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**INITIAL MINERAL RESOURCE ESTIMATE
AND TECHNICAL REPORT
ON THE
NUMBER 3 VEIN,
SILVER QUEEN PROPERTY,
OMINECA MINING DIVISION,
BRITISH COLUMBIA, CANADA**

**UTM NAD83 ZONE 9U
648,300 m E, 5,995,100 m N**

**FOR
NEW NADINA EXPLORATIONS LIMITED**

**NI 43-101 & 43-101F1
TECHNICAL REPORT**

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**P&E Mining Consultants Inc.
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1.0 SUMMARY

The following report was prepared to provide a National Instrument 43-101 (NI 43-101) Initial Resource Estimate and Technical Report on the Number 3 Vein (“No. 3 Vein”), Silver Queen Property for New Nadina Explorations Limited (“New Nadina”). The Technical Report has an effective date of July 15, 2019. New Nadina is a corporation trading on the TSX Venture Exchange with the symbol “NNA”.

The Silver Queen Property is a silver-rich, polymetallic precious and base metal property that comprises 45 contiguous unpatented mineral claims covering an area of 18,852 hectares (“ha”) in the Omineca Mining Division, near Owen Lake, British Columbia. The mineral claims in part overtake 17 contiguous crown granted Mineral Claims (304.47 ha) and two (2) surface title crown grants (40.47 ha).

The mineral claims are 100% owned by New Nadina.

The Property is located 35 km south of the town of Houston, BC, and 590 km north northwest of the city of Vancouver. The centre of the Property is located at approximately 648,300 m E, 5,995,100 m N (UTM NAD83 Zone 9U) or Latitude 54° 04’ 58” N and Longitude 126° 43’ 58” W. The Property is located approximately 32 km southwest of the past-producing Equity Silver Mine.

The Silver Queen Property is road accessible by the Morice-Owen Forest Service Road, which extends south from Trans Canada Highway 16 approximately three km west of Houston. The road distance from Highway 16 to the Silver Queen site is 43.5 km. Houston, with a population of approximately 3,200, is located midway between Prince George, 316 km to the east and the port city of Prince Rupert, 411 km to the west on the Trans Canada Highway.

The Property is characterized by a humid continental climate with summer temperatures averaging approximately 14.5°C and winter temperatures averaging -12.7°C. The area is in the rain shadow of the coastal mountains and is relatively dry. Exploration activities can be conducted year-round. The Silver Queen Property benefits from its proximity to the past-producing Equity Silver Mine and the surrounding region that supports a mining workforce with significant resources for mineral exploration, mine development and mine operations.

The Silver Queen Property has a long history of exploration dating back to 1912. The Property hosts a past-producing mine with historical production from the Wrinch Vein system that includes the No. 3 Vein that is the focus of the current report, plus the Cole, and Chisholm vein systems. Most recently, the Property was operated by the Bradina Joint Venture between 1972 and 1973 during which 190,676 t of mineralized material were mined from the No. 3 Vein. By 1973, a total of 1,050 m of adits and crosscuts plus 810 m of drifting and raises and 1,500 m of diamond drilling had been completed on the Wrinch Vein system.

The Silver Queen Property is located in the Stikine Terrane of the Canadian Cordilleran Province that includes Late Triassic through Tertiary volcanic-arc related rocks that have been intruded by plutonic rocks of Jurassic through Tertiary age. The plutonic rocks are associated with porphyry copper, stockwork molybdenum and mesothermal and epithermal base and precious metal veins.

The Property is located on the western perimeter of the Buck Creek basin that is interpreted as a resurgent caldera. A prominent lineament 30 km long trends east-northeast from the Silver Queen Property towards a central uplift hosting the Equity Silver Mine. The lineament appears to be associated with a radial fracture coinciding with the eruptive axis in the Kasalka Group volcanics.

The Silver Queen Property is underlain by stratified rocks of the Kasalka Group that consists of a basal reddish purple polymictic conglomerate (Unit 1), overlain by fragmental rocks ranging from thick crystal tuff (Unit 2) to coarse lapilli tuff and breccia (Unit 3), and is succeeded upwards by a thick feldspar-porphyrific andesite flow unit (Unit 4), intruded by microdiorite sills and other small intrusions (Unit 5). All of the stratified units are cut by dykes that can be divided into three groups: amygdaloidal dykes (Unit 6), bladed feldspar porphyry dykes (Unit 7), and diabase dykes (Unit 8).

Stratified rocks on the Property form a 20° to 30° northwest dipping homocline. Northwest trending faults dipping at 60° to 80° northeast and later subvertical northeast trending faults displace the homoclinal sequence, cutting the stratigraphy into a series of fault panels. Most of the mineralized veins follow the northwest-trending faults, whereas veins are cut off and displaced by the northeast-trending set of faults.

Mineralization on the Silver Queen Property consists of quartz-carbonate-barite-specularite veins that contain disseminated to locally massive pyrite, sphalerite, galena, chalcopyrite, tennantite and argentian tetrahedrite. Approximately 20 mineralized veins have been discovered. The main quartz vein systems are the Wrinch (including the No. 3 Vein), Camp, Portal, Chisholm, George Lake and Cole systems. The average width of the veins is 0.9 to 1.2 m and locally increases up to 4.6 m.

Silver Queen mineralization is associated with widespread alteration including regional propylitic alteration characterized by replacement of primary mafic minerals by epidote and chlorite and the partial replacement of plagioclase by carbonate and sericite. The development of numerous limonite and jarosite gossans are interpreted to be the result of pervasive kaolinization-pyritization. The extent of alteration suggests a deep source of mineralizing solutions.

The Wrinch Vein system has been the focus of most of the mining and development work to date. The overall strike of the veins is about 130° and is traceable over a length of more than 1,300 m. These veins are generally banded with sphalerite as the predominant sulphide with pyrite, chalcopyrite and galena. The gangue minerals consist mainly of cherty quartz, carbonate minerals (rhodochrosite) and barite.

Vein hosted mineralization at the Silver Queen Deposit is best characterized as having been deposited in a transitional porphyry-epithermal-type environment similar to the past-producing Equity Silver Deposit.

New Nadina has conducted a number of exploration and drilling programs on the Silver Queen Property since 2010. Drilling campaigns in 2010, 2011, 2012/13, 2017 and 2018 drilled a total of 51 holes for a total of 18,204 m. Drilling initially focussed on defining extensions of the vein systems, however, drilling in 2011 discovered Cu-Mo porphyry mineralization named the Itsit Porphyry. Subsequent drilling in 2012/13, 2017, and 2018 has focussed on porphyry targets associated with Titan IP and ZTEM geophysical anomalies.

Mr. Jim Hutter, P.Geo., an independent Qualified Person in terms of NI 43-101, visited the Silver Queen Property on May 29, 2019 for the purposes of completing a site visit and due diligence sampling. During the May 2019 site visit, Mr. Hutter collected 21 samples from 13 diamond drill holes completed between 1988 and 1989. A range of high, medium and low-grade samples were selected from the stored drill core. Samples were collected by taking the quarter or half core remaining in the core box. Samples were placed in plastic bags with a uniquely numbered tag, and delivered by Mr. Hutter to Actlabs in Kamloops, BC, Canada for analysis. Actlabs is an independent commercial laboratory that is ISO 9001 certified and ISO 17025 accredited. The accreditation program includes ongoing audits to verify the QA system and all applicable registered test methods.

All samples were analysed for gold, silver, copper, lead and zinc. Gold and silver were determined using INAA/Total Digestion ICP and copper, lead, zinc by Sodium Peroxide Fusion/Total Digestion ICP. Bulk density was also determined for all samples. P&E considers there to be good correlation between the majority of P&E's independent verification samples analyzed by Actlabs and the original analyses in the Silver Queen database. Grade variation is evident in some samples; however, the authors consider the due diligence results to be acceptable and results are suitable for use in the current Mineral Resource Estimate.

The Silver Queen mineral processing approach has been composed of crushing-grinding followed by selective froth flotation to produce copper-lead-silver, zinc and later, gold-containing pyrite concentrates for sale to a smelter or a hydrometallurgical facility. Cumulative process metal recoveries are relatively high and have enabled estimates of metal payables, based on expected metallurgical recoveries and possible payables by a smelter or a pyrite processor.

The Mineral Resource Estimate presented in the current Technical Report has been prepared following the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1 and in conformity with generally accepted "CIM Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral Resources have been classified in accordance with the "CIM Standards on Mineral Resources and Reserves: Definition and Guidelines" as adopted by CIM Council on May 10, 2014. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the Mineral Resource will be converted into a Mineral Reserve. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

All drilling and assay data for Au, Ag, Zn, Cu and Pb were provided in the form of Excel data files by New Nadina. The Geovia Gems V6.8 database for this Mineral Resource Estimate, compiled by P&E, consisted of 535 drill holes totalling 66,045 m, of which a total of 194 drill holes intersected the mineralization wireframes used for the Mineral Resource Estimate. In the database, 75 drill holes totalling 7,688 m did not have any assays and were not utilized for the Mineral Resource Estimate. The assay records for these 75 drill holes were not located. Industry standard validation checks were carried out on the supplied databases, and minor corrections made where necessary. P&E considers that the drill hole database supplied is suitable for Mineral Resource estimation. The supplied drill hole database contains 21 bulk density measurements with values ranging from 2.70 to 4.34 t/m³ and an average bulk density within the defined mineralized domains of 3.56 t/m³.

Four mineralization wireframes representing Vein No. 3, Vein No. 3HW (hanging wall), Vein No. 3FW (footwall) and Vein No. 3EX (extension) were constructed for the Mineral Resource Estimate. The wireframes were created from successive cross-sectional polylines on northwest-facing vertical sections with a 25 m spacing. The main mineralization domain, Vein No. 3, is modeled proximately 1,150 m long, 300 m deep, average true width 2.1 m, with a general strike azimuth of 130°, dipping 55°–60° to the northeast. The resulting Mineral Resource domains were utilized as constraining boundaries for Mineral Resource estimation. A topographic surface was provided by New Nadina. P&E created an overburden surface using drill hole logs, and digitized shapes of mined out voids and non-mineralized dykes based on a vertical longitudinal projection drawing provided by New Nadina.

Approximately 63% of the constrained sample lengths were less than 1 m in length, and a 1.0 m compositing length was used in order to regularize the assay sampling intervals for grade interpolation. Grade capping was investigated on the 1.0 m composite values in the database within the constraining domains to ensure that the possible influence of erratic high values did not bias the database. In the main part of Vein 3, Au and Ag were capped at 15 g/t and 900 g/t respectively. Vein 3 FW and Vein 3 EX were not capped.

An NSR C\$100/t cut-off value was applied to the mineralization wireframes. The NSR was calculated with the formula:

$$\text{NSR (CDN)} = (\text{Cu}\% * \$57.58) + (\text{Pb}\% * \$19.16) + (\text{Zn}\% * \$30.88) + (\text{Au g/t} * \$39.40) + (\text{Ag g/t} * \$0.44) - \$78.76$$

This cut off reflects underground mining costs of potentially economic portions of the mineralization. In some cases, mineralization below the NSR cut-off value was included for the purpose of maintaining zonal continuity. The NSR model uses approximate 2-year trailing average commodity prices, estimated process recoveries, plus estimated smelter and refining charges. Au, Ag, Cu, Pb, and Zn prices used were US\$1,300/oz, US\$17/oz, US\$3.00/lb, US\$1.05/lb and US\$1.35/lb respectively.

The Silver Queen block model was constructed using Geovia Gems V6.8 modelling software. The block model consists of separate model attributes for estimated grade of Au, Ag, Cu, Zn and Pb, rock type, volume percent, bulk density, NSR value and classification. A rotated block model was established to cover the extent of the mineralized domains and reflect the generally tabular nature of the mineralization. The block size was 1 x 3 x 3 m. A volume percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside the constraining domains. The Au and Ag grade blocks were interpolated with Inverse Distance Cubed (“ID³”), while Zn, Cu and Pb were interpolated with Inverse Distance Squared (“ID²”).

In P&E's opinion, the drilling, assaying and exploration work on the Silver Queen Project supports this Mineral Resource Estimate and are sufficient to indicate a reasonable potential for economic extraction and thus qualify it as a Mineral Resource under the CIM definition standards. The Mineral Resource was classified as Indicated and Inferred based on the geological interpretation, semi-variogram performance and drill hole spacing. The Indicated Mineral Resource was classified within the blocks of Vein No. 3 interpolation Pass 1 and II which used at least three

composites from a minimum of two holes. Inferred Mineral Resources were categorized for all remaining grade populated blocks within all mineralized domains.

The resulting Mineral Resource Estimate at an NSR C\$100/t cut-off (C\$70/t mining, C\$20/t processing and C\$10/t G&A) as of the effective date of this Technical Report, is tabulated in Table 1.1.

The current surface disturbance resulting from historical mining activity can be considered limited. The principal current liabilities include surface hazards from unsecured portals, raises and open trenches; metal leaching from tailings and development rock; and mine drainage. The Silver Queen Project can be developed as a relatively small-scale underground mining project (<1,000 tpd), and will be designed and operated to have no discernable off-site impacts during development, operations and closure. No hazardous chemicals will be used to process (on surface) the mineralised feed material. While the mineralized material and waste rock may be mildly acid generating and metal leaching, measures will be taken to minimise occurrence and effects.

P&E considers that the Silver Queen Property hosts significant high-grade mineralization that may potentially be amenable to underground economic extraction and warrants further exploration. P&E recommends that the next exploration phase focus on core drilling to potentially increase the resources with a focus on the southeastern part of the No. 3 Vein. The proposed program should also include updated metallurgical studies and continue environmental baseline and permitting work to support a future Preliminary Economic Assessment. The work is budgeted at \$1,920,000.

TABLE 1.1
SILVER QUEEN MINERAL RESOURCE ESTIMATE ⁽¹⁻⁷⁾

Classification	Tonnes (kt)	Zn (%)	Zn (Mlb)	Au (g/t)	Au (koz)	Ag (g/t)	Ag (koz)	Cu (%)	Cu (Mlb)	Pb (%)	Pb (Mlb)	AuEq (g/t)	AuEq (koz)	AgEq (g/t)	AgEq (koz)
Indicated	815	6.35	114	3.24	85	201. 4	5,280	0.26	5	0.96	17	9.31	244	835.4	21,900
Inferred	801	5.21	92	2.49	64	184. 3	4,748	0.31	5	0.88	16	7.51	193	674.1	17,360

Notes:

1. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.
2. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
3. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
4. The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
5. The Mineral Resource Estimate was based on metal prices of US\$1,300/oz gold, US\$17/oz silver, US\$1.35/lb zinc, US\$3.00/lb copper and US\$1.05/lb lead.
6. The historical mined areas were depleted from the Mineral Resource.
7. AuEq and AgEq are based on the formula: $NSR (CDN) = (Cu\% * \$57.58) + (Pb\% * \$19.16) + (Zn\% * \$30.88) + (Au \text{ g/t} * \$39.40) + (Ag \text{ g/t} * \$0.44) - \$78.76$. See details in Sections 14.10 and 14.12.

2.0 INTRODUCTION AND TERMS OF REFERENCE

2.1 TERMS OF REFERENCE

New Nadina Explorations Limited (“New Nadina”) retained P&E Mining Consultants Inc. (“P&E”) to complete an independent NI 43-101 Initial Mineral Resource Estimate and Technical Report for the Number 3 Vein on the Silver Queen Property, located in the Omineca Mining Division of central British Columbia.

This Technical Report was prepared by P&E, at the request of Mr. John Jewitt, President and CEO of New Nadina. New Nadina was incorporated in 1964 under the Company Act of British Columbia. On December 20, 1977 the Company name was changed from Nadina Explorations Limited NPL to New Nadina Explorations Limited NPL. On April 9, 1985 the company converted from a specially limited company to a limited company under the name of New Nadina Explorations Limited.

New Nadina trades on the TSX Venture Exchange (TSXV) with the symbol “NNA”. New Nadina has its corporate office located at:

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Greenwood, BC, V0H 1J0.
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Mr. James Hutter, P.Geo, a Qualified Person under the terms of NI 43-101, conducted a site visit of the Property for the current Technical Report on May 29, 2019. A data verification sampling program was conducted as part of the on-site review.

This Technical Report is considered current as of the effective date July 15, 2019.

The present Technical Report is prepared in accordance with the requirements of National Instrument 43-101 (“NI 43-101”) and in compliance with Form NI 43-101F1 of the Ontario Securities Commission (“OSC”) and the Canadian Securities Administrators (“CSA”).

2.2 SOURCES OF INFORMATION

This Technical Report is based, in part, on internal company technical reports, and maps, published government reports, company letters, memoranda, public disclosure and public information as listed in the References at the conclusion of this Technical Report. This Technical Report is also supplemented by published and available reports provided by the British Columbia Geological Survey.

2.3 UNITS AND CURRENCY

Unless otherwise stated all units used in this Technical Report are metric. Zinc (“Zn”), lead (“Pb”) and copper (“Cu”) concentrations are reported in weight % (“%”). Gold (“Au”) and silver (“Ag”)

assay values are reported in grams of metal per tonne (“g/t Au or g/t Ag”) unless ounces per ton (“oz/ton”) are specifically stated. The CAD\$ is used throughout this report unless the US\$ is specifically stated. At the time of issue of this Technical Report, the rate of exchange between the US\$ and the CAD\$ is US\$1.00 = CAD\$1.31. Location coordinates are expressed in the Universal Transverse Mercator (UTM) grid coordinates using 1983 North American Datum (NAD83) Zone 9 unless otherwise noted.

The following list, Table 2.1, shows the meaning of the abbreviations for technical terms used throughout the text of this Technical Report.

<p style="text-align: center;">TABLE 2.1 TERMINOLOGY AND ABBREVIATIONS</p>	
Abbreviation	Meaning
“Ag”	silver
“asl”	above sea level
“ARD”	acid rock drainage
“Au”	gold
“Bradina”	Bralorne Can Fer Resources Limited and Pacific Petroleum Ltd.
“°C”	degree Celsius
“CAD\$”	Canadian Dollar
“CEAA”	Canadian Environmental Assessment Act
“CESL”	Cominco Engineering Services Limited
“CIM”	Canadian Institute of Mining, Metallurgy, and Petroleum
“cm”	centimetre(s)
“conc”	concentrate
“CRM”	certified reference material
“CSA”	Canadian Securities Administrators
“Cu”	copper
“DDH”	diamond drill hole
“\$M”	dollars, millions
“EA” or “EIA”	Environmental Impact Assessment
“EAO”	Environmental Assessment Office
“EM”	electromagnetic
“ft”	foot
“g/t”	grams per tonne (of metal)
“ha”	hectare(s)
“HLEM”	horizontal loop electromagnetic survey
“ID”	inverse distance
“ID ² ”	Inverse Distance Squared
“ID ³ ”	Inverse Distance Cubed
“IP”	induced polarization
“IP/RES”	induced polarization / resistivity survey
“ISO”	International Organization for Standardization
“JV”	joint venture
“k”	thousand(s)

<p style="text-align: center;">TABLE 2.1 TERMINOLOGY AND ABBREVIATIONS</p>	
Abbreviation	Meaning
“km”	kilometre(s)
“kW”	kilowatt
“l”	litre(s)
“l/s”	litres per second
“lb”	pound (weight)
“level”	mine working level referring to the nominal elevation (m RL), e.g. 4285 level (mine workings at 4285 m RL)
“LIDAR”	Light Detection and Ranging
“m”	metre(s)
“m ³ ”	cubic metre(s)
“Ma”	millions of years
“Mag”	magnetic
“max.”	maximum
“min.”	minimum
“ML”	metal (and non-metal) leaching
“mm”	millimetre
“Moz”	million ounces
“m RL”	metres relative level
“MS”	mass spectrometer
“m/s”	metres per second
“Mt”	mega tonne or million tonnes
“MTAR”	British Columbia Mineral Tenure Act Regulation
“MW”	megawatts
“NAD”	North American Datum
“NE”	northeast
“New Nadina”	New Nadina Explorations Limited
“NI”	National Instrument
“NN”	nearest neighbour
“No. 3 Vein”	Number 3 Vein
“NSR”	net smelter royalty
“NW”	northwest
“OSC”	Ontario Securities Commission
“oz”	ounce
“P&E”	P&E Mining Consultants Inc.
“Pb”	lead
“P.Eng.”	Professional Engineer
“P.Geo.”	Professional Geoscientist
“ppm”	parts per million
“QA/QC”	quality assurance/quality control
“SE”	southeast
“SW”	southwest

TABLE 2.1 TERMINOLOGY AND ABBREVIATIONS	
Abbreviation	Meaning
“t”	metric tonne(s)
“TMF”	tailings management facility
“ton”	Imperial ton(s)
“tpd”	tonnes per day
“TSF”	Tailings Storage Facility
“US\$”	United States dollar(s)
“UTM”	Universal Transverse Mercator grid system
“yr”	year
“Zn”	zinc
“ZTEM”	Z-axis Tipper electromagnetic

Some conversion factors applicable to this report are shown in Table 2.2.

TABLE 2.2 CONVERSION FACTORS	
1 ppm	1 g/t = 0.0291667 oz/ton
1 ppb	0.001 g/t
1 oz/ton	34.2857 g/t
1 troy ounce/ton	34.29 g/t
0.029 troy ounce/ton	1 g/t
1 gram	0.0322 troy ounces
1 troy ounce	31.104 grams
1 pound	0.454 kilograms
Linear Measurements	
1 foot	0.3048 metres
1 mile	1.609 kilometres
Area Measurements	
1 acre	0.405 hectares
1 square mile	2.59 square kilometres
1 square kilometre	100 hectares

3.0 RELIANCE ON OTHER EXPERTS

P&E has assumed that all of the information and technical documents listed in the References section of this Technical Report are accurate and complete in all material aspects. While P&E has carefully reviewed all of the available information presented, P&E cannot guarantee its accuracy and completeness. P&E reserves the right, but will not be obligated to revise the Technical Report and conclusions, if additional information becomes known to P&E subsequent to the effective date of this Technical Report.

