentrate. The final concentrate is thickened, filtered, dried, and packed in tote bags for shipment. Tailings are impounded and water is recycled for use in the mill. A simplified process flow sheet is shown in Figure 17-1.

Table 17-1 Manpower Requirements

Description	Manpower
Operating	85
Maintenance	35
Power Supply and Surface Facilities	6
General and Administration	25
Total	**151**

Figure 17-1 Simplified Process Flow Sheet



18.0 PROJECT INFRASTRUCTURE (ITEM 18)

This section is not applicable to the Ruby Creek Property.

19.0 MARKET STUDIES AND CONTRACTS (ITEM 19)

This section is not applicable to the Ruby Creek Property.

20.0 CAPITAL AND OPERATING COSTS (ITEM 20)

This section is not applicable to the Ruby Creek Property.

21.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT (ITEM 21)

This section is not applicable to the Ruby Creek Property.

22.0 ECONOMIC ANALYSIS (ITEM 22)

This section is not applicable to the Ruby Creek Property.

23.0 ADJACENT PROPERTIES (ITEM 23)

No information on adjacent properties is reported or considered pertinent.

24.0 OTHER RELEVANT DATA AND INFORMATION (ITEM 24)

The authors are not aware of any other data or information relevant to the Ruby Creek Project described in this report.

25.0 INTERPRETATION AND CONCLUSIONS (ITEM 25)

The Ruby Creek Molybdenum Deposit is a deposit that has throughout its five decades of exploration presented few surprises. Since the late 1960s, the molybdenum deposit has continued to grow albeit incrementally with each additional phase of exploration drilling. With the drill-defined Deposit currently open to the west, southwest and south, that trend may continue.

The Deposit presents some risks although they are also offset by potential upsides. The risks are caused by the occurrence of molybdenite as clots, rosettes and massive vein fillings. (see Sections 7.2.4, 7.4 and 10.9), which will result in the overestimation of grades locally. The diamond-drilling sample size may well be too small to obtain reproducible grades, for example, duplicate sample grades show variability of 65% (not unlike many gold deposits). However, these risks are somewhat mitigated by the small sample size which may be understating the average grades (Section 10.9). Effectively, the occurrence of molybdenite and the size of core samples cause higher variability and more spikes of high grades while also yielding grades that may be low compared to reality.

The reader should refer to Section 14.9 in its entirety with respect to Interpretations and Conclusions.

26.0 RECOMMENDATIONS (ITEM 26)

The Ruby Creek molybdenum project is deserving of significant additional work including engineering, economic evaluations, and drilling. A Preliminary Economic Assessment ("PEA") is recommended for Phase I. At times in the past, the Ruby Creek Deposit was found to be economic and at other times not so. It is recommended to update those studies with current costs and prices to determine current economics. The recommended PEA will also provide guidance for Phase II drilling. Recommended work in Phase II is dominated by drilling, which, regardless of the outcome of Phase I is justified. Only the objective and location Phase II drilling is contingent upon the result of Phase I.

26.1 Phase I

Preliminary Economic Assessment:

The project deserves to be evaluated again from an economic standpoint with a PEA. It is recommended to update those studies and the costs to determine current economics. Also, studies should compare the economics of the Ruby Creek Deposit based on Measured and Indicated material alone versus Measured, Indicated, plus Inferred material, the results of which would guide the drilling in Phase II. The cost of the PEA is expected to be approximately C$360,000 including the cost of reporting and a 10% contingency.

The total recommended Phase I program totals C$360,000 as shown in Table 26-1.

Table 26-1 Cost Estimate for the Phase I Ruby Creek Recommended Program

PHASE I (C$, rounded to 1000s)				
Preliminary Economic Assessment				
Engineering		$	257,000	desktop studies
Reporting		$	70,000	
Contingency	10%	$	33,000	
Total		**$**	**360,000**	

26.2 Phase II

Regardless of the outcome of the results of Phase I, drilling is justified. However, the results of Phase I will guide the objective and location of drilling in Phase II. If the economics of the Ruby Creek Deposit based on Measured and Indicated material alone is sufficiently favorable, then expansion and exploration drilling should be done as described below. The project is after all open to the east, south and southwest, and at depth down dip along the Adera fault zone. If the economics based on Measured, Indicated, and Inferred material is more attractive, then the drilling should concentrate on converting Inferred to Measured or Indicated.

Drilling:

All core drilling should be no smaller than HQ size, and optimizing sample handling and processing should be emphasized to ensure the capture of most representative samples possible.

For expansion and exploration, drilling should be done on Thor Ridge, located about a kilometer east and southeast of the center of the deposit, where there is potential to define small volumes of mineralization that could be easily accessible to early mining. About 500m of drilling is proposed in this area but in 10 shallow drill holes. Farther south along Thor Ridge, the potential pits approach the top of the ridge therefore if the resource can be expanded to the south the strip ratio will incrementally decrease. Three holes for 1,550m of drilling is proposed in this area.

