Technical Report on the Winston Project

Chloride Mining Sub-District, Sierra County, New Mexico, USA

Sawmill Peak Quadrangle 33.42678° N Latitude, 107.76058°W Longitude

Prepared for:

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Table of Contents

Summary	8
1.0 Introduction and Terms of Reference	1
1.1 Introduction	1
1.2 Terms of Reference	1
1.3 Sources of Information	1
1.4 Site Visit	1
2.0 Disclaimer	2
3.0 Property Description and Location	3
3.1 Location	3
3.2 Claim Status	6
3.2.1 Ivanhoe/Emporia Claims	6
3.2.2 Little Granite Gold Unpatented Claims	8
3.2.3 LG Unpatented Claims	. 11
4.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography	. 13
4.1 Accessibility	. 13
4.2 Climate	. 13
4.3 Local Resources	. 15
4.4 Infrastructure	. 15
4.5 Physiography and Vegetation	. 16
5.0 History	. 17
5.1 Chloride District Summary History	. 17
5.1.1 Modern Era Mining and Exploration (1968-2011)	. 19
5.2 Emporia and Ivanhoe Claim History (1881-2010)	. 21
5.2.1 Ivanhoe Claim Located (circa 1880-1881)	. 21
5.2.2 Ivanhoe Claim Patented (1883)	. 21
5.2.3 Emporia Claim Located (1886)	. 21
5.2.4 AT&SF Production & Grade Record (1887)	. 21
5.2.5 Emporia Claim Patented (1891)	. 22
5.2.6 Seales Report (1916)	. 22
5.2.7 Grafton Mining Company (circa 1922-1926)	. 22
5.2.8 Clum Report (1936)	. 22
5.2.9 Van Dolah Report (1940)	. 22
5.2.10 Dooley Report (1940)	. 23
5.2.11 Entwhistle Underground Long Section (1944)	. 23
5.2.12 Entwhistle Report (1948)	. 23
5.2.13 Anonymous Report (1950)	. 24

5.2.14 Grayson Report (1955)	. 24
5.2.15 Goldfield Corporation (1969)	. 24
5.2.16 Feasibility: ChemTech from Certified Public Geologist (1978)	. 24
5.2.17 Assay & Channel Widths: ChemTech from Skyline Laboratory (1978)	. 25
5.2.18 ChemTech from Skyline Laboratory (1978) - Assay & Channel Widths	. 25
5.2.19 Metallurgy: Chem-Tech from Hazen Labs (1978)	. 25
5.2.20 Refining: Chem-Tech from Chender Resources (1978) - (Chender, 1978).	. 25
5.2.21 Chem-Tech Constructs Mill (circa 1979)	. 25
5.2.22 Western Nuclear (1980)	. 26
5.2.23 Turley Operations (1983-1986)	. 26
5.2.24 St. Cloud (Goldfield) Initial Visit (1986)	. 26
5.2.25 St. Cloud (Goldfield) Acquisition (1989)	. 27
5.3 LG Claims Group History	. 28
5.3.1 Little Granite Claims Originally Located (circa 1885)	. 28
5.3.2 Production & Grade Record (1887)	. 28
5.3.3 Eveleth Report #1 (1980)	. 28
5.3.4 Eveleth Report #2 (1980)	. 28
5.3.5 Numex Report (1984)	. 28
5.4 2011 Redline Minerals Exploration Program	. 29
5.4.1 Lithogeochemistry	. 29
5.4.2 Soil geochemistry	. 29
5.4.3 Geophysical Surveys Redline Minerals Inc	. 32
5.5 Historical Mineralised Material Estimates	. 33
5.5.1 Emporia Mine	. 33
5.5.2 Ivanhoe Mine	. 34
5.5.3 Combined Emporia and Ivanhoe Mine	. 35
5.5.4 LG Claim Group	. 35
5.6 Historical Diamond Drilling	. 37
5.6.1 Ivanhoe and Emporia Patented Claims	. 37
5.6.2 Little Granite Claims	. 37
5.7 Historical Mineral Processing and Metallurgical Testing	. 38
5.7.1 Emporia and Ivanhoe Claims	. 38
5.7.2 Little Granite Claims	. 40
6.0 Geological Setting	. 42
6.1 Regional Geology	. 42
6.1.1 Stratigraphy	. 42
6.1.2 Structure	. 42
6.1.3 Mineralisation	. 42

6.2 Property Geology	
7.0 Deposit Types	50
8.0 Mineralization	53
8.1 Ivanhoe and Emporia Claims	53
8.2 LG Claims and Little Granite Gold Claims	56
9.0 Exploration	59
10.0 Drilling	60
11.0 Sampling Method and Approach	61
12.0 Sample Preparation, Analyses and Security	62
13.0 Data Verification	63
14.0 Adjacent Properties	64
15.0 Mineral Processing and Metallurgical Testing	66
16.0 Mineral Resource and Mineral Reserve Estimates	66
17.0 Other Relevant Data and Information	66
18.0 Interpretation and Conclusions	67
19.0 Recommendations	68
20.0 References and Bibliography	72
21.0 Statements of Qualifications	

List of Tables

Page

Table 3.2.1: Royalty Schedule for Ivanhoe and Emporia Patented Claims, Sierra County, New Mexico 8
Table 3.2.2.1 Little Granite Gold Claims Details 9
Table 3.2.2.2 Payment Schedule to Silver Rose Corp. for Little Granite Unpatented Claims, Sierra County New Mexico. 9
Table 3.2.3 LG Claims Details 11
Table 5.5.1: Exploration Target for Emporia Mine, Sierra County, New Mexico (Based on Entwhistle, 1944;1948; Ristorcelli, 1980; Freeman, 1986; 1989).34
Table 5.5.2.: Exploration Target for Emporia Mine, New Mexico (Based on Entwhistle,1944; 1948; Ristorcelli, 1980; Freeman, 1986, 1989)
 Table 5.5.3: Exploration Target for Combined Emporia and Ivanhoe Mines, Sierra County, New Mexico (Based on Entwhistle, 1944; Entwhistle, 1948; Ristorcelli, 1980; Freeman, 1986; and Freeman, 1989)
Table 5.5.4: Exploration Target for Little Granite Mine, Sierra County, New Mexico(Based on Eveleth, 1980 and DeWitt, 1984)
Table 5.6.2: Collar Details and Assay data from 1984 Little Granite Mine DiamondDrilling Program, Sierra County, New Mexico (Compiled from Dewitt, 1984).37
Table 5.7.1.1 - G.V. Martin Flotation Test, Emporia-Ivanhoe Mines, Sierra County, New Mexico (Van Dolah, 1940) 38
Table 5.7.1.2.1: Hazen Research Jig Test, Emporia-Ivanhoe Mines, Sierra County, New Mexico (Shaw, 1978)
Table 5.7.1.2.2: Hazen Research Minus 20 Mesh Tabling Tests, Emporia-IvanhoeMines, Sierra County, New Mexico (Shaw, 1978)39
Table 5.7.1.2.3: Hazen Research Minus 48 Mesh Tabling Tests, Emporia-IvanhoeMines, Sierra County, New Mexico (Shaw, 1978)39
Table 5.7.1.2.4: Hazen Research Conventional Flotation Tests, Emporia-Ivanhoe Mines, Sierra County, New Mexico (Shaw, 1978)40
Table 5.7.2.1 – Gold Silver Content of 2.5 ton Bulk Sample Concentrate from the Little Granite Mine, Sierra County, New Mexico (Eveleth, 1980b).
Table 6.2: Open File 390 (Harrison et al., 1992) Map Units in Vicinity of Little Granite Claims 48
Table 7.0: Ore Deposit Model: Epithermal Au-Ag Low Sulphidation (Panteleyev, 1996) 50
Table 19.1: Little Granite Gold Property: Phase 1 Exploration Program, SoilGeochemistry and Surveying, Proposed Budget
Table 19.2: Little Granite Gold Property: Phase 2 Exploration Program, Diamond Drilling, Proposed Budget

List of Figures

Page

Figure 3.1.1: Property Location Map 4	ŀ
Figure 3.1.2 Property Location Map, District5	;
Figure 3.2 Claim Map7	1
Figure 3.2.2: Little Granite Gold Claims Survey Map 10)
Figure 3.2.3 2011 Land Status, Greater Chloride Sub-District, Sierra County, New Mexico (Jackson, 2012)	2
Figure 4.1 Road Access, Winston Project14	ŀ
Figure 5.1 Distribution of Claims and Mines 1934, Chloride Mining Sub-District, Sierra County, New Mexico (Modified from Harley, 1934 and Jackson, 2012) 18	,
Figure 5.2 Redline Minerals Ltd. 2012 Claim Map, Little Granite Mine area, Sierra County, New Mexico, Jackson, (2012)
Figure 5.4.1.1 Lithogeochemistry - Au, Ivanhoe Claim)
Figure 5.4.1.2 Lithogeochemistry - Au, Little Granite Claims)
Figure 5.4.2 Soil Geochemistry - Au, Winston Project	
Figure 6.1.1: Regional Geology 44	ŀ
Figure 6.1.2: Mineral Deposits in the Chloride Mining District, Sierra County, New Mexico	;
Figure 6.2.1 - Pennsylvanian thru Tertiary Stratigraphy, Northern Chloride Sub-District, Sierra County, New Mexico (Harrison, 1986)	,
Figure 6.2.2 – Property Geology Map, Winston Project, (Geology layer from Harrison et al, 1992)	,
Figure 6.2.3 - Emporia-Ivanhoe Mine Plan Map and Cross-section, Sierra County, New Mexico Entwhistle (1948))
Figure 8.1.1 Ivanhoe Mine Longsection. Cropped from Entwhistle 1944 54	ŀ
Figure 8.1.2 Emporia Mine Longsection. Cropped from Entwhistle 1944 55	;
Figure 8.2.1 Little Granite Mine: Composite level with cross section, South End (modified after Dewitt, 1984)	,
Figure 8.2.2 Little Granite Mine: Composite level with cross section, North End (modified after Dewitt, 1984)	,
Figure 14.1 Patent Claims along the "Grand Master Lode" to the north of the Winston Project, Sierra County, New Mexico	.,

APPENDICES

APPENDIX I Patent Claim Survey Plats APPENDIX II Letter of Consent

Summary

The Winston Property of Sequoia Gold and Silver Ltd is a gold and silver exploration property covering total of 168.1 hectares (415.3 acres) in the Chloride Mining District of Sierra County, New Mexico, U.S.A.. The project comprises two proximal but non-contiguous blocks; the Little Granite -Little Granite Gold unpatented Claims and the Ivanhoe-Emporia Patented Claims. The western most corner boundary of the Ivanhoe-Emporia block is 891 metres east of the Little Granite Claims' eastern boundary.

The property is in Sections 16, 21 and 22 of Township 10 South, Range 9 West approximately 13.5 km northwest of the town of Winston in the Chloride Mining District, and is accessible by four-wheel drive road from State Highway 59.

The project area in the is underlain by shallow dipping tertiary volcanics on the western edge of the Winston Graben that is dissected by high-angle normal faulting along predominantly North-south trends that cut older strike-slip faults and host the epithermal vein deposits of the district.

The Chloride mining district defined by open-space, epithermal fissure-filling quartzcalcite veins with sulphide and native-metal mineralisation occurring in distinct, structurally controlled shoots. They are hosted predominantly in the Rubio Peak Formation.

Past mining development and production on the is poorly documented. however the various small mines in the district did produce a significant amount of gold and silver between 1879 and 1931.

The Little Granite, Ivanhoe and Emporia properties saw sporadic technical work performed sporadically through the 20th century, primarily focused on milling and metallurgy, however the little amount of exploration work performed was poorly documented, with the exception of a small surface exploration program by Redline Minerals in 2012.

The exploration objective on the project is to define sufficient epithermal precious metal vein mineralisation to support a profitable mining operation.

It is recommended that a first phase of soil geochemistry and survey work at a cost of \$100,000 be executed to better define the surface expression of the Little Granite vein and other potential mineralisation along trend to the north and south. A second phase of up to 850 metres of diamond drilling at a cost of \$250,000 should attempt to better define the extent and character of the Little Granite vein beyond the extents of existing mine workings.

1.0 Introduction and Terms of Reference

1.1 Introduction

The purpose of this report is to provide an evaluation of the exploration potential for the Little Granite, Ivanhoe and Emporia properties to host an economic ore-body.

1.2 Terms of Reference

This report was prepared at the request John Gammack, President and CEO of Far Resources Ltd., including all subsidiaries and affiliates from time to time.

1.3 Sources of Information

Sources of information in the preparation of this report include public government, academic, and company reports listed in the References section of this report. Large portions of this report are taken from Stewart Jackson's 2012 report: "National Instrument 43-101 Report of Geology and Mineralization of the LG and Ivan Claim Group with Summary of Historical Production and Drilling on Enclosed Pre-Existing Claims, Chloride Mining Sub-District, Winston, Sierra County, New Mexico". The report contains an exhaustive summary of historic work on the properties. All reports referenced by him were made available to the authors. Jackson (2012) accurately reflects all of the source material.

The authors rely on the work and reporting of all previous workers and have been able to cross-reference and verify the contents against other historical data where possible and fully believe it to be true and accurate.

1.4 Site Visit

One of the authors, Lindsay Bottomer, P.Geo. visited the Property on November 13 and 14^{th,} 2013, and the other author, James Moors, P.Geo. visited the Property December 11, 2017 and again on January 15, 2020.

2.0 Disclaimer

Information relating to claim ownership was supplied by the company. The status and location of the claims is available from government sources.

The authors did not confirm the locations of any mineral claims in the field. Information regarding underlying legal agreements and permits was verified by correspondence with the County clerk, BLM, and Sequoia Gold and Silver Ltd.

The authors have relied extensively on information provided in reports by numerous geologists, engineers and others that have worked on various geological, metallurgical and mining aspects relating to the properties as noted in the References section of this report. The authors have no reason to believe that any of the past work was not done in a professional manner to industry standards of that time.

The authors have relied on regional geological mapping executed by officers of the both the United States Geological Survey and New Mexico Bureau of Geology and Mineral Resources as cited in References. These sources are deemed reliable.

