Ivanhoe ELECTRIC | TINTIC UTAH, USA

S-K 1300 TECHNICAL REPORT SUMMARY
& EXPLORATION RESULTS REPORT

TINTIC PROJECT, UTAH

REPORT PREPARED BY:

srk consulting

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Date and Signature Page

S-K 1300 Technical Report Summary & Exploration Results Report, Tintic Project, Utah

Prepared for: Ivanhoe Electric Inc.

Report Date: February 23, 2024

Prepared by:

/s/ SRK Consulting (U.S.), Inc.

SRK Consulting (U.S.), Inc.
February 23, 2024

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List of Abbreviations

The following abbreviations may be used in this report.

Abbreviation	Unit or Term
A	ampere
AA	atomic absorption
A/m^2	amperes per square meter
ANFO	ammonium nitrate fuel oil
Ag	silver
Au	gold
AuEq	gold equivalent grade
°C	degrees Centigrade
CCD	counter-current decantation
CIL	carbon-in-leach
CoG	cut-off grade
cm	centimeter
cm^2	square centimeter
cm^3	cubic centimeter
cfm	cubic feet per minute
ConfC	confidence code
CRD	carbonate replacement deposit
CRec	core recovery
CSS	closed-side setting
CTW	calculated true width
°	degree (degrees)
dia.	diameter
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
FA	fire assay
ft	foot (feet)
ft^2	square foot (feet)
ft^3	cubic foot (feet)
g	gram
gal	gallon
g/L	gram per liter
g-mol	gram-mole
gpm	gallons per minute
g/t	grams per tonne
ha	hectares

Abbreviation	Unit or Term
HDPE	Height Density Polyethylene
hp	horsepower
HTW	horizontal true width
ICP	induced couple plasma
ID2	inverse-distance squared
ID3	inverse-distance cubed
IFC	International Finance Corporation
ILS	Intermediate Leach Solution
kA	kiloamperes
kg	kilograms
km	kilometer
km^2	square kilometer
koz	thousand troy ounce
kt	thousand tonnes
kt/d	thousand tonnes per day
kt/y	thousand tonnes per year
kV	kilovolt
kW	kilowatt
kWh	kilowatt-hour
kWh/t	kilowatt-hour per metric tonne
L	liter
L/sec	liters per second
L/sec/m	liters per second per meter
lb	pound
LHD	Long-Haul Dump truck
LLDDP	Linear Low Density Polyethylene Plastic
LOI	Loss On Ignition
m	meter
m^2	square meter
m^3	cubic meter
masl	meters above sea level
MARN	Ministry of the Environment and Natural Resources
MDA	Mine Development Associates
mg/L	milligrams/liter
mm	millimeter
mm^2	square millimeter
mm^3	cubic millimeter

Abbreviation	Unit or Term
MME	Mine & Mill Engineering
Moz	million troy ounces
Mt	million tonnes
MTW	measured true width
MW	million watts
m.y.	million years
NGO	non-governmental organization
NI 43-101	Canadian National Instrument 43-101
OSC	Ontario Securities Commission
oz	troy ounce
%	percent
PLC	Programmable Logic Controller
PLS	Pregnant Leach Solution
PMF	probable maximum flood
ppb	parts per billion
ppm	parts per million
QA/QC	Quality Assurance/Quality Control
RC	rotary circulation drilling
RoM	Run-of-Mine
RQD	Rock Quality Description
SEC	U.S. Securities & Exchange Commission
sec	second
SG	specific gravity
SPT	standard penetration testing
st	short ton (2,000 pounds)
t	tonne (metric ton) (2,204.6 pounds)
t/h	tonnes per hour
t/d	tonnes per day
t/y	tonnes per year
TSF	tailings storage facility
TSP	total suspended particulates
µm	micron or microns
V	volts
VFD	variable frequency drive
W	watt
XRD	x-ray diffraction
y	year

1 Executive Summary

This report was prepared as an exploration results Technical Report Summary in accordance with the Securities and Exchange Commission (SEC) S-K regulations (Title 17, Part 229, Items 601 and 1300 until 1305) for Ivanhoe Electric Inc. (IE or the Company) by SRK Consulting (U.S.), Inc. (SRK) on the Tintic Project (Tintic or the Project). The Qualified Person is not affiliated with IE or another entity that has an ownership, royalty, or other interest in the property.

1.1 Property Description and Ownership

The Tintic Project is a gold, silver, and base metal Carbonate Replacement Deposit (CRD), skarn, fissure vein, and copper-gold porphyry exploration project located in the historical Tintic Mining District (the District) of central Utah, USA. The District is the site of significant historical production and over 125 years of exploration activity. The Project is located near the City of Eureka, approximately 95 km south of Salt Lake City, and can be accessed from U.S. Highway 6, approximately 30 km west of the Interstate 15 junction. It is crossed by many historical mine roads and defunct railroad paths, which provide access to most of the property. The exploration area covers approximately 81.97 km^2 of private patented claims, unpatented claims, and state leases consolidated by IE into a cohesive package of interests.

1.2 Geology and Mineralization

The Property comprises a large portion of the Main and Southwest Tintic Districts where Paleozoic limestone, dolomite, and quartzite rocks and late Eocene-Oligocene volcanic rocks are intruded by the 33.07 Ma to 32.09 Ma Silver City intrusive complex. The Silver City intrusive complex appears to be the locus of the mineralized CRDs and fissure veins and is prospective to host porphyry-style mineralization at depth.

Across the Tintic Project, three deposit types have been identified:

- Widespread ‘fissure vein’ deposits that host gold, silver, lead, zinc, and lesser copper;
- CRDs consisting of columnar and pod-like mineralized bodies connected by pipe-like, tabular and irregular masses of mineralization, forming continuous ‘ore runs’ of copper, gold and silver, zoning distally to lead and zinc; and
- Porphyry copper deposits.

Abrupt changes in bedding orientation, as well as cross faults, are important structures that control the CRD columnar mineralized bodies and concentrate mineralization.

Total historical production from the Main and Southwest Tintic Districts is estimated at 2.18 Moz gold (Au), 209 Moz silver (Ag), 116 kt copper (Cu), 589 kt lead (Pb) and 63 kt zinc (Zn), from both surface and underground sources. This past production is dominantly from a series of CRD pipe-like bodies and fissure veins, whose mineral assemblages are consistent with a high-sulfidation epithermal origin. The fluid source is consistent with that of a porphyry environment. Total historical production from deposits located within IE’s acquired property, predominantly in the Main and Southwest Tintic mining districts, totals 1.89 Moz Au; 136 Moz Ag; 104 kt Cu; 416 kt Pb and 6 kt Zn. The gold and copper mineralization indicates the potential that the IE property is likely proximal to a potential porphyry source.

1.3 Status of Exploration

Between May 2021 and December 2023, IE has focused on drilling areas of interest developed from interpretation of their earlier geophysical surveys, surface mapping, and compilation and digitization of historical data. Drilling of two reverse circulation (RC) holes and fourteen diamond drill holes has been completed with assays pending from three of the diamond drill holes. Diamond drilling totaling 13,436 m has been completed as of December 15, 2023 since the commencement of exploration drilling in late 2022. In addition to drilling, a ground gravity geophysical survey was conducted in 2022.

Drilling in the Silver City area has intersected part of a bona fide porphyry system associated with the Sunbeam Typhoon™ chargeability anomaly in drill hole TTD-016. Abundant sulfide-bearing veins are present from 800 m to the end of the hole at 1435 m, with vein density ranging from 5-20 veins per meter. While the visible copper mineralization is low, this is the first hole to have tested the Sunbeam Typhoon™ anomaly directly, and the potential exists to vector toward the center of a porphyry system which may contain mineralization with follow-up drilling. Assays are pending for this pyrite-dominant stockwork zone.

This Sunbeam porphyry system is thought to be part of the source of mineralization in the Silver City area but is unlikely to be the source of mineralization at Mammoth and Grand Central.

1.4 Conclusions and Recommendations

Since securing the Tintic Project in 2017, IE has invested $55 million into exploration in the Tintic Main District, with the expenditures for securing the land and mineral titles and technical exploration work (Table 1-1). Exploration has focused on porphyry coppers, CRDs and skarns. The Main Tintic District is highly prospective for these types of mineralization based on historical mining and on the geological understanding of the source of CRD mineralization. The consolidation of mineral claims since the cessation of mining in the 1980's has facilitated the opportunity to explore broader tracts of land, attempting to locate continuations of known exploited mineralization. IE has collated all historical data and produced a regional exploration model. The QP notes that the exploration approach taken by IE has been successfully employed in the East Tintic District by Tintic Consolidated Metals LLC (TCM), a subsidiary of Osisko Development Corp. (Osisko).

Table 1-1: IE Spending on the Tintic Project

Year	Cost – Land	Cost – Technical	Total Cost
2017	$500,000	$136,229	$636,229
2018	$2,246,108	$2,641,071	$4,887,179
2019	$4,303,215	$2,294,054	$6,597,269
2020	$7,322,571	$977,916	$8,300,487
2021	$6,107,341	$2,067,029	$8,174,370
2022	$7,890,211	$1,942,606	$9,832,817
2023 (to December 31)	$3,654,576	$12,996,975	$16,651,551
Total	**$32,024,021**	**$23,055,881**	**$55,079,902**

Source: IE (2023)

The QP found the information supplied by IE to be comprehensive and logically archived. The surface geochemical sampling program and the drill core logging and sampling procedures and associated QA/QC protocols are consistent with industry standard practices.

IE has applied industry accepted exploration techniques to identify and prioritize areas with exploration potential in the Main Tintic District. Drilling of two reverse circulation and 16 diamond drill holes since 2021 has tested several of these areas. Whilst no significant mineralization has been intersected to date, the drilling program has served to refine the exploration approach and re-prioritize the prospects for continued testing in 2024 based on the results and IE's overall strategy for the project.

IE has completed several academic studies related to whole rock geochemistry, petrography, geochronology and quartz vein fluid inclusions. These results confirm historical authors' opinions on the project area and provide valuable information for the further development of IE's exploration model.

The QP identifies the following risks associated with the Tintic Project:

- The dimensions of historical underground mining cavities are not surveyed, and the risk exists that larger areas have been exploited and not recorded.
- Historical drill hole location and analytical results should be treated with caution. Confidence in this information is low as little to no QA/QC data are available for the respective drill holes. However, the results can be utilized for regional-scale modelling, which IE has completed in Leapfrog Geo™.
- The area being explored by IE is very large and the risk exists that the exploration activities may be diluted if too many of the prospect areas are explored simultaneously. This risk can be mitigated by ranking of prospect areas, which IE has undertaken.
- All the exploration results to date indicate exploration potential areas only; no mineralization with any reasonable prospects of eventual economic extraction has been identified.
- Anomalous geochemical soil sample results occurring downslope from historical mining may be related to the aforementioned and not an indicator of an exploration potential area.
- A complex land claims ownership exists in the Tintic District and the risk to access certain isolated claims during exploration could occur. IE has consolidated claims through several agreements to acquire the relevant claims to mitigate the risk. IE has negotiated the right to access any of the claims under the respective agreements for exploration purposes.
- Unresolved Recognized Environmental Conditions (RECs) and pre-existing environmental liabilities exist in the IE tenement area. However, none of these impact IE's ability to perform exploration activities on the prospective areas prioritized as prospect areas.
- Future environmental permitting is a risk should IE consider an application to mine in Utah. The risk is partially mitigated on private patented claims, which would require State rather than Federal permitting.
- Significant portions of the patented and unpatented mining lode claims are subject to Net Smelter Return (NSR) royalty agreements, ranging between 1% and 4%. However, they are only payable upon production and sale of product should IE engage in such activities in the future. No royalties are due in advance.

The QP considers the following upside potential:

- Historical underground mining in the Tintic District was focused on mineralization above the water table. Therefore, mineralization along existing mined zones at depth may be preserved below the water table.
- Historical underground mining utilized higher cut-off grades than those that are economic in recent times. Therefore, the potential exists for unmined remnant lower grade mineralization areas being preserved.
- Historically, exploration and mining were focused on CRD, skarn, and fissure vein mineralization and not on the potential mineralized fluid source at depth. IE exploration geophysics has identified several anomalies that could indicate the potential source of the fluids. Diamond drilling in the Sunbeam prospect area has intersected textures and alteration typically associated with porphyry systems. While the visible copper mineralization is low, this is the first hole to have tested the Sunbeam Typhoon™ anomaly directly, and the potential exists to vector toward the center of a porphyry system which may contain mineralization with follow-up drilling. Assays are pending for this pyrite-dominant stockwork zone.

The QP is not currently aware of any other significant factors that may affect access, title or right or ability to perform work on the property.

The QP considers IE's exploration model to be applicable and realistic for the Tintic Main District region. Furthermore, the exploration techniques employed by IE are suitable for exploration for porphyry copper, CRD, skarn and fissure vein mineralization. While further exploration is warranted in the QP's opinion, there is no guarantee it will be successful.

The QP recommends that IE focuses on continuing to drill the highest priority prospect areas and to continue to use the drilling results and compiled geophysical and geological data to guide future work. Drilling is required to delineate the volume and morphology of the potentially mineralized underground zones above and below the water table. Depending on whether mineralization is intersected, and its style and grade, this would enable IE to declare an exploration target with relevant estimated tonnage and grade ranges, contingent on IE's QA/QC protocols and performance, both of which have been demonstrated to meet industry standards.

A $12M budget for 2024 has been proposed that includes payments on optioned land and surface drilling (Table 1-2). This will continue to test the porphyry and CRD exploration potential of the project.

Table 1-2: Summary of estimated costs for recommended exploration work at Tintic in 2024

Item	Total Cost
Land	$290,570
Drilling	$8,640,000
Facilities and Staff	$3,069,060
Total	$11,999,630

Source: SRK (2023)

2 Introduction

2.1 Registrant for Whom the Technical Report Summary was Prepared

This report was prepared as an exploration update and Technical Report Summary in accordance with the Securities and Exchange Commission (SEC) S-K regulations (Title 17, Part 229, Items 601 and 1300 through 1305) for Ivanhoe Electric Inc. (IE or the Company) by SRK Consulting (U.S.), Inc. (SRK) on the Tintic Project (Tintic or the Project).

2.2 Terms of Reference and Purpose of the Report

The purpose of this Technical Report Summary is to report exploration results.

The quality of information, conclusions, and estimates contained herein are consistent with the level of effort involved in SRK's services, based on i) information available at the time of preparation and ii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by IE subject to the terms and conditions of its contract with SRK and relevant securities legislation. The contract permits IE to file this report as a Technical Report Summary with U.S. securities regulatory authorities pursuant to the SEC S-K regulations, more specifically Title 17, Subpart 229.600, item 601(b)(96) - Technical Report Summary and Title 17, Subpart 229.1300 - Disclosure by Registrants Engaged in Mining Operations. Except for the purposes legislated under securities law, any other uses of this report by any third party are at that party's sole risk. The responsibility for this disclosure remains with IE.

This report is current as of December 31, 2023. Data cut off for the report is December 15, 2023.

2.3 Sources of Information

This report is based in part on internal Company technical reports, previous studies, maps, published government reports, Company letters and memoranda, and public information as cited throughout this report and listed in the References Section 24.

Reliance upon information provided by the registrant is listed in Section 25 when applicable.

2.4 Qualifications of Consultants

This report was prepared by SRK Consulting (U.S.), Inc., a third-party firm comprising mining experts in accordance with § 229.1302(b)(1). IE has determined that SRK meets the qualifications specified under the definition of qualified person in § 229.1300. References to the Qualified Person or QP in this report are references to SRK Consulting (U.S.), Inc. and not to any individual employed at SRK.

2.5 Details of Inspection

SRK personnel visited the Tintic Project on January 15, 2024, accompanied by Wes Hall, Tintic Acting Project Manager, Alex Neufeld, Vice President, Exploration, and Graham Boyd, Senior Vice President, Exploration as detailed in Table 2-1. The purpose of the site visit was to observe the exploration drilling, the drill core logging, cutting, sampling and security procedures employed by IE, and to examine the lithology, alteration and mineralization recovered in selected drill cores completed to date.

SRK personnel previously visited the Tintic Project on November 10-11, 2020 to obtain an overview of IE's exploration work at the time and the historical mining on the property, to examine the prospect areas identified for drill testing, and to review the context of the project development goals.

Table 2-1: Site visits

Company	Date(s) of Visit	Details of Inspection
SRK Consulting (U.S.), Inc.	January 15, 2024	Project overview by Senior VP Exploration, VP Exploration, and acting Project Manager; Core shack to observe drill core logging, cutting, sampling and security procedures, and range of lithology / alteration observed in several drill holes. Drilling site to observe drill rig, drill core.
	November 10-11, 2020	Project overview by Project Manager. Underground workings at Mammoth Mine and the Sioux-Ajax Tunnel. Selected porphyry deposit drilling opportunities.

Source: SRK (2023)

2.6 Report Version Update

This Technical Report Summary supersedes the previous report, SEC Technical Report Summary Exploration Results Report, Tintic Project, Utah, U.S.A., dated November 1, 2021, which had previously been filed pursuant to 17 CFR §§ 229.1300 through 229.1305 (subpart 229.1300 of Regulation S-K). This is the second Technical Report Summary prepared under regulation S-K 1300 for IE for the Tintic Project.

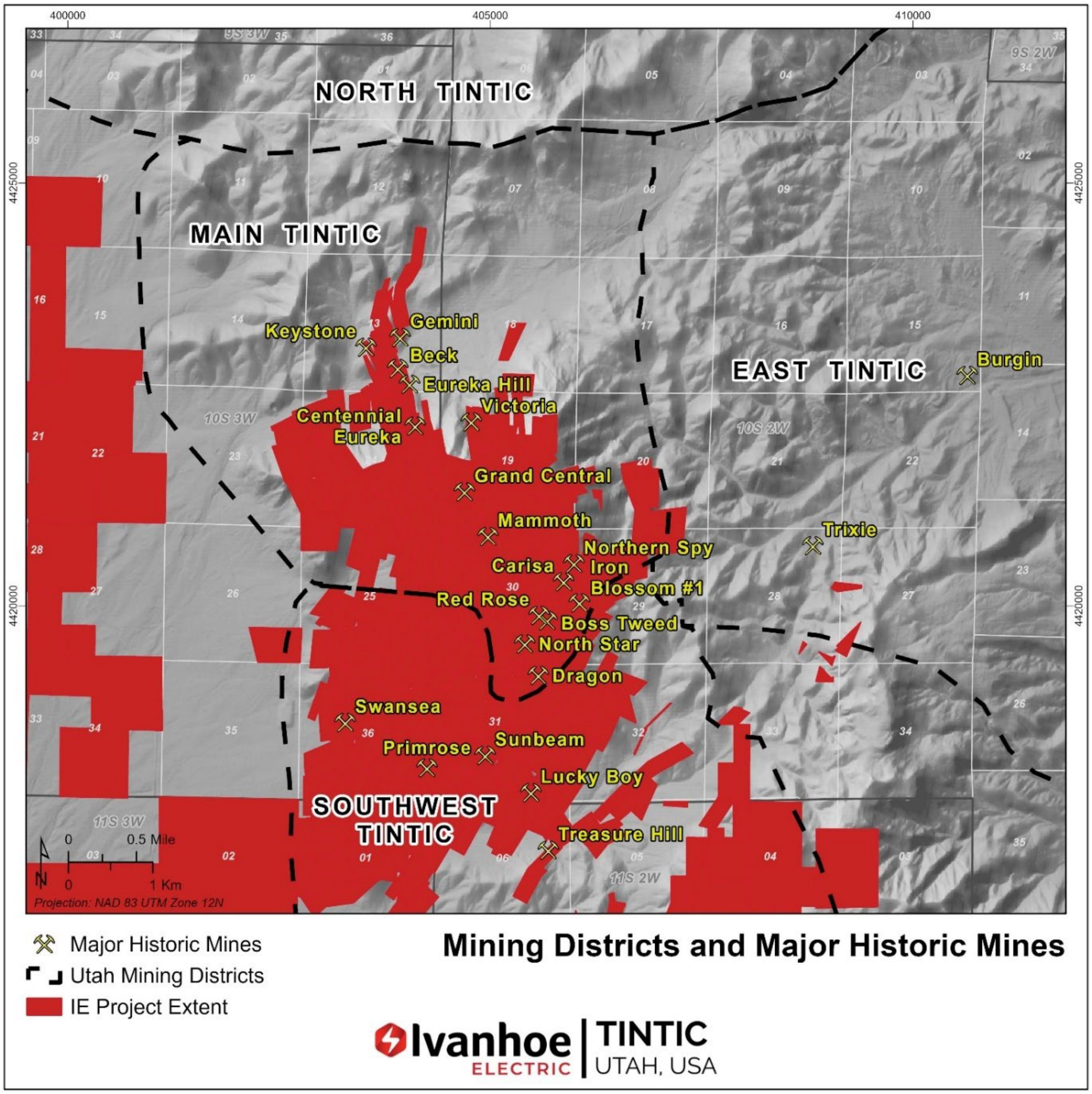
2.7 Use of Historical Mining Terms

'Ore run' is an historical mining term that is used extensively in the supporting documentation for this report. It is local Tintic parlance for the shallow-plunging, irregular polymetallic replacement deposits explored and historically mined in the District (Krahulec and Briggs, 2006). The QP has opted to maintain use of this term where historical mining is referenced and notes that it has no economic or mineral reserve implications. The QP notes that the 'ore runs' shown on figures in this report were modeled by IE based on historical maps to represent the replacement deposits including, but not limited to, historically mined material.

2.8 Tintic Project Overview

The Tintic Project is a gold, silver, and base metal Carbonate Replacement Deposit (CRD), skarn, fissure vein, and copper-gold porphyry exploration project located in the historical Tintic Mining District (the District) of central Utah, USA. The District was discovered in 1869 and historical production (Figure 2-1) was mainly derived from polymetallic and precious metal-rich chimneys and breccia pipes hosted within the Paleozoic carbonate rocks, i.e., CRDs. A sub-economic porphyry deposit, the SWT Porphyry, has been found in the District well to the south of the CRDs, but it is not believed to be the intrusive source of the hydrothermal solutions that produced the high grade polymetallic and gold-silver CRDs.

IE has assembled a consolidated land package over the project area and has spent more than six years completing geological and geophysical exploration work to identify potentially mineralized geologic prospects. This report documents the status of the Project, provides a summary of the historical and modern exploration activities, and describes the viable prospects. Modern exploration work by IE aims to identify mineralized prospects both above and below the water table, with these prospects consisting of CRD mineralized bodies, skarns, and the source porphyry mineralizing intrusion(s).



Source: IE (2023)

Figure 2-1: Tintic mining districts and selected past producing mines in the Main Tintic District

IE's exploration strategy at the Tintic Project is twofold:

- Explore for blind porphyry copper-gold-molybdenum systems believed to be the source for CRD and high-sulfidation mineralization; and
- Discover new copper-gold-silver rich CRD-style mineralized zones or breccia pipes, or significant extensions of the historically mined 'ore runs' (see Section 2.7) in the Paleozoic carbonates.

This report describes the 14 most prospective exploration areas identified by IE which comprise:

- six CRD historical 'ore run' extension prospect areas,
- four CRD breccia pipe prospect areas,
- three possible porphyry center prospect areas, and
- one skarn mineralization prospect area.

Details of these and their respective priority in terms of prospectivity are summarized in Section 7.10.

The QP notes that in this report the terms "exploration prospect", "prospect", and "exploration potential area" are used synonymously.

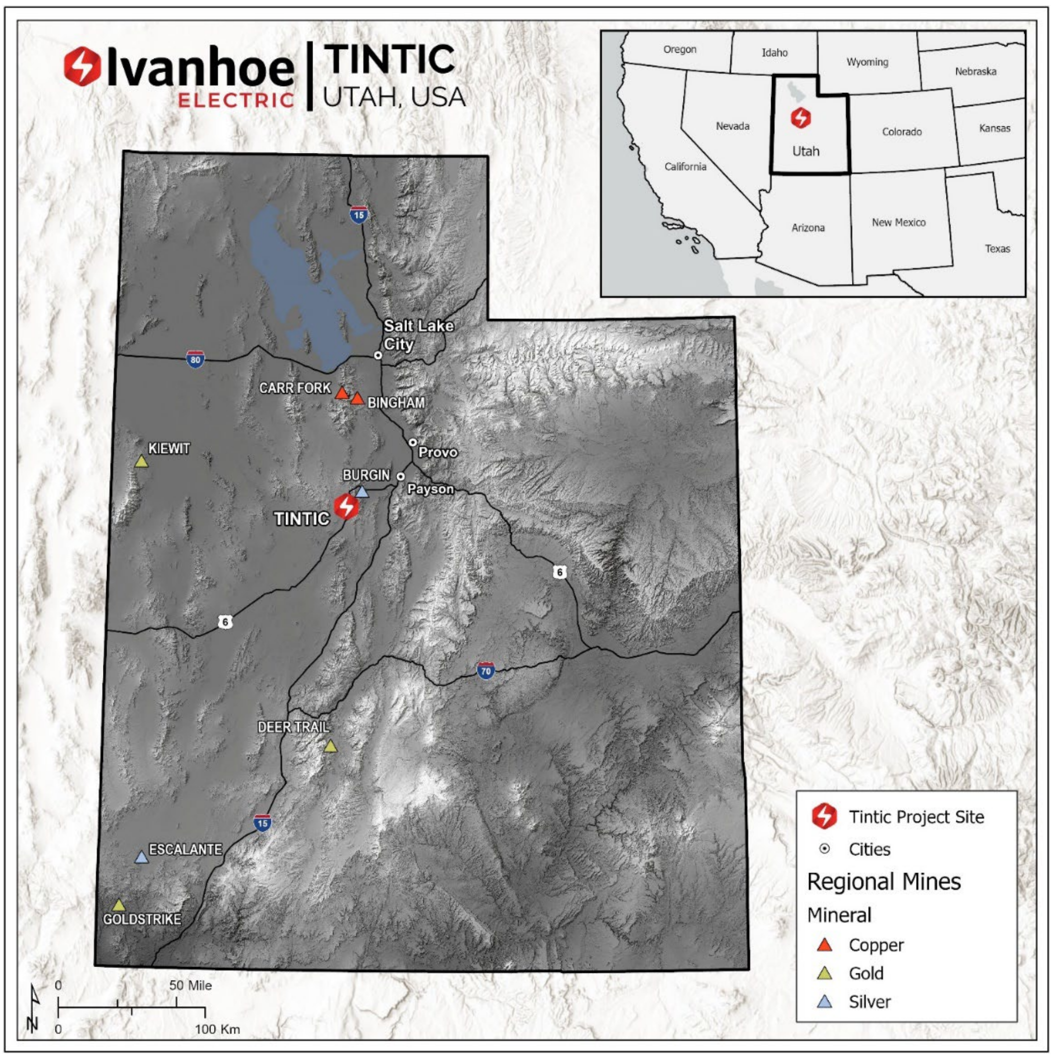
2.9 Units and Currency

The metric system has been used throughout this report unless otherwise stated. Tonnes are metric of 1,000 kg, or 2,204.6 lb. All currency is in U.S. dollars (US$) unless otherwise stated.

3 Property Description

3.1 Property Location

The Project is located approximately 95 km south of Salt Lake City, Utah and can be accessed by road from U.S. Highway 6 approximately 30 km west of the Interstate 15 junction (Figure 3-1). The center of the IE claims and applications lies approximately at 39° 55' N latitude and 112° 06' W longitude. The exploration area covers approximately 81.97 km^2 of private patented claims, unpatented claims, and state leases that have been consolidated by IE into a cohesive package of interests (Section 3.2). All maps and reported coordinates are referenced to 1983 North American Datum (NAD83) UTM Zone 12 N. The area once hosted an array of mining communities and activities but only two communities remain today – the City of Eureka and the unincorporated community of Mammoth. The historical mining area lies in the Tintic Mountains divide between the Utah and Juab Counties. The county line occurs at the watershed divide.



Source: IE (2023)

Figure 3-1: IE Tintic Project location relative to other major mining districts in Utah.

3.2 Mineral Tenure

The single most limiting factor for the development of mining in recent times relates to the complex land ownership within the District. IE has acquired 81.97 km^2 of mineral tenure in the historical Tintic Mining District through various agreements, state leases, and permit applications (see Section 3.3) made through its subsidiary Tintic Copper & Gold Inc. (TCG), which is a successor to the merger of HPX Utah Holdings Inc. and Continental Mineral Claims Inc. (CMC). IE has consolidated all interests under TCG, its wholly owned subsidiary as of April 30, 2021.

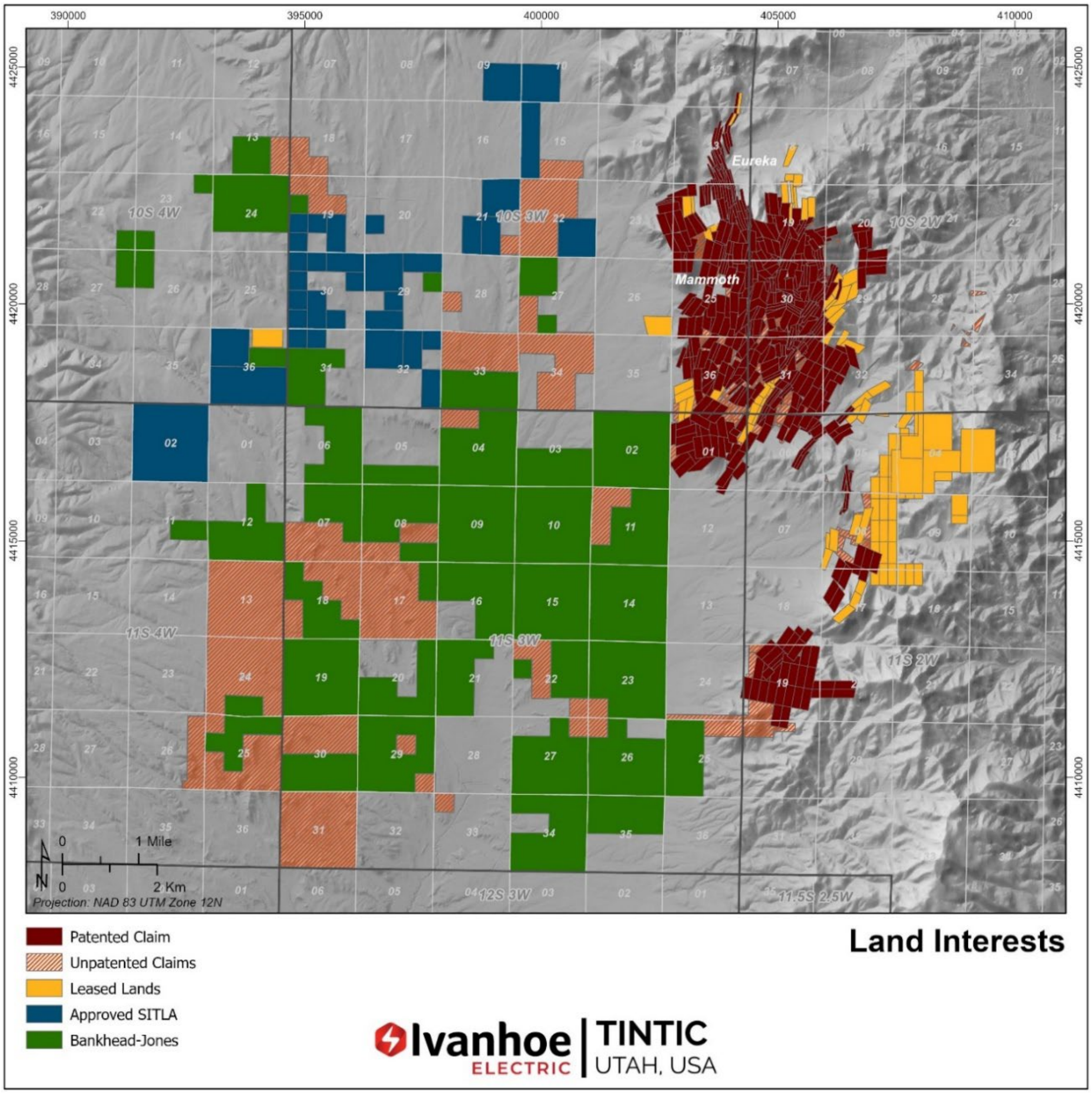
IE's current mineral tenure can be broadly categorized into i) patented claims and ii) other claims and applications, consisting of the following claims, lease agreements and permit applications (Figure 3-2):

- 486 Patented claims either owned or subject to purchase and sale by TCG comprising 19.62 km^2;
- 152 Patented claims and 1 fee parcel subject to various lease or lease and option agreements by TCG comprising 9.11 km^2;
- 474 Unpatented mining lode claims owned by TCG comprising over 38.79 km^2;
- 14.45 km^2 of SITLA (Utah School and Institutional Trust Lands Association) mineral leases, in three agreements; and
- Six Hardrock Prospecting Permit (HRPP) applications on Bankhead-Jones lands (Section 3.2.2) in the Tintic Valley, comprising 61 km^2 (through CMC).

The identifying name, number, and areas of individual patented and unpatented claims, are provided in Appendix A.

To retain an unpatented claim on federal land in the USA, a $165 maintenance fee per claim is due annually by September 1st. Based on the current landholding this would amount to $78,210 in annual payments for claim retention.

The claim positions of the Project generally provide a cohesive, contiguous land package for the possible extraction of mineralization in relation to the known geology of the area.



Source: IE (2023)

Figure 3-2: IE Land tenure as of December 2023

3.2.1 SITLA Lands

At Utah's Statehood in 1896, Congress granted land called trust lands to the new state with the provision that revenue earned from the sale or lease of the land be placed into permanent endowments for 12 specific institutions. Trust land parcels were largely allocated by apportioning the state into townships, each six by six miles, and dividing each township into 36 square-mile (93 km^2) sections. The State of Utah was given sections 2, 16, 32, and 36 in each township for public schools, resulting in a checkerboard of land ownership. All other designated state institutions were granted fixed amounts of acreage. Later transactions and agreements have modified the School and Institutional Trust Lands Administration's (SITLA) interests into a diverse portfolio of surface and mineral land interests throughout the state. TCG holds three leases from SITLA on 14.45 km^2 of mineral and surface interests, which were acquired in a competitive bid process in December 2018.

3.2.2 Bankhead-Jones Lands

Bankhead-Jones lands were created by an act of Congress and President Franklin D. Roosevelt in 1937, which authorized acquisition by the federal government of damaged agricultural lands to rehabilitate and use them for various purposes. Certain parcels in the Tintic Valley are classified as these lands and may be leased and explored for minerals by way of a Hardrock Prospecting Permit, as adjudicated by the BLM. The HRPP applications, on non-core areas of the Tintic project, were filed in 2017. In 2019, the US Government passed the John D. Dingell, Jr. Conservation and Recreation Act, which provided for, in part, a land exchange between the United States and the Utah School and Institutional Trust Lands (the "Dingell Exchange"). The Dingell Exchange lands included a portion of the lands covered by the HRPP Applications. Based on the authorization of the Dingell Exchange, BLM issued rejections of the HRPP Applications in and around July 2022. TCG appealed the rejections, in part, on the basis that BLM lacked authority to reject the pending HRPP Applications solely on the basis of the Dingell Exchange. Following discussions between TCG and BLM, and at the direction of the parties, the Interior Board of Land Appeals vacated the BLM's decision to reject the applications and vacated the appeal. The matter has been remanded back to BLM for further consideration of the applications and discussions with TCG regarding the processing and approval of the applications.

3.2.3 Comments

The QP completed preliminary verification of IE and its subsidiary's land tenure, relying on online searches and verifications made on the websites for the Juab and Utah County Recorders, SITLA, and the Bureau of Land Management (BLM). The QP noted that several unpatented claims overlie patented claims entirely, which may be to cover narrow fractions between surveyed patented claim boundaries.

Due to the complex land ownership, a subsequent legal opinion on their mineral tenure was sought by IE (see Section 25). The QP has reviewed the legal opinion document and is satisfied with the veracity of mineral tenure details documented in this report.

The QP is satisfied based on information available on the BLM's Mineral and Land Records System (MLRS) and received from IE that unpatented claim maintenance fees have been paid, and all lease and option obligations have been kept current.

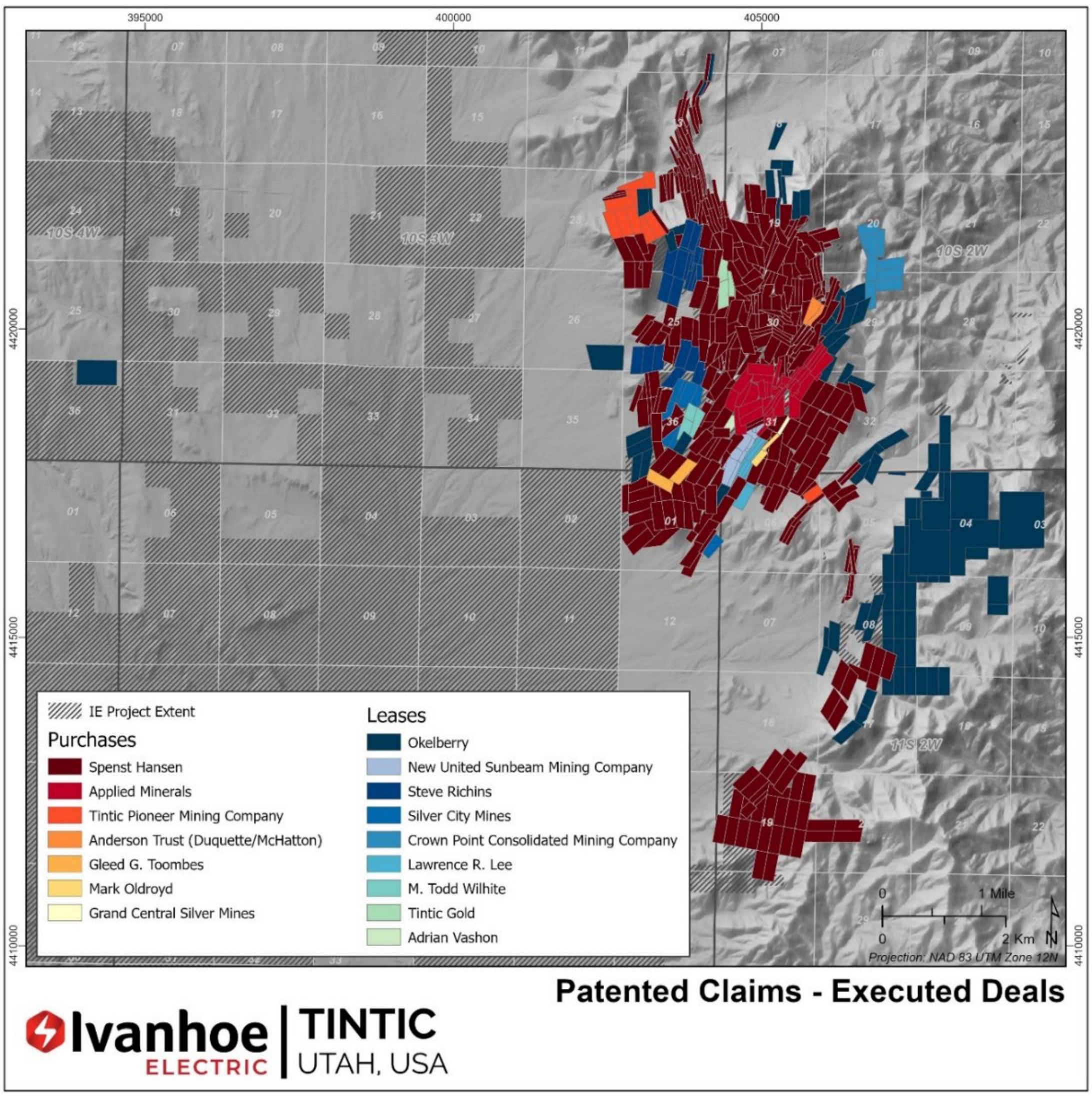
3.3 Underlying Agreements

In October 2017, IE (HPX at the time) signed a purchase and sale agreement with Mr. Spenst M. Hansen (Hansen) to acquire 100% of his patented claims and a portion of his unpatented claims. The last payment installment was made on April 19, 2022, making IE the current owner.

In January 2018, IE (HPX at the time) signed an agreement with Applied Minerals Inc. for an option to purchase metallic mineral rights, which granted exploration access to the Dragon claims during the option period. The terms of the agreement indicate that (i) IE would be required to pay US$350,000 lump sum at the completion of an initial 40-day due diligence, (ii) further installments of US$150,000 are required to be paid in December each year until December 2027, (iii) at any time before December 2027, IE may elect to purchase 100% of the rights to minerals for US$3,000,000, except for clay and iron oxide, and (iv) Applied Minerals Inc. retains the surface rights with joint operating conditions allowing IE reasonable access. In March 2020, the agreement was amended to allow IE an early exercise of the purchase of the metallic mineral rights for $1,050,000, while retaining IE's exploration and reasonable access through the claims. IE immediately exercised this right and was deeded the metallic mineral rights to the subject claims.

In August 2018, IE signed a further purchase and sale agreement with Hansen to acquire the patented claims on the Mammoth, North Star, and Gemini properties. Payments were made over a five-year period with escalating payments as defined in the Definitive agreement. The last payment installment was made on August 7, 2023, making IE the owner of the patented claims.

In addition to the Hansen and Applied Minerals Inc. agreements, IE entered into an additional 22 agreements, totaling to 27 agreements, for the acquisition of claims, mineral and surface rights with numerous parties using various legal structures. All these agreements are summarized in a simplified form in Figure 3-3 and in Table 3-1.



Source: IE (2023)

Figure 3-3: Tintic Project map of underlying agreements

Table 3-1: Tintic Project simplified summary of agreements

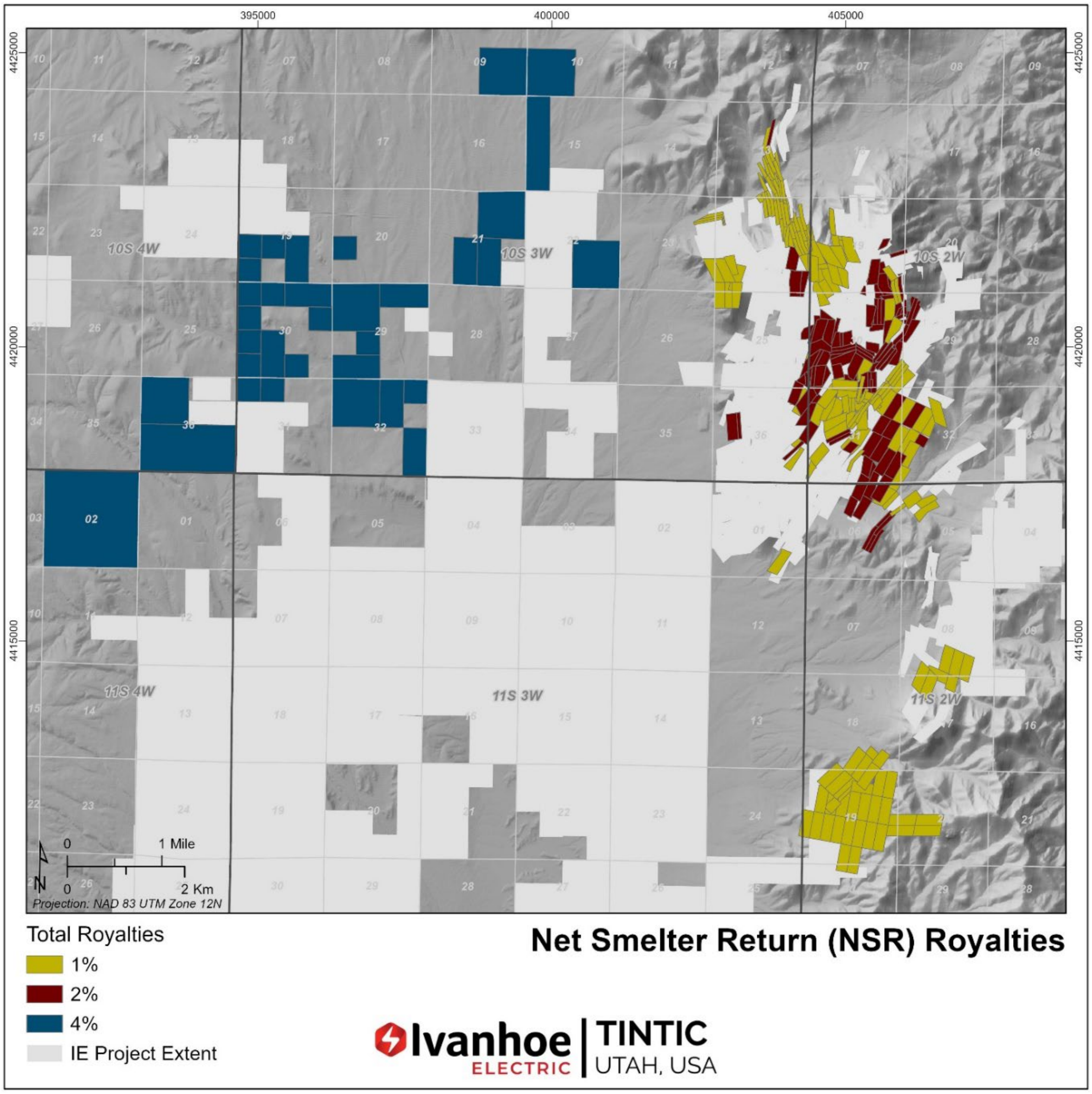
Vendor	Deal Type	Status	Lease/Option Payment frequency	Lease/Option Payment ($)	Start Date	Term	Expiration Date
Hansen Porphyry	Purchase and Sale	Closed	–	–	19-Oct-17	5 years	–
Applied Minerals Inc. (Dragon)	Exploration with Option to Purchase	Closed	–	–	22-Dec-17	Option Executed in 2020	–
Okelberry (Hansen)	Lease	Executed	none	None	1-Jun-15	10 years with extensions	1-Jun-25
Gleed G Toombes	Purchase and Sale	Closed	–	–	1-Mar-18	Closed	–
Okelberry 1	Lease	Executed	annually	$5,000	13-Apr-18	Renewable Annually	13-Apr-24
Hansen Camp (MMC)	Lease	Terminated	–	–	12-Jun-18	5 years with extensions	–
New United Sunbeam Mining Company	Lease	Executed	annually	$10,000	21-Jul-18	10 years with extensions	21-Jul-28
Hansen Mammoth	Purchase and Sale	Closed	–	–	4-Oct-18	5 years	–
Hansen Gemini	Purchase and Sale	Closed	–	–	4-Oct-18	5 years	–
Hansen North Star	Purchase and Sale	Closed	–	–	4-Oct-18	5 years	–
SITLA	Lease	Executed	annually	$3,570	1-Dec-18	10 years	1-Dec-28
Lawrence Lee	Lease with Option to Purchase	Executed	annually	$5,000	5-Dec-18	10 years	5-Dec-28
Okelberry 2	Lease	Executed	annually	$15,000	14-Feb-19	Renewable Annually	14-Feb-25
Grand Central Silver Mines	Purchase and Sale	Closed	–	–	4-Apr-19	Closed	–
Duquette/McHatton	Lease with Option to Purchase	Closed	–	–	9-May-19	5 years	–
Adrian Vashon - Jessamine Claim	Lease with Option to Purchase	Executed	annually	$5,000	27-Jun-19	5 years	27-Jun-24
Oldroyd	Purchase and Sale	Closed	–	–	14-Jun-19	Closed	–
Todd Wilhite	Lease with Option to Purchase	Executed	annually	$15,000	9-Jul-19	7 years	9-Jul-26
Silver City Mines	Lease with Option to Purchase	Executed	annually	$10,000	20-Aug-19	10 years	20-Aug-29
Unpatented Claims	Maintenance Fees	–	annually	$165/claim	–	Annually	–
Tintic Gold	Lease with Option to Purchase	Executed	annually	$100,000	20-Jul-20	7 years	20-Jul-27
Crown Point	Lease with Option to Purchase	Executed	annually	$15,000	1-Aug-20	5 years with extensions	1-Aug-25
Steve Richins	Lease with Option to Purchase	Executed	on execution of option	$75,000	27-Oct-20	5 years	27-Oct-25
BLM	Prospecting Permits	Pending	annually	$14,840	–	–	–

Source: IE (2023)

Status definitions: Executed: active deal*; Pending:* terms aligned and pending execution*; Closed:* purchase completed, and deeds conveyed.

3.4 Royalty Agreements

Significant portions of the patented and unpatented mining lode claims are subject to Net Smelter Return (NSR) royalty agreements, ranging between 1% and 4% (Figure 3-4 and Appendix B), which would be payable upon production and sale of product, i.e., there are no advance royalties. IE has purchased certain royalty interests already and formed an opinion on others. As part of its land consolidation effort, IE is continually clarifying and negotiating the relevant royalty terms to sensibly lessen the royalty burden.



Source: IE (2023)

Figure 3-4: IE Claims NSR royalty agreements

3.5 Encumbrances

The QP is not currently aware of any violations by or fines due by IE relating to the Tintic Project. However, there are current unresolved Recognized Environmental Conditions (REC's) and pre-existing environmental liabilities, as described below. None of these impact IE's ability to perform exploration activities on the prospective areas prioritized as prospect areas.

3.5.1 Environmental Liabilities

Historically, there were certain encumbrances to IE claims due to proximity to the town of Eureka (commercial and residential portion), a United States Environmental Protection Agency (EPA) Super fund site. This affected the northern claims that cover the Godiva shaft and tunnel, Bullion Beck-Gemini mine waste piles and central Eureka Mining Areas. The EPA issued a ruling on Site Ready for Reuse and Redevelopment in 2015. The "Eureka Mills" Superfund site was officially delisted from the National Priorities List on September 25th, 2018. The only remaining activities are the site Operations and Maintenance (O & M) and future Five-Year Reviews, the last confirmed Five-Year Review having been conducted in September 2018.

In September 2017, an initial desktop environmental due diligence study by IE was expanded to a Phase 1 Environmental Site Assessment (Phase 1 ESA) in order to meet the EPA standard for "All Appropriate Inquiries" with respect to environmental due diligence. Ramboll Environ US Corporation (Ramboll) has completed two Phase 1 ESAs on IE claims: one in September 2017 covering the sections encompassing the Hansen "Porphyry Claims" purchase and sale agreement (Ramboll, 2017), and a second in October 2018 covering the aggregate sections encompassing the Hansen "Lode Mines" purchase and sale agreements, as shown in Figure 3-5 (Ramboll, 2018). The main land parcel areas in Juab and Utah Counties that the assessments considered are as follows:

September 2017 Phase 1 ESA:

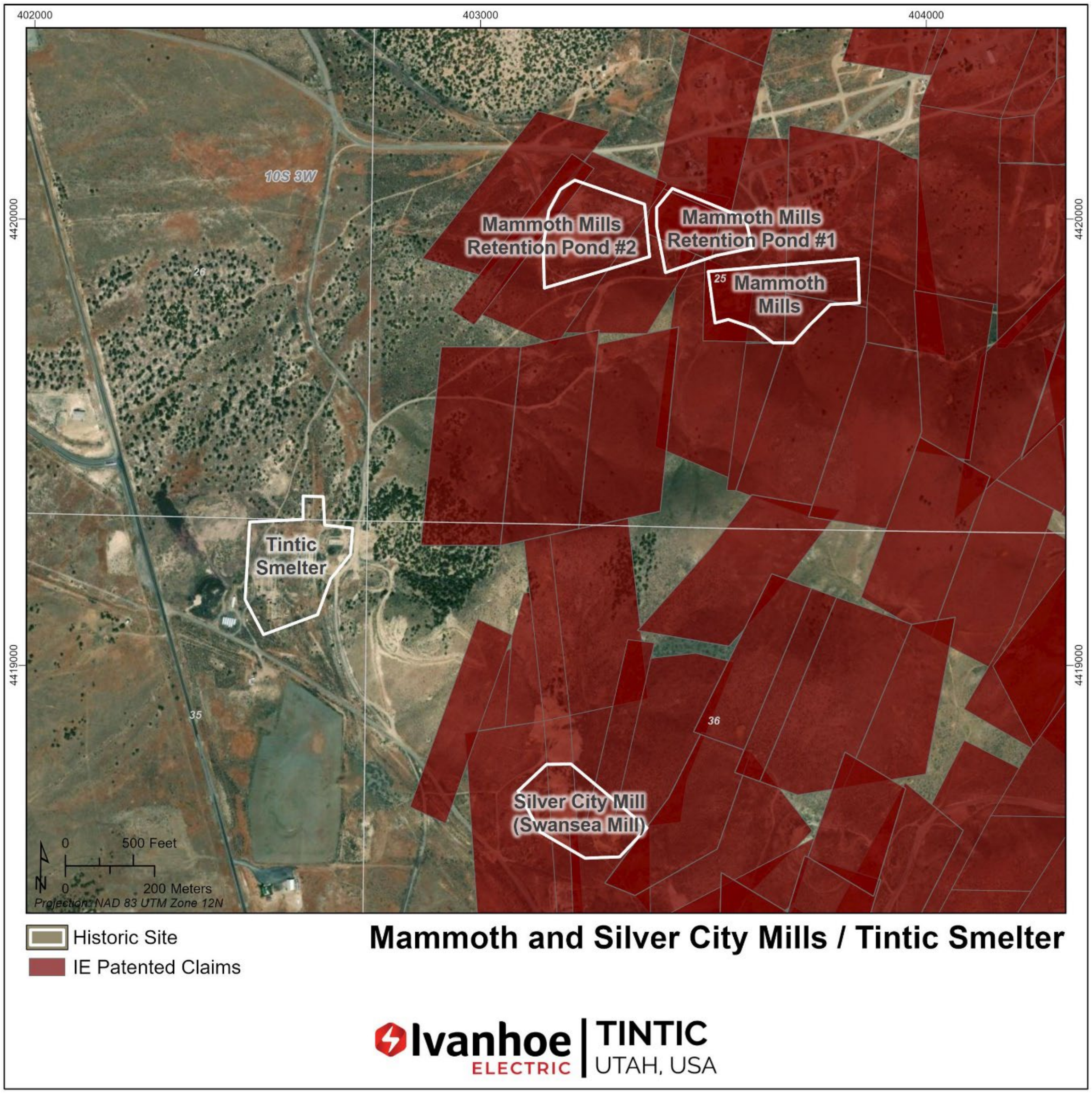
- T10S R3W Sections 25, 35 and 36;
- T10S R2W Section 31;
- T11S R2W Sections 5, 6, 7, 8, 17, 18, 19 and 20; and
- T11S R3 W Sections 1, 2, 11 and 12.

October 2018 Phase 1 ESA:

- T10S R3W Sections 13 and 24; and
- T10S R2W Sections 17, 18, 19, 20, 29, 30 and 32.

The September 2017 ESA identified two areas as being problematic. Firstly, the Silver City Mills where a site inspection was ongoing, and secondly, the Mammoth Mills and Smelter which had an expanded site investigation ongoing (Figure 3-5). No additional RECs were identified by the October 2018 ESA. Other findings identified related to potential contamination concerns over past mining and railroad operations at the site and the City of Eureka historic and current operations were noted in the report.

In February 2021, IE retained Ramboll to provide an update for Silver City Mills and Mammoth Mills and Smelter, the two RECs listed in the September 2017 ESA. The investigation revealed that there were no significant regulatory events since 2017 to change the status of the RECs (Ramboll, 2021).



Source: IE (2023)

Figure 3-5: Historical sites, including the Silver City Mills and the Mammoth Mills and Smelter, that are considered to be Recognized Environmental Conditions

3.5.2 Required Permits and Status

In March 2021, TCG submitted a Notice of Intention (NOI) to Conduct Exploration to the Division of Oil, Gas and Mining of the Department of Natural Resources of the State of Utah. This permit (E/023/0130) was approved in July 2021, and has been amended multiple times by TCG, with the most recent amendment approved in July 2023. The current permit allows for up to 16.8 acres of surface disturbance, and 61 drill holes totaling 61,500 m (201,720 ft). The approved permit will allow the recommended drilling program to be undertaken. Reclamation bonding is required by the state of Utah, and is assessed at $578,200.00, covering 100% of permitted surface disturbance and up to 16 open holes (20,000 m). Bonding is fulfilled through an insurance surety instrument.

3.6 Other Significant Factors and Risks

The QP is not currently aware of any other significant factors or risks that may affect access, title or right or ability to perform work on the property.

4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

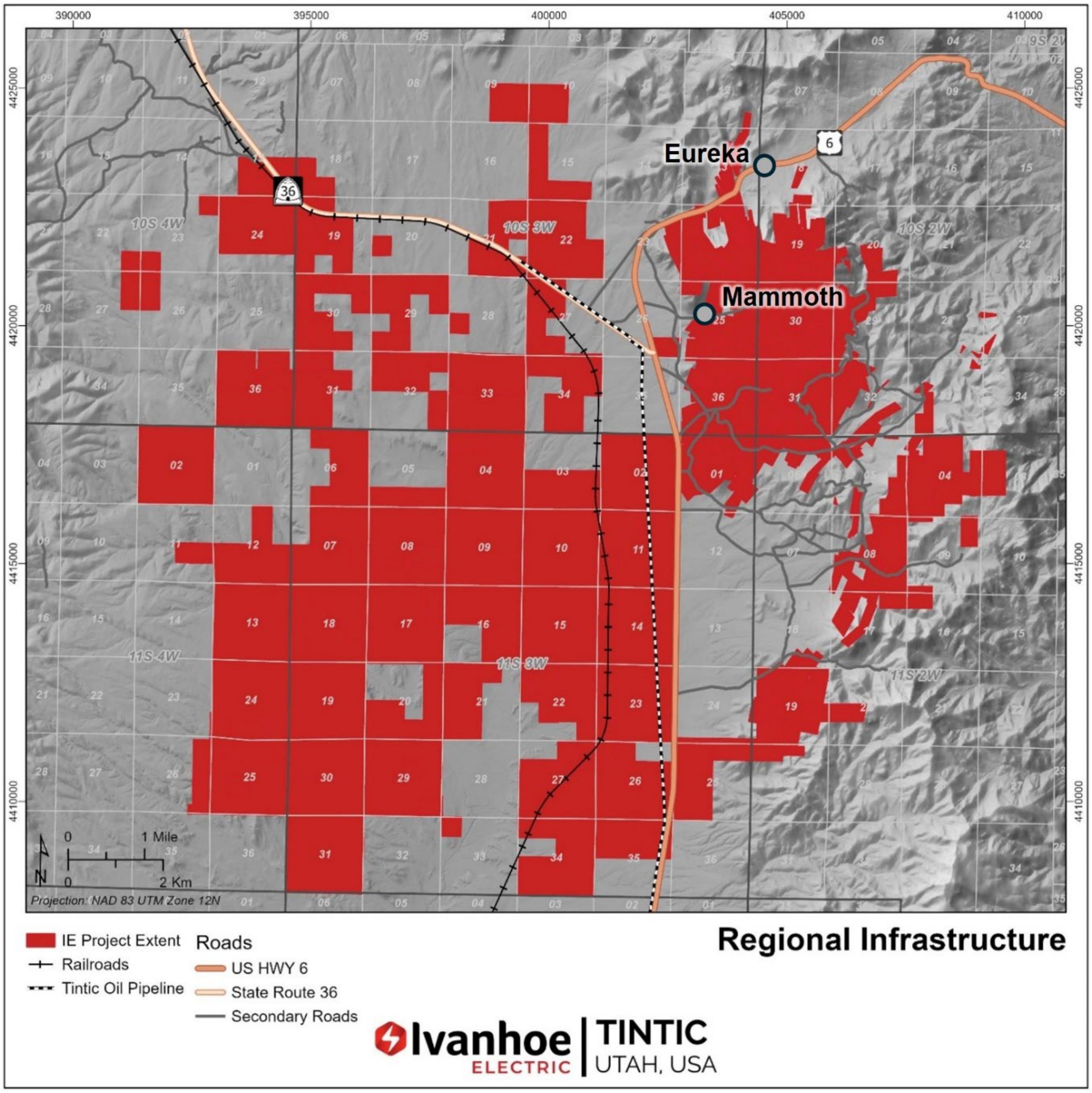
4.1 Topography, Elevation and Vegetation

The topography in the Tintic District is rolling to moderately rugged hills and mountainous terrain with north-south trending ridges and valleys with elevations ranging from 1,500 to 3,000 m of the East Tintic mountain range. Paleozoic carbonates comprise a significant portion of the Project and form large mountains with rugged cliffs, whereas the regions with igneous rocks of the Silver City and Ruby Hollow areas form gentle hills of low to moderate relief.

Vegetation generally consists of sage, juniper, pinyon pine, antelope brush, prickly pear and hedgehog cactus, and Brigham tea.

4.2 Means of Access

The Tintic Project is located approximately 95 km south of Salt Lake City, Utah (city population 200,800, metropolitan area population 1,257,900) and can be accessed via U.S. Highway 6 (US6), approximately 30 km west of the Interstate 15 junction. US6 is within 3 km of most of the development sites at Tintic. The Silver City porphyry exploration area is easily accessed by a network of well-maintained dirt roads whereas the CRD exploration areas are accessed by several poorly maintained dirt roads and partially overgrown historical tracks. A connecting line of the Union Pacific Railroad is within 3 km of the prospective areas, and serves Utah, connecting Salt Lake City to Las Vegas, Nevada through Eureka, and material can be delivered to any California port. The nearest major airports are the Provo Municipal Airport (48 km from Eureka) and the Salt Lake City International Airport (approximately 144 km from Eureka). The local and regional infrastructure for the project is shown in Figure 4-1.



Source: IE (2023)

Figure 4-1: Tintic Project with regional infrastructure

4.3 Climate and Length of Operating Season

The Tintic district has a semi-arid climate, characterized by warm, dry summers (Figure 4-2) and moderately cold winters with significant snowfall and sub-freezing temperatures (Figure 4-3). The area receives approximately 15 inches of precipitation a year with most falling as snow during the winter months. Thunderstorms are common from July to September, with monsoon-style rain showers occurring in the afternoons.

The site is considered to have a year-round operating season.

Source: photo courtesy of IE

Figure 4-2: Tintic Project in summer – July 2020

Source: photo courtesy of IE

Figure 4-3: Tintic Project in winter – December 2018

4.4 Sufficiency of Surface Rights

IE holds surface rights that are sufficient to allow for continued exploration on the Tintic Project. A drilling permit was obtained in 2021 to allow for the work program proposed at that time to take place, with the most recent amendment dated July 2023 (see Section 3.5.2). No mining or processing is currently taking place on the Project.

4.5 Infrastructure Availability and Sources

The infrastructure and facilities used to support the exploration activities on the Project to date, the water and power supply for the area, and the sources of supplies and personnel are described in this section. A summary of the historical surface and underground infrastructure is provided below.