P&E has reviewed and interpreted the historical documentation of data and observations of past activities by previous claim holders and exploration personnel who operated in the vicinity of the Silver Queen Property. The majority of this information is located within internal reports and memorandums of historical claim holders for this Property. The information concerning Adjacent Properties is in the form of published NI 43-101 Technical Reports. The list of information used to complete this Technical Report is located herein under Section 27 References.

Although selected copies of the tenure documents, operating licenses, permits, and work contracts were reviewed, an independent verification of land title and tenure was not performed. P&E has not reviewed or verified the legality of any underlying agreement(s) that exist concerning the claims, leases and licenses or other agreement(s) between third parties. Information on tenure and permits was obtained from New Nadina. Selected information was verified by P&E using the BC government mining lands website <https://www.mtonline.gov.bc.ca/mtov/home.do> (accessed August 22, 2019).

A draft copy of this Technical Report has been reviewed for factual errors by New Nadina. Any changes made as a result of these reviews did not involve any alteration to the conclusions made. Hence, the statement and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the effective date of this Technical Report.

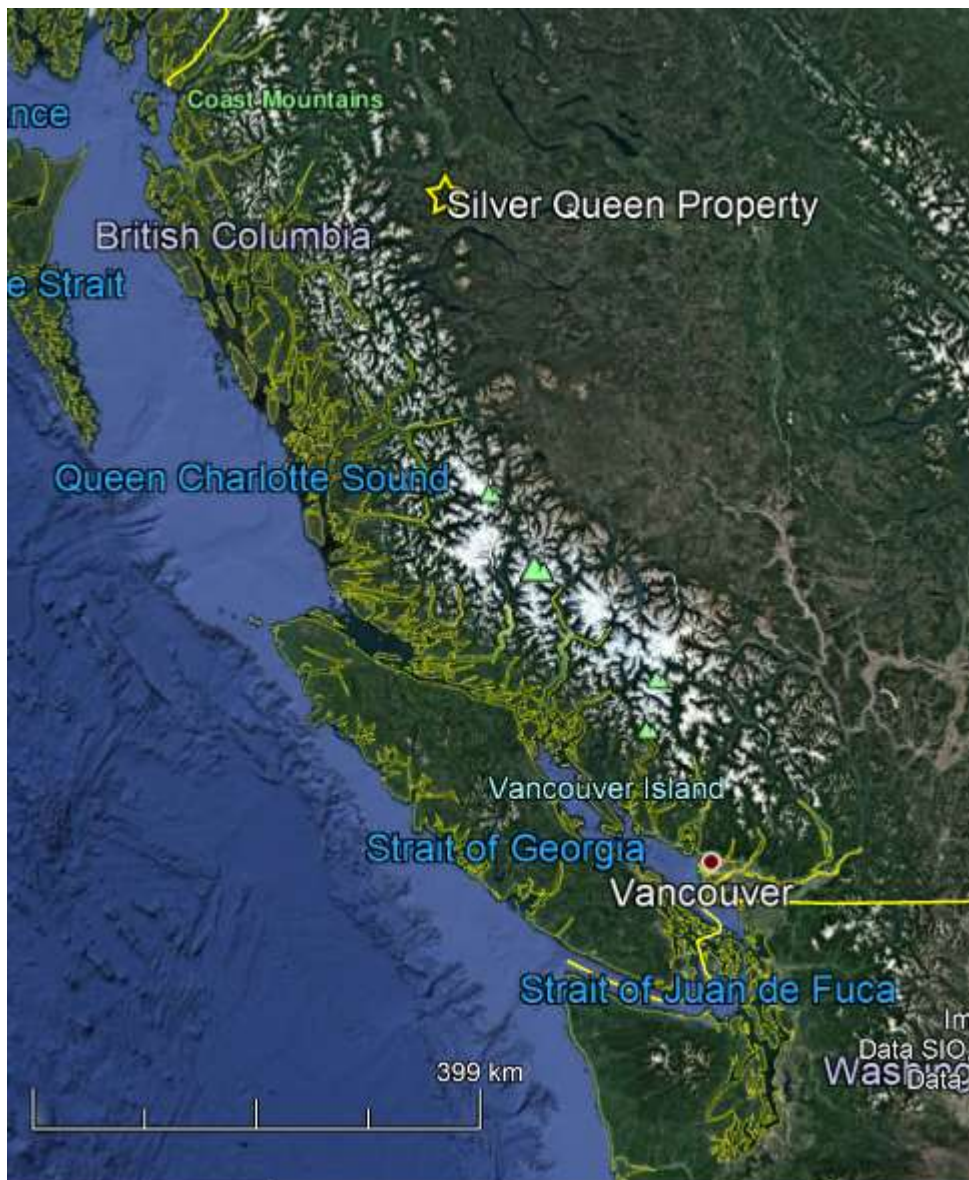
4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 LOCATION

The Silver Queen Property is located in central British Columbia, 35 km south of the town of Houston, BC, and 590 km north northwest of the city of Vancouver (Figure 4.1). The centre of the Property is located at approximately 648,300 m E, 5,995,100 m N (UTM NAD83 Zone 9U) or Latitude 54° 04' 58" N and Longitude 126° 43' 58" W.

The Property is located approximately 32 km southwest of the past-producing Equity Silver Mine.

FIGURE 4.1 PROPERTY LOCATION MAP



Source: Google Earth 2019

4.2 PROPERTY DESCRIPTION AND TENURE

New Nadina's 100% owned Silver Queen Property is comprised of 45 contiguous unpatented mineral claims covering an area of 18,852 ha in the Omineca Mining Division, near Owen Lake, British Columbia (Figure 4.2 and Table 4.1). The mineral claims in part overstate 17 contiguous crown granted Mineral Claims (304.47 ha) and 2 surface title crown grants (40.47 ha) (Table 4.2). Assessment work done on the Crown Grants may be applied to the mineral claims.

The mineral claims are 100% owned by New Nadina and were acquired by staking between July 2005 and January 2014. There are no existing royalties associated with the Silver Queen Property.

The mineral claims forming the Silver Queen Property are subject to annual assessment work requirements. As per section 8(4) of the British Columbia Mineral Tenure Act Regulation ("MTAR"), the value of exploration and development required to maintain a mineral claim for one year is \$5.00 per hectare during each of the first and second anniversary years, \$10.00 per hectare for each of the third and fourth anniversary years, \$15.00 per hectare for each of the fifth and sixth anniversary years and \$20.00 per hectare for subsequent anniversary years. Exploration and development work can be registered within one year of the work being completed and the expiry date of claims can be advanced up to a maximum of 10 future anniversary years from the current year. As of the effective date of this Technical Report, all mineral claims are in good standing until November 2027.

Crown Grants are subject to annual tax payments. Currently the annual tax levy for the Silver Queen Crown Grants is \$380.58 and taxes have been paid through to 2020.

*P&E Mining Consultants Inc.
New Nadina Explorations Limited, Silver Queen Property, Report No. 357*

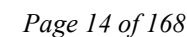


TABLE 4.1
LIST OF SILVER QUEEN PROPERTY MINERAL CLAIMS

New Nadina Explorations Ltd.						
Silver Queen Project - Mineral Claims						
Title Number	Claim Name	Owner	Title Type	Issue Date	Good To Date	Area (ha)
516670		119546 (100%)	Mineral	2005/JUL/11	2027/NOV/03	1080.999
516671		119546 (100%)	Mineral	2005/JUL/11	2027/NOV/03	1005.583
516672		119546 (100%)	Mineral	2005/JUL/11	2027/NOV/03	1006.028
525871	BQ CGS	119546 (100%)	Mineral	2006/JAN/19	2027/NOV/03	94.849
704203	DQ1	119546 (100%)	Mineral	2010/JAN/22	2027/NOV/03	474.5584
704223	DQ2	119546 (100%)	Mineral	2010/JAN/22	2027/NOV/03	474.5688
704243	DQ3	119546 (100%)	Mineral	2010/JAN/22	2027/NOV/03	417.4704
704263	DQ4	119546 (100%)	Mineral	2010/JAN/22	2027/NOV/03	417.3866
704264	DQ5	119546 (100%)	Mineral	2010/JAN/22	2027/NOV/03	189.8758
704265	DQ6	119546 (100%)	Mineral	2010/JAN/22	2027/NOV/03	474.8062
704266	DQ7	119546 (100%)	Mineral	2010/JAN/22	2027/NOV/03	474.7967
704267	DQ8	119546 (100%)	Mineral	2010/JAN/22	2027/NOV/03	474.7723
704269	DQ9	119546 (100%)	Mineral	2010/JAN/22	2027/NOV/03	455.7534
704833	DQ10	119546 (100%)	Mineral	2010/JAN/26	2027/NOV/03	113.9672
754142	DQ11	119546 (100%)	Mineral	2010/APR/21	2027/NOV/03	455.1444
754162	DQ12	119546 (100%)	Mineral	2010/APR/21	2027/NOV/03	455.1548
851764		119546 (100%)	Mineral	2011/APR/15	2027/NOV/03	474.4474
851765		119546 (100%)	Mineral	2011/APR/15	2027/NOV/03	455.203
853425		119546 (100%)	Mineral	2011/MAY/03	2027/NOV/03	398.1258
853429		119546 (100%)	Mineral	2011/MAY/03	2027/NOV/03	284.2539
853431		119546 (100%)	Mineral	2011/MAY/03	2027/NOV/03	284.269
853437		119546 (100%)	Mineral	2011/MAY/03	2027/NOV/03	37.9078
853438		119546 (100%)	Mineral	2011/MAY/03	2027/NOV/03	37.8966
1015576		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	473.5827
1015580		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	473.5807
1015581		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	473.5727
1015582		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	473.5695
1015583		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	284.1411
1015584		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	378.9984
1015585		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	398.0474
1015586		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	473.8115
1015587		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	473.8091
1015589		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	341.1591
1015591		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	322.2908
1015592		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	568.9531
1015593		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	568.949
1015594		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	568.9449
1015595		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	455.3412
1015597		119546 (100%)	Mineral	2012/DEC/31	2027/NOV/03	322.6174
1021062		119546 (100%)	Mineral	2013/JUL/17	2027/NOV/03	170.6005
1024162		119546 (100%)	Mineral	2013/DEC/02	2027/NOV/03	113.7478
1024379		119546 (100%)	Mineral	2013/DEC/13	2027/NOV/03	113.7249
1025208		119546 (100%)	Mineral	2014/JAN/16	2027/NOV/03	454.9561
1025209		119546 (100%)	Mineral	2014/JAN/16	2027/NOV/03	454.7725
1025210		119546 (100%)	Mineral	2014/JAN/16	2027/NOV/03	454.7676
						18851.7555

Source: New Nadina, August 2019

TABLE 4.2
LIST OF SILVER QUEEN PROPERTY CROWN GRANTS

ID	Claim Name	CG No.	DL No.	Tag / Folio No.	Rights	Hectares
278	EARL NO 1	CG7399	7399	063274	Surface	20.902
279	EARL NO 1 FR	CG7401	7401	063274		4.763
280	SILVER KING	CG6547	6547	063274		20.902
281	TYEE	CG6548	6548	063274		20.441
292	EARL NO. 3	CG7402	7402	063630		14.261
293	SILVER QUEEN	CG6549	6549	063274		20.712
294	SILVER TIP	CG6550	6550	063274		20.137
295	ASTA FRACTION	CG7543	7543	063630		13.529
296	EARL NO. 2	CG7400	7400	063274	Surface	20.902
297	I X L	CG6551	6551	063274		20.643
298	I X L NO. 3	CG7403	7403	063630		17.175
299	LILY FRACTION	CG7541	7541	063630		9.320
300	LUCY	CG7404	7404	063630		20.671
301	MAE	CG7545	7545	063630		20.161
302	MAE NO. 1	CG7544	7544	063630		18.733
303	MARY	CG7540	7540	063630		20.902
304	MARG FRACTION	CG7542	7542	063630		20.331
Total						304.485

Notes: CG = Crown Grant, DL = District Lot.

Source: New Nadina, August 2019

4.3 ENVIRONMENTAL AND PERMITTING

New Nadina's Free Miners Certificate was reinstated in November 2018, following a suspension in September, 2018. The reinstatement required that New Nadina meet compliance with certain reclamation conditions imposed by the Ministry of Mines under the suspension order. The Company has complied with the order and satisfied the conditions.

The Silver Queen Property is within the Wet'suwet'en land claim and band is included in the Notice of Work and permitting consultation process. New Nadina actively encourages First Nation involvement and uses First Nations' employees and contractors in all activities when available.

The Silver Queen site is considered a "brownfield" site as a result of previous mining and mineral processing during 1972-1973 and extensive exploration over many decades. The British Columbia environmental assessment and permitting processes are well defined and are expected to proceed smoothly. A Closure Plan will be outlined and implemented that will result in minimal site long-term liabilities.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 ACCESS

Houston, British Columbia, the nearest town to the Silver Queen Property, has a population of approximately 3,200. Houston is located on along the Trans-Canada Highway BC-16, approximately midway between Prince George, 316 km to the east and Prince Rupert, 411 km to the west (Figure 5.1).

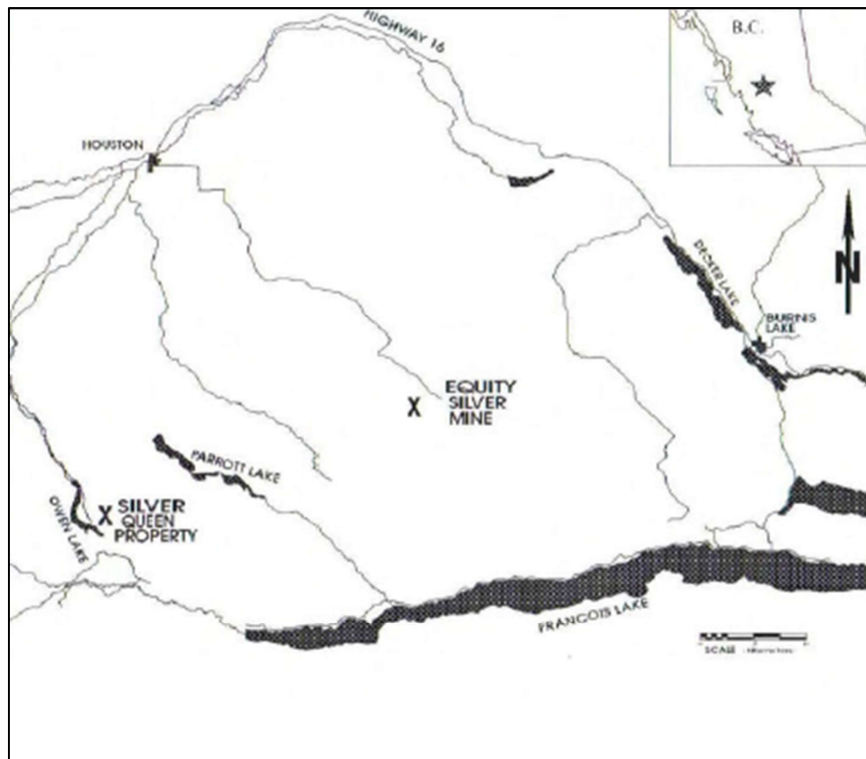
Access to the Property is south from Houston via the Morice-Owen Forest Service Road, which leaves Highway 16 approximately three km west of Houston (Figure 5.2). The Morice-Owen Road is a well-maintained all-weather road in regular use by heavy industrial traffic. The road distance from Highway 16 to the Silver Queen site is 43.5 km. Further along the road is the Huckleberry Mine, a road distance of 78 km beyond the Silver Queen Property.

FIGURE 5.1 NORTHERN BC HIGHWAY MAP SHOWING LOCATION OF HOUSTON, BC



Source: Government of BC, 2019

FIGURE 5.2 SILVER QUEEN PROPERTY LOCATION RELATIVE TO HOUSTON, BC SHOWING MAJOR HIGHWAYS



Source: JDS report (2011)

5.2 CLIMATE

Houston has a humid continental climate (Köppen *Dfb*) with summer temperatures averaging around 14°C and winter temperatures averaging -11°C. Being in the rain shadow of the coastal mountains, Houston has a dry climate with relatively uniform precipitation year-round. The annual rainfall in the region is 35 cm per year, while average snowfall is 164 cm per year. Annual snowfall is relatively high due to the five-month period with mean temperatures below freezing. Table 5.1 shows the climate data for Houston.

5.3 LOCAL RESOURCES

Houston with a population of 3,200 is located in the Regional District of Bulkley-Nechako. The main industries in the area are forestry, service and supply, and tourism. The larger community of Smithers, population of 5,351 (2016), is located 65 km northwest of Houston on Highway 16 is the regional center.

TABLE 5.1 CLIMATE DATA FOR HOUSTON, BC												
Item	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	-10.6	-5.3	-1.7	3.6	8.3	12.1	14.3	13.8	9.7	4.4	-2.6	-7.3
Min. Temperature (°C)	-14.8	-10.5	-7.4	-2.3	1.5	5.3	7.2	6.7	3.2	-0.1	-5.8	-10.8
Max. Temperature (°C)	-6.3	-0.1	4.1	9.5	15.2	18.9	21.4	20.9	16.2	9	0.7	-3.8
Avg. Temperature (°F)	12.9	22.5	28.9	38.5	46.9	53.8	57.7	56.8	49.5	39.9	27.3	18.9
Min. Temperature (°F)	5.4	13.1	18.7	27.9	34.7	41.5	45.0	44.1	37.8	31.8	21.6	12.6
Max. Temperature (°F)	20.7	31.8	39.4	49.1	59.4	66.0	70.5	69.6	61.2	48.2	33.3	25.2
Precipitation / Rainfall (mm)	55	35	26	20	32	46	47	48	46	59	58	60

Source: <https://en.climate-data.org/north-america/canada/british-columbia/houston-871492/>

5.4 INFRASTRUCTURE

New Nadina has a 10-person camp and core shed facilities on the Silver Queen Property. The Company maintains and monitors an on-site Tailings Storage Facility (“TSF”) constructed in 1970 by the Bradina Joint Venture. The TSF collects water from historical workings including underground channels and drains through a natural wetland filtering area prior to entry into Owen Lake.

Houston is well serviced by the Trans Canada Highway that provides access to the Pacific ports at Prince Rupert (410 km) via highway BC16 and Kitimat (325 km) via highway BC16. Houston is also serviced by the CN rail line.

Smithers, BC, located 65 km northwest of Houston on Highway 16, is the closest commercial airport. Houston has a public aerodrome located 9 km north that is available for charters. One helicopter service, Westland Helicopters, operates out of Houston and there is also regular VIA Rail service to the town.

New Nadina has granted Huckleberry Mines an easement over the Crown Grants for the power line to the Huckleberry Mine. Through the Powerline Right of Way Agreement executed in 1999, Huckleberry has agreed to allow New Nadina the use of the power line if required, and has agreed to use commercially reasonable best efforts to assist New Nadina in obtaining such rights and consents necessary to obtain power, should New Nadina require power for mine purposes. The agreement includes assisting New Nadina in its efforts to obtain access agreements over Crown Land, private lands and reserves affected by the Right of Way.

New Nadina does not hold any water licenses at present, however there are abundant water sources in the area. Options for water sources include local lakes, the construction of underground wells or the construction of a dam to collect precipitation. During the 1972-73 production period, water for mining and processing purposes was obtained from Owen Lake.

5.5 PHYSIOGRAPHY

The Property is situated to the east of Owen Lake in the Morice River valley. Owen Lake is approximately three sq km in area and drains into the Morice River which flows north and joins the Bulkley River west of Houston. Northwest of Houston, at Hazelton, the Bulkley River joins the Skeena River that flows southwest to the Pacific Ocean at Prince Rupert.

Much of the Property occupies a moderate southwest facing slope. Close to Owen Lake and in the southeastern portion of the Property, the ground is relatively flat. Vegetation is generally heavy, with poplar, willows and heavy ground cover and with local spruce and fir forest. Elevations range from 762 m (2,500 ft) at Owen Lake to more than 1,220 m (4,000 ft) at the top of Tip Top Hill. The southwest facing slopes often lack tree cover and support a lush growth of grasses and other plants.

6.0 HISTORY

The Silver Queen Property has a long history of exploration dating back to 1912. This section on the history of exploration summarizes work from 1912 to 2011. Information on the historic exploration is primarily derived from the British Columbia Geological Survey MINFILE Detail Report for the Silver Queen Property (MINFILE Number 093L 002, accessed August 6, 2019).

6.1 EXPLORATION HISTORY

The present Silver Queen Property was historically comprised of the Silver Queen and the Cole Lake properties. Except for the period 1928 to 1943, the Silver Queen and Cole Lake properties were managed separately until 1985, when Bulkley Silver Resources Ltd. acquired both properties.

A summary of historical exploration on the Silver Queen Property from MINFILE is presented in point form in the tables below. To simplify the exploration history, the pre-1985 exploration work on the two properties is discussed separately, Table 6.1 is work performed on the Historic Silver Queen Property and Table 6.2 is on the Historic Cole Lake Property. Table 6.3 shows work performed on the current Silver Queen Property post-1985.