3.0 Property Description and Location

3.1 Location

The property consists of: 1. a group of 16 unpatented claims; the LG Claims, 2. a group of 4 unpatented claims; the Little Granite Gold claims and, 3. 2 patented claims; the Ivanhoe Lode and the Emporia Lode claims, centred at Latitude 33.42678° N Longitude 107.76058° W along Turkey Creek drainage of the Chloride Mining District of Sierra County, state of New Mexico, USA. The claims are found in Sections 16, 21 and 22 of Township 10 South, Range 9 West of the 15 minute series Lookout Mountain Quadrangle. See Figures 3.1.1 and 3.1.2



Figure 3.1.1: Property Location Map



Figure 3.1.2 Property Location Map, District

3.2 Claim Status

The Winston Project consists of 16 unpatented mining claims, the "LG Claims", owned 100% by Sequoia Gold and Silver Ltd. along with the right to acquire an additional 4 unpatented mining claims, the "Little Granite Gold" claims, and 2 patented mining claims, the "Ivanhoe/Emporia claims" located in Sierra County, New Mexico. They are shown on Figure 3.2 and cover a combined area of 168.1 hectares (415.3 acres).

In consideration for the Winston Project, Sequoia Gold and Silver Ltd. paid C\$100,000 cash and issued 2,500,000 common shares (the "Payment Shares") of the Company to the original Vendors between April and September 2017.

Additional cash payments totalling US\$478,000 and US\$361,375 are payable, by way of instalments to the owners of the Little Granite claims and Ivanhoe/Emporia claims, respectively, in accordance with the terms and conditions of the underlying purchase agreements to complete the acquisition of such claims.

Further details regarding the ownership of each property in the Winston Project are described in the sections following.

3.2.1 Ivanhoe/Emporia Claims

The Ivanhoe Patented Claim known as the Ivanhoe Lode Mining Claim designated by the Surveyor General as Lot No. 165 situated within Section 22, Township 10 South, Range 9 West, N.M.P.M. It contains 13.84 acres of land, and described and recorded in Book "F" at pages 486-489 of the Mining Deed Records in the office of the Clerk of Sierra County, New Mexico, under Mineral Certificate No. 67, within the Gila National Forest.

The survey Plat can be found under BLM reference number NM230100S0090W0 and is provided in Appendix 1

The Emporia Patented Claim known as the Emporia Lode Mining Claim designated by the Surveyor General as Lot No. 719 situated within Section 22, Township 10 South, Range 9 West, N.M.P.M. It contains 13.939 acres of land, and described and recorded in Book "H" at page 202 of the Mining Deed Records in the office of the Clerk of Sierra County, New Mexico, under Mineral Certificate No. 369.

The survey Plat can be found under BLM reference number NM230100S0090W0 and is provided in Appendix 1

It should be noted that the patent claim locations depicted on National Topographic maps and BLM survey maps are quite inaccurate. Legally binding boundaries are dictated by the Survey Plats and monuments on the ground, not locations as depicted on other maps

The Emporia Mine & Patented Claim is located 1350 metres due east of the southeast corner of Little Granite Claim block.



Figure 3.2 Claim Map

Claims were transferred to Sequoia Gold and Silver from Redline Minerals Ltd. on May 7, 2017.

The general terms of the Ivanhoe/Emporia Agreement relate to an underlying agreement with the original title holders in 1997 for fee-simple ownership of the Ivanhoe and Emporia patented claims for a purchase price of \$500,000 requiring advanced minimum monthly royalty and production royalty payments according to the schedule shown in Table 3.2.1.

Table 3.2.1: Royalty Schedule for Ivanhoe and Emporia Patented Claims, Sierra County, New Mexico			
MONTHLY AVERAGE SILVER PRICE/OZ	MINIMUM MONTHLY ROYALTY	PRODUCTION ROYALTY %	
Less than \$5.00	\$125	3%	
\$5.00 ~ \$6.99	\$250	4%	
\$7.00 ~ \$8.99	\$500	5%	
\$9.00 ~ \$10.99	\$1,000	6%	
\$11.00 ~ \$14.99	\$1,500	7%	
\$15 or greater	\$2,000	8%	

All royalty payments shall be credited toward the purchase price of \$500,000. Upon full payment of the purchase price, the Seller shall be entitled to a permanent Production Royalty equal to two percent (2%) of the Net Smelter Returns on all ores mined and marketed from the Claims.

As of December 2016, the payment schedule required payments totalling \$262,500, of which \$138,625 had been received, leaving it in arrears of \$126,625. To reach the full purchase price the payment schedule requires a further \$234,500 plus the amount in arrears for a total of \$361,375

Sequoia Gold and Silver provided the author with copies of the Ivanhoe/Emporia *paid* 2017 Property Tax Bill dated August 22, 2017 showing the taxes are paid up to date, and the 2016 Notice of Value dated April 4, 2016 from the Sierra County Assessor, and the registered owner of the Ivanhoe/Emporia patented claims as Robert Howe Educational Trust-Attn: ESB Trust Department.

3.2.2 Little Granite Gold Unpatented Claims

The Little Granite Gold property comprises four contiguous unpatented mineral claims listed in table 3.2.2.1 and shown on Figures 3.2 and 3.2.2.

All maintenance fees on the four claims are up to date and good through September 2021.

Claims Little Granite Gold #1 and #6 fall almost entirely within Section 16 of Range 9 West, and Claims Little Granite Gold #2 and #5 fall almost entirely with Section 21. (Figure 3.2.2).

Sequoia Gold and Silver Ltd. has agreed to purchase the claims as stated in the purchase agreement and amendments. An underlying purchase agreement from the Vendor

requires payments totalling \$478,000 to Silver Rose Corp. according to the schedule provided in Table 3.2.2.2.

Table 3.2.2.1 Little Granite Gold Claims Details			
Claim Name	Claim Record #	Area (hectares)	Area (acres)
Little Granite Gold #1	NMMC135823	33.3	82.2
Little Granite Gold #2	NMMC135824	26.5	65.5
Little Granite Gold #5	NMMC135827	29.4	72.7
Little Granite Gold #6	NMMC135828	32.7	80.7

Table 3.2.2.2	Payment Schedule to Silver Rose Corp. for Little Granite Unpatented
	Claims, Sierra County New Mexico.

Date	Amount Due	Cumulative Amount	Purchase Price Balance
			\$478,000
July 15, 2016	\$12,000	\$12,000	\$466,000
July 15, 2017	\$12,000	\$24,000	\$454,000
July 15, 2018	\$12,000	\$36,000	\$442,000
July 15, 2019	\$12,000	\$48,000	\$430,000
July 15, 2020	\$12,000	\$60,000	\$418,000
October 1, 2020	\$19,000	\$79,000	\$399,000
October 1, 2021	\$19,000	\$98,000	\$380,000
*October 1, 2022	*\$19,000		
October 1, 2022	\$380,000	\$478,000	\$0

*-optional to defer final payment to 2023; final purchase price increases to \$497,000



Figure 3.2.2: Little Granite Gold Claims Survey Map. (Claims 3, 4, 7,8, 9, and 10 have lapsed)

3.2.3 LG Unpatented Claims

The LG Claim Group consists of 16 contiguous un-patented lode claims (~330.1 acres/133.6 hectares) (Figure 3.2) in Sections 16, 21, Township 10 South, Range 9 West within the northwestern portion of Sierra County, New Mexico. Claim details are provided in Table 3.2.3.

The LG Claim group was originally staked in December, 2011 and contained 110 claims. It has since been reduced in size and restaked with the core 16 contiguous claims remaining in good standing and with claim fees paid in full to until September 2021. There was a contiguous block of 106 claims (the Ivan Claims) to the west that were also staked and included in the property grouping at the time, however they have lapsed. (See figure 5.2 for previous claim groupings.)

The purchase agreement with Redline Minerals gives Sequoia Gold and Silver Ltd. a 100% undivided interest in the LG Claim Group without royalty. Mineral rights are granted annually once maintenance fees (currently USD\$140 per claim) are paid to the Bureau of Land Management (BLM) in Santa Fe, New Mexico before September 1st.

No environmental liabilities are known to have been formally identified on or legally assessed against LG Claims.

Claim	Serial No.	Area (ha)	Area (acres)
LG19	NMMC201919	8.24	20.4
LG20	NMMC201920	8.36	20.7
LG28	NMMC201921	8.26	20.4
LG29	NMMC201922	8.42	20.8
LG30	NMMC201923	8.27	20.4
LG31	NMMC201924	8.33	20.6
LG39	NMMC201925	8.32	20.6
LG40	NMMC201926	8.45	20.9
LG41	NMMC201927	8.3	20.5
LG42	NMMC201928	8.39	20.7
LG50	NMMC201929	8.42	20.8
LG51	NMMC201930	8.42	20.8
LG52	NMMC201931	8.33	20.6
LG53	NMMC201932	8.42	20.8
LG63	NMMC201934	8.27	20.4
LG64	NMMC201935	8.36	20.7

Table 3.2.3 LG Claims Details



Figure 3.2.3 2011 Land Status, Greater Chloride Sub-District, Sierra County, New Mexico (Jackson, 2012)

4.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

4.1 Accessibility

The Property was originally accessible via a 10 mile dirt road up the Turkey Creek stream bed that intersects highway 52 1.7 miles north of the small town of Winston. This route is currently blocked by several locked gates.Twenty-eight miles east of Winston on Highway 52 is US Highway 85 which leads to the large centres of Albuquerque, 140 miles north, and Las Cruces, 85 miles south.

An alternate access route to the properties was related by Jackson (2012):

"Traveling 4.0 miles (~6.5 km) north of Truth or Consequences, New Mexico along Interstate 25 to State Highway 52 one proceeds 36 miles (~57.9 km) to the community of Winston From the latter, access to the heart of the LG and Ivan Claimblock involves the following:

1. Traversing 8.0 miles (~12.9 km) north along State Highway 52 from the town of Winston.

2. The route then turns west for 4.0 miles (~6.4 km) on State Highway 59.

3. Upon reaching the poorly maintained 4WD USFS Road 4081, the access bears 4.0 miles (~6.4 km) south past the historic Occidental, Minnehaha, and Great Republic Mines to the now razed former booming mining settlement of Grafton.

4. An old haulage road, USFS Road 4073E and 4073K respectively proceed generally southwest from the Grafton to the Emporia and Ivanhoe Mines. USFS Road 524 ambles ~1.5 miles (~2.4 km) west up Turkey Creek from Grafton to the Little Granite Claims.

Several other alternative shorter formerly public roads of better quality also exist to the east and west of the Property Group but were controversially allowed by the U.S. Forest Service to be closed 30 years ago by local ranchers.

Obtaining un-restricted permanent ingress and egress to the claims in the Gila National Forest for exploration and potential future production on the preceding or via new construction is a vital necessity to the future viability of the project. Meetings with the U.S. Forest Service District Ranger in the Silver City, NM office as well as legal consultation on re-opening the closed roads have been conducted in an attempt to quickly resolve this matter." Jackson (2012).

All known roads in the area of the project are provided in Figure 4.1.

4.2 Climate

Climate was described accurately in Jackson (2012):

"The area of the Chloride Sub-District is classified as a semi-arid region with a mean precipitation rate of 12 to 15 inches (30.5 to 38.1 cm). Most rainfall is observed in thunderstorms in July and August. A late summer-early fall monsoon is commonly in effect. The torrential rainfall results in flashfloods in the narrow creeks and canyons and





can cause serious temporary travel hazards. Temperatures are generally moderate and range from an average low of 20° to 35° F(-7° to +2° C) in the winter to a high of 85° to 95° F(29° to 35° C) in the summer. However, exceptional extremes of -25° and 100° F(-32° to 38°) have been recently recorded." Jackson (2012)

4.3 Local Resources

Local Resources were described in detail by Jackson (2012):

"Surface water is scarce but historical tests have demonstrated that there is an adequate supply of ground water for both the general public as well as potential mining operations. Cattle ranching is the vocation that sustains the majority of the general local population.

Although old-line family ranches of a few hundred acres are the norm, others such as Television-mogul Ted Turner's Ladder Ranch in the range of tens of thousands of acres also exist. None-the-less, the general industry relies heavily on grazing allotments on multiple-use USFS, BLM, and State lands.

Big game hunting and leases, particularly for trophy elk through nationally recognized sporting good franchises, on both private and public lands, is a thriving business extending from mid-August through mid-January.

Large stands of Ponderosa Pines are present and formerly supported a thriving seasonal industry. However, the latter is currently essentially non-existent due to the combination of the diminished national economy as well political restrictions imposed on the leasing and harvesting of timber.

Competition among the recreation, hunting, mining, and ranching interests for water and land sometimes results in significant friction among the groups. However, the Property Group is within a historically well-established premier mining area that has been dormant for approximately 25 years and even pre-dates the designation of the Gila National Forest which encloses it.

Human resources in northwestern Sierra County, New Mexico are extremely limited due to very sparse population within an isolated rural area." Jackson (2012)

4.4 Infrastructure

Infrastructure is described in detail by Jackson (2012):

"Local infrastructure in the area of the Chloride Sub-District is minimal. The closest settlement is the community of Winston with a population of 50-100 which is located ~10 miles (~16.1 km) southeast of the heart of the Redline Minerals Property Group. It has only a post office and small general store which carries a small line of groceries as well as gasoline (petrol). Truth or Consequences, NM (pop. ~7,000) located 45 miles (~72.4 km) to the south has moderate support facilities. Las Cruces, NM (pop. ~200,000) is the major service and supply center for all of southwest New Mexico and is located ~100 miles (~161.9 km) to the south of the project area while another 50 miles (~80.5 km) further is El Paso, TX (pop. +1,000,000). The latter has a regional airport." Jackson (2012)

4.5 Physiography and Vegetation

Physiography and vegetation is described in detail by Jackson (2012):

"The area of the Redline Minerals Property Group is moderately rugged with elevations ranging from 6,800 to 7,900 feet (~2,073 to 2,409 m). Approximately 1.5 miles (~2.4 km) to the west, Sawmill Peak is 8,400 feet (~2,561 m) high. The hamlet of Winston lying 10 miles (~16.1 m) to the south has an elevation of ~6,000 feet (~1,829 m). The mountains of the claimblock are comprised of thoroughly dissected essentially flat-lying volcanic rocks. They are usually covered by overall sparse vegetation typically comprised of range grasses, scrub oak, pinion shrubs, and large gnarled alligator-back juniper trees. However, thickets of scrub oak as well as balds and open parks of several tens of acres (~12.0 hectares) also locally exist. Stands of Ponderosa Pines are found on the higher mountain sides where they have an affinity for the north-facing slopes as well as within protected topographic basins. Cottonwood as well as some stunted Black Walnut trees populate the wider valley floors such as Turkey Creek where water is seasonally more abundant." Jackson (2012)

5.0 History

A detailed exhaustive history of the various claims composing the property is provided by Jackson (2012). For the sake of brevity, not all portions and figures (and associated references) from that report have been restated in this report but nothing of significance has been omitted.