The Project is managed out of the City of Eureka, population ~660 (Figure 4-4), approximately 2 km north of the northeastern property boundary. Eureka offers limited services including two gas stations, a general store, an auto mechanics shop, a restaurant, and a small roadside motel. Equipment and other services are generally obtained from the towns of Tooele or Payson/Spanish Fork, which are each a 45-minute drive. IE has established a permanent presence in the Tintic District and is currently headquartered out of Eureka, where it has leased a 93 m^2 office and an attached 325 m^2, 5-bedroom, 4-bathroom bunkhouse for geologic staff housing. IE has also retained an 8-bedroom, 6-bathroom former bed and breakfast, The Goldminer's Inn, as additional staff accommodations (Figure 4-5).

Source: photo courtesy of IE

Figure 4-4: Eureka, Utah, 2019

IE has developed a small parcel at the mouth of the Mammoth Valley to serve as a core logging and storage facility (Figure 4-5). The facility is plumbed with running water to spigots on site from a well owned by Spenst Hansen, 2 km west in the Tintic Valley. The primary core shed is a 230 m^2, 7.6 m high metal Quonset hut with concrete foundation. The Quonset hut has electrical services including overhead LED warehouse lighting and is heated by two overhead 150k Btu propane radiant tube heaters. The core shed is secured by two large bay panel doors with padlocks. A Tuff Shed constructed adjacent to the Quonset hut on a concrete pad is secured by a padlocked bay panel door and is used for drill core and sample storage. A large seacan shipping container has been set up to serve as the core cutting facility. The cut shack is wired with electrical utilities and heated by an overhead radiant heater.

Source: photos courtesy of IE

Figure 4-5: Facilities at Tintic include the (A) IE office; (B) IE crew bunkhouse; (C) and (D) Mammoth core shack

Water for the Project can also be sourced from the City of Eureka's maintenance yard at a cost of $0.01 per gallon (~3.8 liters). The exploration area contains several small ephemeral springs that are productive in the early spring. The exploration area does not contain any streams or rivers owing to the arid nature of the climate.

Rocky Mountain Power Company provides electric utilities to the Eureka community and a high-power transmission line services Eureka, Mammoth, and Silver City. Gas is supplied by Blue Flame Propane.

Limited supplies and personnel are available from Eureka, however, the main source is the Salt Lake City-Ogden-Provo Combined Statistical Area, a corridor of contiguous urban and suburban development stretched along a 190 km (120-mile) segment of the Wasatch Front with a population of 2.7 million.

4.6 Historical Surface and Underground Mining Infrastructure

The Tintic District contains numerous historical mine adits, shafts, and prospect pits. The majority of these historical sites have been catalogued by the State of Utah Department of Abandoned Mines, who have overseen the backfilling and capping/grating of open portals and shafts. The Department also has completed an inventory of almost all historical prospect pits, adits, and shafts in the Tintic District and at each location they have secured a metal survey peg with the mine catalog identification number.

Most historical shafts, adits, and open stopes/glory holes near well-traveled roads and populated areas in the Tintic District have been backfilled or barricaded by rebar fencing (Figure 4-6). However, the district contains many historical features that are still open at surface. Most large past producing mine shafts have had their surface facilities and headframes removed and the shaft capped with concrete and rebar mesh. IE has actively cataloged open mine features and erected signage to warn against potential dangers (Figure 4-7). Where possible, no trespass signs are erected to help secure the IE property. Additionally, in those underground workings that are safe to access, there are many remnant pieces of equipment and metal and wood supports still present (Figure 4-7). The IE property is crossed by many historical mine roads and railroad grades, which provide access to most of the property.

Source: photos courtesy of IE

Figure 4-6: Utah Division of Abandoned Mines survey peg; (B) Caution sign at Murray Hill shaft; (C) Open stope at Carisa Mine and (D) Grand Central mine building

Source: photos courtesy of IE

Figure 4-7: Examples of underground historical infrastructure at the Tintic Project: (A) Grand Central Shaft; (B) Sunbeam Shaft Collar; (C) Mammoth Mine; and (D) Mammoth Mine Shaft Station at 300 level underground

4.7 Underground Rehabilitation

In July 2019, IE commissioned a study by Nordmin Resource & Industrial Engineering USA (Nordmin) to complete an investigation of and devise an underground rehabilitation work plan for the Sioux-Ajax Tunnel, a drift accessible from surface near the town of Mammoth (Nordmin, 2019). It also provided a work plan and approximate cost to rehabilitate portions of several levels of workings for these areas to be accessible for budgeted (at the time) exploration mapping, sampling and drilling.

The work plan included temporary ventilation, safety equipment and all necessary mitigation in conjunction with mine access regulations as prescribed by the Mine Safety Health Administration (MSHA), a mining-specific safety regulatory body that operates on a national scale.

The analysis of the Tintic region was completed under the review of meeting MSHA regulations, CIM Best Practice Guidelines and Ontario Mining Act regulations to evaluate the various options.

Nordmin supplied budget advice and recommendations to substantiate and support various exploration and drilling activities of these access areas. It is the opinion of Nordmin, supported by the due diligence team's findings, that:

1) The Sioux-Ajax Tunnel tunnel be rehabilitated by creating an established set of procedures for entry/exit, safety, egress and other typical plans needed for the operation of an underground facility under Mine Safety and Health Administration (MSHA) regulations.
2) The Grand Central Shaft have the plug removed to improve ventilation to existing underground areas and allow for access to additional mapping and drilling locations.

To date, IE has completed some basic rehabilitation on the Sioux-Ajax Tunnel to facilitate access and mapping. This included creating a tag system, installing a communications system, and washing the walls. Further rehabilitation is not currently planned or budgeted for, and IE has prohibited access to the Sioux-Ajax Tunnel since March 2022.

5 History

Due to the complex and uncertain land ownership during more than 125 years of exploration and mining in the Tintic District, the QP cannot provide a comprehensive account of historical land ownership. However, Hansen owned large portions of the District that has since been bought by IE.

5.1 Tintic Mining District History

Mineralization in the Tintic Mining District was discovered in 1869, and by 1871 significant mining camps were established in the nearby City of Eureka, and the now defunct towns of Silver City and Diamond. Mineral extraction focused on high-grade Ag-Pb-Zn oxide CRD mineralization hosted in Paleozoic limestone both at surface and underground (Tower and Smith, 1900; Lindgren et al., 1919; Krahulec and Briggs, 2006). The Tintic precious and polymetallic mining district saw nearly continuous mining operations from 1871 through to 2002 with variations in the level of activity, or commodity extracted. Estimates of the total mineralization historically extracted from the Main and Southwest Tintic Districts is summarized in Table 5-1.

Table 5-1: Tintic Main and Southwest Districts' estimated historical production

Metal	Unit	Historical Production
Gold	Moz	2.18
Silver	Moz	209
Copper	kt	116
Lead	kt	589
Zinc	kt	63

Source: Krahulec and Briggs (2006)

Total historical production from deposits located within IE's acquired property, predominantly in the Main and Southwest Tintic mining districts, totals 1.89 Moz Au; 136 Moz Ag; 104 kt Cu; 416 kt Pb and 6 kt Zn (Krahulec and Briggs, 2006; Forster, Boyd, Ramirez, 2017). The gold and copper mineralization are evidence that the IE property is potentially proximal to a mineralizing source.

Exploration and development in the District increased dramatically between 1878 and 1891 after the introduction of the Utah Southern and Rio Grande Western Railroads. Discovery of new mineralization coupled with improvements to infrastructure and transportation resulted in continuous growth in the area, and by 1899, the Tintic Mining District would surpass the Salt Lake District as the largest polymetallic producer in Utah (Lindgren et al., 1919). Gold production peaked in 1907, followed by a peak in copper production in 1912, silver production peaked in 1925 and zinc production peaked in 1926. By 1916, fifty-four mines were active within the Main Tintic District (U.S. Geological Survey, 1916). Major discoveries within the East and Southwest Tintic sub-districts continued to spur growth, exploration and development of new operations through the 1920's and into the early 30's. During this time, the first sulfide mineralized material was exploited via dewatering the lower levels of the Tintic Standard mine. Though Tintic was strongly affected by the Great Depression, devaluation of the US dollar in 1934 led to increased gold prices, resulting in a surge of gold prospecting by unemployed miners and stimulated production in the Tintic District. This saw continual growth in production through the Great Depression of the 1930's and into the 1940's (Krahulec and Briggs, 2006).

A federal assistance program designed to increase base metals production during World War II bolstered numerous operations in the District, even as several operations began commercial closures in the 1940's (Eureka Standard mine [1940], Eureka Lilly and Tintic Standard mines [1949]). The early-1950's were marked by failed attempts by Anaconda, Kennecott, Hecla and Calumet, to locate the north extension of the Chief deposit and explore for porphyry-style mineralization in the Main Tintic District. In 1958, the Bear Creek Mining Company discovered the high-grade Ag-Pb-Zn Burgin mine, which remained in operation until 1978. Bear Creek Mining Company also ran exploration programs through the 60's and 70's, delineating a low-grade chalcocite blanket south of Treasure Hill, followed by discovery of a deep, low-grade porphyry copper system known as the Southwest Tintic Porphyry (SWT Porphyry). Further discoveries made by Bear Creek Mining Company include Ballpark Pb-Zn-Mn deposit and Homansville gold zone (Morris and Lovering, 1979). Neither of these discoveries were developed further after initial estimates were completed.

The slow decline of operations in the Tintic District was accelerated by the Clean Air Act of 1971, which affected base metal production across the American West and resulted in multiple closures of Ag-Pb-Zn mines in the Tintic District. However, exploration and development continued with the emphasis on the precious metal potential. Kennecott began commercial production of high silica mineralized material at the Trixie Mine in 1974, where operations ceased in 1982. During the 1980's, a claims consolidation effort in the District was led by two major companies: American Metal Climax Inc. (succeeded by Amax) and South Standard Mining Company. Mineral exploration continued throughout the 1980's and 1990's. Asarco installed a new headframe and hoist and rehabilitated the Chief No. 2 Shaft in 1981 for an underground exploration program that ran until 1984. Anaconda drilled several exploration holes in the central and eastern parts of the District (James 1984). A joint venture between Western Mining Corporation Holdings Ltd. and Centurion Mines Corporation conducted an exploration program for gold mineralized material in the Main Tintic sub-district into the late-80's. Centurion also performed trenching and limited drilling in the Southwest Tintic sub-district, which was re-examined by Kennecott for porphyry copper and volcanic-hosted copper-gold massive sulfide mantos during the early 1990's.

During the 1990's, Chief Consolidated Mining conducted an underground exploration program and rehabilitated the workings connecting the Chief, Plutus, Eagle and Gemini mines. Although an underground drill hole intersected high grade silver mineralization, no further work has been reported. In November 1996, Chief Consolidated Mining hired Thyssen Mining Construction of Canada Ltd. to conduct preliminary engineering design, budgeting, and planning services for sinking the new Burgin shaft, underground development and contract mining. They estimated capital expenditures of US$42 million to resume production at the Burgin mine (Krahulec and Briggs, 2006), which to date remains inactive but is the subject of renewed exploration and resource expansion interest. During the 1990's, several efforts to process waste rock material were pursued, with varying degrees of commercial success. Most operations utilized small-scale leaching processes, such as South Standard's 18,000 ton/year sale of flux material from the Trixie waste dump between 1993 and1995. By 1996, all metal production from the Tintic District had been halted. The Trixie Mine was briefly in operation under Chief Consolidated Mining in 1999, 2001 and 2002. However, unstable ground conditions in late March 2002 resulted in suspension of production indefinitely.

From 2002 to present, sporadic exploration efforts continued. Anglo American and Kennecott both entered into a joint venture partnership with Chief Consolidated Mining, targeting porphyry-style mineralization at Big Hill in the East Tintic sub-district. FMEC, a subsidiary of Freeport McMoran acquired the SWT Porphyry from Quaterra in the late 2000's and is currently still exploring the area. During this time, various entities of Spenst Hansen (Treasure Hill Mines LLC, Centurion Mines Corporation, Knight Silver Mines LLC, etc.) consolidated land, collected channel, rock and waste samples, performed data compilation and enlisted the services of Elder and Gurr (2010) to prepare an independent assessment of mineral asset potential for Hansen's northern claims. Sporadic mining operations continued at the Dragon halloysite and iron oxide deposit during this time. Table 5-2 summarizes the timeline of significant events that occurred in the Tintic District.

Table 5-2: Tintic District history of important events

Year	Event
1869	Sunbeam claim was staked by George Rust and a party of prospectors
1870	Important discoveries made at Black Dragon, Mammoth and Eureka Hill
1877	Mine production begins at Eureka Hill
1878	Utah Southern Railroad completed to Ironton, five miles west of Eureka
1882	Bullion Beck mine commenced operations
1886	Shipments of mineralized material begin at the Centennial-Eureka mine
1891	Rio Grande Western Railroad completed to Eureka and later extended to Silver City
1893	Mammoth Mining Company constructs 20-mile water pipeline from West Tintic Mountains, resulting in the commissioning of pan-amalgamation mills at Mammoth, Bullion Beck, Eureka Hill and Sioux.
1896	Humbug mineralized body discovered
1899	First shipment of mineralized material from the East Tintic subdistrict (the Lilley of the West mine)
1900	United States Mining Company purchased the Centennial-Eureka min
1905	Iron Blossom mine discovered
1906	Initial zinc production from the Tintic mining district occurred at the Scranton mine
1904	Tintic Standard Mining Company formed
1908	U.S. Smelting, Refining and Mining Company acquired the Bullion Beck and Champion mines; Tintic Smelting Co. commissioned a new lead smelter at Silver City
1909	Chief mineralized body discovered; Iron Blossom and Eureka Lilly mines commissioned
1916	Tintic Mining Company commissioned the 200-stpd chloritizing, roasting and leaching facility at Silver City; Pothole silver mineralized body discovered at Tintic Standard mine
1917	High grade Central mineralized body discovered at Tintic Standard mine
1920	Goshen Valley Railroad completed an 11-mile standard gauge line from Iron Spur to Dividend
1921	Tintic Standard Mining Company commissioned the 200-stpd Harold mill at Goshen
1923	Plutus mineralized body discovered by Plutus Mining Company
1925	Tintic Standard Mining Company ceased operations at the Harold mull facility
1927	Significant discoveries made on the North Lily and Eureka Lilly properties
1928	Gold mineralized material discovered at Eureka Standard
1929	U.S. Smelting, Refining and Mining Company acquired the Victoria and Eagle & Bluebell mines;
1940	Commercial operations cease at Eureka standard
1943	U.S. Smelting, Refining and Mining Company ceased commercial operations at Eagle & Bluebell, Centennial Eureka, Bullion Beck and Victoria mines
1949	Commercial operations cease at Eureka Lilly, North Lily and Tintic Standard; Filtrol Corporation commenced halloysite mining operations at the Dragon mine
1957	Chief Consolidated Mining Company cease operations at the Chief mine
1958	Burgin mineralized body discovered by Bear Creek Mining Co.
1962	Bear Creek Mining Co. delineate chalcocite blanket above a suspected porphyry copper system
1966	Kennecott achieve commercial operations at the Burgin mine
1968	Bear Creek Mining Co. delineate the SWT porphyry copper system (400 Mt of 0.33% Cu)
1969	Bear Creek Mining Co. discover gold-silver-copper mineralized material at Trixie
1974	Kennecott achieve commercial operations at Trixie
1976	Filtrol Corporation cease operations at the Dragon halloysite mine
1978	Kennecott suspends operations at Burgin mine, returning ownership to the Chief Consolidated Mining Co.
1980	Sunshine Mining Company lease Burgin mine from the Chief Consolidated Mining Co.
1982	Kennecott suspend mining operations at Trixie mine
1983	Sunshine Mining Company acquire Trixie lease and resume operations
1988	North Lily Mining Company commissioned the Silver City heap leach facility
1992	Sunshine Mining Company cease mining operations at Trixie
1993	North Lily Mining Company close the Silver City heap leach facility
1996	Chief Consolidated Mining Company acquire Trixie property through merger with South Standard Mining Co.
2001	Chief Consolidated Mining Company resume operations at Trixie
2002	Unstable ground conditions result in suspension of mining operations at Trixie
2003	Atlas Mining Company begin exploration at Dragon halloysite mine
2007	Richard Sillitoe endorses porphyry potential at Big Hill in East Tintic
2008	Anglo America commences exploration drilling at Big Hill
2009	Applied Minerals take over operations at Dragon halloysite mine from Atlas Mining Company
2009	FMEC, a Freeport McMoran subsidiary acquires SWT porphyry from Quaterra
2011	Kennecott commences exploration drilling at Big Hill
2017	HPX begins exploration in the Tintic District
2017	HPX completes aeromagnetic survey
2018	LeadFX sells the Chief Mining Company (Burgin, Trixie mines) to IG Copper
2018	HPX completes soil sampling, geologic mapping and prospecting, digitization of historical documents, and begins 3D modeling of the district geology and workings, facilities construction and Typhoon™ ground geophysical survey.
2019	Continued geologic mapping, sampling, and prospecting. Initiated core and chip re-loggings and Relogging of historical drill hole core and chip samples. Completion of the 2018 Typhoon™ Survey.
2019	IG Copper begins refurbishment of the Trixie underground Au-Cu-Ag mine
2020	TCM reopens the Trixie mine (TCM subsequently acquired by Osisko in 2022)

Source: modified from Krahulec and Briggs (2006) and HPX (2019)

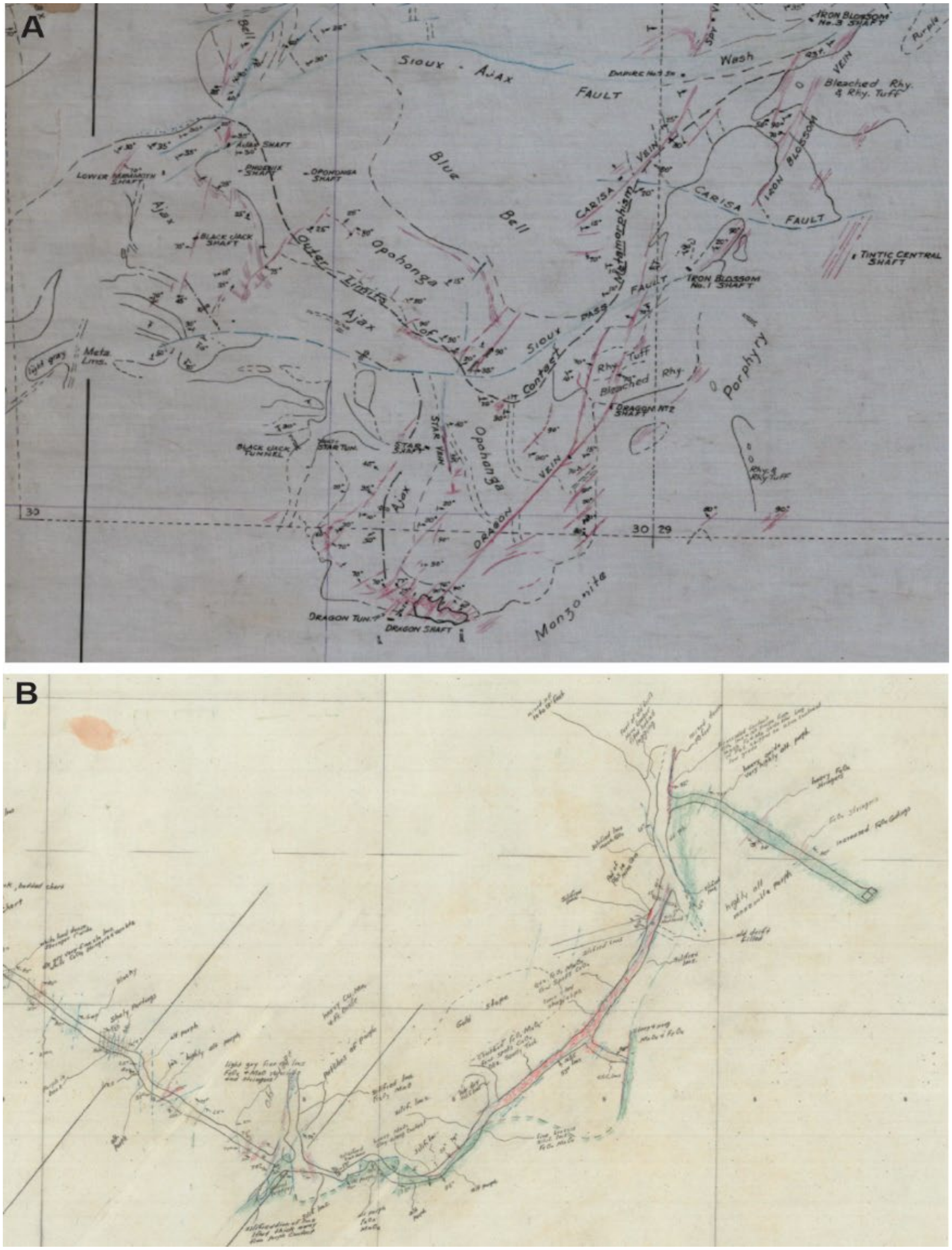
5.2 Exploration and Development Results of Previous Owners

Exploration work has been completed across the Tintic District from the time of discovery in 1867 until the present. Documented details of exploration activities prior to 1943 consist primarily of thousands of photos (Figure 5-1), reports, and maps (Figure 5-2). These document a significant amount of mapping, exploration and mining both on surface and underground. Most of the mining was completed underground with access to drifts via either surface portals or shafts. Post 1943, activities such as surface exploration and drilling are well documented and are briefly summarized in Table 5-3.

The compilation of all available historical data, including drilling, by IE is described in Section 7.4. A total of 489 drill holes were completed historically on the Tintic Project by several operators, with a combined length of at least 72,212 m, however not all of the details are available. The historical drilling database compiled by IE is discussed further in Section 7.4.2.

Source: HPX (2020)

Figure 5-1: (A) Eureka, UT in 1911; (B) Miners at the Ajax Mine in Mammoth and (C) Chief Consolidated Mining Co. miners at the Holden Tunnel, Eureka, Tintic District



Source: HPX (2020)

Figure 5-2: Examples of historical surface mapping and underground geology maps (A) a surface geology map around the Dragon Mine (1 to 800 ft scale) and (B) geology map of underground workings at 300 level of the Iron Blossom Mine (1:400 ft scale)

Table 5-3: Summary of exploration work conducted post-1943 and prior to IE acquiring the Tintic Project.

Years	Activities	Company	Description
1943-1944	Drilling	Mintintic	Four drilled along the margins of the Silver City stockwork which had been historically thought to be the source of mineralization in the Main District.
1950's	Exploration	Anaconda	Evaluated the igneous terrain in Southwest Tintic for porphyry Cu potential.
1962-1967	Drilling	Bear Creek Mining	*Southwest Tintic Chalcocite Blanket Project:* Thirty shallow (mostly 100 - 150 m) rotary drill holes ("RC") (SWT-1 through SWT-30) were drilled on an approximate 600 m grid targeting a shallow chalcocite blanket above a suspected porphyry. A sub-economic copper resource was delineated based on 10 of these holes. Holes assayed for Au and Ag but returned low grades.
1967	Data Evaluation	Bear Creek Mining	Treasure Hill area: evaluated data to establish whether there was interest in acquiring claims. Due to insufficient information the acquisition was not completed.
1968-1981	Drilling	Bear Creek Mining	*Primary Porphyry Copper-Molybdenum Project:* Seven diamond drill holes (SWT-31 through SWT-37) completed to test deep porphyry copper-molybdenum prospect. Assays indicated the presence of a low-grade porphyry Cu system, with approximately 0.2 % Cu intersected in drill holes 31, 32, 33, 36 and 37. The potential for Cu-skarn mineralization prospects in the Paleozoic carbonates adjacent to the Diamond Gulch quartz monzonite porphyry was proposed during this period of exploration.
1981-1984	Drilling	Tintic Joint Venture	Drill hole SWT-30 was deepened from 601 m to 945 m, due to the surface exposure of a latite dyke similar to ones associated with higher grade copper mineralization at Safford, Arizona. Short assessment holes were drilled in 1980, 1981 and 1984.
1981	Drilling	Bear Creek Mining	Three drill holes (W-1, W-2 and W-3) completed. No details on the respective intended target(s) are of public knowledge.
1982-1982	Exploration	Anaconda	Treasure Hill area: evaluated leases for bonanza vein and stockwork potential. This and several other areas were proposed as hot springs environments based on mapping and sampling. Additional work was recommended.
1982-1984	Drilling	Exxon	Ten, shallow angled RC drill holes (E-1 through E-10) were collared on and near Treasure Hill. Drilling was based on mapping, geochemical sampling, and IP surveys and targeted shallow fissure veins and surrounding wall rock potential.
1985	Assaying	Diamond Bullion	Leached capping and chalcocite blanket zones of the SWT Porphyry were systematically re-assayed for gold and silver. Only low-grade assay results were returned.
1987-1989	Drilling/Exploration	Centurion/Western Mining	Majority of work was completed around the Mammoth Mine and areas to the north. Three drill holes were drilled in the extreme northern portion of the Southwest Tintic area, just north of the Dragon Pit to test shallow portions of the Au-Ag-Cu Dragon Fissure Vein and small, surface, gossanous pods. No significant assay results were returned.

Table 5-3 (continued): Summary of Exploration Work Conducted Post-1943 and Prior to IE Acquiring the Tintic Project

Years	Activities	Company	Description
1991-1992	Drilling/Surface Sampling	Centurion/Crown Resources	Trenching, soil sampling and drilling. Trenching and sampling were conducted on a broad east-west elongate section of altered volcanics, south of the Dragon Pit and north of Ruby Hollow. Trench 14 Area Au mineralization was tested. Soil surveys were completed in the same area and across a Landsat circular anomaly 6.5 km SSW of Horseshoe Hill. Drill hole TR-1 in the Trench 14 area was completed and contained persistent anomalous Au. Drill holes SB-1 through SB-3 were collared along the strike of the Sunbeam Mine Au-Ag fissure mineralization. Drill holes TH-1 through TH-3 were completed on Treasure Hill. Centurion intersected anomalous Cu mineralization in the bottom of the Dragon Pit along the projection of the Dragon Fissure Vein.
1993-1994	Drilling	Centurion/Kennecott	Nineteen diamond core and reverse circulation rotary drill holes (STR (rotary) and STD (core) 1 through 19) were completed under a joint venture on numerous prospect areas within the Southwest Tintic Project area. Only one hole, STR-6, targeted extensions of known hypogene Cu mineralization adjacent to the Diamond Gulch porphyry. This hole intersected the longest intercept of greater than 0.2 % Cu drilled to date and the hole was still in Cu mineralization at terminal depth. Three holes were drilled peripheral to Treasure Hill and a fourth hole on Treasure Hill (STR-19) intersected an enargite vein system in the footwall of the Republic-Little May (Treasure Hill) fissure zone.
1994	Drilling	Centurion	Centurion completed eight rotary drill holes during the program. Three holes (STR-16, 21 and 27) were drilled in the Dragon Pit and one (STR-17) was drilled along the Dragon Vein. Close spaced step out drilling (holes STR-23 through STR-25) from the enargite vein mineralization intersected in STR-19 and two holes (STR-20 and STR-26) along Ruby Gulch were completed.
2008-2009	Drilling	Anglo American/Chief Consolidated Mining	Big Hill Region: Four deep diamond drill holes were drilled on Spenst Hansen claims, totaling 4,512.9 m targeting porphyry-style mineralization as hypothesized by Richard Sillitoe (2007) to underlie the lithocap on surface in the area. Results confirmed the presence of a potassic alteration zone with associated quartz-molybdenite-pyrite veining, but Cu concentrations were extremely low. Operators concluded that the results adequately disproved the presence of a large Cu mineralized body (i.e., > 5 Mt Cu) within 1,000 m of the present-day surface.
2010	Valuation	Centurion	Spenst Hansen, a vendor of Patented Tintic Mining District claims, procured the services of SRK to evaluate the mineral inventory for the Gemini, Godiva, Homansville, Mammoth, Victoria and 109 other claims in the Tintic Main Mining District. SRK produced a technical report entitled “Hansen Mine Assets Independent Assessment”.
2011-2013	Drilling	Kennecott/Chief Consolidated Mining	Three drill holes were pre-collared through the volcanic cover with RC drilling and completed with diamond core drilling recovery, totaling 5,525.45 m. No significant Cu mineralization was intersected. Minor anomalous Cu values were attributable to As-Bi associated epithermal veins interpreted to be distal to a porphyry system.
2014	Drilling	Kennecott/Chief Consolidated Mining	Three diamond drill holes totaling 2,689.55 m were completed, targeting porphyry-style mineralization under the Silver Pass lithocap and under the volcanic cover at Latite Ridge. All three drill holes failed to intersect significant Cu mineralization.

Source: HPX (2020)

5.3 Historical Estimates

No historical Mineral Resource or Mineral Reserve estimates are disclosed in this Technical Report.

Although there have been many historical mineral inventory assessments across the Tintic Project (e.g., Morris and Lovering 1979; Centurion 1996; Krahulec and Briggs 2006; Elder and Gurr 2010), none of them utilized internationally recognized Mineral Resource and Reserve reporting standards. Since no detail of the estimation methods and parameters employed are available, the QP is unable to comment on the reliability of the respective estimates.

5.4 Historical Production

Almost 70% of the historical bulk production can be attributed to the Tintic Main District in the form of CRDs and to a lesser extent from high grade quartz fissure veins. This production originated from Mammoth Consolidated Mines Inc., North Star Mines LLC, and the Gemini Mine LLC mining areas.

The U.S. Bureau of Mines documented production from the late 1890's through the 1930's to be 7.14 Mt (million metric tonnes) that produced 1.9 Moz Au, 136 Moz Ag and 105 kt Cu from 22 individual named deposits (Forster, Boyd and Ramirez, 2017). The top eight largest metal producers' production in the Tintic Main District's history is summarized in Table 5-4.

Table 5-4: Tintic Main District top eight metal producers

Mine	Tonnes (kt)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)
Centennial Eureka	1,415	14.4	514	2.55	0.64
Mammoth	1,179	9.7	349	1.42	1.39
Grand Central	653	9.4	486	1.35	1.14
Bullion Beck	601	3.8	833	2.38	10.48
Iron Blossom	553	4.9	1,417	0.65	5.87
Eureka Hill	419	6.2	1,025	1.32	5.48
Gemini & Keystone	403	0.4	805	0.23	12.14
Victoria	303	5.0	706	0.40	7.17
Total	5,526	8.5	671	1.58	4.02

Source: After Centurion Mines (1996 and 1997) and Forster, Boyd and Ramirez (2017)

IE has identified several CRD prospects in the Carisa Group fissures region, detailed in Section 7.7.2. The estimated historical production figures of mines within this high-priority prospective area are summarized in Table 5-5.

Table 5-5: Estimated historical production from Carisa Group mines

Mine	Tonnes (kt)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)
Carisa Mine	65	5.5	286	5.83	0.56
North Star Mine	25	25.7	499	Unknown	2.66
Northern Spy Mine	15	42.2	1,291	1.06	2.82
Red Rose Mine	Unknown	Unknown	2,914	Unknown	40.00
Boss Tweed Mine	Unknown	2.5-175.9	411-2,057	21-30	Unknown

Source: After Centurion Mines (1996)

5.5 Mineral Processing and Metallurgical Testing

No contemporary metallurgical testing or mineral processing studies on mineralized material from the Tintic Main District are currently available to IE.

Limited information on mineral processing and metallurgical tests from mineralized material at the Burgin mine in the East Tintic subdistrict were reported in the 2011 NI 43-101 "Technical Report on the Burgin Extension Deposit - Preliminary Economic Assessment" by Tietz et al. (2011). This document reports operating records from the Burgin mine between 1968 - 1978 and are incomplete. However, "a 1975 report indicated recoveries in the Burgin mill ranged between 86 - 90% on clean sulfide mineralized material and down to 50% when the mineralization was interlocked with gangue or was [present as] oxide mineralized material" (Tietz et al., 2011). Tietz et al. (2011) also reported results from metallurgical test work on samples from the Burgin project that were performed by Dawson Metallurgical Laboratories in 1987,1997 and 2001. The 1987 work consisted of flotation testing on a high-grade sulfide sample to produce lead and zinc concentrates, but the results of this study are not available. In 1997, seven-cycle locked-cycle testing on an equal-weight mixture of two composites produced recoveries of 90% for lead and 85% for silver in the lead concentrate and 51% for zinc in the zinc concentrate (Tietz et al., 2011). In 2001, Dawson reported 92% lead and 87% silver recovery in the lead concentrate and 60% zinc in the zinc concentrate from bulk-sulfide flotation concentrate cyanidation tests and stated that historical records indicate lead concentrate contains an average of 1.54 g/t Au (HPX, 2019).

In general, mineralized material from the Tintic District was divided into oxide mineralized material above the water table and sulfide mineralized material below. The oxide mineralized material from Tintic is reportedly amenable to contemporary cyanide heap leaching and other cyanidation processes, with high recoveries, rapid leach cycles and low cyanide consumption. This is evidenced by Magellan Resources Corporation's heap leach operations, whereby over 800,000 tons of oxide gold-silver-copper ore were recovered from the Eureka Hill, Mayday, Yankee, North Star, Centennial-Eureka and Mammoth mine dumps from 1988 to 1993 (Krahulec and Briggs, 2006; internal document: "Tintic District Executive Summary" - Centurion Mines Corporation).

With a joint venture partner, North Lily operated a small heap leach, located just west of Silver City, which sourced oxide mineralized material from dumps and spoil piles throughout the Tintic District. Operations at the heap leach started in 1989 and completed in 1995 (Table 5-6). The final report by North Lily in 1993 indicates that 30,121 ounces of gold equivalent (both gold and silver values combined) was recovered (source North Lily Operations Review and 1994 SEC filings [http://edgar.secdatabase.com/838/92735695000103/filing-main.htm]).

Table 5-6: Tintic Project historical heap leach production

Production	1989	1990	1991	1992	1993
Gold (oz)	5,887	5,787	5,565		
Silver (oz)	119,708	104,865	90,436		
Gold Equivalent	7,728	7,097	6,570	6,579	737
Silver Conversion	65:1	80:1	90:1	90:1	

Source: North Lily (1994)

5.6 QP Opinion

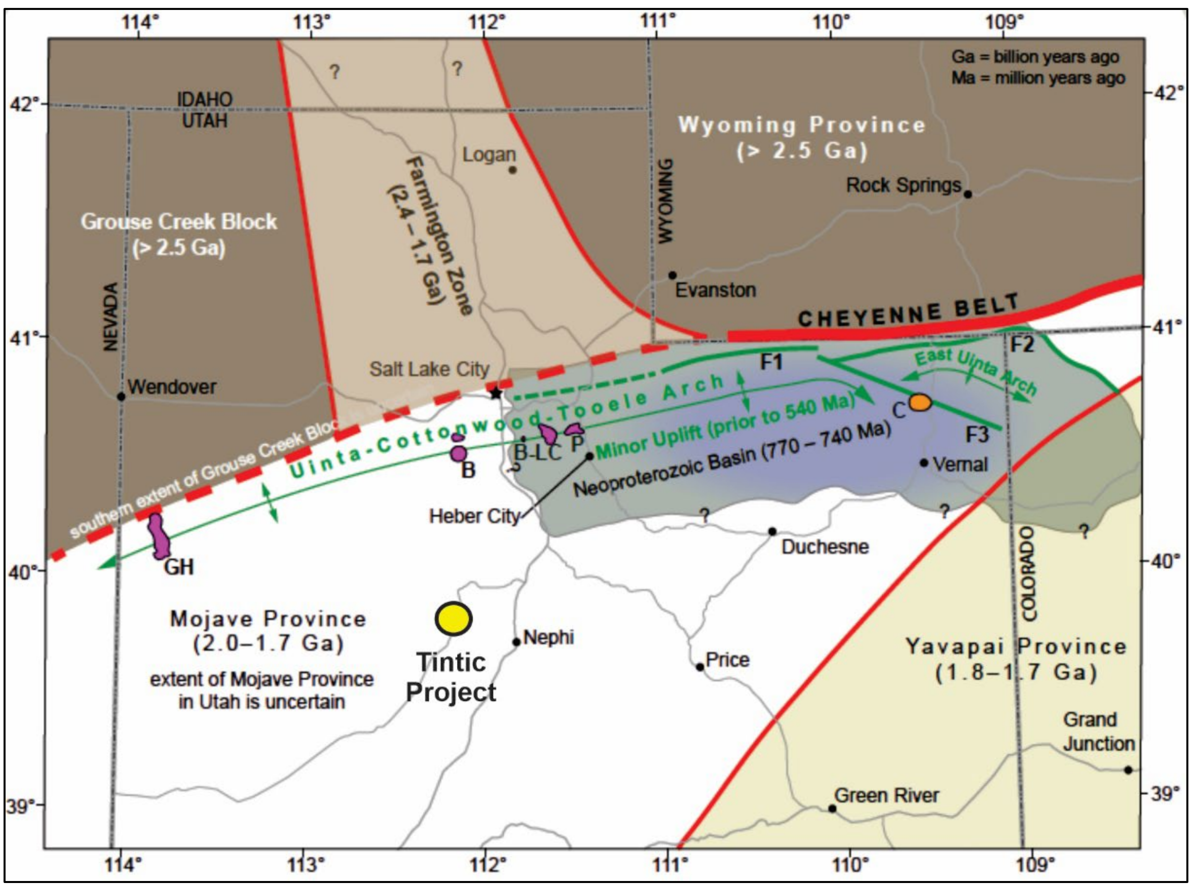
The QP is of the opinion that basic commonalities can be reasonably inferred between the historical mining and processing described above and what IE could expect to encounter within its prospect areas. The reader is cautioned that the historical production figures in Table 5-4 and Table 5-5 vary between different sources and therefore should be considered as indicative only. The QP has not validated the historical production figures. The historical drill hole location and assay data should be treated with caution, however, can be utilized for regional-scale modelling (Section 7). The historical mapping is of sufficient quality to be used to guide exploration program planning (Section 7.4).

6 Geological Setting, Mineralization, and Deposit

The information in this section has been synthesized and summarized from Krahulec and Briggs (2006), Parry (2006), Elder and Gurr (2010), Bonner (2020), and HPX (2020).

6.1 Regional Geology

North-central Utah lies on the east-west Cheyenne suture belt, where the Paleoproterozoic Yavapai and Mojave provinces to the south were welded to the Archean Wyoming province, Grouse Creek block, and Farmington zone to the north during a plate-tectonic collision event, the Yavapai orogeny, about 1.7 Ga (Karlstrom and Houston, 1984; Chamberlain et al., 1993; Karlstrom et al., 2005; Whitmeyer and Karlstrom, 2007) (Figure 6-1). The suture zone projects westward into the Great Basin and delineates a local contrast in crustal architecture (Dickinson, 2006). The suture zone is a fundamental control on deformation, plutonism, and metallogeny (Presnell, 1998). Precambrian strike-slip faults trend parallel (eastward) and oblique (northwest and north-northeast) to the suture zone (Jordan and Douglas, 1980) and have likely influenced fault architecture, sedimentation and plutonism ever since the assembly of the American continental lithosphere in the Paleoproterozoic (Bryant and Nichols, 1988; Paulsen and Marshak, 1999; Kloppenburg et al., 2010).



Source: Sprinkel (2018)

Figure 6-1: Paleoproterozoic Cheyenne suture zone in relation to Uinta-Cottonwood arch and Bingham-Park City Mineral Belt Mining Districts (Purple; B = Bingham Mine)

Shortly after the formation of the Cheyenne suture belt, about 1,550 Ma, Rodinia began to break apart along a north-trending rift through central Nevada. Rifting culminated in early Phanerozoic around 770 Ma (Stewart, 1976; Sears et al., 1982; Armin and Mayer, 1983; Bond et al., 1984, 1985; Sprinkel, 2018) during which time a failed arm of the rift, the Late Proterozoic Uinta aulacogen, or Uinta trough (Sears et al., 1982; Bruhn et al., 1986; Sprinkel, 2018), collected more than 5 km of sandstone and shale, forming the Uinta Mountain Group. After the rift failed, the Uinta trough started inverting around 550 Ma and slightly uplifted and folded the Uinta Mountain Group into the initial Uinta arch, the Uinta-Cottonwood-Tooele Arch (Sprinkel, 2018). The structural weakness born out of the failed rift has since influenced geologic evolution of northeastern Utah, influencing fault architecture and magmatic activity from the Paleozoic through to the Cenozoic (Sprinkel, 2018).

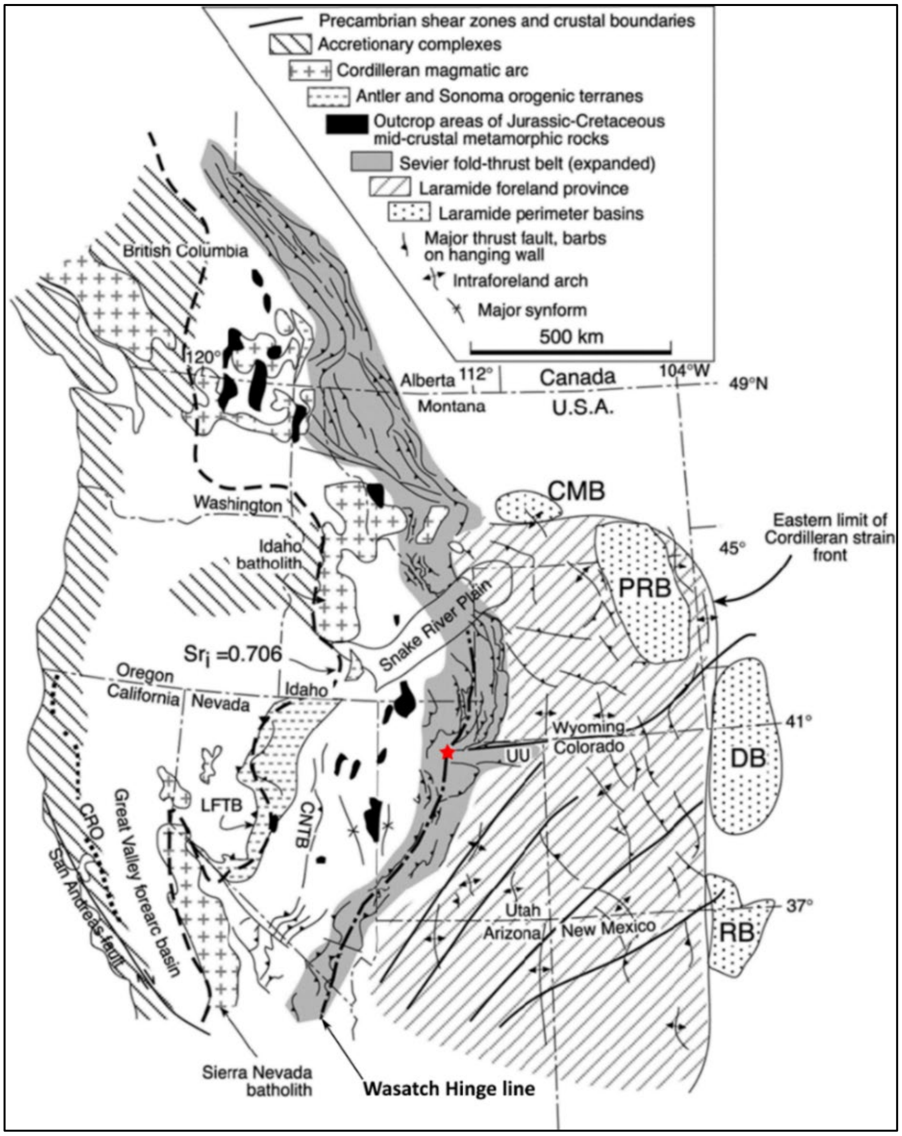
Throughout the Paleozoic and early Mesozoic, Utah lay on a passive continental margin The Wasatch hinge line of Kay (1951) marks the approximate break in slope between continental sedimentation to the east and thicker, marine, miogeoclinal sedimentation to the west (Stokes, 1988; Hintze and Kowallis, 2009). In the Mesozoic, the North American plate collided with the Farallon plate leading to subduction and an eastward migration of compressional deformation, the Sevier fold-thrust belt (Wood et al., 2015). The Cretaceous Sevier orogeny lasted from ~140 to 55 Ma (DeCelles and Coogan, 2006), during which time the eastern Great Basin was extensively deformed by broad north-northwesterly trending asymmetrical folds, and a series of large eastward-verging thrust faults and related northeast trending high-angle, strike-slip and tear faults (Morris, 1968; Porter et al., 2012) (Figure 6-2).

The Laramide orogeny (80-40 Ma) saw the subducting slab flatten and subduction rate accelerate eastward, generating a series of uplifts and sedimentary basins in eastern Utah, while undergoing northeast-southwest compression. During this time, increased volcanism eastward led to the emplacement of mineral deposits from Idaho to Arizona (Hildenbrand et al., 2000). Orogenic collapse from ~49 to 20 Ma (Kloppenburg et al., 2010) began when the plate convergence rate slowed, and the subducting slab steepened and started to roll back. Crustal delamination and decompression melting initiated regional extension from middle Eocene to early Miocene (Constenius, 1996), manifested by extensional strike-slip faults in the Miocene which were exploited to form epithermal deposits.

Cook (1969) identifies three east-west transverse structural lineaments from gravity data in the eastern Basin and Range province that correspond with three well-known east-west mineral belts in Utah. Rowley (1998) and Rowley and Dixon (2001) suggest the importance of these east-west transverse zones for localizing magmatism and mineral belts in the eastern Great Basin. Calc-alkaline, subduction-related magmatism migrated southward throughout the Eocene – early Oligocene. East-west igneous belts in the eastern Great Basin young to the south from the ‘Bingham-Park City’ mineral belt (40 – 33 Ma) to the slightly younger ‘Deep Creek-Tintic’ mineral belt, and further south still to the Wah Wah-Tushar mineral belt ranging from 32 to 14 Ma (Best et al., 1989; Rowley et al., 2005).

The ‘Deep Creek-Tintic’ mineral belt (Shawe and Stewart 1976; Stewart et al. 1977b) is an east trending zone of basement highs marked by Cenozoic calderas and associated metal endowment (Lindsey, 1982; Christiansen et al., 1986) all along the belt (Figure 6-3). The East Tintic Mountains, where the belt terminates, host the Tintic Mining District, the second biggest mining district in Utah after the Bingham District, located ~65 km north of Tintic. The Bingham stock lies approximately at the intersection of the Wasatch hinge line and the ‘Bingham-Park City’ mineral belt, coinciding with the Cheyenne suture zone and the Uinta arch, concentrating tectonic and igneous activity (Stokes, 1976).

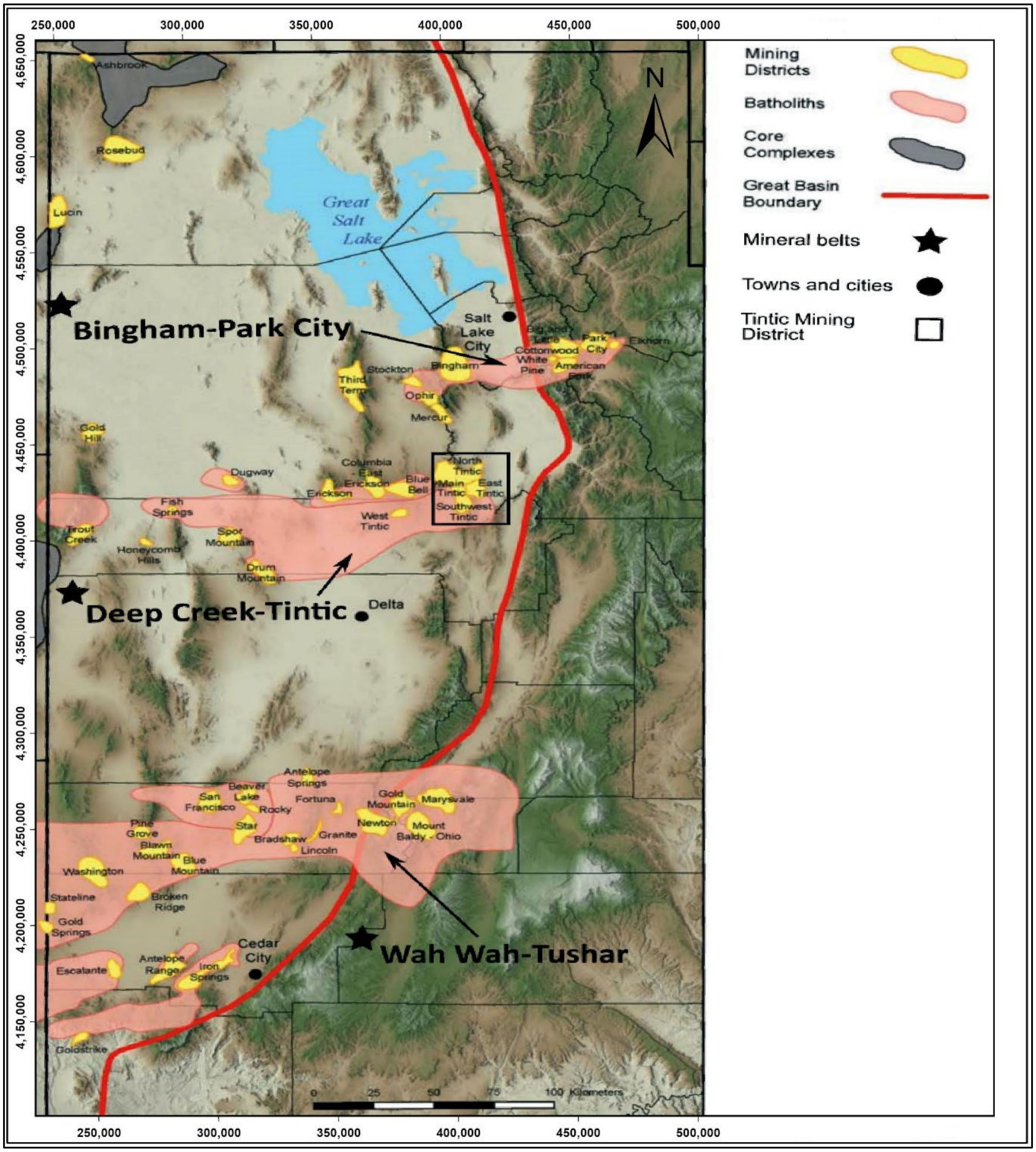
The Tintic District lies at the eastern margin of the 'Deep Creek-Tintic' mineral belt where it terminates against two or more N-S trending range front faults, inferred from Cook and Berg (1961) and Mabey and Morris (1967) gravity surveys. Metallic minerals at Tintic and Bingham are hosted along northeast, steeply dipping, thrust faults, related to the Sevier orogeny. Intrusions along the Uinta arch in the Wasatch intrusive belt are high potassium calc-alkaline and metaluminous I-type granitoids (Hansen, 1995; Vogel et al., 1997; Porter et al., 2012; Zhang and Audetat, 2017) similar to the igneous intrusions at Tintic (Morris and Lovering, 1979; Armstrong, 1969; Krahulec and Briggs, 2006; Johnson and Christiansen, 2016). Eocene to early Oligocene intrusions were emplaced in an extensional stress regime with NW-SE least principal stress (Presnell, 1998; Kloppenburg et al., 2010; Porter et al., 2012).



Source: modified from Wood et al. (2015)

Figure 6-2: Extent of the Sevier Fold-Thrust Belt (Sevier orogenic belt) and the Laramide Foreland Province in relation to the Western United States and Canadian Provinces

Note: Wasatch Hinge Line and Precambrian Shear Zones and Crustal Boundaries are also shown in relation to the Sevier Fold-Thrust Belt and the Tintic Mining District Location Marked by the Red Star



Source: modified from Krahulec (2015) and from Doelling and Tooker (1983)

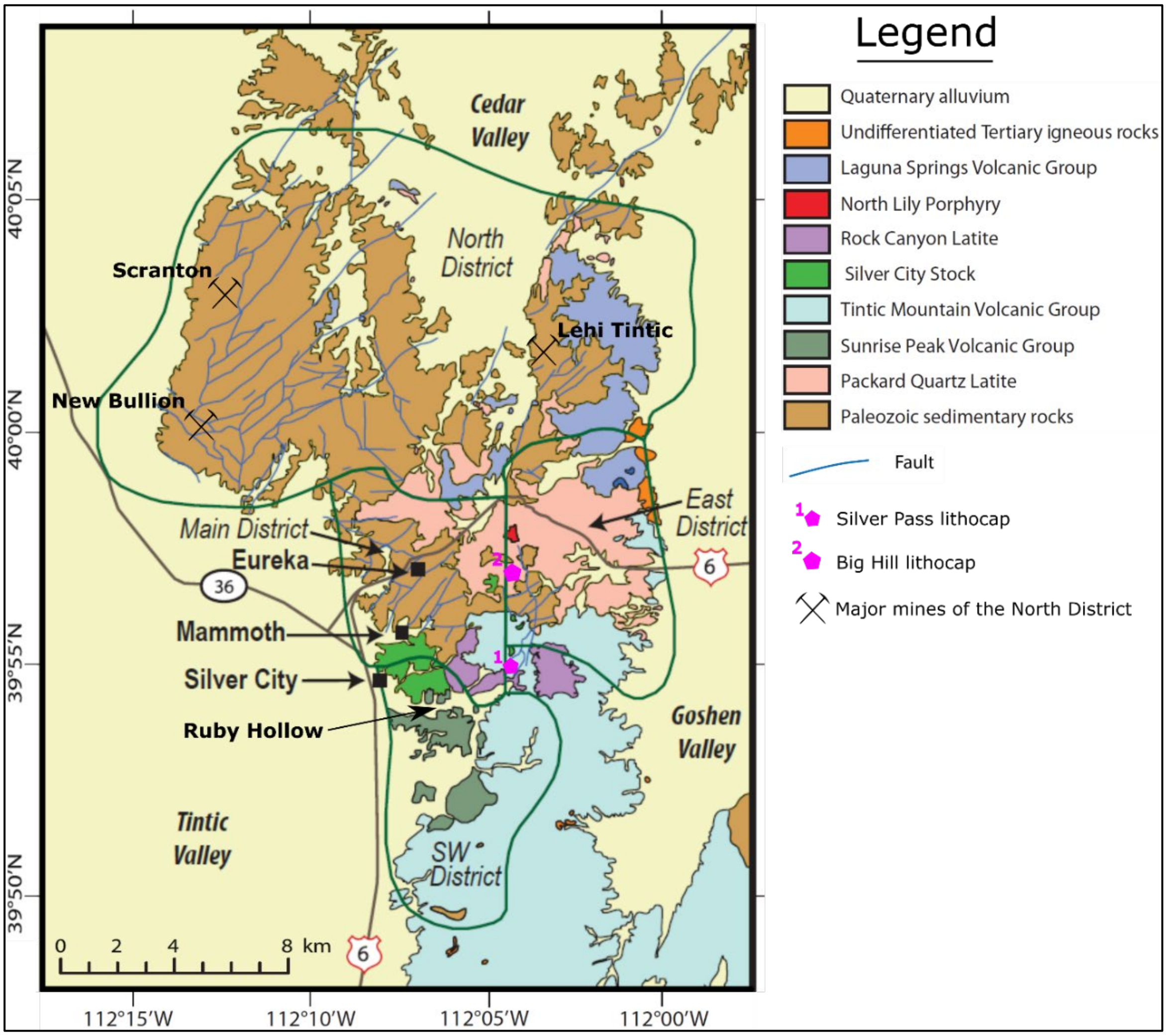
Figure 6-3: Tertiary intrusive-related mining districts and mineral belts of the Eastern Great Basin

Basin and Range extension began around 18 Ma, forming high-angle normal faults which resulted in block tilt and the present Basin and Range topography (Morris, 1968). Fluid inclusion studies from plutons in the Wasatch Mountains by John (1989) indicate a 15-20˚ eastward tilt of the range and paleomagnetic data from the Oquirrh Mountains are consistent with an 11˚ eastward tilt related to the Basin and Range (Melker and Geissman, 1997). The East Tintic Mountains were uplifted and rotated 10-20˚ E (Morris and Lovering, 1979), similar to the Oquirrh Mountains.

6.2 Local Geology

The Tintic Mining District has been broadly divided into four sub-districts: North, East, Main and Southwest (Figure 6-4). The following describes the stratigraphy, structure, volcanism, mineralized deposit types and zoning patterns, including mineralization and alteration, observed in the four sub-districts, and summarizes the effects of Basin and Range extension on the Tintic Mining District.

The geology of the IE Tintic Property, which lies predominantly in the Main and Southwest sub-districts, is discussed in Section 6.3, including a stratigraphic column and lithology map, and a cross section of the property geology is presented in Section 6.6.



Source: modified from Johnson and Christiansen (2016)

Figure 6-4: Simplified geology and structures of the Tintic Mining District

Note: Four sub-districts are outlined in green and East District lithocaps are shown in pink. Major mines of the North District are shown as well as towns and valleys. The Ruby Hollow Valley, separating the Silver City Intrusive Complex to the north and Sunrise Peak Volcanic Group to the south is also shown.

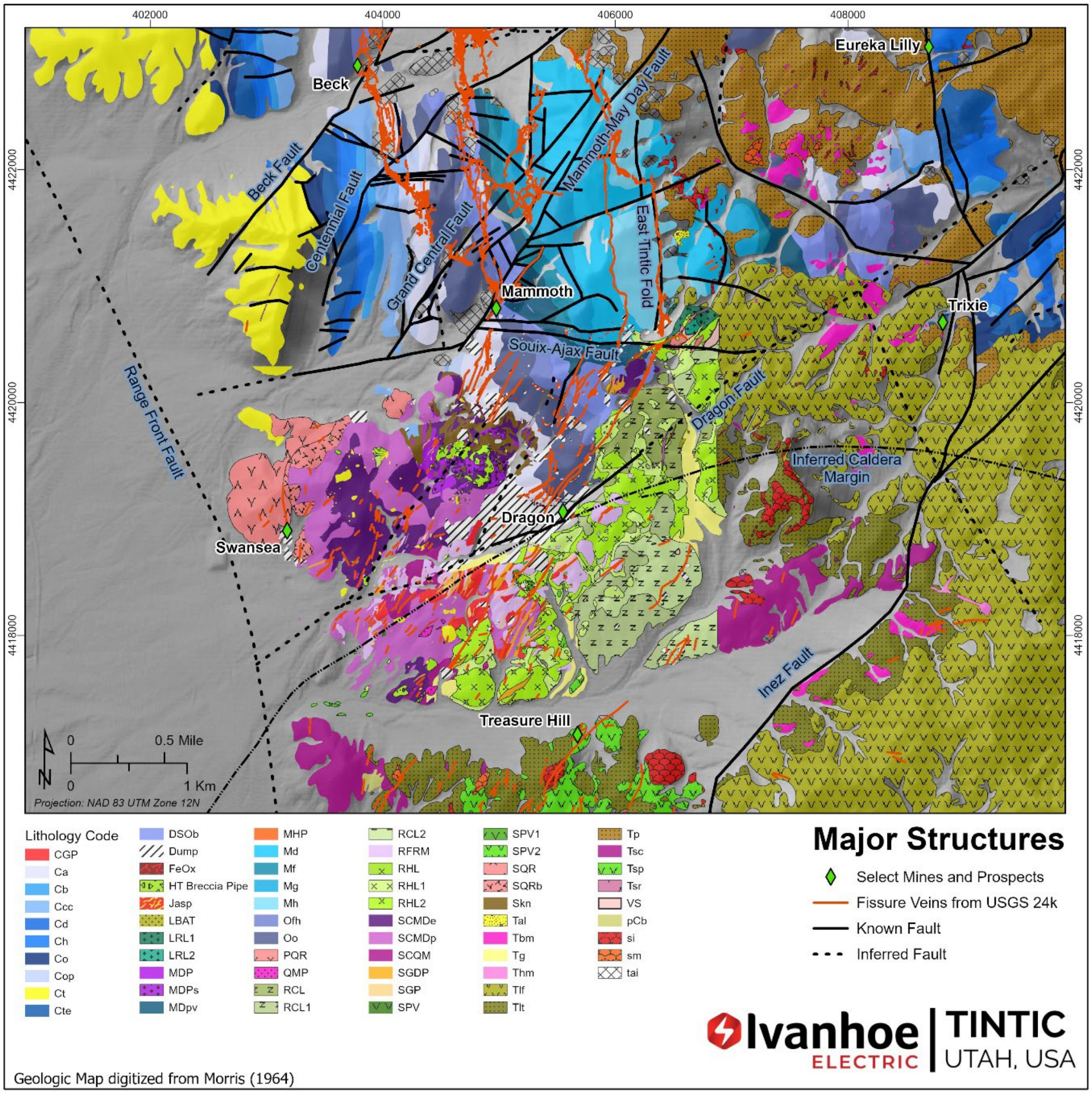
6.2.1 Stratigraphy and Structure

The East Tintic Mountains are underlain by a basement sequence of more than ~800 m of phyllic slate, quartzite and dolomite from the Neoproterozoic Big Cottonwood Formation (Johnson and Christiansen 2016), outcropping along the axis of the North Tintic anticline. A sequence of more than ~3,700 m of Paleozoic (ranging from Cambrian to Mississippian periods) carbonate and clastic sedimentary strata lies unconformably on top (Morris, 1964; Morris, 1968; Morris and Lovering, 1979; Krahulec and Briggs, 2006). This sequence is characterized by a thick basal Cambrian Tintic Quartzite, succeeded by a thick sequence of dominantly limestone and dolomite.

During the Sevier orogeny, from Late Jurassic to Late Cretaceous, the East Tintic Mountains were uplifted and deformed in a series of north-trending, north-plunging asymmetrical folds cut by coeval thrust faults, high-angle strike-slip and tear faults (Morris, 1964; Morris, 1968; Armstrong, 1969; Krahulec and Briggs, 2006). Three major folds deform the Neoproterozoic and Paleozoic sequence in the Tintic District. The Tintic syncline, adjacent and parallel to the Iron Blossom 'Ore Run' in the Main and East Districts, is a major structure at Tintic. Its fold axis dips 17˚ N and consists of a west limb dipping 75˚ E and an east limb dipping 30˚ W (Morris, 1964; Morris, 1968).

None of the major thrust faults are exposed in the Main District (Armstrong, 1969), however strike-slip faults form a conjugate system of northeast-northwest trending fractures that cut the fold axis at 25-55˚ angles (Morris, 1964). These shear faults dip steeply southeast or southwest and seldom dip northwest or northeast. Northeast trending shear faults are generally more through-going and are important structures for localizing mineralization (Morris, 1964; Armstrong, 1969).

During the orogenic collapse, pre-volcanism, the East Tintic Mountains were again cut by normal faults, including Sioux-Ajax and Eureka-Lily (Morris, 1964). These early extensional faults serve to localize mineralized bodies where they are crossed by north-northeast tear faults or epithermal fissure veins (Armstrong, 1969) (Figure 6-5). Northeast trending mineralized faults and "fissures" are believed to be related to volcanism (Morris, 1964; Armstrong, 1969), however, these are most likely tear faults related to the Sevier orogeny.



Source: IE (2023)

Figure 6-5: Major structures in the Tintic District in the region of the IE Tintic Property

Note: Mapped structures are overlain on the USGS 24k geological map. Fissure veins and historically mined 'ore runs' are shown in orange. Refer to Figure 6-9 and Figure 6-10 for legend code descriptions.