TABLE 6.1 SILVER QUEEN PROPERTY PRE-1985 EXPLORATION HISTORY	
Year	Work Type Performed
1912	Mineralization discovered, three adits driven on the Wrinch Vein system.
1915	38 tons of mineralization (31% Pb and 6 oz Ag) shipped from two shallow shafts.
1923	Property optioned to Federal Mining and Smelting Co., more than 500 ft of drifting completed from the three adits.
1928	Silver Queen and Cole Lake properties acquired by Owen Lake Mining and Development Company, Cole Shaft sunk, a 3,000 ft cross-cut driven.
1941	Canadian Exploration (subsequently Placer Development) purchased Silver Queen claims, and optioned Cole Lake property; surface and underground mapping and sampling completed.
1943	The option on the Cole Lake ground dropped, work continued on Silver Queen veins until 1947.
1963	Nadina Explorations Ltd. optioned Silver Queen claims; program of diamond drilling, trenching, and underground development on the No. 3 Vein and traced Wrinch Vein system south to the "Ruby Extension zone".
1966	Nadina continued underground and surface work on the property.
1967	Property optioned to Kennco Explorations; geological mapping, soil sampling and IP survey done; several deep holes drilled to test for porphyry copper mineralization.
1968	Nadina continued work on Silver Queen veins; soil sampling, trenching, diamond drilling and underground mapping.
1969	BC Ministry of Energy, Mines and Petroleum Resources mapped entire property in detail, as well as the area surrounding Owen Lake. Nadina completed 4,000 ft of

TABLE 6.1 SILVER QUEEN PROPERTY PRE-1985 EXPLORATION HISTORY	
Year	Work Type Performed
	drifting, 51 drill holes (both underground and surface) plus airborne geophysical surveys.
1970	Northgate Explorations optioned the property from Nadina; did extensive underground check sampling, 13,500 ft of surface drilling, 1,500 ft of underground drilling and 4,200 ft of drifting and raising.
1971	Bralorne Can Fer Resources Limited and Pacific Petroleum Ltd. optioned the property, and formed the Bradina Joint Venture; feasibility study prepared by Dolmage Cambell and Associates, surface EM and IP surveys, 6,000 ft of surface drilling and 800 ft of drifting and raising.
1972	Property put into production in March 1972, using equipment from Bralorne's gold mine in southern B.C.
1973	Operations ceased September 1973 after milling 200,000 tons of mineralization; During 1972-73, 47 surface holes and 68 underground holes, totalling over 20,000 ft drilled.
1974	5,900 ft of drilling completed, JV agreement terminated.
1977	Nadina purchased Silver Queen property from Placer with Placer retaining back in rights. Property optioned by New Frontier Petroleum Ltd, the successor company to Frontier Explorations Ltd. which held the Cole Lake property. Limited deep drilling from surface completed, and the option dropped in 1978.
1980	Nadina reorganized as New Nadina Explorations Limited; a major program of backhoe trenching done, as well as surface drilling and rehabilitation of underground workings.
1981	Rehabilitation completed, additional drifting, with 28 underground and 4 surface drill holes drilled (a total of over 8,000 ft).
1982	Campbell Resources completes re-evaluation of the Silver Queen property, completed limited metallurgical testing.
1983-84	New Nadina completed 7,500 ft of surface diamond drilling in 15 holes.

TABLE 6.2 COLE LAKE PROPERTY PRE-1985 EXPLORATION HISTORY	
Year	Work Type Performed
1915	Cole Vein system staked as the Diamond Belle group.
1928	The property was acquired, along with the Silver Queen property, by the Owen Lake Mining and Development Company; Cole shaft sunk.
1941	Canadian Exploration optioned property, completed mapping and sampling. Option dropped in 1943.
1967	Considerable trenching and some drilling on the Cole Lake veins by Frontier Explorations Ltd, who had acquired the ground in this area in 1960.
1972	Frontier Explorations completes EM survey, as well as percussion drilling and 1,500 ft of diamond drilling on George Lake Lineament Vein.

TABLE 6.2 COLE LAKE PROPERTY PRE-1985 EXPLORATION HISTORY	
Year	Work Type Performed
1980	Backhoe trenching by Frontier.
1981	New Frontier sold all its mining interests to Bulkley Silver Resources Ltd, who attempted to raise money to complete the Earl Adit which would intersect the Cole Vein system at depth. Insufficient funds were raised and only 100 feet of this drive was completed.

TABLE 6.3 SILVER QUEEN PROPERTY POST-1985 EXPLORATION HISTORY	
Year	Work Type Performed
1985	Bulkley Silver optioned the New Nadina ground to put the entire camp under the management of one company; a max-min EM survey and 6 diamond drill holes were completed.
1987	JV formed between New Nadina and Houston Metals Corp, (the successor to Bulkley Silver and subsequently reorganized as Pacific Houston Resources Inc). In excess of \$7,500,000 was spent on exploration on the property during 1987 and 1988, including 35,000 ft of diamond drilling and 8,100 ft of tunnelling, cross-cutting, and declining; and metallurgical work.
1989	University of British Columbia studies including geological mapping, structural studies, 2 M.Sc. theses (mineralogy, resources), 1 Ph.D. thesis (alteration).
1990	Pacific Houston becomes bankrupt, New Nadina assumed the debts and purchased the claims outright from Pacific Houston. Also, in 1990, an agreement was reached with Placer, whereby Placer signed over all remaining rights to the property.
1991	New Nadina addressed site remediation through a study by consultant Tom Higgs, to develop a system of treating zinc rich mine drainage prior to release into the environment.
1992	A tailings pond/wetland passive treatment system was implemented to treat mine Drainage.
1993 to present	Ongoing water sampling by New Nadina to test mine drainage, as required by the Ministry of Environment.
1995-1996	New Nadina Explorations abandoned the Silver 4 claim and restaked the property as the current Owen 1 - 5 claims. An Explore BC Grant was obtained to assist in a compilation and interpretation of previous data on the property. Sampling of water treated by wetlands indicated that this treatment is working, however, contamination was occurring from the mill site/waste dump areas. A reclamation program was undertaken to rectify this problem and filed for assessment. A combined program of satellite imagery analysis, Digital Elevation Modelling and regional aeromagnetism was completed to identify regional controls for bulk tonnage mineralization.
1996	Spring Drill program with five NQ diamond drill holes for a total of 3,041 feet (L. Caron report No. 832, May 1996) and Fall Drill program with five NQ diamond drill holes for a total of 3,027 feet (L. Caron report No. 865, November 1996).

TABLE 6.3
SILVER QUEEN PROPERTY POST-1985 EXPLORATION HISTORY

Year	Work Type Performed
1997	Drill core storage lists by Jim Hutter (report No. 910).
1998	PIMA short wave spectroscopy (report No. 926), ERA Maptec structural report (No. 929) were compiled by G. Stewart into report No. 1064.
1999	Reclamation, Trenching and Water Sample report No. 1211. In November 1999, a 690 John Deere excavator was used to deepen the existing 75 m trench. The rocky knoll was drilled and blasted for a length of 10 m, 3-4 m wide and approximately 1.5 m deep. The rock was removed.
2000	Lab Physical Property Tests on Samples from Silver Queen, Quantec Geoscience, Apr 17, 2000 (report No. 1011).
2005	GPS survey of claims by J. Hutter (report No. 1117), a 3-D, IP survey on 2 selected areas by SJ Geophysics (report No. 1126) and one hole drilled by Beaupre Drilling (report No. 1120). Sampling by J. Hutter.
2008	Trench reclamation conducted by local rancher.
2009	Reclamation of trenches east of mine hill, raise covers installed, Cole Shaft covered, fences repaired around raises, cleaned site.
2010	Re-sampled core for verification purposes, 10-person container camp installed complete with septic and water system, geophysics (EM16) survey, soil sampling and diamond drilling.

6.2 PAST PRODUCTION AT SILVER QUEEN MINE

In this section, “historical estimate” means an estimate of the quantity, grade, or metal or mineral content of a deposit that an issuer has not verified as a current mineral resource or mineral reserve, and which was prepared before the issuer acquiring, or entering into an agreement to acquire, an interest in the property that contains the deposit. The terms “Reserves” and “ore” are used in a historical context and are not compliant with current NI43-101 definitions.

Historical production was from the Cole, Chisholm and Wrinch (“No. 3”) vein systems. In March 1972, the property was put into production by the Bralorne Can Fer Resources Limited and Pacific Petroleum Ltd. (“Bradina”) Joint Venture (“JV”) using equipment from the Bralorne's gold mine in southern B.C. Operations ceased in September 1973 after mining 190,676 t of mineralized material from the north end of the No. 3 Vein.

Historical mineral reserves on the No. 3 (also known as Wrinch) Vein system reported by Dawson (1985) are 577,600 t averaging 0.108 oz/ton Au, 7.51 oz/ton Ag, 6.53% Zn, 1.49% Pb and 0.49% Cu (Cummings 1987; BC Geological Survey MINFILE 093L 002 accessed August 6, 2019). Cummings (1987) reports that this grade is above the average Bradina JV production grade due to the low-grade development stockpile that was treated at the time, and the higher-grade mineralization that has been drilled since the Bradina operations.

The reader is cautioned that the historical mineral “reserve” estimate is being treated as historical in nature. A Qualified Person has not completed sufficient work to classify the

historical estimate as a current mineral resource or reserve and the issuer is not treating the historical estimate as a current mineral resource or reserve.

Since the mining activity by the Bradina JV, significant surface and underground exploration has extended the length and depth to the Wrinch (No. 3) Vein system. During the 1980s a decline was installed and intersected the No.3 Vein at the 2,425 level. The No. 3 and NG3, an assumed extension of No.3, vein systems remain open on strike and to depth.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGY

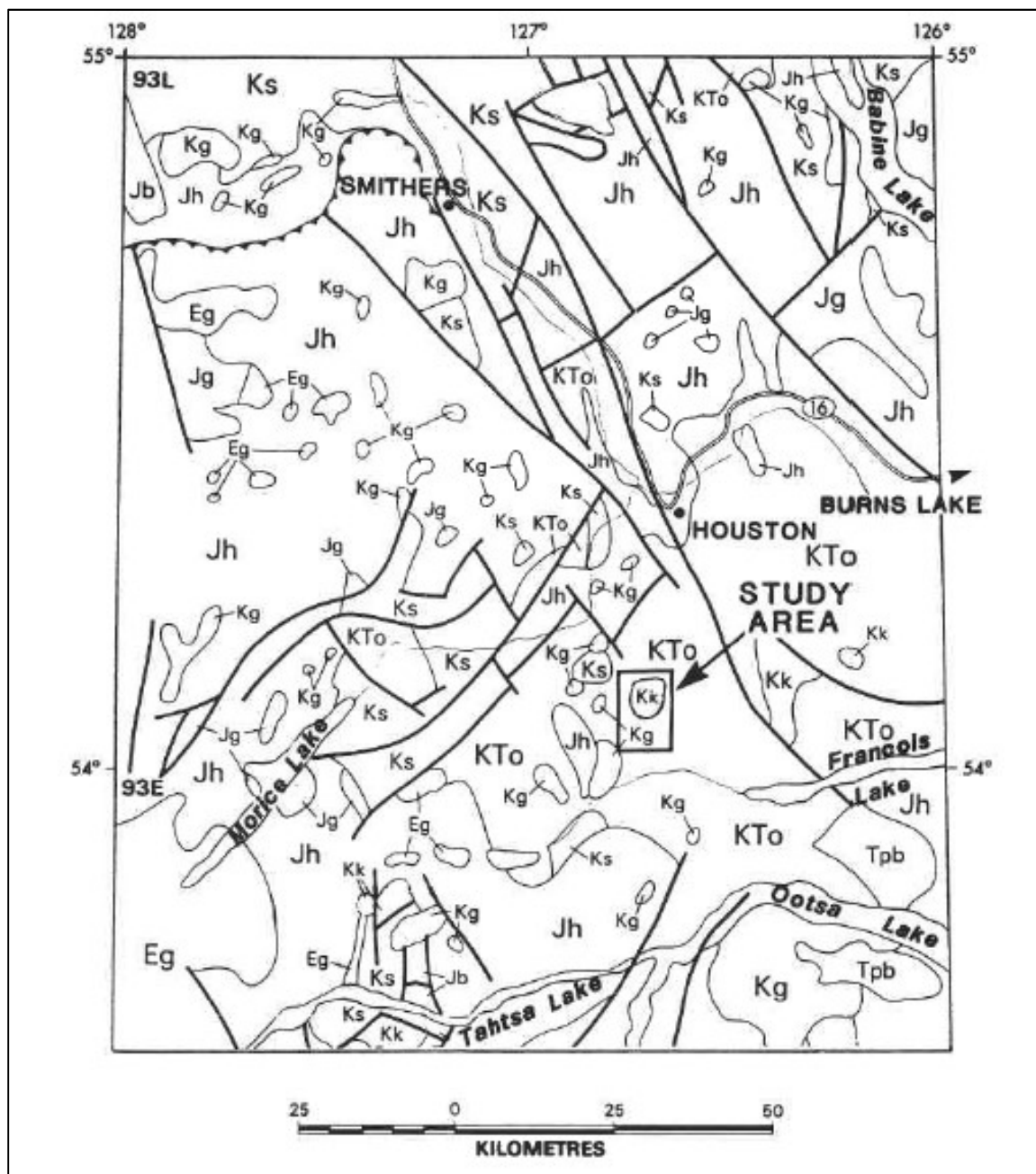
West-central British Columbia lies within the Stikine Terrane, that includes: Late Triassic Takla Group submarine calc-alkaline to alkaline, immature, volcanic-arc rocks; Early to Middle Jurassic Hazelton Group sub-aerial to submarine, calc-alkaline volcanic, volcanoclastic and sedimentary rocks; Late Jurassic and Cretaceous successor basin sedimentary rocks of the Bowser Lake, Skeena and Sustut groups; and Cretaceous to Tertiary calc-alkaline continental volcanic arc rocks of the Kasalka, Ootsa Lake and Endako groups (MacIntyre and Desjardins, 1988), shown in Figure 7.1. Plutonic rocks of Jurassic, Cretaceous and Tertiary age form distinct intrusive belts (Carter, 1981), with associated porphyry copper, stockwork molybdenum and mesothermal and epithermal base and precious metal veins.

Stratified Cretaceous rocks hosting the polymetallic epithermal veins on the Silver Queen Property and the Equity Silver Deposit are considered to be correlative with the Cretaceous Kasalka Group rocks (Church 1971).

The Kasalka Group is a late-Early Cretaceous (Armstrong, 1988) or early-Late Cretaceous (MacIntyre, 1985) continental volcanic succession that is predominantly porphyritic andesite and associated volcanoclastic rocks. It is well exposed in the Kasalka Range type section near Tahtsa Lake. In the type area, it includes a basal polymictic conglomerate with lenses of sandstone that lies in angular unconformity on older rocks. The conglomerate is overlain by a felsic fragmental unit over 100 m thick, consisting of variably welded siliceous pyroclastic rocks (lithic lapilli tuff, crystal and ash-flow tuff, minor breccia) with interbedded porphyritic flows. The fragmental rocks are in turn overlain by columnar jointed, massive, greenish grey flows or sills of hornblende-feldspar-porphyritic andesite to dacite that are at least 100 m thick. The andesite flows are conformably overlain by a 200 m thick assemblage of volcanic debris flows (lahars). Rhyolite flows and tuffs and columnar jointed basalt flows, together more than 100 m thick, cap the succession.

A mid to Late Cretaceous age is assigned to the Kasalka Group volcanic rocks because they unconformably overlie sedimentary rocks containing latest Early Cretaceous (Albian) fauna (Duffel, 1959). Dacitic lapilli tuffs near the base of the group give an isotopic age of 108 to 107 \pm 5 Ma by K-Ar on whole rock, and intrusions dated at 87 \pm 4 to 83.8 \pm 2.8 Ma cut the stratified units (MacIntyre, 1985).

FIGURE 7.1 REGIONAL GEOLOGY



Legend

Tpb, Tertiary plateau basalt;
KTo, Ootsa Lake Group;
Kk, Kasalka Group;
Jg, Jurassic granite;

Eg, Eocene granite;
Kg, Cretaceous granite;
Ks, Skeena Group;
Jh, Hazelton Group.

Source: Leitch et al. (1992).

The Silver Queen Property is located on the western perimeter of the Buck Creek basin that is delineated by a number of rhyolite outliers and semicircular alignment of Upper Cretaceous and Eocene volcanic centres scattered between Francois Lake, Houston and Burns Lake. The Buck

Creek basin is interpreted as a resurgent caldera (Leitch et al. 1992). The past-producing Equity Silver Mine is located within a window eroded into the central uplifted area (Church, 1985). A prominent lineament 30 km long trends east-northeast from the Silver Queen Property towards the central uplift hosting the past-producing Equity Silver Mine and appears to be a radial fracture coinciding with the eruptive axis of the Tip Top Hill (Kasalka Group) volcanics and a line of syeno-monzonite stocks and feeder dykes to an assemblage of "moat" volcanics (Church, 1985; Leitch et al. 1992). Block faulting is common in the basin, locally juxtaposing the various ages of volcanic rocks found within it.

Within the basin, a Mesozoic volcanic assemblage is overlain by a Tertiary volcanic succession. The oldest rocks exposed within the basin are at the Equity Silver and Silver Queen properties. The sequence at the Equity mine has been characterized by Church (1984) as the Lower Jurassic Telkwa Formation of the Hazelton Group, however, Wetherell *et al.* (1979) and Cyr *et al.* (1984) correlate the sequence hosting the Equity orebodies with the Upper Cretaceous Kasalka Group.

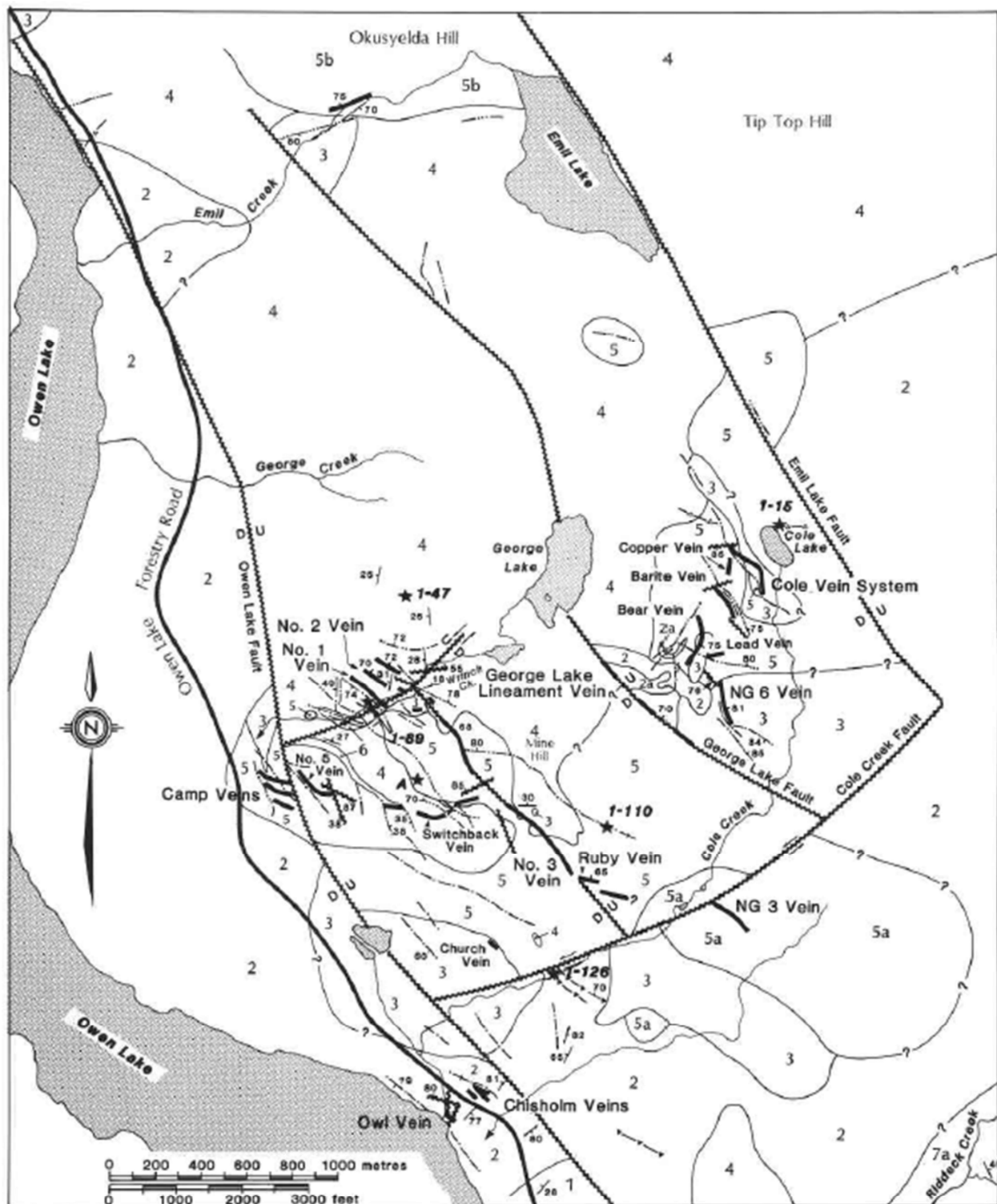
Upper Cretaceous rocks with similarities to the Kasalka Group are exposed westwards from the Equity Silver Mine to the Owen Lake area, where they host the Silver Queen Deposit (Church, 1984). These rocks have been dated at 75-80 Ma by K-Ar whole rock (Church, 1973).

The Upper Cretaceous rocks are overlain by the Eocene Ootsa Lake Group which includes the Goosly Lake and Buck Creek Formations of Church (1984). The Goosly Lake andesitic to trachyandesitic volcanic rocks are dated at 48.8 ± 1.8 Ma by K-Ar whole rock, and this is supported by dates of 49.6 ± 3.0 to 50.2 ± 1.5 Ma for related syenomonzonite to gabbro stocks with distinctive bladed plagioclase crystals (Church, 1973) at Goosly and Parrot lakes. The Buck Creek andesitic to dacitic volcanic rocks, which directly overlie the Goosly Lake Formation, are dated at 48.1 ± 1.6 Ma by K-Ar whole rock. Basalts of the upper part of the Buck Creek Formation (Swans Lake member: Church, 1984) may correlate with the Endako Group of Eocene-Oligocene age. These rocks give whole rock K-Ar ages of 41.7 ± 1.5 to 31.3 ± 1.2 Ma on samples from the Whitesail Lake map area (Diakow and Koyanagi, 1988). The youngest rocks in the Buck Creek basin are Miocene columnar olivine basalt, called the Poplar Buttes Formation by Church (1984) and dated at 21.4 ± 1.1 Ma by K-Ar whole rock (Church, 1973).