While technical and regulatory reporting standards have evolved greatly over the last century, the information from these historical investigations is considered relevant and informative to determining the exploration potential of the property and must be included in this report for the sake of full disclosure and absolute transparency.

As similarly stated by Jackson (2012),: There are no known mineral resources or reserves on any of the properties that are the subject of this report. All historical reports of resources and reserves, including statements of grades associated with sampling, production, tonnages, widths, and lengths, do not satisfy National Instrument 43-101 standards and should not be relied upon. This background data is included for reference, transparency, and to qualify the recommendations of further exploration programs.

5.1 Chloride District Summary History

Nomenclature and distribution of historic mining references is displayed in Figure 5.1.

"The total value of silver, gold, copper, lead, and zinc was largely obtained from a few large mines in the Chloride, Hermosa, and Kingston Sub-Districts of the Black Range District and was in excess of USD\$20 million (Lovering and Heyl, 1989). Approximately USD\$1.0 million of this total production prior to 1980 is attributable to the Grafton-Phillipsburg area in northern portion of the Chloride Sub-District that now coincides with the Winston Project (Lovering and Heyl, 1989).

There was a revival of exploration, re-development, and production in the 1970s and 1980s. The Occidental, Minnehaha, Great Republic, Emporia, and Ivanhoe Mines in the northern Chloride Sub-District were re-activated in the early 1980s and continued to produce gold-silver ores through 1987 (Lovering and Heyl, 1989).

Redline Minerals, Inc. in February and July 2011 acquired the current leaseholds on two patented and four unpatented claims that were among the more recently reactivated producers in the 1980s. These are comprised by the Emporia Patented Claim and Mine, Ivanhoe Patented Claim and Mine, and Little Granite Unpatented Claim Group. Subsequently, in the Fall of 2011, following an exhaustive review of the published professional literature as well as a plethora of unpublished historic private reports of past mine operators and prospective buyers in the Chloride Sub-district, Redline



Figure 5.1. - Distribution of Claims and Mines 1934, Chloride Mining Sub-District, Sierra County, New Mexico (Modified from Harley, 1934 and Jackson, 2012).

Minerals commissioned the staking of 216 un-patented claims (\sim 4,400 acres/1,778 hectares) to cover the strike and dip extensions of the veins on its existing leased claims. (Jackson, 2012).

The resultant tenure map for the property area is provided in Figure 5.2.

Redline Minerals carried out lithogeochemistry and soil geochemistry surveys in 2011. Of the 216 unpatented claims that were staked, all but 16 were allowed to lapse in subsequent years.



Figure 5.2 Redline Minerals Ltd. 2012 Claim Map, Little Granite Mine area, Sierra County, New Mexico, Jackson, (2012)

5.1.1 Modern Era Mining and Exploration (1968-2011)

5.1.1.1 Goldfield Corporation (1968-1989)

"Goldfield Corporation was active in the Chloride area from 1968 until 1989 (Freeman, 1986; Freeman, 1989). During this time they examined and sampled the **Emporia and Ivanhoe Mines** as well as the Elephant Claim Group, Blue Top Fly Mine, and Minnehaha Mine located to the north of the Redline Mineral property along the same mineralized trend. Additionally, the former two mines were leased but never drilled or placed into production". (Jackson, 2012)

5.1.1.2 Getchell Mining (circa 1970)

"Getchell Mining's entry sometime in or before 1972 marks the inception of aggressive modern exploration and development in the Chloride Sub-District. Whereas prior to this date claim staking and subsequent mine development was on small fragmented claim blocks consisting of a few to a few tens of claims, Getchell aggressively staked hundreds of claims and consolidated much of the Central Chloride District annexing such wellknown large mines as the Silver Monument, U.S. Treasury, and Midnight (Figure 6.1.1 and Figure 4.3.2.1). The preceding mines respectively occur approximately 12 miles (~19 km) to the southwest, south, and south-south- east of the Emporia and Ivanhoe Mines. Little to nothing is available regarding Getchell's work and internal reports because subsequently Placer Dome and eventually Barrick Gold successively acquired the companies holding Getchell's original claims." (Jackson, 2012)

5.1.1.3 Western Nuclear (1978-1981)

"Western Nuclear, a subsidiary of Phelps-Dodge Corporation, (Ristorcelli, 1980), undertook systematic channel sampling and mapping at the **Emporia, Ivanhoe**, and possibly other mines between 1978-1981 (Freeman, 1986)." (Jackson, 2012)

5.1.1.4 Chem-Tech Minerals (1978)

"Chem-Tech Minerals and Research & Development Corporation in 1978 undertook channel and dump sampling at the **Ivanhoe and Emporia Mines** that led to subsequent limited calculations of mineralized material, metallurgical, refining, and feasibility studies (Daffron, 1978; Chender, 1978; Albuquerque Assay Labs, 1978; Skyline Labs, 1978)." (Jackson, 2012)

5.1.1.5 Turley and Foster (1980)

"Mssrs. Frank Turley and John Foster, in 1980 had the Little Granite Claims evaluated by a professional mining engineer who undertook limited channel and dump sampling; favorable assays resulted in subsequent bulk sampling (Eveleth, 1980a; Eveleth, 1980b)." (Jackson, 2012)

5.1.1.6 Turley (1983-1986)

"Frank Turley, and a local independent miner, intermittently operated the Emporia and Ivanhoe Mines from 1983-1986." (Jackson, 2012)

5.1.1.7 Numex Geological & Engineering Services (1984)

"Numex in 1984 under the direction of a State Registered Geologist undertook seven drill holes on the **Little Granite Mine Vein;** very positive results yielded calculation of an exploration target (DeWitt, 1984). Some low grade silver-gold siliceous dump material was sold to Phelps- Dodge as smelter flux. "(Jackson, 2012)

5.1.1.8 St. Cloud Mining Company (circa 1990-2011)

"The St. Cloud Mining Company, a subsidiary of Goldfield Corporation prior to 2001, begin surficial mining of zeolites from altered volcanic rocks in the early 1990s (Virta, 2001). It is presently the largest producer of zeolites in North America (St. Cloud Website, 2011)." (Jackson, 2012)

5.1.1.9 Redline Minerals, Inc. (2011)

"Redline Minerals, Inc. became interested in the Chloride Sub-District in late 2010 when Steve Rogers submitted some of his family's mining properties for examination. The associated large data package included published regional information as well as detailed private reports on the **Emporia, Ivanhoe, and Little Granite Mines**. A review of the preceding augmented by research at the New Mexico Institute of Mining and Technology's by Redline's founders, Ray Strafehl and Barney Lee, along with their Corporate Geologist, Matt Melnyk suggested high potential for the re-development of some existing historic mines as well as the discovery of new presently unknown deposits. In February 2011, these individuals conducted a field examination of several of the prospective workings. The dump and some in-situ vein samples collected returned positive assays and subsequently resulted in the acquisition of the **Emporia, Ivanhoe, and Little Granite Claims**. In late August through December 2011, a field program of reconnaissance geologic traverses, expanded dump and vein sampling, soil sampling, and orientation electro-magnetic and magnetic lines was implemented across some major veins. Additionally, 216 new claims were staked. "(Jackson, 2012)

5.2 Emporia and Ivanhoe Claim History (1881-2010)

The northeast-southwest trending Ivanhoe Mine Vein is projected to intersect the northsouth oriented Emporia Mine Vein near the center of the Emporia Claim. The preceding two mines and claims of the respective same names thus have a long interrelated history of exploration and operation since shortly after their staking and issuance of their respective patents in 1883 (Ivanhoe) and 1891 (Emporia). Their common exploration and development history is jointly briefly chronologically summarized below. (Jackson, 2012)

5.2.1 Ivanhoe Claim Located (circa 1880-1881)

The Ivanhoe Claim appears to be among the oldest claims located in Chloride Sub-District - possibly having been staked between 1880 and 1881 based on its patent survey date of 20-23 August 1881. The actual patent was issued in September 1883 to an unstated party. (Jackson, 2012)

5.2.2 Ivanhoe Claim Patented (1883)

Patent #8220 was issued for the Ivanhoe Claim in September 1883. (Jackson, 2012)

5.2.3 Emporia Claim Located (1886)

U.S. Government records show that the Emporia Claim was originally staked on 22 April 1886. (Jackson, 2012)

5.2.4 AT&SF Production & Grade Record (1887)

Spreadsheet Records of the Atchinson, Topeka, and Santa Fe Railroad from 1887 show that the Emporia Mine was then being operated by Robert Howe and Slater. It had 1 adit, 3 crosscuts, and 1 winze but apparently had no dump of significant size (Schmidt, 1953). The same AT&SF spreadsheet indicates that the Ivanhoe Mine was being operated in 1887 by R. Ingersoll & Co. Mine-run on its dump was valued at \$15.00/ton (Schmidt, 1953). The width of the Ivanhoe Vein was stated as varying from 4.0 to 10.0 feet wide (1.2 to 3.1 m) and carrying silver, gold, and copper (Schmidt, 1953). (Jackson, 2012)

5.2.5 Emporia Claim Patented (1891)

Patent #18510 for the Emporia Claim was issued to Robert T. Howe on 19 August 1891. (Jackson, 2012)

5.2.6 Seales Report (1916)

A very comprehensive and positive evaluation of the Emporia and Ivanhoe Mines with recommendations for acquisition and construction of a mill were made by a knowledgeable geologist or mining engineer (Seales, 1916). (Jackson, 2012)

5.2.7 Grafton Mining Company (circa 1922-1926)

The Grafton Mining Company, under Japanese ownership, operated the Ivanhoe and Emporia Mines in the 1930s (Clum, 1936; Ristorcelli, 1980). (Jackson, 2012)

5.2.8 Clum Report (1936)

A very optimistic report on the potential of the Emporia vein and its +2.0 mile (3.2 km) extension was written by an independent consulting mining engineer for an unknown client (Clum, 1936). Three parallel veins that increased to up to 12 feet wide (3.7 m) at depth were noted over a span of 40 feet (12.2 m). Mixed oxide and sulphide mineralization amenable to flotation was estimated to average \$35.00/ton (Au \sim \$35.00/oz; Ag \sim \$0.70/oz) (Clum, 1936). Mining, milling, and transportation costs were all estimated.

No dimensional or economic data is cited with regard to the Ivanhoe Vein - only mine infrastructure and the very favorable potential of the deposit are discussed. (Jackson, 2012)

5.2.9 Van Dolah Report (1940)

A total of 92 channel samples with an average width of 4.25 feet (1.3 m) and 26 dump samples with an individual average weight of 1.385 lbs (0.62 kg) from the Ivanhoe and Emporia Mines were undertaken in 1940. Weighted averages for the 39 Samples from the Emporia yielded \$15.59/ton while 50 samples from the Ivanhoe ran \$17.73/ton (Au ~\$35.00/oz; Ag ~\$0.70/oz) (Van Dolah, 1940). Flotation work on the dump samples yielded average heads of 0.602 opt Au, 20.53 opt Ag, and 1.26 percent copper with respective recoveries of 87.5, 94.4, and 77.8 percent (Van Dolah, 1940).

The Emporia Vein is described as being from 12 to 25 feet wide (3.7 to 7.6 m) and containing a 140 foot long (42.7 m) ore shoot that locally occupies the entire 25 foot width (7.6 m) of the vein. Values of \$12.89/ton are observed in the latter with gold averaging \$4.18/ton and silver \$8.72/ton (Au \$35.00/oz; Ag \$0.70/oz) (Van Dolah, 1940). This equates to 0.119 opt Au and 12.46 opt Ag. (Jackson, 2012)

5.2.10 Dooley Report (1940)

The Ivanhoe Vein is interpreted to be a true fissure vein 4.0 to 7.0 feet wide (1.2 to 2.1 m). It was stated to contain at least three separate ore shoots with a rake in the vein to the south of 78°. Mining of the in-sight vein was projected to yield \$17.67/ton (Dooley, 1940). Milling-grade dump material averaging \$15.00/ton was observed (Dooley, 1940).

Aggressive development work at the Ivanhoe Vein included sinking of a 400 foot (122 m) shaft since an earlier report. A 150 foot long (45.7 m) ore shoot from which select samples averaged 1.5 opt Au on the 100 foot Level (30.5 m) were noted to average 2.5 opt Au on the 200 Level (Dooley, 1940). Another ore shoot appeared to be up to 300 feet long (91.5 m) based on underground and surface observations. (Jackson, 2012)

5.2.11 Entwhistle Underground Long Section (1944)

A geologist undertook an extensive and comprehensive evaluation of the Ivanhoe and Emporia Mine resulting in the construction of a detailed longitudinal section of the two sets of underground workings and their respective veins and primary ore shoots (Entwhistle, 1944). His work and results at the Ivanhoe Mine included the following:

- 1. 52 Channel samples 2.0 to 8.0 feet wide (0.61 to 2.4 m) yielding 0.01-1.65 opt Au and 0.26-60.5 opt Ag (Entwhistle, 1944).
- 2. 6 dump samples Yielded 0.01-0.25 opt Au, 1.53-6.46 opt Ag (Entwhistle, 1944).

A partially mined ore shoot at the Ivanhoe Mine appearing on the southwestern portion of the long section defined by the above data is summarized below:

v Southwest Ore Shoot - 100 feet long X 3.9 feet wide $X \sim 120$ feet deep (30.5 m X 1.2 m X \sim 36.6 m) (open at depth): Channels averaged 0.025 opt Au and 16.30 opt Ag. Bulk samples averaged 0.03 opt Au, 7.31 opt Ag, and 0.33 percent Cu (Entwhistle, 1944). Similar efforts at the adjoining Emporia Mine resulted in that listed below:

- 1. 44 channel samples 3.0 to 10.0 feet wide (0.92 to 3.1 m) yielding 0.01 to 0.96 opt Au and 0.14-169.28 opt Ag (Entwhistle, 1944).
- 2. An unknown number of dump samples.