6.2.2 Volcanism

In the Tintic Mining District, the Paleozoic sequence is unconformably overlain by a thin erosional section of Eocene to early Oligocene conglomerate, which is succeeded by up to 1,525 m of early Oligocene andesitic, latitic and quartz latite lavas, tuffs, and agglomerates (Krahulec and Briggs, 2006). These potassic, calc-alkaline igneous lithologies are remnants of a large, deeply eroded, inferred caldera complex of early Oligocene age, centered several miles south of the Tintic District, in the central portion of the East Tintic Mountain range (Armstrong, 1969; Morris, 1975; Hannah and Macbeth, 1990; Krahulec and Briggs, 2006). The collapsed caldera complex formed a composite volcano (Moore, 1993) composed of a sequence of quartz-biotite crystal tuff, andesitic to latitic flows, sills, and agglomerates, latitic air-fall tuff, and tuffaceous sediments (Krahulec and Briggs, 2006).

The basal volcanic sequence is intruded by the Sunrise Peak and Silver City intrusive complex and associated plugs, sills and dikes, along the proposed caldera rim (Armstrong, 1969; Morris, 1975; Hannah and Macbeth, 1990; Krahulec and Briggs, 2006). They are dated at ~34.7 Ma (Moore, 1993) and ~33.6 Ma (Keith et al., 1991), respectively. These stocks are potassic, calc-alkaline monzonites and monzonite porphyries (Johnson and Christiansen, 2016). The Diamond Gulch quartz monzonite porphyry is the youngest intrusive event and the mineralizer in the Southwest District porphyry copper system (SWT porphyry), dated at 31.55 Ma by Hannah and Stein (1995). Post-mineralization cover amounts to early Miocene semi-indurated conglomerates and middle Miocene quartz latite flows along the eastern flank of the range (Hannah and Macbeth, 1990).

6.2.3 Sub-Districts and Mineral Deposits

The Tintic Mining District lies on the eastern end of the ‘Deep Creek-Tintic’ mineral belt and the mineralization is coeval with or succeeds emplacement of the Silver City intrusive complex (Morris, 1964; Krahulec and Briggs, 2006). North-northeast trending shear and tear faults of the Sevier orogeny appear to be channels for intrusions and related hydrothermal, mineralizing aqueous fluids in the Tintic District (Morris, 1964). The mineralization occurs as porphyry-, vein-, and carbonate replacement-type deposits. Vein-type deposits are widest and longest in intrusive phases and tend to form groups of short, sub-parallel veins or disappear entirely in the extrusive volcanic rocks just 50 to 100 m away from the stock (Morris, 1964). Mineralized deposit type, mineralogy and alteration varies by sub-district and their distribution suggests there is more than one feeder zone for the Tintic District (Figure 6-6).

The Main District is characterized by carbonate-hosted Pb-Zn-Ag replacement deposits and Cu-Au rich epithermal ‘fissure vein’ deposits (Krahulec and Briggs, 2006). Veins in the Main District appear to culminate in replacement deposits to the north, occurring dominantly in hydrothermally dolomitized limestone and consisting of columnar and pod-like bodies connected by pipe-like, tabular and irregular masses, forming continuous ‘ore runs’ (Morris, 1964). Cross-faults and abrupt changes in bedding orientation are important structures to localize the columnar bodies, and concentrate mineralization, as is the case at the high-grade Mammoth pipe located north of the Silver City intrusive complex (Morris, 1964; Krahulec and Briggs, 2006; Johnson and Christiansen, 2016).

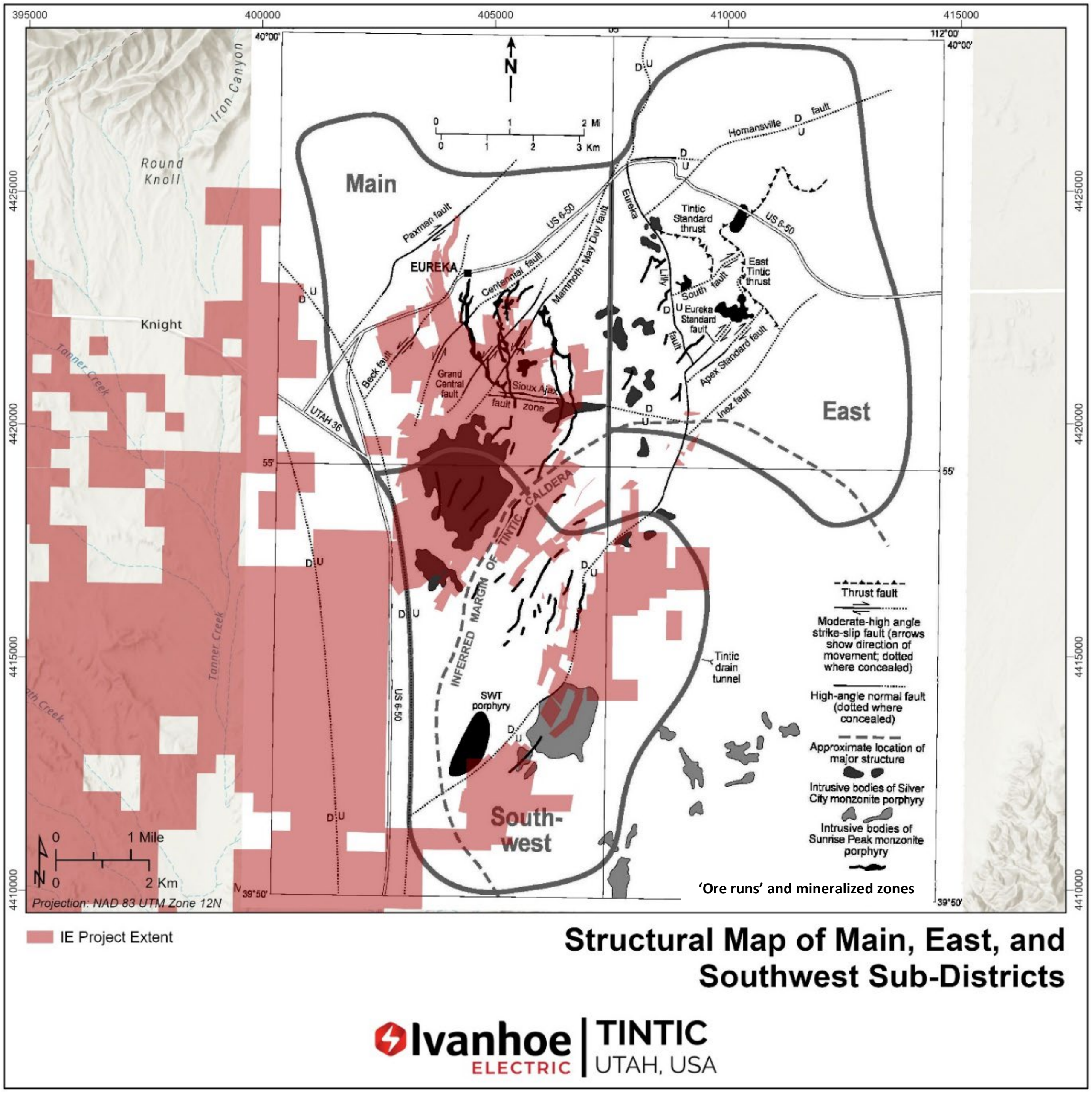
The Main District has produced the most out of the four sub-districts, with ~12.9 Mt of mineralized material chiefly from five replacement deposits; the Gemini, Mammoth-Chief, Plutus, Godiva, and Iron Blossom 'Ore Runs' (Tower and Smith, 1987; Krahulec and Briggs, 2006). These deposits mainly lie within the Tintic Syncline at the intersection of north-easterly trending faults and favorable carbonate strata (Morris, 1964; Krahulec and Briggs, 2006). Cu-Au rich epithermal fissure veins of the Main District lie proximal, hosted within dolomites and limestones (Krahulec and Briggs, 2006) or within the late Eocene Silver City intrusive complex (Lindgren et al., 1919; Tower and Smith, 1987; Krahulec and Briggs, 2006).

The East District mineralization is hosted in similar but more complex intersections in Paleozoic strata, under a thin veneer of Tertiary volcanic rocks (Brannon, 1982). Most of the past mineral production from both Main and East sub-districts is localized near or north of a concealed Jurassic tear fault approximately coinciding with the Inez Fault in the East District and the northwest caldera rim (Krahulec and Briggs, 2006). The Burgin mine is representative of Pb-Zn-Ag replacement deposits, while the Trixie mine represents Cu-Au 'fissure veins', breccias and replacement bodies found in the East District (Krahulec and Briggs, 2006). The hypothesized porphyry centers (Big Hill and Silver Pass lithocaps) of the East District have been tested by Anglo American and Kennecott without success to date.

While the East District is likely sourced from a separate feeder zone than the Main District, the North District mineralized deposits appear to have been sourced by the same feeder zone as the Main District, based on metal zonation. The North District has historically produced the least out of the four sub-districts, being characterized by oxidized Pb-Zn-Ag rich CRDs including the Scranton mine, New Bullion and Lehi Tintic properties. These deposits, however, contain on average the highest-grade zinc mineralized material of the Tintic District (Krahulec and Briggs, 2006). Yet, it is not clear if these are distal to other sub-districts, or if they are sourced from a separate igneous center (Armstrong, 1969). The fact remains, however, that virtually no copper or gold was produced from these mines.

6.2.4 Basin and Range

Post-volcanism basin and range extension, and related high-angle normal faults, resulted in the current block-faulted East Tintic Mountain range. North-trending normal faults of the Basin and Range, like the southern Diamond fault aligned with the Eureka Lily fault are the youngest structures in the Tintic mining district (Morris, 1964). The East Tintic Mountains were uplifted and rotated 10-20˚ E during the Basin and Range extension (Morris and Lovering, 1979). The range is interpreted to be bounded by two or more north-northwest range front faults, which helped accommodate the modest block tilt (Cook and Berg, 1961; Mabey and Morris, 1967).



Source: IE (2023), modified from Krahulec and Briggs (2006)

Figure 6-6: Simplified structural map of the Main, East, and Southwest Tintic Sub-Districts (outlined in grey) showing the IE Tintic Property (red)

6.3 Property Geology

IE interests in the Tintic District are focused on the southern portion of the Main District where Paleozoic sedimentary rocks and late Eocene – Oligocene volcanic rocks are intruded by the Silver City intrusive complex. Over 2,000 m of Paleozoic stratigraphy is exposed at the property ranging from the early Cambrian Tintic Quartzite at the western flank through the Mississippian Humbug Formation on the east. The rocks above the Tintic Quartzite are predominantly comprised of limestone and dolomite with a few units that have a greater siliciclastic component. Thin-skinned thrusting during the Sevier orogeny resulted in a complex pattern of faults and folds in the Paleozoic stratigraphy dominated by the east-west Sioux-Ajax fault through Mammoth and a large, east-verging asymmetric anticline-syncline pair that is cut by northeast trending faults. The thrust faults that underly this folding have been identified in mines in the East Tintic District and locally at surface when not covered by later volcanic rocks. North of the Sioux-Ajax fault, the ‘ore runs’ of the Main District occur as sub-horizontal bodies connected by chimneys or pipes where crossed by faults in the shared subvertical limb of the anticline-syncline pair and along the axis of the Tintic syncline at the eastern margin. Exposure of Paleozoic rocks south of the Sioux-Ajax fault is limited to a <2 km^2 area between the Silver City intrusive complex to the southwest and overlying volcanic rocks to the southeast; it does not show the magnitude of folding found to the north of the fault. Instead, the beds here dip moderately to the northeast and are cut by steep reverse faults referred to as fissures when mineralized which continue south to the contact with the intrusion. These fissures and the subvertical chimneys and pipes tend to be more Cu-Au rich than the sub-horizontal Ag-Pb-Zn rich ‘ore runs’ north of the fault. Where these fissures intersect the contact with the Silver City intrusive complex, deposits of massive Fe-oxide and halloysite occur such as the Dragon Mine.

Late Eocene-Oligocene volcanic and intrusive activity followed the deformation of the Paleozoic stratigraphy and established the hydrothermal system which formed the deposits of the Tintic District and hosts typically more pyritic Cu-Au rich fissure veins. The volcanic phases generally predate the intrusions observed at surface. The oldest volcanic rocks are the ~35.2-35.3 Ma Packard Quartz Rhyolite (PQR) and Swansea Quartz Rhyolite (SQR) which are nearly identical in composition and likely related to each other. A series of recessive rhyolitic dikes are also present on the ridges around Mammoth Valley and periodically encountered in underground mines which are probably related to these units. The next oldest volcanic series encountered in the mapping area are the ~34.7 Ma alkalic Sunrise Peak latite tuffs (SPV) and volcaniclastics that are typically encountered at low elevations to the south around Ruby Hollow and Treasure Hill and as xenoliths within the Silver City intrusive complex. This unit is the primary host rock of the SWT porphyry ~4 km to the south. Overlying these sediments in the northeast corner of the mapping area, east of the Iron Blossom #3 shaft, are alkalic lapilli ash-flow tuffs and volcanic breccias related to the Latite Ridge Latite (LRL). These volcanic rocks are not common in the Project area but do occur along portions of the eastern property boundary. Stratigraphically above the LRL units are the ~33.7 Ma high-K calc-alkaline to weakly alkalic lavas of Rock Canyon Latite (RCL) that cover much of the southeast part of the mapping area. Lastly, the smaller volume alkalic Ruby Hollow Latite (RHL) biotite ash-flow tuff, airfall tuff, and associated surge deposits cap nearly all ridges in the central to eastern extents of the mapping area representing the final episode of late Eocene-Oligocene alkalic volcanism in the region.

Phyllic alteration in the volcanic units is usually more widespread and intense around the causative quartz-pyrite-sericite fissure veins than within the neighboring intrusive rocks, which reflects the relative ease these rocks are hydrothermally altered. This is particularly the case for the Ruby Hollow Latite. Potassic and propylitic alteration overprints have been identified locally as well, though the destructive nature of the later phyllic alteration often obscures these alteration products.

Several small intrusions were emplaced into this volcanic package and the Paleozoic stratigraphy across the southern Main district and western East district. By far the largest intrusion is the Silver City intrusive complex that makes up the southern half of the IE property and hosts several of the porphyry prospect areas. Detailed mapping revealed a complex intrusive history in the Silver City including at least seven separate intrusive phases related to, or post-dating, the emplacement of the Silver City intrusive complex at ~33.0 Ma based on U-Pb age dating completed by IE. Two main phases make up the majority of the intrusive complex, an early medium- to coarse-grained equigranular phase (SCMDe) and a medium-grained weakly porphyritic phase (SCMDp). A slightly more leucocratic quartz-bearing and compositionally distinct weakly porphyritic lobe of quartz monzonite (SCQM) occurs between Murray Hill and Rabbits Foot Ridge as well. All phases of the Silver City intrusive complex contain miarolitic cavities with epidote and actinolite that often have albitic halos. Xenoliths of quartzite are particularly common in the SCMDe phase and can occur up to 150 m across. Other xenoliths include hornfelsed volcanic rocks throughout the intrusive complex and skarn altered carbonates near the contact with the Paleozoic stratigraphy along the northeastern boundary (Figure 6-7). SCMDe and SCMDp units both have widespread weak sodic-calcic alteration though SCMDp hosts the majority of the actinolite ± magnetite veining observed. Fissure veins of quartz-pyrite-sericite cut across these units with relatively narrow alteration halos ~3-15 m across.

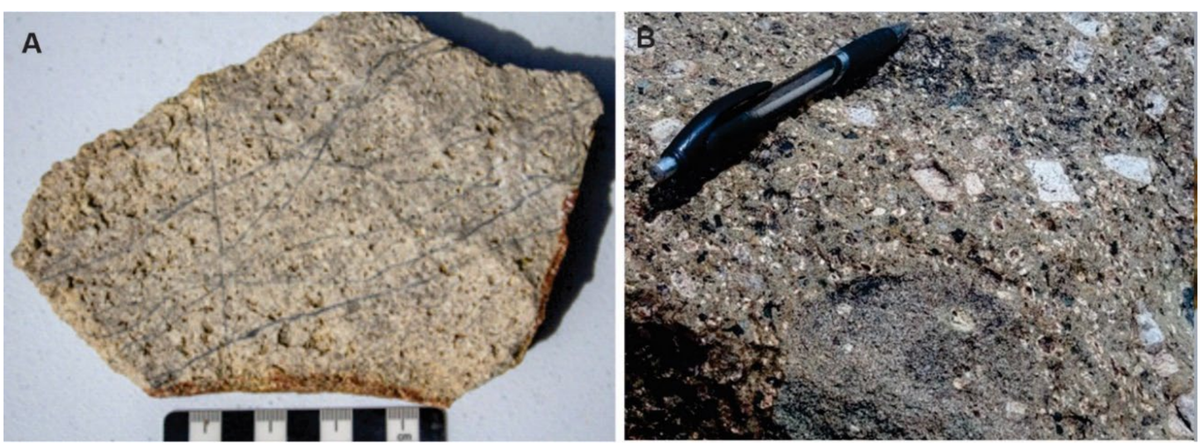
The oldest mapped porphyritic intrusive phase is the Crowded Granodiorite Porphyry (CGP) which is older and slightly more differentiated than the SCQM. It can be distinguished from other porphyry phases readily based on texture, grain size, and the abundance of pyroxene (5-8 vol.%) with only subordinate amphibole much like the main phases of the Silver City intrusive complex. It occurs as an irregular stock to the southwest of the Dragon Mine near Sunbeam, and on either side of Rabbit's Foot Ridge where it has been crosscut by younger porphyritic intrusions. The CGP is a much more noticeably porphyritic rock than either SCMDp or SCQM phases of the Silver City intrusive complex and can vary from medium- to coarse-grained phenocrysts or glomerocrysts, often making it difficult to distinguish from some of the nearby volcanic stratigraphy when affected by phyllic alteration and Fe-oxide staining. Intruding CGP at Rabbit's Foot Ridge and the top of Murray Hill is the much more porphyritic Rabbit's Foot Ridge Monzonite Porphyry (RFRM) (Figure 6-8a). They have similar compositions to each other, and modally contain minor biotite > amphibole ≥ clinopyroxene. These porphyries characteristically have a coarse sugary aplitic groundmass (0.1 – 0.3 mm) owing to their larger volume and probably depth of erosion in the vicinity of Murray Hill. They are commonly weakly propylitic-altered and sometimes are cut by early quartz and magnetite veinlets. A largely dissociated series of plugs and dikes occurs to the northwest of the Dragon Mine in Skarn Valley as the Monzodiorite Porphyry (MDP). It is intermixed with smaller dikes of SCMD intruding into the Paleozoic stratigraphy, thus creating a complex mix of lithologies and associated metasomatic alteration. The MDP is the primary unit in which endoskarn has been identified, often with large domains comprised of anorthite and garnet developed through much of the area. Both the MDP and SCMD result in minor skarn development in the carbonate rocks they intrude, but the resulting alteration seems to be more intense around the MDP dikes and only up to a few meters thick around the SCMD intrusions.

The remainder of the porphyritic phases are volumetrically subordinate with fine aplitic groundmasses owing to their smaller size and likely deeper source of origin than the other intrusive phases. The oldest of these are diorite and granodiorite porphyry dikes grouped as the Sunbeam Granodiorite Porphyry (SGDP) followed by the Murray Hill Quartz Granodiorite Porphyry (MHP), the Sunbeam Granite Porphyry (SGP), and the Megacrystic Quartz Monzonite Porphyry (QMP) (Figure 6-8b). The SGDP, MHP, and SGP dikes are primarily distinguished based on phenocryst abundance though they are otherwise texturally and mineralogically similar. SGDP and SGP dikes are associated with the potassic alteration and quartz veining observed in the Sunbeam-Joe Daly area and are thought be the causative intrusions for this alteration in that area. QMP is the youngest phase and is easily distinguished with megacrystic K-feldspar and quartz eyes and typically occurs as small plugs 10 - 100 m across. The QMP crosscuts all the other units and is not typically altered or veined at surface, although in one locality 500 m south of Sunbeam it is cut by quartz-pyrite-sericite veins and phyllic alteration which suggests that it is at least overprinted by some late-stage hydrothermal alteration. The QMP dikes have been dated at ~32.1 and ~32.7 Ma and provide rough constraints on the age of veining in the district.

A paragenetic diagram showing all non-carbonate rock types and lithology codes for the Tintic Project and relative ages of some rock types is shown in Figure 6-9. Figure 6-10 illustrates the Project area stratigraphic column and associated lithology codes used in geologic mapping. Figure 6-11 shows the 1:2,500 scale geological map of the Project as created by IE. A cross section showing the simplified property geology is presented in Figure 6-13.

Source: HPX (2020)

Figure 6-7: Drill core samples from hole DDH2012-02 (completed by Applied Minerals) of (A) intense carbonate-quartz veining at 175 m downhole depth and (B) pyroxene skarn at 370 m downhole depth



Source: HPX (2020)

Figure 6-8: Surface samples of (A) sheeted A-type quartz veining from the Rabbit's Foot Ridge porphyry prospect with potassic alteration and sulfides within veins and (B) field photo of a quartz-monzonite porphyry outcrop with pen for scale. The xenolith (lower center) has similar composition and may be an autolith

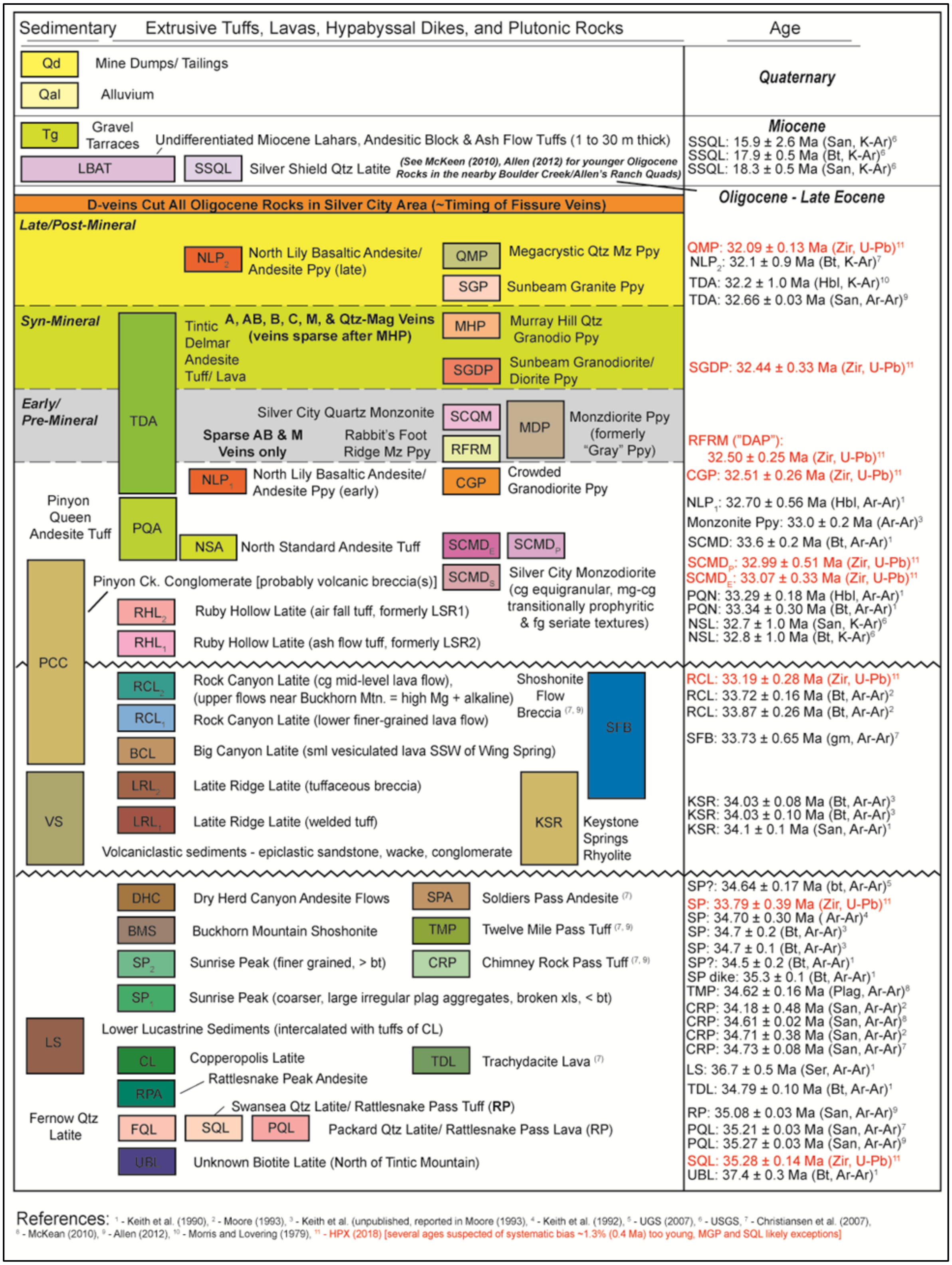


Figure 6-9: Paragenetic diagram showing all non-carbonate rock types and lithology codes for the Tintic Project and relative ages of various rock types.

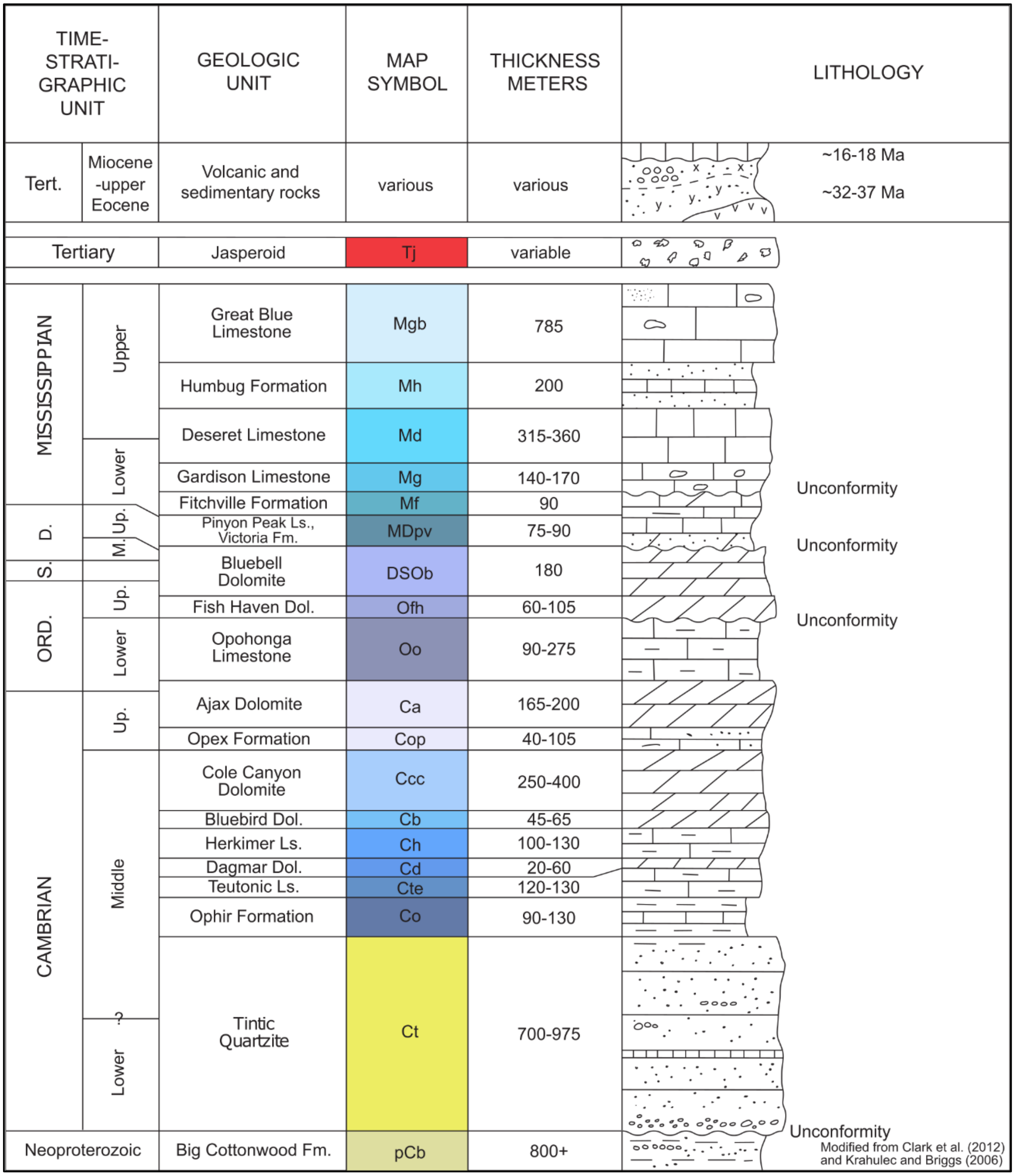
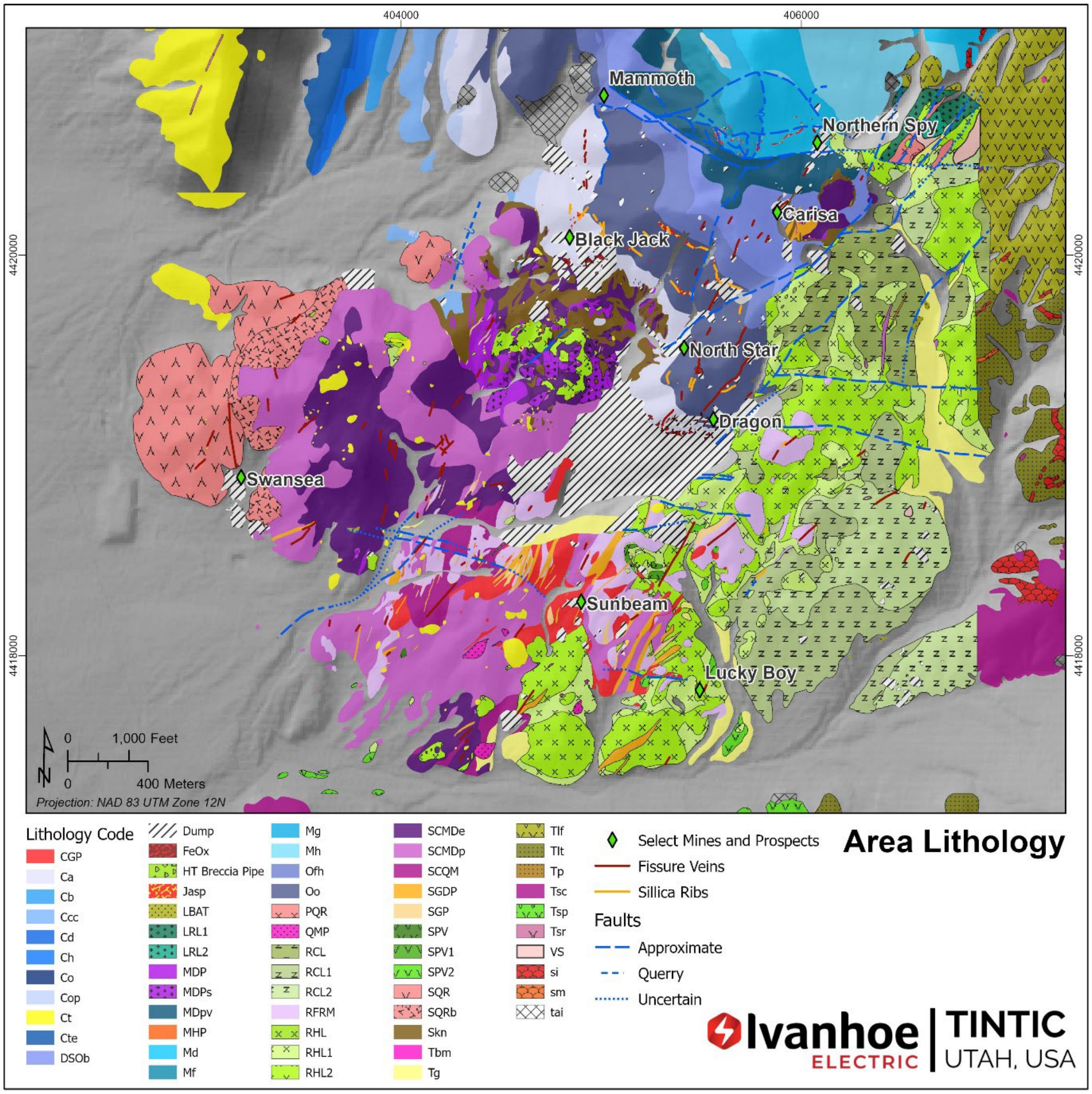


Figure 6-10: Sedimentary Rock Stratigraphic Column for the Tintic District



Source: IE (2023)

Figure 6-11: Tintic Project property lithology map resulting from the 1:2,500 scale mapping program

Note: Refer to Figure 6-9 and Figure 6-10 for legend code descriptions.

6.4 Significant Mineralized Zones

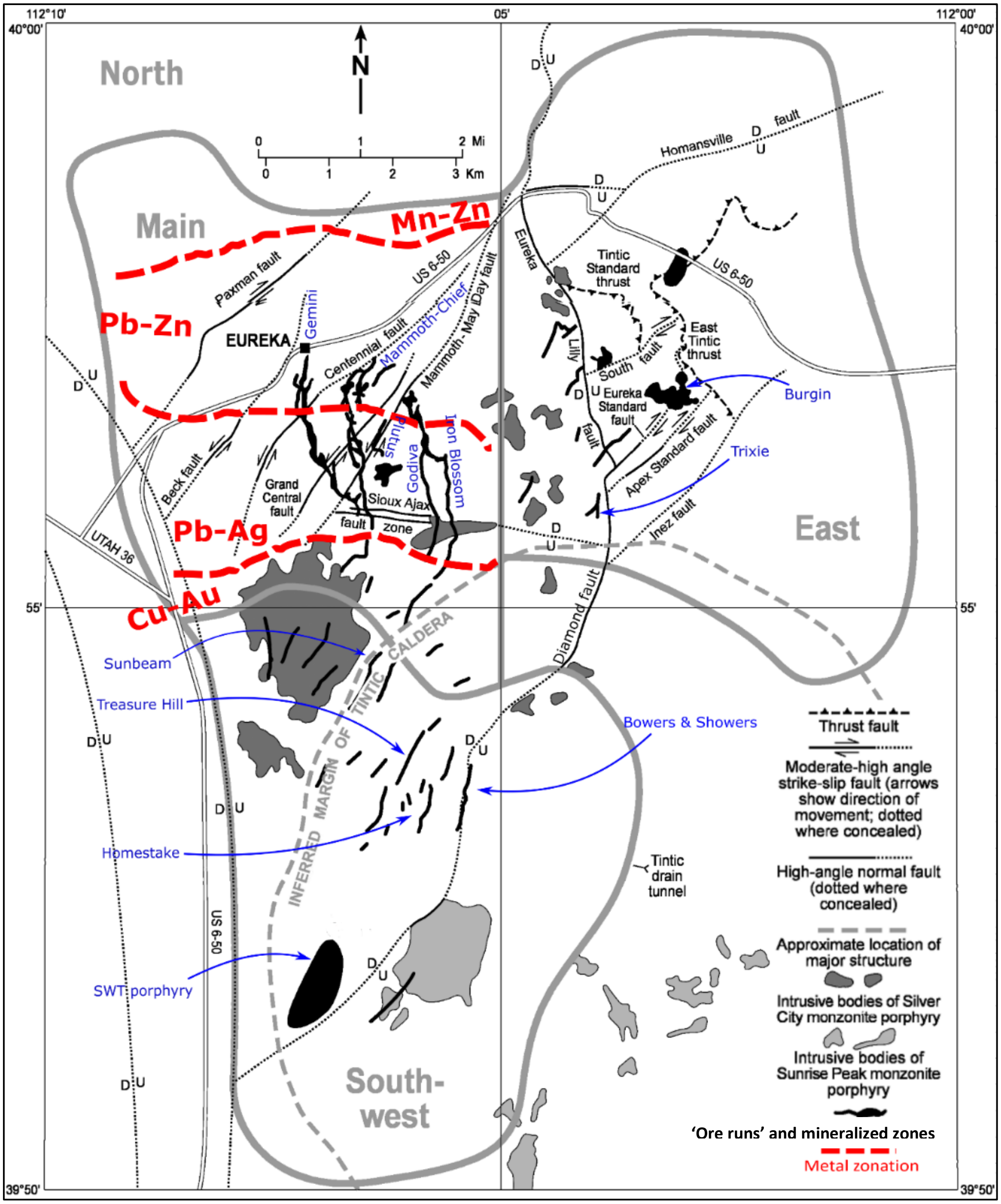
Predominantly, historical production in the Tintic district focused on Ag-Pb-Zn CRDs hosted in Paleozoic limestones, with lesser production from steeply dipping Au-Ag-Pb-Zn-Cu fissure veins. The main precious and base metal bearing minerals in the District are enargite, tetrahedrite, galena, sphalerite, pyrite, marcasite, and native gold, silver, and copper. However, many more mineral species are present, including minerals that bond with copper, silver, tellurium, arsenic, sulfur, carbonates, and hydroxides (Krahulec and Briggs, 2006). There are clear metalliferous domain changes from the Southwest to the Main Tintic Districts. Cu-Au dominance transitions into Pb-Ag, then into Pb-Au and finally into Pb-Zn in the northern portion of the Main Tintic District. This zonation also indicates that the Southwest Tintic District is closer to the original source of the polymetallic bearing fluids (Figure 6-12).

In the Tintic District, three deposit types have been identified:

- Widespread ‘fissure vein’ deposits that host gold, silver, lead, zinc and lesser copper;
- CRDs of primarily lead and zinc; and
- Porphyry copper deposits.

A compilation of the precious and base metals mineralogy in the deposits of the Tintic District (Lindgren et al.,1919; Cook, 1957; Morris, 1964; Morris, 1968; Armstrong, 1969; Levy, 1987; Tower and Smith, 1987; Krahulec and Briggs, 2006) delineates a distinct metal zonation inwards from the North District to the southern edge of the Main District, from Mn-Zn to Pb-Zn-Ag to Cu-Au (Figure 6-12 and Figure 6-13). This zonation pattern is the same at Bingham and many other porphyry deposits (Sillitoe, 2010; Porter et al., 2012). There are, however, exceptions to this zonation pattern wherein Pb-Zn-Ag is found in copper mineralized material, but copper is always absent from Pb-Zn-Ag mineralized material to the north. This overlapping relationship suggests telescoping (Krahulec and Briggs, 2006). Fluid inclusion studies (Reed, 1981) validate the overall metal zonation pattern northward from Silver City by showing a decrease in temperature related to more Zn-rich mineralized material. In addition to metal zonation, textural zonation of gangue minerals is also quite reliable, wherein the size of minerals gradually decreases northward from Silver City. Coarse quartz and barite are found in veins in igneous rocks while medium quartz, barite and jasperoid is found in veins in Paleozoic strata. Eventually fine quartz and barite disappear and only fine jasperoid remains in the Zn mineralized material.

To the south of the Main District, the Southwest District is host to modest volcanic-hosted high-sulfidation epithermal vein deposits presumably in-part related to the deep, sub-economic SWT porphyry (Krahulec, 1996; Krahulec and Briggs, 2006). Prominent mines in the Southwest District include the Homestake mine and Bowers and Showers mine near the Treasure Hill deposit, and the Sunbeam mine on the northern edge in the Silver City intrusive complex. These high-sulfidation epithermal deposits trend north-northeast along Sevier-related shear and tear faults. Similar to the metal zonation in the Main District, there is a clear geochemical zonation in the high-sulfidation epithermal veins of the Southwest District, from Cu-Ag-As rich veins near the SWT porphyry outward to Cu-Pb-Zn-Au-Sb to the Alaska prospect north of Treasure Hill. Alteration zonation supports this metal zonation, where veins to the south are associated with sericite-pyrophyllite-diaspore and lower temperature veins to the north contain illite, dickite and barite (Krahulec and Briggs, 2006).



Source: modified from Krahulec and Briggs (2006)

Figure 6-12: Simplified Structural Map of the Main, East and Southwest Tintic Sub-Districts (outlined in grey) Illustrating Metal Zonation (red) and Mined 'Ore Runs'

Fluid inclusion studies of quartz gangue related to copper mineralization, albeit of questionable quality, in the Southwest District (Ramboz, 1979) also serve to validate this geochemical zonation, where chalcopyrite formed at 350˚C homogenization temperature in the SWT porphyry and decreases to 200˚ C within two miles to the north.

Although these zonation patterns suggest the SWT porphyry may be the principal source of hydrothermal alteration and mineralization for deposits in the Main and North Districts, Hildreth and Hannah (1996) show that the Main District copper mineralized material is separate from the SWT porphyry by measuring 245 fluid inclusion homogenization temperatures (HT) in 41 polished thick sections of quartz in fissure veins. While the HT decreases from the SWT porphyry northward, it increases again near Treasure Hill, south of the Silver City intrusive complex. Billingsley and Crane (1933) hypothesized that there are ~10 individual mineral centers at Tintic with each copper-rich “chimney” representing a center, while Krahulec and Briggs (2006) hypothesized that a phase of the Silver City intrusive complex may be a mineral center responsible for vein mineralization in the southern Main District. Aeromagnetic surveys by Mabey and Morris (1967) show a magnetic high in the southeast corner of the Main District that Krahulec and Briggs (2006) infer to be unexposed stock and the ultimate source of metals in the chimneys and ‘ore runs’ of the Main District.

IE’s land holdings cover approximately two-thirds of the Main District’s CRDs and the multi-phase Silver City monzonite stock, which appears to be the focus of the CRD ‘ore runs’ and fissure veins. The area is also a prospective host to porphyry-style mineralization at depth when considering the proposed porphyry deposition model (see Section 6.6).

The Main District is characterized by carbonate-hosted Pb-Zn-Ag replacement deposits and Cu-Au rich epithermal fissure vein deposits (Krahulec and Briggs, 2006). Veins appear to culminate in replacement deposits to the north, predominantly occurring in hydrothermally dolomitized limestone and consisting of columnar and pod-like mineralized bodies connected by pipe-like, tabular and irregular masses of mineralization, forming continuous ‘ore runs’ (Morris, 1964). Cross-faults and abrupt changes in bedding orientation are important structures to localize the columnar bodies and to concentrate mineralization, as is the case at the high-grade Mammoth pipe located north of the Silver City intrusive complex (Morris, 1964; Krahulec and Briggs, 2006; Johnson and Christiansen, 2016).

6.5 Deposit Type

Mineralization in the Tintic District is typical of a porphyry-epithermal magmatic hydrothermal system. Known deposits predominantly occur as CRDs and epithermal veins (e.g., fissures) with a few small porphyry deposits including the SWT porphyry south of the Main District and the Big Hill porphyry in the East District. Exploration prospects identified by IE on the Project include CRDs in the Paleozoic stratigraphy, areas with porphyry exploration potential in the Silver City intrusive complex and at depth below the CRDs, and skarns at intrusive contacts in the carbonate rocks. The prospect areas are described in Section 7.7.

6.6 Geological Model

The porphyry copper system (Sillitoe 2010) is shown in Figure 6-14, modified to highlight the mineralizing systems found at Tintic and the block tilt that is estimated to have affected the district. Figure 6-15 shows the porphyry copper model in the context of Tintic mineralization and surface features. Porphyry copper systems are recognized globally as potential systems to host Cu ± Mo ± Au ± Ag deposits of various sizes and grades.

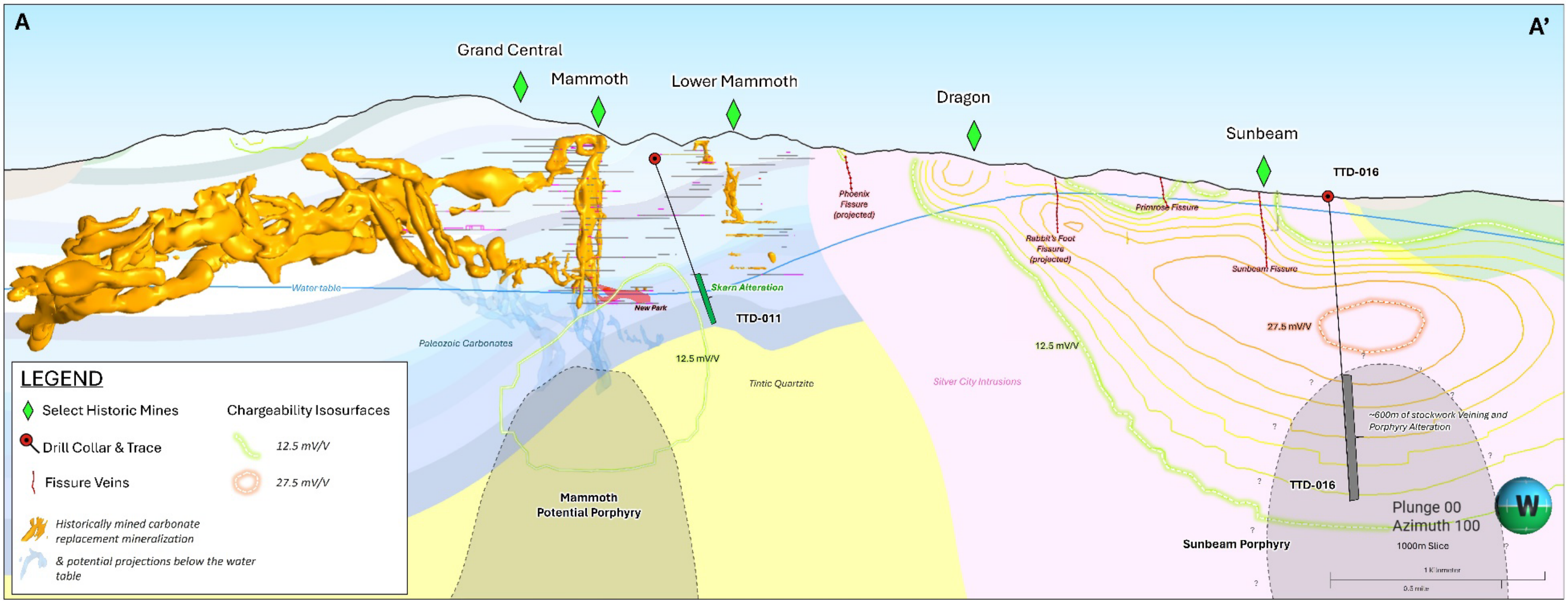
The alteration and mineralization in porphyry copper systems are known to comprise many cubic kilometers of rock and are zoned outward from stocks or dike swarms, which typically comprise several generations of intermediate to felsic porphyry intrusions. Porphyry Cu ± Au ± Mo deposits are centered on the causative intrusions. Carbonate wall rocks can host proximal Cu-Au skarns, distal Zn-Pb and/or Au skarns, and, beyond the skarn front, carbonate replacement Cu and/or Zn-Pb-Ag ± Au deposits, and/or sediment-hosted, distal disseminated Au deposits. High-sulfidation epithermal deposits may occur in lithocaps above porphyry Cu deposits, where massive sulfide lodes tend to develop in deeper feeder structures and Au ± Ag-rich, disseminated deposits form at shallow levels within the uppermost 500 m or so. Intermediate sulfidation epithermal mineralization, chiefly veins, may develop on the peripheries of some lithocaps. The alteration-mineralization in the porphyry Cu deposits is zoned upward from barren, early sodic-calcic through mineralized potassic, chlorite-sericite, and sericitic, to advanced argillic which in part make up the lithocaps and may attain >1 km in thickness if not eroded. Low sulfidation state chalcopyrite ± bornite assemblages are characteristic of potassic zones, whereas higher sulfidation-state sulfides are generated progressively upward together with temperature decline and the resultant greater degrees of hydrolytic alteration, culminating in pyrite ± enargite ± covellite in parts of the lithocaps. The porphyry Cu mineralization occurs in a distinctive sequence of quartz-bearing veinlets as well as in disseminated form in the altered rock between the veins. Magmatic-hydrothermal breccias may form during porphyry intrusion, with some of them containing high-grade mineralization because of their intrinsic permeability. In contrast, most phreatomagmatic breccias, constituting maar-diatreme systems, are poorly mineralized at both the porphyry Cu and lithocap levels, mainly because many of them formed late in the evolution of systems.

Epithermal gold-silver deposits form in the near-surface environment from hydrothermal systems typically <1.5 km below the Earth's surface (Hedenquist et al., 2000). They are commonly found associated with centers of magmatism and volcanism and modern hot-spring deposits and both liquid- and vapor-dominated geothermal systems are commonly associated as well. Epithermal gold deposits are considered to comprise one of three subtypes (Sillitoe and Hedenquist, 2003): high sulfidation, intermediate sulfidation, and low sulfidation, each denoted by characteristic alteration mineral assemblages, occurrences, textures, and, in some cases, characteristic suites of associated geochemical elements (e.g., Hg, Sb, As, and Tl). Base metals (Cu, Pb, and Zn) and sulfide minerals may also occur in addition to pyrite and native Au or electrum. In some epithermal deposits, notably those of the intermediate-sulfidation subtype, base metal sulfides may be present in significant amounts that often show metal zoning which reflects the hydrothermal fluid temperature change with: relatively more Cu nearer the source, an increased Zn component further away, and Mn beyond that. If carbonate host rocks are available, CRDs may form as mantos and chimneys that can display similar metal zoning.

Figure 6-13 is an illustrative cross-section showing known mineralization at Tintic (i.e., historically mined CRD ‘ore runs’ and fissure veins) relative to a hypothetical porphyry intrusion at depth. Also shown is a hypothetical porphyry intrusion closer to surface in the Sunbeam porphyry prospect area. Figure 6-14 shows the Tintic Mining District porphyry, skarn and CRD mineralized areas in the context of the porphyry depositional / exploration model. Figure 6-15 shows 3D surface features at Tintic combined with a schematic 2D cross-section of the porphyry deposit model illustrating the relationships between types of mineralization on the Project.

6.7 QP Opinion

The QP synthesized the information in this section from various historical sources and prior work on the project and accepts the information. The QP is of the opinion that the geology, structure and mineralization of the Tintic District is clearly understood and documented by several authors over several decades.

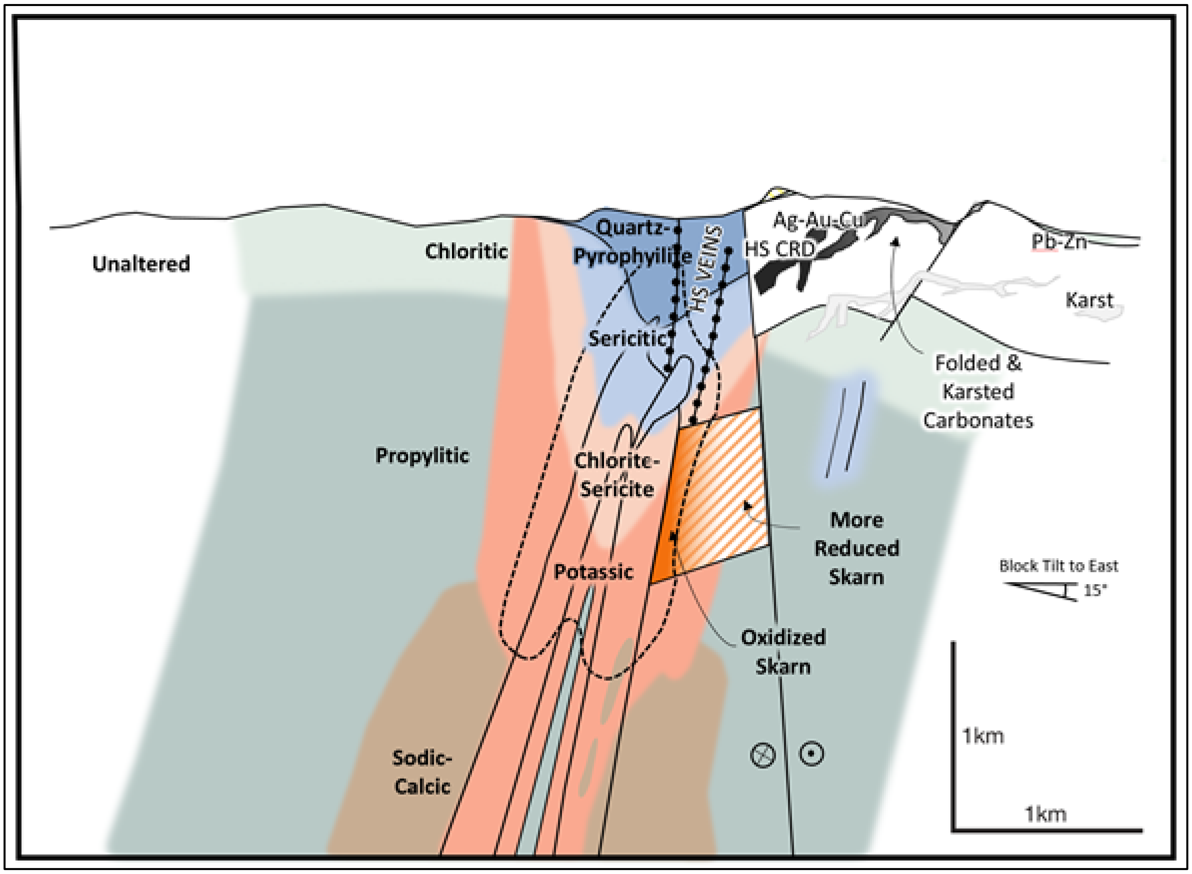


Source: IE (2023)

Figure 6-13: Illustrative cross-section looking east (1,000 m thick section)

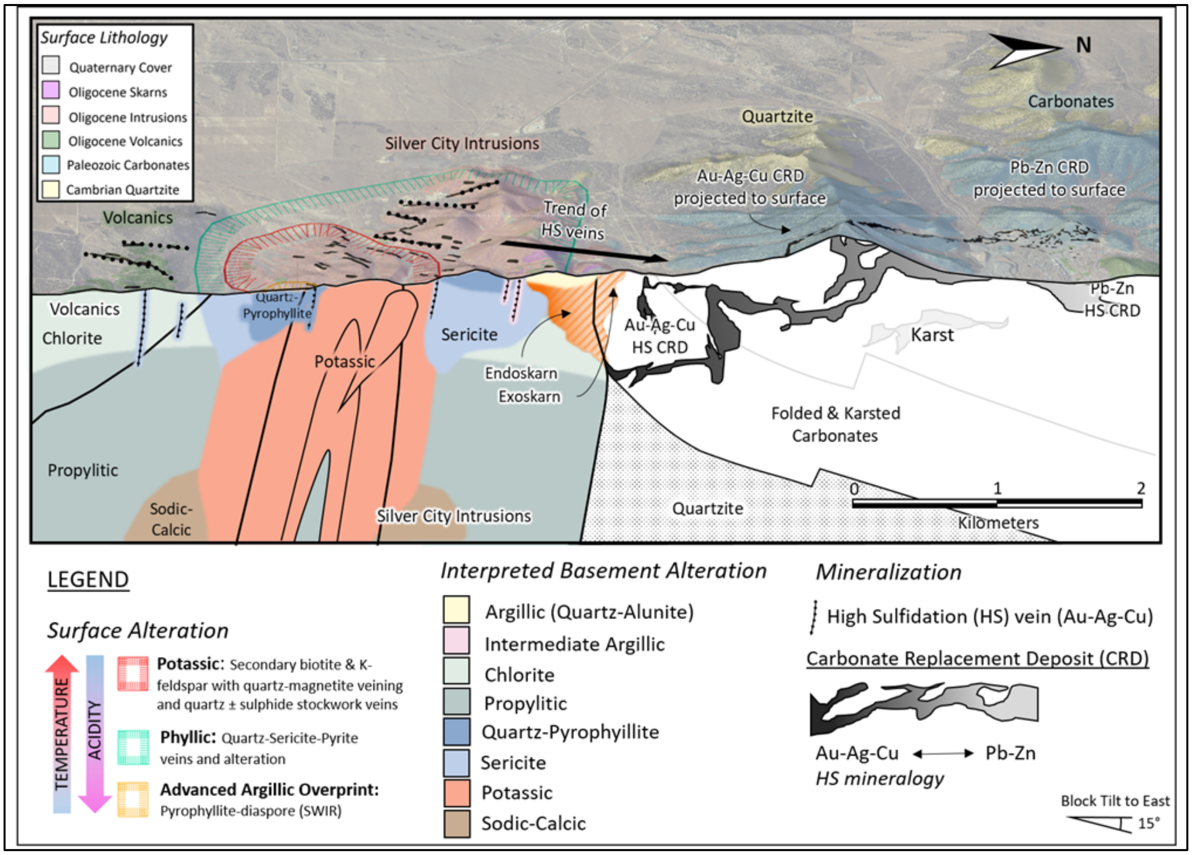
Note: Illustration shows the simplified lithology at Tintic, Typhoon™ chargeability values, and the known mineralization (i.e., historically mined CRD ‘ore runs’ and fissure veins) relative to a hypothetical porphyry intrusion at depth are shown. A hypothetical porphyry intrusion closer to surface in the Sunbeam porphyry prospect area is also shown.

Location of section A-A’ is shown in Figure 7-21.



Source: modified after Sillitoe (2010)

Figure 6-14: Tintic Mining District Porphyry, Skarn and CRD Deposits in Context of the Porphyry Depositional / Exploration Model and including the Estimated Block Tilt that Affected the Region



Source: Kerr and Hanneman (2020a) - modified after Sillitoe (2010) to be Tintic-specific

Figure 6-15: Illustration Showing 3D Surface Features at Tintic Combined with Schematic 2D Cross-section of the Porphyry Deposit Model (modified after Sillitoe (2010) to be Tintic-Specific) that shows the Relationships between Types of Mineralization on the Project

7 Exploration

Exploration by IE on the Tintic Project commenced in late 2017 with an airborne geophysical survey followed by on-the-ground exploration in early 2018. Surface exploration work included a ground geophysical survey and a geological baseline work program consisting of soil and rock grab sampling, age dating, petrology, mapping, prospecting, and identification of key intrusive and alteration phases. Additional work through 2018 and into 2019 included the re-logging of deep historical drill holes at the Dragon prospect and the compilation and 3D digitization of historical mines, underground workings, and mineralized zones termed ‘ore runs’. Exploration work in 2022 and 2023 has comprised reverse circulation and diamond core drilling, and a ground gravity survey along with small programs of soil samples, mapping, and surface sampling.

The geophysical and geological exploration work completed by IE on the Project is summarized in Table 7-1. More detailed information on each program is provided in Section 7.1 to Section 7.6 and reports referenced therein, as well as in Section 8. The significant results of the work and interpretation of the information in the form of three porphyry prospects, six CRD prospects, and one skarn prospect are presented in Section 7.7.

Table 7-1: Summary of IE Geological and Geophysical Exploration on the Tintic Project

Type	Year	Sample Type	Analysis or Task	Total Samples / Study Area
Geophysical Surveys	2017	Airborne Magnetic	1,582 km total line distance	2,850 km^2
	2018-2019	Ground Induced Polarization	389 km total line distance to a depth of ~1,500 m	72 km^2
	2022	Ground Gravity	941 gravity stations	20 km^2
Surface Mapping and Sampling	2018-present	Rock Grab - Surface	Assay (49 element)	866
	2018-2019		Whole Rock Characterization (66 element)	30
	2018-present		Petrography	144
	2018-2021		Age Dating - U/Pb	15
	2018		Age Dating - Ar/Ar	2
	2019		Fluid Inclusions	8
	2018-present	Soil	Geochemistry (53 element)	2,835
	2018	Surface Measurements	Magnetic Susceptibility	1,140
	2018-2019		Short Wave Infrared (SWIR)	3,046
	2018-present	Mapping	Geological Surface Mapping	14.7 km^2
Historical Compilation and Analysis	2018-present	Underground Workings	Shafts Digitized	37
	2018-present		Underground Drifts Digitized	> 626 km
	2018-present		Historical maps digitally scanned	> 8,700
	2018-present		Historical maps georeferenced	>500
	2020	Drilling	Drill Core and RC Chip Holes Re-Logged	15
	2020		Drill Core and RC Chip Handheld XRF Measurements	2,200
	2018-2019		Short Wave Infrared (SWIR) of drill core	3,080
Sioux-Ajax Tunnel Mapping and Sampling	2021	Rock Grab	Detailed Mapping and Geochemical Rock Grab Sampling	280
Remote Sensing	2023	Hyperspectral Imaging	Hyperspectral data from the Tintic area	217 km^2
Drilling	2021	Reverse Circulation Drilling	Reverse circulation drill samples	52
	2022-2023	Diamond Drilling	Drill core samples	2,109

Source: IE (2023)

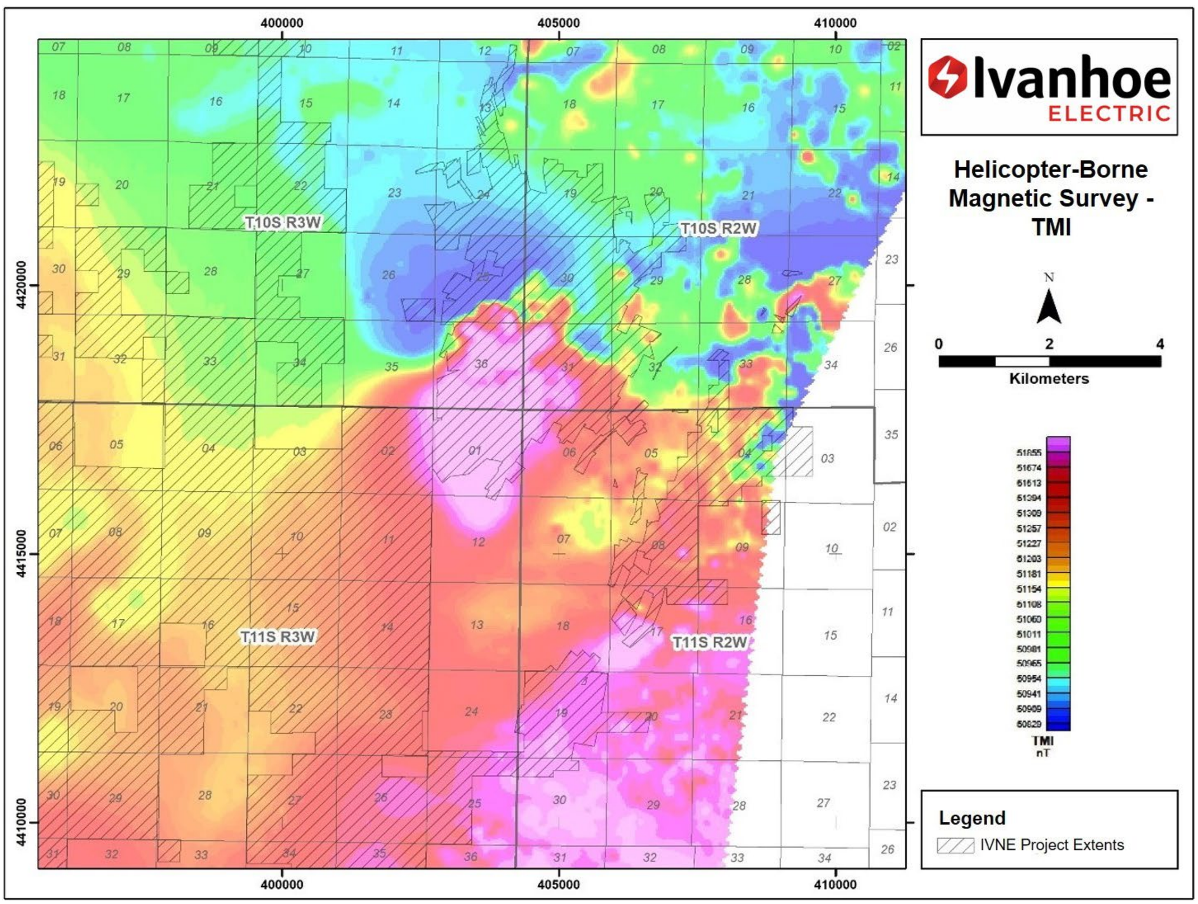
7.1 Geophysical Surveys

IE has completed several geophysical exploration surveys over the Tintic Project area including proprietary Typhoon™ 3D Perpendicular Pole-Dipole (PPD) induced polarization (IP), airborne magnetics, and ground gravity. The geophysical datasets and interpretations have been used to assist with geological interpretation and improved drill targeting.