7.2 PROPERTY GEOLOGY

The stratigraphy of the area surrounding the Silver Queen Mine, shows a stratigraphic succession that is similar to that observed in the Kasalka Range (Leitch et al. 1992). Leitch et al. (1992) subdivides the rocks on the Silver Queen Property into five major stratified units plus three types of dykes (Figure 7.2). The following descriptions taken are from Leitch et al. (1992).

FIGURE 7.2 SILVER QUEEN PROPERTY GEOLOGY



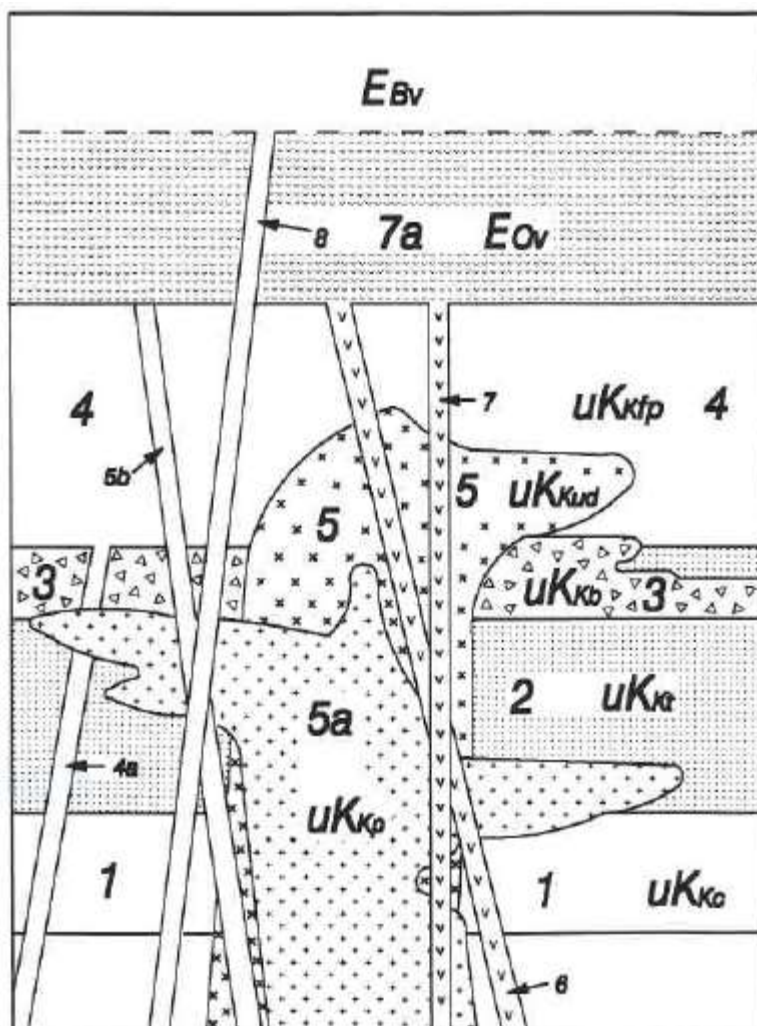
Note: Numbers correspond to units described in text.

Source: Leitch et al. (1992)

A basal reddish purple polymictic conglomerate (Unit 1), is overlain by fragmental rocks ranging from thick crystal tuff (Unit 2) to coarse lapilli tuff and breccia (Unit 3), and this is succeeded upwards by a thick feldspar-porphyrific andesite flow unit (Unit 4), intruded by micro-diorite sills and other small intrusions (Unit 5). The stratified rocks form a gently northwest-dipping succession, with the oldest rocks exposed near Riddeck Creek to the south and the youngest exposed in Emil Creek to the north.

All of the stratified units are cut by dykes that can be divided into three groups: amygdaloidal dykes (Unit 6), bladed feldspar porphyry dykes (Unit 7), and diabase dykes (Unit 8). The relationships between units 1 through 8 are shown in Figure 7.3.

FIGURE 7.3 SCHEMATIC RELATIONSHIPS BETWEEN GEOLOGICAL UNITS ON THE SILVER QUEEN PROPERTY



Note: Unit numbers correspond with units described in text.

Source: Leitch et al. (1992)

The succession is unconformably overlain by basaltic to possibly trachyandesitic volcanics that crop out in Riddeck Creek and farther south. These volcanics may be correlative with the Goosly Lake Formation (Church, 1973).

7.2.1 Tip Top Hill Volcanics

Units 1 to 5, as defined in the Project area, were named the Tip Top Hill Formation (Church, 1984), but correspond closely with the units defined in Kasalka Group rocks elsewhere. The units are described in detail below.

Basal Polymictic Conglomerate (Unit 1) - The basal member of the succession is a reddish to purple, heterolithic, poorly sorted pebble conglomerate that contains rounded to subangular small white quartz and grey-brown to less commonly maroon tuff and porphyry clasts. Local interbeds of purplish sandstone with graded bedding are found within the unit, as are rare black shaly partings. The matrix is composed of fine sand, cemented by quartz, sericite and iron oxides.

Crystal Lithic Tuff (Unit 2) - In outcrop, the next major unit is a sequence of mainly fragmental rocks that are mostly fine crystal tuffs with thin interbeds of laminated tuff, ash tuff, lapilli tuff, and less abundant breccia. The unit may be as much as 100 m thick. The most widespread rock type is a massive, grey to white, strongly quartz-sericite-pyrite altered, fine crystal tuff that grades imperceptibly into a porphyry of similar appearance and composition; the latter may be partly flow, intrusive sill, or even a welded tuff. Only the presence of broken phenocrysts and rare interbeds of laminated or coarsely fragmental material suggest that the bulk of this unit is tuffaceous.

Outcrops on the northeast side of the George Lake Fault have rare interbeds of a very fine, uniform "ash tuff" that are up to several metres thick (Unit 2a). Typically they are dark grey to medium grey-green and have a siliceous appearance. Locally they contain angular fragments of either mixed origins (heterolithic clasts) or of larger blocks that are only barely distinguishable from the matrix (monolithic clasts).

Coarse Fragmental Unit (Unit 3) - A distinctive coarse fragmental unit overlies or in some places is interlayered with the upper part of Unit 2. It is composed of blocks and bombs of feldspar porphyritic rock similar in appearance to both the underlying porphyry and the overlying porphyritic andesite. The clasts are mostly angular to subangular and about 2 to 5 cm in diameter, but some are much larger (up to 0.5 m); the matrix makes up a widely variable percentage of the rock, from almost 0 to 90%, therefore, in places the rock has the appearance of an intrusive breccia with little or no rotation of fragments. In other places the fragments are clearly unrelated and "accidental" or unrelated clasts of chert or fine tuff are common, although still volumetrically minor; this has the appearance of a lahar.

Feldspar Porphyry (Unit 4) - The fragmental rocks of unit 3 appear to be conformably overlain by a thick, massive unit of porphyritic andesite that outcrops over much of Mine Hill and is best developed north of Wrinch Creek. This unit is equivalent to the Tip Top Hill volcanics of Church (1970), although in most places on the Property the porphyry is coarser and contains sparser phenocrysts than the exposures on Tip Top Hill. In exposures in Wrinch Creek canyon, a distinct flow lamination is developed by trachytic alignment of phenocrysts, best seen on weathered

surfaces. This suggests that these porphyries are mostly flows, with gentle northerly to northwesterly dips. However, some of the coarsest material probably forms intrusive sills and stocks and locally the porphyry grades into intrusive microdiorite (Unit 5). This unit has been dated at 77.1 ± 2.7 Ma by K-Ar on whole rock (Church, 1973) and 78.3 ± 2.7 Ma by K-Ar on whole rock (Leitch et al., 1992).

Biotite Feldspar Porphyry Dikes (Unit 4A) - Rare, thin (1 m or less) dykes with similar composition and appearance to the flows of Unit 4 probably represent feeders to overlying flows. They are distinguished by prominent scattered books of black biotite up to 3 mm across, as well as abundant 1 to 2 mm plagioclase phenocrysts. These dykes have only been recognized near the north end of Cole Lake and on the highway at the north end of Owen Lake (Figure 7.2), but they may be more extensive (they are difficult to recognize because of their similarity to Unit 4). They are dated by K-Ar on whole rock at 70.3 ± 2.5 Ma, indicating a possible 7-8 Ma span of Tip Top volcanic activity (Leitch et al., 1992), (Cheng 1995).

Microdiorite (Unit 5) - Microdiorite forms subvolcanic sills, dykes, and possibly small irregular stocks on the Silver Queen Mine property. These intrusions are centrally located in the two main mineralized areas, the No. 3 Vein and Cole Vein areas. Contacts with the feldspar porphyry are indistinct or gradational over about 1 m, but dykes are seen cutting older units.

Typically the microdiorite is a medium to fine-grained, dark greenish grey equigranular to porphyritic rock characterized by small (1 mm, but locally glomeratic to 4 mm) plagioclase phenocrysts and 0.5-millimetre mafic relics in a phaneritic pink feldspathic groundmass. Primary magnetite is found in the less altered specimens.

Because of the relatively high K_2O content, both the microdiorite and the feldspar porphyry classify as latite-andesites or dacites. The microdiorite has been dated isotopically at 75.3 ± 2.0 Ma by K-Ar on whole rock (Church, 1973) and 75.3 ± 2.0 Ma (Leitch et al, 1992).

Porphyry (Unit 5A) - Large bodies of a coarsely feldspar-porphyritic rock, up to 1,000 m across, crop out in the vicinity of Cole Creek and are also found in drill core from the south end of the Number 3 Vein system, where the porphyry body usually occurs between Units 1 and 3. The rock is composed of roughly 50 percent variably saussuritized or sericitized plagioclase phenocrysts of up to 5 mm in diameter and 10% to 20% smaller, altered mafic relics in a fine feldspathic groundmass. The porphyry is distinguished from the feldspar porphyry, Unit 4, by its coarser texture and by the absence of flow textures. It probably represents subvolcanic or high-level intrusive bodies, that were emplaced below or postdate the extrusive feldspar porphyry, however, are related to the same magmatic event that produced it.

Quartz-Feldspar Porphyry (Unit 5B) - Quartz feldspar porphyry that appears to be part of a subvolcanic intrusive stock crops out along Emil Creek and on Okusyelda Hill to the north of the creek. This unit was formerly called "Okusyelda" dacite (rhyolite) by Church (1970). Although its contact relationships are uncertain, it appears to intrude Unit 4 (Tip Top Hill volcanics).

Amygdaloidal Dikes (Unit 6) - Units 1 to 5 are cut by a series of variably amygdaloidal dykes that are concentrated in the two main areas of mineralization (No. 3 Vein and Cole Vein areas). They generally trend northwesterly parallel to the mineralized veins, but north, east and northeast-trending examples are known. Dips are either subvertical to steep or else gentle (as low as 20°).

These dykes are irregular and anastomosing in some parts of the Property, for example between the Camp and Switchback vein systems. Strongly altered examples are commonly found adjacent to and parallel to veins; elsewhere veins are cut by these dykes.

The dykes have an Eocene K-Ar whole rock age of 51 ± 1.8 Ma that reflects alteration, thus establishing a maximum but likely age of mineralization (Cheng 1995).

Bladed Feldspar Porphyry Dykes (Unit 7) -Trachytic-textured porphyry dykes, 1 to 5 m wide and characterized by coarse (up to 1 cm long) bladed plagioclase phenocrysts, cut and slightly offset the amygdaloidal dykes. The complete lack of alteration in the bladed feldspar porphyry dykes, and the fact that they distinctly crosscut mineralized veins (e.g., the Bear Vein, Cole Lake area), indicates that they postdate mineralization. Their spatial distribution is similar to that of the amygdaloidal dykes, with concentrations in the two main mineralized areas: orientations are also similar, with subvertical dips.

The similarity of these post-mineral bladed feldspar porphyries to the Goosly and Parrot Lake syenomonzonite stocks, and bladed feldspar andesite dykes at Equity dated at 50.7 ± 1.8 Ma by K-Ar on whole rock, suggest that they are probably of the same age. The pre-mineral amygdaloidal dykes, although considerably finer grained also have similar characteristics (trachytic-textured feldspar), but their age is not yet established.

Diabase Dykes (Unit 8) - Black fine-grained dykes of probable basaltic composition cut all other units on the Property. They are much more limited in distribution than the older dykes, with subvertical dips and northwest or east-west strikes. However, they still seem to be concentrated in areas of veining, and are subparallel to the veins: for example, where a vein strikes east, as in Emil Creek, a diabase dyke has the same orientation. It is likely that these dykes were feeders to a younger volcanic group such as the Endako Group of Eocene-Oligocene age (40 to 30 Ma), but the possibility cannot be ruled out that they are related to the Buck Creek volcanic unit (48 Ma). There is little possibility that they are related to the Miocene Poplar Buttes volcanic rocks (21 Ma), as they lack olivine. The K-Ar whole rock isotope age of these dykes is 50.4 ± 1.8 Ma, only slightly younger than the dykes of Unit 6 and 7. It is likely that Unit 8 dykes are related to the basaltic Buck Creek Formation (48.1 ± 1.6 Ma; Church, 1973), (Cheng 1995).

7.2.2 Structure

The structure of the Silver Queen Mine area is dominated by a gently north to northwest dipping homocline that has presumably been tilted 20° to 30° from the horizontal by block faulting. The average bedding plane is $032/25^\circ\text{NW}$ and the most prominent joint set dips steeply, roughly perpendicular to the bedding at $057/7^\circ\text{SE}$ (Leitch et al., 1992).

Two prominent sets of faults displace the homoclinal sequence, cutting it into a series of fault panels: a northwest-trending set and a northeast-trending set. The former predates or is contemporaneous with mineralization, whereas the latter is mainly post-mineralization. Most of the mineralized veins and the dykes follow the northwest-trending faults, whereas veins are cut off and displaced by the northeast-trending set. The northwest-trending faults dip 60° to 80° to the northeast, and the northeast-trending set appears to be subvertical.

The sense of motion on the northwest-trending faults is such that each successive panel to the east is upthrown, leading to successively deeper levels of exposure to the east. Thus, in the panel between the George Lake and the Emil Lake faults, there is considerably more of the lower fragmental rocks (Units 2 and 3) exposed than in the next panel to the west, between the Owen Lake and the George Lake faults. There does not seem to be much displacement across the No. 3 Vein fault: slickensides seen underground on this structure suggest a reverse sense of movement.

The sense of motion on the northeast-trending faults appears to be south side down, with a small component of sinistral shear. Offsets of the No. 1 and 2 veins across the fault along Wrinch Creek suggest a few metres of left-lateral displacement, but the displacement of an amygdaloidal dyke near the portals of the 2880 level suggests the south side must have dropped as well. The boundaries of this fault zone, and its dip, are not well constrained; in outcrops in Wrinch Creek, it appears as a vaguely defined zone up to 10 m wide, with segments that have possible shallow to moderate dips to the north. The Cole Creek Fault is not well exposed at surface; a splay from it may cause the change in orientation of the No. 3 Vein to the Ruby Vein. A considerable left-lateral offset of perhaps as much as 200 m is suggested by drill-hole intersections of the NG3 Vein, which may be a faulted extension of the No. 3 Vein south of the Cole Creek Fault. Underground, this fault is exposed at the southernmost extent of drifting as a gouge zone 1 to 2 m thick.

Further studies (Millar, 1998) suggest the Property is situated within a ring structure, possibly developed around an intrusion at depth which acts as a source for the mineralizing fluids. It is proposed that the Cole Creek Fault and possibly the Chisholm Fault represent segments of ring fractures to this intrusion. The intrusion is part of a much larger regional body within which the Silver Queen and the Silver Equity deposits both sit close to the margin.

The principal regional fault system strikes north-northwest with a series of secondary and tertiary northwest and west-northwest structures associated with mineralization. The northwest striking No. 3 Vein, the largest vein on the Property, shows all the characteristics of sinistral (left-lateral) motion at the time of mineralization and can be modeled within an overall regional north-northwest sinistral system. West-northwest structures, such as the No. 5 Vein and the E/W inflection on the No. 3 Vein, will be highly dilational and potentially the thickest structures within this regime. However, the amount of dilation is not directly proportional to the grade. The principal mineralized structures may be faulted to the northwest by a northeast striking structure which crosscuts the ring fracture complex. Exploration potential may be terminated depending on the throw on this structure. However, exploration is open to the southeast in the "Three Corners Area" where the projection of the principal structures intersects the ring complex. A number of possible extensions to these structures have been interpreted on the geophysical data. This area is geochemically anomalous and highly fractured possibly reflecting these ring fractures as a pathway for fluids sourced in the intrusive.

7.2.3 Mineralization

Leitch et al. (1990) describe the mineralization on the Property is consisting of quartz-carbonate-barite-specularite veins, 1 to 2 m thick, that contain disseminated to locally massive pyrite, sphalerite, galena, chalcopryite, tennantite and argentian tetrahedrite.

Pyrite-sphalerite-chalcopryrite and sphalerite-galena are the two general types of sulphide mineralization occurring in the veins but there are gradations between the two types. Higher gold and silver values are generally associated with the pyrite-sphalerite-chalcopryrite veins. The gangue is mainly cherty quartz, carbonate minerals such as rhodochrosite and siderite, some barite and rarely pyrobitumen. Local intense alteration of wallrock along veins and fissures has resulted in a mixture of clay and carbonate minerals, some chlorite, minor epidote and disseminated pyrite. Concentrations of gallium, germanium and indium are also present.

Locally, in chalcopryrite-rich samples, there is a diverse suite of Cu-Pb-Bi-Ag sulphosalts such as aikinite, matildite (in myrmekitic intergrowth with galena), pearcrite-arsenopolybasite, and possibly schirmerite. Native gold (electrum) with low fineness of 510 to 620 is present in minor amounts.

The veins are cut by the amygdaloidal, fine-grained plagioclase-rich dykes (Unit 6), and are cut by the series of dykes with bladed plagioclase crystals (Unit 7). Both these dyke types are possibly correlative with the Ootsa Lake Group Goosly Lake volcanics of Eocene (approximately 50 Ma) age. The age of mineralization is thought to be Early Tertiary and probably Eocene.

Approximately 20 mineralized veins have been discovered. The following descriptions are summarized from the MINFILE report 093L 002 (accessed August 6, 2019). The main quartz vein systems are the Wrinch (including the No. 3 Vein), Camp, Portal, Chisholm, George Lake and Cole systems. The average width of the veins is 0.9 to 1.2 m and locally increases up to 4.6 m. In general, the veins occupy northwest striking fractures that cut the volcanics, microdiorite, and the felsite porphyry and the basalt dykes. Figure 7.2 shows the approximate locations of the major veins.

The main vein within the Wrinch system is the No. 3, which splits into the No. 1, No. 2, No. 3 veins in the north-western portion of the system. A Footwall Vein, sub-parallel to the No. 3, is also present in some locations. The No.3 structure has complexities such as abrupt changes in strike or dip that often have associated splays, and possible en-echelon structures. Historically areas of the No. 3 Vein have had a number of names including Ruby Zone, Ruby Extension and No. 3 Extension, but these are parts of the same structure, and possibly the same vein. The structure is cut off at its southwest end by the Cole Fault and it is presumed that the NG-3 Vein is the faulted-off extension of this vein, indicating a displacement of approximately 150 m to the northeast.

The Wrinch Vein system has been the focus of most of the mining and development work. The overall strike of the veins is about 130 degrees and is traceable over a length of more than 1,300 m. These veins are generally banded with sphalerite as the predominant sulphide with pyrite, chalcopryrite and galena. The gangue minerals consist mainly of cherty quartz, carbonate minerals (rhodochrosite) and barite. By 1973, a total of 1,050 m of adits and crosscuts plus 810 m of drifting and raises and 1,500 m of diamond drilling had been completed on the Wrinch Vein system.

The Camp Vein system occurs under deep overburden within a topographic low and has no surface exposure. This area contains some of the highest silver grades found on the Property in association with pyrargyrite (“ruby silver”) in low-sulphide veins and also contains veins with sections of massive galena-sphalerite. Structure of the area is complex and poorly understood and attempts to create a coherent and predictive model of the veins have been unsuccessful. Millar’s (1998) structural study, suggests that the strike of the individual veins within the system may differ from the overall trend of the system. Exploration to the north was discontinued due to an apparent

weakening of the system in that direction. It appears likely that the system has been slightly offset by the Wrinch Canyon Fault.

The Portal Veins strike roughly westerly and are generally narrow but high-grade. A small amount of mineralization was mined from Portal Vein stopes on the 2600 Level during the 1972-73 production period but the structure in this area is difficult to follow due to offsets by faulting. Limited drilling indicates that the vein may be lost due to faulting below the 2600 level, but very little effort has been expended in locating the continuation of the vein beyond the fault.

The Chisholm veins (MINFILE 093L 216) consist of three sub-parallel veins striking northwesterly and dipping to the north-east. A small amount of mineralization was shipped from this area in 1915.

The George Lake Vein occupies a topographic low known as the George Lake lineament and is obscured by overburden. The lineament is about 1,100 m long and is subparallel to the No. 3 Vein and about 700 m to the northeast of it. The vein has been intersected underground by the Bulkley crosscut and has been the subject of limited underground and surface drilling in that area. The remainder of the lineament has not been systematically explored.

The Cole System includes the Cole Vein, Cole Shear, Bear Vein, Copper Vein, Barite Vein and NGF-6 Vein. All have northerly to north-westerly strikes. No underground work has been done in this area except for the sinking of the Cole Shaft in 1928.