A partially exploited ore shoot at the Emporia Mine appearing on the northeastern portion of the long section defined by the above data is summarized below:

v Northeast Ore Shoot - 175 feet long X 21 feet wide X 200 feet deep (53.4 m X 6.4 m X 61.0 m) (open at depth). Channels averaged 0.17 opt Au and 12.10 opt Ag (Entwhistle, 1944) (Jackson, 2012)

5.2.12 Entwhistle Report (1948)

A geologist re-visited the Ivanhoe and Emporia shortly after WWII. Dooley's (1940) previous tonnage and grade estimates based on 36,041 pounds of bulk channel samples from one of Ivanhoe's shoots, were reviewed and followed by confirmation sampling (Entwhistle, 1944). Subsequently, Dooley's results were significantly downgraded due to discrepancies with the result that a weighted average grade of \$10.95/ton (\$35.00/oz Au and 0.70/ozAg) was obtained (Entwhistle, 1944). A good large scale X-section and plan map were also generated. (Jackson, 2012)

5.2.13 Anonymous Report (1950)

An un-signed very short general report on the Ivanhoe & Emporia Mines contains no significant new economic or geologic information. It appears to be a very short L.P. Entwhistle report. The Ivanhoe Vein's width is stated to average 4.0 feet (1.2 m) and be a maximum of 8.0 feet wide (2.4 m). (Jackson, 2012)

5.2.14 Grayson Report (1955)

A general description of the Ivanhoe and Emporia workings, mineralization, geology, and property disputes was assembled by a geologist (Grayson, 1955). Many other mines over the entire Chloride area are discussed and the nature of mineralization as well as dimensions of shafts, adits, and levels mentioned.

However, there is no economic data of significance. (Jackson, 2012)

5.2.15 Goldfield Corporation (1969)

Five vein and dump samples from the mines located in the northern portion of the Chloride Sub-District were submitted to a Silver City Assay lab headquartered in Denver, CO (Parker, 1969)." A single sample returned an assay result of 0.06 opt Au, 23.2 opt Ag and 0.765% Cu. (Jackson, 2012)

5.2.16 Feasibility: ChemTech from Certified Public Geologist (1978)

W.J. Daffron, a Certified Public Geologist, sampled 7 dumps with 64 sample pits at the Emporia and Ivanhoe Mines (Daffron, 1978). Plan maps of each dump, showing sample pit locations and number designations were prepared. Tonnage estimates were computed by plotting area-of-influence polygons around each sample pit location, planimetering area, multiplying area by the appropriate sample pit depth to determine the cubic feet of volume within each polygon, and dividing the product by a cubic-feet-per-ton factor of 16 to obtain tonnage. Most of the sample locations were marked on 20 foot centers, although in some cases sample pits were dug at from 10 foot centers up to 25 foot centers. A total of 64 sample pits were hand-dug and the depth of each recorded. Each 2 feet of depth in each pit was separately sampled and sent to Albuquerque Assay Lab for analysis. The Lab prepared each sample by crushing, pulverizing, and mixing the entire sample prior to splitting out the portion for assay. After the assaying was completed it was discovered that the sample preparation instructions had not been followed—the crushed sample had been split down and only a small fraction selected for pulverizing. Consequently, ten of the samples were retrieved from the Lab, and pulps and rejects were combined, and the samples were sent to Skyline Labs of Tucson, Arizona. The results of these samples varied widely with the Albuquerque Lab assay. Subsequently, almost all of the dump sampling pits were resampled by cutting a narrow channel from top to bottom. These 57 samples (about 12 lbs each (\sim 5.5 kg)) were delivered to Skyline for preparation and assay. A few locations were not re-sampled and in these cases the Albuquerque assay were utilized. Subsequently, Daffron calculated the following estimated dump material at the Ivanhoe and Emporia Mines:

1. Emporia Mine - Six dumps averaged 0.248 opt Au and 4.46 opt Ag (Daffron, 1978).

2. Ivanhoe Mine - One dump averaged 0.146 opt Au and 15.75 opt Ag (Daffron, 1978).

(Jackson, 2012)

5.2.17 Assay & Channel Widths: ChemTech from Skyline Laboratory (1978)

A total of 60 dump, pit, and channel samples from the Ivanhoe and Emporia Mine were analyzed by Skyline Labs, Inc facility in Tucson, Arizona (Lemback, 1978). These yielded results of 0.005 to 2.470 opt Au and 1.93 to 39.00 opt Ag over sample intervals of 2.0 to 8.0 feet (0.6 to 2.4 m) (Lemback, 1978). The preceding values were successfully verified by Albuquerque Assay Labs in Albuquerque, New Mexico (Schwab, 1978). (Jackson, 2012)

5.2.18 ChemTech from Skyline Laboratory (1978) - Assay & Channel Widths.

A total of 60 dump, pit, and channel samples over sample intervals of 2.0 to 8.0 feet (0.6 to 2.4 m) from the Ivanhoe and Emporia Mine yielded results of 0.005 to 2.470 opt Au and 1.93 to 39.00 opt Ag (Lemback, 1978; Schwab, 1978). (Jackson, 2012)

5.2.19 Metallurgy: Chem-Tech from Hazen Labs (1978)

A preliminary study of the Emporia-Ivanhoe mineralization by Hazen Labs indicated that a conventional flotation process in which gold and silver recoveries were respectively 88.4 percent and 90.4 percent was the more effective practical method than Wilfley tabling followed by flotation of the table tailings (Shaw, 1978). (Jackson, 2012)

5.2.20 Refining: Chem-Tech from Chender Resources (1978) - (Chender, 1978).

There was an agreement from Chender Resources to purchase Ivanhoe-Emporia Mines' precious metal concentrate. (Jackson, 2012)

5.2.21 Chem-Tech Constructs Mill (circa 1979)

Chem-Tech through various specialty consulting firms under took the following:

- 1. Channel and dump sampling (Daffron, 1978)
- 2. Metallurgical tests (Shaw, 1978)
- 3. Reserve calculations (Daffron, 1978)
- 4. Refining and Marketing Studies (Chender, 1978)
- 5. Feasibility Studies (Daffron, 1978)

Subsequent to the above, Chem-Tech constructed a 60-ton/day mill on the Emporia Claim to service both the Emporia and Ivanhoe Mines. (Ristorcelli, 1980; Freeman, 1989). Details are discussed under the respective categories and authors.

5.2.22 Western Nuclear (1980)

Western Nuclear undertook preliminary underground plan and vertical mapping on the Emporia and Ivanhoe Mines. A total of 39 channel samples from 1.0 to 10.0 foot thick (0.3 to 3.1 m) veins and an estimated four dump samples were also collected from the two mines (Ristorcelli, 1980).

It appears that 18 channel samples were taken within the Emporia Mine that yielded an average of 0.102 opt Au and 4.62 opt Ag (Ristorcelli, 1980). It did not include significant known extensions. Dumps were stated to average 0.188 opt Au and 11.07 opt Ag (Ristorcelli, 1980).

A total of 17 channel samples also were taken within the Ivanhoe Mine averaging 0.044 opt Au and 8.51 opt Ag for the Ivanhoe Mine (Ristorcelli, 1980). Other substantial known extensions were not included in the total.

5.2.23 Turley Operations (1983-1986)

Frank Turley intermittently operated the Emporia and Ivanhoe Mines. Material grading 0.060 opt Au and 5.0 opt Ag was obtained from a decline driven down the Emporia Vein's strike (Freeman, 1986). A similar decline undertaken on the nearby Ivanhoe Vein yielded no production.

5.2.24 St. Cloud (Goldfield) Initial Visit (1986)

Goldfield Corporation visited the Emporia and Ivanhoe Claims/Mines in 1986 but was unable to arrive at mutually favorable lease terms with the owners. During their evaluation of the properties, they undertook the following work at the Emporia Mine (Freeman, 1986):

- 1. Surface and underground mapping at a scale of 1.0-inch = 10.0 feet (2.54 cm = 3.1 m).
- 2. 80 systematic channel samples ranging from 1.0 to 7.2 feet thick (0.3 to 2.2 m).
- 3. An unknown number of dump samples.
- 4. Construction of Longitudinal- and Cross-sections. Integration of assays from 94 underground samples from the Emporia Mine yielded the following range of metal grades 0.050-0.072 opt Au, 3.45-4.27 opt Ag, and 0.05-0.08 percent Cu (Freeman, 1986).
- 5. Goldfield also undertook the work listed below at the Ivanhoe Mine (Freeman, 1986):
- 6. Surface and underground mapping at a scale of 1.0 inches = 10.0 feet (2.54 cm = 3.1 m).
- 7. 40 systematic channel samples ranging from 1.0-7.2 feet thick (0.3 to 2.2 m).
- 8. An unknown number of dump samples.
- 9. Construction of Longitudinal- and Cross-sections.

Integration of assays from 55 underground samples at the Ivanhoe Mine yielded the following range of grades 0.008-0.060 opt Au, 6.44-11.47 opt Ag, and 0.18-0.27 percent *Cu* (Freeman, 1986).

Weight averaging of the mineralization from the Emporia and Ivanhoe Mines yielded an average of 0.055 opt Au, 6.23 opt Ag, and 0.11 percent Cu with favorable potential for establishing additional mineralization (Freeman, 1986). Other mineralization was stated to average 0.056 opt Au, 7.77 opt Ag., and 0.07 percent Cu (Freeman, 1986). However, these are not sub-divided by the respective mines." (Jackson, 2012)

5.2.25 St. Cloud (Goldfield) Acquisition (1989)

"Goldfield Corporation re-visited the Emporia and Ivanhoe Claims and mines in 1989 (Freeman, 1989). A long term lease was successfully negotiated on the combined properties via their subsidiary, the St. Cloud Mining Company. Subsequently, the following work was performed:

- 1. Mine plan and section maps as well as channel and dump sampling from 1986 were reviewed and augmented.
- 2. Grinding and flotation tests by Hazen Research were conducted that recovered 90.4 percent of the gold and 88.4 percent of the silver from a -200 mesh feed of containing 0.110 opt Au and 6.10 opt Ag (Shaw, 1978).
- 3. Using channel and dump data expanded from a 1986 assessment, the geologic target was re-calculated and mining costs projected (Freeman, 1989). Integration of assays from the channel and dump samples suggested the following grades for the mineralization present (Freeman, 1986; Freeman, 1989):
- 1. Emporia Mine exploration target averaging 0.057 opt Au, 6.86 opt Ag, and 0.03 percent Cu (Freeman, 1986).
- 2. Ivanhoe Mine exploration target averaging 0.050 opt Au, 10.58 opt Ag, and 0.25 percent Cu (Freeman, 1986).
- 3. Dumps and channel samples from the preceding two mines averaging 0.056 opt Au, 7.56 opt Ag, and 0.07 percent Cu (Freeman, 1989).

With regard to the excellent exploration potential stated to exist at the Emporia Mine, the following was noted (Freeman, 1989):

- 1. The vein intersections in the Chloride area are commonly loci of higher grade, larger tonnage mineralization.
- 2. The Emporia and Ivanhoe Vein intersection is analogous to that of the U.S. Treasury and St. Cloud Mines 12 miles (~19 km) to the south. The latter junction produced the largest ore shoot in the entire sub-district.
- 3. Only 1,500 feet (457 m) of the Emporia Vein has been explored."
- 4. The Alaska Mine lies 3,000 feet (915 m) to the north and is hosted by the same vein which extends over ~4.0 miles (6.4 km) further north." (Jackson, 2012)

5.3 LG Claims Group History

5.3.1 Little Granite Claims Originally Located (circa 1885)

The date on which the original Little Granite Claim Group was staked is nebulous. However, production was established between the organization of the Chloride Sub-District in 1881 and 1887 when Sierra County tonnage and grade records appear for it (Anonymous, 1887).(Jackson, 2012)

5.3.2 Production & Grade Record (1887)

The Little Granite Mine appears on a list of productive mines compiled by the Atchinson, Topeka, and Santa Fe Railroad in 1887 (Schmidt, 1953). At that time it was owned by Oscar Neisly. It is noted that the vein is 2.4 feet wide (0.7 m) and assays \$40.00/ton (Schmidt, 1953).(Jackson, 2012)

5.3.3 Eveleth Report #1 (1980)

Mr. Frank Turley and John Foster commissioned a professional mining engineer to evaluate the property. Limited dump and vein sampling yielded favorable results. Channel samples across the vein ran 0.05-0.12 opt Au and 7.3- 15.6 opt Ag over widths of 1.3 to 3.3 feet (0.4 to 1.0 m) (Eveleth, 1980a). Additional evaluation of the mine was recommended. (Jackson, 2012)

5.3.4 Eveleth Report #2 (1980)

Based on earlier positive results, a 2.5 ton bulk sample by Mr. Frank Turley, the mine owner, produced two concentrates averaging respectively 8.44 opt Au with 465.13 opt Ag and 95.75 opt Au with 3,039.44 opt Ag (Eveleth, 1980b). Tails averaged 0.39 opt Au with 7.35 opt Ag (Eveleth, 1980b). Head grades are not stated, thus the tenor of mine-run cannot be ascertained. (Jackson, 2012)

5.3.5 Numex Report (1984)

The main workings of the Little Granite Mine are within an ore shoot 165 feet long (50.3 m) that occurs were the northerly-trending semiparallel +1,700 foot long X 1.0-14.0 foot wide (518 m X 0.3 to 4.3 m) Little Granite Vein and so-called Jap Vein to the west merge (DeWitt, 1984). Both veins dip 70°-86° east.

Numex Geological & Engineering Services in 1984 undertook a series of seven angle drill holes on the Little Granite Mine Vein with very positive results (DeWitt, 1984)." Jackson (2012).

This 1984 program is discussed in Section 5.6 Historical Diamond Drilling and Section 8.0 Mineralisation.
5.4 2011 Redline Minerals Exploration Program

A small program involving Soil geochemistry and Lithogeochemistry sampling along with minimal geophysics was carried out by Redline Minerals Ltd. in 2011.

5.4.1 Lithogeochemistry

Twenty six lithogeochemistry samples were submitted for assay. A detailed description of the results is provided in Jackson (2012). Sample locations with gold results are shown on figures 5.4.1.1 and 5.4.1.2.

Observations by Jackson (2012) include

"Assaying of the September-October 2011 samples by ALS Chemex essentially confirmed the range of grades reported from historic sampling and production at the two mines. In consideration that the vast majority of the lithologic samples constitute material formerly categorized as waste, the historic grades reported from the workings on the Ivan Claim block are supported by the most recent sampling."

"It should be noted that the bulk of the most recently collected lithologic samples were derived from material designated as waste during historic exploitation. The preceding sample suite is deemed to essentially confirm the historic grades observed in the various workings on the LG Claimblock."