7.1.1 Airborne Magnetic Survey

Airborne magnetic and radiometric surveys were flown over the entire project area in 2017. IE contracted New-Sense Geophysics to conduct the survey over a 2,850 km^2 block (Figure 7-1). A total of 1,582-line km of data was collected along 200 m spaced, east/west lines with a nominal flying height of 50 m using a Scintrex cesium magnetometer and an RS-500 spectrometer for data acquisition.

Data recovered from the survey were deemed satisfactory quality and a variety of gridded and filtered products were produced to highlight geological features. A 3D Magnetic Vector Inversion (MVI) was performed with the data; the MVI algorithm calculates and removes remanence for the data and provides a 3D location of magnetic bodies. The MVI results were added to the 3D geological model and have been shown to map the extents of the Silver City intrusion.



Source: IE (2021)

Figure 7-1: Tintic Project airborne magnetic survey total magnetic intensity (TMI) representation

7.1.2 Ground Induced Polarization Survey

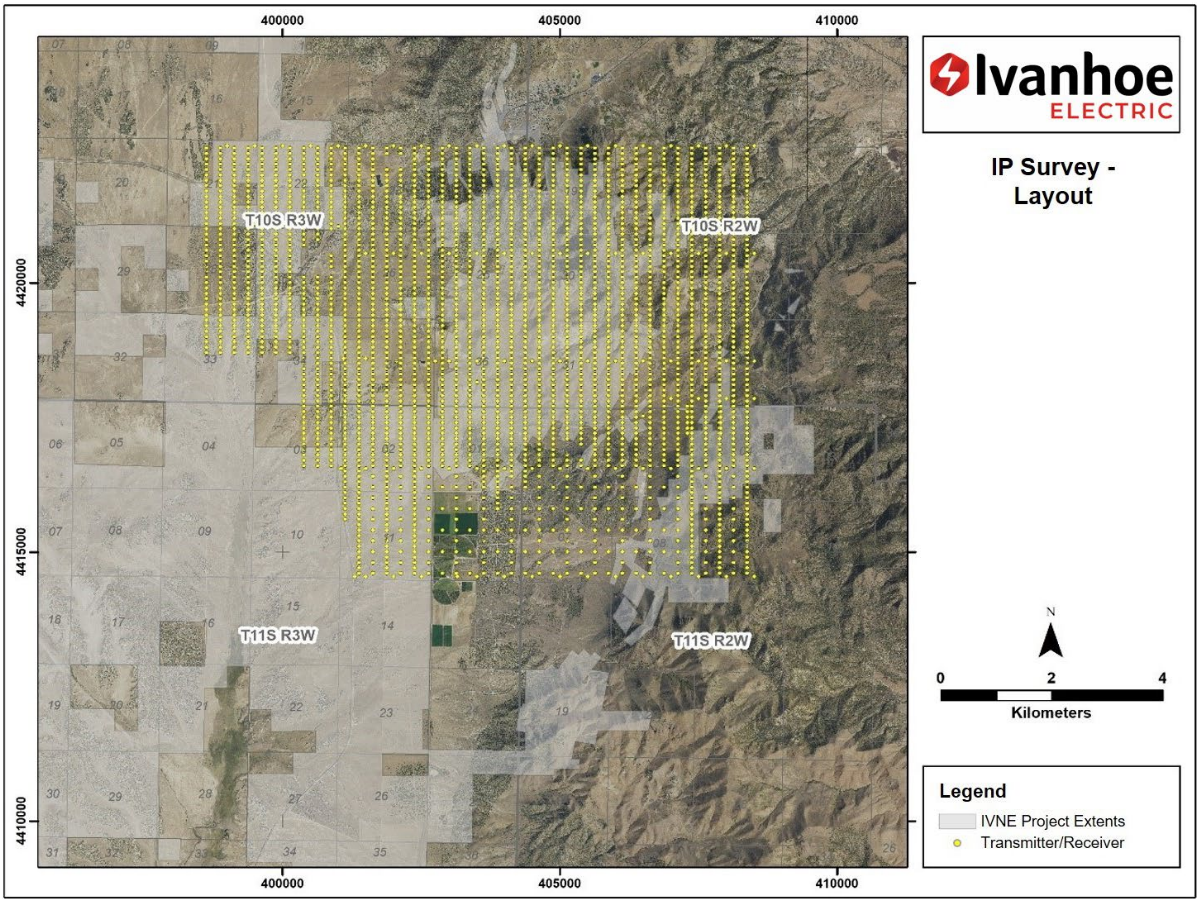
The Tintic Typhoon™ 3D PPD IP survey was conducted by IE and DIAS Geophysical Ltd. (DIAS) in two phases between October 2018 and June 2019. Over 72 km^2 and 389 line-km (with 250 to 500 m data spacing) were surveyed covering the core of the Tintic project area and many of the surrounding mineral claims using IE's proprietary Typhoon™ (Figure 7-2) geophysical transmitting system and the DIAS-32 3D receiver technology. The survey detected resistivity and chargeability to a depth of 1,500 m. Data collected using the Typhoon™ system have reduced noise, allowing for resolution of the subtle, deep features that may be missed with the use of other systems.

The survey design employed at Tintic allowed for the data to be inverted into a 3D volume representing the true locations of recovered signals. This facilitated integration of the data into the 3D geological model.

The final survey design is shown in Figure 7-3.

Source: photo courtesy of IE

Figure 7-2: IE's proprietary Typhoon™ equipment at Tintic in Fall 2018



Source: IE (2021)

Figure 7-3: Tintic Project ground IP survey configuration

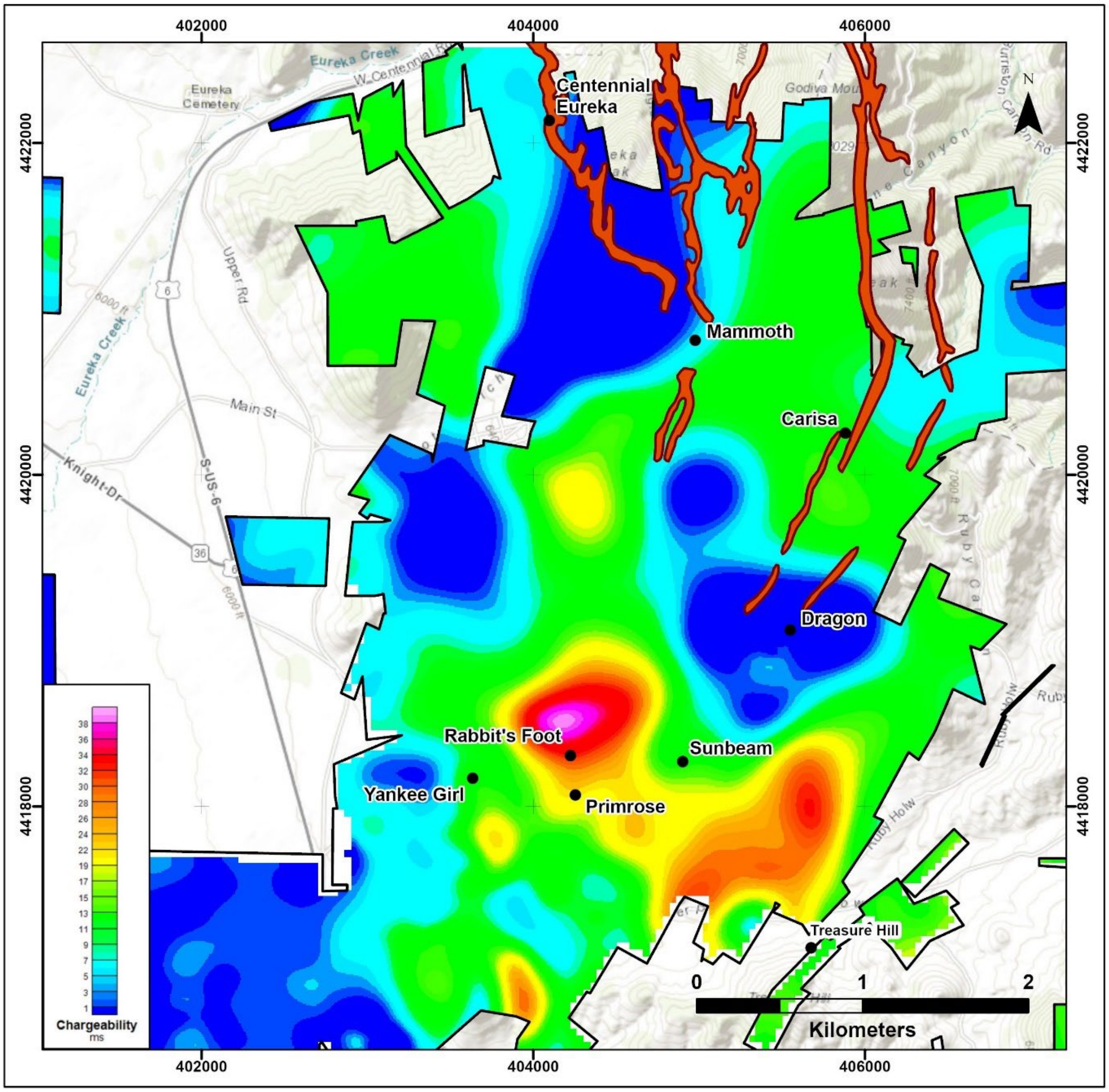
The geophysical survey covered both the Main Tintic CRD prospects and the Silver City porphyry prospects. This survey aided in the identification of resistivity anomalies associated with porphyry copper and CRD styles of mineralization.

The major technical challenge in the survey was measuring IP responses below variably conductive cover in terrain that was steep and rocky. Extensive pre-survey modelling was used to generate a survey plan that would minimize inductive electromagnetic coupling (EMC), maximize the production rate, and provide deep penetration of the subsurface.

The IP data collected in the survey were inverted into a 3D representation of the data by Computational Geoscience Inc. (CGI). In general, EMC is minimal, and the results show a reliable estimation of the subsurface distribution of conductive and chargeable materials. The depth of investigation is typically approximately 1,000 m. However, it is less in the far east of the survey area due to the presence of thick conductive cover. In the more resistive areas, such as those dominated by carbonate rocks, the depth of investigation is closer to 1,500 m.

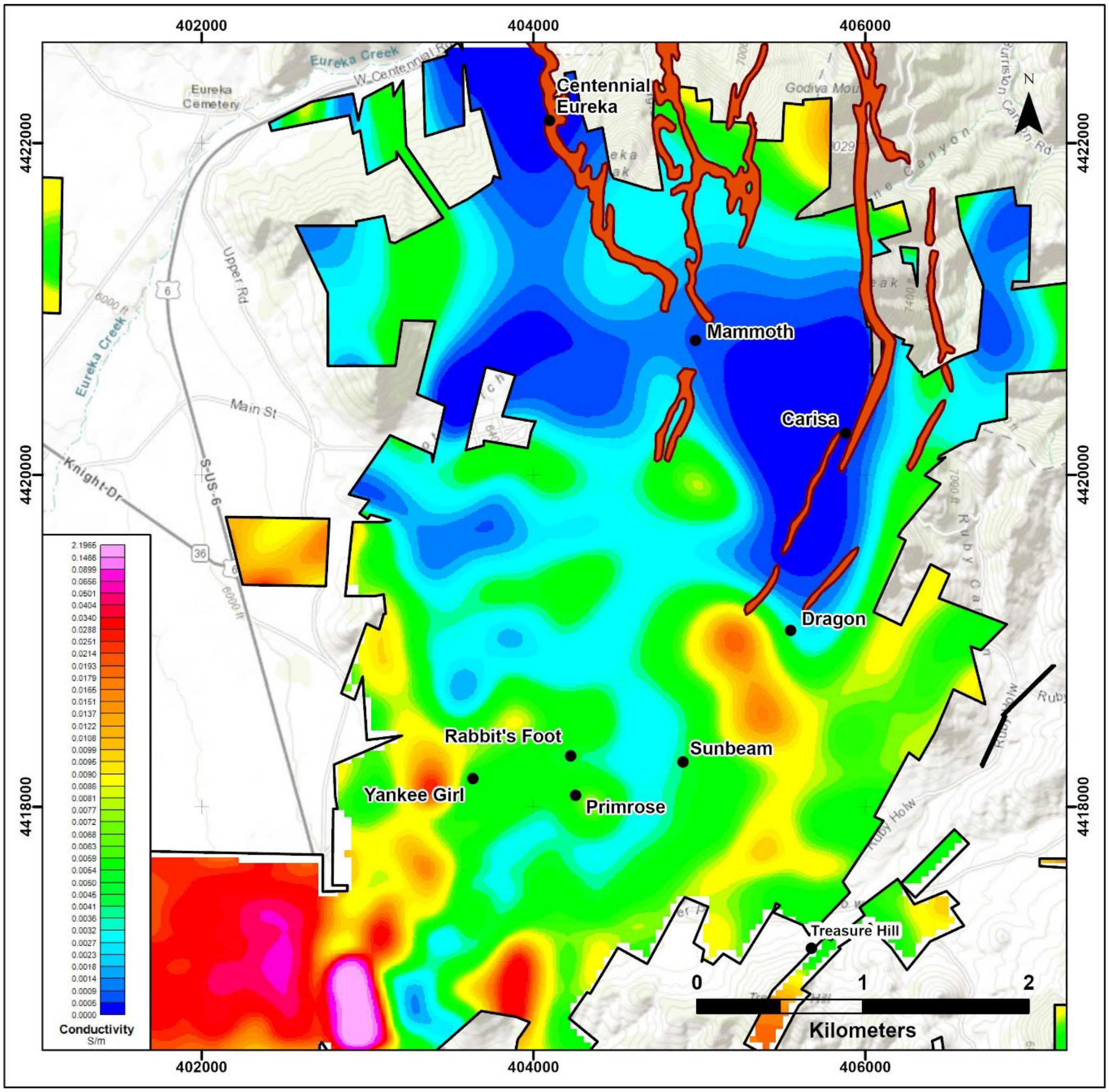
Results of the survey indicate that there may be at least three large-scale porphyry prospects that coincide with previously identified geological prospects (Figure 7-4, Figure 7-5 and Figure 7-6). In addition, one potential CRD-style breccia pipe was identified.

Within the carbonate rocks, the Typhoon™ conductivity data can discern the different stratigraphic units. Changes in the resistivity data have been found to correlate well to the lithological information obtained from the historical mine maps. On this basis, IE is confident in their ability to use the resistivity data to predict where the different limestone units are located and to determine areas of silica alteration away from the limestones.



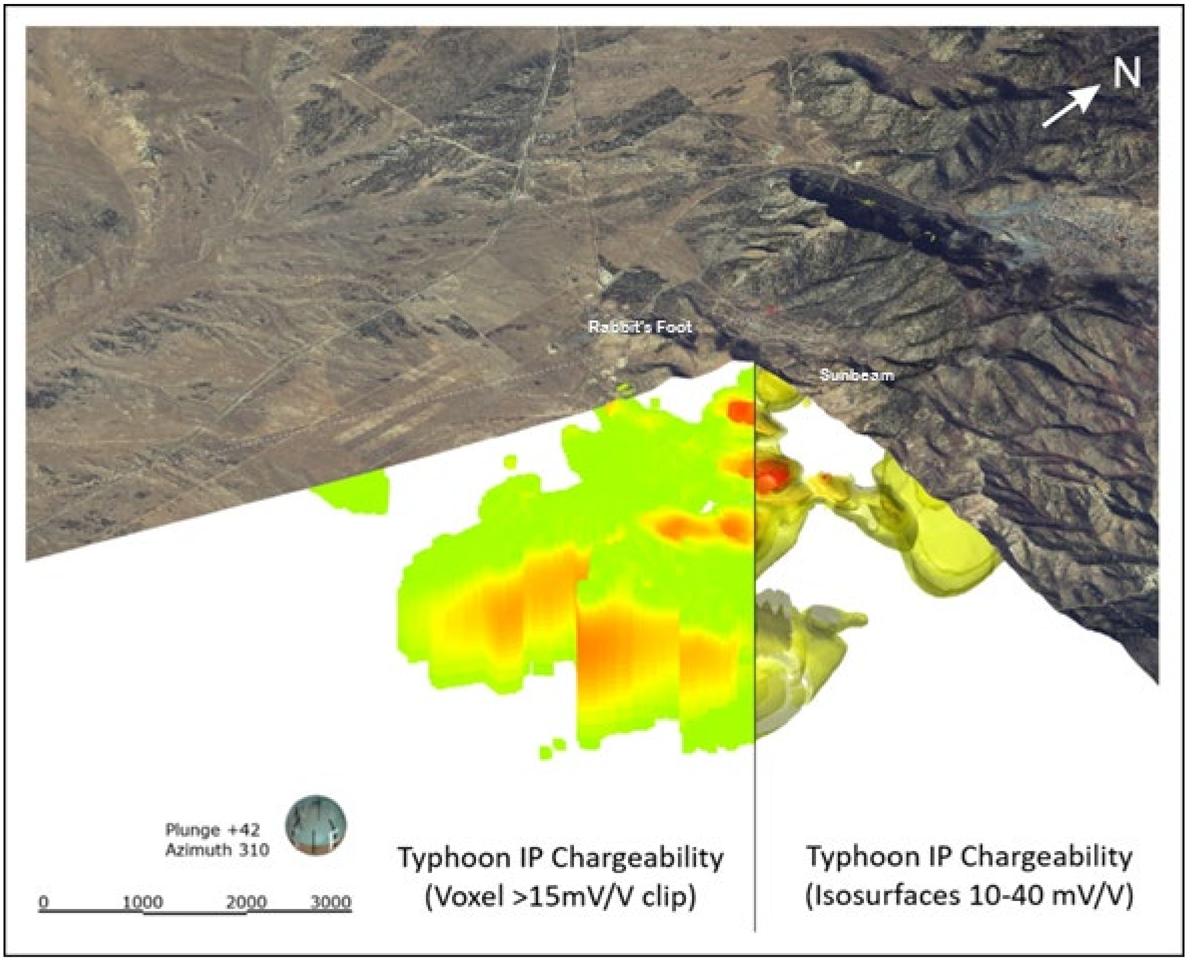
Source: IE (2021)

Figure 7-4: Tintic Typhoon™ ground IP survey chargeability 3D inversion slice at 1700 m RL (approximately 200-300 m depth below surface) around the Rabbit's Foot and Sunbeam porphyry prospects



Source: IE (2021)

Figure 7-5: Tintic Typhoon™ ground IP survey conductivity 3D inversion slice at 1700 m RL (approximately 200-300 m Depth Below Surface) around the Rabbit's Foot and Sunbeam porphyry prospects



Source: HPX (2020)

Figure 7-6: Tintic Typhoon™ ground IP survey chargeability shown in 3D around the Rabbit's Foot and Sunbeam porphyry prospects

7.1.3 Ground Gravity Survey

The gravity survey was conducted in October 2022. A total of 941 new gravity stations were acquired on an offset grid of approximately 120-meter by 240-meter spacing and regional stations along roads and tracks at 250-meter to 500-meter spacing. Relative gravity measurements were made with LaCoste & Romberg Model-G gravity meters and Scintrex CG-5 Autograv gravity meters. Topographic surveying was performed with Trimble Real-Time Kinematic and Fast-Static GPS. Gravity data were processed to complete Bouguer gravity and forwarded to IE for further processing and interpretation.

LaCoste & Romberg Model-G gravity meters, serial numbers, G-392, G-603 and Scintrex CG-5 Autograv gravity meter, serial number 1210 were used on the survey. Model-G gravity meters measure relative gravity changes with a resolution of 0.01 mGal. The manufacturer's calibration tables used to convert gravity meter counter units to milliGals were included with the delivered data.

CG-5 gravity meters measure relative gravity changes with a resolution of 0.001 mGal. The CG-5 instrument samples the gravity signal at 6 Hz and averages the individual samples each second to filter out background seismic noise (Scintrex Ltd., 2012). The one-second averages were integrated over a minimum of a 90-second reading time to produce one record. Tilt and long-term drift corrections are made by the CG-5 at five second intervals over the reading time, and tide and temperature corrections are applied by the instrument software at the end of the reading time to produce the final recorded values provided in the raw ASCII text file (Scintrex Ltd., 2012).

Modified calibration tables were used for meters G-392 and G-603 to correct interval scale factors used to convert gravity meter dial readings to milligals. The modifications were determined based on a 12-station gravity calibration loop in northern Nevada, covering a range of 274.60 mGal, and completed in August 2016. Both the original manufacturer's calibration tables and modified tables used to convert gravity meter counter units to milligals were included with the delivered data.

The gravity survey is tied to the U.S. Department of Defense (reference number 4628-1) gravity base in Eureka, Utah (Jablonski, 1974).

Two GPS base stations, designated *TNT1* and *TNT2* were used on this project. The coordinates and elevations of these stations were determined by making simultaneous GPS occupations in the Fast-Static mode with continuously operating reference stations (CORS). GPS data for the stations were submitted to the National Geodetic Survey (NGS) OPUS service which is an automated system that uses the three closest CORS stations to determine coordinates and elevations for unknown stations. The OPUS coordinates and elevations are listed in Table 7-2 .

Table 7-2: OPUS coordinates and elevations

Station	**WGS-84 Latitude**	**WGS-84 Longitude**	**WGS-84 Ellipsoid Ht.**
TNT1	N 39º 54’ 00.25148”	W112º 08’ 05.24613”	1,806.342m
	WGS84 UTM Northing	**WGS84 UTM Easting**	**Elevation (NAVD88)**
	4417282.305 m	402992.424 m	1,824.099 m
TNT2	**WGS-84 Latitude**	**WGS-84 Longitude**	**WGS-84 Ellipsoid Ht.**
	N 39º 57’ 00.40330”	W112º 06’ 54.68951”	2,008.225 m
	WGS84 UTM Northing	**402992.424 m**	**1,824.099 m**
	4422815.507 m	404737.279 m	2025.766 m

Source: IE (2023)

All topographic surveying was performed simultaneously with gravity data acquisition. The gravity stations were surveyed in WGS84 UTM Zone 12 North coordinates in meters and the GEOID18 (Conus) geoid model was used to calculate North American Vertical Datum of 1988 (NAVD88) elevations from ellipsoid heights.

Stations were reached on foot or by ATV and 4x4 trucks were used for access. Some stations had to be moved due to trees or extreme terrain. A station location map is shown in Figure 7-7.

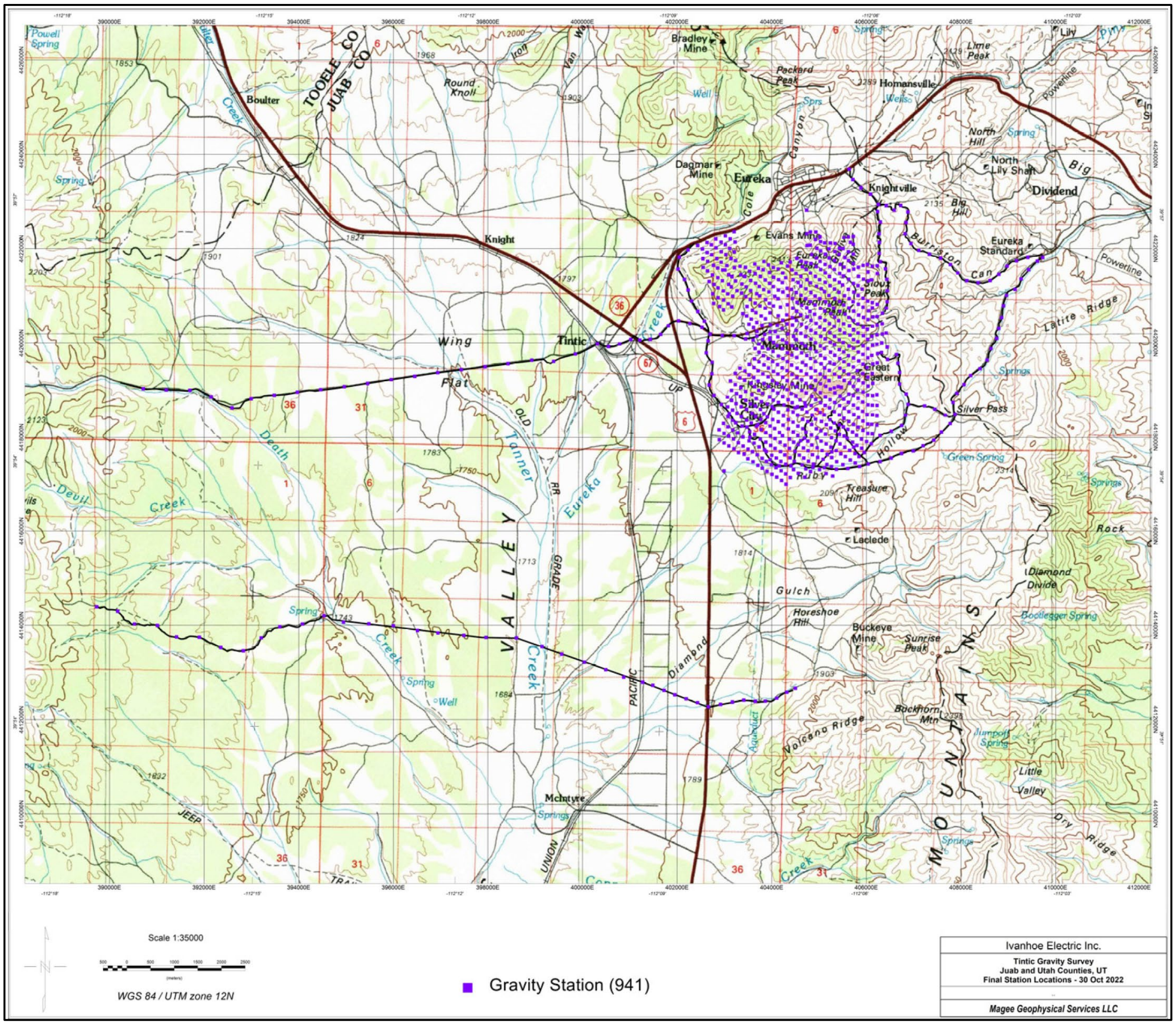
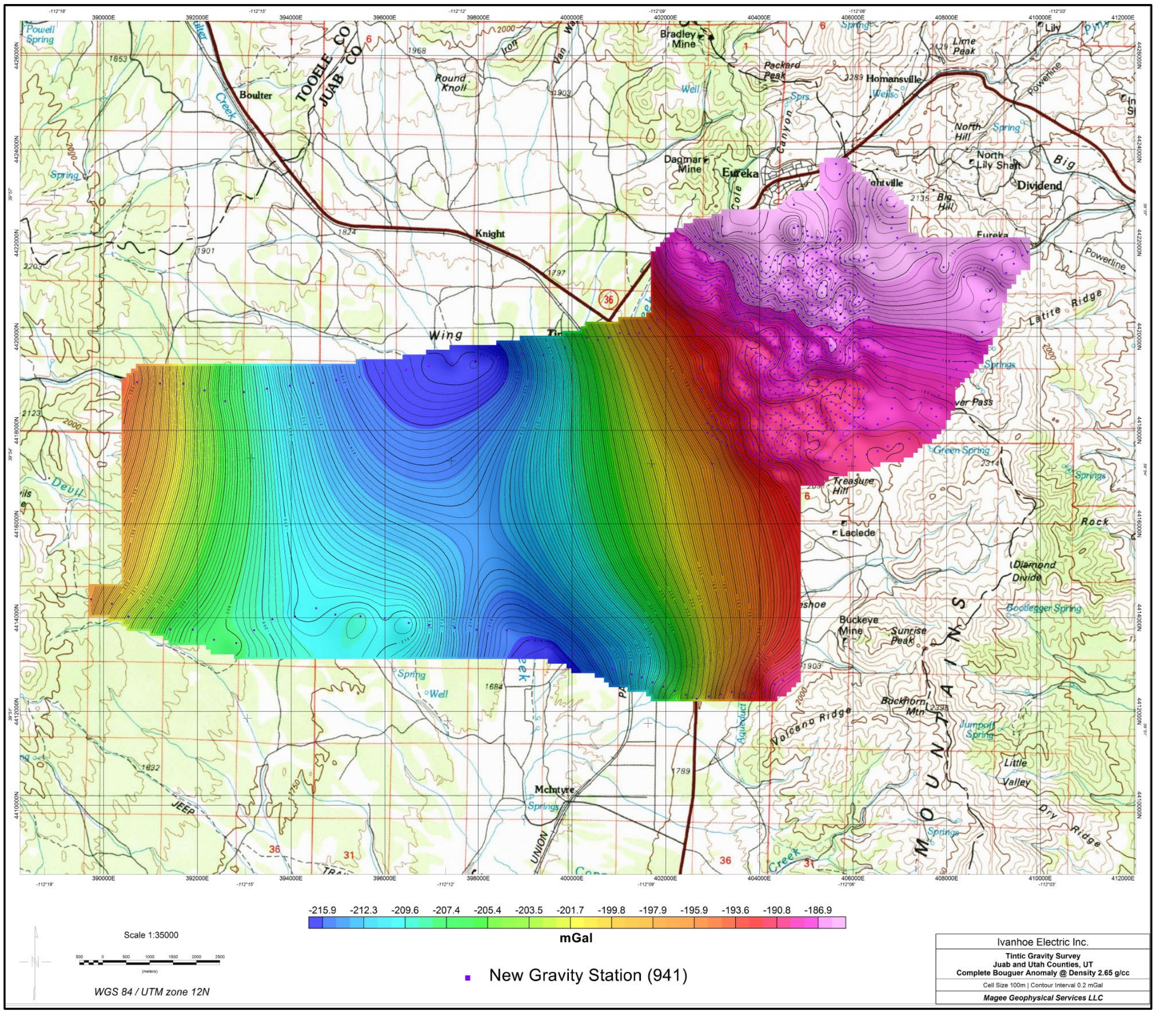


Figure 7-7: Map of station locations for the Tintic gravity survey

Note: Purple squares denote new stations. Coordinates in WGS84 UTM 12N meters.

New field data including station identifier, local time, gravity reading, measured slope, and operator remarks were recorded in the field in notebooks and on survey controllers. Recorded data were then entered into a notebook computer or transferred digitally in the form of Geosoft RAW gravity text files. Survey coordinates were also transferred digitally. All gravity data processing was performed with the *Gravity and Terrain Correction* module of Geosoft Oasis Montaj (version 2022.1 [20200602.26]). Gravity data were processed to complete Bouguer anomaly over a range of densities from 2.00 g/cc through 3.00 g/cc at steps of 0.05 g/cc using standard procedures and formulas. A color contoured image of the complete Bouguer anomaly reduced at density 2.65 g/cc, is shown in Figure 7-8. A grid cell size of 100 meters was used. Terrain corrections were calculated to a distance of 167 km for each gravity station.



Source: IE (2023)

Figure 7-8: Complete Bouguer anomaly reduced at density 2.65 g/cc

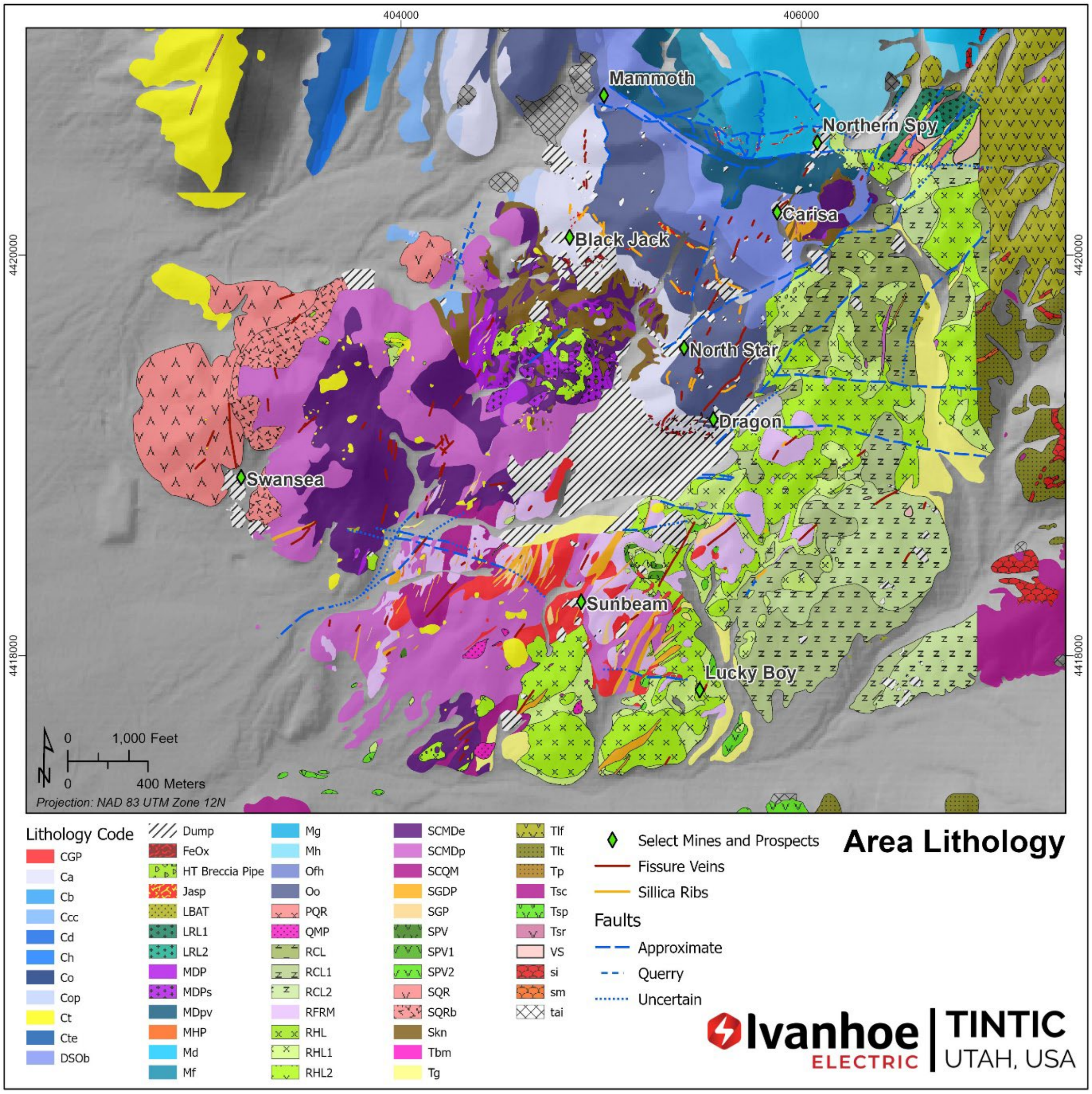
Note: Grid cell size=100 m; contour interval 0.2 mGal. Purple squares show gravity stations.

7.2 Surface Mapping

Geological mapping at a 1:2,500 scale was initiated across the Silver City porphyry prospect in 2018. The area was divided into 500 x 500 m quadrants and was systematically mapped by IE staff with a focus on mapping the various lithologies and alteration present in the Silver City area. Historical geologic maps of the Silver City area were completed at a scale of 1:24,000 and broadly grouped the Silver City intrusive complex into one unit (Morris, 1964).

The 2018 IE mapping program identified eight different intrusive units with varying phases and degrees of hydrothermal alteration, suggesting a complex, composite intrusive history impacted by complicated hydrothermal alteration (Figure 7-9). Detailed property geology derived as a result of this surface mapping work is described in Section 6.3 of this report.

Coincident with surface mapping, rock and chip samples were collected for various analyses. These are detailed in subsequent subsections.



Source: IE (2023)

Figure 7-9: Lithology Map Resulting from the IE 1:2,500 Scale Mapping of the Silver City Area

Note: Refer to Figure 6-9 and Figure 6-10 for legend code descriptions.

7.3 Surface Sampling

7.3.1 Soil Sampling

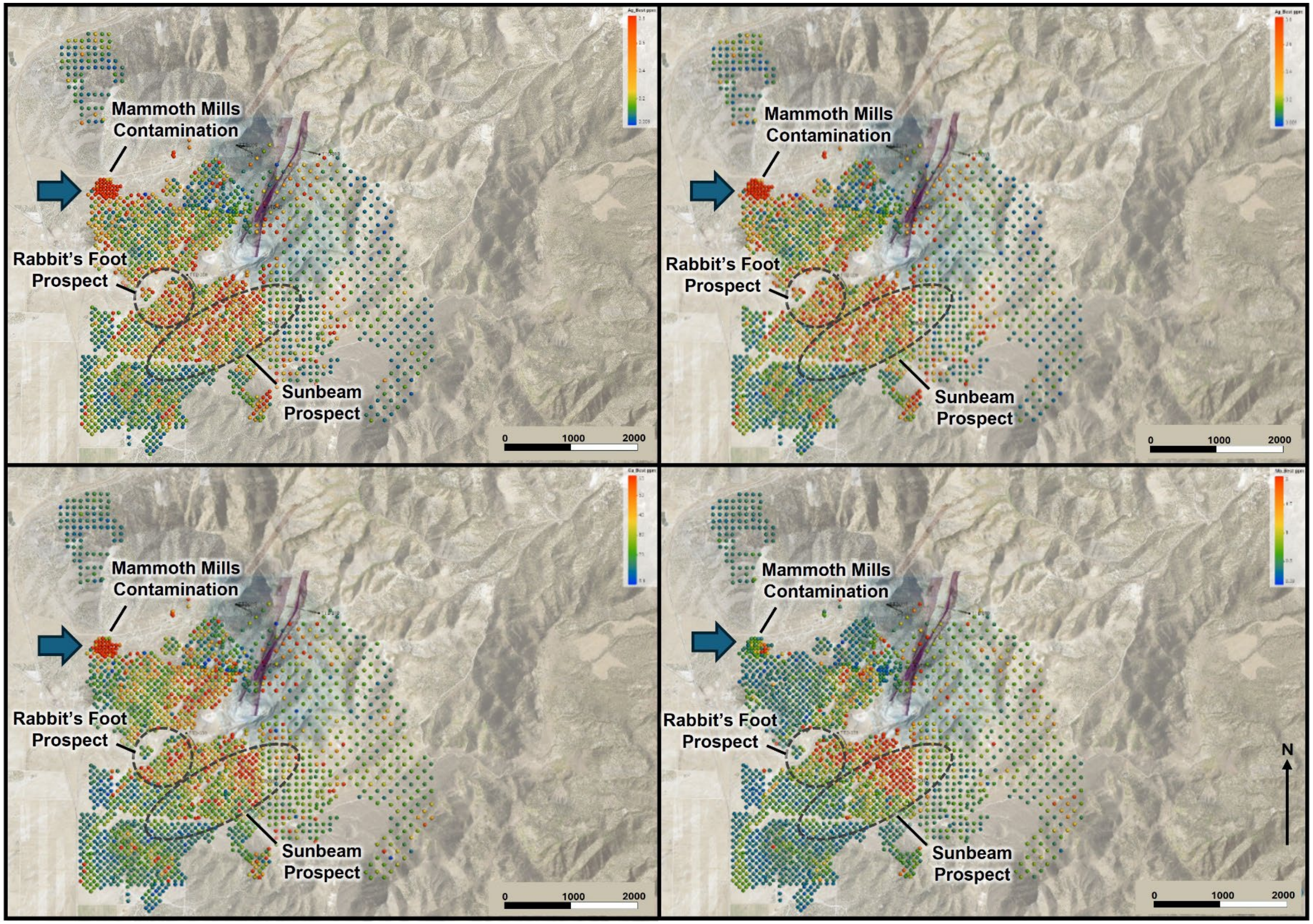
IE completed a soil geochemical survey between April and June of 2018 across the Silver City and Sunbeam porphyry prospect. A total of 2,283 soil samples, including 175 QA/QC samples, were collected on an offset grid with 70 m sample spacing (Figure 7-10). Only 1,172 soil samples were considered non-contaminated. The anomalous Au (ppm) area identified with an arrow in Figure 7-10**.** relates to anthropogenic contamination and was utilized by IE as a baseline study for their core processing facility.

Each sample was analyzed for 53 trace element geochemistry by ALS Minerals and the coarse fractions of the samples were analyzed by TerraSpec® to characterize the soil mineralogy that may potentially serve as a vector to mineralization. Quality assurance/quality control (QA/QC) samples were inserted into the sampling (Section 8.1.1) and analytical workflow and results indicate that there was no bias or contamination present in the analytical results (Van Geffen, 2018).

In 2023, an additional 286 soil samples were taken, expanding the survey primarily to the northwest.

The Cu-Mo-Au anomalous area is roughly coincident with the zones of stockwork quartz veining and argillic alteration and potentially indicative of a porphyry prospect.

In the QP's opinion, the soil sampling grid is reasonably spaced to identify soil anomalies. IE's approach, i.e., taking into consideration various metallic elements and ratios to identify prospect areas, is appropriate for porphyry-style, CRD, and fissure vein mineralization exploration.



Source: IE (2023)

Figure 7-10: (A) Au (ppb), (B) Ag (ppm), (C) Cu (ppm), and (d) Mo (ppm) in soil samples showing a highly anomalous area over the Silver City and Sunbeam porphyry prospects (arrow relates to anthropogenic contamination area at historical Mammoth Mill area).

7.3.2 Rock Grab Sampling

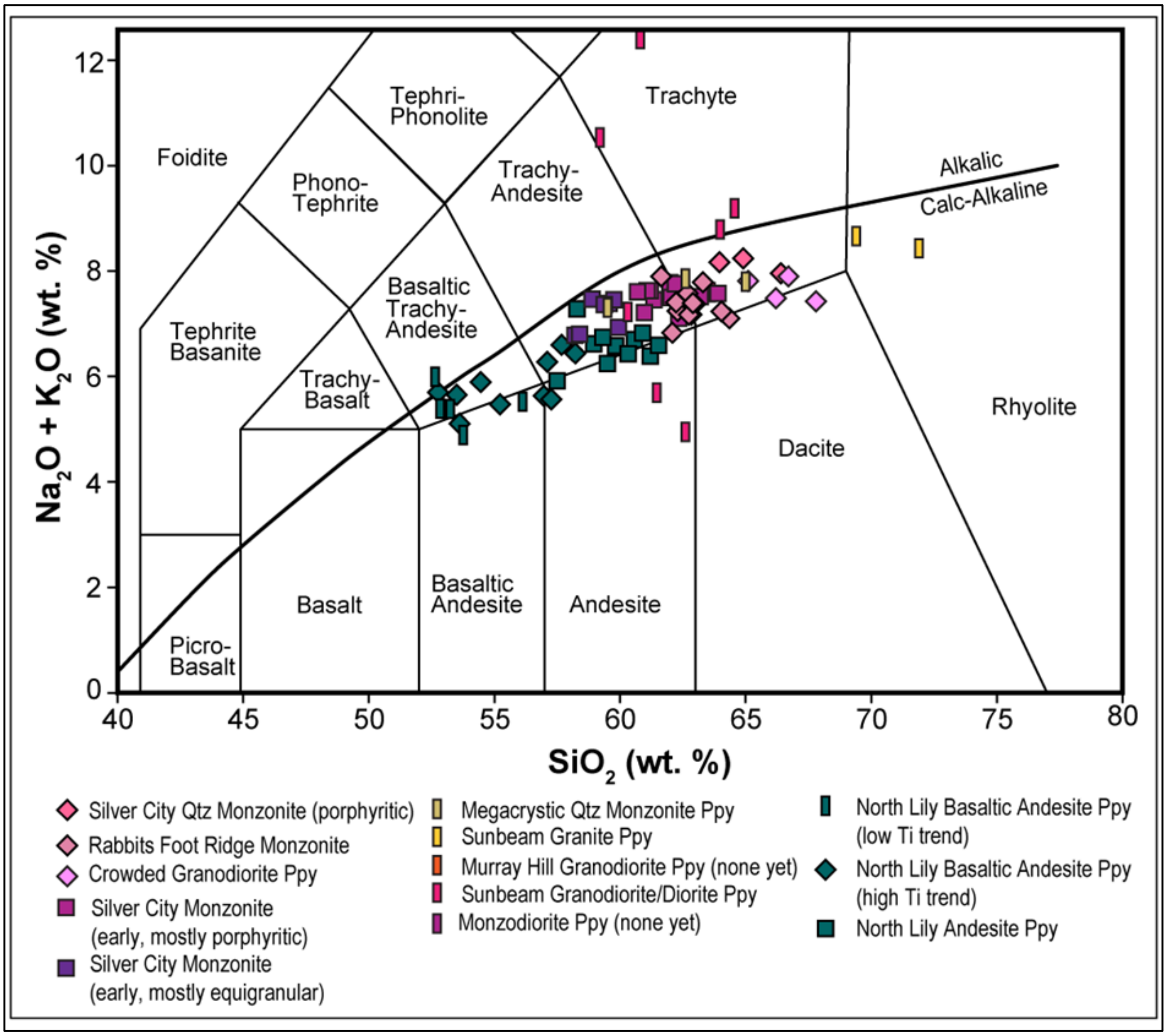
Assaying

A total of 1,002 rock grab samples have been collected by IE during mapping and other field visits across the Tintic Project. IE included Blanks, Certified Reference Material (CRM), and duplicates as part of the QA/QC (Section 8.1.2).

The rock grab samples were collected with a rock hammer and each comprised approximately 0.5 to 2.0 kg of material collected in a large plastic sample bag. An ALS sample ticket was inserted into the bag and a duplicate ticket stapled to the collar of the bag. The sample number was written in black marker on the outside of the bag near the base and top collar for quick identification. The sample bag was sealed by twisting the bag collar and then securing with a large plastic zip tie. A duplicate sample was collected every twenty (20) samples. Standards were inserted every twenty-five (25) samples and blanks inserted every twenty (20) samples.

Whole Rock Geochemistry

A lithologically representative suite of unaltered to weakly altered igneous rocks were selected for whole rock litho-geochemistry to better classify the igneous phases. The geochemical results were then plotted in ioGAS™ using a variety of classification diagrams. In general, the intrusive rocks of the Silver City suite are high-K calc-alkaline to shoshonitic in composition (Figure 7-11). The Sunbeam Granodiorite Porphyry dikes (SGDP) data frequently plot as anomalous relative to the rest of the data because it has so far rarely been identified without alteration, and as such these may not be representative data. The volcanic rocks tend to be more K-rich than the plutonic phases and are broadly shoshonitic. Swansea Quartz Rhyolite (SQR) is notably much more siliceous than the other volcanic phases. The total alkali-silica ("TAS") plot in below shows clear compositional groupings for the various intrusive and extrusive phases present in the East Tintic Mountains.



Source: after Le Maitre et al. (2002); includes data from Kim (1992), Moore (1993) and samples collected by IE

Figure 7-11: Total Alkali-Silica (TAS) Diagram for Intrusive Rocks of the Tintic District

Petrography

A total of 144 samples from the mapping area were submitted for petrographic analysis to classify the igneous rocks, alteration assemblages, and skarn types observed in the mapping area. The petrography helped guide the mapping efforts and ascribed rock unit names were taken in part from the petrographic rock classifications. The petrographic samples were submitted to Paula Cornejo at Asesorías Geológicas y Mineralógicas in Santiago, Chile or to F. Colombo at Ultra Petrography and Geoscience Inc. in Vancouver, Canada and to for both transmitted and reflected light petrographic analysis.

Geochronology

A suite of 12 samples from a variety of representative intrusive phases were submitted to Dr. Victor Valencia of ZirChron LLC for U-Pb age dating on zircons (Table 7-3). The samples were selected to provide geochronologic age constraints on some of the major intrusive phases observed in the multiphase Silver City intrusive complex. It should be noted that these samples were selected prior to the completion of the detailed 1:2,500 scale mapping and that subsequent intrusive phases have been identified which are not included in these data. These units are the Sunbeam Granite Porphyry (“SGP”) and the Murray Hill Quartz Granodiorite Porphyry (“MHP”) dikes which crosscut every unit they encounter, and the Monzodiorite Porphyry (“MDP”) which is only crosscut by the SGP in Skarn Valley.

The margin of error for the dates ranges from ± 400 - 800 Ky, with one outlier in HPXGC008 at 1,300Ky, allowing for overlap between some samples. However, the calculated age date for these samples broadly reflects the observed crosscutting field relationships. Swansea Quartz Rhyolite (SQR, 35.4Ma ±0.4) is clearly the oldest igneous phase in these data followed by the Sunrise Peak Stock (34.1Ma +0.4 -0.8) and the associated Sunrise Peak Volcanics (SPV, 33.4Ma +0.4 -0.6, 32.9Ma ±0.5). The intrusive phases in the mapping area have clustered age dates with the oldest attributed to the Silver City Monzodiorite (SCMDe, 32.8Ma ±0.4 and SCMDp, 32.3Ma +1.3 -0.7) and closely followed by the Sunbeam Granodiorite Porphyry dikes (SGDP, 32.6Ma +0.6 -0.5), Crowded Granodiorite Porphyry (CGP, 32.5Ma +0.5 -0.4), and finally the Megacrystic Quartz Monzonite Porphyry (QMP, 32.2Ma ±0.4). These dates are well within each other’s margin for error, so the field observations which have SCMD as the oldest followed by CGP, RFRM, SCQM, MDP(?), SGDP, MHP(?), SGP, and finally QMP are still valid with these data. The U/Pb age dates from Silver City intrusive rocks show that this multiphase intrusion was emplaced over a relatively short 1 My time period, similar to the suite of intrusions that formed the Bingham porphyry deposit (Deino and Keith, 1997).

A paragenetic diagram of the various intrusive and extrusive igneous rocks observed in the Tintic District has been constructed based on IE age dates obtained during the 2018 field season, field mapping and observed crosscutting relationships, and a review of historical literature. In addition to the zircon ages measured by IE, many previously published Ar-Ar and K-Ar ages from a variety of minerals around the Tintic District are noted on the paragenetic diagram.

The Dragon and Blackjack halloysite deposits contain pods of massive white alunite intergrown with the halloysite clay and the spatial relationship of these two minerals suggests they were formed at the same time under similar conditions. These clays formed at the contact between Paleozoic carbonates and the Silver City intrusive complex where clusters of fissure veins cross the contact. Samples of massive alunite were collected from the Blackjack (HPX-AL01) and the Dragon (HPX-AL02) open pits and were sent to the New Mexico Tech geochronology laboratory for 40Ar/39Ar age dating. The samples yielded ages of 5.29±0.04 Ma and 5.36±0.03 Ma (Table 7-4).

The crystal form of the alunite from Dragon was found to be of the tabular ‘platy’ variety, which would point towards a high-T, highly acidic origin that could easily be attributable to a high sulfidation alteration event (Garcia et al., 2009). This is only one preliminary line of evidence towards the clay deposit being of hypogene origin.

Table 7-3: Tintic Project U/Pb Geochronology Results

Rock Type	Lithology Code	Sample ID	Age (Ma)	(+) Error (Ma)	(-) Error (Ma)
Megacrystic Quartz Monzonite Porphyry	QMP	HPXGC006	32.2	0.4	0.4
Megacrystic QMP from SWT core	QMP	HPXGC011	32.2	0.4	0.4
Silver City Monzodiorite - weakly porphyritic	SCMDp	HPXGC008	32.3	1.3	0.7
Crowded Granodiorite Porphyry	CGP	HPXGC004	32.5	0.5	0.4
Sunbeam Granodiorite Porphyry	SGDP	HPXGC003	32.6	0.6	0.5
Silver City Monzodiorite - equigranular	SCMDe	HPXGC002	32.8	0.4	0.4
Xenolith of Rabbit's Foot Ridge Monzonite Porphyry	RFRM	HPXGC001	32.9	0.5	0.5
Weakly altered float of SGP dike cross cutting SCMDp	SGP	HPXGC012	33.0	0.5	0.3
Rabbit's Foot Ridge Monzonite (RFRM) hornblende porphyry	RFRM	HPXGC010	33.2	0.4	0.4
Sunrise Peak Volcanics	SPV	HPXGC007	33.4	0.4	0.6
Sunrise Peak Stock	n/a	HPXGC009	34.1	0.4	0.8
Swansea Quartz Rhyolite	SQR	HPXGC005	35.4	0.4	0.4

Source: HPX (2020)

Table 7-4: Tintic Project Ar/Ar Geochronology Results

Mineral	Age Analysis	Steps	Age (Ma)	±2σ	MSWD
Alunite	Bulk Step-Heat	7	5.29	0.04	2.93
		Integrated age 5.36±0.02 Ma			

Source: HPX (2020)

7.3.3 Short-Wave Infrared Survey

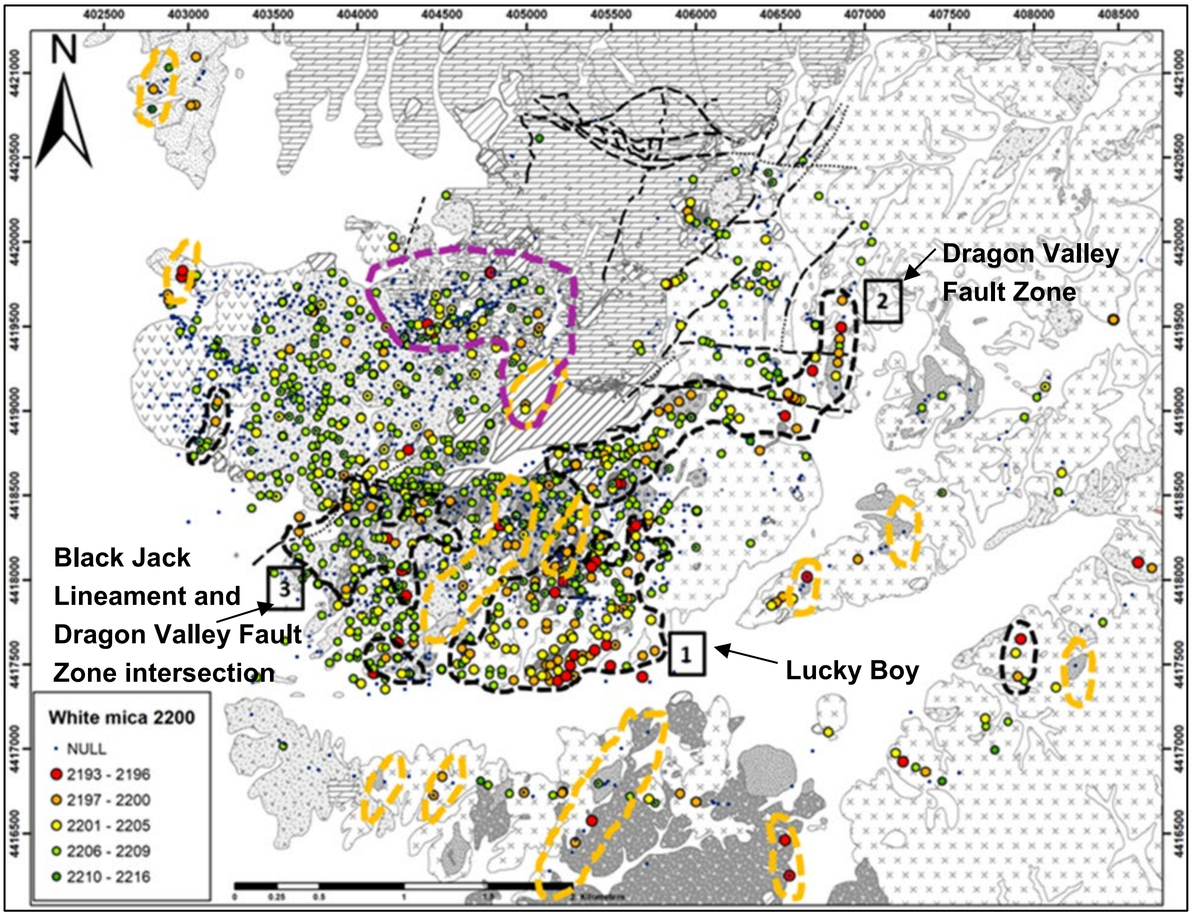
A Short-Wave Infrared (SWIR) spectroscopic study of surface rocks and historical drill hole core/chips was completed between 2018 and 2020 as part of an M.Sc. thesis at the Colorado School of Mines by Bonner (2020). The study focused on the Tintic Main and Southwest Districts and aimed to accurately map the distribution of phyllosilicate minerals related to hydrothermal alteration and identify zoning patterns in order to vector towards a potential causative intrusion. The research also included petrography, Scanning Electron Microscopy (SEM) using Back-Scattered Electron and Energy-Dispersive X-Ray Spectroscopy (BSE-EDS) and X-Ray Diffraction (XRD) analysis to verify SWIR mineral identifications and inferred mineral geochemical variations.

A handheld Terraspec HALO instrument was used to collect SWIR measurements from outcrop across the Silver City intrusive complex and some historical drilling. This instrument collects data on the reflectivity of hydrous minerals over a short wave and infrared spectrum which can then be correlated to a database to identify various mineral species.

A total of 3,046 measurements were collected across the Silver City intrusive complex at surface and 3,080 throughout drill core and chips (Figure 7-12). All 6,126 samples span a surface area of ~20 km^2 and a depth of over 980 m from 18 drill holes. The spectral study delineated white mica crystallinity gradients, used as a proxy for temperature, and spectrally-inferred geochemical variations of some minerals, such as Fe-Mg proportion in chlorite, Na-K proportion in alunite, and Na-K-(Fe ± Mg) proportions in sericite. These zoning patterns are used to vector to hydrothermal hotspots and identify relationships between clay speciation, igneous phases and metal distribution.

The research identified three high-temperature alteration zones at surface in the Silver City prospect area, as follows:

1. Around the Lucky Boy prospect in the Ruby Hollow valley;
2. Along the Dragon Valley fault, east of the Martha Washington mine; and
3. At the intersection of the Dragon Valley fault and the Black Jack lineament.



Source: HPX (2020)

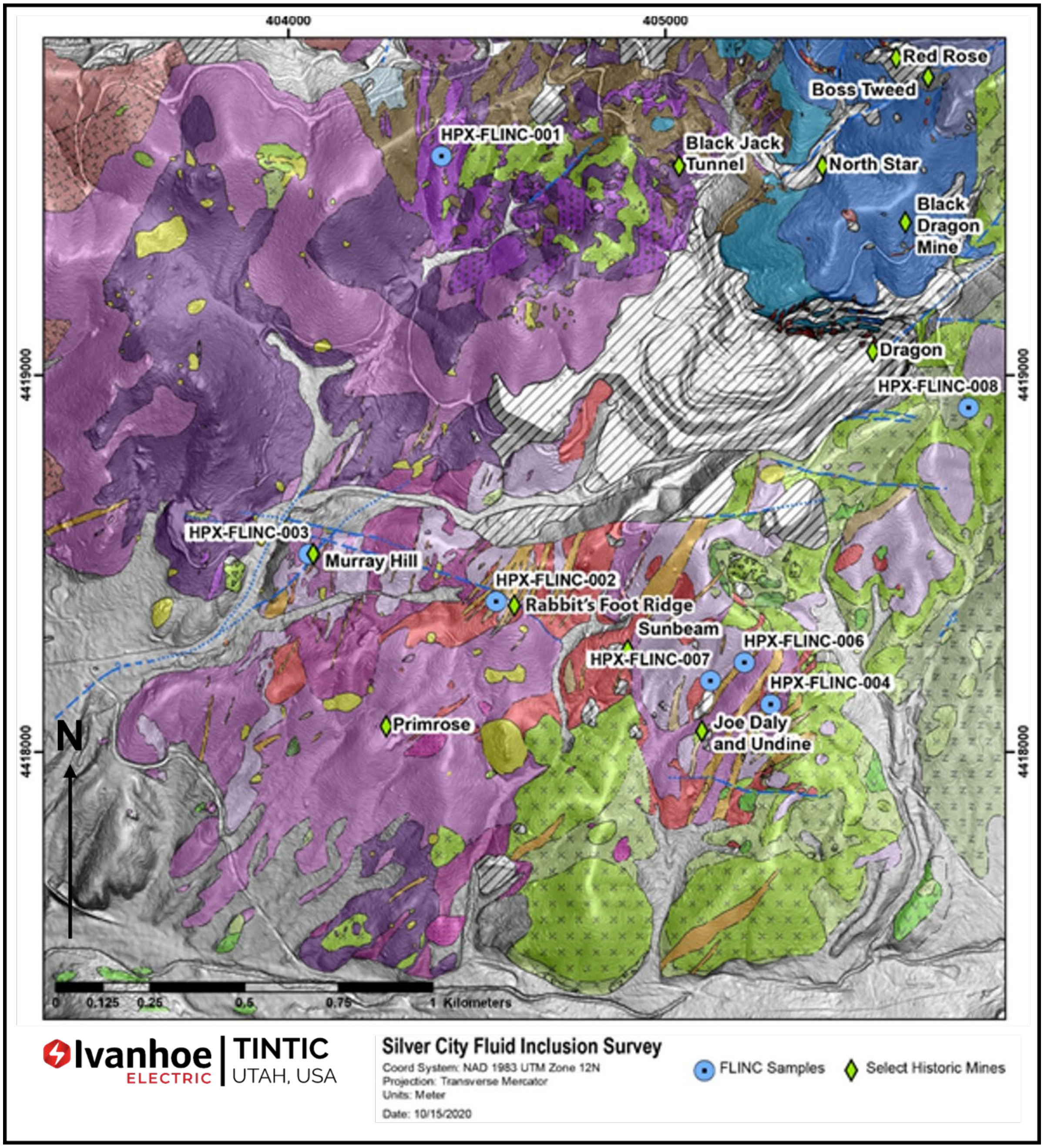
Figure 7-12: Distribution of the Wavelength Position of the White Mica Al-OH Spectral Absorption Feature at ~2200 nm

Note: Black dashed polygons outline high temperature zones consistent with low Al-OH values – inferring higher acidity of formation fluids; orange dashed polygons outline pyrophyllite-diaspore occurrences and trends, fairly consistent with high acidity; purple dashed polygon highlights retrograde skarn alteration associated with a small zone of high acidity.