The Wrinch Vein system is the most important and has been the focus of most of the mining and development work. The overall strike of the veins is about 130° and they are traceable over a length of more than 1,600 m. These veins are generally banded with sphalerite as the predominant sulphide with pyrite, chalcopyrite and galena. The gangue minerals consist mainly of cherty quartz, carbonate minerals (rhodochrosite or manganiferous siderite) and barite. To date, a total of 3,650 m of adits and crosscuts plus 3,700 m of drifting and raises and 27,000 m of diamond drilling have been completed on the Wrinch Vein system.

The Portal Vein system contains some of the highest metal grades found on the Property. The veins are generally less than 30 vertical metres from surface. A quartz-chalcopyrite sample from Vein No. 5 assayed 9.6 g/t Au, 829.7 g/t Ag, 7.2 % Cu, 0.17 % Pb, 0.17 % Zn, 0.11 % Bi, and 0.01 % Ba.

The Chisholm vein system (093L 216) consists of three subparallel veins located about 1,200 m south of Mine Hill. The veins strike about 125 degrees and dip northeast. The minerals are mainly argentiferous sphalerite, galena, pyrite and minor chalcopyrite. The host rocks consist of highly altered dacitic tuffs and tuff breccias. The veins are mainly the result of fissure-filling as indicated by their vuggy structure and the colloform banding of the mineralization and gangue. The gangue constituents are mainly cherty quartz, rhodochrosite, siderite and some barite.

The Cole system lies to the west of Cole Lake. These veins uniformly carry low-temperature assemblages of sphalerite-pyrite-galena (Minfile).

7.2.4 Alteration

Mineralization on the Silver Queen Property is associated with widespread alteration. The alteration is manifested in the development of numerous limonite and jarosite gossans and appears to be the result of pervasive kaolinization-pyritization. The extent of alteration suggests a deep source of mineralizing solutions and the potential for replacement-type sulphide mineralization at depth (MINFILE 093L 002).

At the Silver Queen Property regional propylitic alteration is characterized by replacement of primary mafic minerals, initially by epidote and chlorite as well as minor amounts of carbonate and the partial replacement of plagioclase by carbonate and sericite. This type of alteration is interpreted to be the product of hydrothermal activity followed by the initial stage of volcanism, which predates the mineralization.

Carbonatization superimposed on the early propylitic alteration may be the product of hydrothermal activity associated with mineralization and is spatially controlled by a complicated fracture system. At Silver Queen, with increasing intensity of superimposed carbonatization on propylitic alteration, more complete replacement of epidote and chlorite by abundant carbonates occur.

Hydrothermal activity associated with mineralization forms the outer alteration envelopes marked by complete replacement of plagioclase by sericite and kaolinite, chlorite by siderite and magnetite by pyrite or hematite. Inner alteration envelopes are interpreted as a maximum stage hydrothermal alteration superimposed on the sericitic and argillic outer alteration envelope. This alteration is associated with the replacement of sericite by quartz and direct precipitation of quartz, sulfide and carbonate. The close association between mineralization and the inner silicification envelope indicates that the ore-forming metals are transported as Si, S and C complexes, and that the precipitation of quartz, sulfide and carbonate through reaction with the wall rock and hydrothermal solution might trigger ore deposition (Cheng 1995).

Church and Barakso (1990) completed a regional lithogeochemical sampling program. Areas of known mineralization were defined by anomalous As-Ag geochemistry. An examination of this geochemistry shows that the Silver Queen area has anomalies of similar magnitude to the Equity Silver Mine for Ag, As, Cu, Pb and Mo, and has stronger Au and Zn anomalies (Caron, 1996).

8.0 DEPOSIT TYPES

Studies of the Silver Queen Deposit indicated the mineralization is best characterized as a transitional porphyry-epithermal type deposit model similar to the past-producing Equity Silver Deposit.

The majority of the known Silver Queen veins are hosted in relatively brittle feldspar porphyry or microdiorite of the Upper Cretaceous Kasalka Group. As detailed above, structural and lithological permeabilities are the main ore controls for transitional porphyry-epithermal mineralization. All of the underground work at Silver Queen and about 95% of the surface drilling has been done in areas underlain by brittle rocks.

Mineralization is known to be hosted in the pyroclastic rocks at Silver Queen (the Church, Owl and Chisholm veins and the Twinkle breccia zone), however exploration of these targets has been minimal and essentially no work has been done to test for "Equity type" mineralization. Mineralogical zonation studies of the Silver Queen veins point to a heat source at depth, to the southeast of the main area of veining, with fluid movement from south to north (Hood, 1991).

The age of mineralization is closely confined by pre- and post-mineral diking at about 51 Ma, slightly younger than that at Equity (58 Ma) (Leitch, et al, 1992). A Tertiary intrusive, believed to be correlative with the Eocene Goosley intrusive (the Equity heat source), was intersected at depth in drill hole NG4, which may represent the heat source at Silver Queen.

Mineralization at the past-producing Equity Silver Mine fits a transitional porphyry-epithermal subvolcanic Au-Ag-Cu model (Pantelyev, 1986). Characteristics of this deposit type are:

- Mineralization is intrusion related; with near-by porphyry copper-molybdenum deposits.
- The intrusions are emplaced as high-level, subvolcanic stocks; with coeval volcanic rocks that may, or may not, be present. Quartz-feldspar porphyry domes and flow dome complexes can be mineralized in their interior parts, but overall, they most commonly host typical epithermal vein deposits.
- Cu-Au-Ag and/or Au-Ag mineralization is associated with polymetallic mineralization, typically with abundant As and Sb.
- Pyrite is the dominant sulphide mineral. Chalcopyrite, tetrahedrite/tennantite are common, enargite is rare or absent.
- Structural and lithologic permeabilities are the main mineralization controls.
- Sulphide minerals are present in stockworks, veins, breccias and local massive replacements to disseminated zones. The ore stockworks and vein sets are composed of sulphide-bearing fractures; they contain only minor quartz.
- Quartz-sericite-pyrite is the dominant alteration, mainly as a pervasive replacement of the mineralization host rocks. Advanced argillic alteration forms a locally developed

overprint with pervasive kaolinite and veins with quartz-alunite- (jarosite) assemblages. Higher temperature zones contain andalusite, pyrophyllite, zunyite, diaspore and rare corundum; tourmaline is abundant in some deposits. Propylitic alteration is widespread in the hostrocks surrounding the mineralization.

- Vertical zoning is evident and lateral zoning of metals may be developed in deposits. From shallow to greater depth there is a progression from Au, Ag with increasing Cu, Zn and Pb, locally Mo, Bi, and W and, rarely, Sn.
- Mineralization is related to ‘robust’ high temperature and relatively high-pressure fluids emanating from porphyritic intrusions. The ore solutions are highly saline, moderately oxidized and less-acidic than those in high-sulphidation epithermal deposits.

Mineralization at the Silver Queen property has many of these characteristics. These include intrusion related; polymetallic mineralization and associated epithermal veins; anomalous As-Sb; quartz-sericite-pyrite alteration and pervasive propylitic alteration; and vertical and lateral mineralogical zonation. Caron (1996) concludes that the Silver Queen mineralization formed by a similar process to the Equity Silver Deposit.

9.0 EXPLORATION

Historical exploration campaigns carried out on the Property prior to 2010 are summarized in Section 6. In 2010 the Company resampled core for verification purposes. A soil sampling program as well as an electromagnetic geophysical survey (EM16) were conducted.

9.1 2011 EXPLORATION PROGRAM

Due to the overburden in the area, geophysics was selected as the best method to find suitable drill targets. The program consisted of three major elements, being a ZTEM and magnetometer survey followed by advanced analysis of the magnetometer data and finally a Titan 24 deep imaging DCIP and MT survey.

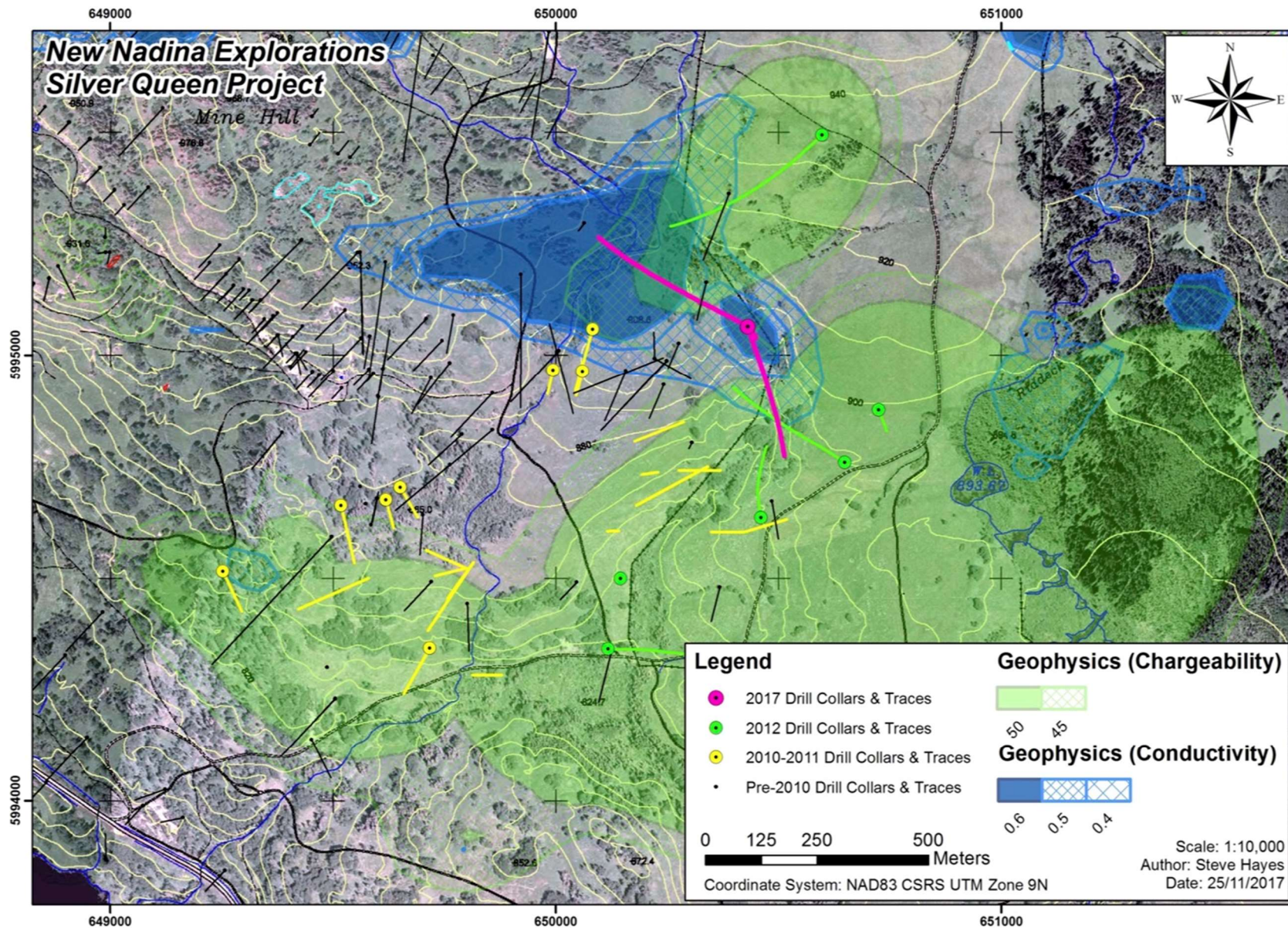
In early May 2011, Geotech Ltd. was engaged to undertake a helicopter-borne geophysical survey totalling 708.4 line-km. Sensors included a Z-axis Tipper electromagnetic (“ZTEM”) system and a caesium magnetometer, supported by a GPS navigation system and a radar altimeter. Mira Geoscience completed unconstrained modelling of the Geotech airborne magnetic data to generate a 3-D magnetic susceptibility model in order to guide further exploration.

In July 2011, Quantec Geoscience Ltd undertook a ground-based Titan 24 DCIP and MT survey covering eight lines spaced about 300 m apart and totaling approximately 24.6 line- km. Objectives of the survey were to locate favourable areas both for vein and porphyry style mineralization.

Two targets were identified, designated as Targets A and B. Target A was suggested to be related to vein type mineralization and Target B was consistent with porphyry style mineralization. Drill holes directed to Target A failed to intersect significant mineralization. Target B was named the “Itsit” Deposit by management.

The chargeable and conductive areas are shown on the plan view in Figure 9.1 and in section view in Figure 9.2. Drill holes sections plotted in relation to the geophysical anomalies can be seen in Figures 10.4 through 10.8.

FIGURE 9.1 PLAN VIEW INDUCED POLARIZATION ANOMALIES



Source: www.nadina.com

FIGURE 9.2 SECTION OF INDUCED POLARIZATION ANOMALIES

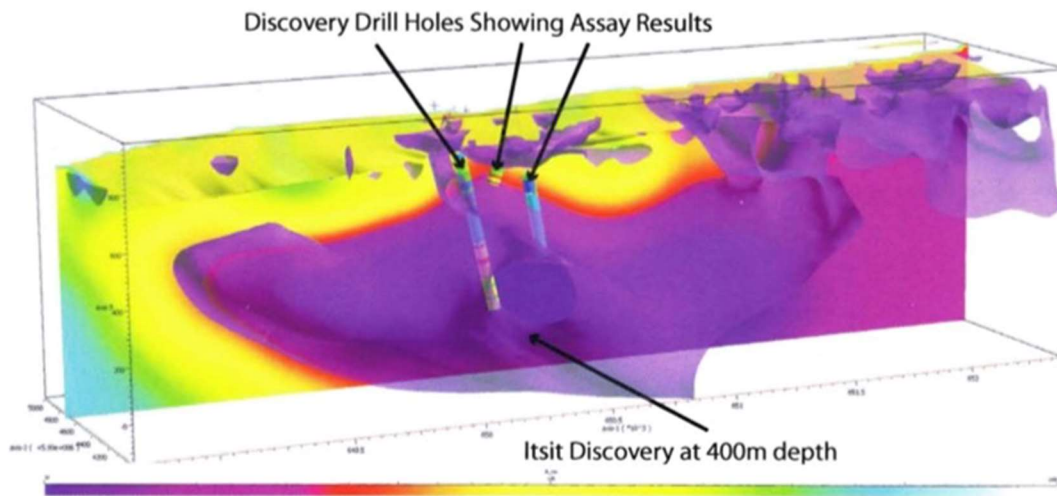


Figure 1: DC Resistivity section over Target B

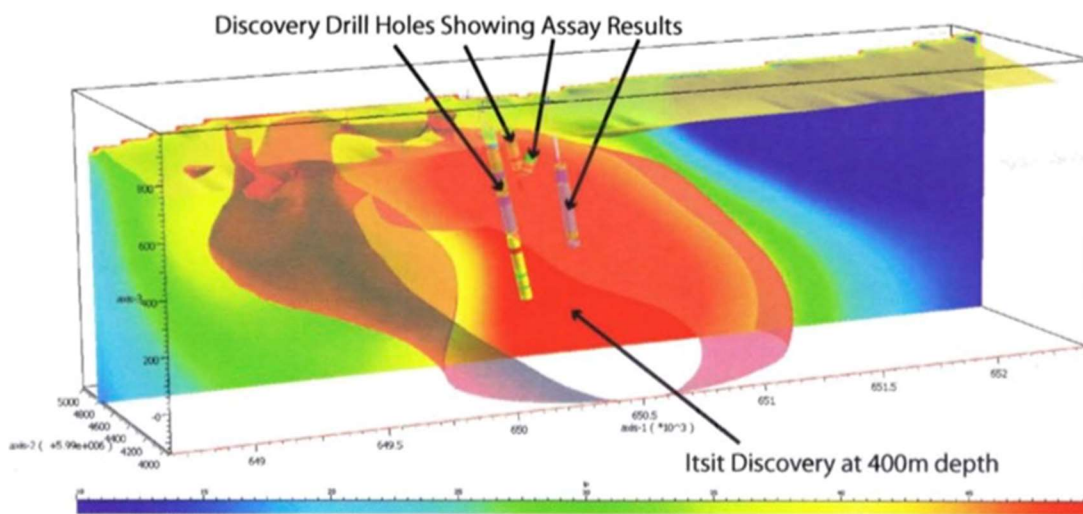


Figure 2: IP Chargeability section over Target B

Source: www.nadina.com

10.0 DRILLING

Drilling campaigns prior to 2010 are summarized in Section 6.

10.1 2010 DRILLING PROGRAM

The NG-3 Vein was initially discovered during drilling in 1970 by Northgate Explorations. Some sporadic drilling was done on the vein in 1971 and the early 1980s but its precise location and orientation were unclear, as was its relationship to the No. 3 Vein. Drilling from workings on the 2600 Level established that the NG-3 Vein is the eastern extension of the No. 3 Vein to the east of the Cole Creek Fault. Further drilling was done on the NG-3 as part of the 2010 drilling program.

During September and October 2010, 26 NQ2 sized core holes were drilled in six areas for a total of 4,109.5 m. Drilling was conducted in six locations: 1) IP anomaly (south); 2) Drainage ditch (old millsite); 3) Camp North; 4) Swamp; 5) Cole North; and 6) NG-3. Borehole locations are shown on Figure 10.1.

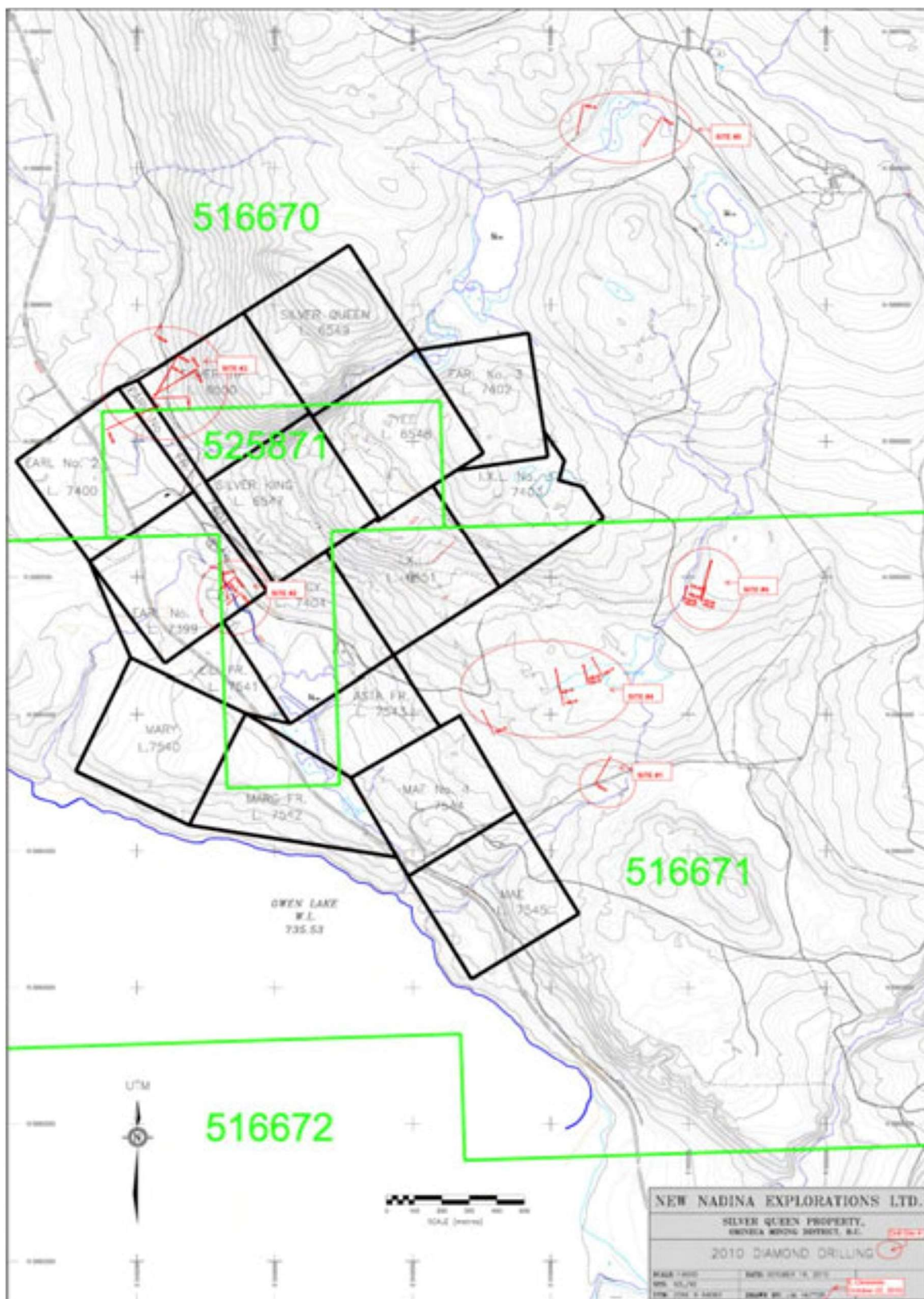
Drilling in the Camp North, Swamp and NG-3 areas was preceded by a VLF-EM survey conducted by J. Hutter with a Geonics EM-16 machine. This survey responded poorly or not at all to veins in the Swamp and NG-3 areas but indicated a zone in the Camp North area which proved to be mineralized.

Drilling on both the northern (Camp North) and southern (IP Anomaly) portions of the Property encountered indications of the proximity of a porphyry system. The single hole drilled on the IP Anomaly, south of previously known mineralization, encountered 125 m of quartz- pyrite stockwork interspersed with post-mineral dykes, most being feldspar porphyry. Six holes were drilled in a Camp North area where felsic tuff and highly pyritic rocks were encountered. Samples were sent to SGS Mineral Services in Vancouver for analysis. See Table 10.1.