"Collectively, these samples suggest the persistence of vein-hosted precious metal mineralization may exist for a minimum of over 2,000 feet (610 m)." Jackson (2012)

5.4.2 Soil geochemistry

A detailed description of the 2011 soil geochemistry program on the Ivan Claims is given in Jackson (2012). Sample locations with gold results are provide in Figure 5.4.2. A summary is also given and it is provided below.

Observations by Jackson include:

"All of geochemical anomalies bear varying moderate to strong degrees of spatial relation to each other as well as to major and minor structures, stratigraphic units, and historic mines and prospects."

The skeletal geochemical soil grid over both the LG and Ivan Claimblocks delineated multiple prominent north-south oriented anomalies as well as a single more subtle northwest-southeast trend. These primarily correspond to the Veta Madre/ Great Master Lode and Triple Cross Fault and Vein Systems as well as individual faults and mines, prospects, and quartz vein float. Threshold and maximum values are comparatively low but clearly outline geologically significant features that possess exploration significance.

"The author concludes that more closely-spaced follow-up sampling is warranted in order to further enhance the existing geochemical targets as well as to potentially discriminate between barren versus metalliferous vein-hosting faults delineated by mapping and/or geophysics.)." Jackson (2012)



Figure 5.4.1.2 Lithogeochemistry - Au, Little Granite Claims



Figure 5.4.2 Soil Geochemistry - Au, Winston Project

5.4.3 Geophysical Surveys Redline Minerals Inc

A detailed report on the small geophysics program performed in 2011 is given in Jackson (2012). A brief summary is also given and that is provided below:

"Two reconnaissance geophysical lines were respectively conducted on the Emporia Claim and a portion of the adjoining Ivan Claims in October 2011"

"VLF EM-16 instrumentation was successful in delineating three conductors within a 100 foot (30.1 m) structurally disrupted zone containing the main vein on the Emporia Claim itself. The strongest of these conductors is situated on the edge of the zone and may possibly represent the Veta Madre which is the master structural control for this portion of the Chloride Sub-District. Approximately 1,800 feet (549 m) to the north of the first line, a second line was run on the Ivan Claims which enclose the Emporia Claim. It also yielded a strong conductor that occurs approximately 45m east of a significant collapsed adit and dump. This response corresponds with the approximate mapped location of the Veta Madre here. The positive results obtained from the two reconnaissance lines demonstrates that the fault/fissure/joint structures controlling the northerly-trending precious metalbearing quartz veins related to the Veta Madre are capable of being detected and mapped under cover using a shallow penetrating Electromagnetic method.

Magnetometer readings were also undertaken along the previously discussed VLF EM-16 reconnaissance line. It was hypothesized that the instrumentation might either detect the veins themselves or magnetite destruction adjacent to the veins might indicate pervasive alteration away from the veins. However, the high-low variable nature of the magnetic profile suggests that no magnetite destruction related to mineral fluid alteration exists in the andesite host rocks at any significant distance from the vein.

A VLF resistivity sounding with the VLF-EM16R was conducted between the two geophysical reconnaissance lines (UTM E244491 N3702100). An apparent resistivity of 230 ohm m for the underlying andesite was obtained which is what would be anticipated for a propylitically-altered mafic volcanic in the American Southwest. It is concluded from the low resistivity observed in cover and host rocks that time-domain electromagnetic systems rather than frequency electro-magnetic systems should be utilized for future ground and aeromagnetic geophysical surveys. The former have much better greater depth penetration in low resistivity bedrock than do the latter."

5.5 Historical Mineralised Material Estimates

The numerous estimates of mineralised material were summarised in detail by Jackson (2012). It is necessary to include these studies for full disclosure of all work relating to the viability of the these claims to host potentially economic mineral deposits.

There are no known mineral resources or reserves on any of the properties that are the subject of this report. All historical reports of resources and reserves, including statements of grades associated with sampling, production, tonnages, widths, and lengths, do not satisfy National Instrument 43-101 standards and should not be relied upon. This background data is included for reference, transparency, and to qualify the recommendations of further exploration programs.

"Many historical estimates of the grade and/or tonnages present at the Emporia, Ivanhoe, and Little Granite Mines have been made between 1940 and 1989. All of these, though not meeting current National Instrument 43-101 standards to qualify as resources or reserves, have been derived from extensive systematic channel and/or dump sampling.

Core samples were used only at the Little Granite Mine. All of the preceding sampling methods were subsequently used in the derivation of estimated blocks of mineralization, weight averaging, and the classification into now historical archaically defined Proven, Indicated, and Possible (Inferred) Reserve Categories. There is thus an underlying basis for the tenor and mass of the mineralization suggested to exist. However, under National Instrument 43-101 restrictions, the preceding are regarded as exploration targets." Jackson (2012).

5.5.1 Emporia Mine

From Jackson (2012): "Written records of the estimated grades and/or tonnages of the Emporia Claim and mine are only available for the period between 1940 and 1989 even though production is documented as early as 1887 (Schmidt, 1953). Most evaluations of the mineralization were made by consulting geologists and mining engineers assumedly for the mine operator or un-named clients with an interest in purchasing the claims; these include the reports of the Van Dolah (1940), Entwhistle (1948) and Daffron (1978). Although, the work on all of the preceding mines is thorough and the lengths and assays of the actual channel sample on which grade and tonnage estimates are given, the location, construction, and calculation of the respective blocks of mineralization is not available and thus cannot be classified as a historical resource or reserve. Later work by significant companies such as Western Nuclear (Ristorcelli, 1980) and Goldfield Corporation (Freeman, 1986; Freeman 1989) generally display their systematic calculations but maps of the location of the mineralized blocks are still lacking. Nonetheless, estimates based on the data regardless of a company's size provides an important in-sight into exploration targets within the Emporia Vein System" Table 5.5.1.

Mine	Expl Tgt Size (tons)	Au (opt)	Ag (opt)	Au+ Ag	Sample Size	Reference
Emporia	74,500 to 200,000	0.01 to 0.96	0.14 to 169.28	NR	44 channel samples	Entwhistle (1944) Entwhistle (1948)
Emporia	120,000 to 200,000	0.102 to 0.188	4.62 to 11.07	NR	18 channel samples + 4 dump samples	Ristorcelli (1980)
Emporia	98,385 to 200,000	0.050 - 0.0752	3.45 - 4.27	NR	80 channel + 14 under- ground samples	Freeman (1986), Freeman (1989)

Table 5.5.1: Exploration Target for Emporia Mine, Sierra County, New Mexico(Based on Entwhistle, 1944;1948; Ristorcelli, 1980; Freeman, 1986; 1989).

The estimated potential of the quantity and grade of the mineralization listed above is conceptual in nature and there has been insufficient exploration to define a mineral resource using National Instrument 43-101 guidelines. Additionally, it is uncertain if further exploration will result in the targets being delineated as a mineral resource. The expressed potential of the targets is based on the results of extensive historical underground channel sampling and bulk sampling of surface dumps.

5.5.2 Ivanhoe Mine

"Most records relating to the estimated grades and/or tonnages of the Ivanhoe Claim and mine mirror those stated in independent reports between 1940 and 1989 found for the adjoining Emporia Mine (Van Dolah, 1940); Entwhistle, 1948; Entwhistle, 1948; and Daffron, 1978). This includes the high quality of raw data as well as lack of specific location and detailed calculations for the amount of mineralization stated to exist. Additionally, a single record documents the tenor of mineralization stockpiled in 1887 (Schmidt, 1953). Subsequent much later evaluations by larger companies such as Western Nuclear (Ristorcelli, 1980) and Goldfield Corporation (Freeman, 1986; Freeman 1989) are more detailed regarding their calculations of the mineralization present. The various data sets provide a valuable window into exploration targets within the Ivanhoe Vein System; see Table 5.5.2" Jackson (2012).

Table 5.5.2.: Exploration Target for Emporia Mine, New Mexico (Based on
Entwhistle, 1944; 1948; Ristorcelli, 1980; Freeman, 1986, 1989).

Mine	Expl Tgt Size (tons)	Au (opt)	Ag (opt)	Au+ Ag	Sample Size	Reference
Ivanhoe	14,500 to 150,000	0.01 to 1.68	0.26 to 60.5	NR	52 channel + 6 dump samples	Entwhistle (1944) Entwhistle (1948)
Ivanhoe	22,680 to 150,000	0.008 to 0.060	6.44 to 11.47	NR	55 channel samples + dump samples	Freeman, 1986 Freeman, 1989

The estimated potential of the quantity and grade of the mineralization listed above is conceptual in nature and there has been insufficient exploration to define a mineral resource using National Instrument 43-101 guidelines. Additionally, it is uncertain if

further exploration will result in the targets being delineated as a mineral resource. The expressed potential of the targets is based on the results of extensive historical underground channel sampling and bulk sampling of surface dumps.

5.5.3 Combined Emporia and Ivanhoe Mine

Historic work did not separate the respective sampling data for the Emporia and Ivanhoe Mine. This includes that obtained by consultants preparing reports for small companies (Van Dolah, 1940; Entwhistle, 1948) as well as the geologists for larger companies (Ristorcelli, 1980; Freeman, 1986).

Since the mineralization has been mined and milled as a consolidated unit, these data suggest exploration targets as summarized in Table 5.5.3

Table 5.5.3: Exploration Target for Combined Emporia and Ivanhoe Mines, Sierra County, New Mexico (Based on Entwhistle, 1944; Entwhistle, 1948; Ristorcelli, 1980; Freeman, 1986; and Freeman, 1989).

MINE	EXPL TGT SIZE (tons)	AU (opt)	AG (opt)	AU + AG	BASIS OF ESTIMATE	REFERENCE
Emporia & Ivanhoe	8,704 to 350,000	0.146 to 0.248	4.46 to 15.75	NR	7 composite bulk dump samples from 64 pits	Daffron (1978)
Emporia & Ivanhoe	191,000 to 350,000	0.005 to 2.470	1.93 to 39.00	NR	18 channel samples + 22 channel samples	Lemback (1978) Ristorcelli (1980)
Emporia & Ivanhoe	16,566 to 121,066	0.055 to 0.056	6.23 to 7.77	NR	94 channel samples + 55 channel samples	Freeman (1986) Freeman (1989)

The estimated potential of the quantity and grade of the mineralization listed above is conceptual in nature and there has been insufficient exploration to define a mineral resource using National Instrument 43-101 guidelines. Additionally, it is uncertain if further exploration will result in the targets being delineated as a mineral resource. The expressed potential of the targets is based on the results of extensive historical underground channel sampling and bulk sampling of surface dumps.

5.5.4 LG Claim Group

Seven core holes over the 1,700 foot (518 m) strike length of the most productive of three veins at the Little Granite Mine were undertaken in 1984 by a geologic consultant (DeWitt, 1984). Earlier, a series of vein and dump samples were collected and evaluated (Eveleth, 1980). Based on both sets of data and calculations, exploration targets are as listed in Table 5.5.4."

MINE	EXPL TGT SIZE (tons)	AU (opt)	AG (opt)	AU + AG	BASIS OF ESTIMATE	REFERENCE
Little Granite	150,000 to 300,000	0.050 to 0.120	7.3 to 15.6	NR	Un-determined number of vein and dump samples	Eveleth (1980)
Little Granite	165,603 to 300,000	0.005 to 11.421 Au	<0.05 to 182.69	NR	Seven DDH along strike length of 1700 feet	DeWitt (1984)

 Table 5.5.4: Exploration Target for Little Granite Mine, Sierra County, New Mexico (Based on Eveleth, 1980 and DeWitt, 1984).

The estimated potential of the quantity and grade of the mineralization listed above is conceptual in nature and there has been insufficient exploration to define a mineral resource using National Instrument 43-101 guidelines. Additionally, it is uncertain if further exploration will result in the targets being delineated as a mineral resource. The expressed potential of the targets is based on the results of extensive historical underground channel sampling and bulk sampling of surface dumps.

5.6 Historical Diamond Drilling

5.6.1 Ivanhoe and Emporia Patented Claims

The network and pattern of steep switchback roads over the western-most known vein of the Emporia Vein suggest that it has been systematically drilled. At least six (6) historic pads appear to exist. Anecdotal accounts indicate that these were constructed in the 1970s or 1980s by those operating the mine at that time. No record what-so-ever is available for the type, location, or logs of the holes.). "Jackson (2012) "No record exists of drilling on the Ivanhoe Claims." Jackson (2012)

5.6.2 Little Granite Claims

A drill program supervised by Dewitt in 1984 intersected vein material 5.78 to 11.82 feet (1.8 m to 3.6 m) thick in pierce points 165 feet (~50.3 m) apart situated in the immediate area of the old mine workings at depths of between 150 and 300 feet down-dip. No lithologic logs or drill site location maps whatsoever are available or known to exist, only pierce point locations relative to surface work exposures are provided.

Hole details and Assay results from this program are provided in table 5.6.2.

The work was not carried out under supervision of a Qualified Person. the assaying sampling, and QA/QC protocols are unknown, and therefore cannot be relied upon. These results are presented as historical information only.

Hole	azimuth	inclination	from	Interval	true	Ass	say
			feet	feet	feet	Au	Ag
						(oz/ton)	(oz/ton)
LG-1	252°	-78°	157	15.0	9.64	0.596	0.15
LG-2	0	-90°	216	16.0	10.28	1.256	0.81
LG-3	274°	-80°	193.5	14.0	9.0	2.346	3.82
LG-4	0	-90°	221	18.0	11.57	0.021	0.44
LG-5	0	-90°	139	9.0	5.78	0.985	0.65
LG-6	283°	-81°	190	17.0	11.82		
			4 s	amples of unk	nown	0.278	7.95
			1	individual leng	gths	0.1	5.2
						0.02	2.1
						0.05	0.2
LG-7	270°	-79°	441.5	14.5	9.32		
			3 samples of unknown individual lengths			0.576	0.15
						0.18	< 0.05
						0.546	< 0.05

Table 5.6.2: Collar Details and Assay data from 1984 Little Granite Mine DiamondDrilling Program, Sierra County, New Mexico (Compiled from Dewitt, 1984).