The three zones are characterized by pervasive quartz-sericite-pyrite (“phyllic”) alteration and moderate to high vein density, plus higher white mica crystallinity values and lower Al-OH values. They are interpreted to be zones where higher temperature and acidic hydrothermal fluids circulated, confirming previous hypotheses inferred by IE that these are possible porphyritic centers. These zones are coincident with outcropping porphyry dikes of the Silver City intrusive complex, anomalous soil geochemistry in Cu, Au, and Mo, and strong chargeability anomalies at depth.

7.3.4 Fluid Inclusion Studies

Eight quartz vein samples from the Silver City stock were submitted to Fluid Inc. (Reynolds, 2019) for fluid inclusion (FLIN”) analysis (Figure 7-13). Study of quartz vein fluid inclusions allows for the approximate determination of pressure, temperature, and depth of vein formation and characterization of the style of vein as it relates to a porphyry or epithermal system. Monecke et al. (2018) lay a framework for interpreting quartz veins in porphyry systems based on silica solubility and vein classification (Gustafson and Hunt, 1975; Muntean and Einaudi, 2000; Monecke et al., 2018).

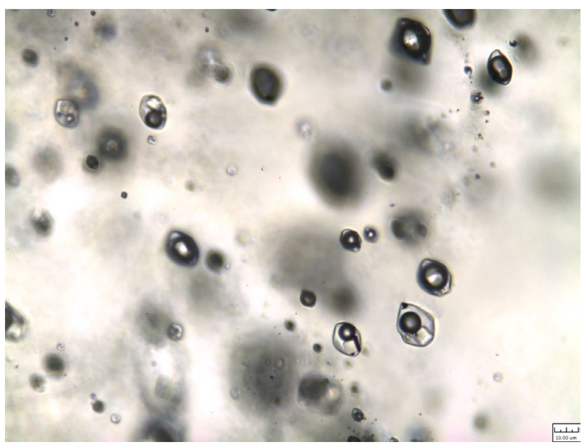


Source: HPX (2020)

Figure 7-13: Geologic Map Showing Fluid Inclusion Sample Locations at Tintic

Hedenquist et al. (1998) described the fluid inclusion characteristics existing between a porphyry Cu deposit and a high-sulfidation epithermal deposit. Above, but close to the causative porphyry pluton, vapor-filled inclusions are ubiquitous and predominate, but rare high-salinity inclusions can be found in samples collected closest to the pluton. Over an interval as small as a few hundred meters distance from the causative pluton, the high-salinity inclusions with the NaCl crystals decrease markedly in abundance, but the vapor-filled inclusions persist far above into the high-sulfidation alteration zones.

Fluids escaping a porphyry pluton can produce A, B and banded veins close to and above the pluton and fluid inclusions in these are dominantly vapor-filled (Hedenquist et al. 1998; Monecke et al. 2018). These vein types are observed at Tintic in this study, and such vein types are referred to as high-level A veins or high-level B veins, and banded type. Fluid inclusion characteristics in quartz of A veins are different depending on the relative depth of crystallization of the intrusion. A veins in deeper plutons contain only liquid-rich, two-phase inclusions, whereas the common occurrence of highly saline brine inclusions coexisting with vapor-rich inclusions (Figure 7-14) are found in A and B veins from within potassic zones in porphyry copper deposits associated with intermediate depth plutonism. The combination of high-salinity and vapor rich inclusions being ubiquitous in A and B veins (Figure 7-14) is the telltale indicator that a potassic zone of an intermediate to shallow pluton has been intersected.



Source: HPX (2019)

Figure 7-14: Fluid inclusion population in quartz from an "A vein" in the core of a potassic zone in an intermediate depth pluton forming the porphyry copper deposit at Santa Rita, NM, USA. High-salinity inclusions (those containing a crystal of halite) and vapor-rich inclusions (those with a large dark vapor bubble) are ubiquitous.

No classic A, B, C, or D porphyry quartz veins as described in Monecke et al. (2018) were observed in the eight Tintic samples. However, fluid inclusion petrographic evidence shows that the environment of formation for the veins is at levels above some causative intrusion that the magmatic fluids were derived from. Many samples contain quartz veining that would form above a causative pluton: banded veins (Monecke et al., 2018; Muntean and Einaudi, 2000), high-level A veins, and high-level B veins. A few samples have quartz that is commonly found as the latest quartz veining crossing any level of a porphyry system, commonly carrying base and/or precious metals. This is referred to as E quartz veining (Monecke et al., 2018) and these veins are likely related to late high sulfidation fissure veining.

No samples of the current submitted batch showed an inclusion population, though sample 007 was the closest: more high-salinity inclusions were found in what appears to be B vein quartz crosscut by sulfides in this sample. Most of the samples had experienced temperatures higher than 450°C early in their histories, which is likely why some remnant potassic-like alteration has been described for some of the samples. Porphyry plutons that exsolved the magmatic fluids must be below the levels where the samples were collected, neglecting possible structural offsets.

7.4 Historical Data Compilation

7.4.1 3D Geological and Infrastructure Model

IE has obtained geological and mining information in the form of historical maps, sections, drilling reports, drill logs and assay results reports. As a significant component of the exploration program and part of the re-evaluation of the District, historical mine workings and geological maps were georeferenced and digitized in 2D (ArcGIS) and then 3D (Leapfrog Geo™). Three-dimensional geological interpretations were derived from historical 2D plan maps and sections with geological interpretations on them, supplemented by IE detailed surface mapping data. The 3D geological interpretation was also supported by historical drilling (Sections 7.4.2) and IE-collected geophysical data. The 3D geological model is kept up to date with any additional information that is made available. To date, over 8,700 historical maps have been scanned to PDF by IE and have been sorted by exploration potential area/region and scale. Of these, more than 500 maps and cross-sections were georeferenced and systematically digitized and incorporated into the 3D model.

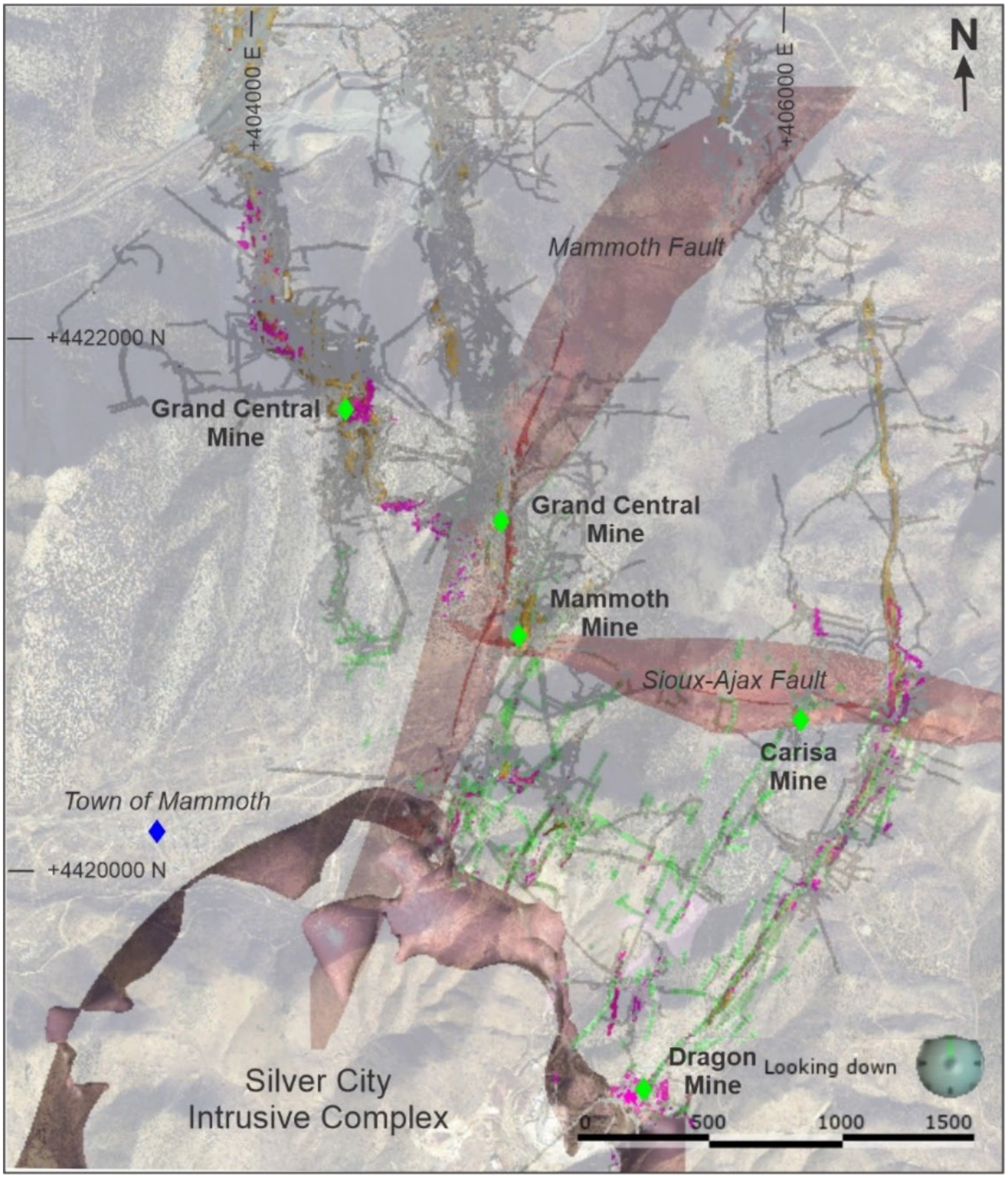
In order to ensure mine workings were correctly located in space, the IE team utilized both property boundaries on maps and the locations of four historical mine monuments (aka control points) for spatial reference (Figure 7-15). IE had the mine monuments professionally surveyed in order to ensure accuracy. In 2020, IE enlisted Focus Engineering and Surveying LLC of Midvale, Utah to complete a survey of a large portion of the Sioux-Ajax Tunnel. The final survey data were added to the 3D model and compared to the Sioux-Ajax Tunnel as modeled from historical maps. Estimates of offset between the two were approximately 3 m laterally and 5 m vertically. Variability in the position of some mine workings, depending on the scale from which they were digitized, can range from <5 m up to 25 m on average.

This historical data compilation program allowed for the 3D visualization of historical mine workings, previously mined mineralized structures, structural features, intrusive and extrusive rocks, and stratigraphy (Figure 7-16, Figure 7-17, Figure 7-18). Structural features and favorable stratigraphic horizons that may host mineralization were assessed and prospects identified using the 3D model, combined with geophysical data, as a targeting tool. Mineralization prospects include extensions of known, previously mined ‘ore runs’ (laterally and to depth); newly identified mineralized zones and breccia bodies; possible porphyry intrusions; and possible hydrothermal fluid flow pathways.

The QP also notes that the modeled “ore runs” shown on figures in this report represent enveloping surfaces that were digitized from the historical maps and represent the CRD systems including, but not limited to, historically mined material.

Source: photo courtesy of IE

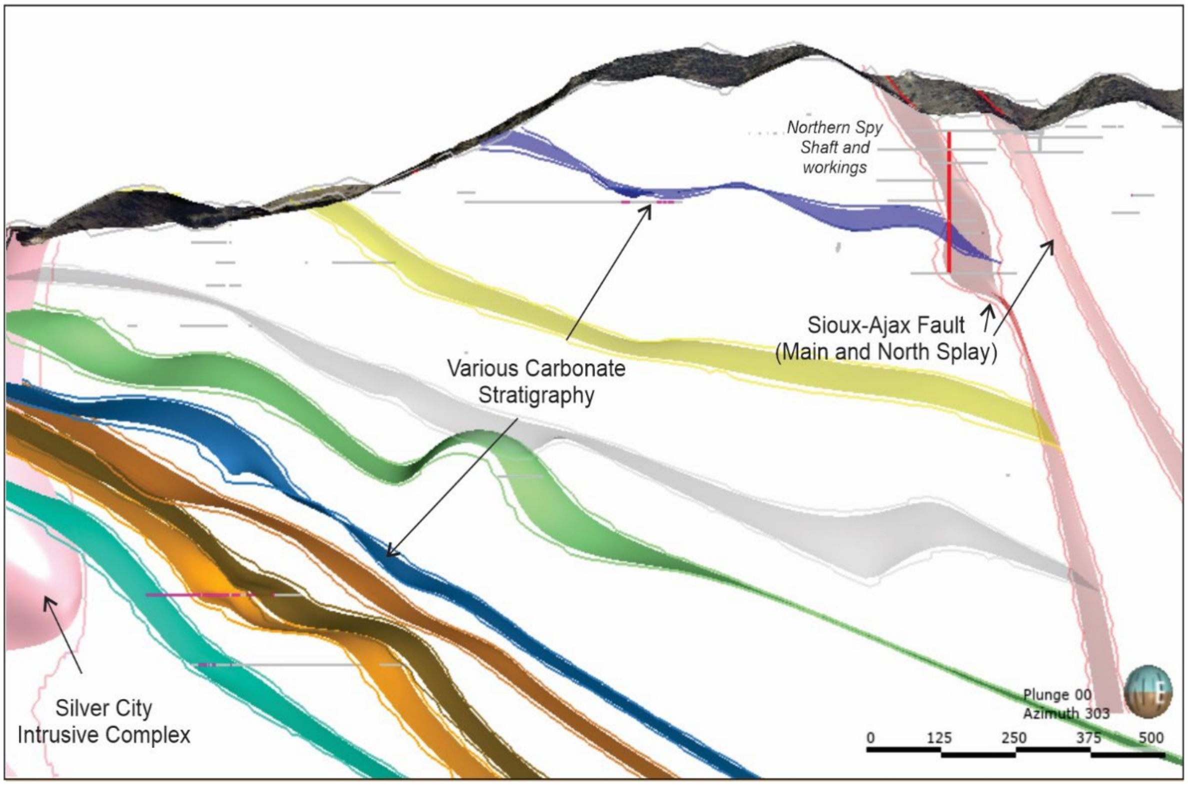
Figure 7-15: Historical mineral monuments in the Silver City area and at the Mammoth Mine



Source: HPX (2020)

Figure 7-16: Image showing 3D workings (grey) relative to the Silver City intrusive complex (pink surface), individual fissure veins (green), stopes (pink), and modeled historical 'ore runs' (orange surfaces) for the Tintic District

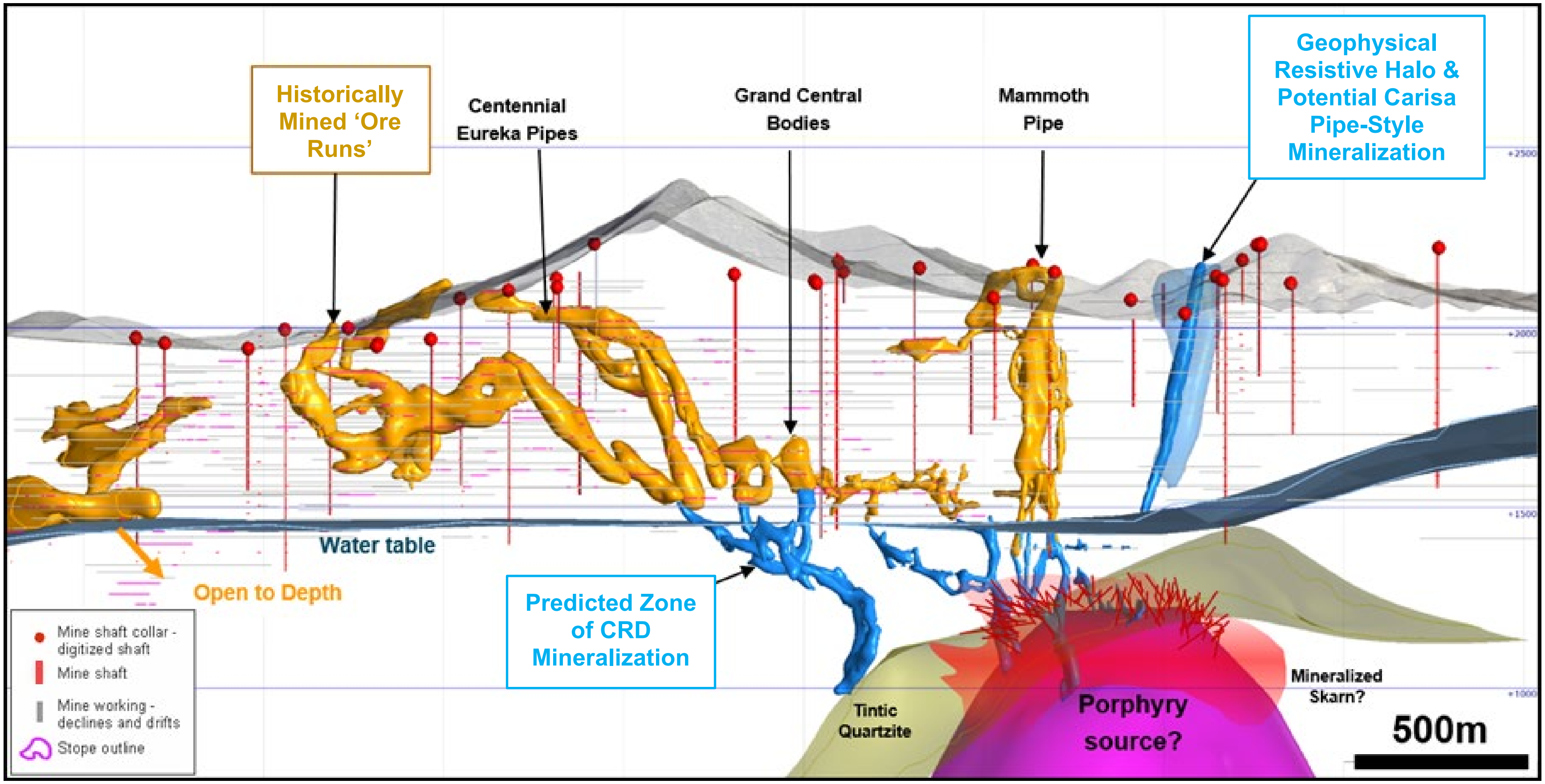
Note: The region shown in this image is approximately 60 km^2.



Source: HPX (2020)

Figure 7-17: Cross-section through 3D Model showing carbonate stratigraphy (varied colors) relative to the Silver City intrusive complex (pink) and the E-W trending Sioux-Ajax Fault (red), looking NE.

Note: Faults, intrusive boundary and stratigraphy modeled based on surface geological maps (both historical and recent), cross-sections and historical 2D geological maps created at each mine level plan.



Source: HPX (2020)

Figure 7-18: Tintic District schematic cross-section showing mine infrastructure, modeled historically mined 'ore runs', and predicted zones of CRD mineralization (blue), skarn (red), and porphyry (magenta) prospects. While mining stopped at the water table, the historically mined mineralization most likely continues to depth.

7.4.2 Drill hole Database Compilation

IE has compiled a drill hole database from over 125 years of exploration and development operations in the Tintic District by dozens of historical operators. Early exploration efforts primarily utilized primitive surface methods (pick and shovel), exploration drifts and shafts to locate mineralization, with negligible exploration drill data. However, the more modern exploration programs undertaken from the 1950's onwards provide valuable drill hole data that have been integrated into the current database (HPX, 2020). A total of 489 drill holes were completed historically on the Tintic Project by several operators, however not all of the details are available.

The IE historical database contains known collar locations for 442 diamond, reverse circulation ("RC"), and rotary air blast ("RAB") drill holes totaling approximately 72,212 m. Drill lengths are unavailable for the other 47 drill holes. The accuracy and certainty of collar locations are variable, due to the many sources of information. Some collar coordinates were derived from georeferenced maps and figures, abandoned mine-grid translations and state UPC geographical, un-projected references, each of which have uncertainties attached to them regarding their positions. 47 holes have collar locations recorded in undocumented or unknown mine-grid datums and will be added to the database when their locations can be deduced. 193 drill holes are collared on the Applied Minerals "Dragon" halloysite mine property (12,635 m total), and consist primarily of geotechnical, geological, and mineral data pertinent to the clay and iron-oxide mining operations there (HPX, 2020). Additional information about the historical drilling programs is provided in Table 5-3. It is the QP's opinion that drill hole positions be treated with caution when utilized for geological modelling, due to the varied level of accuracy. However, they can be utilized for regional scale geological modelling, which IE has completed in Leapfrog Geo™.

Assay results have been compiled from 221 drill holes across the Tintic District. Records of analytical methods for assay data are limited and the assay database consists of variable element analyses; these range from comprehensive 43 element ICP-MS data from analyses performed on drill hole core from the Big Hill diamond drill hole program conducted from 2008 to 2014 in the East Tintic sub-district, to Cu-Au only results from RC drilling in the Treasure Hill area (HPX, 2020). In the QP's opinion, historical drill hole analytical results should be treated with caution and only utilized for indicative purposes until twin drilling is completed to verify position, orientation and grade, as no supporting QA/QC information is available for the respective drill holes.

In October 2019, IE completed a one-week handheld X-ray fluorescence (XRF) sample analysis verification program of 2,200 historical coarse rejects, percussion chips, and pulps from 15 historical drill holes. Each XRF measurement was taken in a controlled and isolated environment to prevent radiation exposure. This exercise allowed for an indicative comparison to the historical results. However, there will be conditional bias with chip sample results as they are not homogenized. This was evident in the results as the chips performed poorly in the duplicate tests (HPX, 2020). In the QP's opinion these results should not be utilized in the definition of any exploration potential areas as the samples were not homogenized. The QP notes that the accuracy of handheld XRF machines is lower than laboratory analytical results.

7.5 Sioux-Ajax Tunnel Mapping and Geochemical Sampling

Detailed mapping and rock chip grab sampling for geochemical analysis were conducted in the Sioux-Ajax Tunnel during the winter and spring of 2021. The goal of this work was to constrain the structural, stratigraphic, and geochemical signature that is associated with CRD deposits and fissure vein systems along the Sioux-Ajax Fault Zone and integrate legacy data with recent mapping data. Detailed geological mapping data collected during this program included lithology, hydrothermal alteration, and structural orientations. The geological mapping data were applied to generate cross-sectional interpretations of structure and stratigraphy in the Tintic Main District. Rock chip samples were collected from the ribs (sides) of the Tunnel at variable spacing to represent changes in lithology and alteration. Samples were analyzed for multi-element composition and gold fire assay, as described in Section 8.1. Geochemical results were plotted on geologic maps and subjected to spatial data analysis by lithological and hydrothermal alteration type to identify areas for future exploration.

7.6 Drilling

IE commenced drilling with two reverse circulation (RC) holes (TTR-001 and TTR-002) followed by a fan of four diamond drill holes (TTD-003 through TTD-006) in 2021. Drilling resumed in late 2022 with one diamond drill hole (TTD-007) completed in early 2023. Drilling resumed again in May 2023 and continued until the winter break shutdown on December 17, 2023 while TDD-017 was in progress. All drilling completed to December 15, 2023 is summarized in Table 7-5. The purpose of each drill hole and the key results are summarized in Table 7-6. Drill hole collar locations are shown in Figure 7-19.

Table 7-5: Summary of IE Drilling on the Tintic Project from 2021 to 2023

Hole number	Year	Northing (m)	Easting (m)	Elevation (m)	Hole Type	Azimuth	Dip	Length (m)
TTR-001	2021	4416600	402919	1,803	RC	0	-90	251.46
TTR-002	2021	4416793	402924	1,809	RC	0	-90	332.232
TTD-003	2021	4420614	405078	2,166	Diamond	120	-60	469.08
TTD-004	2021	4420614	405078	2,166	Diamond	120	-50	435.55
TTD-005	2021	4420614	405078	2,166	Diamond	120	-80	371.26
TTD-006	2021	4420614	405078	2,166	Diamond	94	-45	379.45
TTD-007	2022	4417970	405385	1,989	Diamond	315	-60	997.00
TTD-008	2023	4418692	404339	1,938	Diamond	140	-75	747.83
TTD-009	2023	4419697	405490	2,119	Diamond	20	-50	1400.86
TTD-010	2023	4420482	406305	2,216	Diamond	285	-50	794.31
TTD-011	2023	4420638	404648	2,052	Diamond	157	-65	827.68
TTD-012	2023	4420588	403430	1,942	Diamond	150	-59	548.64
TTD-013	2023	4420106	406113	2,241	Diamond	315	-63	581.41
TTD-013A	2023	4420106	406113	2,241	Diamond	315	-63	1519.43
TTD-014	2023	4419697	405490	2,119	Diamond	118	-58	1319.78
TTD-015	2023	4419697	405490	2,119	Diamond	70	-58	1395.07
TTD-016	2023	4417509	404485	1,882	Diamond	130	-77	1435.61
TTD-017*	2023	4420638	404648	2,052	Diamond	63	-64	213.36

Source: IE (2023)
* TTD-017 had not completed drilling as of December 15, 2023

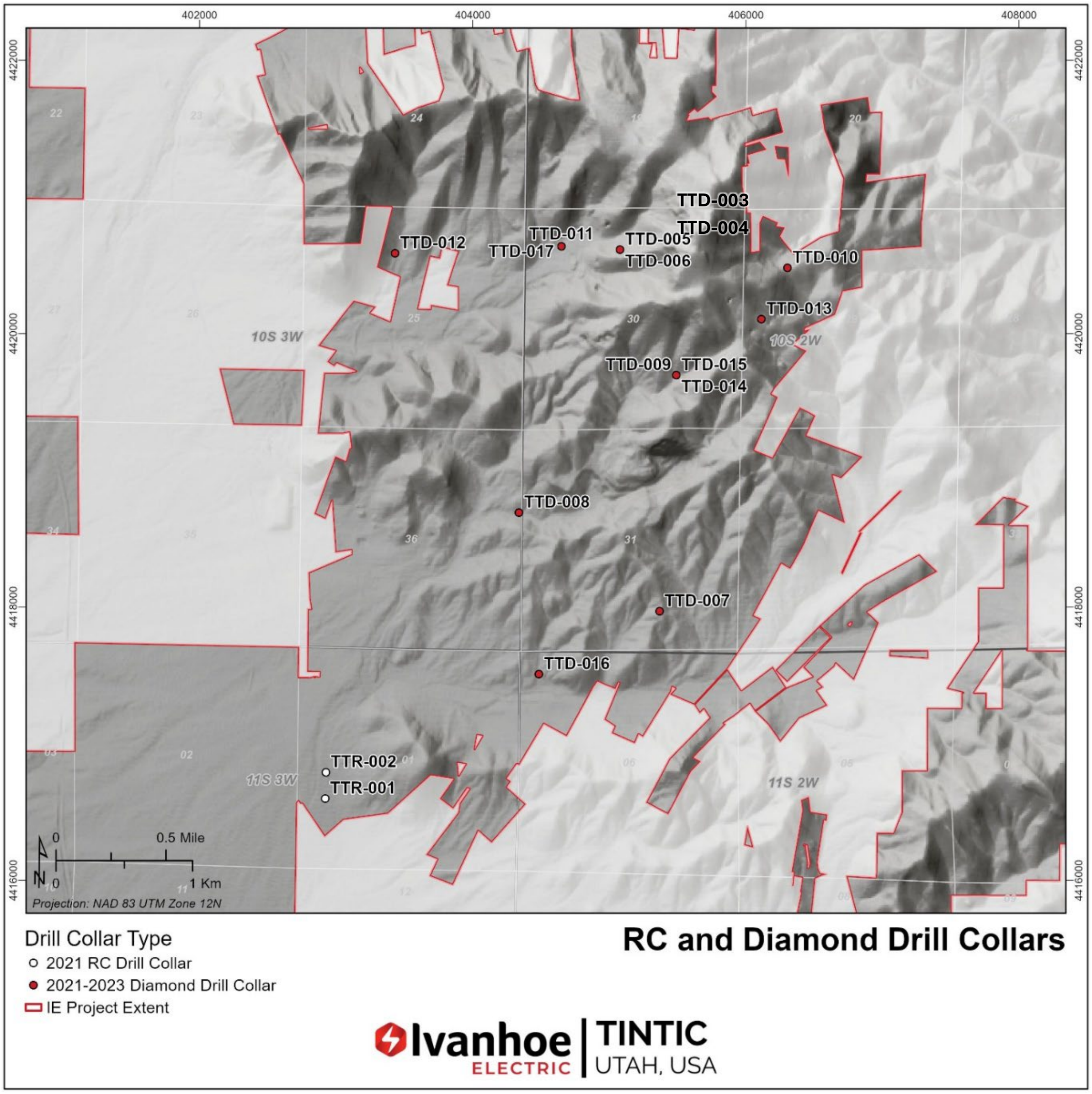
Table 7-6: Summary of Diamond Drill Holes Purpose and Results

Hole ID	Prospect	Summary
TTR-001	West Treasure Hill	RC hole drilled to test a strong conductivity response in shallow pediment at the mouth of the wash draining the Silver City area. Drilling intercepted weathered chlorite-altered Silver City monzonite.
TTR-002	West Treasure Hill	RC hole drilled to test a strong conductivity response in shallow pediment at the mouth of the wash draining Silver City area. Intercepted chlorite+-epidote altered Silver City monzonite with disseminated pyrite.
TTD-003	Gold Chain	TTD-003, TTD-004, TTD-005, TTD-006 were drilled as a fan from a single set-up to test an area of strong resistivity along the Gold Chain fissure, which was interpreted to be a favourable area for replacement-style mineralization. These holes intersected extensively brecciated host carbonates, potentially as a collapse above a deeper zone of dissolution. No significant mineralization was intersected, however the extensive collapse brecciation intersected should be considered favourable for potential replacement style mineralization nearby.
TTD-004	Gold Chain	
TTD-005	Gold Chain	
TTD-006	Gold Chain	
TTD-007	Sunbeam	Collared in the inner annulus of the Sunbeam Chargeability feature near the Lucky Boy Mine, TTD-007 was designed to test a "donut hole" negative chargeability feature. The hole intersected several different phases of the Silver City intrusive complex with low intensity propylitic and clay alteration associated with the distal expression of a porphyry system. One zone of intense clay alteration, and quartz-clay-pyrite veining interpreted as steeply dipping to the WNW, correlates with the projected down dip expression of the Joe-Undine high sulfidation fissure vein mine. From 775 m veining increases with the presence of quartz veins with pyrite content of around 5% total rock volume. An intense zone of veining and thick 10-20 cm pyrite veins is present from 790.40 m to 804.00 m with associated quartz and clay selvages.
TTD-008	Rabbits Foot	TTD-008 was designed to test the northern side of a chargeability “ring” feature interpreted as the outer pyrite and phyllic altered halo to a porphyry system. The drill hole intersected a number of intrusive phases from the Silver City intrusive complex. Rare quartz-pyrite-clay veins are present at a sparse density of 1-2 veins per 10 m, with some localized increasing intensity with intermediate argillic clay alteration of the feldspars in surrounding host rock. The hole did not explain the Typhoon™ anomaly but was not directed to test the core of that feature.
TTD-009	Deep Mammoth	TTD-009 was drilled from south to north to test below the Deep Mammoth chargeability feature and intersected several silver, lead, zinc and gold bearing veins with weak copper mineralization. The lowermost formations in the carbonate package were altered and intruded by several dikes with clay and pyrite alteration. The most gold- and copper-rich mineralization was associated with cross-cutting “fissure” style mineralization, however some lead- and zinc-rich mineralized skarn was intersected in the Ophir Formation.

Hole ID	Prospect	Summary
TTD-010	Carisa Pipe	TTD-010 was drilled to test this resistivity pipe prospect and intersected a wide zone of brecciation and weakly anomalous base metal geochemistry in the area of the prospect. This is likely sufficient to explain the Typhoon™-derived resistivity feature. While the rocks intersected were favourable hosts, there was little indication that it had been exposed to significant mineralizing fluids. Shallower in TTD-010, the hole traversed a very wide zone of marbelization and silicification, interpreted to be a thermal alteration halo to the Carisa stock, a pre-mineral intrusion to the south. There may be potential for mineralization at depth on the western and northern margins of the Carisa stock
TTD-011	Lower Mammoth (Billingsley Breccia)	TTD-011 was drilled to test below an area of extensive collapse breccias mapped in historical workings at the Lower Mammoth. The hole was collared near the intersection of the Mammoth fault and the Sioux-Ajax fault and traversed over 100 m of extensive jasperoid and brecciation in the shallow portions of the hole. At depth, the hole intersected several gougy zones with elevated base metals that may represent fissures. The hole drooped and intersected quartzite sooner than expected. However, the west-most Ophir formation showed extensive skarn (calc-silicate with local magnetite) alteration. It is unclear if the hole was drilled deep enough to traverse below the mapped breccia itself.
TTD-012	Western Run	TTD-012 was drilled to test the potential of a western trend of carbonate replacement mineralization associated with discrete Typhoon™ anomalies. The hole drilled the overturned sequence of Paleozoic rocks, traversing the anomalies without intersecting much alteration. However the hole was lost in highly broken and calc-silicate altered rocks that may be associated with the western splay of the Sioux-Ajax fault.
TTD-013/A	Deep Mammoth	TTD-013 (wedged at 461m to become TTD-013A) was drilled into the chargeability feature along a west-northwesterly azimuth and intersected extensive marble, breccia, and alteration on the west flank of the Carisa stock that persisted for several hundred meters until approximately 800 m downhole. The hole then cut approximately 500 m of host carbonates with patches of bleaching and rare manganoan “BBQ rock” veins. A zone of calc-silicate alteration (epidote) manifested in a shaly horizon with well developed “BBQ rock” calcite on fractures from 1335 to 1358 m. After a short unaltered section, the core gradually becomes more intensely calc-silicate altered with increasing pyrite until the contact with the basal Tintic Quartzite is encountered at 1477 m where no major signs of alteration or veining were encountered.
TTD-014	Black Dragon	TTD-014 was drilled to test a strong density feature near shallow historical mines. The hole intersected several narrow mineralized fissure zones and cut approximately 800 m of marble and bleaching with increasing lead-zinc-silver-rich skarn alteration towards the end of hole. Nothing to explain the density anomaly was noted, so the hole is interpreted to have drilled over top of a potentially significant zone of dense material (massive sulfides or skarn).
TTD-015	Iron Blossom	TTD-015 was drilled to test below the Iron Blossom mine halfway between TTD-009 and TTD-014 which both intersected lead-zinc-rich mineralization. The hole traversed extensive zones of bleaching with some "BBQ rock", though overall it was less altered than TTD-014. The bottom of the hole is extensively calc-silicate altered in the Ophir formations. Assays are pending.

Hole ID	Prospect	Summary
TTD-016	Sunbeam	TTD-016 intersected a monzodiorite phase of the Silver City intrusive complex with moderate to intense potassic and phyllic alteration. The hole intersected approximately 600 m of high-temperature porphyry-style veining and alteration from around 800 m to the end of hole at 1435.61 m hosted in a monzodiorite phase of the Silver City intrusive complex. Abundant quartz-sericite-pyrite D type veins are present from 800 m downhole. These overprint an earlier potassic vein assemblage of sheeted, sub-vertical, quartz-pyrite centreline with biotite-pyrite which are present from 960 m to the end of hole. Veins are typically sheeted and sub vertical with some minor stockwork zones; vein density ranges from 5-20 veins per metre. Rare higher temperature quartz-filled A veins are also observed. The sulfide assemblage is dominated by pyrite, from 2-8% total rock volume. Very minor chalcopyrite and molybdenite is observed but the sulfide assemblage is dominated by pyrite.

Source: IE (2023)



Source: IE (2023)

Figure 7-19: Location map of all Ivanhoe Electric drilling

During the 2021 RC drilling campaign, downhole surveying was conducted using the SprintIQ north seeking gyro (NSG) in multishot mode starting at the collar and every 30 meters thereafter.

Subsequent drilling used a combination of EZGYRO and OMNIx42 NSGs in multishot mode approximately every 100 ft as the tool was being lowered into the hole. In some instances, confirmatory shots were taken as the tool was pulled from the hole.

Abandonment procedures for all drilling performed during the campaigns were designed and held to meet or exceed State mandated requirements. The majority of drilling reaching or exceeding depths over 100 m utilized borehole abandonment of State approved methods involving: abandonite to approximately 20 m below the geological contact between bedrock and overburden sediments, if present, then the installation of appropriately sized Bradley plugs, labeled with the associated borehole ID, as the base for pumping and curing State approved cement across the geological contact to seal the interface, followed by additional abandonite to approximately 20 m below the topographic surface, with an approximately 20 m cement cap, with the hole tagged and labeled for collar demarcation. Shallow drillholes, particularly those drilled utilizing only reverse circulation or sonic drilling methods, were abandoned using cement from total depth to surface with cap, with the hole tagged and labeled for collar demarcation.

7.6.1 Logging Procedures

RC Drill Chips

Chips are collected by the drillers in bags and representative samples are placed into chip trays for geological logging.

IE geologists enter geological information into a Microsoft Excel spreadsheet while logging, including lithology, alteration, veining, and mineralization. Optional characterizers, including color and grain size, are available for further identification.

Drill Core

Core is received and laid out in proper sequence on the logging tables for checking proper boxing of core, meter conversions, washing, geotechnical logging, marking orientation lines, geological logging, sampling, and photography. Core is photographed wet, dry, and under ultraviolet (UV) light – these photos are captured directly into Imago.

IE geotechnicians collect data from the core including: total core recovery (TCR), rock quality designation (RQD), intact rock strength (IRS), discontinuity logging, and specific gravity (SG) measurements according to IE standard operating procedures (SOPs).

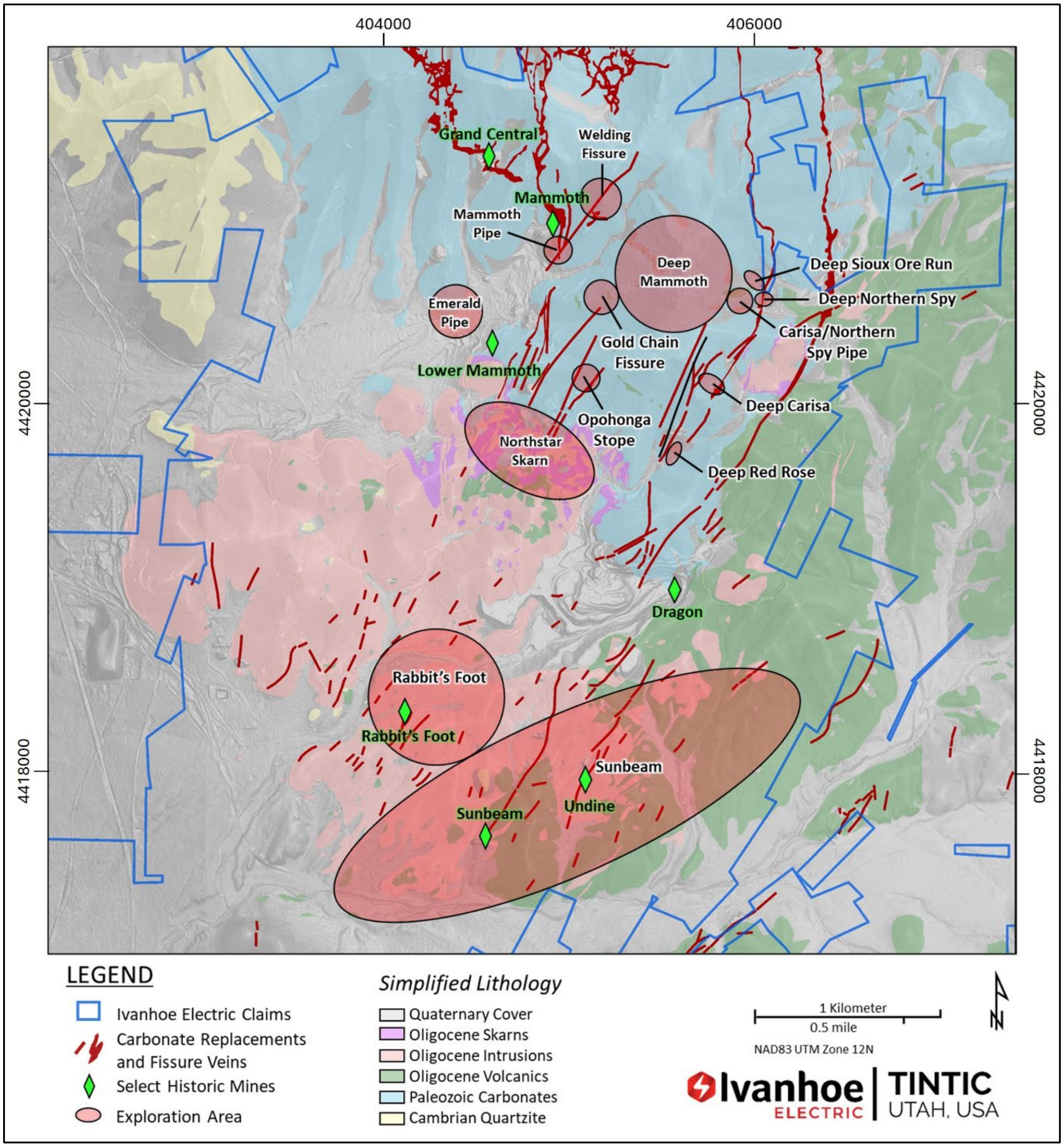
IE geologists enter geological information into several tabs within MX Deposit™ while logging, including lithology, alteration, mineralization, oxides, vein zones, structure zones, structure point data, oriented core measurements, and physical property measurements including magnetic susceptibility, conductivity, and induced polarization (IP) chargeability measurements.

X-ray fluorescence (XRF) measurements are taken by IE wherever mineralization of interest is present for internal use.

SWIR and near-infrared (NIR) spectral data are collected with a portable infrared spectrometer and analyzed by IE for interpreting and determining minerals of interest. SWIR and NIR spectrometer data are analyzed both in-house utilizing The Spectral Geologist (TSG™) software as well as outsourced to aiSIRIS™, a cloud-based mineral interpretation artificial intelligence (AI) system.

7.7 Significant Results and Interpretation – Prospects

Sections 7.1 through 7.6 detail all the work that went into identifying robust CRD and porphyry prospects at Tintic (Figure 7-20). This section describes the significant results of the work including the diamond drilling completed by IE since 2021 to test several of the key exploration prospects. The QP notes that all of the areas discussed below are considered prospects and further exploration in the form of drilling will be needed to test whether any could potentially be considered exploration targets, but there is no certainty that exploration will return positive results.



Source: IE (2023)

Figure 7-20: IE prospect localities

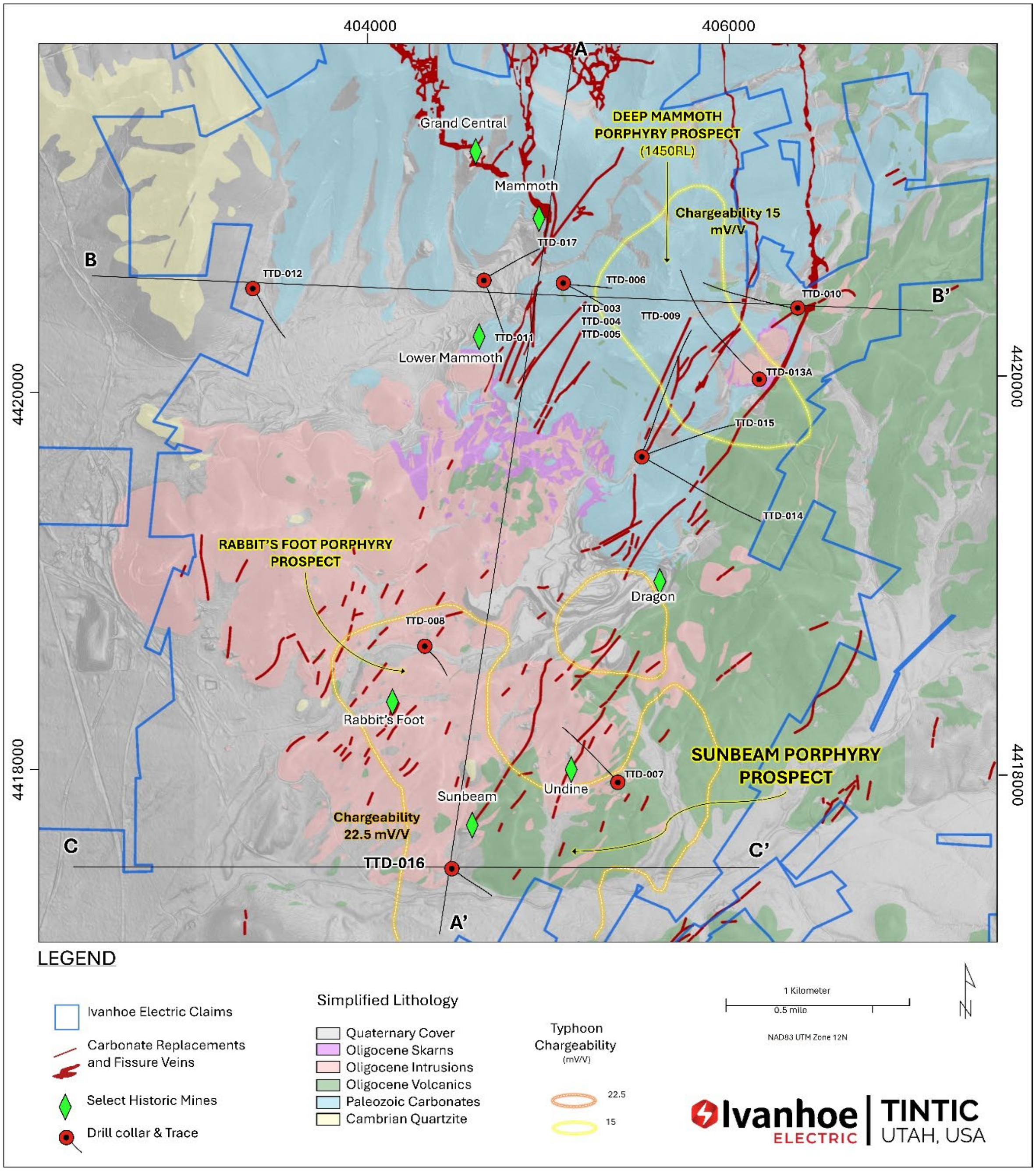
7.7.1 Porphyry Prospects

The Silver City intrusive complex is the focus of mineralizing fluids for the Tintic Mining District and is highly prospective for buried porphyry-style mineralization at depth. The multiphase intrusive stock displays a similar intrusive history and composition to the Bingham, Stockton, and Southwest Tintic porphyries. Detailed geologic mapping (Section 7.2) has discerned at least eight intrusive phases that become progressively more porphyritic with time and that are all crosscut by porphyry-style hydrothermal alteration and veining that is coincident with anomalous Au-Cu-Mo in soils (Section 7.3.1). Illite crystallinity displays a clear vector towards a central heat source in the core of the Silver City complex (Section 7.3.3), a trend which is also supported by fluid inclusion survey data (Section 7.3.4). The fluid inclusion survey has identified vapor-dominated and moderately saline inclusions in the Rabbit's Foot and Sunbeam-Joe Undine areas. These types of inclusions form above a causative porphyry intrusion from high temperature (>450° C) magmatic fluids intersecting the vapor + NaCl stability region of the H_2O-NaCl system. Typhoon™ IP data have discerned a large chargeability anomaly coincident with the above-mentioned anomalies (Section 7.1.2).

These data provide several lines of geological evidence for the presence of at least one large porphyry center in the Silver City stock and two principal porphyry prospects have been identified at Rabbit's Foot Hill and below the past-producing Sunbeam Mine. Additionally, the Typhoon™ IP survey data have yielded a third porphyry prospect below the past producing Mammoth breccia pipe to the north of the Silver City stock.

Three diamond drill holes, TTD-007, TTD-008, and TTD-016, totaling 3,180.44 m, have been completed in the Rabbit's Foot and Sunbeam porphyry prospects. TTD-016 intersected approximately 600 m of high-temperature porphyry-style veining and alteration hosted in a monzodiorite phase of the Silver City intrusive complex from ~800 m to the end of hole at 1,435.61 m. The vein assemblage of biotite-quartz-pyrite overprinted by quartz-sericite-pyrite is interpreted as early potassic veining overprinted by later D type veining consistent with phyllic alteration. The sulfide assemblage is pyrite dominant with very minor chalcopyrite and molybdenite. TTD-016 is confirmation of the presence of a porphyry system at the Sunbeam porphyry prospect with a significant intersection of porphyry-style high-temperature veining with abundant pyrite.

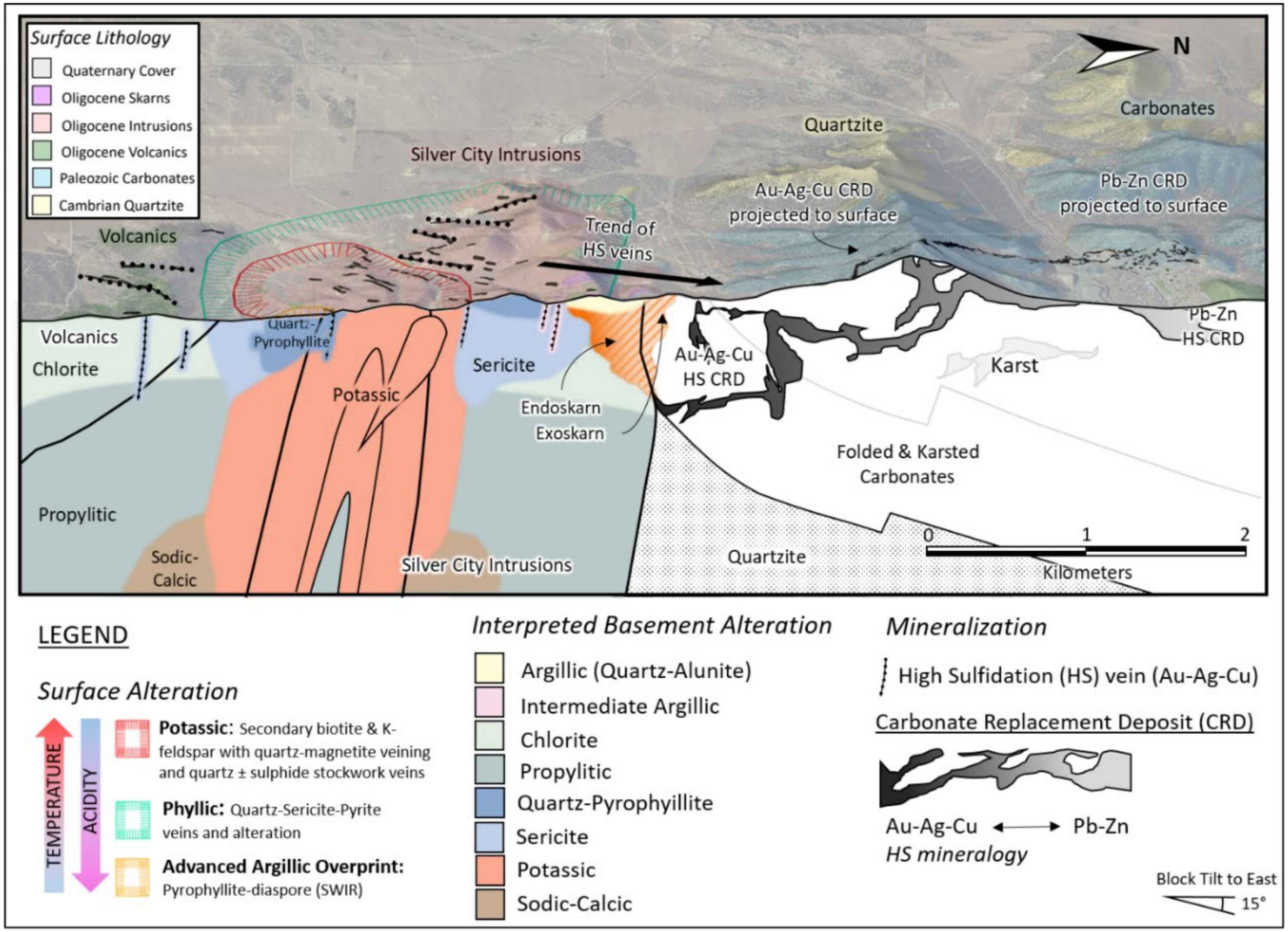
Figure 7-21 shows the simplified lithology and geophysical data across the Silver City intrusive complex and highlights the regions of the three porphyry prospects. Figure 7-22 is a schematic section through the Silver City intrusive complex showing the interpreted position of a postulated porphyry center in relation to the main Tintic district (Kerr and Hanneman, 2020a).



Source: IE (2023)

Figure 7-21: Simplified lithology and geophysical data across the Silver City Stock and the three porphyry prospects

Note: Section A-A' is shown in Figure 6-13, B-B' is shown in Figure 7-28, and C-C' is shown in Figure 7-26 .



Source: Kerr and Hanneman (2020a) - modified after Sillitoe (2010) to be Tintic-specific

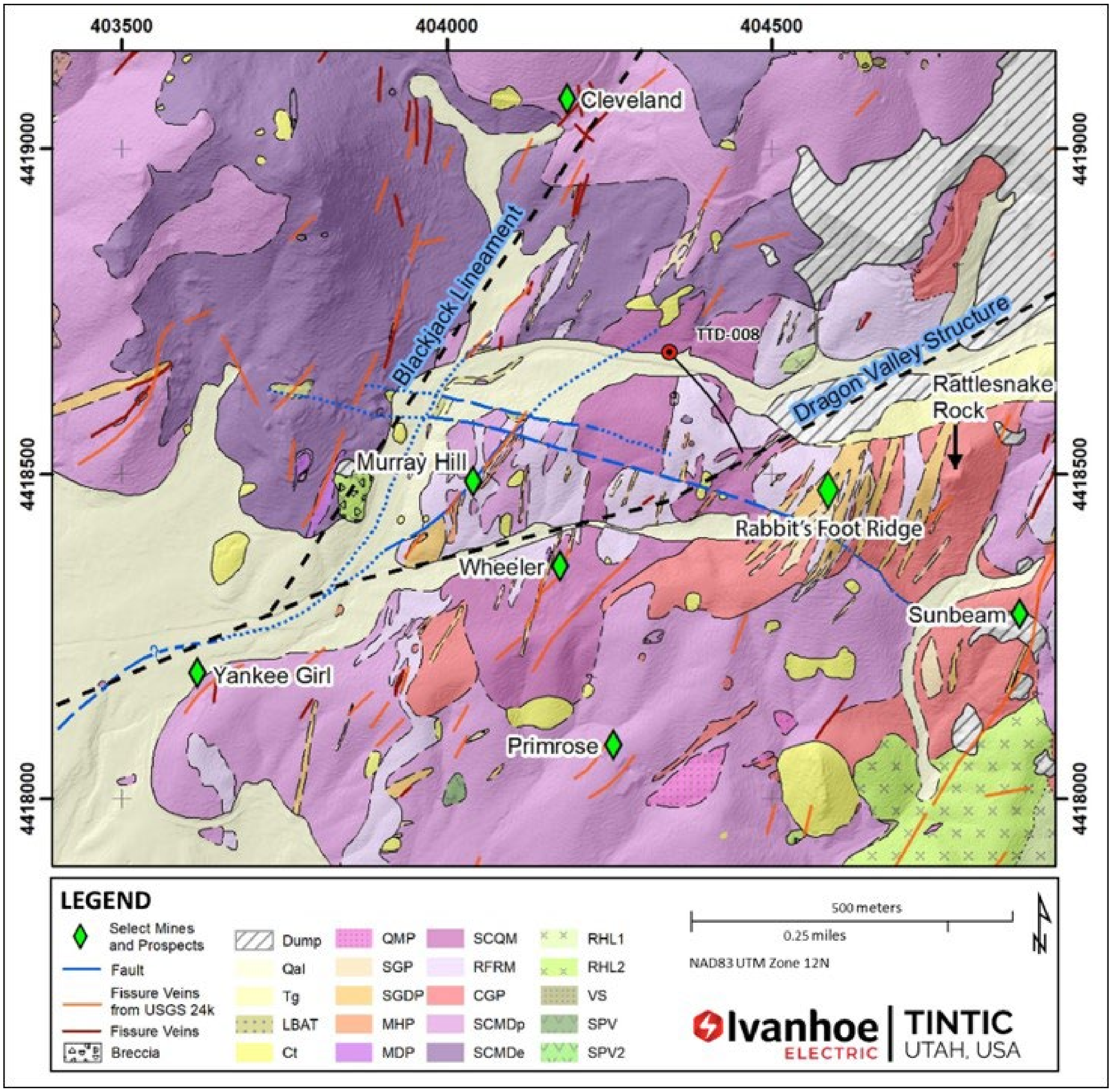
Figure 7-22: Schematic section through the Silver City intrusive complex showing the interpreted position of a postulated porphyry center in relation to the Main Tintic District

Rabbit's Foot Porphyry Prospect

The Rabbit's Foot porphyry prospect is located at the intersection of the E-W trending Dragon structure and the NNE trending Blackjack-Mammoth structure (Figure 7-23). Several prominent CRD 'ore runs' and fissure veins coalesce in this area and several of the historical mines, although small in scale, produced high-grade copper, gold, and, anecdotally, one mine produced some molybdenum. Historical mines in this area include the Murray Hill shafts, the Rabbit's Foot Mine, the Rabbit's Foot Ridge Au Prospect, and the Yankee Girl Mine which were active from roughly 1870 - 1900. At surface, this area falls within a zone of strongly anomalous Cu-Au-Mo soil geochemistry (Kerr and Hanneman, 2020a).

The Rabbit's foot area is crosscut by stockwork quartz-filled A-veins and the igneous host rock has been pervasively altered to K-feldspar (potassic alteration). A historical shallow rotary drill hole on Rabbit's Foot ridge drilled into the potassic-altered zone of quartz stockwork veins and intersected disseminated bornite in the last 75 ft (23 m) of drilling. The extent of potassic alteration on Rabbit's Foot ridge is limited in lateral extent, and this likely reflects an upflow zone of porphyry-related hydrothermal fluids. A fluid inclusion survey of the stockwork quartz veins has identified ubiquitous vapor-filled inclusions with rare NaCl inclusions. These veins formed from the intersection of magmatic fluids with the Vapor + NaCl stability region of the H_2O-NaCl system. Generally, such veins form at the point of vapor flashing during high-level ascent above a porphyry system in an area between the porphyry and overlying high-sulfidation system. The causative pluton might be intersected within 500 m, neglecting potential structural offsets, which is in line with the modeled depth of the chargeability and conductivity anomalies (Kerr and Hanneman, 2020a).

One diamond drill hole, TTD-008 of 747.83 m depth has been completed in the Rabbit's Foot porphyry prospect. TTD-008 was designed to test the northern side of a chargeability "ring" feature interpreted as the outer pyrite and phyllic altered halo to a porphyry system. The drill hole intersected a number of intrusive phases from the Silver City intrusive complex. Rare quartz-pyrite-clay veins are present at a sparse density of 1-2 veins per 10 m, with some localized increasing intensity with intermediate argillic clay alteration of the feldspars in surrounding host rock.



Source: IE (2023)

Figure 7-23: Geologic map of the Rabbit's Foot porphyry prospect area

Sunbeam Porphyry Prospect

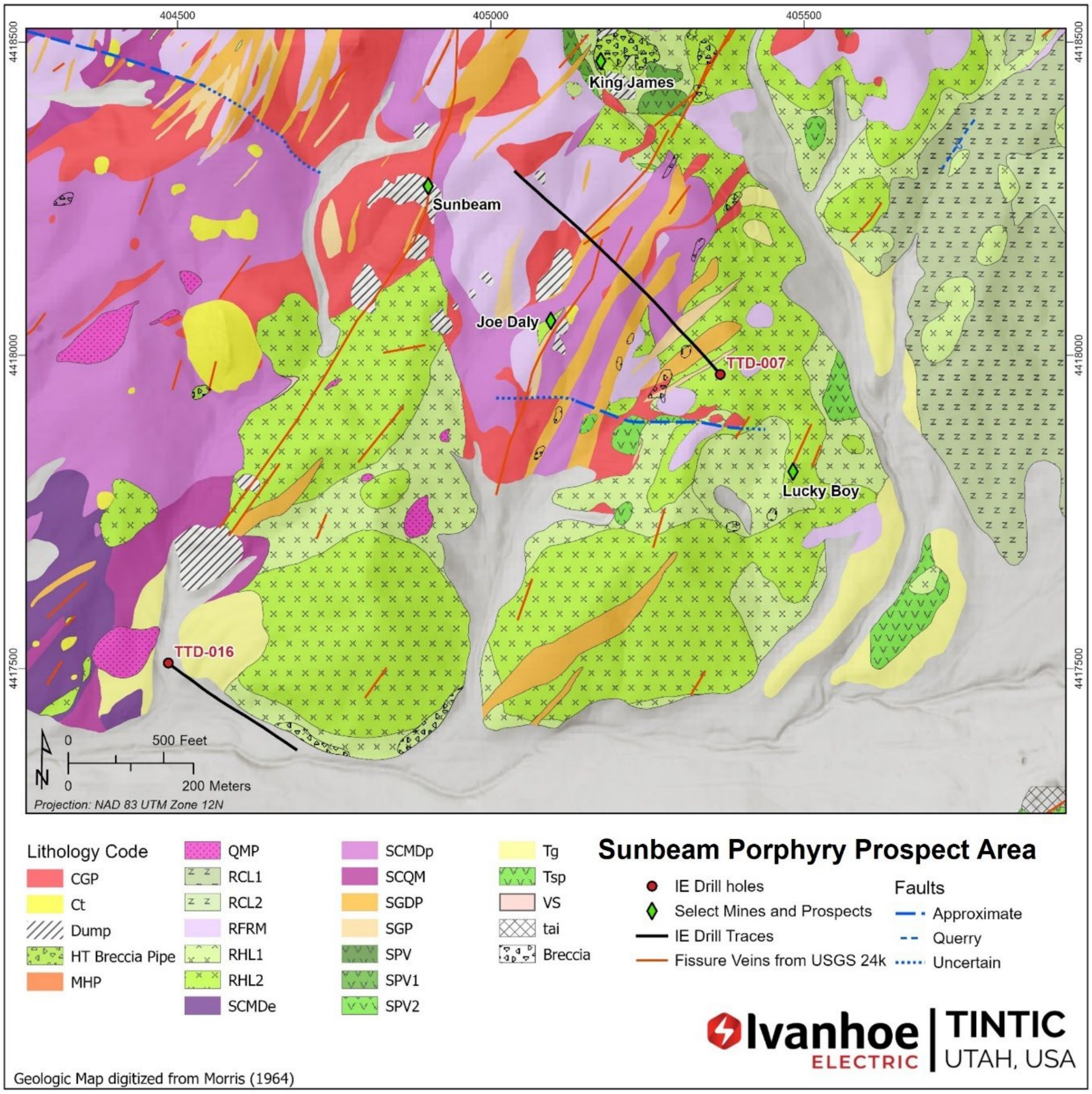
The Sunbeam porphyry prospect is located below the past producing Sunbeam and Joe-Undine high-sulfidation fissure vein mines. The fissure veins in this area likely reflect late thermal collapse of an underlying porphyry system as they crosscut zones of earlier potassic alteration and A-vein quartz stockwork. Fluid inclusion surveys of the stockwork quartz veining in the Sunbeam prospect have identified them as high-level A and B-style veins above the core of a porphyry system (Kerr and Hanneman, 2020a).