DDH 10S-01, drilled to a depth of 269 m on the IP Anomaly, was the first hole of the 2010 program and encountered a silica-pyrite stockwork from 44 m to 169 m containing minor amounts of gold, where sampled. See Table 10.1 The boundaries of the stockwork are gradational, with a gradual decrease in the intensity of veining away from the main body of stockwork such that only isolated silica-pyrite veinlets are encountered at the top and bottom of the hole. The main stockwork has been intruded by a post-mineral feldspar porphyry dyke swarm, with core length of individual dyke intersections being 0.3 to 9.3 m. Stockwork intersections range from 1.0 to 14.75 m in length. Aside from size, the silica-pyrite veinlets comprising the stockwork are very similar in appearance to the gold-bearing silica-pyrite sections of the No. 3 Vein.

Holes 10S-02 to 10S-04 and 10S-12 were drilled to investigate areas of high-grade zinc mineralization in the Drainage Ditch area, found by trenching in previous years, but encountered no significant mineralization.

FIGURE 10.1 2010 DIAMOND DRILL HOLE LOCATIONS



Source: New Nadina Explorations 2019

Table 10.1 shows the sample results from the Camp North area and DDH 10S-01 on the IP Anomaly.

TABLE 10.1 SAMPLE ANALYSIS SUMMARY, 2010 DRILLING PROGRAM							
Sample No.	From (m)	To (m)	Core Length (m)	Au (g/t)	Ag (g/t)	Cu (%)	Description
454134	92	95	3	0.1	1.8	0.11	Silica-pyrite veins and stockwork
454136	114.6	115.35	0.75	0.44	4.1	0.04	Silica-pyrite alteration in hanging wall of vein
454137	114.6	115.35	0.75	0.87	16.9	0.04	Duplicate of above Silica-pyrite alteration in hanging wall of vein
454138	115.35	115.48	0.13	1.16	493.5	1.18	7 cm carbonate-silica- pyrite-sphalerite vein at 30-40 d to CA
454139	125.3	126.3	1	0.09	3	0.06	Silica-pyrite stockwork
454140	140	143	3	0.08	3	0.05	Silica-pyrite stockwork

Holes 10S-05 to 10S-11 were drilled to test the Camp North area with the objective of extending the Camp Vein system. Drilling was hampered in this area by extensive heavy overburden, causing the abandonment of hole 10S-06 without reaching bedrock.

A conductor indicated by an EM-16 survey was drilled and yielded several narrow veins, although metal values were low. It is believed that much of the pyrite found in this area could be of primary origin. The area has previously received very little attention and continues to be of interest.

Six holes were drilled from three locations to test the NG-3 Vein. The structure was narrow but showed good continuity. Gold values ranged up to 9.11 g/t Au and silver values were up to 336.9 g/t Ag.

Six holes totaling 820 m were drilled in the Swamp area to test for structures occupying the topographic low. The intersections obtained, when combined with the results of previous drilling from 1969 and 1971, were interpreted as a set of four sub-parallel veins striking approximately 65° and dipping steeply to the north, along with two splay veins. Veins in this area are lacking the width and continuity to justify further work.

A reconnaissance geochemical survey early in the season to the northwest of Cole Lake produced several multi-element spot anomalies. The most promising of these was tested by DDH 10S-19 that intersected a new vein but yielded poor results.

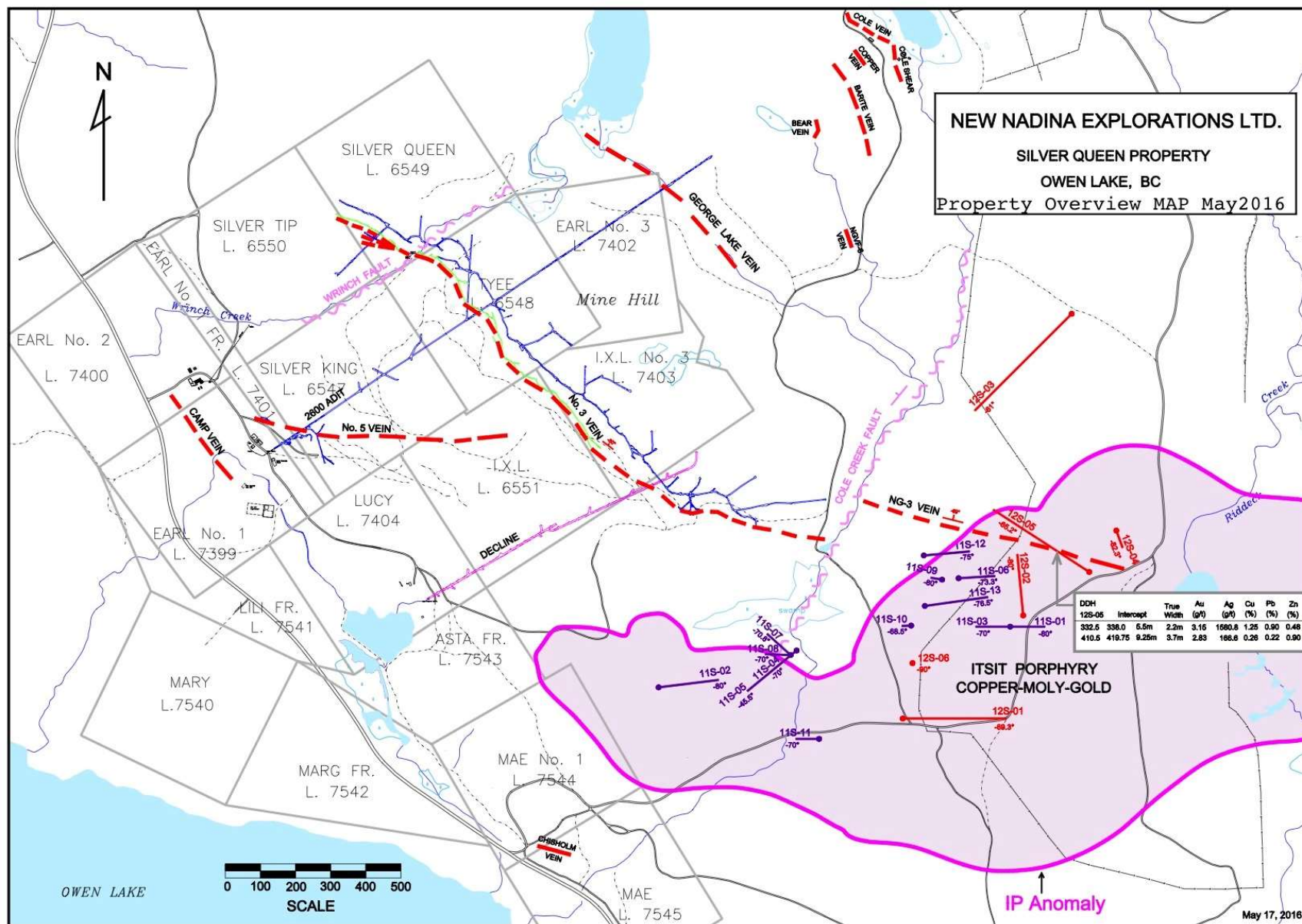
Also, to the northwest of Cole Lake, DDH 10S-20 was drilled to follow up on results obtained in a historic drill hole, NGF-8, drilled in 1970. The new hole intersected two veins but neither was of sufficient quality to justify more drilling in this area at present. Silver grades in both holes were good but gold and zinc values were low and widths encountered were narrow.

10.2 2011 DRILLING PROGRAM

During September and October, thirteen holes (4,490.2 m) were drilled, six (1,723.5 m) into Target A and seven (2,766.7 m) were directed at Titan Target B. The Titan A target was interpreted to be a potential vein type system of the Silver Queen type. Diamond drilling failed to intersect a likely source for this anomaly.

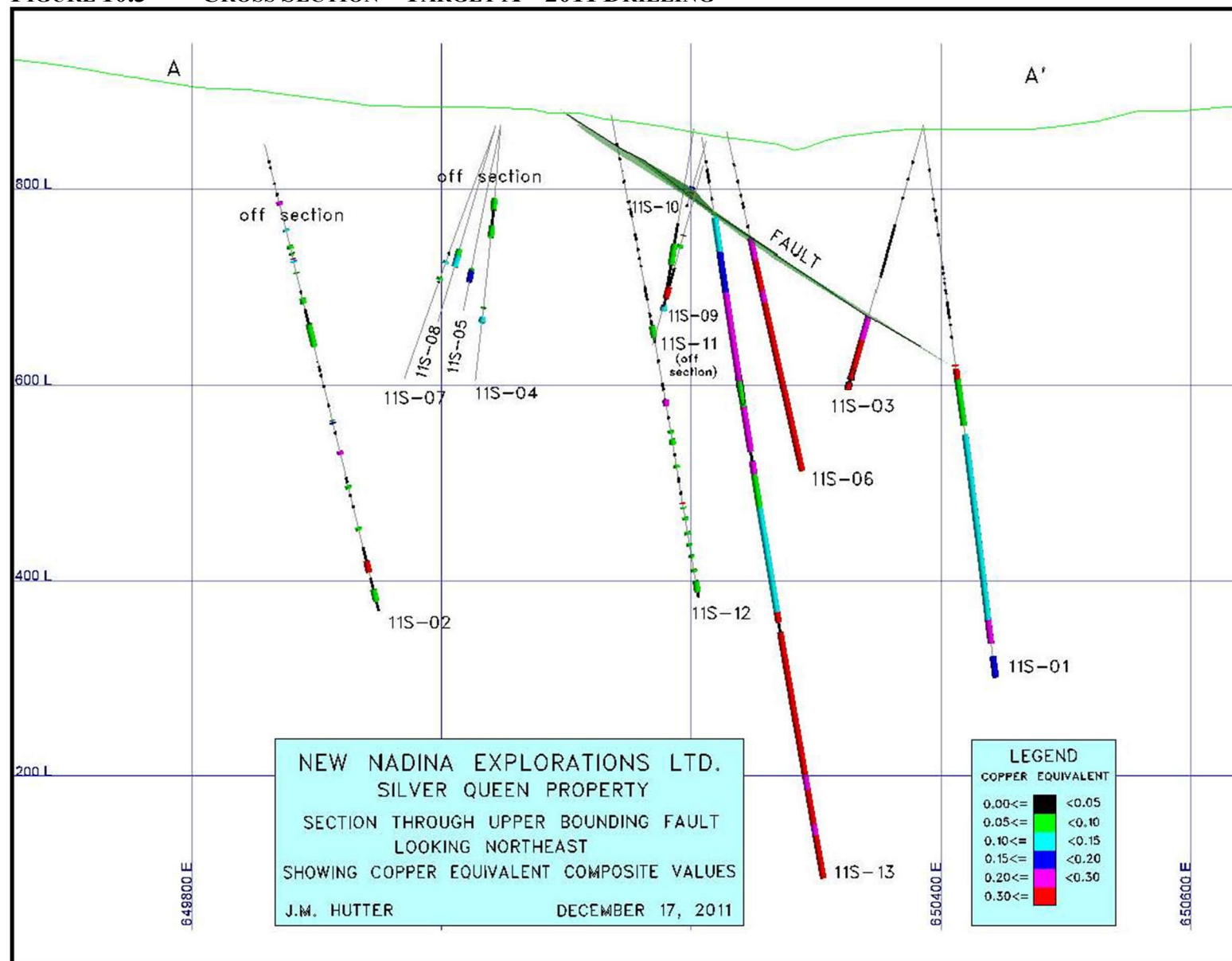
The locations of the drill holes are shown in Figure 10.2. A section showing composite grades and geology on Target A is shown in Figure 10.3. Drill holes were planned based on geophysics. Two targets were identified, designated as Targets A and B. Target A was suggested to be related to vein type mineralization and Target B was consistent with porphyry style mineralization. Target B revealed Cu-Mo-Au porphyry mineralization and was named the “Itsit” Deposit.

FIGURE 10.2 SILVER QUEEN – 2011-2012 DRILL HOLE LOCATIONS



Source: www.nadina.com

FIGURE 10.3 CROSS SECTION – TARGET A – 2011 DRILLING



Source: www.nadina.com

Holes 11S-02, -04, -05, -07 and -08 were drilled to intersect Target A and the remainder were directed to Target B. The Target A holes encountered occasional narrow intervals carrying weakly anomalous gold values but did not explain the underlying cause of the “A” anomaly. Of the Target B holes (Table 10.2), 11S-09, -10, -11 and -12 did not encounter the feldspar porphyry or only encountered narrow intersections of it. These four holes intersected only narrow mineralized intervals. Holes 11S-01, -03, -06 and -13 encountered continuous mineralization (except for occasional post-mineral dykes) from the Upper Bounding Fault to the bottom of the hole. All four of these holes bottomed in mineralization. Hole 11S-03 was terminated due to stuck rods, which were lost, and hole 11S-06 was abandoned due to difficult drilling conditions which also were threatening to seize the rods. The casing has been left in hole 11S-13 so that it may be re-entered and deepened. Select significant intersections are presented on Table 10.3.

TABLE 10.2 SILVER QUEEN 2011 DIAMOND DRILLING, ITSIT DEPOSIT, TARGET B						
Hole ID	Easting (UTM)	Northing (UTM)	Elevation (m)	Length (m)	Azimuth (UTM) (°)	Dip (°)
11S-01	650,423	5,994,603	865.5	572	90	-80
11S-03	650,423	5,994,603	865.5	288	270	-70
11S-06	650,276	5,994,741	858	361.5	86.5	-73.3
11S-09	650,229	5,994,737	861.5	189.2	280	-80
11S-10	650,141	5,994,606	849	72	268	-68.5
11S-12	650,177	5,994,806	876	507	85	-75
11S-13	650,180	5,994,662	853	777	82	-76.5
Total				2,766.7		

Note: Easting and Northing coordinates are in metres in UTM NAD83 Zone 9U.

TABLE 10.3 SELECT SIGNIFICANT INTERSECTIONS – TARGET B							
Hole ID	From (m)	To (m)	Length (m)	Au (g/t)	Cu (%)	Mo (%)	Cu Equiv (%)
11S-03	Rods stuck - lost hole at 288 m – Hole bottomed in mineralization						
	208.4	288	79.6	0.123	0.230	0.0010	0.321
11S-06	Hole stopped at 361.7 m due to squeezing clay – encountered strong mineralization						
	112.79	361.7	248.91	0.12	0.197	0.041	0.435
11S-13	Cored 693 m of near continuous mineralization – open to depth						
	84.35	330.55	246.2	0.054	0.099	0.016	0.208
	340.9	508.8	167.9	0.038	0.0978	0.005	0.143
	519	777	258	0.035	0.196	0.043	0.384

10.3 2012 DRILLING PROGRAM

One of the holes of the 2012 porphyry program, DDH 12S-05, intersected a substantial vein. When the intersection was plotted in 3-D it became apparent that the vein lined up very well with the

NG-3 Vein and was considered the eastern extension of the vein. This intersection is over 300 m east of what was previously the easternmost extension of this vein.

The NG-3 Vein as located in DDH 12S-05 is within the porphyry. It strikes at 110° and dips 69° to the north. This is somewhat different than the No. 3 Vein which usually strikes about 135° and dips 50-65° to the north, and likely indicates some rotation about the Cole Fault. The NG-3 in a number of drill holes is seen to have a footwall vein associated with it, and this holds true also in DDH 12S-05. The footwall vein in most cases is weaker than the main vein above it. The No. 3 Vein is also known to have an associated footwall vein, especially towards its eastern end, and this further supports the idea that the No. 3 Vein and NG- 3 Vein are in fact the same vein.

During the 2012 drill program the sample intervals of the NG-3 Vein and its footwall vein in DDH 12S-05 were broken out separately from the porphyry deposit but were subjected to the same assay regimen, which was a fire assay for gold and multi-element ICP analysis. Provisions had been made as part of the porphyry drilling program to re-assay samples which produced results beyond the standard ICP capabilities for Cu and Mo, but not for other elements such as Ag, Pb and Zn which were not considered to be economic metals within the porphyry deposit. This left the silver assays within the veins reported simply as >10 ppm Ag.

The NG-3 Vein was intersected within the porphyry deposit in diamond drill hole 12S-05 from 332.5 to 338.0 m. Over a true width of 2.2 m the vein returned 3.15 g/t (0.092 oz/ton) gold, 1580.8 g/t (46.1 oz/ton) silver, 1.25 % copper, 0.90 % lead and 0.48 % zinc. A sub-parallel footwall vein was also intersected in the same drill hole from 410.5 to 419.75 m with a true width of 3.70 m. This vein returned assays of 2.3 g/t (0.067 oz/ton) gold, 166.6 g/t (4.86 oz/ton) silver, 0.26 % copper, 0.22 % lead and 0.90 % zinc.

In 2015 these samples were re-assayed using ore- grade procedures to produce more precise results. The resulting silver assays were considerably higher than expected and in fact were the highest ever recorded from the NG-3 Vein. The vein where intersected in DDH 12S-05 exhibits not only the best grades encountered to date but also had significant width.

The top of the porphyry deposit has been cut off by the Upper Bounding Fault, and it is considered likely (although not proven at this point) that this same fault also cuts off the NG-3 Vein. The NG-3 Vein is still open to the east of the 12S-05 intersection below the Upper Bounding Fault and is also open to depth.

10.4 2017 DRILLING PROGRAM

The 2017 drill program was conducted during October and November with all three holes from the same drill pad for a total of 2,158.5 m. Drilling planned to test the high conductive body inside the caldera and its apophysis further to the east, as well as test the high silver intercepts reported in 12S-05 and a cylindrical chargeability high and resistivity low feature beyond the veins. The Property is showing both, Ag-Au-Cu-Pb-Zn veins and Cu-Mo+/-Au porphyry, respectively. Reconnaissance geological work has shown that the Silver Queen Ag-Au-Cu-Pb-Zn vein system is located within a 3 km wide caldera, which formed during repetitive explosive eruptions producing pyroclastic volcanics (tuffs).

Drill hole 17S-01 targeted a deep seated conductive geophysical anomaly with hole 17S-03 targeting an apophysis of this anomaly extending to the southeast of the main body, both identified in a 2012 Quantec Geoscience deep IP survey (Figure 10.4). The larger high conductive anomaly in blue color in the map has been named the 'Blue Zone'. The apparent ring structure of the ancient volcano appears to play an important role in the development of the Itsit Porphyry system adjacent to the south, likely by providing heat and metal bearing fluids. The target for hole 17S-02 is a cylindrical chargeability feature, coincident resistivity low, in the north Itsit Porphyry, which has been touched by hole 12S-05 in 2012, showing two high-grade sections, formally interpreted as the NG3 extension and Sister Vein. Figures 10.4 to 10.7 show the Blue Zone area with the drill holes, and their assay values, drilled in the vicinity. Figure 10.4 displays a 3-D view of the Blue Zone and drilling. Figure 10.5 is a plan view of the same area.

Drill hole 17S-01, Azimuth 300°, dip -59°, drilled to a length of 816 m, intersected the conductive geophysical anomaly in the southern part of the caldera. The structure of the mineralization is an intense stockwork veining grid with sub-vertical sulfide-low-silica veins ranging from less than a millimeter to 1.5 cm. The drill hole sample assays have shown that the main body of the target stockwork mineralization consists of pyrite, arsenopyrite, sphalerite, and possibly fine-grained tennantite-tetrahedrite, manganese oxides, +/- galena and cobaltite. Also, within the target there are value carrying sections with up to 1.5 cm veins containing sulfides, visually identified and supported by assay results as bornite, sphalerite, galena, pyrargyrite, and tennantite-tetrahedrite. Rhodochrosite has been identified as an indicator mineral as well. However, the majority of the non-carrying sections dilute the values of the higher-grade section, which can be seen on the following summary, Table 10.4. Figure 10.6 shows drill holes 17S-01 to 17S-03 locations and Figure 10.7 displays these drill holes with Ag assay results and Ag, Au and Cu values for drill hole 17S-01.