5.7 Historical Mineral Processing and Metallurgical Testing

A detailed summary of the various processing and testing programs on material derived from the various showings on the property was completed by Jackson (2012). The authors agree with the statement by Jackson (2012) that this type of information is very relevant to the future economic viability of any project and must be reported. Heading numbering has been changed to allow continuity within this report:

"It is extremely important to understand the metallurgical characteristics of any mineral deposit. The processes by which ore minerals are separated from waste rock and ultimately reduced to a saleable product can be complex and ore mineral recoveries highly variable. The effectiveness and costs of such milling and refining processes can determine the commercial viability of a mineral deposit." (Jackson, 2012)

There are no known mineral resources or reserves on any of the properties that are the subject of this report. All historical reports of resources and reserves, including statements of grades associated with sampling, production, tonnages, widths, and lengths, do not satisfy National Instrument 43-101 standards and should not be relied upon. This background data is included for reference, transparency, and to qualify the recommendations of further exploration programs.

5.7.1 Emporia and Ivanhoe Claims

5.7.1.1 Van Dolah Report (1940)

"Guy V. Martin, a Metallurgical Engineer residing in Albuquerque, NM performed a series of flotation tests on mineralization obtained from the Ivanhoe and Emporia Mines (Van Dolah, 1940). A total of 26 dump samples, representing a weight of 1,385 lb/sample (627 kg/sample), were utilized."

Results of all fractions/products of the test milling are shown in **Table 5.7.1.1**. The ratio of concentration was 1:17."

The higher grade dumps samples may reflect mineralization that was more enriched by supergene processes than that in deeper underground channel samples." (Jackson, 2012)

Commodity	Heads (Assayed:OPT)	Heads (Calculated OPT)	Concentrates (OPT)	Tails(Assayed)	Recovery in Conc from Calc Heads
Gold	0.64	0.602	9.18	0.08	87.40%
Silver	20.53	22.7	369.78	1.6	93.40%
Copper	0.70% Cu	NR	7.84% Fe??	0.14% Cu	77.30%
Iron	NR	NR	13.9% Cu??	NR	NR
INSOLUBLE	NR	NR	53.4% Insol	NR	NR

 Table 5.7.1.1 - G.V. Martin Flotation Test, Emporia-Ivanhoe Mines, Sierra County, New Mexico (Van Dolah, 1940)

5.7.1.2 Metallurgy: Chem-Tech from Hazen Research, Inc (1978)

"Hazen Research, Inc in 1978 conducted a study of the Emporia-Ivanhoe Mines mineralization utilizing 57 underground channel and 3 surface dump samples with an average weight of 14 lb/sample (6.3 kg/sample) processed from the two mines (Shaw, 1978). The dump samples were subsequently excluded from further study. The average head grade of composited material was 0.110 opt Au, 6.10 opt Ag, and an unknown percent copper (Shaw, 1978). The sample was then split into three fractions. Subsequently, they were respectively processed via (1) jigging, (2) tabling + floatation, and (3) conventional flotation. Hazen's work, although preliminary in nature, indicated that the last method was the most effective practical one (Shaw, 1978). (Jackson, 2012)" Results of these tests are presented in the tables below

Table 5.7.1.2.1	Hazen Research Jig Test, Emporia-Ivanhoe Mines,	Sierra County,
	New Mexico (Shaw, 1978)	

Product	Weight %	Au (opt)	Ag (opt)	Au-Distribution	Ag-Distribution
Concentrate	8.84%	0.645	12.32	46.8% of Au	18.8% of Ag
Middling	2.12%	0.125	5.53	2.1% of Au	2.0% of Ag
Tailing	89.04%	0.07	5.17	51.0% of Au	79.02% of Ag
Head-Calc	100.00%	0.122	5.81	100.0% of Au	100.0% of Ag

Table 5.7.1.2.2: Hazen Research Minus 20 Mesh Tabling Tests, Emporia-Ivanhoe Mines, Sierra County, New Mexico (Shaw, 1978)

Product	Weight %	Au (opt)	Ag (opt)	Au-Distribution	Ag-Distribution
Cleaner Conc (1)	14.93%	0.45	14.07	52.7% of Au	37.2% of Ag
Cleaner Tail (2)	34.25%	0.07	3.7	18.8% of Au	22.5% of Ag
Middling (3)	4.11%	0.09	4.62	2.9% of Au	3.4% of Ag
Tailing (4)	46.71%	0.07	4.46	25.6% of Au	36.9% of Ag
Head (Calc)	100.00%	0.128	5.64	100.0% of Au	100.0% of Ag
Product 1 & 2	49.18%	0.185	6.85	71.5% of Au	59.7% of Ag

Table	5.7.1.2.3: Hazen	Research Minus 48 Mesh Tabling Tests, Emporia-Ivanhoe
	Mines	, Sierra County, New Mexico (Shaw, 1978)

Product	Weight %	Au (opt)	Ag (opt)	Au-Distribution	Ag-Distribution
Cleaner Conc (1)	4.45%	1.73	51.02	60.7% of Au	39.3% of Ag
Cleaner Tail (2)	30.13%	0.045	3.52	10.7% of Au	18.4% of Ag
Middling (3)	3.83%	0.225	4.38	6.8% of Au	2.9% of Ag
Tailing (4)	61.59%	0.045	3.67	21.6% of Au	39.4% Ag
Head (Calc)	100.00%	0.127	5.76	100.0% of Au	100.0% of Ag
Product 1 & 2	34.58%	0.262	9.63	71.4% of Au	57.7% of Ag

"In subsequent tests, Wilfley Tabling was followed by flotation of the table tailings. The best combined concentrate generated assayed 0.300 opt Au and 14.0 opt Ag and represented gold and silver recoveries of 95 and 93 percent respectively (Shaw, 1978). The weight recovery, however, of this concentrate was 38.74 percent of that in the orefeed which was considered excessive. This product would likely have to be re-ground and further up-graded by tabling or flotation. These operations obviously add considerably to the capital costs and complexity of the operation." (Jackson, 2012)

Grind % Passing -200 Mesh	Product	Weight %	Au (opt)	Ag (opt)	Au Dist.	Ag Dist.
37.80%	Rougher Concentrate	4.11%	2.27	112.5	82.90%	80.90%
	Rougher Tailing	95.89%	0.02	1.2	17.10%	19.90%
.د	Head (Calculated)	100.00%	0.112	5.77	100.00%	100.00%
51.60%	Rougher Concentrate	3.98%	2.63	113.8	87.90%	84.30%
	Rougher Tailing	96.02%	0.015	0.88	12.10%	15.70%
.د	Head (Calculated)	100.00%	0.119	5.37	100.00%	100.00%
70.20%	Rougher Concentrate	4.14%	2.66	131.14	88.40%	90.40%
"	Rougher Tailing	95.86%	0.015	0.6	11.60%	9.60%
.د	Head (Calculated)	100.00%	0.124	6	100.00%	100.00%

Table	5.7.1.2.4: Hazen	Research Conventional Flotation Tests, Emporia-Ivanhoe
	Mines,	Sierra County, New Mexico (Shaw, 1978)

5.7.1.3 St. Cloud (Goldfield) Acquisition (1989)

"Metallurgical tests conducted between 1986 and 1989 by The St. Cloud Mining Company, a subsidiary of Goldfield Corporation, demonstrated the amenability of the Emporia and Ivanhoe Mines to froth flotation (Freeman, 1989). No details of their work are available. St. Cloud also reviewed in detail Hazen Research's grinding and flotation work undertaken in 1978 on the same mines and found them satisfactory (Freeman, 1989; Shaw, 1978)."(Jackson, 2012)

5.7.2 Little Granite Claims

5.7.2.1: Eveleth Report #2 (1980) - *Mr. Frank Turley, the owner/operator of the Little Granite Mine, extracted a 2.5 ton bulk sample from the workings. Subsequently, a set of*

two concentrates were generated by the Bahamian Refining Company of Phoenix, AZ. (Eveleth, 1980b)". Results are summarized in Table 5.7.2.1

Product	Contained Au	Contained Ag
Concentrate #1	95.75 oz Au	3,039.44 oz Ag
Concentrate #2	8.44 oz Au	465.13 oz Ag
Tails	0.39 oz Au	7.35 oz Ag

 Table 5.7.2.1 – Gold Silver Content of 2.5 ton Bulk Sample Concentrate from the Little Granite Mine, Sierra County, New Mexico (Eveleth, 1980b).

There are no known mineral resources or reserves on any of the properties that are the subject of this report. All historical reports of resources and reserves, including statements of grades associated with sampling, production, tonnages, widths, and lengths, do not satisfy National Instrument 43-101 standards and should not be relied upon. This background data is included for reference, transparency, and to qualify the recommendations of further exploration programs.

6.0 Geological Setting

6.1 Regional Geology

6.1.1 Stratigraphy

The Regional Geology of the Property area; the Choride District, was outlined in detail by Harrison (1986). A regional geology map is provided in Figure 6.1.1.

"The oldest Tertiary unit in the Chloride district is the Rubio Peak Formation. Rubio Peak overlies Paleozoic rocks with angular unconformity and is divisible into a lower, sediment-dominated sequence overlain by a volcanic-dominated sequence. Very large exotic blocks of Paleozoic rocks occur as landslide deposits within lower Rubio Peak Formation. Overlying Rubio Peak are Kneeling Nun Tuff, sandstone of Monument Park-Caballo Blanco Tuff-tuff of Koko Well, basaltic andesite of Poverty Creek, tuff of Little Mineral Creek-tuff of Stiver Canyon, and Moccasin John Rhyolite. Strike-slip faulting along north-northeast trends cut only Rubio Peak and older rocks. High-angle normal faults along north, northwest, north-northeast to northeast and east trends cut the entire stratigraphic section. Epithermal vein deposits occupy al fault trends."

6.1.2 Structure

"The structural fabric of the Chloride mining district and environs is the result of complex interaction between dynamic, regional-tectonic forces and local, magmatically influenced structures."

"The dominant structural style found in the Chloride mining district is high-angle normal faulting along north, northwest, north-northeast to northeast, and lesser east trends. Normal faults along these trends cut older strike-slip faults as well as rocks from the entire stratigraphic section and are the principal hosts for epithermal vein deposits in the mining district. Normal faulting occurred before, during, and after vein mineralisation. Normal faulting began after Poverty Creek deposition, nearly coincidental with intrusion of Moccasin John Rhyolite flow-dome complexes."

"The Santa Rita lineament in north-central Black Range is a few kilometres wide zone that acts as a hinge line for structural blocks tilted in different directions on opposite sides of the lineament. An excellent example is the Winston graben, a structure that is tilted down to the northwest with its hinge along the Santa Rita lineament." Harrison (1986)

6.1.3 Mineralisation

Deposit types and mineralisation in the Chloride District, and specifically the "Veta Madre" or "Grand Master Lode" on which the Emporia and Ivanhoe claims reside, is covered in detail by Harrison, (1986). The distribution of these deposits is shown in Figure 6.1.3

"Epithermal mineral deposits in the Chloride mining district occur as open-space, fissure-filling with or without disseminated mineralization in adjacent wallrocks. Vein deposits consist dominantly of quartz, calcite (fluorite, barite) gangue material, with lesser sulphide and native-metal mineralisation occurring in distinct, structurally controlled shoots. Rocks of the Rubio Peak Formation are the primary hosts for vein deposits, with a few occurrences in Kneeling Nun Tuff, Basaltic andesite of Poverty Creek occurs in the Hanging wall of one northern vein, but its emplacement there is believed to be post-mineralisation.

Quartz occurs as multiple pulses of coarse-grained to vuggy to crypto-crystalline and as milky white, clear, or amethystine varieties. Calcite, fluorite, and barite mineralisation always occur as latest-stage vein filling, Quartz and adularia mineralisation occur concurrently with sulphide ad gold mineralisation.

Districtwide sulphide mineralogy is varied in both vertical and lateral dimensions. In a vertical direction, both upper precious-metal and lower base-metal horizons described by Buchanan (1981) for epithermal systems are recognized in individual deposits of the Chloride district. Most of the Au mineralisation found in the Chloride district occurs in the upper precious-metal horizon of individual deposits."

"Epithermal vein systems in the northern part of the district exist along dominantly north trends with lesser northeast and northwest trends. The longest continuous vein system in the district, the Great Master Lode, occurs in this area, winding along north and northeast trends for more than 11 km. Vein adularia at the Minnehaha mine, on the Great Master Lode, yielded a K-Ar age of 26.2 + - 1.2my, nearly identical to dates for stage 2 mineralisation in the southern half of the district."

"Sulfides in northern vein systems occur primarily as dark, very fine-grained bands, pods, and streaks. Mineralogy is principally acanthite, tetrahedrite, and pyrite with lesser bornite, chalcopyrite, and native Au occurrences. A rhyolite flow-dome complex located in Sheep Canyon is possibly a control for northern epithermal mineralisation..."



Figure 6.1.1: Regional Geology



Figure 6.1.2: Mineral Deposits in the Chloride Mining District, Sierra County, New Mexico.

6.2 Property Geology

There is no record of any mapping done at a "property scale" on any of the properties. The most detailed work on the geology of the property was performed by Harrison et al. across the Truth or Consequences Quadrangle(1992).

A stratigraphic column for the map area is provided in figure 6.2.1 and property scale view of his map is provided in figure 6.2.2.

A description of the stratigraphic units that comprise the property and its vicinity is taken from Harrison OF390 and provided in Table 6.2.

A very basic geology plan and section of the Ivanhoe-Emporia claims was made by Entwhistle (1948) and is provided in Figure 6.2.3.



Figure 6.2.1 - Pennsylvanian thru Tertiary Stratigraphy, Northern Chloride Sub-District, Sierra County, New Mexico (Harrison, 1986).



Figure 6.2.2 – Property Geology Map, Winston Project, (Geology layer from Harrison et al, 1992).