Drilling into the Adera fault zone from the northwest will give invaluable information as to the style and controls of mineralization along the fault zone as it would be drilling into and sub-perpendicular to the fault zone as opposed to parallel to it. These holes may not expand mineralization but would certainly add to understanding of the deposit and potentially open new opportunities and for potential underground-minable resources.

The deposit is open to the southwest thus offsetting open-ended known mineralization in that direction could add incrementally to the resource. Some of the grades in this area are high. Five drill holes are recommended for this area totaling 2,700m. Upon completion of the 3DIP geophysics analysis and report, modification to the drilling in this area may be supported.

Alternatively, if infill drilling is determined to be more appropriate, the holes will be located within the resource limits and be dictated by appropriate pit shells and the location of the Inferred material within the pit shells.

Reporting:

As with any drill program, follow up interpretations, compilation and validation of data, and reporting is required. It is assumed that this task could cost C$38,000.

Update Resource Estimate:

It is assumed that much of the proposed drilling will encounter mineralization so the resource estimate should be updated. This work would require updating the database and the existing model and estimate, evaluating the QA/QCand reporting.

The total recommended Phase I program totals C$2,600,000 as shown in Table 26-2.

Table 26-2 Cost Estimate for the Phase II Ruby Creek Recommended Program

PHASE I (C$, rounded to 1000s)				
Expansion Drilling				
Item	Units	$/Unit	Cost	
Drilling	7,700	$ 280	$ 2,158,000	all in costs
Interpretations and Reporting			$ 38,000	filing addendum
Updating Estimate			$ 65,000	includes reporting
Contingency	15%		$ 339,000	
Total			**$ 2,600,000**	

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28.0 DATE AND SIGNATURES

Effective Date of report:	March 10, 2022
Completion Date of report:	April 22, 2022

"S. Ristorcelli"
Steve Ristorcelli, C.P.G. — Date Signed: April 22, 2022

"P. Ronning"
Peter A. Ronning, P.Eng. — Date Signed: April 22, 2022

"Finley Bakker"
Finley Bakker P.Geo. — Date Signed: April 22, 2022

"John Eggert"
John Eggert, P.Eng. — Date Signed: April 22, 2022

29.0 AUTHORS CERTIFICATES

STEVEN RISTORCELLI, C. P. G.

I, Steven Ristorcelli, C. P. G., do hereby certify that I am currently self-employed working as an associate of Mine Development Associates, a division of RESPEC, 210 South Rock Blvd., Reno, Nevada 89502.

I am one of the authors of the report entitled "*Ruby Creek Project, Northern British Columbia, Canada*" (the "Technical Report") prepared for Stuhini Exploration Ltd. ("Stuhini") having an Effective Date of March 10, 2022. I take joint responsibility for Section 1 through 12, 14, 25, 26 and 27. Having read those parts of the Technical Report for which I have responsibility, and having read National Instrument 43-101, I affirm that these sections of the Technical Report for which I am responsible have been prepared in compliance with the instrument.

I graduated with a Bachelor of Science degree in Geology from Colorado State University in 1977 and a Master of Science degree in Geology from the University of New Mexico in 1980. I am a Certified Professional Geologist (#10257) with the American Institute of Professional Geologists.

I have worked as a geologist continuously for 44 years since graduation from undergraduate university. During that time I have been engaged in the exploration, definition, and modeling of porphyry-style metal deposits in North America and South America, and have estimated the mineral resources for such deposits.

I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

I visited the Ruby Creek Project site on September 11 through 13, 2021.

I am independent of Stuhini and all its subsidiaries as defined in Section 1.5 of NI 43-101 and in Section 1.5 of the Companion Policy to NI 43-101. I am independent of the mineral property that comprises the Ruby Creek Project, as it is described in section 4.0 of the Technical Report.

I have had no prior involvement with the Property and Project.

I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

As of the Effective Date of this report, to the best of my knowledge, information and belief, the parts of this Technical Report that I am responsible for contain all the scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Dated this 22nd day April, 2022

"S. Ristorcelli"

Signature of Qualified Person
Steven Ristorcelli, C. P. G.

PETER A. RONNING, P. ENG.

I, Peter Arthur Ronning, P.Eng. of 1450 Davidson Road, Gibsons, B. C., Canada, V0N 1V6, hereby certify that:

1. I am a consulting geological engineer, doing business as a sole practitioner.
2. I am one of the authors of and have read the report entitled "*Ruby Creek Project, Northern British Columbia, Canada*" (the "Technical Report") prepared for Stuhini Exploration Ltd. ("Stuhini") having an Effective Date of March 10, 2022. I share joint responsibility for Sections 1 through 12, 25, 26 and 27. Having read those parts of the Technical Report for which I have responsibility, and having read National Instrument 43-101, I affirm that these sections of the Technical Report for which I am responsible have been prepared in compliance with the instrument.
3. As of the Effective Date of the report, to the best of my knowledge, information and belief, those parts of the Technical Report for which I have responsibility contain all scientific and technical information that is required to be disclosed to make the report not misleading.
4. I am a graduate of the University of British Columbia in geological engineering, with the degree of B.A.Sc. granted in 1973. I also hold the degree of M.Sc. (applied) in geology, granted by Queen's University in Kingston, Ontario, in 1983. I am a member in good standing of Engineers and Geoscientists B. C., Registration Number 16,883. I hold Permit to Practice Number 1000128.
5. I have worked as a geologist and since 1989 as a Professional Engineer in the field of mineral exploration since 1973, in many parts of the world. I have explored for and worked on porphyry-style metal deposits. Since 2006 I have participated in or conducted numerous audits, reviews and evaluations of mining and mineral-exploration project quality control and quality assurance ("QA/QC") data. I have studied QA/QC topics relating to the sampling and analysis of mineralized material independently and in formal continuing education sessions.
6. I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association as defined in NI 43-101 and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101 with respect to the contents of those parts of the Technical Report for which I take responsibility.
7. I participated in a field examination of the Ruby Creek Project site on September 11 through 13, 2021.
9. I am independent of Stuhini and all its subsidiaries as defined in Section 1.5 of NI 43-101 and in Section 1.5 of the Companion Policy to NI 43-101. I am independent of the mineral property that comprises the Ruby Creek Project, as it is described in section 4.0 of the Technical Report. I have had no involvement with the Ruby Creek Property prior to the work described in the Technical Report.

Original Authenticated (signed and sealed) by Peter A. Ronning on April 22, 2022

"P. Ronning"

Peter A. Ronning, P.Eng.
EGBC Permit to Practice 1000128

FINLEY BAKKER, P.GEO.

I, Finley Bakker residing in Campbell River, B. C., V9H-1C6, Canada, do hereby certify that:

1) I am a Professional Geoscientist Registration No. 18,639 at Finley Bakker Consulting PERMIT NUMBER: 1003901.
1) This certificate applies to the National Instrument 43-101 Technical Report titled, "*Ruby Creek Project, Northern British Columbia, Canada*" (the "Technical Report") prepared for Stuhini Exploration Ltd. ("Stuhini") having an Effective Date of March 10, 2022.
2) I am a graduate of McMaster University with a Hons. Bachelor of Science in Geology (1979)
3) I am a licensed Professional Geologist with EGBC (1991) in the Province of British Columbia, Canada (Registration No. 18,639).
4) I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I am a "Qualified Person" for the purposes of NI 43-101.
5) My relevant experience for the purpose of the Technical Report is:
    a) Practiced my profession continuously since 1979
    a) 34 years' experience utilizing MineSight software
    b) 40 years' experience estimating Resources and Reserves
    c) Chief Geologist at four mines
    d) Have also held the positions of Senior Resource Geologist, Exploration Manager and Superintendent of Technical Services
6) I authored and assisted in preparation of the Technical Report and take responsibility for Section 14.
7) I have not completed a personal inspection of the Property that is the subject of the Technical Report.
8) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
9) I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
10) I have had prior involvement with the Property that is the subject of the Technical Report and held the position of Chief Geologist at the Ruby Creek Project 2007-2008 for Adanac Molybdenum Corporation.
11) I have read NI 43-101, Form 43-101F1 and the Technical Report, and the Technical Report has been prepared in compliance therewith.

Dated this 22nd day of April, 2022

F. B. BAKKER

Signature of Qualified Person
Finley Bakker P.Geo.

JOHN EGGERT, P.ENG

I, John Eggert, residing at 158 David Street, Sudbury, Ontario, P3E 1T4, Canada, do hereby certify that:

1) I am a Professional Engineer at Eggert Engineering Inc.
2) This certificate applies to the National Instrument 43-101 Technical Report titled, "*Ruby Creek Project, Northern British Columbia, Canada*" (the "Technical Report") prepared for Stuhini Exploration Ltd. ("Stuhini") having an Effective Date of March 10, 2022.
3) I am a graduate of Queen's University at Kingston in 1990 with a BSc in Mining Engineering.
4) I am licensed by the Professional Engineers Ontario, (License No. 90397597) and by Engineers and Geoscientists British Columbia, (License No. 55542). I hold Permit to Practice number 1004188 issued by Engineers and Geoscientists British Columbia.
5) I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("**NI 43-101**") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I am a "Qualified Person" for the purposes of NI 43-101.
6) I have worked in operations, technical and managerial positions in Canada. I have been an independent engineer for twelve years. I have performed mill designs, metallurgical accounting, cost estimations, operations management, due diligence reviews and report writing for mining projects in Canada, the USA and Mexico.
7) I authored and assisted in preparation of the Technical Report and take responsibility for Sections 13 – Mineral Processing and Metallurgical Testing and 17 – Recovery Methods.
8) I have not completed a personal inspection of the Property that is the subject of the Technical Report.
9) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
10) I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
11) I have not had prior involvement with the Property that is the subject of the Technical Report.
12) I have read NI 43-101, Form 43-101F1 and the Technical Report, and the Technical Report has been prepared in compliance therewith.
13) I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Effective Date: March 10, 2022

Signing Date: April 22, 2022.

[original signed and sealed by "John Eggert"]
John Eggert, P.Eng.
President, Eggert Engineering Inc.

Dated this 22nd of April, 2022
(Signed and sealed)