<p align="center">TABLE 10.4 SIGNIFICANT INTERSECTIONS – BOREHOLE 17S-01 UPPER BLUE ZONE</p>				
From – To (m)	Interval (m)	Ag (g/t)	Au (g/t)	Cu (%)
176.55 to 177.22	0.67	305	12.73	0.21
207.42 to 207.76	0.34	709	0.36	2.84
423.47 to 423.67	0.2	91.3	0.06	0.65
433.3 to 433.7	0.4	120	1.29	1.41
663.35 to 809.35	146.0	8.0	0.10	0.06
including 663.35 to 666	2.65	34.1	0.26	
and 690 to 693	3.0	120	0.24	0.5
and 791 to 793	2.0	47.3	0.71	0.72
and 807 to 809.33	2.33	21.4	0.86	

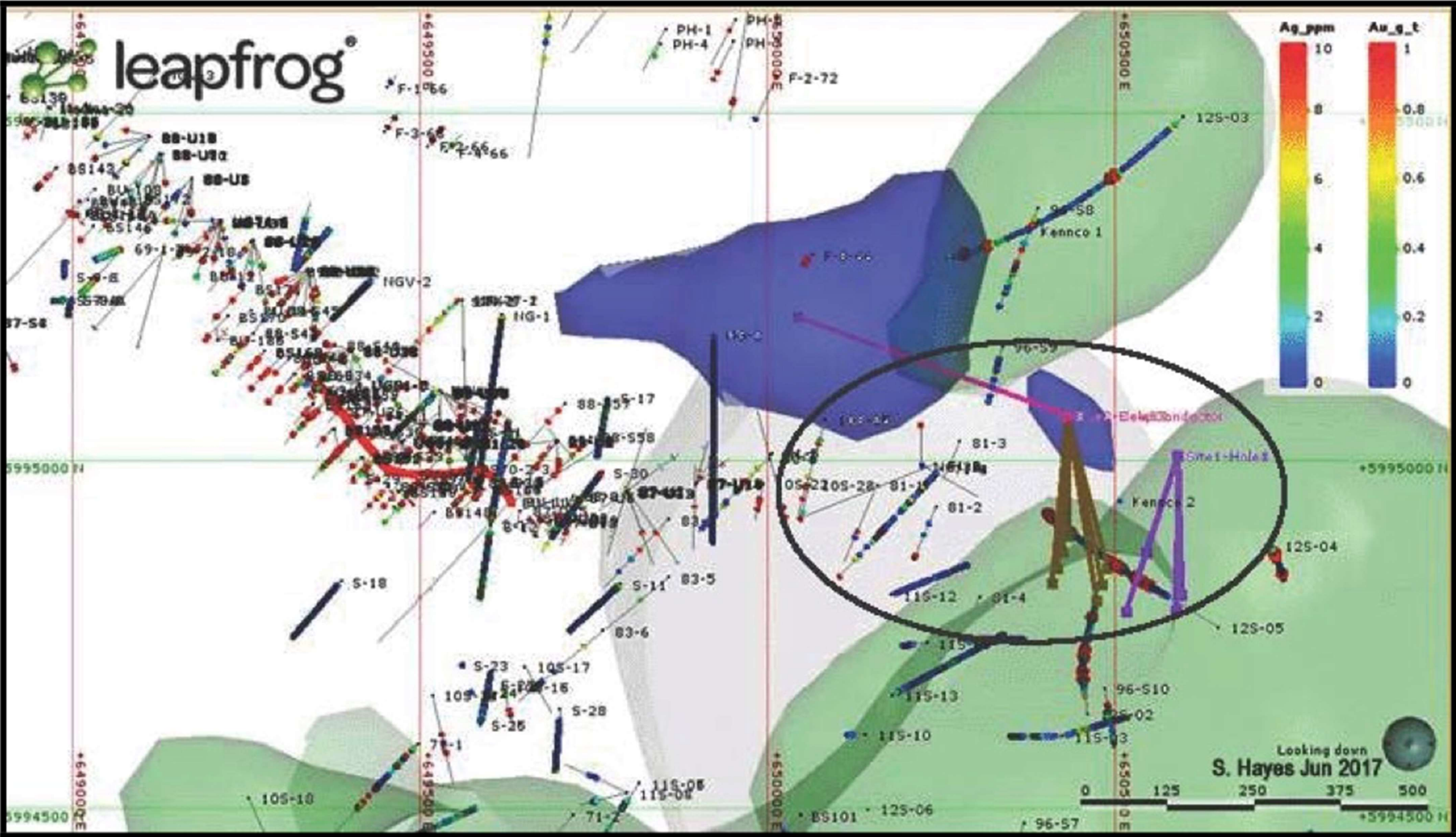
Drill hole 17S-02, Azimuth 165°, dip -61°, drilled to a length of 667.51 m, tested the northwest portion of the Itsit Copper-Molybdenum-Gold porphyry, and targeted both, the high-grade silver veins intercepted in drill hole 12S-05 and the high chargeability, low resistivity anomaly, respectively. Results show, that this target is a cylindrical sericite core of the Cu-Mo-Au Porphyry with an average grade of 0.27 % copper and of 0.055 % Molybdenum, which is rimmed by multiple layers of Zn-Ag sulphides on both sides, each of up to 3 m in depth.

Drill hole 17S-02, within the Itsit Cu-Mo-Au Porphyry, averages from 515.15 to 667.51 m (142.06 m interval) 0.27 % Cu and 0.055 % Mo and contains Ag- Zn+/-Au rims. Significant assay values and intervals are shown in Table 10.5.

Additional multiple layered poly-metallic rims of the cylindrical shape of the sericitic porphyry core have been recognized on both sides, and according to the inclination of the hole, at different depths.

TABLE 10.5 SIGNIFICANT INTERSECTIONS – BOREHOLE 17S-02				
From – To (m)	Interval (m)	Ag (g/t)	Au (g/t)	Zn (%)
Related to ‘the NG3 extension:				
453 to 454	1.0	14.0	1.24	
518 to 521	3.0	94.0	0.85	
At bottom of the borehole, not related to a vein:				
615 to 618	3.0	12.4	0.13	0.32
621 to 624	3.0	14.3	0.12	0.24
630 to 633	3.0	36.9	0.19	6.77
642 to 645	3.0	25.2	0.13	0.19
659 to 661	3.0	24.1	0.10	3.97

FIGURE 10.4 MAP OF THE BLUE ZONE AREA



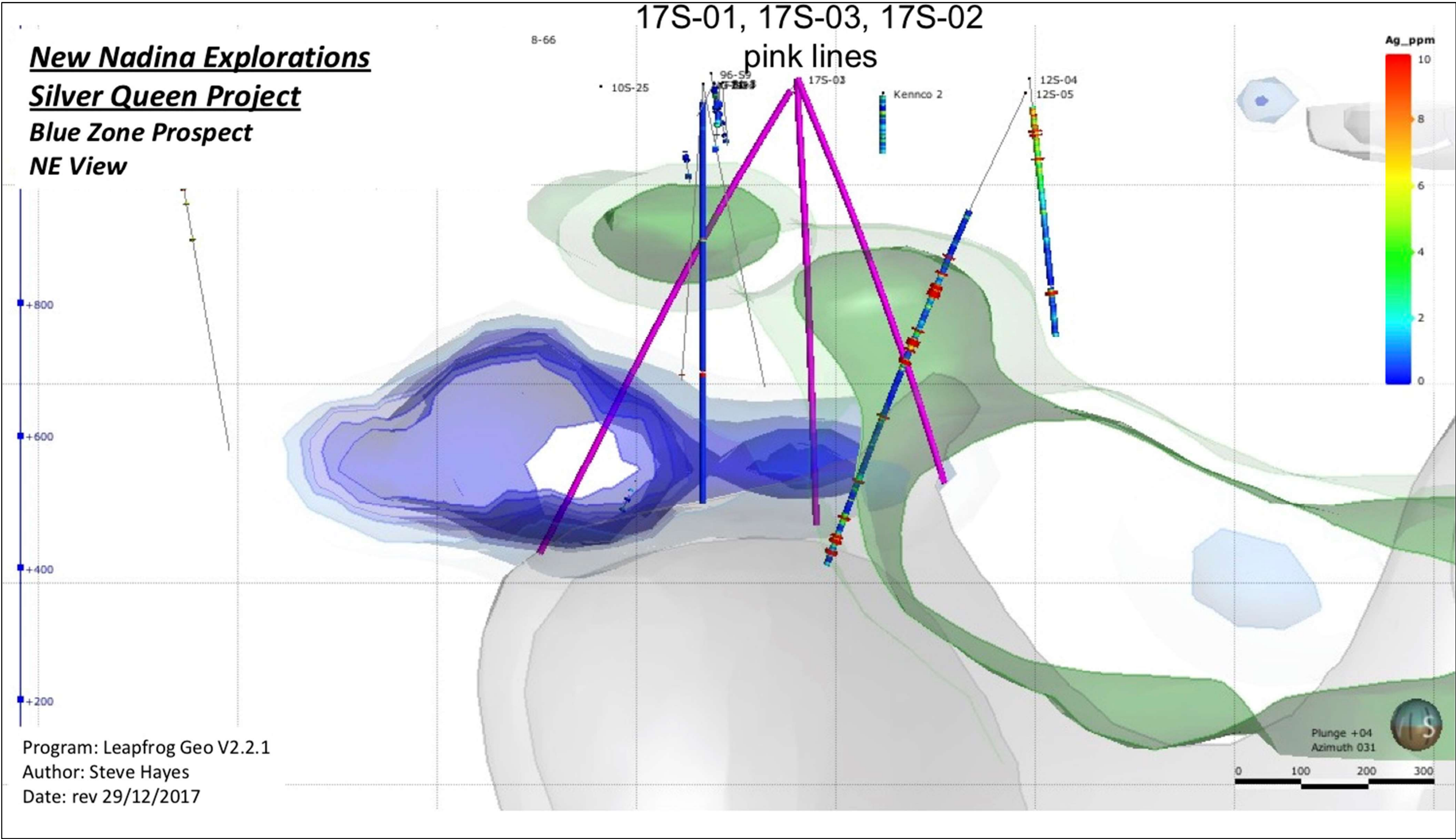
Source: www.nadina.com

New Nadina Explorations
Silver Queen Project
Blue Zone Prospect
Plan View

Program: Leapfrog Geo V2.2.1
Author: Steve Hayes
Date: rev 29/12/2017

*P&E Mining Consultants Inc.
New Nadina Explorations Limited, Silver Queen Property, Report No. 357*

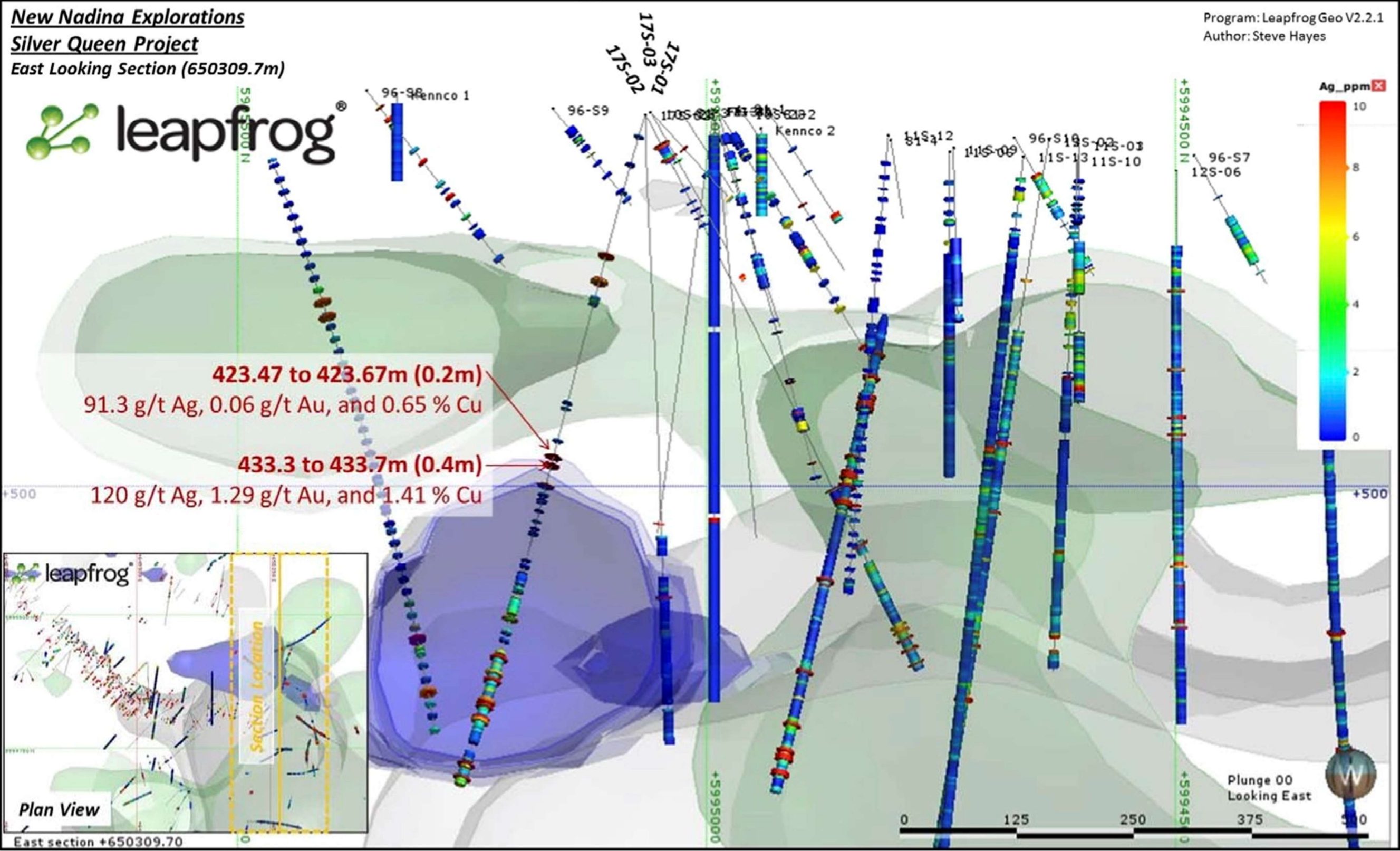
FIGURE 10.6 SECTION OF 2017 DRILL HOLES – BLUE ZONE PROSPECT



Source: www.nadina.com

FIGURE 10.7 2017 BOREHOLE 17S-01 – UPPER BLUE ZONE

17S-01 ‘Upper Blue Zone’



Source: www.nadina.com

10.5 2018 DRILLING PROGRAM

Drilling commenced May 17, 2018 where 3,052.5 m was completed by the first week in July. Three holes in total were completed (with one abandoned due to excessive hole deviation). All three holes were targeting the “Blue Zone”, which is a conductivity anomaly outlined by IP geophysics.

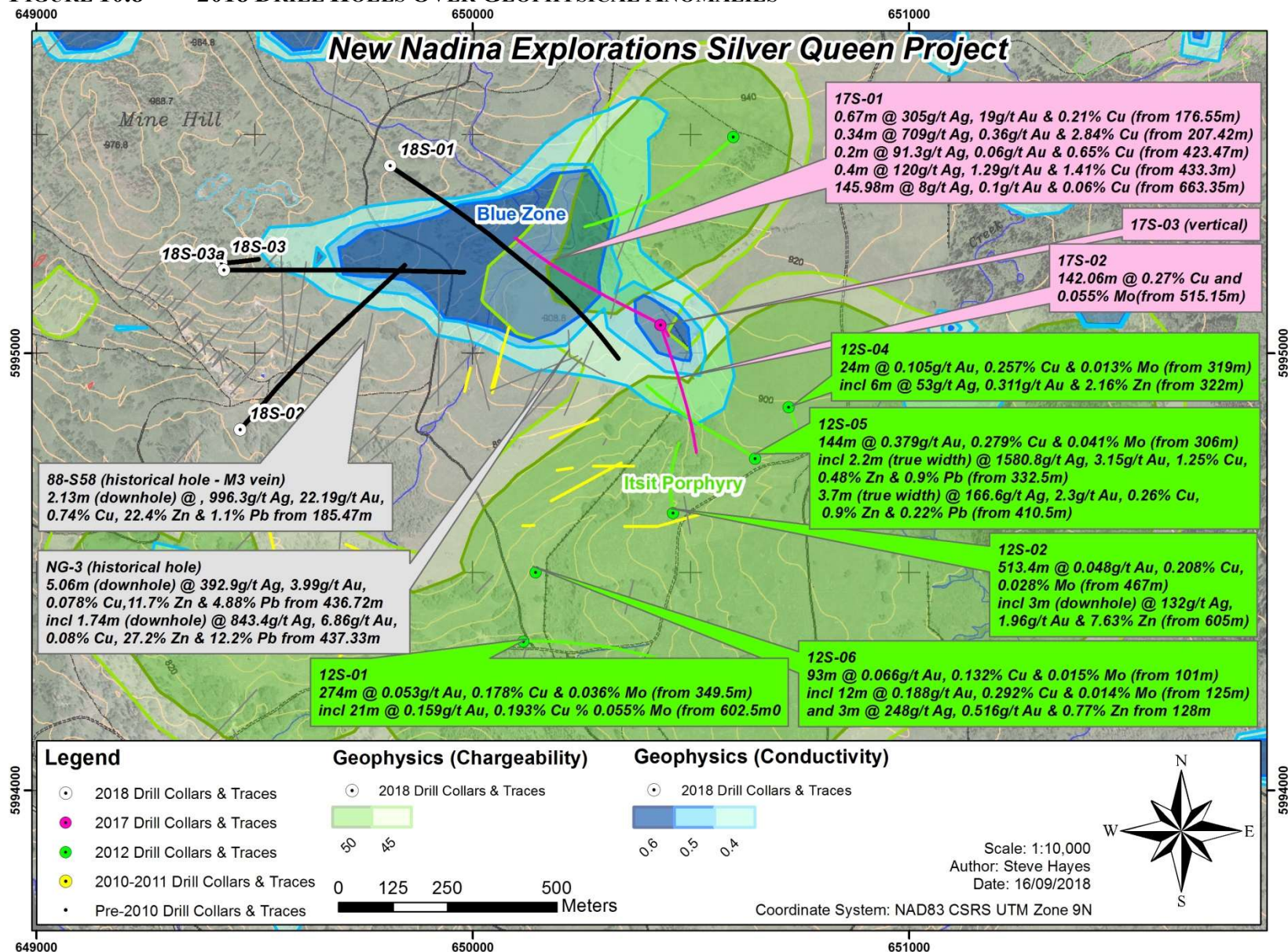
The timing and scope of the program did not result in a definitive explanation for the existence of the “Blue Zone”. Further exploration is required to systematically cover the area.

The first hole, 18S-01, was drilled from the north side of the target at an azimuth of 127° and a dip of -45°, with a total depth of 1,122 m. Unfortunately, the hole began too shallow, resulting in excessive deviation and the objective of penetrating the “Blue Zone” was missed, only skimming the edge of the geophysical anomaly. Although there are zones of anomalous values at various intervals in the hole, the “Blue Zone” anomaly was missed.

18S-02 was drilled at a heading of 038°, with a dip of -50° for a total downhole depth of 893.2 m while 18S-03A was drilled at a heading at 090°, dipping -50°, ending at 902 m. All three holes were drilled initial using HQ core diameter, and subsequently reduced to NQ2 core size where drilling difficulties were encountered. Note the 18S-03A is a re-drill of hole 18S-03, which was abandoned at 135.3 m due to unfavourable hole deviation.

A plan map of the 3 holes is shown in Figure 10.8. Significant intersections from 18S-02 and 18S-03A are presented on Table 10.6 and Table 10.7 respectively.

FIGURE 10.8 2018 DRILL HOLES OVER GEOPHYSICAL ANOMALIES



Source: www.nadina.com

TABLE 10.6
SIGNIFICANT INTERSECTIONS – BOREHOLE 18S-02

Sample No.	From (m)	To (m)	Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
5094151	0.0	17.2	2.0	0.258					15.7	1,020	712	1,300
5094152	17.2	19.2	2.1	0.097					6.78	214	288	2,260
5094153	19.2	21.3	0.7	0.133					7.94	204	1,010	2,840
5094154	21.3	22.0	1.7	0.429	323	1.1	2.95	8.07	> 100	> 10,000	> 10000	> 10,000
5094155	22.0	23.7	1.8	0.25			0.83		58.8	1,440	7,640	5,100
5094156	23.7	25.5	1.2	0.459	260		2.78	5.39	> 100	7,360	> 10,000	> 10,000
5094157	25.5	26.7	3.0	0.121				0.97	37.7	930	2,580	9,730
5094158	26.7	29.7	3.0	0.037					1.24	40.2	289	5,430
5094159	29.7	32.7	2.5	0.065				1.08	2.29	174	244	> 10,000
5094165	32.7	49.0	16.3	0.67		1.5			20.8	> 10,000	146	1,440
5094174	252.9	253.6	0.7	1.93					65.9	4,250	1,020	6,110
5094175	253.6	256.5	2.9	0.337					11.7	499	587	7,580
5094176	256.5	258.2	1.7	4.58	270	3		3.23	> 100	> 10,000	3,650	> 10,000
5094177	258.2	261.2	3.0	0.244					4.83	404	300	1,320
5094178	261.2	262.6	1.4	0.163					2.39	250	142	1,060

TABLE 10.7
SIGNIFICANT INTERSECTIONS – BOREHOLE 18S-03A

Sample No.	From (m)	To (m)	Width (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
5094285	385.7	386.7	1.0	0.21		2.8			18.6	489	2,060	> 10,000
5094286	390.0	391.2	1.2	0.233		4.9			24.7	753	,2970	> 10,000
5094291	449.7	452.4	2.7	0.142					4.28	200	250	8,880
5094292	454.0	455.4	1.4	0.127					4.98	103	515	6,580
5094293	459.0	459.8	0.8	0.234		1.5			5.01	65.9	655	> 10,000
5094299	500.1	503.0	2.9	0.073					11.4	70.6	2,480	7,640
5094326	653.0	654.1	1.1	0.424		4.1		0.9	33.0	1,110	5,480	> 10,000
5094337	698.0	699.5	1.5	0.281		2.8			15.5	609	1,090	> 10,000
5094339	704.8	705.8	1.0	0.15					7.75	227	803	6,850
5094362	891.0	893.0	2.0	0.314					9.76	49.6	1,190	7,130
5094363	893.0	895.1	2.1	0.139					4.99	94.3	352	7,000
5094364	895.1	898.0	2.9	0.11					3.99	123	854	9,540

11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

The following Section 11.0 has largely been taken from the 2011 internal report completed by JDS Energy & Mining Inc.

11.1 SAMPLE PREPARATION

11.1.1 Pre-2010 Diamond Drilling Samples

Typically, mineralized intersections included within drill core were split with a mechanical core splitter and half of the sample sent to a lab for analysis, with the remainder retained on the Property. While this is undocumented for most of the drilling campaigns on the Property, it has been an industry-standard procedure for many years. A considerable amount of drill core remains on the Property, even including much of the core from early years of exploration. While this early core has degraded to the extent that it cannot be used for most purposes, examination of the core by Mr. Jim Hutter, P.Geo., an independent Qualified Person in terms of NI 43-101, indicates that the above procedure was generally followed.

Mr. Hutter was directly involved in much of the 1987 to 1989 program, where the only difference from the above procedure was that some of the core was cut with a diamond saw rather than a mechanical splitter.

11.1.1.1 Drill Hole Locations

It is not known what methods were used to survey the locations of diamond drill holes before the Bradina era. The earlier surveying of the claims for Crown-granting would have supplied a number of known reference points that would be useful for tying-in drill holes. It is likely that surveyors would have been on-site for any of the programs that involved significant underground work.

During the Bradina production period, the mine employed full-time surveyors who were responsible for surveying the mine workings and both surface and underground drill holes. A full-time surveyor was also employed during the period of exploration by Houston Metals Corp. for the same purpose. The underground workings on the 2,600 level were re-surveyed by Houston Metals. As the Bradina survey does not exist in digital form the writer does not know the degree of error between the two surveys, except to say that the Houston Metals surveyor considered it to be reasonable. The Bradina survey results still exist in paper form and the Houston Metals results are recorded in digital form, so a comparison would be possible. The workings are no longer accessible, so a re-survey at this time would not be practical.