Table 6.2: Open File 390 (Harrison et al., 1992) Map Units in Vicinity of Little Granite Claims

Map Unit	Description
Трс	Basaltic andesite of Poverty Creek Multiple, dark, aphanitic lava flows of basaltic andesite through dacite composition with minor intercalated fine-grained volcaniclastic deposits; numerous WAr ages and A r / A r age constraints indicate an age range of 29.1-29.4 Ma; numerous, widespread flow-dome complexes and dikes; regional stratigraphic unit throughout the western half of map area.
Tmps	Sandstone of Monument Park Volcaniclastic sandstone, siltstone, and local pebble- cobble conglomerate deposits; sandstone beds contain of quartz, sanidine, and plagioclase grains; conglomerate beds contain clasts of Kneeling Nun Tuff.
Tkw	Tuffs of Koko Well: Two rhyolite ash-flow tuffs; directly overlie Kneeling Nun Tuff in northwestern corer of map area; the upper tuff is crystal poor with approximately 5% sanidine, < 1 % plagioclase, and trace quartz and biotite phenocrysts, and is probably correlative to the Rock House Canyon Tuff found in the northern Mogollon-Datil volcanic field; the lower tuff is moderately crystal rich with approximately 6% sanidine, 2-3% plagioclase, 1% biotite, and trace hornblende and pyroxene phenocrysts.
Tkn	Kneeling Nun Tuff, Rhyolite ash-flow tuff; crystal rich with 20-45% phenocrysts of quartz, sanidine, plagioclase, and biotite; McIntosh (1989) obtained A r/Ar age of 34.9 Ma for this unit; Kneeling Nun Tuff is a major stratigraphic unit throughout the western half of the map; source area is the Emory caldera complex, the northern lobe of which is in the southwestern quarter of the map (see Abitz, 1984; 1989).
Ts	Dominantly rhyolite ash-flow tuffs; includes tuff Rocque Ramos Canyon and tuff of Victoria Tank in Sierra Cuchillo-Animas uplift and Black Range.
Тгр	Rubio Peak Formation, debris flow-dominated unit - Lower, volcaniclastic- dominated Rubio Peak Fm. Dominantly massive, heterolithic, matrix-supported debris flow deposits, with pebbles to boulders of aphanitic and porphyritic intermediate volcanic rocks. Interbeds with sandstones to the south. Surrounds landslide blocks of limestone (Pme).



Figure 6.2.3 - Emporia-Ivanhoe Mine Plan Map and Cross-section, Sierra County, New Mexico Entwhistle (1948)

7.0 Deposit Types

As discussed in section 6.1.3: Mineralisation, deposit styles in the Chloride Mining District are classified as belonging to the Low Sulphidation Epithermal Vein type that was summarised in detail by Panteleyev et al. (1996) and is provided in Table 7.0. Manto deposits that occur across a belt approximately 20km south of the property are associated with limestones of a similar age to those rocks found within and near the Little Granite Property. Limestones are not associated with any mineralisation know to date on the property so manto type deposits can only be considered for deep and blind discovery potential currently have no bearing on the property value.

Table 7.0: Ore Deposit Model: Epithermal Au-Ag Low Sulphidation (Panteleyev, 1996)		
SYNONYMS	(Epithermal) adularia-sericite; quartz-adularia, Comstock, Sado-type; bonanza Au-Ag; alkali chloride (hydrothermal).	
COMMODITIES (BYPRODUCTS)	Au, Ag (Pb, Zn, Cu).	
EXAMPLES (British Columbia (MINFILE #) - International)	Toodoggone district deposits - Lawyers (94E066), Baker (94E026), Shas (94E050); Blackdome (92O050- 053); Premier Gold (Silbak Premier), (104B054); Cinola (103F034); Comstock, Aurora (Nevada, USA), Bodie (California, USA), Creede (Colorado, USA), Republic (Washington, USA), El Bronce (Chile), Guanajuato (Mexico), Sado, Hishikari (Japan), Colqui (Peru), Baguio (Philippines) Ladolam (Lihir, Papua- New Guinea).	
GEOLOGICAL CHARACTERISTICS		
CAPSULE DESCRIPTION	Quartz veins, stockworks and breccias carrying gold, silver, electrum, argentite and pyrite with lesser and variable amounts of sphalerite, chalcopyrite, galena, rare tetrahedrite and sulphosalt minerals form in high- level (epizonal) to near-surface environments. The ore commonly exhibits open- space filling textures and is associated with volcanic-related hydrothermal to geothermal systems.	
TECTONIC SETTING	Volcanic island and continent-margin magmatic arcs and continental volcanic fields with extensional structures.	
DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING	High-level hydrothermal systems from depths of ~1 km to surficial hotspring settings. Regional-scale fracture systems related to grabens, (resurgent) calderas, flow-dome complexes and rarely, maar diatremes. Extensional structures in volcanic fields (normal faults, fault splays, ladder veins and cymoid loops, etc.) are common; locally graben or caldera-fill clastic rocks are present. High-level (subvolcanic) stocks and/or dikes and pebble breccia diatremes occur in some areas. Locally resurgent or domal structures are related to underlying intrusive bodies.	
AGE OF MINERALIZATION	Any age. Tertiary deposits are most abundant; in B.C. Jurassic deposits are important. Deposits of Paleozoic age are described in Australia. Closely related to the host volcanic rocks but invariably slightly younger in age (0.5 to 1 Ma, more or less).	
HOST/ASSOCIATED	Most types of volcanic rocks; calcalkaline andesitic compositions	

ROCK TYPES	predominate. Some deposits occur in areas with bimodal volcanism and extensive subaerial ashflow deposits. A less common association is with alkalic intrusive rocks and shoshonitic volcanics. Clastic and epiclastic sediments in intra-volcanic basins and structural depressions.
DEPOSIT FORM	Ore zones are typically localized in structures, but may occur in permeable lithologies. Upward-flaring ore zones centred on structurally controlled hydrothermal conduits are typical. Large (> 1 m wide and hundreds of metres in strike length) to small veins and stockworks are common with lesser disseminations and replacements. Vein systems can be laterally extensive but ore shoots have relatively restricted vertical extent. High-grade ores are commonly found in dilational zones in faults at flexures, splays and in cymoid loops.
TEXTURE/STRUCTURE	Open-space filling, symmetrical and other layering, crustification, comb structure, colloform banding and multiple brecciation.
ORE MINERALOGY (Principal and subordinate)	Pyrite, electrum, gold, silver, argentite; chalcopyrite, sphalerite, galena, tetrahedrite, silver sulphosalt and/or selenide minerals. Deposits can be strongly zoned along strike and vertically. Deposits are commonly zoned vertically over 250 to 350 m from a base metal poor, Au-Ag-rich top to a relatively Ag-rich base metal zone and an underlying base metal rich zone grading at depth into a sparse base metal, pyritic zone. From surface to depth, metal zones contain Au- Ag-As-Sb-Hg, Au-Ag-Pb-Zn-Cu, Ag- Pb-Zn. In alkalic hostrocks tellurides, V mica (roscoelite) and fluorite may be abundant, with lesser molybdenite.
GANGUE MINERALOGY (Principal and subordinate)	Quartz, amethyst, chalcedony, quartz pseudomorphs after calcite, calcite; adularia, sericite, barite, fluorite, Ca- Mg-Mn-Fe carbonate minerals such as rhodochrosite, hematite and chlorite.
ALTERATION MINERALOGY	Silicification is extensive in ores as multiple generations of quartz and chalcedony are commonly accompanied by adularia and calcite. Pervasive silicification in vein envelopes is flanked by sericite-illite- kaolinite assemblages. Intermediate argillic alteration [kaolinite-illite- montmorillonite (smectite)] formed adjacent to some veins; advanced argillic alteration (kaolinite-alunite) may form along the tops of mineralized zones. Propylitic alteration dominates at depth and peripherally,.
WEATHERING	Weathered outcrops are often characterized by resistant quartz \pm alunite 'ledges' and extensive flanking bleached, clay-altered zones with supergene alunite, jarosite and other limonite minerals.
ORE CONTROLS	In some districts the epithermal mineralization is tied to a specific metallogenetic event, either structural, magmatic, or both. The veins are emplaced within a restricted stratigraphic interval generally within 1 km of the paleosurface. Mineralization near surface takes place in hotspring systems, or the deeper underlying hydrothermal conduits. At greater depth it can be postulated to occur above, or peripheral to, porphyry and possibly skarn mineralization. Normal faults, margins of grabens, coarse clastic caldera moat-fill units, radial and ring dike fracture sets and both hydrothermal and tectonic breccias are all ore fluid channeling structures. Through-going, branching, bifurcating, anastamosing and intersecting fracture systems are commonly mineralized. Ore shoots form where dilational openings and cymoid loops develop, typically where the strike or dip of veins change.

	Hangingwall fractures in mineralized structures are particularly favourable for high-grade ore.
GENETIC MODEL	These deposits form in both subaerial, predominantly felsic, volcanic fields in extensional and strike-slip structural regimes and island arc or continental andesitic stratovolcanoes above active subduction zones. Near- surface hydrothermal systems, ranging from hotspring at surface to deeper, structurally and permeability focused fluid flow zones are the sites of mineralization. The ore fluids are relatively dilute and cool solutions that are mixtures of magmatic and meteoric fluids. Mineral deposition takes place as the solutions undergo cooling and degassing by fluid mixing, boiling and decompression.

8.0 Mineralization

8.1 Ivanhoe and Emporia Claims

The mineralogy of the patented Ivanhoe and Emporia claims was summarised by Harley (1934) and extensive sampling and mapping was performed by by Entwhistle (1944). The resultant longitudinal section is a very large map and has been split into two composited views; a southern Ivanhoe view and a Northern Emporia view, provided in Figures 8.1.1 and 8.1.2.

Emporia: "The walls of the vein are andesite breccia, and the fractured vein zone is said to reach a maximum width of 40 feet in one place. Good ore is said to have been mined in thesouth drift. The vein consists of a gouge-filled hanging-wall seam and two banded and crustified quartz veinlets up to 12 inches wide traversing a zone of brecciated andesite, which is partly silicified and grades into the unbroken footwall. Just above the old shaft, a recent prospect hole has been sunk on a quartz vein that is 20 inches wide and contains gold, silver and copper. This vein is apparently dipping toward the main vein and should connect with it about 50 feet below the surface." Harley, (1934)

Ivanhoe: "The Ivanhoe mine is on a vein which strikes northeast and dips southeast, and which must cross the Emporia vein in a draw within 300 feet of the Emporia shaft, although the point of crossing has apparently never been definitely located. The shaft is 380 feet deep, according to report, and there are three levels with 600 feet of lateral workings. Considerable high-grade ore has been won from this mine, but it is said that the bottom level showed an extreme pinching of the vein, although it could still be followed along its course. One nearly vertical ore shoot had a maximum stope length of over 100 feet. Both walls of the vein consist of andesite breccia. It is said that the first ore found in this mine assayed 17 to 25 ounces gold and over 100 ounces in silver to the ton and about 31/2 per cent copper. While the mine was yet in the early development stage it was sold to Robert G. Ingersoll, who appeared at the collar of the shaft one day with his engineer and at once completed a deal involving the payment of \$60,000 on terms of \$10,000 down and the balance in 30 days. The mine is reported to have produced' \$100,000, but it never paid a dividend. The main shaft was sunk to a depth of 400 feet, using a hand windlass for hoisting. Lessees on the property are said to have secured much very high grade ore from time to time by close hand sorting. A recent shipment of a few tons of combined Ivanhoe-Emporia gold ore is said to have returned over \$200 per ton net." Harley, (1934)

There are no known mineral resources or reserves on any of the properties that are the subject of this report. All historical reports of resources and reserves, including statements of grades associated with sampling, production, tonnages, widths, and lengths, do not satisfy National Instrument 43-101 standards and should not be relied upon. This background data is included for reference, transparency, and to qualify the recommendations of further exploration programs.



Figure 8.1.1 Ivanhoe Mine Longsection. Cropped from Entwhistle 1944. Scale: Mine levels are spaced at 100' intervals



Figure 8.1.2 Emporia Mine Longsection. Cropped from Entwhistle 1944. Scale: Mine levels are spaced at 100' intervals

8.2 LG Claims and Little Granite Gold Claims

Dewitt (1984) provides the most detailed description of the mineralisation on the Little Granite unpatented claims and constructed the only known maps specifically made of the Little Granite mine workings (Figures 8.2.1, 8.2.2):

"The Little Granite mine is located along a quartz vein system in moderately to severely altered, grayish-green aphanitic andesite. Alteration of the andesite is propylitic. The vein parallels the dominant joint set within the andesite~ The major workings are within an ore shoot approximately 165 feet long, where two of the larger veins combine.

Generally, the vein system can be described as two major veins called the Little Granite vein and the West, or Jap vein. The veins are semi-parallel, striking roughly north, and dipping 70 degrees to 80 degrees east.

The West vein consists of a gouge filled, limonite stained seam with andesite breccia and minor quartz stringers. It carries very poor values of gold and silver in its entire exposed length.

The Little Granite vein is a well developed quartz vein containing gold, silver, and occasional copper. The vein at the Main shaft is only 12 to 18 inches wide but increases in width with depth. It is 4 feet wide on the 65 foot level. It is continuous along its strike to a point 100 feet north of the Main shaft, where it merges with the West vein in the 0-1 Decline to form a complicated brecciated zone.

Within the ore shoot, the grade of the ore also increases with depth. This can be seen in the assays of samples taken from the different levels of the mine.

The high grade ore shoot is bounded by the escapeway to the north and by a small fault 20 feet south of the Main shaft. A continuation of high grade ore to the south of the fault is very likely, as good ore is present in the stope on the south termination of the 43 foot level. The northern boundary of the ore shoot also appears to be extended with depth.

Where exposed to the north of the ore shoot by the 43 foot level and by the 0-1 Decline, the Little Granite vein remains a well formed quartz vein for a distance of 540 feet. It is 12 inches wide at the portal of the decline but widens to nearly 3 feet 370 feet north of the portal. This increase in width occurs over a depth increase or JO ~eet, which is similar to the depth • width ratio observed in the other mine worktngs. It must be pointed out that this increase is general in nature, and is not a steady increase.

South of the ore shoot, the Little Granite vein can be traced for over 1,000 feet. This portion of the vein is unexplored and offers an excellent potential for ore. Plate 1 is a geologic map of the Little Granite vein as exposed in the 0-1 Decline. It is intended to show the general characteristics of the vein."

There are no known mineral resources or reserves on any of the properties that are the subject of this report. All historical reports of resources and reserves, including statements of grades associated with sampling, production, tonnages, widths, and lengths, do not satisfy National Instrument 43-101 standards and should not be relied upon. This background data is included for reference, transparency, and to qualify the recommendations of further exploration programs.



Figure 8.2.1 Little Granite Mine: Composite level with cross section, South End (modified after Dewitt, 1984)



Figure 8.2.2 Little Granite Mine: Composite level with cross section, North End (modified after Dewitt, 1984)

9.0 Exploration

No exploration has been carried out on the property by Sequoia Resources. One of the authors (LB) carried out a preliminary site inspection on November 13th and 14th, 2013, together with representatives of the BLM and Santana (Turkey Creek) Ranch.

Access was via a 4WD trail down Turkey Creek from the west; the trail is currently suitable for ATVs and light 4WD vehicles. Some upgrading would be required for heavier vehicles.