Weakly mineralized potassic altered intrusive rock with disseminated chalcopyrite has been observed in the King James mine dumps just north of the Joe-Undine mine area (Figure 7-24). This is evidence in support of an early mineralized and potassic altered porphyry system active in this area, which has subsequently been overprinted by later high-sulfidation and advanced argillic alteration (Figure 7-25). The Sunbeam area has been a focus area of interest from the beginning of the mapping campaign by IE due to coincident Cu-Au mineralization along the Sunbeam fissure, nearby porphyry-style potassic alteration and quartz veining in porphyritic rocks, strong phyllic alteration and quartz-sericite-pyrite (QSP) veining, and Cu-Au-Mo geochemical anomaly in soils at surface (Kerr and Hanneman, 2020a).

The Sunbeam prospect is crosscut by several generations of ~N-S trending porphyritic dikes that are variably phyllic and potassic (phlogopite) altered. Potassic alteration in the Sunbeam area is focused in and around the porphyry dikes and alteration is associated with narrow A-type quartz ± magnetite and magnetite veining. A Cu-Au-Mo soil geochemical anomaly is centered on the most significant part of this alteration zone east of Joe-Undine and along the NNE-trending Sunbeam fissure vein. Widespread phyllic alteration predominantly occurs in the volcanic rocks and the CGP around QSP veins along the historically exploited fissure veins. Some of the strongest QSP veining and phyllic alteration is present in volcanic rocks on surface at the Lucky Boy Mine, and it arcs to the northeast and west-southwest with intermittent tourmaline alteration. Together these phyllic alteration zones encircle the potassic alteration, quartz and magnetite veining, and geochemical anomalies east of Joe Undine. Historical drill hole STR-26 ended in confirmed porphyry mineralization grading 0.4% Cu (chalcopyrite) and 0.2 g/t Au with phlogopite alteration. This drill hole was collared just outside of the primary chargeability anomaly and it just grazed the edge of the porphyry system (Kerr and Hanneman, 2020a).

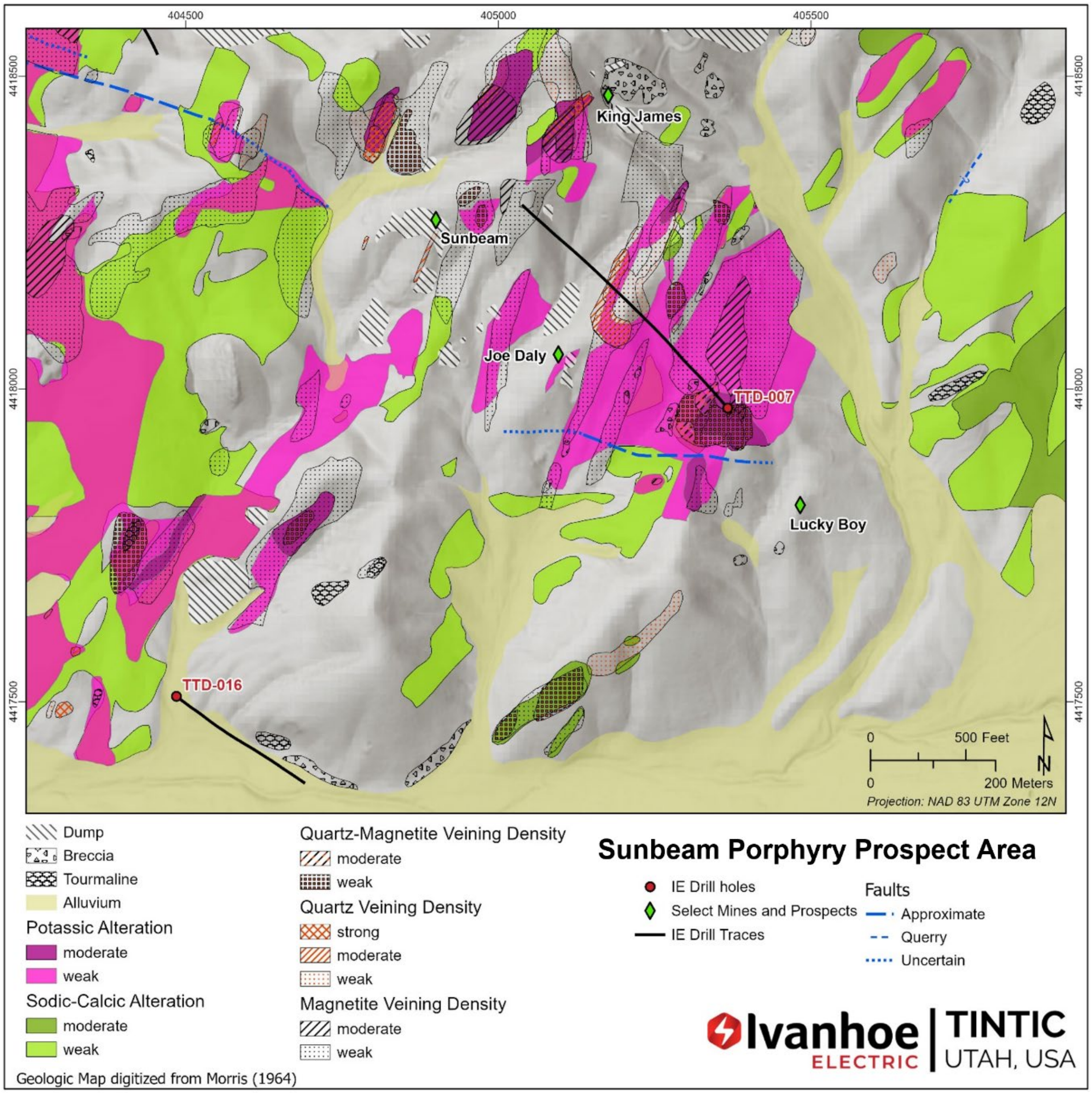
Two diamond drill holes, TTD-007, 997 m depth and TTD-016, 1435.61 m depth, have been completed in the Sunbeam porphyry prospect. TTD-007 was designed to test the inner southern side of a chargeability “ring” feature interpreted as the outer pyrite and phyllic altered halo to a porphyry system, a “negative anomaly” in the geophysics.

TTD-007 intersected several different phases of the Silver City intrusive complex with low intensity propylitic and clay alteration associated with the distal expression of a porphyry system. One intense zone of intense clay alteration, quartz-clay-pyrite veining interpreted as steeply dipping to the WNW correlates with the projected down dip expression of the Joe Daly-Undine high sulfidation fissure vein mine. From 775 m veining increases with the presence of quartz veins with pyrite content of around 5%. An intense zone of veining and thick 10-20 cm pyrite veins is present from 790.40 m to 804.00 m with associated quartz and clay selvage.



Source: IE (2023)

Figure 7-24: Geologic map of the Sunbeam porphyry prospect area



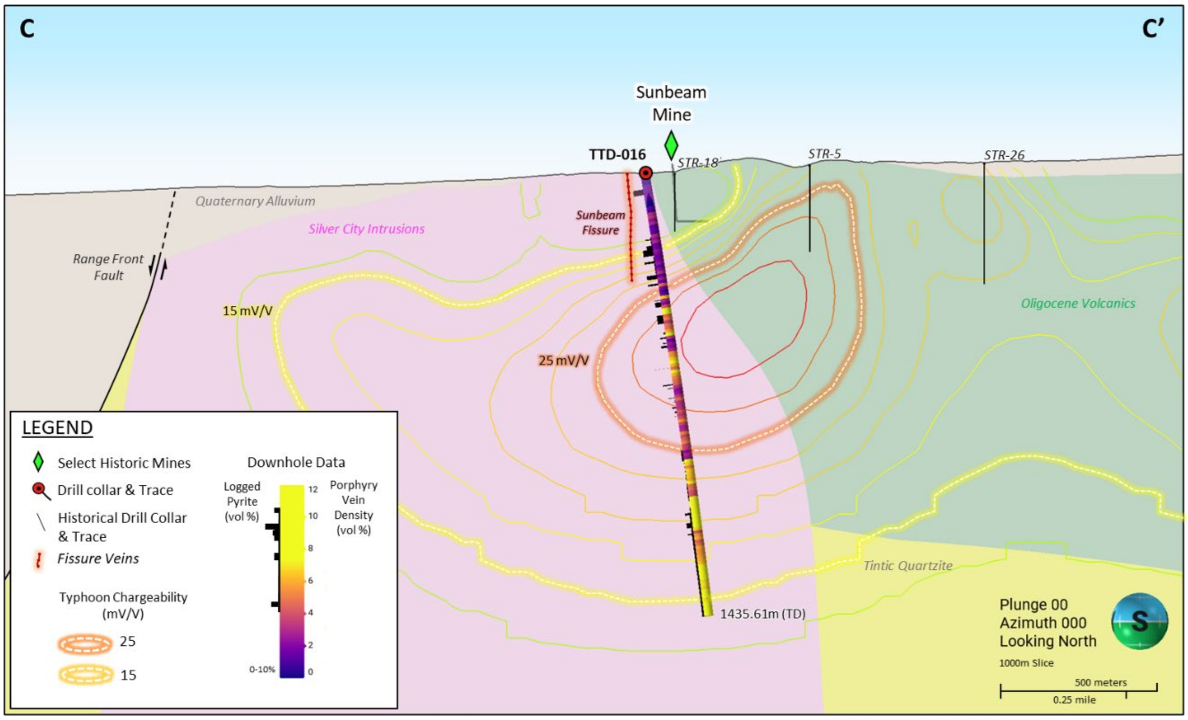
Source: IE (2023)

Figure 7-25: Geological map of the Sunbeam porphyry prospect area showing potassic alteration and vein intensity.

TTD-016 intersected a monzodiorite phase of the Silver City intrusive complex with moderate to intense potassic and phyllic alteration. TTD-016 intersected approximately 600 m of high temperature porphyry-style veining and alteration from around 800 m to the end of hole at 1435.61 m. Abundant quartz-sericite-pyrite D type veins are present from 800 m downhole. These overprint an earlier potassic vein assemblage of quartz-pyrite centerline with biotite-pyrite selvage which are present from 960 m to the end of hole (Figure 7-26; Figure 7-27).

Veins are typically sheeted and sub-vertical with some minor stockwork zones; vein density ranges from 5-20 veins per meter. Rare higher temperature quartz-filled A-veins are also observed. The sulfide assemblage is dominated by pyrite, from 2-8% total rock volume. Very minor chalcopyrite and molybdenite is observed but the sulfide assemblage is dominated by pyrite.

TTD-016 is confirmation of the presence of a porphyry system at the Sunbeam porphyry exploration area with a significant intersection of porphyry-style high temperature veining with abundant pyrite.



Source: IE (2023)

Figure 7-26: Cross section through the Sunbeam Porphyry prospect showing vein density and logged pyrite content in drill hole TTD-016 and geophysical data, looking north.

Note: Location of section C-C' is shown in Figure 7-21.

Source: IE (2023)

Figure 7-27: Photographs of drill core from TTD-016 at the top and the bottom of the stockwork zone, showing intense porphyry-style veining and alteration and pyrite-dominant stockwork in Silver City monzonite host rocks.

Mammoth Porphyry Prospect

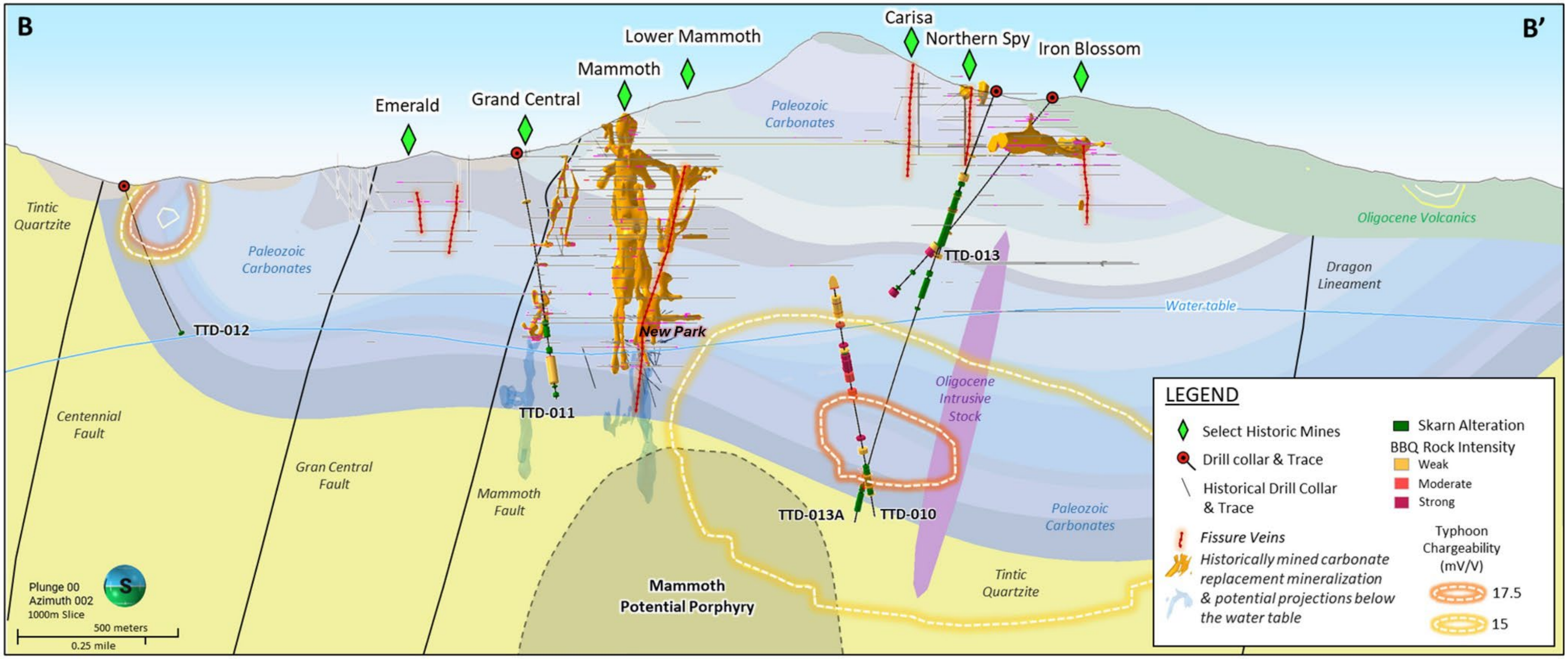
A deep, broad chargeability anomaly at approximately 1 km depth was recognized in early inversions of Typhoon™ data and was interpreted as potentially indicative of disseminated sulfides formed around a deep porphyry or skarn deposit below or adjacent to the Mammoth Breccia Pipe (Figure 7-28). The chargeability anomaly is below a distinct bedding-parallel resistivity anomaly and has a clear pipe-like resistive feature that is roughly centered above the mineralization prospect. Several copper and/or gold-rich (i.e. relative to the Tintic Main District average values) mineralized fissures occur above the geophysical anomaly radiating outwards. However, the centrally located Carisa Stock is nearby at surface to the southeast, indicating some capacity for intrusive activity in the area and therefore possible development of mineralization (Kerr and Hanneman, 2020a).

TTD-009 was drilled from south to north to test below the chargeability feature and intersected several silver, lead, zinc and gold bearing veins with weak copper mineralization. The lowermost formations in the carbonate package were altered and intruded by several dikes with clay and pyrite alteration. The most gold- and copper-rich mineralization was associated with cross-cutting "fissure" style mineralization, however some lead- and zinc-rich mineralized skarn was intersected in the Ophir Formation.

TTD-013 (wedged at 461 m to become TTD-013A) was drilled into the chargeability feature along a west-northwesterly azimuth and intersected extensive marble, breccia, and alteration on the west flank of the Carisa stock that persisted for several hundred meters until approximately 800 m downhole. The hole then cut approximately 500 m of host carbonates with patches of bleaching and rare manganoan "BBQ rock" veins. A zone of calc-silicate alteration (epidote) manifested in a shaly horizon with well developed "BBQ rock" calcite on fractures from 1,335 to 1,358 m. After a short unaltered section, the core gradually becomes more intensely calc-silicate altered with increasing pyrite until the contact with the basal Tintic Quartzite is encountered at 1,477 m in the north-westerly quadrant of the chargeability feature where no major signs of alteration or veining were encountered.

Taken together, TTD-009 and TTD-013 have demonstrated that a porphyry system does not exist within or immediately below the center of the Mammoth chargeability feature. The holes do show very encouraging signs of replacement potential to the east of their deeper projections, on the west flank of the Carisa Stock. Further, the results do not preclude the potential for a significant porphyry fluid source to the west and north, immediately below the depth extents of the Mammoth and Grand Central Mines.

IE gained access to historical data in 2023 that showed some unverified underground drilling results from 1960's drilling that intercepted broad zones of copper mineralization, presumably structurally controlled, in drill holes collared from the deepest levels of the Mammoth Mine (Figure 7-28) in an area called New Park. Petrological data showing clear hypogene chalcocite upgrading in mineralization associated with New Park indicates drilling in the area would be informative.



Source: IE (2023)

Figure 7-28: Schematic section showing the postulated Deep Mammoth Porphyry based on Typhoon™ IP geophysical anomalism

Note: Location of section B-B' is shown in Figure 7-21.

7.7.2 Carbonate Replacement Deposit Prospects

Carisa Group Fissure

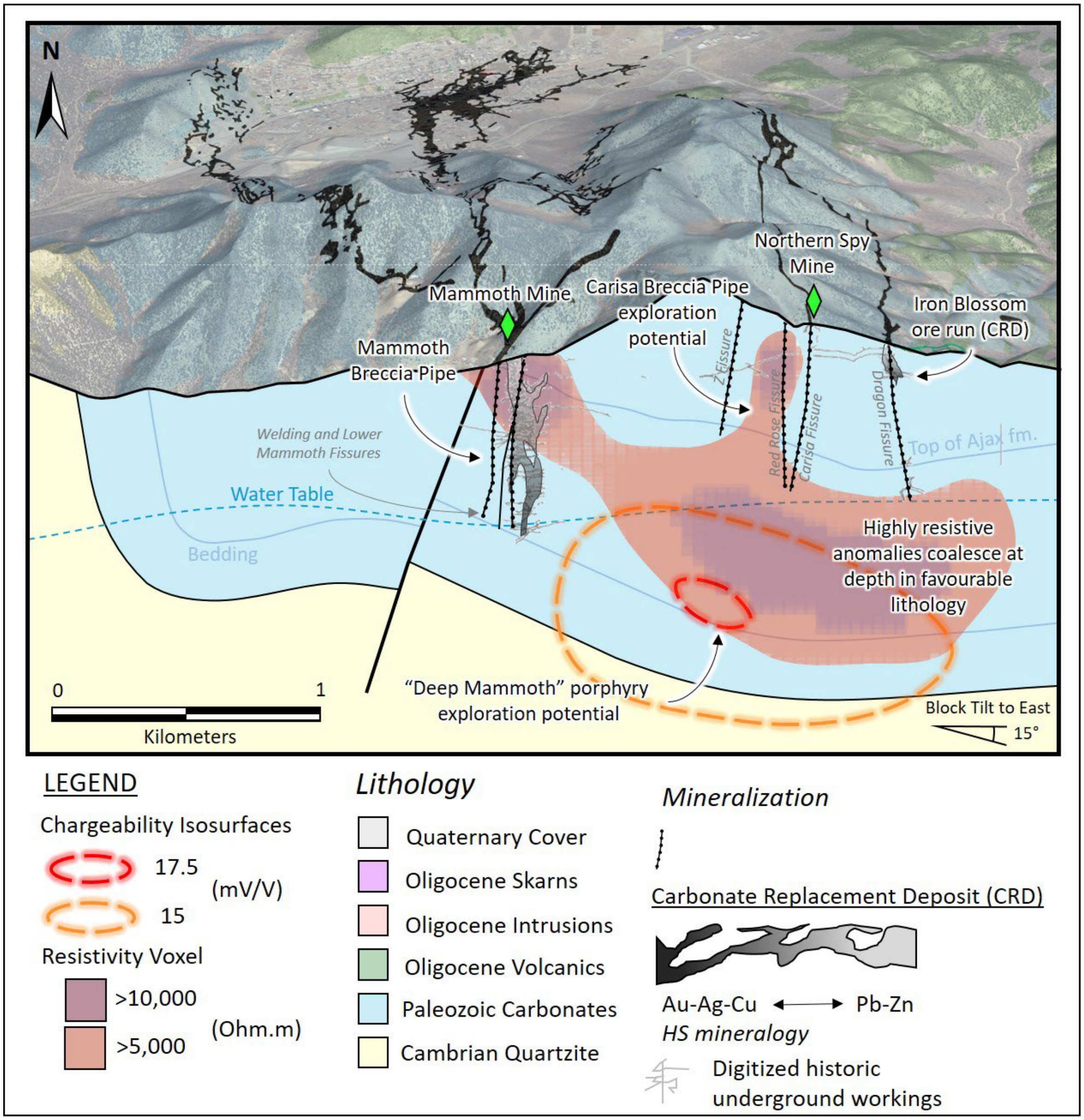
The carbonate succession below the historical Northern Spy and Carisa mines are considered to be priority drilling prospects by IE, predominantly for high-grade Cu-Au-Ag lode vein and breccia pipe replacement bodies. Mineralized veins at Carisa and Northern Spy were historically exploited down to relatively shallow depths (270 m and 210 m below surface respectively), yielding some of the highest-grade Au and Ag values in the Tintic District. Despite the high grades, production in these mines was limited due to the complex fractured land positions and difficulties shipping mined material due to topography and access. Based on the historical mining and for the reasons outlined below, the Carisa and Northern Spy areas (Carisa Group) are highly prospective for undiscovered CRD mineralization inclusive of a potential ‘Mammoth’ breccia pipe occurrence. Fissures included in the Carisa Group are the Carisa, Star, Red Rose, and “Z” fissures.

The Carisa and Northern Spy mines produced from the Lower Bluebell Formation and the Fish Haven Formation, which are located relatively high in the Tintic District stratigraphic section. North Star Mine primarily produced from the Ajax Formation. This is the lower portion in the stratigraphic section and has been recognized as one of the more favorable and reactive carbonate lithologies for mineralization. While the Fish Haven and Bluebell Formations locally produced high grade mineralization at Carisa and Northern Spy, the lower lying more favorable Ajax Formation has not been adequately tested at depth below these mines. Mineralization at the Northern Spy and Carisa mines appears to have been best developed where the roughly north-northeast trending mineralized fissures intersected cross structures (e.g. the east-west trending Sioux Ajax fault zone). These structural intersections have potential to host larger CRDs at depth in the Ajax Formation (Kerr and Hanneman, 2020b).

The Red Rose and Boss Tweed mines are less well documented. However, their workings are generally located within the Opohonga Formation. The Red Rose Mine shaft was apparently sunk into the Upper Ajax Formation. The Sioux-Ajax Tunnel (2071 m RL) and lower levels of other larger mines (as low as 1,414 m RL) e.g. the Iron Blossom (1300, 1700, and 2100 levels), Lower Mammoth (2100 and 2155 levels), Black Jack (1100 level), and Dragon (300 level) mines all mined into these fissures. However, only limited mineralization was intersected (Kerr and Hanneman, 2020b).

Primary prospects for CRD mineralization are generally associated with structural intersections within favorable carbonate horizons. The structural intersections allow for high fracture permeability, hence promote increased fluid flow and precipitation of sulfide mineralization. Large manto-style replacement bodies (i.e. Mammoth pipe analogues) are likely to be best developed in favorable carbonate horizons identified throughout the district and locally in the Ajax and Bluebell Formations in the Carisa / Northern Spy area. Therefore, the down plunge projection of the structural intersections with the Ajax Formation has the greatest potential to host a large replacement deposit. Furthermore, the axis of the Tintic Syncline may have increased fracture permeability characteristics and the intersection of the synclinal axis with favorable lithologies and known mineralized fissures have increased prospectively potential (Kerr and Hanneman, 2020b).

The host rock adjacent to mineralized fissures and breccia pipes is moderately silicified, which is measurable in the Typhoon™ geophysical survey data as a strongly resistive anomaly. The Mammoth Breccia pipe is surrounded by a coincident resistive halo as are several known fissure veins. A resistive pipe-like body extends at depth below the Northern Spy Mine down to the Ajax Formation and Opex Formation. This suggests that a Mammoth-style breccia pipe may exist below the deepest working level of the Northern Spy Mine (Kerr and Hanneman, 2020b) (Figure 7-29).



Source: IE (2023)

Figure 7-29: Illustrative representation of the Carisa prospect region showing highly resistive anomalies as identified from the Typhoon™ survey data, that coalesce at depth within a prospective carbonate formation.

Southern extension of Carisa mineralized shoots into the Ajax Formation

The Carisa Mine southern workings followed a series of mineralized shoots along the Carisa Fault to lower stratigraphic positions, most probably into the Upper Opohonga Formation in the neighboring Red Rose and Boss Tweed regions. This fissure mineralization was possibly exploited in the northern stopes of the Red Rose Mine. Historically, the more prospective Ajax Formation had not been tested below the Carisa and Red Rose stopes, hence is a potential site for exploration. Mineralized shoots along the Carisa Fault were described as endowed in Cu – Au mineralization and associated with barite (Kerr and Hanneman, 2020b).

Significant mineralization potential exists where the adjacent Red Rose and “Z” Fissures penetrate the Ajax Formation and intersect with the Carisa Fault. Areas where fissures converge are considered favorable horizons due to the increased permeability.

Deep Northern Spy in Ajax Formation south of Sioux-Ajax Fault

The Sioux-Ajax Fault is a major east-west feature that most probably assisted in channelizing the mineralization bearing fluids into areas where clusters of fissures intersect it. Possible mineralization development occurs just north of the western extent of the Sioux-Ajax Fault where Carisa Group fissures are interpreted to intersect the fault. Furthermore, the Carisa fissures have not been explored for mineralization in the favorable Ajax formation below the Northern Spy Mine. Strong resistivity anomalies indicative of alteration occurs near the surface at both the Mammoth and Northern Spy mines. However, most of the workings in the main ‘ore’ pipe at the Mammoth Mine do not occur within the resistivity anomaly. A large (800 m) deep resistivity anomaly centered at the base of the Opex Formation, directly below the location where the Carisa Fissure is projected to intersect the Ajax Formation, exists and is a prospective mineralization exploration prospect (Kerr and Hanneman, 2020b).

Deep Sioux ‘Ore Run’ in Bluebell Formation at hinge of Tintic Syncline

The Tintic Syncline fold hinge (dips at 55° west) is shown to localize mineralization in the Iron Blossom, Godiva, Plutus, and Chief ‘ore runs’ in the northern part of the Main District, north of the Sioux-Ajax Fault. Following the fold-controlled deposits in the Godiva and Iron Blossom ‘ore runs’ to greater stratigraphic depth along the fold hinge to the mineralization-favorable Bluebell Formation may yield addition mineralization (Kerr and Hanneman, 2020b).

Deep Red Rose (Victor) at Sioux Pass Fault

Historical mine development within the Red Rose and Boss Tweed Mines (later Victor Consolidated) are focused within the Opohonga Formation. The more favorable Ajax Formation underlying these mines has been poorly explored and resides in a region of the Tintic District that is known for Cu- and Au-rich mines. The largest cross structure to intersect the Carisa Group of fissures in this area is the east-northeast Sioux Pass Fault, dipping toward the south. A resistivity anomaly, possibly representing silicification, is centered on the Carisa Group of fissures and concentrated within the Ajax Formation predominantly north of the Sioux Pass Fault. The anomaly is roughly stratiform and strengthens along a north-westerly trend to anomalies associated with the Gold Chain and Mammoth Mines. The resistivity anomaly also roughly follows bedding to depth to the north, beneath the Northern Spy Mine, where it increases in size and is associated with a chargeability anomaly. These two geophysical anomalies constitute the Deep Mammoth prospect (Kerr and Hanneman, 2020b).

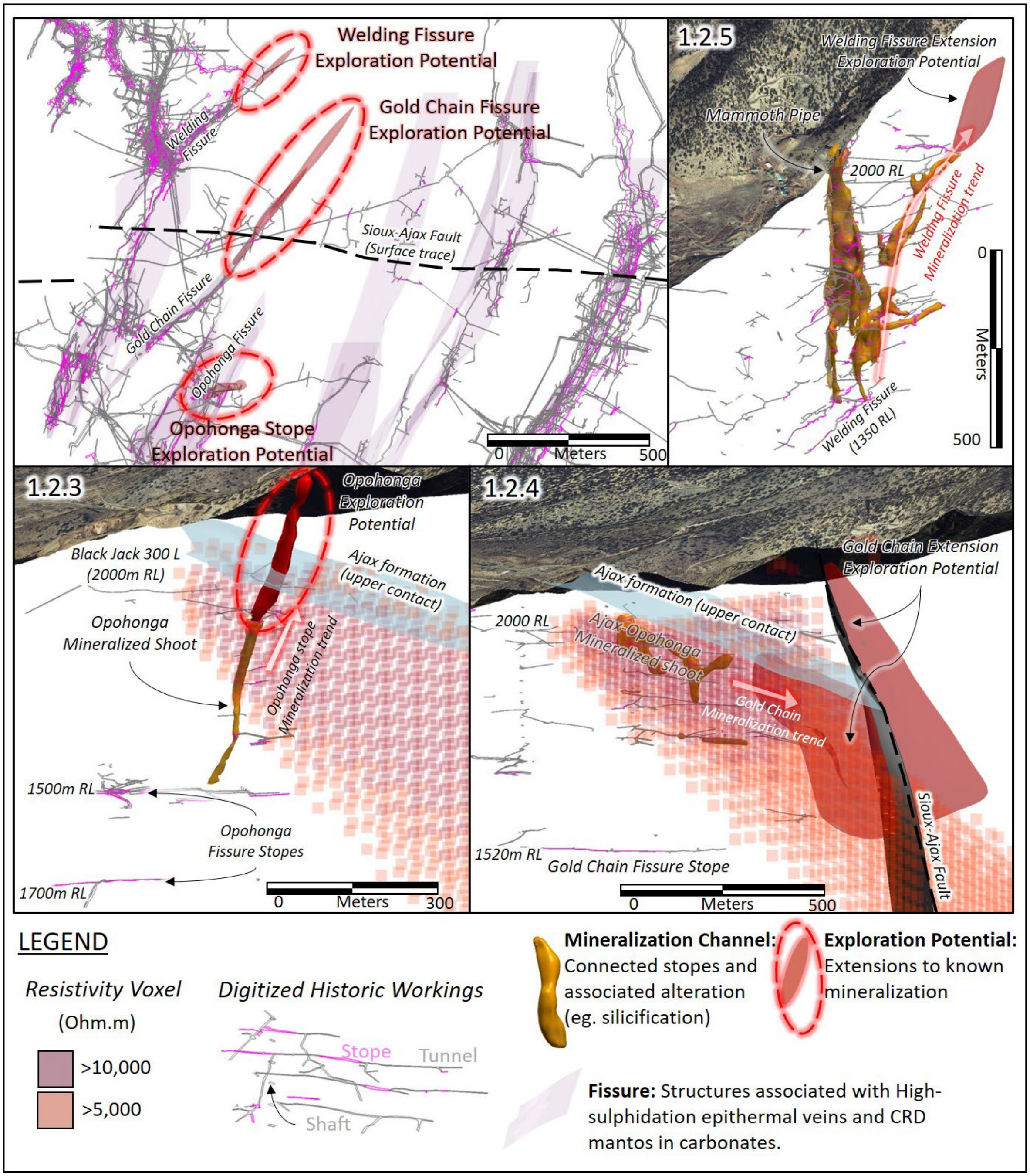
Carisa / Northern Spy Resistivity Pipe

This is a pipe-like resistivity anomaly that is perpendicular to bedding and is associated with a deeper, larger anomaly. The site where the resistivity anomalies merge into the Ajax Formation is a prospective site for mineralization. Portions of the Sioux-Ajax Tunnel cut through the center of the upper end of the anomaly in the Opohonga Formation. The pipe-like anomaly is in the footwall of the Sioux-Ajax Fault. The uppermost portion of the anomaly is strongest in the Bluebell Formation, adjacent to the Northern Spy Mine and crosses through portions of the Sioux-Ajax workings. The strongest resistivity anomaly is likely to indicate silicification in carbonates. The western edge of the Northern Spy Mine lies within the upper portion of the resistivity anomaly, where the anomaly is proximal to existing mineralization. The lower portion of the pipe-like anomaly is less distinct but transitions to the larger deep resistivity anomaly at the lower part of the Ajax Formation (Kerr and Hanneman, 2020b).

TTD-010 was drilled to test this resistivity pipe and intersected a wide zone of brecciation and weakly anomalous base metal geochemistry in the area of the anomaly. This is likely sufficient to explain the Typhoon™-derived resistivity feature. While the rocks intersected were favorable hosts, there was little indication that it had been exposed to significant mineralizing fluids. Shallower in TTD-010, the hole traversed a very wide zone of marbelization and silicification, interpreted to be a thermal alteration halo to the Carisa stock, a pre-mineral intrusion to the south.

Opohonga Stope

A partially-mined stope discovered with drifts extending from the 300-level of the Gold Chain/Ajax Mine or the 300-level of the Black Jack Mine was discovered by Centurion geologists. The reason for partial mining was explained by Yeomans (2017), since mined material had to be extracted through a competitor’s shaft when mining conditions were marginal. The mining area is located near the contact between the Lower Ajax and Opex Formations and followed the Opohonga Fault (Fissure) downward in brecciated rock. The exploration area is the bulk of the overlying Ajax Formation, approximately 640 ft (195 m) thick, which is a favorable unit hosting mineralization elsewhere in the district. It is unclear why the miners only developed the stope downward (Kerr and Hanneman, 2020b) (Figure 7-30).



Source: HPX (2020)

Figure 7-30: 3D model of Opohonga Stope prospect (in red) above the previously mined out stopes (in orange). Red and orange draped semi-transparent data indicate a highly conductive zone within the Ajax dolomite formation.

Gold Chain Fissure

A possible extension of the Gold Chain stopes at depth along the north-northeast trending fissure in the Ajax Formation south of the Sioux-Ajax Fault and in the lower Bluebell Formation north of the Sioux-Ajax Fault exists, both of which are recognized as favorable host formations in the Main Tintic District. The Sioux-Ajax Tunnel crosses over the potential mineralized zone in the generally unfavorable Opohonga Formation, though it still may provide some targeting guidance. If the Plutus 'Ore Run' is projected southward, it trends into a similar area of the Sioux-Ajax Fault as the Gold Chain Fissure prospects (Kerr and Hanneman, 2020b).

TTD-003, TTD-004, TTD-005, TTD-006 were drilled as a fan from a single set-up to test an area of strong resistivity along the Gold Chain fissure south of the Sioux-Ajax fault, which was interpreted to be a favorable area for replacement-style mineralization. These holes intersected extensively brecciated host carbonates, potentially as a collapse above a deeper zone of dissolution. No significant mineralization was intersected, however, the extensive collapse brecciation intersected should be considered favorable for potential replacement-style mineralization nearby.

Welding Fissure

The strike projection of the northeast trending Welding Fissure out of approximately the 300-level of the Mammoth Mine into the favorable Bluebell Formation is a further potential area for exploration. The area is approximately 120 m east of the upper Mammoth Mine shaft where the fissure trend would intersect the northernmost splays of the Sioux-Ajax Fault. The fissure is well mineralized below the 1000-level in the Mammoth Mine within the Bluebell Formation and trends toward the general area of the Plutus 'Ore Run' (Kerr and Hanneman, 2020b).

Mammoth Pipe Below the Water Table

The Mammoth Mine ceased mining as soon as the water table was intersected. Sulfide mineralization is known to continue below existing workings around the 2400 and 2600 levels of the mine and is therefore a viable a priority exploration area, especially at depth where the mineralization-favorable Ophir Formation exists. Furthermore, a portion known as New Park has been partially mined with crosscuts by Kennecott and drilled by the New Park Mining Company. This area is postulated to be the down-dip extent of the well mineralized Back Fissure in the overlying Mammoth Mine (Kerr and Hanneman, 2020b).

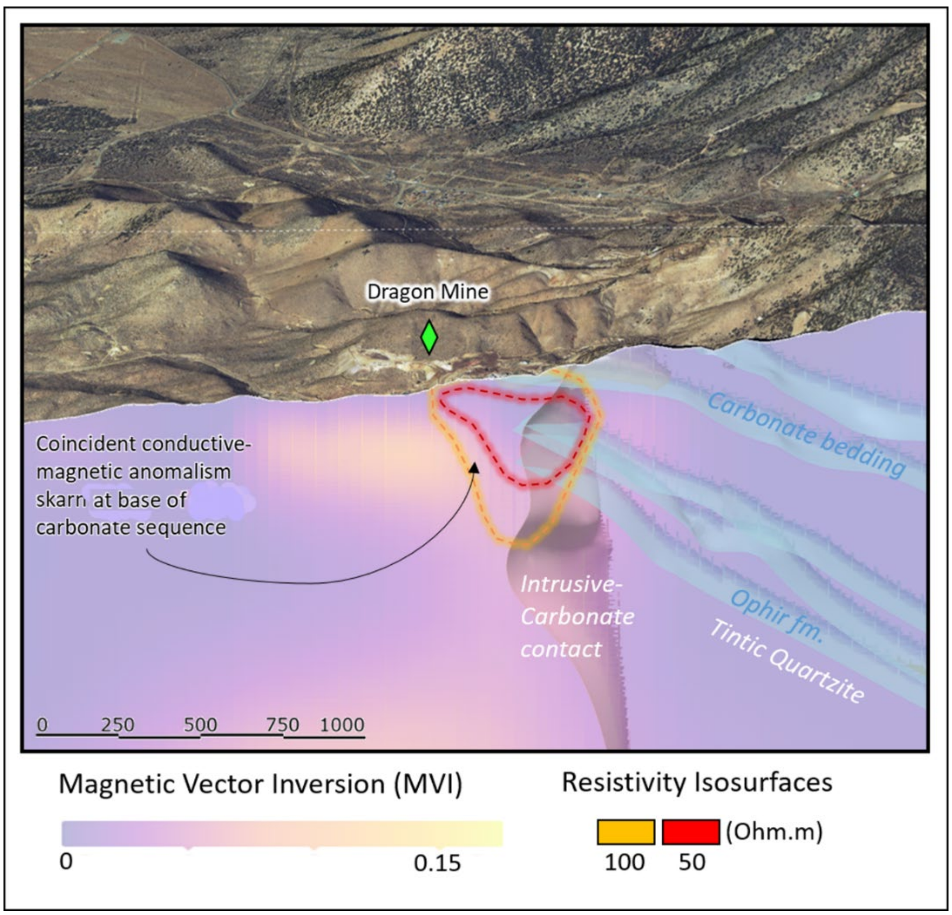
Emerald Prospect

The Emerald prospect is located south of the Gemini 'Ore Run' on strike with the bulk of the mineralization near the intersection of the northern block of the inferred Sioux-Ajax Fault trace in Mammoth Valley. The major north-easterly Grand Central Fault, that is similar to the Mammoth-Mayday Fault at the Mammoth Mine and most likely was the fluid conduit for the Mammoth 'Ore' Pipe, is also in the vicinity. This area is a structural analogue to the Mammoth Breccia Pipe in which near vertical carbonates of the Tintic Syncline have possibly been deformed along a sinistral drag fold along the Sioux Ajax Fault Zone. The area is also bisected by several northeast trending structures (ex. Grand Central Fault). The high degree of structural complexity, deformation, and brecciation may have formed a vertical damage zone (pipe) with enhanced permeability. Metalliferous hydrothermal fluids may have precipitated a large high-grade replacement body along this damage zone. Mine workings did not extend to the southwest toward the Emerald prospect. A near-surface geophysical anomaly east of the prospect was drilled by Centurion in the 1990's but did not intersect appreciable metal contents. However, silicification and disseminated pyrite were logged in the drill hole (Kerr and Hanneman, 2020b).

7.7.3 Skarn Prospects

Northstar Skarn

The northeastern edge of the Silver City intrusive complex intrudes the Paleozoic carbonate sequence at surface and has developed generally narrow calc-silicate alteration around the intrusive bodies. The narrow alteration and unmineralized skarn development at surface are associated with the dominantly equigranular phases of the Silver City intrusive complex, which are not thought to have produced the prolific mineralization observed throughout the Tintic District. Mineralized sets of fissure veins and CRDs cross the intrusive contact and may have formed massive sulfide bodies at depth, though at surface they appear to form large clay-iron oxide deposits such as the Dragon Mine. The lowest carbonate intruded by the stock forms part of the Ophir Formation, and may be the most prospective for potential skarn mineralization as it would be the first reactive unit encountered by magmatic-hydrothermal fluids (Kerr and Hanneman, 2020b) (Figure 7-31).



Source: IE (2023)

Figure 7-31: 3D modeled prospect area for possible skarn mineralization at the contact between carbonate units and the Silver City intrusive complex on the Tintic Project

7.8 Summary of Prospects and Priority

Table 7-7 summarizes the CRD and porphyry prospects and a single skarn prospect as identified by IE and their relative priority.

Table 7-7: Summary of Prospects Identified on the Tintic Project

Prospect Type	Name	Host Formation	Comment	Priority
CRD – Historically Mined 'Ore Run' Extensions	Carisa	Ajax Dolomite	Extension to depth of known mineralization	Medium
	Northern Spy	Ajax Dolomite	Extension to depth of known mineralization	Medium
	Sioux	Bluebell Dolomite	Extension to depth of known mineralization	Low
	Red Rose	Ajax Dolomite	Extension to depth of known mineralization	Medium
	Gold Chain Fissure	Ajax Dolomite	Northeast extension of known mineralization to the Sioux-Ajax Fault	Low
	Welding Fissure	Bluebell Dolomite	Northeast extension of known mineralization at Mammoth Pipe and southern extension of Plutus 'Ore Run'	Low
CRD – Breccia Pipes	Carisa/Northern Spy Pipe	Various carbonates	Where prospective host units intersect the Sioux-Ajax Fault	High
	Opohonga Stope	Various carbonates	Extension to surface of identified mineralized breccia pipe	Medium
	Mammoth Pipe	Various carbonates	Extension to depth below water table	Medium
	Emerald Pipe	Various carbonates	Identify new mineralized pipe	Medium
Porphyry	Rabbit's Foot	Silver City Stock	Geophysical anomaly below known mineralization on major structure	High
	Sunbeam	Silver City Stock	Surface geochemistry, alteration, geophysical anomaly below known mineralization	High
	Deep Mammoth	Unknown	Deep geophysical anomaly below known mineralization on major structure	High
Skarn	Northstar	Various	Skarn mineralization adjacent to the Silver City intrusives	Low

Source: IE (2023)

7.9 Geotechnical Data

No geotechnical work programs have been completed on the Property.

7.10 Hydrogeological Data

No hydrogeological work programs have been completed on the Property.

7.11 QP Opinion

In the QP's opinion, historical drill hole location and analytical results should be treated with caution. Confidence in this information is low as little to no QA/QC data are available for the respective drill holes. However, the results can be utilized for regional-scale modelling, which IE has completed in Leapfrog Geo™.

All the exploration results to date indicate exploration prospects only; no mineralization with any reasonable prospects of eventual economic extraction has been identified.

Drilling of two reverse circulation and 16 diamond drill holes since 2021 has tested several of these areas. Whilst no significant mineralization has been intersected to date, the drilling program has served to refine the exploration approach and re-prioritize the prospects for continued testing in 2024.

The rock grab samples are indicative of early-stage regional exploration potential and allow IE to focus their more detailed exploration work in anomalous areas.

Anomalous geochemical soil sample results occurring downslope from historical mining may be related to the aforementioned and not an indicator of an exploration potential area. Therefore, these samples should be treated with caution.

IE has completed several academic studies related to whole rock geochemistry, petrography, geochronology and quartz vein fluid inclusions. These results confirm historical authors' opinions on the project area and provide valuable information for the further development of IE's exploration model.

IE has applied industry standard exploration techniques to identify and prioritize exploration prospects in the Main Tintic District. The geological models and concepts used as a basis for mineralization exploration in the Tintic District have been developed and verified through more than 125 years of exploration and mining activities. The IE prospect areas are based on data sets derived from multiple exploration methods that were overlain to identify the locations where the respective anomalies align.

The QP considers IE's exploration model to be applicable and realistic for the Tintic Main District region. Furthermore, the exploration techniques employed by IE are suitable for exploration for porphyry copper, CRD, skarn, and fissure vein mineralization. While further exploration is warranted in the QP's opinion, there is no guarantee it will be successful.

8 Sample Preparation, Analysis, and Security

All drill core, soil, and rock grab samples collected by IE for assay during exploration programs undertaken to date have been prepared and analyzed by ALS Minerals. ALS is a reputable analytical laboratory with a global quality management system that meets all requirements of the international standards ISO/IEC 17025:2017 and ISO 9001:2015. ALS has a robust internal QA/QC program to monitor and ensure quality of assay and other analytical results. Samples are prepared at ALS Elko (Nevada) or ALS Twin Falls (Idaho) and then analyzed at ALS Reno (Nevada).

8.1 Sample Preparation and Analysis

8.1.1 Soil geochemical sampling

The soil samples were prepped using the ALS soil and sediment preparation package PREP-41, which entailed drying at ~60°C and then sieving to -180 micron (80 Mesh). Both the coarse and fine fractions of the sieve were retained. The fine fraction was used for geochemical assay (ME-MS41L) while the coarse fraction was analyzed for hyperspectral characteristics (HYP-PKG). The geochemical assay employed an aqua regia digestion with “Super Trace ICP-MS analysis” which measured 53 elements. The hyperspectral analysis was completed using TerraSpec® 4 HR scanning and aiSIRISTM expert spectral interpretation by ALS. This analysis yielded raw spectral files in ASD and ASCII format, and a spreadsheet with mineral assemblage interpretations with the spectral parameters of the soil.

8.1.2 Rock grab sampling

The rock grab samples were prepped using the ALS package PREP-31Y, which utilized crusher/rotary splitter combo. Samples were crushed to 70% less than 2 mm, then rotary split off 250 g of material, followed by pulverizing split to greater than 85% passing 75 microns. The sample geochemistry was then analysed using ALS’s four acid Super Trace analysis (ME-MS61L) which measured 48 elements. Gold was measured by fire assay and ICP-AES analysis (AU-ICP21).

8.1.3 Drill core sampling

The diamond drill core from the Tintic Project was sampled by IE in 2022 and 2023 under the direct supervision of the Tintic Project Manager, Tyler Baril. After marking out and tagging (labeling) the sample locations (assay/geochemistry/field duplicates), the drill core is cut in half in the Mammoth core cutting shack using an automatic Almonte automatic saw or a Husky manual saw. All assay and duplicate samples are half-core samples, collected over the entire length of the drill cores. Specific gravity (SG) and IP measurements are conducted on 10 cm whole-core samples that are labelled, removed from the core trays to take the measurements and then stored separately as a ‘skeleton’ reference sample set for each drill hole; duplicate sample intervals are adjusted slightly as needed to avoid sampling over the interval sampled for SG/IP.

The core samples were crushed from the split core to prepare a total sample of up to 5 kg at 6 mm. Samples were then riffle split, and a 250 g sample was crushed to 75% passing at 2 mm. The sample was then pulverized with a standard steel to plus 85% passing at 75 µm. After sample pulp preparation, the samples were analyzed in the following manner:

- All samples were analyzed for 48 elements using four acid with an inductively coupled plasma mass spectroscopy (ICP-MS) finish. The lower limit of detection is 0.02 ppm for total Cu, with an upper detection limit of 5%.
- All samples were analyzed for Au using four acid with an ICP atomic emission spectroscopy (ICP-AES) finish. The lower detection limit is 0.001 ppm for Au.

8.2 Security and Storage

The security measures employed by IE for soil and rock grab sample programs are as follows: all samples were bagged in large rice sacks with approximately 20 samples (20 kg) per sack. Each rice sack was labeled with the company name, bag number, and the sample identification numbers contained within it. This information was recorded into an inventory spreadsheet. The sacks were sealed using zip ties and marked with colored flagging tape. All samples were secured in IE's locked storage shed in Mammoth prior to dispatch to the laboratory.

The security measures for the drill core sampling program are as follows: after the drill core samples were cut, they were loaded into labeled plastic bags with a unique sample ID and the corresponding sample tag was stapled to the bag. Labeled sample bags were then loaded into supersacks on pallets with approximately 50 samples per sack. Each supersack was labeled with the company name and sample ID range. This information was catalogued on a detailed inventory sheet, and samples were secured in IE's locked storage shed in Mammoth prior to dispatch to the laboratory.

Samples were dispatched to ALS Elko and ALS Twin Falls preparation labs by IE geologists via Hot Shot Shipping Service (John M Howa & Son's Inc.) who maintained chain of custody until the samples were received by ALS. Prior to dispatch, a senior IE geologist prepared a submittal manifest, sample submittal form, and chain of custody form for the dispatch. All rice bags and drill core sample bags were checked against the submittal manifest which was then approved and signed. A chain of custody form was completed and signed by both IE and ALS staff upon delivery to the Elko and Twin Falls facilities.

The Tintic core is stored in wax impregnated core boxes and transported to the core logging shack. After being logged, the core boxes are palletized and stored in IE's core storage facilities. The core storage is locked behind bay doors or chain link fencing for security purposes.

8.3 Quality Assurance/Quality Control Procedures

IE has implemented two standard insertion protocols for 1) soil and stream sediment samples, which have 5% duplicate and 4% standard insertion rates, and 2) drill core, rock grab, pit, trench, and chip samples, which have 5% blank, 5% duplicate, and 5% standard insertion rates (Table 8-1).

IE has used two different blank materials in 2023, which include blank coarse marble obtained from local hardware stores near the project areas and 1" crushed granite, which is obtained from Pioneer Landscaping in Casa Grande, Arizona. Coarse marble was used from January-October 2023. Each time a new batch of marble was obtained, several samples were sent to ALS to determine the best cutoff values for the material and to ensure the marble did not have high levels of copper, gold, molybdenum, silver, lead, or zinc. IE switched to Inert 1" crushed granite from Pioneer Landscaping in October 2023. This material was chosen due its use throughout all IE projects, the wide dataset IE has collected to create suitable cutoff limits, and because it has been evaluated by IE's external QA/QC consultant, Dale Sketchley, P. Geo., of Acuity Geoscience Inc.

Various certified reference materials (CRMs) are used for a variety of material and mineralization styles and types as listed in Table 8-2.

Table 8-1: IE 2023 QA/QC Sample Insertion Rates

Control Type	Sample Numbers Used for Insertion
Soils and Stream Sediments	
Blank	N/A
Duplicate	02, 22, 42, 62, 82
Standard	00, 25, 50, 75
Total	00, 02, 22, 25, 33, 42, 50, 62, 66, 75, 82, 99
Rock Samples – Drilling, Rock Grab, Pit, Trench	
Blank	09, 29, 49, 69, 89
Duplicate	05, 25, 45, 65, 85
Standard	19, 39, 59, 79, 99
Total	05, 09, 19, 25, 29, 39, 45, 49, 59, 65, 69, 79, 85, 89, 99

Source: IE (2023)

Table 8-2: IE 2018-2023 Certified Reference Material

CRM	Material Type	Purpose	Au (ppm)	Cu (ppm)	Ag (ppm)	Mo (ppm)	Pb (%)	Zn (%)
OREAS 501d	Porphyry Cu-Au mineralized material	Low grade sulfide	0.232	2720	0.664	95	0.00252	0.009
OREAS 606	High sulfidation Au-Cu-Ag	Low grade sulfide	0.34	268	1.02	4.04	0.0107	0.0179
CDN-ME-1603	Mix of low and high grade mineralized material	Medium grade mineralized material	0.995	2790	81	N/A	1.34	0.45
OREAS 506	Porphyry Cu-Au-Mo	Medium grade sulfide	0.364	4440	1.88	87	0.00277	0.0091
OREAS 907	Cu-Au porphyry oxide	Medium grade oxide	0.1	6380	1.35	5.88	0.00462	0.0207
OREAS 153a	Porphyry Cu-Au-Mo	High grade sulfide	0.311	7120	N/A	177	N/A	N/A
OREAS 502c	Porphyry Cu-Au-Mo	High grade sulfide	0.488	7830	0.779	226	0.00235	0.0109
CDN-ME-1702	Misc. combined mineralized material	High grade Au mineralized material	3.24	6040	47.4	N/A	2.38	1.23

Source: IE (2023)

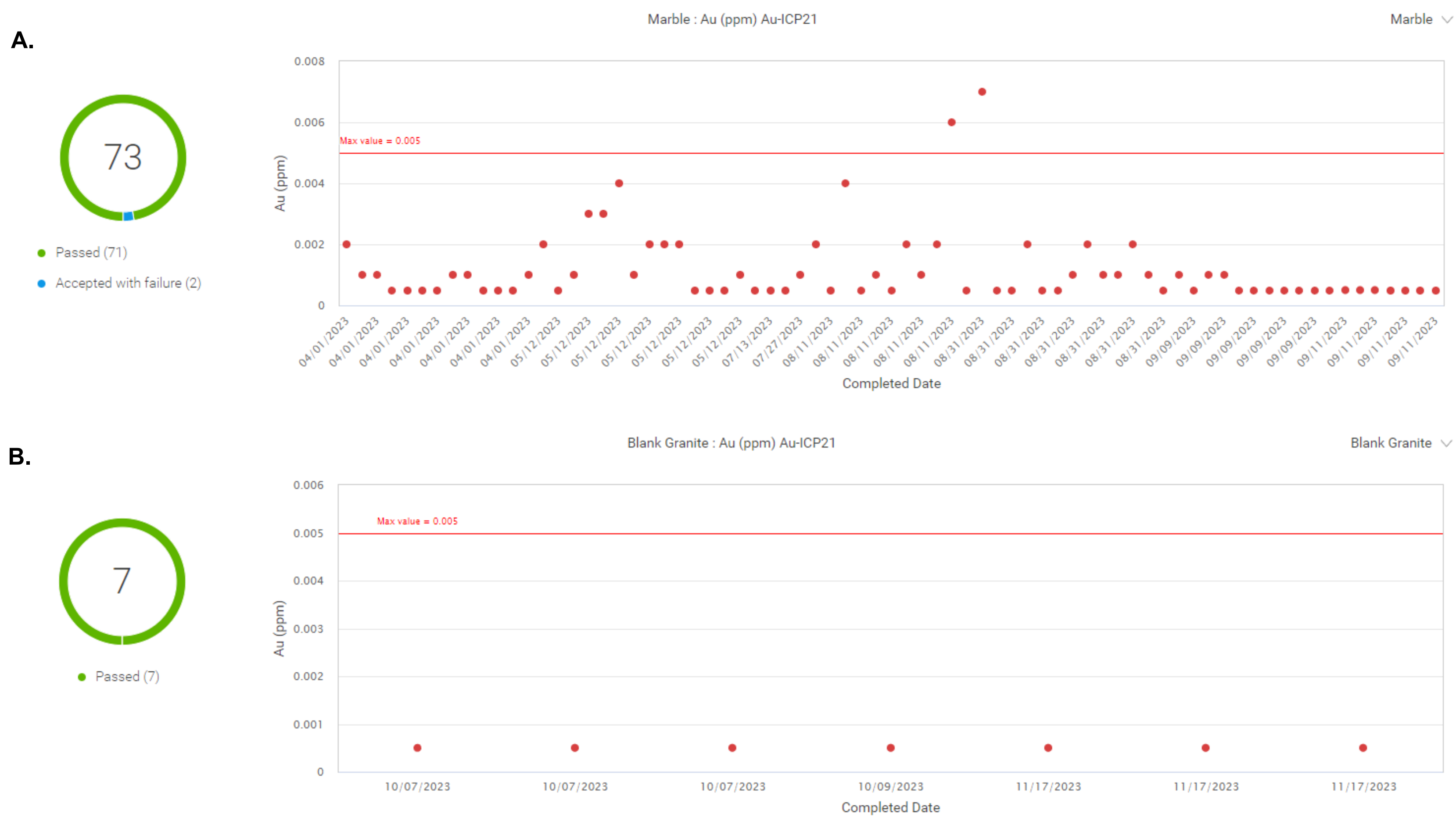
Laboratory assay certificates are imported into Seequent's MX Deposit after they have been received. IE has implemented an internal QA/QC program to monitor all assay results from laboratories by comparing results of IE inserted standards, blanks, and duplicates against expected values.

Blanks are evaluated based on set cutoff values, 0.005 ppm for gold, 0.247 ppm for silver, 35.78 ppm for lead, 60.2 ppm for zinc, and 100 ppm for copper for the 1" granite material. For the marble blanks, the cutoff values varied as each batch of marble obtained was analyzed to determine individual cutoff values for copper, gold, lead, zinc, and molybdenum. The cutoff limit for gold is 0.005 ppm, copper is 50 ppm, molybdenum is 2 ppm, silver is 0.2 ppm, lead is 35 ppm, and zinc is 50 ppm. Blank values are monitored closely, and failures are evaluated case by case if below 200 ppm for lead, zinc, and copper. Blank values were assessed on a case-by-case basis for the marble samples to determine failures depending on the test sample data ranges for each element in each batch that was tested. Generally, marble samples that returned results 10 times the detection limit or 100 ppm were re-analyzed. 1" coarse granite blanks that fail above 200 ppm for lead, zinc, or copper are sent for re-analysis. Gold and silver values are scrutinized closely and are sent for re-analysis above 2 ppm.

CRM standards are evaluated based on a +/- 3 standard deviations from the certified value obtained by the seller (OREAS and CDN Laboratories Inc.). All standards that lie outside of the acceptable range from the certified value are sent for re-analysis. The procedure for re-analysis is to re-assay five samples above and below the failure from the coarse reject.

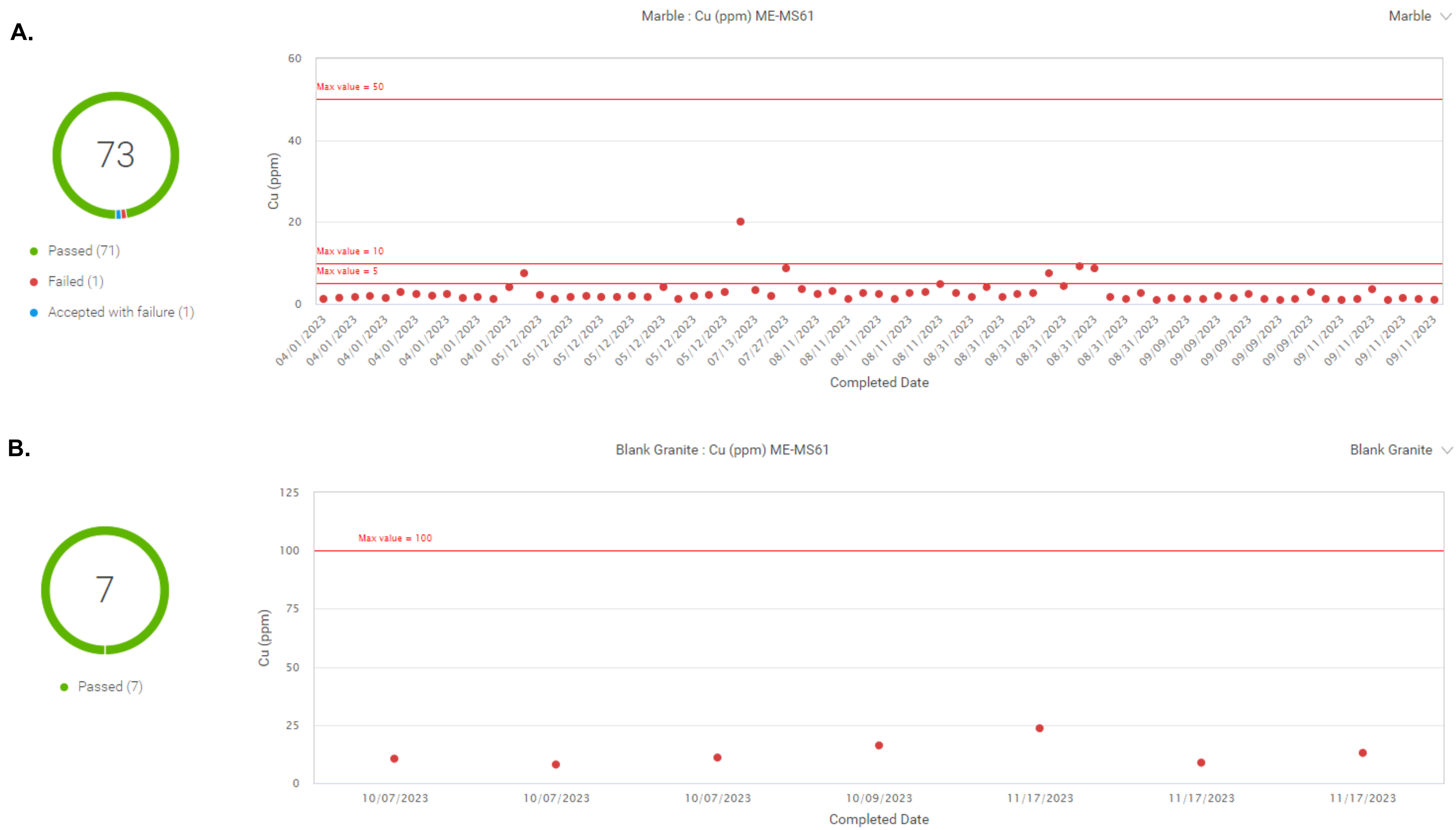
8.3.1 Results and Actions

Blank samples for the marble performed well in 2023 with minor failures. However, it was decided to move to the 1" crushed granite, which had better performance overall, particularly with regard to Pb and Zn, and a larger dataset to compare to. All recorded failures were investigated, and it was determined that none contributed assay values high enough to warrant a re-analysis. This is because the values did not contribute significant contamination to nearby samples assayed for all metals of interest. CRM performance was nominal for 2023 with zero failures for copper, gold, silver, molybdenum, lead, and zinc. Examples have been provided to show blank and CRM performance in Figure 8-1, Figure 8-2, and Figure 8-3 for Au and Cu. No actions were required.