The site visit confirmed the location of the main infrastructure mentioned in the De Witt report. Several possible old drill sites were located, along with fragments of small diameter (AX or similar) size diamond drill core. The mine decline on the north side of Turkey Creek driven subsequent to the De Witt (1984) report was inspected. Both the decline and the Main Shaft on the south side of Turkey Creek are potential sources of water for an initial drill program.

The visit was part of an examination of a (then) much larger property, and preliminary in nature. Six composite rock chip samples were collected from the current Little Granite property – three from dump material which appears to have been excavated from the main decline to the north of Turkey Creek, one of older dump material immediately adjacent to the Jap Shaft, one from the outcropping quartz vein in the north wall of the collapsed Main Shaft, and one from an adit driven on a cross vein at the south end of the Little Granite property.

All samples were personally transported to Vancouver and submitted for multi-element analysis to Acme Analytical Laboratories in Vancouver for 36 element analysis by ICP-MS, with over-limit precious metal samples being reassayed by fire assay. The assay results confirmed the presence of significant gold and silver values in all samples from the Little Granite Vein.

The site visit confirmed the presence of a well-developed steeply-dipping epithermal quartz vein extending for at least 150 metres along strike. The vein has been partially mined from underground and more recently explored via a decline. At surface, the vein ranges from 35 to 60 cm in width within a larger envelope of altered andesitic volcanics.

Three composite rock samples were collected from the extensive quartz dump material believed to have been excavated from the decline in the mid-1980s. Two of these samples, representative of the main style of quartz, returned values of 179 g/t silver and 2.9 g/t gold and 170 g/t silver and 6.7 g/t gold respectively. This material shows classic boiling textures and is thought to represent material from the upper portion of an epithermal system. A composite sample of grey, finer-grained quartz material from one of the dumps returned values of 1,439 g/t silver and 25.2 g/t gold. This supports reports of higher grade "bonanza" shoots being present within the vein as described in accounts of the historic mining.

10.0 Drilling

No drilling has been performed by Sequoia Gold and Silver Ltd.

11.0 Sampling Method and Approach

During the site visit in November 2013, six rock samples were collected by Lindsay Bottomer P.Geo. from the Little Granite property. These samples were reconnaissance in nature, designed to provide confirmation of the order-of-magnitude historic precious metal grades reported from the property.

The four samples collected from dumps in the vicinity of the decline portal and adjacent to the Jap Shaft consisted of 10 or more pieces of rock (quartz and/or altered hostrock) representative of the material visible on the dump piles. The remaining two samples were chip samples taken across the Little Granite vein where exposed in the north wall of the collapsed Main Shaft, and of a cross vein exposed in the face of the Southwest Adit.

12.0 Sample Preparation, Analyses and Security

All samples were submitted to Acme Analytical Laboratories in Vancouver, a NATAcertified laboratory, where they were crushed, pulverised, and a portion then analysed for 36 elements by ICP-MS. Four samples which returned over limit precious metal results were re-assayed by fire assay.

The samples were personally collected on site by Lindsay Bottomer P.Geo., and transported by him to Vancouver. In Vancouver, they were delivered to Acme Labs in person for preparation and analysis.

13.0 Data Verification

Due to the small number of samples collected and reconnaissance nature of the property visit, no additional duplicate or check samples were submitted. The laboratory carried out internal duplicate and blank assays, the results of which were reported to the client.

14.0 Adjacent Properties

There are no properties immediately adjacent to the Emporia-Ivanhoe and Little Granite properties, however they lie at the southern extent of the "Veta Madre" or "Grand Master Lode" which hosts thirteen patent claims currently in good standing but no recent work has been publicly documented. These patent claims are depicted in figure 14.1

Harrison, (1988, 1989) reported over 2 million ounces of silver and 10,000 ounces of gold along with significant copper, lead, and zinc were produced at the St. Cloud, US Treasury and Midnight mines between 1982 and 1987.

Getchell Gold Corp (a subsidiary of Barrick Gold Corp.) currently holds 8 claims over the former Silver Monument Mine located three kilometres south-southwest and New Mexico Mining Corp (THEMAC Resources Group Ltd.) owns unpatented claims containing their Copper Flats copper deposit approx. 40 km to the south-southeast that is scheduled for production in 2019.


Figure 14.1 Patent Claims along the "Grand Master Lode" to the north of the Winston Project, Sierra County, New Mexico

15.0 Mineral Processing and Metallurgical Testing

The company has carried out no mineral processing or metallurgical testing on mineralization from the properties or anywhere in the vicinity.

16.0 Mineral Resource and Mineral Reserve Estimates

The company has not outlined any economic reserves or resources at this time.

17.0 Other Relevant Data and Information

The authors know of no other relevant data or information not included or referenced in this report.

18.0 Interpretation and Conclusions

There is substantial work performed and reported upon and in the immediate vicinity of, the Little Granite and Ivanhoe and Emporia properties to indicate that they have good exploration potential to host a low-sulphidation type gold-silver mineral deposit of sufficient grade and tonnage to merit a profitable mining operation.

19.0 Recommendations

There is sufficient data and geological observations regarding the mineral potential of the Little Granite and Emporia/Ivanhoe claims to merit a two phase exploration program.

Phase 1 would attempt to better define the surface expression of the structure that hosts the Little Granite vein along strike to the north and south of its known extents and to also investigate, as suggested by Jackson (2012), the north-south trending gold in soil anomalies outlined to the east by the 2011 Redline Minerals survey. Sampling should be performed at a density of 200 x 40 metres on east-west oriented lines centred on the Little Granite Shaft and up to a kilometre north and south of Turkey Creek. A tighter 100 x 20 metre spacing is proposed proximal to the showing. A sample grid is supplied in Figure 19.1 and budget outline is supplied in Table 19.1.

Phase 2 would see a minimum of 850 metres of drilling to test the veins at depth and along strike of past mine workings. It should attempt to verify 2 or 3 of the shallow intersections from the 1984 drill program on the Little Granite vein and also test the deeper intersection from Hole 7 of that program. Four drillholes at a 25 x 50 metre (down-dip x along strike) pierce point density to the north and south of that deeper pierce point is recommended. A budget outline is supplied in Table 19.2





Geochemistry and Surveying, Proposed Budget										
Item	<u>#</u>	<u>units</u>	Rate		<u>amount</u>					
Senior Geologist										
compilation, coordination	3	days	\$	800	\$	2,400				
Project Management,	10	days	\$	800	\$	8,000				
Interpretation, Reporting	5	days	\$	800	\$	4,000				
Legal Survey	3	days	\$	2,000	\$	6,000				
Geochemistry										
Sampler Crew Chief (25 samples/day)	16	days	\$	500	\$	8,000				
Sampler (25 samples/day)	16	days	\$	400	\$	6,400				
Road rehab/maintenance	2	days	\$	1,000	\$	2,000				
airfares (crew, management, etc.)	6	return	\$	1,000	\$	6,000				
Accommodation/food	19	days	\$	500	\$	9,500				
Vehicles: truck, ATV	19	days	\$	300	\$	5,700				
fuel	19	days	\$	100	\$	1,900				
Assays	800	sample	\$	32	\$	25,600				
standards/blanks	60		\$	3	\$	180				
shipping	3	lots	\$	100	\$	300				
Communication, sat phone	1	month	\$	500	\$	500				
Subtotal					\$	86,480				
Administration @10%					\$	8,648				
Contingency @ 10%					\$	8,648				
Grand Total					\$	103,776				

Table 19.1: Little Granite Gold Property: Phase 1 Exploration Program, Soil Geochemistry and Surveying, Proposed Budget

Proposed Budget										
Item	<u>#</u>	<u>units</u>	rate		<u>amount</u>					
Senior Geologist										
compilation, coordination	5	days	\$	800	\$	4,000				
project management, on site	9		\$	1,000	\$	9,000				
Interpretation, Reporting	15	days	\$	800	\$	12,000				
Junior Geologist: core logging, GIS	20	days	\$	600	\$	12,000				
Surface Mapping, Surveying	5	days	\$	600	\$	3,000				
Road rehab/maintenance	5	days	\$	1,000	\$	5,000				
Airfares (crew, management, etc.)	10	return	\$	1,000	\$	10,000				
Accomodation/food	20	days	\$	500	\$	11,000				
Vehicles (trucks, ATV)	20	days	\$	500	\$	10,000				
fuel	19	days	\$	100	\$	1,900				
-										
Drilling										
Metre rate	850	metres	\$	100	\$	85,000				
field costs	850	metres	\$	20	\$	17,000				
average production	60	metres/day								
Mobilisation	1	flat rate	\$	10,000	\$	10,000				
Fuel	14	drums	\$	200	\$	2,800				
<u>core trays</u>	293	3 metre box	\$	10	\$	2,930				
Assays	170	samples	\$	30	\$	5,100				
standards/blanks	17		\$	35	\$	595				
shipping	3	lots	\$	100	\$	300				
Communication, sat phone	1	month	\$	500	\$	500				
Subtotal					\$	202,125				
Administration @15%					\$	30,319				
Contingency @ 10%					\$	20,213				
Grand Total					\$	252,656				

 Table 19.2: Little Granite Gold Property: Phase 2 Exploration Program. Diamond Drilling.

Respectfully submitted,

Lindsay Bottomer, P.Geo.

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21.0 Statements of Qualifications

I, Lindsay R Bottomer, do hearby certify that:

- 1. I am a geological consultant with office address of 698 Wellington Place, North Vancouver, BC, V7K 3A1.
- 2. I graduated from the University of Queensland with a B.Sc. (Hons) majoring in Geology in 1970, and from McGill University with an M.Sc. (Applied) in Mineral Exploration in 1975.
- 3. I am a member in good standing of Engineers and Geoscientists British Columbia (EGBC), and a Fellow of the Australasian Institute of Mining and Metallurgy (AIMM).
- 4. I have practised my profession continuously for over 45 years worldwide, the last 28 years based in Vancouver, BC.
- 5. I have read the definition of a "Qualified Person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, work experience and affiliation with a professional association I fulfill the requirements to be a Qualified Person for the purposes of NI 43-101.
- 6. I am co-author of this technical report titled "Technical Report on the Winston Project, Chloride Mining Sub-district, Sierra County, New Mexico, USA" dated September 15, 2020.
- 7. I visited the subject property on November 13th and 14th, 2013. Since that time it is my understanding that no additional material work has been done on the property.
- 8. To the best of the writer's knowledge, this technical report contains all scientific and technical information that is required to ensure the technical report is not misleading.
- 9. I am not independent of Sequoia Gold and Silver Ltd. in that I am a Technical Advisor to the Board of the parent company Far Resources Limited.
- 10. I have read National Instrument 43-101 and Form 43-101 F1, and this technical report has been prepared in compliance with the requirements of that instrument.

Dated this 15th day of September, 2020

"Lindsay R. Bottomer"

Lindsay R Bottomer, P.Geo.

I, James G. Moors do hereby by certify that:

- I am currently Sole Proprietor of: Moors Geoscience.
 1435 Harbour Drive Coquitlam, B.C., BC V3J 5V3
- 2. I graduated with a B.Sc. Hons degree in Earth Science from the University of Waterloo in 1989.
- 3. I am a member in good standing of Engineers & Geoscientists British Columbia (No. 25807)
- 4. I have practiced my profession continuously for over 30 years and have examined and reported on numerous precious metal deposits throughout the world including northern Mexico.
- 5. I have read the definition of a "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirement to be a "qualified person" for the purposes of NI 43-101.
- 6. I am co-Author of this technical report titled "Technical Report on the Winston Project, Chloride Mining Sub-District, Sierra County, New Mexico, USA" dated September 15, 2020. I have had no involvement with the property prior to this report.
- 7. I visited the Property on December 11, 2017 and again on January 15, 2020.
- 8. As of the date of this certificate, to the best of the writer's knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- 9. I am independent of Sequoia Gold and Silver Ltd as defined by National Instrument 43-101.
- 10. I have read National Instrument 43-101 and Form 43-101 F 1, and the technical report has been prepared in compliance with that instrument.

Dated this 15th day of September, 2020.

"James G. Moors"

James G. Moors, P.Geo.

APPENDIX I SurveyPlats





Page ii of v

APPENDIX II LETTERS OF CONSENT

Lindsay R Bottomer, P.Geo.

698 Wellington Place, North Vancouver, BC, V7K 3A1

CONSENT of AUTHOR

TO: British Columbia Securities Commission Alberta Securities Commission Saskatchewan Securities Commission Ontario Securities Commission Nova Scotia Securities Commission TSX Venture Exchange

I, Lindsay R. Bottomer, P.Geo., am one of the authors of the report "Technical Report on the Winston Project, Chloride Mining Sub-District, Sierra County, New Mexico, USA" (the "**Technical Report**"), dated September 15, 2020 and I do hereby consent to the filing, with the regulatory authorities referred to above, of the Technical Report and consent to the incorporation of the Technical Report, by reference only, as may be set out in future Annual Information Form's, 20F SEC documents, Filing Statements or similar or related disclosure documents of Sequoia Gold and Silver Ltd.. Also, I do hereby consent to the incorporation only of the complete Summary of the Technical Report as set out at the start of the Technical Report in these disclosure documents if so required and confirm that it fairly and accurately represents a summary of the information in the Technical Report that supports the disclosure.

Dated as of September 15, 2020.

"Lindsay Bottomer"

Lindsay R. Bottomer, P.Geo.

James G. Moors, P.Geo. 1435 Harbour Drive, Vancouver, B.C., Canada V5V 5B9 Ph: 778 355 7200

CONSENT of AUTHOR

 TO: British Columbia Securities Commission Alberta Securities Commission Saskatchewan Securities Commission Ontario Securities Commission Nova Scotia Securities Commission TSX Venture Exchange

I, James G. Moors, P.Geo., am one of the authors of the report "Technical Report on the Winston Project, Chloride Mining Sub-District, Sierra County, New Mexico, USA" (the "**Technical Report**"), dated September 15, 2020 and I do hereby consent to the filing, with the regulatory authorities referred to above, of the Technical Report and consent to the incorporation of the Technical Report, by reference only, as may be set out in future Annual Information Form's, 20F SEC documents, Filing Statements or similar or related disclosure documents of Sequoia Gold and Silver Ltd.. Also, I do hereby consent to the incorporation only of the complete Summary of the Technical Report as set out at the start of the Technical Report in these disclosure documents if so required and confirm that it fairly and accurately represents a summary of the information in the Technical Report that supports the disclosure.

Dated as of September 15, 2020.

"James Moors"

James G. Moors, P.Geo.