Source: IE (2023)

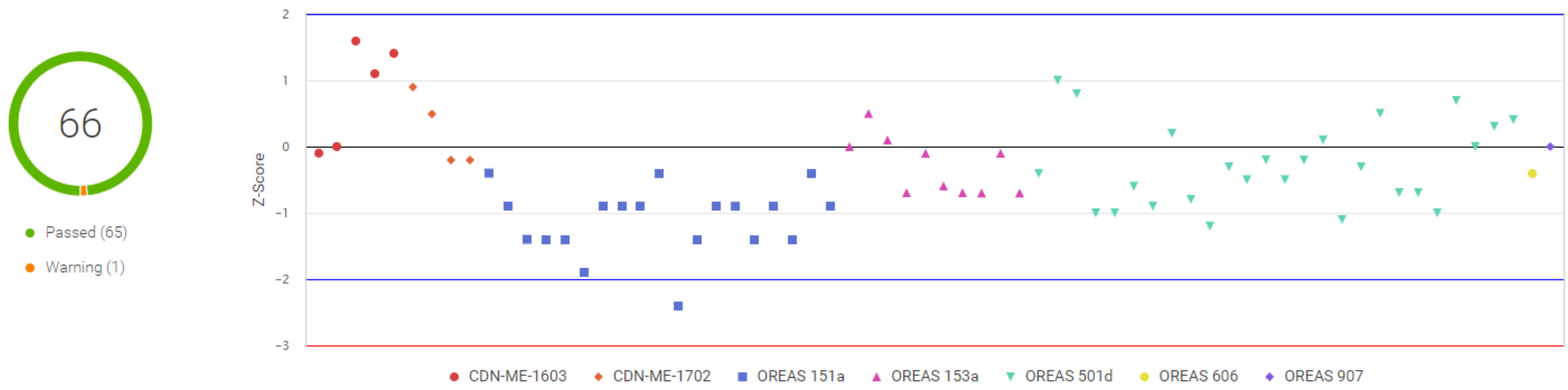
Figure 8-1: Blank control charts for A) marble blank and B) granite blank for Au (ppm) performance during diamond drilling sampling.



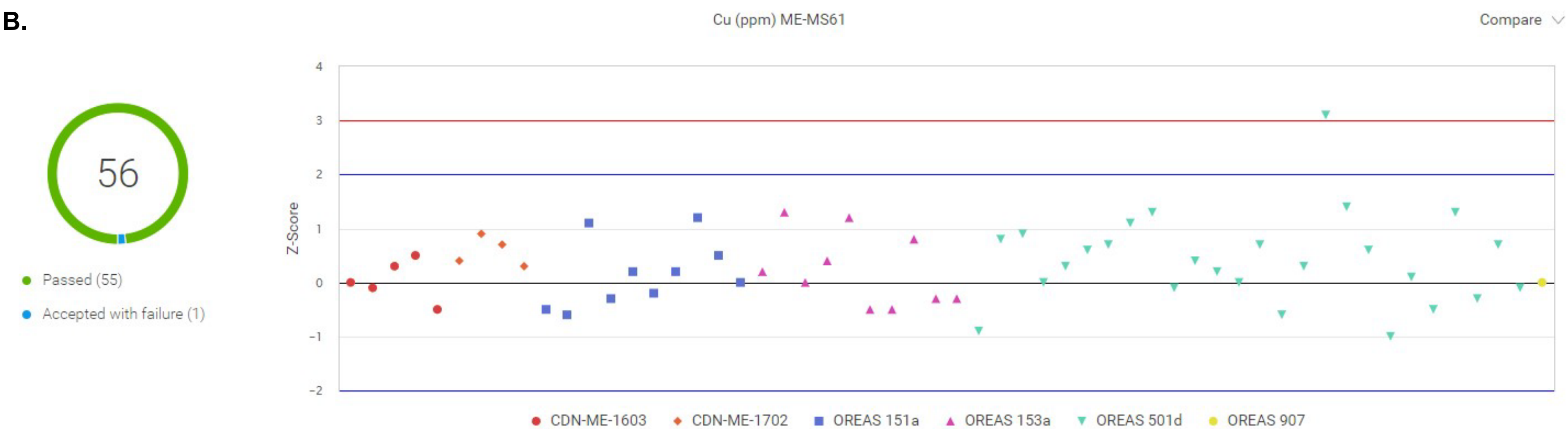
Source: IE (2023)

Figure 8-2: Blank control charts for A) marble blank and B) granite blank for Cu (ppm) performance during diamond drilling sampling.

Note: Three different batches of marble were used as blanks during the sampling in 2023. Each batch had a different maximum value (5 ppm, 10 ppm, or 50 ppm) dictating whether a blank failed.



B.



Source: IE (2023)

Figure 8-3: CRM control charts for A) gold and B) copper performance during diamond drilling sampling. All CRM types are presented normalized on Z-Score to show performance comparatively.

8.4 QP Opinion on Adequacy

The sample collection, security, preparation, and analytical procedures used for sampling at Tintic, including diamond drill core, soil, and rock grab samples, are appropriate and adequate for the type of mineral exploration that is being undertaken and the stage of the Project. The QA/QC measures taken are also considered to be appropriate and the performance of blanks, standards, and duplicates indicates no significant biases in the data.

9 Data Verification

Data verification conducted by the QP for this Technical Report Summary includes two site visits to the Tintic Project and a desktop study as detailed below.

9.1 Data Verification Procedures

9.1.1 Site Visit 1 – Prospect Areas and Historical Mine Workings

As noted in Section 2.5, SRK personnel completed a site visit to the Tintic Project in November 2020. The site visit was led by Nick Kerr, Project Manager for IE. It began with an overview of the history and geological setting of the Project area, presentation of the geophysical and geochemical exploration work conducted by IE and the results obtained to date, and discussion of the Project development goals and prospects. Information was presented using prepared PowerPoint slide decks and GIS software. This data review and discussion session was followed by field examination of selected historical mine workings and the prospective areas identified for exploration drill testing. The underground workings at the Mammoth Mine and the Sioux-Ajax Tunnel which occur in CRD prospects were visited on November 10, 2020. Porphyry deposit drilling pads were visited on November 11, 2020. The QP noted that the 7-15 cm of recently fallen snow and limited visibility in some areas were taken into consideration for the site tour agenda.

<u>Inspection of underground workings in CRD prospect</u>

The Mammoth Mine was historically mined for copper oxides and silver sulfosalts. The Mammoth Shaft and the Glory Hole Shaft were visited. Steeply dipping structures parallel to other fissure veins were observed in the Glory Hole Shaft, as well as the presence of azurite, malachite, and possible copper oxides. Hand samples of gossanous, vein, and unaltered limestone were readily compared.

The Sioux-Ajax Tunnel was partially completed historically and meant for mineralized material haulage during winter months. Good natural airflow was noted in the tunnel due to connection to karst cavities, Carisa Pipe, and other mined pipes along fissure veins. The IE geology crew was running water from the portal in PVC pipe along the length of the tunnel to wash the ribs for geologic mapping and sampling. Femco mine telephones had been recently installed and were operational. Other notable features observed in the tunnel include the following: Nad breccia on the Mammoth #1 patented claim; several pebble dike; a breccia with historical sample markers (ca. 1980s-1990s) near the thrust fault; variable bedding dip angles around the Sioux-Ajax Fault Zone; presence of jasperoid on surfaces in the Horseshoe area (potential for an unmanned aerial vehicle (UAV) with light detecting and ranging (LiDAR) to survey to map the open workings that are not accessible); late structures that cross the tunnel and created natural (non-karst) voids up to 2 m wide; Sevier-age karst with gossan clasts in calcite matrix, interpreted as a weathered massive sulfide pod and collapse breccia; pebble dike in the Black Cave carbonaceous carbonate; pebble dike and mineralized vein at the J-Hook winze; as well as Northern Spy 1 and Northern Spy 2 stopes. Overall, the ground conditions are considered good, and the tunnel is dry, except for the lower part where perched groundwater in sumps was encountered, and areas with added water from the current rib washing program. No underground drilling is planned until the CRD exploration areas are successfully drilled from surface and pending results.

Inspection of porphyry prospects and historical mine pits and dumps

The porphyry prospect areas (Rabbit's Foot, Sunbeam, Deep Mammoth; Section 7.7.1) were accessed on surface. The following locations were visited:

- Swansea Mine dump: The Swansea Mine is the oldest mine in the district; it was flooded out and abandoned. Examples of the Swansea Rhyolite and cross-cutting quartz diorite with pyrite (source of magnetic high) were observed on the dump pile.
- Murray Hill prospect: View of Tintic Valley and Range; examples of Crowded Porphyry; several igneous phases present at hilltop; trend of dikes is same as overall Rabbit's Foot porphyry prospect.
- Rabbit's Foot ridge: Sunbeam Granodiorite is magnetic at this location and is de-magnetized along the Dragon Fault structure.
- Rabbit's Foot porphyry prospect: Potassic alteration of Sunbeam Granodiorite and thin A-type quartz veins; Crowded Granodiorite Porphyry outcrop with D-type veins.
- Sunbeam porphyry propsect: Upper Sunbeam Mine dump; remnants of high sulfidation Cu-Au quartz vein system with strong silicification; Upper Sunbeam shaft collar (secured; viewed from surface); view of Treasure Hill peak from Sunbeam Mine area; latite outcrop located between Sunbeam and Joe Undine Mines;
- Joe Daly and Undine Mine: Pits and dumps on Sunbeam Granodiorite Porphyry (SGDP) dike; A-type veins overprinted with high sulfidation system; areas of potassic alteration with phlogopite. Several clasts with bladed calcite texture replaced by quartz, which indicates boiling zone in epithermal system.
- King James Mine dumps: High sulfidation veins; porphyry clasts with secondary phlogopite; clasts with prominent bladed calcite replaced by quartz; agglomerate up ridge behind mine.
- Dragon Clay Mine: Pits and dumps with view of Blackjack Mine pit up ridge behind dumps.
- Ruby Valley: Outcrops of megacryst porphyry observed below the Sunbeam Mine dumps. This is the youngest intrusive phase; it cuts the Sunbeam dikes and is cut by minor veins.

9.1.2 Site Visit 2 – Drilling, Core Logging and Sampling Procedures

SRK personnel visited the Tintic Project on January 15, 2024, accompanied by Wes Hall, Tintic Acting Project Manager, Alex Neufeld, Vice President, Exploration, and Graham Boyd, Senior Vice President, Exploration. The purpose of the site visit was to observe the exploration drilling, the drill core logging, cutting, sampling and security procedures employed by IE, and to examine the lithology, alteration and mineralization recovered in selected drill cores completed to date.

IE personnel provided an overview of the exploration drilling conducted to date, focusing on the key purpose of each drill hole, the results obtained, and how these have served to refine the exploration program approach and focus areas. Information was presented in the Tintic Leapfrog Geo project.

Drill core marking (depths, orientation lines), geological logging, cutting, and sampling were in progress at the core facility and all procedures were observed and discussed with the project geologists and technicians (Figure 9-1). IE uses Seequent's MX Deposit to capture all these data types. Logging data are captured directly into the database. Additional procedures observed include core photography and SG measurements.

Pallets of drill core and a batch of samples staged ready for the next shipment were seen to be securely stored in the Tuff Shed (Figure 9-2) and a supersack shipment pickup was observed in progress. The chain of custody procedure was discussed. QA/QC materials are stored securely in airtight containers.

Drill core from hole TTD-017, and selected intervals from TTD-016 and TTD-009 were examined. The QP found the logging to be consistent with what was viewed in the drill core. A representative suite of reference hand samples of the carbonate and non-carbonate rock types on the property were available in the core facility.

The drill rig was visited where drilling of hole TDD-017, collared south of the Mammoth Mine glory hole, was in progress (Figure 9-2). The drill pads of several of the completed holes were also observed.

9.1.3 Data Validation and Desktop Study

The QP reviewed and accepted the information supplied by IE. The QP completed the following data validation as part of the desktop study:

- Historical information was verified from several web and literary sources where possible.
- Since the Sioux-Ajax tunnel area was inaccessible at the time of the site visit, the mapping and subsequent report were reviewed and accepted by the QP. The results were found to correspond to the observations made during the site visit.
- Analytical results were checked against the original laboratory certificates, and no transcription errors were noted (spot checks).
- Drill core lithologies recorded in the database were compared to the drill core observed during the site visit and no discrepancies were noted (spot checks).
- The QA/QC performance of the surface grab sampling and drill programs was reviewed.

9.2 Limitations

- The QP did not request any check assays as no Mineral Resources or exploration target tonnages and grades are the focus of this report.
- No survey spot check of drill hole collars was conducted. Drill hole survey data are uploaded directly to Reflex's IMDEXHUB during drilling and no drilling certificates were available for checking.

9.3 QP Opinion on Data Adequacy

The QP found the information to be comprehensive and logically archived. Data management and database compilation procedures are consistent with standard industry practices. Geological data collection, logging procedures, sample chain of custody, and QA/QC procedures are all consistent with industry standard practices. The QP accepts the supplied information and considers it to be geologically appropriate and adequate for use in IE's ongoing exploration efforts at the Tintic Project.

Source: SRK (2024)

Figure 9-1: Drill core logging and cutting/sampling in progress at the core facility.

Source: SRK (2024)

Figure 9-2: Drilling in progress at Mammoth (left) and samples prepared for shipment (right).

10 Mineral Processing and Metallurgical Testing

No contemporary metallurgical testing or mineral processing studies on mineralized material from the Tintic Main District are currently available to IE.

11 Mineral Resource Estimates

A Mineral Resource estimate has not been conducted for the Tintic Project and is not a requirement of an exploration results Technical Report Summary.

12 Mineral Reserve Estimates

A Mineral Reserve estimate has not been conducted for the Tintic Project and is not a requirement of an exploration results Technical Report Summary.

13 Mining Methods

There is no active mining on the Tintic Project, and no mining is currently proposed. No work regarding mining methods has been undertaken for this report.

14 Processing and Recovery Methods

No work regarding processing and recovery methods has been undertaken for this report.

15 Infrastructure

There is currently no mining taking place on the Tintic Project. The historical surface and underground mining infrastructure on the property is described in Section 4.6.

The infrastructure and facilities used to support the exploration activities on the Project to date, as well as the water and power supply for the area, are described in Section 4.5.

16 Market Studies

Market studies have not been undertaken for the Tintic Project and there are no contracts in place or under negotiation for mining, concentrating, smelting, refining, transportation, handling, sales and hedging, or forward sales contracts or arrangements.

17 Environmental Studies, Permitting, and Plans, Negotiations, or Agreements with Local Individuals or Groups

Details of the environmental studies, permitting, and drilling permit obtained by IE to allow for the proposed exploration drilling program on the Project in 2021 are provided in Section 3.5.2.

IE is actively involved with City of Eureka and unincorporated community of Mammoth but formal social / community impact work for development of the Tintic Project has not yet been undertaken.

18 Capital and Operating Costs

Capital and Operating Costs have not been estimated for the Tintic Project and are not requirements of an exploration results Technical Report Summary.

Exploration expenditure by IE to date and Exploration Budgets for exploration work in 2024 are provided in Section 22 and Section 23 respectively.

19 Economic Analysis

An economic analysis has not been conducted for the Tintic Project and is not a requirement of an exploration results Technical Report Summary.

20 Adjacent Properties

Freeport McMoran, Chief Consolidated Mining, Tintic Consolidated Metals LLC (TCM), and various private owners hold much of the property adjacent to the IE Tintic Project. As noted by Ramboll (2018), The property adjacent to the Project have been used for mining purposes, smelters, mills, transportation of mineralized material, ranching and farming operations since the late 1860s. The town of Mammoth was developed at a similar time as Eureka in the mid to late 1800s as part of the Tintic Mining District and lies mostly adjacent to the Project area. Most of the adjoining properties comprise native vegetation with occasional mining features or structures.

An overview of the history of the Tintic Mining District, which saw nearly continuous mining operations from 1871 through to 2002, is provided in Section 5. Efforts since the 1990's to conduct underground exploration, rehabilitate mine workings, plan for mine re-opening, and process waste rock, at various localities in the District (both within the Project area and on adjacent properties) are also summarized in that section. Notable of these on adjacent properties are the Trixie, Eureka Standard, and Burgin mines.

In 2022, Osisko acquired TCM and approximately 69 km^2 of patented mining claims and mineral leases in the East Tintic District which included 23 past producing mines within their project boundaries including the Trixie mine which reopened in 2020. The Trixie mine is a historical high-grade gold-silver underground mining operation. The deposit is a hybrid low-sulfidation to high-sulfidation epithermal system, with polymetallic gold and silver veins structurally hosted within the Paleozoic Tintic Quartzite, and base metal mineralization hosted within sedimentary and carbonate rocks north of the main gold system. It was first operated from 1974 to 1992 and again briefly from 2000 to 2002 with a total of six underground levels developed to a depth of 411.5 m. Refurbishment of the mine started in September 2019 with the first gold poured in late 2020. Osisko continues with exploration at Trixie and their surrounding mineral tenure.

The QP recognizes that information relating to adjacent properties is not necessarily indicative of the mineralization on the IE Tintic Project. Information on adjacent properties in Section 20 is sourced from disclosures made by the applicable owner or operator of the property. The QP has been unable to verify this information.

21 Other Relevant Data and Information

There is no other relevant information or explanation necessary to make the Technical Report understandable and not misleading.

22 Interpretation and Conclusions

Since securing the Tintic Project in 2017, IE has invested US$55 million into exploration in the Tintic Main District, searching for prospective areas focused on porphyry copper, carbonate replacement bodies (CRDs) and skarns, with two-thirds of the expenditure being on securing the land and mineral titles (Table 22-1). The Main Tintic District is considered by IE to be highly prospective for these types of mineralization based on historical mining and on the geological understanding of the source of CRD mineralization.

To date this expenditure has focused on the consolidation of land acquisition, capture of historical information, geophysical and geochemical studies, and limited drilling to guide prospect prioritization. The consolidation of mineral claims since the cessation of mining in the 1980's has facilitated the opportunity to explore broader tracts of land, attempting to locate continuations of known exploited mineralization. IE has collated all historical data and produced a regional exploration model. IE's exploration approach has been successfully employed by Tintic Consolidated Metals LLC in the East Tintic District.

Table 22-1: IE Spending on the Tintic Project

Year	Cost – Land	Cost – Technical	Total Cost (USD)
2017	$500,000	$136,229	$636,229
2018	$2,246,108	$2,641,071	$4,887,179
2019	$4,303,215	$2,294,054	$6,597,269
2020	$7,322,571	$977,916	$8,300,487
2021	$6,107,341	$2,067,029	$8,174,370
2022	$7,890,210.64	$1,942,606	$9,832,817
2023 (to December 31)	$3,654,576	$12,996,975	$16,651,551
Total	**$32,024,021**	**$23,055,881**	**$55,079,902**

Source: IE (2023)

The QP found the information supplied by IE to be comprehensive and logically archived. The geochemical sampling program procedures and associated QA/QC protocols are consistent with industry standard practices. Furthermore, IE has applied sound and innovative exploration techniques to identify and prioritize prospect areas in the Main Tintic District. Drilling of two reverse circulation and 16 diamond drill holes since 2021 has tested several of these areas. Whilst no significant mineralization has been intersected to date, the drilling program has served to refine the exploration approach and re-prioritize the prospects for continued testing in 2024 based on the results and IE's overall strategy for the project.

IE has identified four of the 14 prospect areas described within this report as high priority, namely:

- Rabbit's Foot (porphyry);
- Sunbeam (porphyry);
- Mammoth Deep (porphyry); and
- Carisa / Northern Spy (CRD breccia pipe).

IE has completed several academic studies related to whole rock geochemistry, petrography, geochronology and quartz vein fluid inclusions. These results confirm historical authors' opinions on the project area and provide valuable information for the further development of IE's exploration model.

The QP considers IE's exploration model to be applicable and realistic for the Tintic Main District region. Furthermore, the exploration techniques employed by IE are suitable for exploration for porphyry copper, CRD, skarn, and fissure vein mineralization.

The QP identifies the following risks and uncertainties associated with the Tintic project:

- The dimensions of historical underground mining cavities are not surveyed, and the risk exists that larger areas have been exploited and not recorded.
- Historical drill hole location and analytical results should be treated with caution. Confidence in this information is low as little to no QA/QC data are available for the respective drill holes. However, the results can be utilized for regional-scale modelling, which IE has completed in Leapfrog Geo™.
- The area being explored by IE is very large and the risk exists that the exploration activities may be diluted if too many of the prospect areas are explored simultaneously. This risk can be mitigated by ranking of prospect areas, which IE has undertaken.
- All the exploration results to date indicate exploration potential areas only; no mineralization with any reasonable prospects of eventual economic extraction have been identified.
- Anomalous geochemical soil sample results occurring downslope from historical mining may be related to the aforementioned and not an indicator of an exploration potential area.
- A complex land claims ownership exists in the Tintic District and the risk to access certain isolated claims during exploration could occur. IE has consolidated claims through several agreements to acquire the relevant claims to mitigate the risk. IE has negotiated the right to access any of the claims under the respective agreements for exploration purposes.
- Unresolved Recognized Environmental Conditions (REC's) and pre-existing environmental liabilities exist in the IE tenement area. However, none of these impact IE's ability to perform exploration activities on the prospective areas prioritized as exploration potential areas.
- Future environmental permitting is a risk should IE consider an application to mine in Utah. The risk is partially mitigated on private patented claims, which would require State rather than Federal permitting.
- Significant portions of the CRD exploration claims are subject to Net Smelter Return ("NSR") royalty agreements, ranging between 1% and 4%. However, they are only payable upon production and sale of product should IE engage in such activities in the future. No royalties are due in advance.

The QP considers the following upside potential:

- Historical underground mining in the Tintic District was focused on mineralization above the water table. Therefore, mineralization along existing mined zones at depth may be preserved below the water table.

- Historical underground mining utilized higher cut-off grades than those that are economic in recent times. Therefore, the potential exists for unmined remnant lower grade mineralization areas being preserved.
- Historically, exploration and mining were focused on CRD, skarn, and fissure vein mineralization and not on the potential mineralized fluid source at depth. IE exploration geophysics has identified several anomalies that could indicate the potential source of the fluids. Diamond drilling in the Sunbeam prospect area has intersected textures and alteration typically associated with porphyry systems. While the visible copper mineralization is low, this is the first hole to have tested the Sunbeam Typhoon™ anomaly directly, and the potential exists to vector toward the center of a porphyry system which may contain mineralization with follow-up drilling. Assays are pending for this pyrite-dominant stockwork zone.

23 Recommendations

The QP recommends that IE focuses on continuing to drill the highest priority prospect areas and to continue to use the drilling results and compiled geophysical and geological data to guide future work. Drilling is required to delineate the volume and morphology of the potentially mineralized underground zones above and below the water table. Depending on whether mineralization is intersected, and its style and grade, this would enable IE to declare an exploration target with relevant estimated tonnage and grade ranges, contingent on IE's QA/QC protocols and performance, both of which have been demonstrated to meet industry standards.

23.1 Recommended Work Programs and Costs

The following exploration work is recommended on the Tintic Project in 2024:

- On the ground exploration, including mapping and geochemical sampling; and
- Surface diamond drilling to continue to test geophysical anomalies and follow up the drilling results to date.

The proposed budget for the exploration work is detailed in Table 23-1. The $12M budget includes payments on optioned land and surface drilling.

The objective of the work program and expenditure is twofold:

1) Test the buried porphyry prospect areas; and
2) Test shallow CRD prospect areas from surface.

Table 23-1: Summary of Estimated Costs for Recommended Exploration Work at Tintic in 2024

Item	Total Cost
Land	$290,570
Drilling	$8,640,000
Facilities and Staff	$3,069,060
Total	$11,999,630

Source: SRK (2023)

24 References

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25 Reliance on Information Provided by the Registrant

The QP's opinion contained herein is based on information provided by IE throughout the course of the investigations.

The QP used their experience to determine if the information from previous reports was suitable for inclusion in this Technical Report Summary and adjusted information that required amending.

The QP has relied on information provided by IE with respect to legal matters relating to land title and tenure and any underlying agreement(s). Specifically, the QP has not performed an independent verification of land title and tenure information beyond the preliminary verification described in Section 3.2.1 of this report. The QP did not verify the legality of any underlying agreement(s) that may exist concerning the permits or other agreement(s) between third parties but has relied on a legal opinion provided by IE, prepared by Richard R. Hall of Dorsey & Whitney LLP dated January 18, 2024. The reliance applies solely to the legal status of the rights disclosed in Sections 3.2 and 3.3.

With respect to Section 3.6, the QP also relied upon IE's confirmation that there are no known litigations potentially affecting the Tintic Project.

The QP believes that reliance upon IE for the above legal matters is reasonable because such legal matters are outside the expertise of the QP.

Appendices

Appendix A: Mineral Titles

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Fee Land/Leased	XF00-5967-1			Okelberry FIRST lease to HPX 2018; 100% mineral rights	55.3
Patented-Leased	AFRICAN		LOT 312	Okelberry lease to Spenst 2015, leased TO HPX	10.077
Patented-Leased	ALICE	MS 4548		Okelberry lease to Spenst 2015, leased TO HPX	18.55586
Patented-Leased	ANNA	MS 4320		Okelberry lease to Spenst 2015, leased TO HPX	11.63954
Patented-Leased	ANNACONDA		LOT 195A	Okelberry lease to Spenst 2015, leased TO HPX	6.279653
Patented-Leased	APEX NO. 2	MS 3904		Okelberry SECOND lease to HPX 2019	12.74722
Patented-Leased	BLUE BIRD EXTENSION	MS 3904		Okelberry SECOND lease to HPX 2019	19.24525
Patented-Leased	CAP	MS 5345		Okelberry lease to Spenst 2015, leased TO HPX	7.323951
Patented-Leased	COSMOPOLITE NO. 3		LOT 141	Okelberry lease to Spenst 2015, leased TO HPX	6.886742
Patented-Leased	DAD	MS 6090		Okelberry FIRST lease to HPX 2018; 30% mineral rights	12.14552
Patented-Leased	DECEIVER	NS 4136		Okelberry SECOND lease to HPX 2019	14.411
Patented-Leased	DIVIDE	MS 5706		Okelberry lease to Spenst 2015, leased TO HPX	14.91236
Patented-Leased	ELMER RAY		LOT 66	Leased from New United Sunbeam Mining Company, LLC, a Utah limited liability company, c/o Alpine King, Inc., 1257 E Third Ave, Salt Lake City, UT 84103	6.795838
Patented-Leased	EXCELSIOR	MS 5171		Okelberry lease to Spenst 2015, leased TO HPX	4.537393
Patented-Leased	FIRST SOUTHERN EXTENSION SUNBEAM		LOT 64	Leased from New United Sunbeam Mining Company, LLC, a Utah limited liability company, c/o Alpine King, Inc., 1257 E Third Ave, Salt Lake City, UT 84103	2.929713
Patented-Leased	FREMONT	MS 3868		Okelberry SECOND lease to HPX 2019	6.806981
Patented-Leased	GEDDES CONSOLIDATED	MS 3297		Okelberry FIRST lease to HPX 2018; 30% mineral rights	4.119528
Patented-Leased	GO EASY	MS 6090		Okelberry FIRST lease to HPX 2018; 30% mineral rights	21.66658
Patented-Leased	GOLDEN KEY	MS 4136		Okelberry SECOND lease to HPX 2019	19.735
Patented-Leased	HEMITITE	MS 5472		Okelberry lease to Spenst 2015, leased TO HPX	15.33371
Patented-Leased	HENDERSON	MS 3214		Okelberry lease to Spenst 2015, leased TO HPX	15.23786
Patented-Leased	INDIAN		LOT 312	Okelberry lease to Spenst 2015, leased TO HPX	6.61
Patented-Leased	IRON SPAR	MS 4015		Leased from New United Sunbeam Mining Company, LLC, a Utah limited liability company, c/o Alpine King, Inc., 1257 E Third Ave, Salt Lake City, UT 84103	17.08247
Patented-Leased	JASON		LOT 225	Okelberry lease to Spenst 2015, leased TO HPX	20.2
Patented-Leased	JUNCTION	MS 3432		Okelberry FIRST lease to HPX 2018; 30% mineral rights	18.29464
Patented-Leased	JUNCTION NO. 2	MS 3432		Okelberry FIRST lease to HPX 2018; 30% mineral rights	19.66097
Patented-Leased	JUNCTION NO. 3	MS 3432		Okelberry FIRST lease to HPX 2018; 30% mineral rights	15.76046
Patented-Leased	JUNCTION NO. 4	MS 3432		Okelberry FIRST lease to HPX 2018; 30% mineral rights	15.29544
Patented-Leased	LAST DOLLAR	MS 3904		Okelberry SECOND lease to HPX 2019	18.48558
Patented-Leased	LITTLE CHIEF	MS 5171		Okelberry lease to Spenst 2015, leased TO HPX	18.82066
Patented-Leased	LITTLE GIANT	MS 5171		Okelberry lease to Spenst 2015, leased TO HPX	19.51018
Patented-Leased	MARION		LOT 185	Okelberry lease to Spenst 2015, leased TO HPX	6.85
Patented-Leased	MILD WINTER	MS 5171		Okelberry lease to Spenst 2015, leased TO HPX	8.574286
Patented-Leased	MYRTLE	MS 3821		Okelberry FIRST lease to HPX 2018; 30% mineral rights	19.48586
Patented-Leased	NEW NATIONAL	MS 3976		Okelberry FIRST lease to HPX 2018; 30% mineral rights	9.550784

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Leased	NOVEMBER		LOT 211	Okelberry lease to Spenst 2015, leased TO HPX	6.860955
Patented-Leased	PARALLEL NO. 2	MS 3868		Okelberry SECOND lease to HPX 2019	16.03513
Patented-Leased	RED CROSS NO. 101	MS 6587		Okelberry SECOND lease to HPX 2019	20.66116
Patented-Leased	RED CROSS NO. 102	MS 6587		Okelberry SECOND lease to HPX 2019	20.66069
Patented-Leased	RED CROSS NO. 103	MS 6587		Okelberry SECOND lease to HPX 2019	20.66185
Patented-Leased	RED CROSS NO. 121	MS 6640		Okelberry SECOND lease to HPX 2019	20.66069
Patented-Leased	RED CROSS NO. 122	MS 6640		Okelberry SECOND lease to HPX 2019	20.66069
Patented-Leased	RED CROSS NO. 123	MS 6640		Okelberry SECOND lease to HPX 2019	20.66162
Patented-Leased	RED CROSS NO. 141	MS 6640		Okelberry SECOND lease to HPX 2019	20.66069
Patented-Leased	RED CROSS NO. 142	MS 6640		Okelberry SECOND lease to HPX 2019	20.66138
Patented-Leased	RED CROSS NO. 143	MS 6640		Okelberry SECOND lease to HPX 2019	20.66138
Patented-Leased	RED CROSS NO. 221	MS 6696		Okelberry SECOND lease to HPX 2019	20.66116
Patented-Leased	RED CROSS NO. 222	MS 6696		Okelberry SECOND lease to HPX 2019	20.66138
Patented-Leased	RED CROSS NO. 223	MS 6696		Okelberry SECOND lease to HPX 2019	20.66092
Patented-Leased	RED CROSS NO. 43	MS 6608		Okelberry SECOND lease to HPX 2019	20.66185
Patented-Leased	RED CROSS NO. 62 AMENDED	MS 6608		Okelberry SECOND lease to HPX 2019	20.6657
Patented-Leased	RED CROSS NO. 63	MS 6608		Okelberry SECOND lease to HPX 2019	20.65294
Patented-Leased	RED CROSS NO. 83	MS 6587		Okelberry SECOND lease to HPX 2019	20.66967
Patented-Leased	RELIANCE		LOT 138	Okelberry lease to Spenst 2015, leased TO HPX	4.302028
Patented-Leased	RISING SUN	MS 3827		Okelberry SECOND lease to HPX 2019	20.11263
Patented-Leased	RISING SUN NO. 2	MS 3827		Okelberry SECOND lease to HPX 2019	13.91192
Patented-Leased	RISING SUN NO. 3	MS 3827		Okelberry SECOND lease to HPX 2019	13.20883
Patented-Leased	RUBY NO. 100 AM	MS 6640		Okelberry SECOND lease to HPX 2019	20.66138
Patented-Leased	RUBY NO. 120	MS 6640		Okelberry SECOND lease to HPX 2019	20.66162
Patented-Leased	RUBY NO. 121	MS 6640		Okelberry SECOND lease to HPX 2019	20.66069
Patented-Leased	RUBY NO. 121 FRACTION	MS 6640		Okelberry SECOND lease to HPX 2019	1.139
Patented-Leased	RUBY NO. 130	MS 6640		Okelberry SECOND lease to HPX 2019	20.66162
Patented-Leased	RUBY NO. 131	MS 6640		Okelberry SECOND lease to HPX 2019	20.66092
Patented-Leased	RUBY NO. 132 AM	MS 6770		Okelberry SECOND lease to HPX 2019	20.66138
Patented-Leased	RUBY NO. 160	MS 6640		Okelberry SECOND lease to HPX 2019	20.66162
Patented-Leased	RUBY NO. 161	MS 6640		Okelberry SECOND lease to HPX 2019	20.66069
Patented-Leased	RUBY NO. 162	MS 6640		Okelberry SECOND lease to HPX 2019	20.66092
Patented-Leased	RUBY NO. 180	MS 6665		Okelberry SECOND lease to HPX 2019	20.66138
Patented-Leased	RUBY NO. 181	MS 6665		Okelberry SECOND lease to HPX 2019	20.66116
Patented-Leased	RUBY NO. 182	MS 6665		Okelberry SECOND lease to HPX 2019	20.66069
Patented-Leased	RUBY NO. 200	MS 6665		Okelberry SECOND lease to HPX 2019	20.66092
Patented-Leased	RUBY NO. 201	MS 6665		Okelberry SECOND lease to HPX 2019	20.66185
Patented-Leased	RUBY NO. 202 AM	MS 6696		Okelberry SECOND lease to HPX 2019	20.66069
Patented-Leased	RUBY NO. 220	MS 6696		Okelberry SECOND lease to HPX 2019	20.66069
Patented-Leased	RUBY NO. 221	MS 6696		Okelberry SECOND lease to HPX 2019	20.66185
Patented-Leased	RUBY NO. 222 AM	MS 6696		Okelberry SECOND lease to HPX 2019	20.66092

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Leased	SHAMROCK NO. 2	MS 6533		Okelberry SECOND lease to HPX 2019	20.655
Patented-Leased	SHAMROCK NO. 4	MS 6533		Okelberry SECOND lease to HPX 2019	13.761
Patented-Leased	SILVER ALECK		LOT 209	Okelberry lease to Spenst 2015, leased TO HPX	12.218
Patented-Leased	SILVER MOON	MS 2953		Leased from New United Sunbeam Mining Company, LLC, a Utah limited liability company, c/o Alpine King, Inc., 1257 E Third Ave, Salt Lake City, UT 84103	0.750795
Patented-Leased	SPRING		LOT 335	Okelberry SECOND lease to HPX 2019	20.65789
Patented-Leased	SUNBEAM		LOT 165	Leased from New United Sunbeam Mining Company, LLC, a Utah limited liability company, c/o Alpine King, Inc., 1257 E Third Ave, Salt Lake City, UT 84103	3.220664
Patented-Leased	SUNBEAM & FIRST SOUTHERN EXTENSION		LOT 61	Leased from New United Sunbeam Mining Company, LLC, a Utah limited liability company, c/o Alpine King, Inc., 1257 E Third Ave, Salt Lake City, UT 84103	2.801825
Patented-Leased	SWANSEA FRACTION	MS 3976		Okelberry FIRST lease to HPX 2018; 30% mineral rights	1.47225
Patented-Leased	TOPSY	MS 5308		Okelberry lease to Spenst 2015, leased TO HPX	12.03
Patented-Leased	TRIANGLE	MS 4090		Leased from New United Sunbeam Mining Company, LLC, a Utah limited liability company, c/o Alpine King, Inc., 1257 E Third Ave, Salt Lake City, UT 84103	7.425396
Patented-Leased	UNA	MS 4548		Okelberry lease to Spenst 2015, leased TO HPX	17.17093
Patented-Leased	UNCLE BEN	MS 3214		Okelberry lease to Spenst 2015, leased TO HPX	17.48596
Patented-Leased	VENUS	MS 4198		Okelberry lease to Spenst 2015, leased TO HPX	1.149681
Patented-Leased	VICTORIA NO. 2	MS 3868		Okelberry SECOND lease to HPX 2019	19.99314
Patented-Leased	W.H. WHITON		LOT 208A	Okelberry lease to Spenst 2015, leased TO HPX	20.66173
Patented-Leased	WEST ELMER RAY	MS 3874		Leased from New United Sunbeam Mining Company, LLC, a Utah limited liability company, c/o Alpine King, Inc., 1257 E Third Ave, Salt Lake City, UT 84103	15.35631
Patented-Leased	WEST SUNBEAM	MS 3820		Leased from New United Sunbeam Mining Company, LLC, a Utah limited liability company, c/o Alpine King, Inc., 1257 E Third Ave, Salt Lake City, UT 84103	11.8143
Patented-Leased	YORK	MS 4400		Okelberry FIRST lease to HPX 2018; 30% mineral rights	16.06518
Patented-Leased	YOUNG GIANT	MS 5706		Okelberry lease to Spenst 2015, leased TO HPX	17.60586
Patented-Leased/Optioned	BELCHER	MS 0199		Leased/Optioned from Steve Richins	13.74
Patented-Leased/Optioned	BLUE ROCK	MS 6015		Leased/Optioned from Silver City Mines	11.8658
Patented-Leased/Optioned	BRAZILLIAN	MS 0307		Leased/Optioned from Steve Richins	3.91
Patented-Leased/Optioned	CASTLE	MS 5714		Leased/Optioned from Crown Point	16.435
Patented-Leased/Optioned	COMING SUMMER	MS 0330		Leased/Optioned from Steve Richins	5.77
Patented-Leased/Optioned	CONTACT	MS 0250		Leased/Optioned from Steve Richins	20.15
Patented-Leased/Optioned	COPPER PYRITE FRACTION NO. 1	MS 4445		Leased/Optioned from Silver City Mines	4.018
Patented-Leased/Optioned	DIAMOND		LOT 224	Leased/Optioned from Tintic Gold	9.042499
Patented-Leased/Optioned	DIVIDE NO. 2	MS 5708		Leased/Optioned from Crown Point	19.42123
Patented-Leased/Optioned	EMERALD		LOT 224	Leased/Optioned from Tintic Gold	18.54273
Patented-Leased/Optioned	EMMA ABBOTT	MS 0309		Leased/Optioned from Steve Richins	2.44
Patented-Leased/Optioned	ERNAMI	MS 0305		Leased/Optioned from Steve Richins	5.83

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Leased/Optioned	EXTENSION SUNDAY	MS 4083		Leased/Optioned from Lawrence R. Lee, POBox 122, Nantucket, MA 02554-0122	17.81335
Patented-Leased/Optioned	FRACTION	MS 3835		Leased/Optioned from Crown Point	5.386675
Patented-Leased/Optioned	GOSHEN NO. 1	MS 5708		Leased/Optioned from Crown Point	15.53384
Patented-Leased/Optioned	GOSHEN NO. 4	MS 5708		Leased/Optioned from Crown Point	17.70733
Patented-Leased/Optioned	GRANIT	MS 6015		Leased/Optioned from Silver City Mines	10.48053
Patented-Leased/Optioned	GULCH	MS 5899		Leased/Optioned from M. Todd Wilhite	19.06931
Patented-Leased/Optioned	HELEN	MS 4085		Leased/Optioned from Lawrence R. Lee, POBox 122, Nantucket, MA 02554-0122	2.977912
Patented-Leased/Optioned	HOLMAN	MS 3295		Leased/Optioned from Steve Richins	12.867
Patented-Leased/Optioned	HOWARD	MS 3860		Leased/Optioned from Steve Richins	17.65
Patented-Leased/Optioned	INDIAN GIRL	MS 4086		Leased/Optioned from Lawrence R. Lee, POBox 122, Nantucket, MA 02554-0122	3.670185
Patented-Leased/Optioned	IRON DUKE MINE	MS 5899		Leased/Optioned from M. Todd Wilhite	9.987411
Patented-Leased/Optioned	JESSAMINE	MS 3857		Leased/Optioned from Adrian Gerritsen / Vashon	10.83902
Patented-Leased/Optioned	KINGSLEY	MS 3243		Leased/Optioned from Silver City Mines	12.5189
Patented-Leased/Optioned	LOOKEY JACK	MS 0198		Leased/Optioned from Steve Richins	20.61
Patented-Leased/Optioned	LUCKEY JOHN	MS 4339		Leased/Optioned from Silver City Mines	12.235
Patented-Leased/Optioned	MINNEY MOORE	MS 3835		Leased/Optioned from Crown Point	16.15023
Patented-Leased/Optioned	MOLLY S	MS 0250		Leased/Optioned from Steve Richins	20.33
Patented-Leased/Optioned	MONTEBANK	MS 4088		Leased/Optioned from Lawrence R. Lee, POBox 122, Nantucket, MA 02554-0122	5.615461
Patented-Leased/Optioned	MONTEREY	MS 5899		Leased/Optioned from M. Todd Wilhite	17.02967
Patented-Leased/Optioned	MORMON CHIEF	MS 4080		Leased/Optioned from Lawrence R. Lee, POBox 122, Nantucket, MA 02554-0122	7.560456
Patented-Leased/Optioned	NORTH SWANSEA	MS 2955		Leased/Optioned from Steve Richins	19.65
Patented-Leased/Optioned	PEWABIC	MS 0306		Leased/Optioned from Steve Richins	16.17
Patented-Leased/Optioned	PINEY	MS 0250		Leased/Optioned from Steve Richins	20.33
Patented-Leased/Optioned	PRIDE OF THE HILLS	MS 4081		Leased/Optioned from Lawrence R. Lee, POBox 122, Nantucket, MA 02554-0122	6.834791
Patented-Leased/Optioned	PRIDE OF THE HILLS FRACTION	MS 4087		Leased/Optioned from Lawrence R. Lee, POBox 122, Nantucket, MA 02554-0122	4.133154
Patented-Leased/Optioned	QUARTZITE	MS 5893		Leased/Optioned from Steve Richins	17.553
Patented-Leased/Optioned	RED RAPPEREE	MS 0250		Leased/Optioned from Steve Richins	20.6
Patented-Leased/Optioned	RIDGE	MS 5708		Leased/Optioned from Crown Point	18.68237
Patented-Leased/Optioned	RIDGE NO. 2	MS 5708		Leased/Optioned from Crown Point	19.28428
Patented-Leased/Optioned	RISING SUN	MS 5695		Leased/Optioned from Steve Richins	15.248
Patented-Leased/Optioned	ROSA	MS 0250		Leased/Optioned from Steve Richins	2.67
Patented-Leased/Optioned	RUBY		LOT 224	Leased/Optioned from Tintic Gold	19.16966
Patented-Leased/Optioned	SENATOR	MS 3242		Leased/Optioned from Silver City Mines	15.7728
Patented-Leased/Optioned	SIDE ISSUE	MS 0303		Leased/Optioned from Steve Richins	6.69
Patented-Leased/Optioned	SILVER BELT	MS 0168		Leased/Optioned from Steve Richins	6.67
Patented-Leased/Optioned	SILVER BELT NO. 2	MS 4664		Leased/Optioned from Steve Richins	1.703
Patented-Leased/Optioned	SILVER BOW	MS 6015		Leased/Optioned from Silver City Mines	6.59632
Patented-Leased/Optioned	SILVER REED NO. 1	MS 5893		Leased/Optioned from Steve Richins	18.256

Claim Type	*Claim Name*	*MS*	*LOT*	*Comment*	*Acres*
Patented-Leased/Optioned	SILVER STAR	MS 4084		Leased/Optioned from Lawrence R. Lee, POBox 122, Nantucket, MA 02554-0122	6.860292
Patented-Leased/Optioned	SOUTHERN EUREKA	MS 0304		Leased/Optioned from Steve Richins	6.75
Patented-Leased/Optioned	SUNDAY	MS 4082		Leased/Optioned from Lawrence R. Lee, POBox 122, Nantucket, MA 02554-0122	16.81899
Patented-Leased/Optioned	SUNNY SIDE	MS 3835		Leased/Optioned from Crown Point	17.41061
Patented-Leased/Optioned	UTAH	MS 6015		Leased/Optioned from Silver City Mines	19.23299
Patented-Leased/Optioned	WEST BOWER	MS 3296		Leased/Optioned from Steve Richins	20.55
Patented-Leased/Optioned	X RAYS	MS 3941		Leased/Optioned from Silver City Mines	16.90819
Patented-Leased/Optioned	YANKEE GIRL	MS 3242		Leased/Optioned from Silver City Mines	9.871254
Patented-Purchased	2G	MS 3012		Purchased from Spenst Hansen	5.139507
Patented-Purchased	AFTON NO. 2	MS 6844		Purchased from Spenst Hansen	0.05
Patented-Purchased	ALICE	MS 3568		Purchased from Spenst Hansen	14.20443
Patented-Purchased	ALLEN	MS 4561		Purchased from Spenst Hansen	0.139207
Patented-Purchased	ALMO	MS 3009		Purchased from Spenst Hansen	3.850211
Patented-Purchased	ALPHA		LOT 105A	Purchased from Spenst Hansen	6.856035
Patented-Purchased	ALTA		LOT 161	Purchased from Spenst Hansen	6.791741
Patented-Purchased	AMELIA RIVES	MS 4550		Purchased from Spenst Hansen	20.04948
Patented-Purchased	AMELIA RIVES ADDITION	MS 4550		Purchased from Spenst Hansen	3.101864
Patented-Purchased	AMENDED J.H. MINING CLAIM	MS 6721		Purchased from Tintic Pioneer Gold	15.821
Patented-Purchased	AMERICAN EAGLE	MS 4679		Purchased from Spenst Hansen	1.038171
Patented-Purchased	AMETHYST	MS 4523		Purchased from Spenst Hansen	4.724497
Patented-Purchased	AMETHYST NO. 2	MS 4523		Purchased from Spenst Hansen	1.934525
Patented-Purchased	ANA LARA	MS 4360		Purchased from Spenst Hansen	16.29107
Patented-Purchased	ANACONDA FRACTION	MS 6722		Purchased from Tintic Pioneer Gold	9.601
Patented-Purchased	ANITA	MS 4535		Purchased from Spenst Hansen	14.09962
Patented-Purchased	ANNA NO. 2	MS 4320		Purchased from Spenst Hansen	4.490533
Patented-Purchased	ANNANDALE	MS0270		Purchased from Spenst Hansen	5.65905
Patented-Purchased	ANNIE MAY GUNDRY	MS 3241		Purchased from Spenst Hansen	5.465355
Patented-Purchased	ANTELOPE	MS 5999		Purchased from Spenst Hansen	7.105021
Patented-Purchased	ANTELOPE FRACTION	MS 6014		Purchased from Spenst Hansen	1.51093
Patented-Purchased	ANTELOPE NO. 2	MS 5999		Purchased from Spenst Hansen	12.62455
Patented-Purchased	APEX	MS 2991		Purchased from Spenst Hansen	19.82404
Patented-Purchased	APRIL FRACTION	MS 6584		Purchased from Spenst Hansen	1.412262
Patented-Purchased	ARDATH	MS 3332		Purchased from Spenst Hansen	3.814131
Patented-Purchased	ARGENTA		LOT 147	Purchased from Spenst Hansen	5.972414
Patented-Purchased	ARGENTA		LOT 290	Purchased from Spenst Hansen	16.19028
Patented-Purchased	AVELANCHE	MS 4523		Purchased from Spenst Hansen	7.372568
Patented-Purchased	BANARD	MS 4560		Purchased from Spenst Hansen	0.018027
Patented-Purchased	BANGER		LOT 249	Purchased from Spenst Hansen	5.934465
Patented-Purchased	BEACON NO. 1	MS 7001		Purchased from Spenst Hansen	20.66129
Patented-Purchased	BEACON NO. 2	MS 7001		Purchased from Spenst Hansen	20.66107

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	BEACON NO. 3	MS 7001		Purchased from Spenst Hansen	20.66129
Patented-Purchased	BEATRICE D.	MS 4308		Purchased from Grand Central Silver Mines (Centurion Mines).	4.917152
Patented-Purchased	BECK		LOT 74	Purchased from Spenst Hansen	5.316951
Patented-Purchased	BECK FRACTION	MS 6634		Purchased from Spenst Hansen	0.301
Patented-Purchased	BELCHER		LOT 155	Purchased from Spenst Hansen	5.734295
Patented-Purchased	BELCHER	MS 3750		Purchased from Spenst Hansen	6.935477
Patented-Purchased	BESS	MS 3771		Purchased from Spenst Hansen	4.093796
Patented-Purchased	BESSARABIA	MS 2991		Purchased from Spenst Hansen	18.72539
Patented-Purchased	BIMETALLIST	MS 3339		Purchased from Spenst Hansen	13.59321
Patented-Purchased	BLACK DRAGON		LOT 49	Purchased from Applied Minerals	3.491053
Patented-Purchased	BLACK DRAGON FIRST EXT. SOUTH CLAIMS 3 & 4		LOT 79	Purchased from Applied Minerals	1.697057
Patented-Purchased	BLACK JACK		LOT 101	Purchased from Spenst Hansen	6.366528
Patented-Purchased	BLUE BIRD	MS 4360		Purchased from Spenst Hansen	19.70921
Patented-Purchased	BLUE ROCK		LOT 75	Purchased from Spenst Hansen	2.755021
Patented-Purchased	BOBY DODIER	MS 0227-A2		Purchased from Spenst Hansen	1.703584
Patented-Purchased	BOGDAN FRACTION AM	MS 6666		Purchased from Spenst Hansen	14.91798
Patented-Purchased	BOGDAN NO. 1	MS 6666		Purchased from Spenst Hansen	19.77264
Patented-Purchased	BOGDAN NO. 2	MS 6666		Purchased from Spenst Hansen	19.79887
Patented-Purchased	BOGDAN NO. 3 AM	MS 6666		Purchased from Spenst Hansen	14.51972
Patented-Purchased	BOSS TWEED		LOT 237	Purchased from Spenst Hansen	6.442589
Patented-Purchased	BOSS TWEED EXTENSION		LOT 237	Purchased from Spenst Hansen	2.150041
Patented-Purchased	BOYD	MS 5310A		Purchased from Spenst Hansen	0.340596
Patented-Purchased	BRADLEY		LOT 158	Purchased from Spenst Hansen	20.67528
Patented-Purchased	BRAZIL LODE NO. 2		LOT 274	Purchased from Spenst Hansen	6.07899
Patented-Purchased	BROOKLYN		LOT 86	Purchased from Applied Minerals	5.06114
Patented-Purchased	BROOKLYN NO. 2	MS 3783		Purchased from Applied Minerals	2.517502
Patented-Purchased	BROWN	MS 4562		Purchased from Spenst Hansen	0.019383
Patented-Purchased	BROWNIE	MS 4053		Purchased from Spenst Hansen	10.77725
Patented-Purchased	BUCKEYE	MS 3232		Purchased from Spenst Hansen	14.22392
Patented-Purchased	BUDDY	MS 6883		Purchased from Spenst Hansen	4.733759
Patented-Purchased	BULLION		LOT 68	Purchased from Spenst Hansen	2.282323
Patented-Purchased	BULLION		LOT 76	Purchased from Spenst Hansen	5.06119
Patented-Purchased	BURLEIGH		LOT 179	Purchased from Spenst Hansen	17.49035
Patented-Purchased	CADAVER	MS 4180		Purchased from Spenst Hansen	1.337845
Patented-Purchased	CALIFORNIA		LOT 342	Purchased from Spenst Hansen	1.874365
Patented-Purchased	CALIFORNIA		LOT 114	Purchased from Spenst Hansen	6.887075
Patented-Purchased	CANE	MS 0214-C		Purchased from Spenst Hansen	15.404236
Patented-Purchased	CAPE HORN	MS 6997		Purchased from Spenst Hansen	17.15933
Patented-Purchased	CAPE HORN NO. 1	MS 6997		Purchased from Spenst Hansen	20.64105

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	CAPE HORN NO. 10	MS 6997		Purchased from Spenst Hansen	20.53667
Patented-Purchased	CAPE HORN NO. 11	MS 6997		Purchased from Spenst Hansen	20.66117
Patented-Purchased	CAPE HORN NO. 2	MS 6997		Purchased from Spenst Hansen	13.60299
Patented-Purchased	CAPE HORN NO. 3	MS 6997		Purchased from Spenst Hansen	15.0153
Patented-Purchased	CAPE HORN NO. 4	MS 6997		Purchased from Spenst Hansen	20.64164
Patented-Purchased	CAPE HORN NO. 5	MS 6997		Purchased from Spenst Hansen	20.64101
Patented-Purchased	CAPE HORN NO. 6	MS 6997		Purchased from Spenst Hansen	11.7768
Patented-Purchased	CAPE HORN NO. 7	MS 6997		Purchased from Spenst Hansen	16.24373
Patented-Purchased	CAPE HORN NO. 8	MS 6997		Purchased from Spenst Hansen	14.81984
Patented-Purchased	CAPE OF GOOD HOPE	MS 6997		Purchased from Spenst Hansen	20.67338
Patented-Purchased	CAPTAIN S.	MS 4054		Purchased from Spenst Hansen	1.493239
Patented-Purchased	CARISSA		LOT 56	Purchased from Spenst Hansen	6.523833
Patented-Purchased	CAROLINE		LOT 292	Purchased from Spenst Hansen	0.692658
Patented-Purchased	CAROLINE TRIANGLE	MS 3062		Purchased from Spenst Hansen	0.794026
Patented-Purchased	CATASAUQUA	MS 5101		Purchased from Spenst Hansen	19.45054
Patented-Purchased	CATASAUQUA NO. 1	MS 5101		Purchased from Spenst Hansen	19.33196
Patented-Purchased	CATASAUQUA NO. 2	MS 5101		Purchased from Spenst Hansen	19.33162
Patented-Purchased	CATASAUQUA NO. 3	MS 5101		Purchased from Spenst Hansen	11.32746
Patented-Purchased	CATASAUQUA NO. 4	MS 5101		Purchased from Spenst Hansen	16.23016
Patented-Purchased	CENTENNIAL EUREKA		LOT 67	Purchased from Spenst Hansen	6.144291
Patented-Purchased	CENTER	MS 4219		Purchased from Spenst Hansen	0.983084
Patented-Purchased	CHALLENGE CONSOLIDATED	MS 4444		Purchased from Spenst Hansen	20.60933
Patented-Purchased	CHAMPION NO. 2		LOT 73	Purchased from Spenst Hansen	3.741835
Patented-Purchased	CHAMPLAIN NO. 2 AM		LOT 174	Purchased from Spenst Hansen	5.507905
Patented-Purchased	CHANG MILL SITE	MS 4512		Purchased from Spenst Hansen	4.918982
Patented-Purchased	CHING MILL SITE	MS 4513		Purchased from Spenst Hansen	4.948538
Patented-Purchased	CHIPPEWA	MS 2991		Purchased from Spenst Hansen	14.38674
Patented-Purchased	CHRISTOPHER COLUMBUS	MS 3037		Purchased from Spenst Hansen	3.29359
Patented-Purchased	CLEOPATRA	MS 3330		Purchased from Spenst Hansen	19.46959
Patented-Purchased	CLEVELAND		LOT 295	Purchased from Spenst Hansen	4.136116
Patented-Purchased	CLEVELAND	MS 3849		Purchased from Spenst Hansen	18.99921
Patented-Purchased	CLIFF	MS 7001		Purchased from Spenst Hansen	20.66117
Patented-Purchased	CLIFT	MS 3413		Purchased from Spenst Hansen	6.633736
Patented-Purchased	COLCONDA LODE		LOT 293	Purchased from Spenst Hansen	20.66091
Patented-Purchased	COLORADO CHIEF		LOT 139	Purchased from Spenst Hansen	6.882092
Patented-Purchased	COMING SUMMER FRACTION	MS 0227-A1		Purchased from Spenst Hansen	0.357723
Patented-Purchased	COMSTOCK		LOT 153	Purchased from Spenst Hansen	4.819243
Patented-Purchased	CONSORT		LOT 272	Purchased from Spenst Hansen	13.17864
Patented-Purchased	CONTEST		LOT 83	Purchased from Applied Minerals	1.51508
Patented-Purchased	CONVERSANT	MS 7001		Purchased from Spenst Hansen	20.64174

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	COPPEROPOLIS NO. 2 AM		LOT 160	Purchased from Spenst Hansen	11.78823
Patented-Purchased	CORDELIA ORTON	MS 4479		Purchased from Spenst Hansen	1.989618
Patented-Purchased	CORNUCOPIA	MS 4171		Purchased from Spenst Hansen	5.004533
Patented-Purchased	COSMOPOLITE NO. 2		LOT 140	Purchased from Spenst Hansen	6.886288
Patented-Purchased	CROSS DRAGON		LOT 80	Purchased from Applied Minerals	1.762071
Patented-Purchased	CROWN POINT		LOT 113	Purchased from Spenst Hansen	6.700437
Patented-Purchased	CYGNET		LOT 334	Purchased from Applied Minerals	18.56867
Patented-Purchased	DAISEY HAMILTON		LOT 316	Purchased from Spenst Hansen	6.626826
Patented-Purchased	DAISY	MS 4519		Purchased from Applied Minerals	4.459465
Patented-Purchased	DAMIFICARE	MS 4179		Purchased from Spenst Hansen	5.460215
Patented-Purchased	DANDY		LOT 320	Purchased from Spenst Hansen	6.464479
Patented-Purchased	DANDY JIM	MS 4565		Purchased from Spenst Hansen	2.790402
Patented-Purchased	DECEMBER	MS 3491		Purchased from Spenst Hansen	5.973672
Patented-Purchased	DELLA	MS 7011		Purchased from Spenst Hansen	19.51649
Patented-Purchased	DEPREZIN		LOT 248	Purchased from Spenst Hansen	4.409985
Patented-Purchased	DESERT VIEW	MS 6135		Purchased from Spenst Hansen	4.150657
Patented-Purchased	DEW DROP	MS 4519		Purchased from Applied Minerals	16.31705
Patented-Purchased	DIVIDE		LOT 313	Purchased from Spenst Hansen	20.61856
Patented-Purchased	DOM PEDRO 2ND		LOT 172	Purchased from Spenst Hansen	15.63086
Patented-Purchased	DOVE LODE		LOT 269	Purchased from Spenst Hansen	19.30426
Patented-Purchased	DUBEI	MS 3940		Purchased from Spenst Hansen	20.55358
Patented-Purchased	DUCH EMPIRE	MS 2991		Purchased from Spenst Hansen	13.25958
Patented-Purchased	DUDE		LOT 320	Purchased from Spenst Hansen	6.71199
Patented-Purchased	E. SWANSEA	MS 2955		Purchased from Spenst Hansen	17.965255
Patented-Purchased	EAST GOLD COIN	MS 7001		Purchased from Spenst Hansen	20.66117
Patented-Purchased	EAST GOLD COIN EXTENSION	MS 7001		Purchased from Spenst Hansen	20.66107
Patented-Purchased	EAST STAR		LOT 232	Purchased from Spenst Hansen	8.008821
Patented-Purchased	EASTERN	MS 4519		Purchased from Applied Minerals	6.568715
Patented-Purchased	ECLIPSE	MS 4029		Purchased from Spenst Hansen	15.42331
Patented-Purchased	ECLIPSE NO. 2	MS 4029		Purchased from Spenst Hansen	6.134171
Patented-Purchased	ELGIN AM	MS 4019		Purchased from Spenst Hansen	17.4493
Patented-Purchased	ELISE		LOT 84	Purchased from Applied Minerals	2.838249
Patented-Purchased	ELISE NO. 2		LOT 222	Purchased from Applied Minerals	4.981157
Patented-Purchased	ELIZABETH	MS 5650		Purchased from Spenst Hansen	0.661171
Patented-Purchased	EMILY R.	MS 3876		Purchased from Spenst Hansen	4.238997
Patented-Purchased	EMMA		LOT 143	Purchased from Spenst Hansen	5.328565
Patented-Purchased	ENTERPRISE		LOT 326	Purchased from Spenst Hansen	4.370416
Patented-Purchased	ESSEM	MS 6977		Purchased from Spenst Hansen	6.241642
Patented-Purchased	EUCHRE	MS 4360		Purchased from Spenst Hansen	15.68975
Patented-Purchased	EUREKA		LOT 39	Purchased from Spenst Hansen	7.515212
Patented-Purchased	EUREKA NO. 5		LOT 170	Purchased from Spenst Hansen	0.944222

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	EVENING STAR	MS 3382		Purchased from Spenst Hansen	5.959831
Patented-Purchased	FAIRVIEW	MS 2951		Purchased from Spenst Hansen	4.227606
Patented-Purchased	FLAGSTAFF		LOT 324	Purchased from Spenst Hansen	20.26756
Patented-Purchased	FLAGSTAFF	MS 3875		Purchased from Spenst Hansen	13.90531
Patented-Purchased	FOUR ACES	MS 0341		Purchased from Spenst Hansen	6.346467
Patented-Purchased	FRACTION	MS 3233		Purchased from Spenst Hansen	4.918933
Patented-Purchased	FRACTION	MS 3206		Purchased from Spenst Hansen	7.739909
Patented-Purchased	FRANKIE NO. 1	MS 4109		Purchased from Applied Minerals	13.40141
Patented-Purchased	FRANKIE NO. 2	MS 4110		Purchased from Applied Minerals	13.53942
Patented-Purchased	FRANKIE NO. 3	MS 4111		Purchased from Applied Minerals	16.30417
Patented-Purchased	FRANKLIN		LOT 246	Purchased from Spenst Hansen	5.54258
Patented-Purchased	FRANKLIN CONSOLIDATED	MS 3931		Purchased from Spenst Hansen	10.09293
Patented-Purchased	GARNET	MS 3852		Purchased from Spenst Hansen	6.325427
Patented-Purchased	GEDDES CONSOLIDATED	MS 3297		Purchased from Spenst Hansen; 70% minerals	4.119528
Patented-Purchased	GENERAL HARRISON		LOT 308	Purchased from Spenst Hansen	17.50455
Patented-Purchased	GENERAL LOGAN		LOT 332	Purchased from Spenst Hansen	6.481816
Patented-Purchased	GEORGE A. WILSON		LOT 296	Purchased from Spenst Hansen	6.779939
Patented-Purchased	GLADSTONE		LOT 127	Purchased from Spenst Hansen	6.647385
Patented-Purchased	GOLCONDA	MS 3981		Purchased from Spenst Hansen	5.014079
Patented-Purchased	GOLD CHAIN FRACTION	MS 6191		Purchased from Spenst Hansen	4.55315
Patented-Purchased	GOLD COIN	MS 7001		Purchased from Spenst Hansen	20.66117
Patented-Purchased	GOLDEN CHAIN		LOT 339	Purchased from Spenst Hansen	11.07649
Patented-Purchased	GOLDEN EAGLE		LOT 287	Purchased from Spenst Hansen	6.640987
Patented-Purchased	GOLDEN KING		LOT 92	Purchased from Spenst Hansen	6.741835
Patented-Purchased	GOLDEN TREASURE		LOT 78	Purchased from Spenst Hansen	7.346121
Patented-Purchased	GOLDFIELD	MS 3875		Purchased from Spenst Hansen	9.795042
Patented-Purchased	GOOD FRACTION	MS 7011		Purchased from Spenst Hansen	13.20965
Patented-Purchased	GOVENOR		LOT 85	Purchased from Applied Minerals	6.610984
Patented-Purchased	GRACE	MS 4522		Purchased from Spenst Hansen	0.566501
Patented-Purchased	GRACE ELY		LOT 317	Purchased from Spenst Hansen	7.051704
Patented-Purchased	GRACIE	MS 3337		Purchased from Spenst Hansen	19.25692
Patented-Purchased	GRAND CENTRAL	MS 3037		Purchased from Spenst Hansen	12.6312
Patented-Purchased	GREAT WHEL VOR		LOT 298	Purchased from Applied Minerals	19.02425
Patented-Purchased	GROVER CLEAVLAND	MS 3007		Purchased from Spenst Hansen	4.958841
Patented-Purchased	GUARDIAN	MS 3852		Purchased from Applied Minerals	14.99539
Patented-Purchased	HADES		LOT 346	Purchased from Spenst Hansen	6.429257
Patented-Purchased	HARKER	MS 3289		Purchased from Spenst Hansen	0.85744
Patented-Purchased	HARKNESS		LOT 156	Purchased from Spenst Hansen	11.5251
Patented-Purchased	HARRISON		LOT 175	Purchased from Spenst Hansen	6.317255
Patented-Purchased	HILLSIDE	MS 6068		Purchased from Spenst Hansen	4.256571
Patented-Purchased	HOME RULE	MS 3852		Purchased from Spenst Hansen	5.920286

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	HOMESTAKE	MS 3059		Purchased from Spenst Hansen	4.098773
Patented-Purchased	HONORA	MS 4472		Purchased from Spenst Hansen	0.33528
Patented-Purchased	HORNSILVER		LOT 203A	Purchased from Spenst Hansen	7.22551
Patented-Purchased	HUNG MILL SITE	MS 4511		Purchased from Spenst Hansen	4.908311
Patented-Purchased	HUNGARIAN		LOT 164	Purchased from Spenst Hansen	6.529955
Patented-Purchased	IMPERIAL	MS 0343-A1		Purchased from Spenst Hansen	20.446447
Patented-Purchased	INCENSE	MS 7001		Purchased from Spenst Hansen	20.649
Patented-Purchased	INDEPENDENT	MS 3875		Purchased from Spenst Hansen	12.95028
Patented-Purchased	IONE	MS 3860		Purchased from Spenst Hansen	15.02082
Patented-Purchased	IRON BLOSSOM		LOT 115	Purchased from Spenst Hansen	4.983202
Patented-Purchased	IRON CLAD		LOT 82	Purchased from Applied Minerals	6.608371
Patented-Purchased	IVANHOE	MS 4360		Purchased from Spenst Hansen	3.644405
Patented-Purchased	JACKMAN		LOT 125	Purchased from Spenst Hansen	6.776345
Patented-Purchased	JACKMAN FRACTION	MS 6636		Purchased from Spenst Hansen	0.734417
Patented-Purchased	JACOBS	MS 3227		Purchased from Spenst Hansen	0.088388
Patented-Purchased	JAMES	MS 3495		Purchased from Spenst Hansen	19.10643
Patented-Purchased	JANUARY	MS 3382		Purchased from Spenst Hansen	16.14113
Patented-Purchased	JAY WILL	MS 0600		Purchased from Spenst Hansen	0.316095
Patented-Purchased	JENKINS		LOT 93	Purchased from Spenst Hansen	4.555634
Patented-Purchased	JENNIE	MS 4098		Purchased from Spenst Hansen	18.4762
Patented-Purchased	JENNIE	MS 3931		Purchased from Spenst Hansen	9.90998
Patented-Purchased	JENNIE EXTENSION	MS 7001		Purchased from Spenst Hansen	20.66087
Patented-Purchased	JIM FISK	MS 4478		Purchased from Spenst Hansen	3.25045
Patented-Purchased	JOE BOWERS		LOT 41	Purchased from Spenst Hansen	3.91049
Patented-Purchased	JOE BOWERS NO. 2	MS 3801		Purchased from Spenst Hansen	4.170041
Patented-Purchased	JOE DALEY	MS 3965		Purchased from Spenst Hansen	6.241167
Patented-Purchased	JOHN D.	MS 6429		Purchased from Spenst Hansen	19.67713
Patented-Purchased	JOHN D. NO. 1	MS 6429		Purchased from Spenst Hansen	19.80799
Patented-Purchased	JOHN D. NO. 2	MS 6429		Purchased from Spenst Hansen	19.75669
Patented-Purchased	JOHN D. NO. 3	MS 6429		Purchased from Spenst Hansen	19.82451
Patented-Purchased	JOHN D. NO. 4	MS 6429		Purchased from Spenst Hansen	13.2516
Patented-Purchased	JULIAN LANE		LOT 77	Purchased from Spenst Hansen	5.509206
Patented-Purchased	JUNE	MS 4519		Purchased from Applied Minerals	5.011976
Patented-Purchased	JUNE ROSE		LOT 136	Purchased from Applied Minerals	2.135529
Patented-Purchased	JUNO	MS 3747		Purchased from Spenst Hansen	10.29597
Patented-Purchased	JUPITER		LOT 320	Purchased from Spenst Hansen	15.56395
Patented-Purchased	JUSTICE	MS 3337		Purchased from Spenst Hansen	20.57732
Patented-Purchased	KENDALL		LOT 169	Purchased from Spenst Hansen	4.669695
Patented-Purchased	KING JAMES		LOT 87	Purchased from Applied Minerals	5.697251
Patented-Purchased	KING WILLIAM		LOT 193	Purchased from Spenst Hansen	21.17083
Patented-Purchased	KOH-I-NOR	MS 3046		Purchased from Spenst Hansen	2.173993

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	L.P. FRACTION AMENDED	MS 6721		Purchased from Tintic Pioneer Gold	14.982
Patented-Purchased	L.P. MINING CLAIM	MS 6721		Purchased from Tintic Pioneer Gold	17.941
Patented-Purchased	LA BONTA		LOT 122	Purchased from Spenst Hansen	6.608411
Patented-Purchased	LAKEVIEW	MS 3364		Purchased from Spenst Hansen	5.997038
Patented-Purchased	LAKEVIEW GOLD AND SILVER		LOT 342	Purchased from Spenst Hansen	2.140224
Patented-Purchased	LAMAR	MS 5579		Purchased from Spenst Hansen	11.27389
Patented-Purchased	LAST CHANCE	MS 3830		Purchased from Spenst Hansen	15.67315
Patented-Purchased	LAST CHANCE	MS 4360		Purchased from Spenst Hansen	11.83713
Patented-Purchased	LAST CHANCE	MS 6721		Purchased from Tintic Pioneer Gold	3.036
Patented-Purchased	LAST CHANCE AM		LOT 336	Purchased from Spenst Hansen	8.326389
Patented-Purchased	LAST GAP	MS 3004		Purchased from Spenst Hansen	0.910062
Patented-Purchased	LAST HOPE	MS 3872		Purchased from Spenst Hansen	15.29349
Patented-Purchased	LAST SHOW	MS 3268		Purchased from Spenst Hansen	4.282763
Patented-Purchased	LEADVILLE	MS 6081		Purchased from Spenst Hansen	0.967452
Patented-Purchased	LEGAL		LOT 132	Purchased from Spenst Hansen	5.48707
Patented-Purchased	LEO		LOT 290	Purchased from Spenst Hansen	8.625514
Patented-Purchased	LEO LODE	MS 6475		Purchased from Spenst Hansen	9.801367
Patented-Purchased	LEONORA	MS 3370		Purchased from Spenst Hansen	18.22886
Patented-Purchased	LILLIAN		LOT 263	Purchased from Spenst Hansen	2.368359
Patented-Purchased	LION	MS 3490		Purchased from Spenst Hansen	17.64709
Patented-Purchased	LISBON		LOT 290	Purchased from Spenst Hansen	3.856962
Patented-Purchased	LITTLE HOPES	MS 4181		Purchased from Spenst Hansen	0.962366
Patented-Purchased	LITTLE MAY	MS 4052		Purchased from Tintic Pioneer Gold	12.476
Patented-Purchased	LITTLE WILL	MS 3083		Purchased from Spenst Hansen	0.091016
Patented-Purchased	LIZZIE		LOT 320	Purchased from Spenst Hansen	5.723484
Patented-Purchased	LOOKOUT		LOT 133	Purchased from Spenst Hansen	4.348748
Patented-Purchased	LOUISA LODE		LOT 299	Purchased from Spenst Hansen	5.589144
Patented-Purchased	LOWER MAMMOTH	MS 3221		Purchased from Spenst Hansen	18.1826
Patented-Purchased	LUCKY BOY	MS 4360		Purchased from Spenst Hansen	18.84064
Patented-Purchased	LUZERNE	MS 3927		Purchased from Spenst Hansen	18.94839
Patented-Purchased	MADEA		LOT 225	Purchased from Spenst Hansen	20.4838
Patented-Purchased	MADELINE	MS 6616		Purchased from Spenst Hansen	6.484141
Patented-Purchased	MADELINE NO. 1	MS 6616		Purchased from Spenst Hansen	15.754
Patented-Purchased	MADELINE NO. 2	MS 6616		Purchased from Spenst Hansen	19.72543
Patented-Purchased	MADELINE NO. 3	MS 6616		Purchased from Spenst Hansen	19.826
Patented-Purchased	MAGNA CHARTA		LOT 146	Purchased from Spenst Hansen	6.616934
Patented-Purchased	MAMMON	MS 7001		Purchased from Spenst Hansen	20.5583
Patented-Purchased	MAMMOTH 2 & 3		LOT 65	Purchased from Spenst Hansen	1.834179
Patented-Purchased	MAMMOTH FRACTION	MS 6167		Purchased from Spenst Hansen	9.911531
Patented-Purchased	MAMMOTH MINE		LOT 37	Purchased from Spenst Hansen	4.751426
Patented-Purchased	MAMMOTH NO. 1 EXTENSION		LOT 38	Purchased from Spenst Hansen	13.77354

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	MARCH	MS 4519		Purchased from Applied Minerals	15.79699
Patented-Purchased	MARS		LOT 320	Purchased from Spenst Hansen	6.71199
Patented-Purchased	MARTHA WASHINGTON NO. 2		LOT 137	Purchased from Applied Minerals	5.198069
Patented-Purchased	MARY	MS 3873		Purchased from Applied Minerals	15.75463
Patented-Purchased	MARY ELLEN	MS 4360		Purchased from Spenst Hansen	11.66574
Patented-Purchased	MARY L.		LOT 154	Purchased from Spenst Hansen	6.609474
Patented-Purchased	MASCOT			Purchased from Spenst Hansen	1.121683
Patented-Purchased	MATCHLESS	MS 4443		Purchased from St. Marks Episcopal Cathedral	20.60975
Patented-Purchased	MAY NELL	MS 6997		Purchased from Spenst Hansen	20.64149
Patented-Purchased	MICHIGAN		LOT 149	Purchased from Spenst Hansen	3.81805
Patented-Purchased	MICHIGAN FRACTION	MS 6635		Purchased from Spenst Hansen	1.355413
Patented-Purchased	MIDDLE ATLAS AM		LOT 295	Purchased from Spenst Hansen	13.6588
Patented-Purchased	MINERS DELIGHT	MS 3521		Purchased from Spenst Hansen	11.85445
Patented-Purchased	MINING CLIAM		LOT 336	Purchased from Spenst Hansen	2.66
Patented-Purchased	MISSING LINK	MS 4572		Purchased from Spenst Hansen	4.22633
Patented-Purchased	MOLLY BAWN	MS 3830		Purchased from Spenst Hansen	16.59283
Patented-Purchased	MONROE	MS 0094		Purchased from Spenst Hansen	3.598294
Patented-Purchased	MONTANA		LOT 40	Purchased from Spenst Hansen	4.648757
Patented-Purchased	MOORE		LOT 120	Purchased from Spenst Hansen	6.88687
Patented-Purchased	MORTON LODE		LOT 247A	Purchased from Spenst Hansen	21.17202
Patented-Purchased	MOUNT HOPE LODE		LOT 253	Purchased from Spenst Hansen	20.22233
Patented-Purchased	MOUNTAIN CHIEF	MS 0171-B1		Purchased from Spenst Hansen	5.988106
Patented-Purchased	MURRAY HILL	MS 4127		Purchased from Spenst Hansen	7.765506
Patented-Purchased	NAPOLION	MS 3442		Purchased from Spenst Hansen	5.345198
Patented-Purchased	NELLIE	MS 6083		Purchased from Spenst Hansen	14.18681
Patented-Purchased	NEVADA		LOT 342	Purchased from Spenst Hansen	2.190349
Patented-Purchased	NEVER SWET	MS 4534		Purchased from Spenst Hansen	20.17925
Patented-Purchased	NEVER SWET NO. 1	MS 4534		Purchased from Spenst Hansen	20.16581
Patented-Purchased	NEW NATIONAL	MS 3976		Purchased from Spenst Hansen; 70% mineral rights	9.550784
Patented-Purchased	NO YOU DONT	MS 3929		Purchased from Spenst Hansen	1.676112
Patented-Purchased	NOM DE PLUME		LOT 117	Purchased from Applied Minerals	6.609033
Patented-Purchased	NONESUCH LODE		LOT 190	Purchased from Spenst Hansen	5.642134
Patented-Purchased	NORA		LOT 302	Purchased from Spenst Hansen	6.88687
Patented-Purchased	NORMAN	MS 3232		Purchased from Spenst Hansen	16.29504
Patented-Purchased	NORTH ALASKA	MS 4708		Purchased from Spenst Hansen	19.77474
Patented-Purchased	NORTH CLIFT	MS 6474		Purchased from Spenst Hansen	20.67781
Patented-Purchased	NORTH STAR		LOT 62	Purchased from Spenst Hansen	5.647977
Patented-Purchased	NORTHERN SPY		LOT 129	Purchased from Spenst Hansen	5.920027
Patented-Purchased	ONIDA	MS 2950		Purchased from Spenst Hansen	2.372186
Patented-Purchased	ONTARIO		LOT 285	Purchased from Spenst Hansen	4.507518
Patented-Purchased	OPEHONGA AM		LOT167	Purchased from Spenst Hansen	4.51369

Claim Type	*Claim Name*	*MS*	*LOT*	*Comment*	*Acres*
Patented-Purchased	ORE BIN	MS 7001		Purchased from Spenst Hansen	20.6028
Patented-Purchased	ORE BIN EXTENSION	MS 7001		Purchased from Spenst Hansen	20.66117
Patented-Purchased	OVERMAN		LOT 162	Purchased from Spenst Hansen	6.10314
Patented-Purchased	OWL	MS 6429		Purchased from Spenst Hansen	10.32204
Patented-Purchased	PARADISE		LOT 255	Purchased from Spenst Hansen	5.782574
Patented-Purchased	PATTI	MS 4027		Purchased from Spenst Hansen	2.217304
Patented-Purchased	PELICAN		LOT 271	Purchased from Spenst Hansen	13.6337
Patented-Purchased	PERFECTO	MS 3121		Purchased from Spenst Hansen	2.47555
Patented-Purchased	PHEBE SHULER	MS 3368		Purchased from Spenst Hansen	4.405778
Patented-Purchased	PHOENIX		LOT 152	Purchased from Spenst Hansen	10.06897
Patented-Purchased	PICNIC	MS 0072		Purchased from Spenst Hansen	
Patented-Purchased	PINNACLE	MS 7001		Purchased from Spenst Hansen	20.6436
Patented-Purchased	PLUTO		LOT 346	Purchased from Spenst Hansen	6.460389
Patented-Purchased	PLUTUS		LOT 228	Purchased from Spenst Hansen	19.66999
Patented-Purchased	PLYMOTH ROCK	MS 3791		Purchased from Gleed G. Toombes 1638 E Sunnyside Ave Salt Lake City UT 84105	20.1322
Patented-Purchased	PLYMOTH ROCK NO. 1	MS 3791		Purchased from Gleed G. Toombes 1638 E Sunnyside Ave Salt Lake City UT 84105	20.102
Patented-Purchased	PLYMOTH ROCK NO. 4	MS 3791		Purchased from Gleed G. Toombes 1638 E Sunnyside Ave Salt Lake City UT 84105	20.23216
Patented-Purchased	PLYMOTH ROCK NO. 7	MS 3865		Purchased from Spenst Hansen	6.099118
Patented-Purchased	PLYMOUTH ROCK NO. 10	MS 3680		Purchased from Spenst Hansen	19.04477
Patented-Purchased	PLYMOUTH ROCK NO. 11	MS 3680		Purchased from Spenst Hansen	12.21461
Patented-Purchased	PLYMOUTH ROCK NO. 12	MS 3680		Purchased from Spenst Hansen	19.47675
Patented-Purchased	PLYMOUTH ROCK NO. 8	MS 3680		Purchased from Spenst Hansen	12.48964
Patented-Purchased	PLYMOUTH ROCK NO. 9	MS 3680		Purchased from Spenst Hansen	18.49045
Patented-Purchased	PRIMROSE	MS 3897		Purchased from Spenst Hansen	6.241765
Patented-Purchased	PRINCE OF INDIA	MS 3836		Purchased from Spenst Hansen	10.08207
Patented-Purchased	PROD	MS 7168		Purchased from Spenst Hansen	20.6528
Patented-Purchased	PROFIT	MS 7001		Purchased from Spenst Hansen	16.45727
Patented-Purchased	PROVO	MS 3256		Purchased from Spenst Hansen	5.393256
Patented-Purchased	PRY	MS 7168		Purchased from Spenst Hansen	20.65302
Patented-Purchased	QUEEN OF THE WEST	MS 3899		Purchased from Spenst Hansen	18.38191
Patented-Purchased	RANGER		LOT 336	Purchased from Spenst Hansen	16.77896
Patented-Purchased	RATTLER		LOT 151	Purchased from Applied Minerals	14.51007
Patented-Purchased	RAVINE	MS 4391		Purchased from Spenst Hansen	2.337753
Patented-Purchased	REBEL		LOT 301	Purchased from Spenst Hansen	5.834012
Patented-Purchased	RED McGLYNN	MS 3261		Purchased from Spenst Hansen	0.058663
Patented-Purchased	RED ROSE		LOT 91	Purchased from Spenst Hansen	6.188729
Patented-Purchased	REVERSE		LOT 81	Purchased from Applied Minerals	3.951807
Patented-Purchased	REVERSE NO. 2		LOT 333	Purchased from Applied Minerals	3.877537
Patented-Purchased	RISING SUN	MS 7011		Purchased from Spenst Hansen	11.72549

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	ROADSIDE		LOT 150	Purchased from Applied Minerals	9.624355
Patented-Purchased	ROVER		LOT 223	Purchased from Spenst Hansen	20.65588
Patented-Purchased	RUBY NO. 55	MS 6666		Purchased from Spenst Hansen	20.63874
Patented-Purchased	RUBY NO. 56	MS 6666		Purchased from Spenst Hansen	20.43217
Patented-Purchased	RUBY NO. 57	MS 6666		Purchased from Spenst Hansen	19.82195
Patented-Purchased	RUBY NO. 58	MS 6666		Purchased from Spenst Hansen	19.73493
Patented-Purchased	RUBY NO. 59	MS 6666		Purchased from Spenst Hansen	7.92863
Patented-Purchased	RYAN LODE	MS 3060A		Purchased from Spenst Hansen	1.755535
Patented-Purchased	SANTA MONICA	MS 3861		Purchased from Spenst Hansen	7.577186
Patented-Purchased	SANTAQUIN NO. 2 LODE		LOT 242	Purchased from Spenst Hansen	17.29298
Patented-Purchased	SARATOGA	MS 3013		Purchased from Spenst Hansen	4.216946
Patented-Purchased	SCHLEY	MS 3770		Purchased from Spenst Hansen	3.541624
Patented-Purchased	SEGO LILLY	MS 4127	0036-A	Purchased from Spenst Hansen	9.74051
Patented-Purchased	SHEARER	MS 4573		Purchased from Spenst Hansen	1.293474
Patented-Purchased	SHELBY	MS 3983		Purchased from Spenst Hansen	14.62639
Patented-Purchased	SHOWER		LOT 48	Purchased from Spenst Hansen	8.521489
Patented-Purchased	SIDEVIEW	MS 2946		Purchased from Spenst Hansen	4.149234
Patented-Purchased	SILVER BAR NO. 1	MS 6085		Purchased from Spenst Hansen	17.16726
Patented-Purchased	SILVER BAR NO. 2	MS 6085		Purchased from Spenst Hansen	19.79172
Patented-Purchased	SILVER BELL	MS 3831		Purchased from Spenst Hansen	16.017909
Patented-Purchased	SILVER BELL 2	MS 3831		Purchased from Spenst Hansen	13.734983
Patented-Purchased	SILVER CHAIN	MS 5880		Purchased from Spenst Hansen	12.03037
Patented-Purchased	SILVER COIN		LOT 144	Purchased from Applied Minerals	6.102232
Patented-Purchased	SILVER COIN		LOT 98	Purchased from Spenst Hansen	6.234352
Patented-Purchased	SILVER DICK	MS 4127		Purchased from Spenst Hansen	7.738548
Patented-Purchased	SILVER GEM		LOT 128	Purchased from Spenst Hansen	5.507408
Patented-Purchased	SILVER GLANCE		LOT 288	Purchased from Spenst Hansen	2.245829
Patented-Purchased	SILVER HILL NO. 1	MS 4118		Purchased from Spenst Hansen	5.198161
Patented-Purchased	SILVER HILL NO. 2	MS 4118		Purchased from Spenst Hansen	4.512758
Patented-Purchased	SILVER HILL NO. 3	MS 4118		Purchased from Spenst Hansen	13.62713
Patented-Purchased	SILVER HILL NO. 4	MS 4118		Purchased from Spenst Hansen	10.48065
Patented-Purchased	SILVER KING	MS 3928		Purchased from Spenst Hansen	10.41298
Patented-Purchased	SILVER REED NO. 2	MS 5893		Staked by HPX	5.254346
Patented-Purchased	SILVER SPAR		LOT 47	Purchased from Spenst Hansen	5.770665
Patented-Purchased	SILVER SPAR		LOT 290	Purchased from Spenst Hansen	4.513623
Patented-Purchased	SILVER STAR		LOT 290	Purchased from Spenst Hansen	4.95136
Patented-Purchased	SILVEROPOLIS		LOT 135	Purchased from Spenst Hansen	10.47477
Patented-Purchased	SIX SHOOTER		LOT 252	Purchased from Spenst Hansen	5.39521
Patented-Purchased	SNAP DRAGON	MS 3195		Purchased from Applied Minerals	12.48017
Patented-Purchased	SNOW BIRD	MS 3037		Purchased from Spenst Hansen	3.93009
Patented-Purchased	SNOWBIRD	MS 4523		Purchased from Spenst Hansen	3.289641

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	SNOWFLAKE	MS 3875		Purchased from Spenst Hansen	4.94698
Patented-Purchased	SOLID MOULTOON		LOT 283A	Purchased from Spenst Hansen	5.808405
Patented-Purchased	SOUTH ALTA	MS 3228		Purchased from Spenst Hansen	1.335372
Patented-Purchased	SOUTH EUREKA NO. 1	MS 4563		Purchased from Spenst Hansen	14.09392
Patented-Purchased	SOUTH EUREKA NO. 2	MS 0015		Purchased from Spenst Hansen	14.962824
Patented-Purchased	SOUTH EXTENSION ECLIPSE		LOT 245	Purchased from Spenst Hansen	6.857517
Patented-Purchased	SOUTH EXTENSION OF WEST MAMMOTH	MS 5348		Purchased from Spenst Hansen	1.464732
Patented-Purchased	SOUTH HALF SILVER SPAR LODE		LOT 102	Purchased from Spenst Hansen	5.295119
Patented-Purchased	SOUTH MAMMOTH		LOT 63	Purchased from Spenst Hansen	4.591452
Patented-Purchased	SOUTH STAR	MS 3010		Purchased from Spenst Hansen	3.580422
Patented-Purchased	SOUTH SWANSEA		LOT 337	Purchased from Spenst Hansen	6.538377
Patented-Purchased	SOUTHERLY EXTENSION OF JOE BOWERS		LOT 60	Purchased from Spenst Hansen	1.166628
Patented-Purchased	SPACE	MS 3234		Purchased from Spenst Hansen	11.31991
Patented-Purchased	ST. GEORGE		LOT 289	Purchased from Anderson Trust (DUQUETTE, NOLAN, LELAND, MELANA)	14.60675
Patented-Purchased	ST. LOUIS	MS 4641		Purchased from Spenst Hansen	20.3486
Patented-Purchased	ST. LOUIS NO. 2	MS 4641		Purchased from Spenst Hansen	12.19624
Patented-Purchased	STANDARD	MS 0343-A2		Purchased from Spenst Hansen	18.81005
Patented-Purchased	STEEL NO. 2	MS 6843		Purchased from Spenst Hansen	0.695753
Patented-Purchased	STEELE	MS 6749		Purchased from Spenst Hansen	1.313246
Patented-Purchased	STOCKTON	MS 3365		Purchased from Spenst Hansen	5.930216
Patented-Purchased	STOCKTON NO. 2	MS 3366		Purchased from Spenst Hansen	5.988302
Patented-Purchased	STOCKTON NO. 3	MS 3367		Purchased from Spenst Hansen	7.674115
Patented-Purchased	STYX		LOT 346	Purchased from Spenst Hansen	6.642806
Patented-Purchased	SULLIVAN		LOT 254	Purchased from Spenst Hansen	21.12122
Patented-Purchased	SUMMIT		LOT 134	Purchased from Spenst Hansen	5.993288
Patented-Purchased	SUMMIT JOE BOWERS		LOT 229	Purchased from Spenst Hansen	2.238533
Patented-Purchased	SUN SET NO. 4	MS 7011		Purchased from Spenst Hansen	18.32637
Patented-Purchased	SUNDAY	MS 3858		Purchased from Spenst Hansen	2.877568
Patented-Purchased	SUNNY SIDE	MS 3782		Purchased from Applied Minerals	8.022843
Patented-Purchased	SUNSET	MS 3371		Purchased from Spenst Hansen	2.089324
Patented-Purchased	SURPRISE NO. 1 AMENDED	MS 6721		Purchased from Tintic Pioneer Gold	8.93
Patented-Purchased	SWAN LODE		LOT 270	Purchased from Spenst Hansen	10.34899
Patented-Purchased	SWANSEA FRACTION	MS 3976		Purchased from Spenst Hansen; 70% mineral rights	1.47225
Patented-Purchased	TENNESSEE REBEL	MS-0227-A1		Purchased from Spenst Hansen	20.539771
Patented-Purchased	TENNESSEE REBEL FRACTION	MS-0227-A1		Purchased from Spenst Hansen	2.558072
Patented-Purchased	TESORA		LOT 166	Purchased from Spenst Hansen	4.581763
Patented-Purchased	THOMAS	MS 7011		Purchased from Spenst Hansen	16.12821
Patented-Purchased	TIGER	MS 3435		Purchased from Spenst Hansen	0.31

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	TILT	MS 7001		Purchased from Spenst Hansen	20.5842
Patented-Purchased	TINA	MS 3254		Purchased from Applied Minerals	0.555262
Patented-Purchased	TINTIC COPPER	MS 7001		Purchased from Spenst Hansen	20.66117
Patented-Purchased	TINTIC COPPER NO. 1	MS 7001		Purchased from Spenst Hansen	20.66087
Patented-Purchased	TINTIC COPPER NO. 2	MS 7001		Purchased from Spenst Hansen	20.66129
Patented-Purchased	TINTIC COPPER NO. 3	MS 7001		Purchased from Spenst Hansen	20.66107
Patented-Purchased	TINTIC COPPER NO. 4	MS 7001		Purchased from Spenst Hansen	20.66129
Patented-Purchased	TINTIC COPPER NO. 5	MS 7001		Purchased from Spenst Hansen	20.66117
Patented-Purchased	TINTIC COPPER NO. 6	MS 7001		Purchased from Spenst Hansen	20.66117
Patented-Purchased	TIP TOP	MS 4395		Purchased from Spenst Hansen	1.812704
Patented-Purchased	TIPPECANOE	MS 0499		Purchased from Spenst Hansen	15.20556
Patented-Purchased	TOPIC NO. 2	MS 7011		Purchased from Spenst Hansen	18.29978
Patented-Purchased	TRAIL		LOT 121	Purchased from Spenst Hansen	6.963901
Patented-Purchased	TRIP MINE		LOT 289	Purchased from Anderson Trust (DUQUETTE, NOLAN, LELAND, MELANA)	6.326473
Patented-Purchased	TUNNEL	MS 6084		Purchased from Spenst Hansen	2.961481
Patented-Purchased	TURK	MS 4519		Purchased from Applied Minerals	6.368245
Patented-Purchased	UNION		LOT 300	Purchased from Spenst Hansen	4.758374
Patented-Purchased	VALEJO		LOT 116	Purchased from Spenst Hansen	1.581385
Patented-Purchased	VALLEY AMENDED	MS 6721		Purchased from Tintic Pioneer Gold	20.44
Patented-Purchased	VENUS	MS 4392		Purchased from Spenst Hansen	0.492489
Patented-Purchased	VICTOR	MS 4480		Purchased from Spenst Hansen	1.661844
Patented-Purchased	VICTORE NO. 2	MS 4218		Purchased from Spenst Hansen	3.215874
Patented-Purchased	VICTORIA		LOT 217	Purchased from Spenst Hansen	9.499706
Patented-Purchased	VICTORY		LOT 238	Purchased from Spenst Hansen	6.886809
Patented-Purchased	VOLCANIC RIDGE	MS 7001		Purchased from Spenst Hansen	20.66129
Patented-Purchased	VOLTAIRE		LOT 103	Purchased from Spenst Hansen	6.517164
Patented-Purchased	VOLTAIRE FRAC	MS 6540		Purchased from Spenst Hansen	0.028171
Patented-Purchased	W.W.C.		LOT 163	Purchased from Spenst Hansen	5.060376
Patented-Purchased	WALKER		LOT 191	Purchased from Spenst Hansen	6.204192
Patented-Purchased	WEDGEWOOD LODE		LOT 230	Purchased from Spenst Hansen	13.44941
Patented-Purchased	WELDING		LOT 159	Purchased from Spenst Hansen	21.21343
Patented-Purchased	WEST BULLION		LOT 90	Purchased from Spenst Hansen	4.075653
Patented-Purchased	WEST CLIFT	MS 6474		Purchased from Spenst Hansen	20.6422
Patented-Purchased	WEST MAMMOTH		LOT 318	Purchased from Spenst Hansen	11.36132
Patented-Purchased	WEST MAMMOTH		LOT 319	Purchased from Spenst Hansen	7.695916
Patented-Purchased	WEST MAMMOTH		LOT 173	Purchased from Spenst Hansen	3.326063
Patented-Purchased	WEST MEDEA	MS 3213		Purchased from Spenst Hansen	2.990309
Patented-Purchased	WEST SIDE CONTACT	MS 7011		Purchased from Spenst Hansen	19.78624
Patented-Purchased	WEST STAR		LOT 233	Purchased from Spenst Hansen	8.96503
Patented-Purchased	WEST SWANSEA		LOT 337	Purchased from Spenst Hansen	19.74903
Patented-Purchased	WEST VALLEY AMENDED	MS 6721		Purchased from Tintic Pioneer Gold	20.44

Claim Type	***Claim Name***	***MS***	***LOT***	***Comment***	***Acres***
Patented-Purchased	WHITE DRAGON	MS 4163		Purchased from Applied Minerals	0.520652
Patented-Purchased	WHITON FRACTION	MS 6722		Purchased from Tintic Pioneer Gold	5.355
Patented-Purchased	WHITTAKER	MS 5650		Purchased from Spenst Hansen	14.72944
Patented-Purchased	WILLIAM	MS 3496		Purchased from Spenst Hansen	6.512144
Patented-Purchased	WILLIE GUNDRY	MS 3240		Purchased from Applied Minerals	9.783279
Patented-Purchased	WIND RIDGE	MS 3615		Purchased from Mark Oldroyd	5.338687
Patented-Purchased	WINRIDGE NO. 2	MS 3615		Purchased from Mark Oldroyd	8.810904
Patented-Purchased	WOLF		LOT 244	Purchased from Spenst Hansen	12.15758
Patented-Purchased	YANKEE GIRL NO. 2	MS 3242		Staked by HPX	20.29371
Patented-Purchased	YOUNG MAMMOTH		LOT 94	Purchased from Spenst Hansen	4.254992

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
Unpatented	TT 1	UMC437291
Unpatented	TT 2	UMC437292
Unpatented	TT 3	UMC437293
Unpatented	TT 4	UMC437294
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Unpatented	TT 25	UMC437315
Unpatented	TT 26	UMC437316
Unpatented	TT 27	UMC437317
Unpatented	TT 28	UMC437318
Unpatented	TT 29	UMC437319

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
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Unpatented	TT 31	UMC437321
Unpatented	TT 32	UMC437322
Unpatented	TT 33	UMC437323
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Unpatented	TT 36	UMC437326
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Unpatented	TT 40	UMC437330
Unpatented	TT 41	UMC437331
Unpatented	TT 42	UMC437332
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Unpatented	TT 44	UMC437334
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Unpatented	TT 70	UMC437360
Unpatented	TT 71	UMC437361

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
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Unpatented	TT 73	UMC437363
Unpatented	TT 74	UMC437364
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Unpatented	TT 111	UMC437401
Unpatented	TT 112	UMC437402
Unpatented	TT 113	UMC437403

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
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Unpatented	TT 116	UMC437406
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Unpatented	TT 126	UMC437416
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Unpatented	TT 130	UMC437420
Unpatented	TT 131	UMC437421
Unpatented	TT 132	UMC437422
Unpatented	TT 133	UMC437423
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Unpatented	TT 154	UMC437444
Unpatented	TT 155	UMC437445

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
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Unpatented	TT 182	UMC438642
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Unpatented	TT 198	UMC438658

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
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Unpatented	TT 210	UMC438670
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Unpatented	TT 239	UMC438699
Unpatented	TT 240	UMC438700

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
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Unpatented	TT 282	UMC438742

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
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Unpatented	TT 310	UMC438770
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Unpatented	TT 314	UMC438774
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Unpatented	TT 318	UMC438778
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Unpatented	TT 324	UMC438784

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
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Unpatented	TT 326	UMC438786
Unpatented	TT 327	UMC438787
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Unpatented	TT 353	UMC438813
Unpatented	TT 354	UMC438814
Unpatented	TT 355	UMC438815
Unpatented	TT 356	UMC438816
Unpatented	TT 357	UMC438817
Unpatented	TT 358	UMC438818
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Unpatented	TT 360	UMC438820
Unpatented	TT 361	UMC438821
Unpatented	TT 362	UMC438822
Unpatented	TT 363	UMC438823
Unpatented	TT 364	UMC438824
Unpatented	TT 365	UMC438825
Unpatented	TT 366	UMC438826

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
Unpatented	TT 367	UMC438827
Unpatented	TT 368	UMC438828
Unpatented	TT 369	UMC438829
Unpatented	TT 370	UMC438830
Unpatented	TT 371	UMC438831
Unpatented	TT 372	UMC438832
Unpatented	TT 373	UMC438833
Unpatented	TT 374	UMC438834
Unpatented	TT 375	UMC438835
Unpatented	TT 376	UMC438836
Unpatented	TT 377	UMC438837
Unpatented	TT 378	UMC438838
Unpatented	TT 379	UMC438839
Unpatented	TT 380	UMC438840
Unpatented	TT 381	UMC438841
Unpatented	TT 382	UMC438842
Unpatented	TT 383	UMC438843
Unpatented	TT 384	UMC438844
Unpatented	TT 385	UMC438845
Unpatented	TT 386	UMC438846
Unpatented	TT 387	UMC438847
Unpatented	TT 388	UMC438848
Unpatented	TT 389	UMC438849
Unpatented	TT 390	UMC438850
Unpatented	TT 391	UMC438851
Unpatented	TT 392	UMC438852
Unpatented	TT 393	UMC438853
Unpatented	TT 394	UMC438854
Unpatented	TT 395	UMC438855
Unpatented	TT 396	UMC438856
Unpatented	TT 397	UMC438857
Unpatented	TT 398	UMC438858
Unpatented	TT 399	UMC438859
Unpatented	TT 400	UMC438860
Unpatented	TT 401	UMC438861
Unpatented	TT 402	UMC438862
Unpatented	TT 403	UMC438863
Unpatented	TT 404	UMC438864
Unpatented	TT 405	UMC438865
Unpatented	TT 406	UMC438866
Unpatented	TT 407	UMC438867
Unpatented	TT 408	UMC438868

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
Unpatented	TT 409	UMC438869
Unpatented	TT 410	UMC438870
Unpatented	TT 411	UMC444848
Unpatented	TT 412	UMC444849
Unpatented	TT 414	UMC444851
Unpatented	TT 415	UMC444852
Unpatented	TT 416	UMC444853
Unpatented	TT 417	UMC444854
Unpatented	TT 418	UMC444855
Unpatented	TT 419	UMC444856
Unpatented	TT 420	UMC444857
Unpatented	TT 422	UMC444859
Unpatented	TT 423	UMC444860
Unpatented	TT 424	UMC444861
Unpatented	TT 426	UMC444863
Unpatented	TT 427	UMC444864
Unpatented	TT 430	UMC444865
Unpatented	TT 434	UMC444967
Unpatented	TT 436	UMC444969
Unpatented	TT 452	UMC444970
Unpatented	TT 469	UMC444866
Unpatented	TT 470	UMC444867
Unpatented	TT 471	UMC444868
Unpatented	TT 472	UMC444869
Unpatented	TT 473	UMC444870
Unpatented	TT 474	UMC444871
Unpatented	*TT 475*	UMC444872
Unpatented	TT 478	UMC444873
Unpatented	TT 493	UMC444874
Unpatented	TT 494	UMC444875
Unpatented	TT 495	UMC444876
Unpatented	TT 496	UMC444877
Unpatented	TT 497	UMC444878
Unpatented	TT 429	UMC445019
Unpatented	TT 437	UMC445020
Unpatented	TT 438	UMC445021
Unpatented	TT 453	UMC445022
Unpatented	TT 454	UMC445023
Unpatented	TT 455	UMC445024
Unpatented	TT 456	UMC445025
Unpatented	TT 457	UMC445026
Unpatented	TT 458	UMC445027

Claim Type	***Claim (Case) Name***	***Legacy Serial Number (BLM MLRS)***
Unpatented	TT 459	UMC445028
Unpatented	TT 498	UMC445029
Unpatented	TT 499	UMC445030
Unpatented	AM FRACTION #1	UMC420562
Unpatented	AM FRACTION #2	UMC420563
Unpatented	AM FRACTION #3	UMC420564
Unpatented	AM FRACTION #4	UMC420565
Unpatented	AM FRACTION #5	UMC420566
Unpatented	AM FRACTION #6	UMC420567
Unpatented	ZEPHYR 1	UMC435646
Unpatented	ZEPHYR 2	UMC435647
Unpatented	ZEPHYR 3	UMC435648
Unpatented	ZEPHYR 4	UMC435649
Unpatented	ZEPHYR 5	UMC435650
Unpatented	ZEPHYR 6	UMC435651
Unpatented	ZEPHYR 7	UMC435652
Unpatented	ZEPHYR 8	UMC435653
Unpatented	ZEPHYR 9	UMC435654
Unpatented	ZEPHYR 10	UMC435655
Unpatented	ZEPHYR 11	UMC435656
Unpatented	ZEPHYR 12	UMC435657
Unpatented	ZEPHYR 13	UMC435658
Unpatented	VIOLET NO. 1	UMC 428765
Unpatented	VIOLET NO. 2	UMC 428766
Unpatented	VIOLET NO. 3	UMC 428767

Appendix B: Royalty Agreements

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	RIDGE NO. 2	MS 5708		100	0.5	Crown Point
Patented	RIDGE	MS 5708		100	0.5	Crown Point
Patented	GOSHEN NO. 4	MS 5708		100	0.5	Crown Point
Patented	SUNNY SIDE	MS 3835		100	0.5	Crown Point
Patented	DIVIDE NO. 2	MS 5708		100	0.5	Crown Point
Patented	CASTLE	MS 5714		100	0.5	Crown Point
Patented	MINNEY MOORE	MS 3835		100	0.5	Crown Point
Patented	FRACTION	MS 3835		100	0.5	Crown Point
Patented	GOSHEN NO. 1	MS 5708		100	0.5	Crown Point
Patented	GO EASY	MS 6090		100	0.9	30% from 1.5% Erie and 1.5% Lone Pine Realty
Patented	DAD	MS 6090		100	0.9	30% from 1.5% Erie and 1.5% Lone Pine Realty
Patented	SUNSET	MS 3371		100	1	1% Franco-Nevada
Patented	STOCKTON NO. 3	MS 3367		100	1	0.5% Erie and 0.5% Lone Pine Realty
Patented	STOCKTON NO. 2	MS 3366		100	1	0.5% Erie and 0.5% Lone Pine Realty
Patented	STOCKTON	MS 3365		100	1	0.5% Erie and 0.5% Lone Pine Realty
Patented	WEST SIDE CONTACT	MS 7011		100	1	1% Franco-Nevada
Patented	GOOD FRACTION	MS 7011		100	1	1% Franco-Nevada
Patented	THOMAS	MS 7011		100	1	1% Franco-Nevada
Patented	SUN SET NO. 4	MS 7011		100	1	1% Franco-Nevada
Patented	TOPIC NO. 2	MS 7011		100	1	1% Franco-Nevada
Patented	RISING SUN	MS 7011		100	1	1% Franco-Nevada
Patented	DELLA	MS 7011		100	1	1% Franco-Nevada
Patented	DAISEY HAMILTON		LOT 316	100	1	1% Franco-Nevada
Patented	JENNIE	MS 4098		100	1	1% Franco-Nevada
Patented	ORE BIN EXTENSION	MS 7001		100	1	1% Franco-Nevada
Patented	JENNIE EXTENSION	MS 7001		100	1	1% Franco-Nevada
Patented	CLIFF	MS 7001		100	1	1% Franco-Nevada

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	TINTIC COPPER	MS 7001		100	1	1% Franco-Nevada
Patented	TINTIC COPPER NO. 1	MS 7001		100	1	1% Franco-Nevada
Patented	GOLD COIN	MS 7001		100	1	1% Franco-Nevada
Patented	EAST GOLD COIN	MS 7001		100	1	1% Franco-Nevada
Patented	BEACON NO. 3	MS 7001		100	1	1% Franco-Nevada
Patented	BEACON NO. 2	MS 7001		100	1	1% Franco-Nevada
Patented	BEACON NO. 1	MS 7001		100	1	1% Franco-Nevada
Patented	TINTIC COPPER NO. 4	MS 7001		100	1	1% Franco-Nevada
Patented	TINTIC COPPER NO. 3	MS 7001		100	1	1% Franco-Nevada
Patented	TINTIC COPPER NO. 2	MS 7001		100	1	1% Franco-Nevada
Patented	VOLCANIC RIDGE	MS 7001		100	1	1% Franco-Nevada
Patented	EAST GOLD COIN EXTENSION	MS 7001		100	1	1% Franco-Nevada
Patented	INCENSE	MS 7001		100	1	1% Franco-Nevada
Patented	MAMMON	MS 7001		100	1	1% Franco-Nevada
Patented	CONVERSANT	MS 7001		100	1	1% Franco-Nevada
Patented	PINNACLE	MS 7001		100	1	1% Franco-Nevada
Patented	TINTIC COPPER NO. 6	MS 7001		100	1	1% Franco-Nevada
Patented	TINTIC COPPER NO. 5	MS 7001		100	1	1% Franco-Nevada
Patented	PROFIT	MS 7001		100	1	1% Franco-Nevada
Patented	TILT	MS 7001		100	1	1% Franco-Nevada
Patented	ORE BIN	MS 7001		100	1	1% Franco-Nevada
Patented	PROD	MS 7168		100	1	1% Franco-Nevada
Patented	PRY	MS 7168		100	1	1% Franco-Nevada
Patented	CLIFT	MS 3413		100	1	1% Franco-Nevada
Patented	FRANKLIN CONSOLIDATED	MS 3931		100	1	1% Franco-Nevada
Patented	JENNIE	MS 3931		100	1	1% Franco-Nevada
Patented	MAGNA CHARTA		LOT 146	100	1	1% Franco-Nevada

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	JACKMAN		LOT 125	100	1	1% Franco-Nevada
Patented	GLADSTONE		LOT 127	100	1	1% Franco-Nevada
Patented	ARGENTA		LOT 147	100	1	1% Franco-Nevada
Patented	2G	MS 3012		100	1	1% Franco-Nevada
Patented	SOUTH STAR	MS 3010		100	1	1% Franco-Nevada
Patented	MICHIGAN		LOT 149	100	1	1% Franco-Nevada
Patented	ALMO	MS 3009		100	1	1% Franco-Nevada
Patented	BECK FRACTION	MS 6634		100	1	1% Franco-Nevada
Patented	CHAMPION NO. 2		LOT 73	100	1	1% Franco-Nevada
Patented	RAVINE	MS 4391		100	1	1% Franco-Nevada
Patented	WEST BULLION		LOT 90	100	1	1% Franco-Nevada
Patented	MARY L.		LOT 154	100	1	1% Franco-Nevada
Patented	BELCHER		LOT 155	100	1	1% Franco-Nevada
Patented	DEPREZIN		LOT 248	100	1	1% Franco-Nevada
Patented	GOLDEN EAGLE		LOT 287	100	1	1% Franco-Nevada
Patented	GENERAL LOGAN		LOT 332	100	1	1% Franco-Nevada
Patented	W.W.C.		LOT 163	100	1	1% Franco-Nevada
Patented	RYAN LODE	MS 3060A		100	1	1% Franco-Nevada
Patented	PARADISE LODE		LOT 255	100	1	1% Franco-Nevada
Patented	LAST GAP	MS 3004		100	1	1% Franco-Nevada
Patented	ALTA		LOT 161	100	1	1% Franco-Nevada
Patented	SILVER GEM		LOT 128	100	1	1% Franco-Nevada
Patented	LEGAL		LOT 132	100	1	1% Franco-Nevada
Patented	EMMA AM		LOT 143	100	1	1% Franco-Nevada
Patented	SOLID MOULTOON		LOT 283A	100	1	1% Franco-Nevada
Patented	HARRISON		LOT 175	100	1	1% Franco-Nevada
Patented	VICTORE NO. 2	MS 4218		100	1	1% Franco-Nevada

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	CENTER	MS 4219		100	1	1% Franco-Nevada
Patented	SIX SHOOTER		LOT 252	100	1	1% Franco-Nevada
Patented	MOUNT HOPE LODE		LOT 253	100	1	1% Franco-Nevada
Patented	WEDGEWOOD LODE		LOT 230	100	1	1% Franco-Nevada
Patented	HUNG MILL SITE	MS 4511		100	1	1% Franco-Nevada
Patented	CHANG MILL SITE	MS 4512		100	1	1% Franco-Nevada
Patented	CHING MILL SITE	MS 4513		100	1	1% Franco-Nevada
Patented	KING WILLIAM		LOT 193	100	1	1% Franco-Nevada
Patented	TUNNEL	MS 6084		100	1	1% Franco-Nevada
Patented	LEADVILLE	MS 6081		100	1	1% Franco-Nevada
Patented	SARATOGA	MS 3013		100	1	1% Franco-Nevada
Patented	BULLION		LOT 68	100	1	1% Franco-Nevada
Patented	BECK		LOT 74	100	1	1% Franco-Nevada
Patented	BLUE ROCK		LOT 75	100	1	1% Franco-Nevada
Patented	CENTENNIAL EUREKA		LOT 67	100	1	1% Franco-Nevada
Patented	BULLION		LOT 76	100	1	1% Franco-Nevada
Patented	SUMMIT		LOT 134	100	1	1% Franco-Nevada
Patented	LOOKOUT		LOT 133	100	1	1% Franco-Nevada
Patented	COMSTOCK		LOT 153	100	1	1% Franco-Nevada
Patented	OVERMAN		LOT 162	100	1	1% Franco-Nevada
Patented	KENDALL		LOT 169	100	1	1% Franco-Nevada
Patented	CAROLINE		LOT 292	100	1	1% Franco-Nevada
Patented	SOUTH EXTENSION ECLIPSE		LOT 245	100	1	1% Franco-Nevada
Patented	ONTARIO		LOT 285	100	1	1% Franco-Nevada
Patented	SILVER GLANCE		LOT 288	100	1	1% Franco-Nevada
Patented	FRANKLIN		LOT 246	100	1	1% Franco-Nevada
Patented	BANGER		LOT 249	100	1	1% Franco-Nevada

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	HOMESTAKE	MS 3059		100	1	1% Franco-Nevada
Patented	MORTON LODE		LOT 247A	100	1	1% Franco-Nevada
Patented	SILVEROPOLIS LODE		LOT 135	100	1	1% Franco-Nevada
Patented	EUREKA NO. 5		LOT 170	100	1	1% Franco-Nevada
Patented	DOVE LODE		LOT 269	100	1	1% Franco-Nevada
Patented	SWAN LODE		LOT 270	100	1	1% Franco-Nevada
Patented	PELICAN		LOT 271	100	1	1% Franco-Nevada
Patented	CONSORT		LOT 272	100	1	1% Franco-Nevada
Patented	CHRISTOPHER COLUMBUS	MS 3037		100	1	1% Franco-Nevada
Patented	SNOW BIRD LODE	MS 3037		100	1	1% Franco-Nevada
Patented	CAROLINE TRIANGLE	MS 3062		100	1	1% Franco-Nevada
Patented	JACOBS	MS 3227		100	1	1% Franco-Nevada
Patented	PROVO	MS 3256		100	1	1% Franco-Nevada
Patented	ALLEN	MS 4561		100	1	1% Franco-Nevada
Patented	BROWN	MS 4562		100	1	1% Franco-Nevada
Patented	LITTLE WILL	MS 3083		33	1	1% Franco-Nevada
Patented	BOYD	MS 5310A		100	1	1% Franco-Nevada
Patented	SOUTH ALTA	MS 3228		100	1	1% Franco-Nevada
Patented	VICTORIA		LOT 217	100	1	1% Franco-Nevada
Patented	GRAND CENTRAL	MS 3037		100	1	1% Franco-Nevada
Patented	JUPITER		LOT 320	100	1	0.5% Erie and 0.5% Lone Pine Realty
Patented	SNOWBIRD	MS 4523		100	1	1% Franco-Nevada
Patented	MICHIGAN FRACTION	MS 6635		100	1	1% Franco-Nevada
Patented	SILVER BAR NO. 2	MS 6085		100	1	1% Franco-Nevada
Patented	CLEVELAND	MS 3849		100	1	1% Franco-Nevada
Patented	SUNDAY	MS 3858		100	1	1% Franco-Nevada
Patented	SILVER KING	MS 3928		100	1	1% Franco-Nevada

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	SEGO LILLY	MS 4127	0036-A	50	1	50% of 2 (1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty)
Patented	JOHN D. NO. 1	MS 6429		100	1	1% Franco-Nevada
Patented	JOHN D. NO. 2	MS 6429		100	1	1% Franco-Nevada
Patented	JOHN D. NO. 4	MS 6429		100	1	1% Franco-Nevada
Patented	RUBY NO. 57	MS 6666		100	1	0.5% Erie and 0.5% Lone Pine Realty
Patented	RUBY NO. 58	MS 6666		100	1	0.5% Erie and 0.5% Lone Pine Realty
Patented	SILVER DICK	MS 4127		50	1	50% of 2 (1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty)
Patented	MURRAY HILL	MS 4127		50	1	50% of 2 (1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty)
Patented	JOE DALEY	MS 3965		100	1	1% Franco-Nevada
Patented	CATASAUQUA	MS 5101		100	1	1% Franco-Nevada
Patented	CATASAUQUA NO. 1	MS 5101		100	1	1% Franco-Nevada
Patented	CATASAUQUA NO. 2	MS 5101		100	1	1% Franco-Nevada
Patented	CATASAUQUA NO. 4	MS 5101		100	1	1% Franco-Nevada
Patented	CATASAUQUA NO. 3	MS 5101		100	1	1% Franco-Nevada
Patented	SILVER SPAR		LOT 47	100	1	1% Franco-Nevada
Patented	TESORA		LOT 166	100	1	1% Franco-Nevada
Patented	NEVER SWET	MS 4534		100	1	1% Franco-Nevada
Patented	NEVER SWET NO. 1	MS 4534		100	1	1% Franco-Nevada
Patented	MADALIN NO. 3	MS 6616		100	1	1% Franco-Nevada
Patented	MADALIN NO. 2	MS 6616		100	1	1% Franco-Nevada
Patented	MADALIN NO. 1	MS 6616		100	1	1% Franco-Nevada
Patented	MADALIN	MS 6616		100	1	1% Franco-Nevada
Patented	INDEPENDENT	MS 3875		100	1	1% Franco-Nevada
Patented	GOLDFIELD	MS 3875		100	1	1% Franco-Nevada
Patented	FLAGSTAFF	MS 3875		100	1	1% Franco-Nevada
Patented	NORTH ALASKA	MS 4708		100	1	1% Franco-Nevada
Patented	ANITA	MS 4535		100	1	0.5% Erie and 0.5% Lone Pine Realty

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	MASCOT			100	1	0.5% Erie and 0.5% Lone Pine Realty
Patented	QUEEN OF THE WEST	MS 3899		100	1	1% Franco-Nevada
Patented	ST. LOUIS	MS 4641		100	1	1% Franco-Nevada
Patented	ST. LOUIS NO. 2	MS 4641		100	1	1% Franco-Nevada
Patented	NORTH CLIFT	MS 6474		100	1	1% Franco-Nevada
Patented	WEST CLIFT	MS 6474		100	1	1% Franco-Nevada
Patented	LITTLE WILL	MS 3083		33	1	1% Franco-Nevada
Patented	SPRING		LOT 335	100	1.5	Xeres Tintic
Patented	RED CROSS NO. 43	MS 6608		100	1.5	Xeres Tintic
Patented	RED CROSS NO. 62 AMENDED	MS 6608		100	1.5	Xeres Tintic
Patented	RED CROSS NO. 63	MS 6608		100	1.5	Xeres Tintic
Patented	LAKEVIEW	MS 3364		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	RANGER AM		LOT 336	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LAST CHANCE AM		LOT 336	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	JULIAN LANE		LOT 77	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	GOLDEN TREASURE		LOT 78	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	GRACE ELY		LOT 317	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	CORNUCOPIA	MS 4171		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LEONORA	MS 3370		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	GENERAL HARRISON		LOT 308	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ROVER		LOT 223	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SPACE	MS 3234		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LION	MS 3490		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	DECEMBER	MS 3491		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	PHEBE SHULER	MS 3368		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ENTERPRISE		LOT 326	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LIZZIE		LOT 320	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	DANDY		LOT 320	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	DUDE		LOT 320	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	MARS		LOT 320	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	COLCONDA LODE		LOT 293	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SOUTH MAMMOTH		LOT 63	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	PHOENIX		LOT 152	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	HUNGARIAN		LOT 164	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	WEST MAMMOTH		LOT 319	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LOWER MAMMOTH	MS 3221		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	AVALANCHE	MS 4523		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	GOLCONDA	MS 3981		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SILVER CHAIN	MS 5880		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	VENUS	MS 4392		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	CARISA		LOT 56	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	WOLF		LOT 244	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	NORTHERN SPY		LOT 129	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	CAPTAIN S.	MS 4054		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LAKEVIEW GOLD AND SILVER		LOT 342	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	CALIFORNIA		LOT 342	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	NEVADA		LOT 342	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	JIM FISK	MS 4478		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	VICTOR	MS 4480		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	CORDELIA ORTON	MS 4479		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	HONORA	MS 4472		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BROWNIE	MS 4053		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SOUTH SWANSEA		LOT 337	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	WEST SWANSEA		LOT 337	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	TRAIL		LOT 121	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SILVER BAR NO. 1	MS 6085		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SILVER HILL NO. 3	MS 4118		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SILVER HILL NO. 1	MS 4118		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SILVER HILL NO. 2	MS 4118		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SILVER HILL NO. 4	MS 4118		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BLACK JACK		LOT 101	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	AMELIE RIVES ADDITION	MS 4550		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	AMELIE RIVES	MS 4550		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	EVENING STAR	MS 3382		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	JANUARY	MS 3382		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	MOLLY BAWN	MS 3830		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LAST CHANCE	MS 3830		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ECLIPSE	MS 4029		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ECLIPSE NO. 2	MS 4029		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	JOHN D. NO. 3	MS 6429		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	JOHN D.	MS 6429		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	OWL LODE	MS 6429		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	RUBY NO. 59	MS 6666		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BOGDAN NO. 3 AM	MS 6666		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BOGDAN FRACTION AM	MS 6666		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BOGDAN NO. 2	MS 6666		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BOGDAN NO. 1	MS 6666		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ANTELOPE FRACTION	MS 6014		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ANTELOPE NO. 2	MS 5999		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ANTELOPE	MS 5999		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	HOME RULE	MS 3852		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	GARNET	MS 3852		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	NORA		LOT 302	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	NONESUCH LODE		LOT 190	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	WALKER		LOT 191	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SUMMIT JOE BOWERS		LOT 229	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LAST CHANCE	MS 4360		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	IVANHOE	MS 4360		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LUCKY BOY	MS 4360		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	MARY ELLEN	MS 4360		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	EUCHRE	MS 4360		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	RUBY NO. 55	MS 6666		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ANA LARA	MS 4360		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BLUE BIRD	MS 4360		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	RUBY NO. 56	MS 6666		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	JAMES	MS 3495		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	IONE	MS 3860		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LITTLE HOPES	MS 4181		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	DAMIFICARE	MS 4179		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	CADAVER	MS 4180		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SOUTH EUREKA NO. 1	MS 4563		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	DANDY JIM	MS 4565		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	HILLSIDE	MS 6068		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	WEST STAR		LOT 233	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ARGENTA		LOT 290	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SILVER STAR		LOT 290	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SILVER SPAR		LOT 290	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	LISBON		LOT 290	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty

Claim Type	***Claim Name***	***MS***	***LOT***	***Ownership %***	***NSR Royalty %***	***Pay To***
Patented	LEO		LOT 290	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ANNIE MAY GUNDRY	MS 3241		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ARDATH	MS 3332		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	PRINCE OF INDIA AM	MS 3836		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	SHELBY AM	MS 3983		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	KOH-I-NOR	MS 3046		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	ELGIN AM	MS 4019		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	EAST STAR		LOT 232	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BOSS TWEED EXTENSION		LOT 237	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BOSS TWEED		LOT 237	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	VALEJO		LOT 116	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	NORTH STAR		LOT 62	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	RED ROSE		LOT 91	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BRAZIL LODE NO. 2		LOT 274	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	MINERS DELIGHT	MS 3521		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	GRACE	MS 4522		100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	VICTORY		LOT 238	100	2	1% Franco-Nevada, 0.5% Erie and 0.5% Lone Pine Realty
Patented	BLUE BIRD EXTENSION	MS 3904		100	3	GWL
Patented	ANNANDALE		LOT 310	100	3	1.5% Erie and 1.5% Lone Pine Realty

Claim Type	***Township***	***Range***	***Section***	***County***	***Beneficiary Abbr.***	***Legal Description***	***Agency***	***NSR Royalty %***
SITLA	10	3	34	JUAB	SCH	E2SE4	PRIVATE	4
SITLA	10	3	20	JUAB	RES	NW4SW4	SITLA	4
SITLA	11	3	3	JUAB	SCH	LOTS 1-4, S2N2	PRIVATE	4
SITLA	11	3	27	JUAB	SM	N2NW4	BLM	4
SITLA	11	3	16	JUAB	SCH	SW4	SITLA	4
SITLA	11	3	22	JUAB	SM	SW4SE4	BLM	4
SITLA	11	3	22	JUAB	SM	SE4SW4	BLM	4
SITLA	10	3	19	JUAB	SYDC	LOT 4(39.57), SW4SE4 [LOT AKA SW4SW4]	PRIVATE	4
SITLA	10	3	19	JUAB	RES	LOT 3 (NW4SW4)	PRIVATE	4
SITLA	10	3	19	JUAB	RES	NE4SW4	PRIVATE	4
SITLA	10	3	19	JUAB	RES	NW4SE4	PRIVATE	4
SITLA	10	3	21	JUAB	UNIV	W2SE4, E2SW4	PRIVATE	4
SITLA	10	3	21	JUAB	UNIV	NE4	PRIVATE	4
SITLA	10	3	29	JUAB	RES	W2NW4	PRIVATE	4
SITLA	10	3	29	JUAB	SM	N2NE4	PRIVATE	4
SITLA	10	3	29	JUAB	UNIV	SE4NW4, NE4SW4, S2SW4	PRIVATE	4
SITLA	10	3	29	JUAB	UNIV	NE4NW4	PRIVATE	4
SITLA	10	3	30	JUAB	SYDC	LOT 1(39.68), NW4NE4, NE4NW4 [LOT AKA NW4NW4]	PRIVATE	4
SITLA	10	3	30	JUAB	RES	SE4NE4	PRIVATE	4
SITLA	10	3	30	JUAB	RES	NE4NE4	PRIVATE	4
SITLA	10	3	32	JUAB	SCH	E2SE4, NE4NE4	PRIVATE	4
SITLA	10	3	32	JUAB	UNIV	W2NE4, NW4	PRIVATE	4
SITLA	10	3	34	JUAB	RES	W2SW4	SITLA	4
SITLA	10	3	34	JUAB	RES	S2NW4	SITLA	4
SITLA	10	3	35	JUAB	SCH	SW4, S2SE4	PRIVATE	4
SITLA	10	3	35	JUAB	SCH	S2NW4	PRIVATE	4
SITLA	10	4	36	JUAB	SCH	NW4, S2	BLM	4

Claim Type	***Township***	***Range***	***Section***	***County***	***Beneficiary Abbr.***	***Legal Description***	***Agency***	***NSR Royalty %***
SITLA	11	3	20	JUAB	SCH	NW4, W2NE4, NW4SE4	BLM	4
SITLA	11	4	2	JUAB	SCH	LOTS 1(42.50), 2(42.70), 3(42.90), 4(43.10), S2N2, S2 [ALL]	BLM	4
SITLA	11	3	28	JUAB	SCH	W2	PRIVATE	4
SITLA	10	3	9	JUAB	USU	SE4	PRIVATE	4
SITLA	10	3	10	JUAB	USU	SW4	PRIVATE	4
SITLA	10	3	15	JUAB	UNIV	W2W2	PRIVATE	4
SITLA	10	3	22	JUAB	SCH	NE4SE4	BLM	4
SITLA	10	3	22	JUAB	SCH	SE4SE4	BLM	4
SITLA	10	3	22	JUAB	SCH	NW4SE4	PRIVATE	4
SITLA	10	3	22	JUAB	SCH	SW4SE4	PRIVATE	4
SITLA	10	3	30	JUAB	NS	LOT 4 (SW4SW4)	PRIVATE	4
SITLA	10	3	30	JUAB	NS	LOT 3 (NW4SW4)	PRIVATE	4
SITLA	10	3	30	JUAB	NS	LOT 2 (SW4NW4)	PRIVATE	4
SITLA	10	3	30	JUAB	SM	E2SW4	PRIVATE	4
SITLA	10	3	30	JUAB	SM	SW4SE4	PRIVATE	4
SITLA	10	3	31	JUAB	SM	NE4NW4	PRIVATE	4
SITLA	10	3	31	JUAB	NS	LOT 1 (NW4NW4)	PRIVATE	4