11.1.1.2 Down Hole Surveys

Down-hole surveys were seldom performed in any of the drill programs except for holes S74-1 to S74-3 in which a Sperry-Sun instrument was used. The Sperry-Sun instrument used a down-hole camera with a timer to take a photograph of a dial showing inclination and azimuth. Any movement or vibration during the exposure would cause a blurring of the image. The azimuth was taken from a compass reading, and thus was susceptible to magnetic disturbances in the surrounding rock. The

azimuth reading was not corrected for declination, the adjustment being done by calculation after the reading was obtained. Readings from these three holes were very erratic, possibly due to magnetite in the rocks, and were not usable.

Acid tests were performed during the Houston Metals work, but these give no indications of changes in azimuth and only supply inclination with very poor accuracy, and are of little use.

Future drilling will require proper down-hole surveys. It is believed that in most locations alteration has removed magnetite from the rock but if magnetite proves to be a problem, then a gyroscopic method may be required.

11.1.2 2010 Diamond Drilling Samples

Samples from all holes, except 10S-13, 14, 18, 19 and 20, were split on-site with a diamond saw by persons contracted by the Company and supervised by Mr. Hutter. Samples from holes 10S-13, 14, 18, 19 and 20 were split off-site by Mr. Hutter using a mechanical core splitter. Half of the split core was sent to the lab for analysis and the other half was retained as a permanent record.

11.1.2.1 Drill Hole Locations

Drill collars were surveyed by means of hand-held GPS. As tree cover was generally light to nil in the areas being investigated, GPS reception was good to excellent. The first ten holes were surveyed by means of a Garmin Etrex Legend and produced results with a claimed accuracy of two metres. The remaining holes were surveyed with a Garmin Etrex Vista HCx. The use of the averaging function available with this instrument improved the accuracy to between 0.9 and 1.3 m, depending on how many readings were taken.

11.1.2.2 Down Hole Surveys

Down-hole surveys were performed by the drill crew using a compass-based Reflex instrument. This is a single-shot instrument which provides digital readouts on a small screen. The readouts of magnetic azimuth, inclination and magnetic field strength are recorded manually by the operator. A correction of 18 degrees was later added to the magnetic azimuth reading to convert to UTM Azimuth. All azimuths in this report use UTM North as 0 degrees. To convert UTM azimuths to azimuths based on True North, subtract 1.85 degrees from the UTM azimuth.

Readings of magnetic field strength that are significantly outside the norm indicate a magnetic disturbance, usually caused by the presence of magnetite, that could cause the azimuth reading to be unreliable. This was only noted in one reading (DDH 10S-20), which was therefore not used for plotting.

11.2 ANALYSES

11.2.1 Pre-2010 Diamond Drilling Analysis

While it is believed that the samples were generally sent to reputable labs, most of the details of the labs used and the methods of analysis employed have been lost, especially for the earlier programs.

It is known that during the 1972-73 production period, Bradina Joint Venture maintained an assay lab on site, however details of procedures used are not known to P&E.

During the 1987 to 1989 Houston Metals program, samples were sent to Min-En labs in Vancouver for analysis. Details of analytical procedures are scarce and rather sketchy. In general, samples were ground to minus 100 mesh (percentage passing was not given), gold was fire assayed, a part of the sample was digested in acid and silver, copper, lead and zinc were determined by chemical assay, but the exact procedure of the digestion and chemical assay was not stated.

11.2.2 2010 Diamond Drilling Analysis

During the early part of the program, Assayers Canada was acquired by SGS Mineral Services, who continued to operate the sample preparation lab. As Assayers Canada transitioned to the procedures of SGS Mineral Services, the assay code numbers changed and in some cases detection limits changed.

Gold and silver were fire assayed using a 30 g sample with an AA finish for gold and gravimetric finish for silver. This procedure was coded as F262A by Assayers Canada and as FAG323 by SGS.

Multi-element assays were done using a four-acid (HCl, HNO₃, HF, HClO₄) digestion followed by analysis by ICP-MS. This was Assayers Canada procedure MS102 or SGS procedure ICM40B.

Copper, lead and zinc over-limits from the multi-element assay were re-assayed by Assayers Canada using a four-acid digestion with an AA finish. This was procedure MA113, MA114 and MA117 for copper, lead and zinc respectively. SGS re-assayed over-limits using a sodium peroxide fusion and ICP-AES analysis.

11.2.2.1 Bulk Density

A total of 366 bulk density measurements were taken as part of the 2010 check-sampling program. Samples were weighed in both air and in water, and bulk density was calculated using the formula:

$$\text{Bulk Density} = (\text{weight in air}) / (\text{weight in air} - \text{weight in water})$$

An Ohaus triple beam balance was used to weigh the samples. The calibration of the balance was checked by weighing a set of known weights and the results were satisfactory. The operation of the balance was checked by having the weight of a number of samples checked by a second operator who had no knowledge of the weights as determined by the first operator. Differences in weights determined between the two operators were insignificant.

The 366 bulk density measurements dispersed over 111 samples produced an average bulk density of 3.31, and the average grade of the samples was 3.09 g/t for Au, 285.7 g/t for Ag, 0.47 % for Cu, 1.23 % for Pb and 6.58 % for Zn.

11.3 SECURITY

11.3.1 Pre-2010 Diamond Drilling Security

Sample security was likely not an issue in earlier programs. The samples are thought to have been placed in bags which would themselves be placed in larger sacks and then wired shut and sent to the lab by bus or some other convenient method of transportation. This was also the procedure used during the Houston Metals program. In that program the wire-tied sacks were taken on a regular basis to the bus depot in Houston by company employees or by employees of the mining contractor.

11.3.2 2010 Diamond Drilling Security

Samples of split core were placed in plastic sample bags identified with unique sample numbers and tied with plastic ladder ties. The bags were then placed into sacks and delivered by Mr. Hutter to the Assayers Canada Ltd., sample preparation facility in Telkwa.

11.4 QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

11.4.1 Pre-2010 QA/QC Program

Quality Assurance/Quality Control (“QA/QC”) field procedures for verification of assays and methods were not performed in any of the pre-2010 drill programs (i.e. no blanks or standards and very rarely duplicate samples).

No pulps or rejects from any of the historic drill programs are known to exist, except for some more recently found pulps from the 1981 underground program. Most of those pulps are in usable condition and could serve to verify the assaying from that program.

Check sampling programs, as detailed in Section 11.4.3, were undertaken in late 2009 and early 2010 in an attempt to provide assay verification for the 1987 to 1989 Houston Metals work.

11.4.2 2010 QA/QC Program

Blanks and standards were inserted into the sample stream such that either a blank or a standard would be inserted at approximately every tenth sample, for a total of six standards and seven duplicates. White landscaping marble was used for blanks. Standards were provided by Canadian Resource Laboratories Ltd. Four duplicate sample sets were produced as quartered cores by splitting half cores into two.

In the tables below, copper, lead and zinc assays have been converted from parts per million to percent where applicable in order to maintain consistent presentation of units.

None of the blanks (Table 11.1) indicate significant carry-over or contamination during the sample preparation process.

TABLE 11.1
BLANK SAMPLES USED IN THE 2010 DRILL PROGRAM

Blanks:					
Sample No.	Au	Ag	Cu	Pb	Zn
	(g/t)	(g/t)	(%)	(%)	(%)
454105	<0.01	1.3	0.0002	0.0019	0.0065
454125	0.01	2.2	0.0005	0.0076	0.0128
454145	<0.01	1.3	0.0008	0.0011	0.0087
454162	<0.01	0.5	0.0004	0.0004	0.0053
454175	<0.01	1.1	0.0003	0.0006	0.0052
454195	0.01	0.8	0.0005	0.0005	0.0014
454215	<0.03	<5	0.0087	0.0011	0.0017

Source: JDS Energy & Mining Inc., (2011)

Standards used during the QA/QC program are outlined in Table 11.2, and only the results for silver were consistently within the expected range. Although the average of gold values was acceptable, three individual assays were higher than expected and one was lower. Copper assays were tightly grouped but fell just below the expected values. Lead assays tended to be low, with the average just falling within acceptable limits. Four of the six zinc assays were well below expected values. The significance of this is unknown, as the standard zinc value is below the value that would be considered mineable for this Property, i.e., it is not known whether this discrepancy would continue on to higher zinc values. Although it is probably not of great importance if the assays for already low-grade samples are lower than they should be, samples from this program having higher zinc values, say above 3 percent, should be re-assayed to ensure that high-grade values are not being diminished. For future programs, standards with a higher zinc value should be obtained in order to more closely approximate zinc grades that would be found at the Property.

TABLE 11.2
STANDARD SAMPLES USED IN THE 2010 DRILL PROGRAM

Standards: CDN-ME-4					
Accepted Values:	Au	Ag	Cu	Pb	Zn
	(g/t)	(g/t)	(%)	(%)	(%)
Recommended	2.61	402	1.83	4.25	1.1
Minimum	2.31	377	1.75	4.01	1.04
Maximum	2.91	427	1.91	4.49	1.16
Sample No.					
454115	2.55	409.7	1.71	3.97	0.932
454135	3.21	389.3	1.72	4.24	0.855
454165	2.46	397.5	1.71	3.86	0.950
454186	3.05	396.9	1.75	4.08	0.854
454205	2.99	398.0	1.72	3.97	1.130
454217	2.14	414.0	1.73	3.93	1.070
average	2.73	400.9	1.72	4.01	0.965
		high			
		within limits			
		low			

Source: JDS Energy & Mining Inc., (2011)

Three of the four duplicate sample sets (Table 11.3) produced excellent agreement between the two samples of each set. The remaining set, 454136 - 454137, showed great differences between the two samples for all elements except copper. Given that the core appeared relatively uniform, it would seem likely that a piece of core from the higher-grade section immediately below may have found its way into one of the samples, indicating the need for greater vigilance by samplers.

TABLE 11.3
DUPLICATE SAMPLES USED IN THE 2010 DRILL PROGRAM

Duplicates:					
Sample No.	Au	Ag	Cu	Pb	Zn
	(g/t)	(g/t)	(%)	(%)	(%)
454118	0.04	2.1	0.0055	0.0114	0.0176
454119	0.04	2.6	0.0046	0.0094	0.0162
454136	0.44	4.1	0.0362	0.0285	0.0573
454137	0.87	16.9	0.0433	0.1170	0.3852
454184	0.29	18.1	0.0028	0.0224	0.0188
454185	0.24	17.3	0.0032	0.0198	0.0160
454197	0.25	3.5	0.2838	0.0029	0.0206
454198	0.22	4.2	0.3802	0.0041	0.0225

Source: JDS Energy & Mining Inc., (2011)

11.4.3 2010 Check Sampling Program

The condition of core remaining from any of the drill programs before 1987 is generally too poor to allow the core to be useful for re-sampling purposes, except for perhaps an occasional interval. Parts of the 1987 to 1989 core were usable for re-sampling purposes and this was carried out in the fall of 2009 and the spring of 2010 by Mr. Hutter. Some of the core had been damaged by rats or by undocumented but obvious re-sampling or by “souvenir sampling” where someone had removed one or more pieces of core from certain intervals, thus making the entire interval useless for verification of previous samples. “Souvenir sampling” is particularly damaging for subsequent check sampling programs as it may go unrecognized. The removal of “souvenirs” will generally tend to lower the grade of the remaining sample because the souvenirs removed are almost always the best pieces.

A larger sampling program was undertaken in the spring of 2010 to supplement the 2009 re-sampling and ensure more statistically meaningful results. From assay records, about 250 intervals were identified running at least 3 g/t Ag that were potentially useful for check samples. In the field, only 111 were deemed usable for the check-sampling program. Of the samples that were not considered usable, some had been damaged by rats and some had been the subject of previous undocumented re-sampling, a few were inaccessible as one of the core storage units had fallen over, but the majority were rendered useless by “souvenir sampling” that removed part of the sample.

Analyses of copper, lead and zinc were converted from parts per million to percentages in order to have the same units as the over-limit assays (>10,000 ppm) which were presented as percentages. Correlation of both gold and zinc assays between the check and the original samples was excellent, with gold checks on average being barely lower than the originals and the zinc checks being just slightly higher. Lead results were fairly close, with the lead checks averaging 89 % of the original

assays. Silver and copper did not correlate as well as the others, with silver checks averaging 82% and copper 79% of the original results. There is often considerable variation between the assay results for single sample pairs (check / original) but this variation appears random rather than systematic.

Seven samples were done in duplicate, i.e.: the half-core remaining in the box was quartered and both quarters were assayed separately. Results between duplicates show less variation than the results between check vs. original samples, although this could simply be coincidence given the small number of duplicate samples. Even the duplicate samples show occasional wide variations for individual elements. Although the correlation for gold, silver, lead and zinc is quite good, the variation for copper was greater, with the first assays averaging only 86% of the second ones; however this is not considered excessive for core duplicates, which are expected to show more variation than pulp or reject duplicates.

Some possible explanations for the apparent differences between some of the results of the 2010 check sampling and the 1980s sampling are:

- an insufficient number of samples to adequately reduce the statistical variations between core duplicates, producing a bias that is more apparent than real.
- a real bias in some of the assays, presumably mainly in those of the 1980s.
- a low bias in some of the 2010 check samples caused by unrecognized “souvenir sampling”.

While taking the check samples, Mr. Hutter was aware of the possibility of unrecognized “souvenir sampling” having a negative influence on the results, especially considering the considerable amount of such sampling that was recognized. The writer believes that at least some part of the variation between the check samples and the original samples is likely due to this cause and that this variation can therefore be considered to be within an acceptable range for present exploration purposes. Should the data from these holes be required for purposes of resource estimation, further verification by other means may be required.

Blanks and standards were inserted into the sample stream in an alternating fashion such that every tenth sample was either a blank or a standard. No attempt was made to insert them randomly, as it would have been obvious to the lab in any case that they were blanks and standards. A total of seven blanks and six standards were analyzed.

The material used for blanks was white marble landscaping rock. Analyses of blanks showed some carry-over from the crushing and grinding processes, but not a significant amount considering the grade of the samples. Carry-over was from 0.01 to 0.03 g/t for gold, 0.7 to 2.6 g/t for silver, 0.1 to 42.5 ppm for copper, 12.6 to 74.7 ppm for lead, and 5 to 366 ppm for zinc, assuming that the natural metal content of the blank material is indeed nil.

Standards used were reference material CDN-ME-4, supplied in 100 g packages by Canadian Resource Laboratories, Ltd., No. 2, 20148-102nd Ave., Langley, BC, V1M 4B4. Recommended values plus or minus two standard deviations are shown in Table 11.4.

TABLE 11.4
RECOMMENDED VALUES, REFERENCE MATERIAL: CDN-ME-4

Gold	2.61 g/t Au	±	0.3 g/t Au
Silver	402 g/t Ag	±	25 g/t Ag (FA/Grav)
Silver	414 g/t Ag	±	17 g/t Ag (Digestion, ICP)
Copper	1.83 % Cu	±	0.08 % Cu
Lead	4.25 % Pb	±	0.24 % Pb
Zinc	1.10 % Zn	±	0.06 % Zn

Source: JDS Energy & Mining Inc., (2011)

Four of the six gold assays fell outside the recommended range of values and the average gold assay was also slightly above the recommended maximum value. This may indicate a slight positive bias for gold in the check samples, or it may not be significant given the small number of standard samples assayed. Silver and copper each had one sample outside the recommended range, zinc had two and lead had none. Averages for these four metals were well within their recommended ranges.

12.0 DATA VERIFICATION

12.1 SITE VISIT AND DUE DILIGENCE SAMPLING

The Silver Queen Project was visited by Mr. Jim Hutter, P.Geo., an independent Qualified Person in terms of NI 43-101, on May 29, 2019 for the purposes of completing a site visit and due diligence sampling.

Mr. Hutter collected 21 samples from 13 diamond drill holes during the May 29, 2019 site visit. All samples were selected from holes drilled from 1988 to 1989.

A range of high, medium and low-grade samples were selected from the stored drill core. Samples were collected by taking either quarter or half core remaining in the core box. Individual samples were placed in plastic bags with a uniquely numbered tag, after which all samples were collectively placed in a larger bag and delivered by Mr. Hutter to Actlabs in Kamloops, BC, Canada for analysis.

Actlabs is an independent commercial laboratory that is ISO 9001 certified and ISO 17025 accredited. The accreditation program includes ongoing audits to verify the QA system and all applicable registered test methods.

All samples were analysed for gold, silver, copper, lead and zinc. Gold and silver were determined using INAA/Total Digestion ICP and copper, lead, zinc by Sodium Peroxide Fusion/Total Digestion ICP. Bulk density was also determined for all samples.

Results of the site visit's due diligence samples are presented in Figure 12.1 through Figure 12.5.

FIGURE 12.1 SILVER QUEEN DUE DILIGENCE SAMPLE RESULTS FOR GOLD: MAY 2019 SITE VISIT

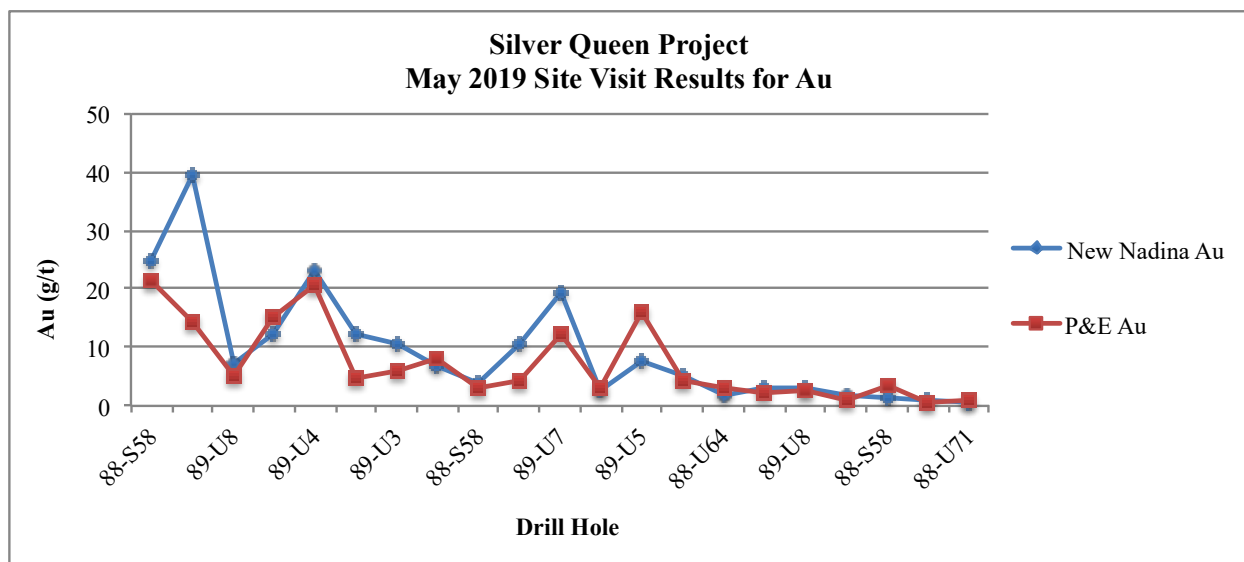


FIGURE 12.2 SILVER QUEEN DUE DILIGENCE SAMPLE RESULTS FOR SILVER: MAY 2019 SITE VISIT

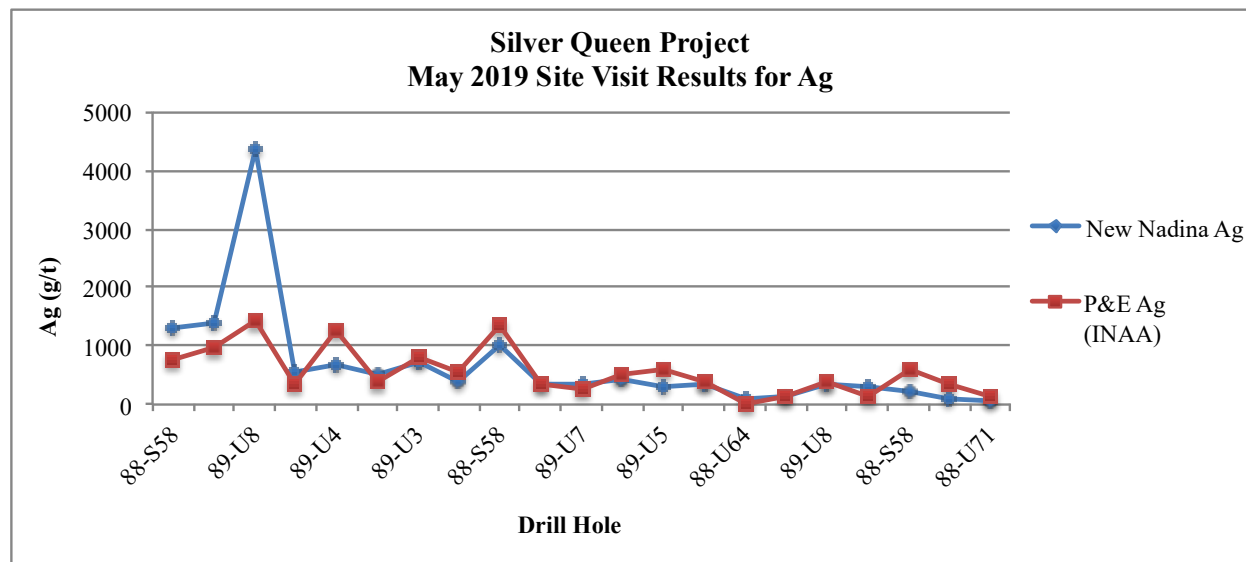


FIGURE 12.3 SILVER QUEEN DUE DILIGENCE SAMPLE RESULTS FOR COPPER: MAY 2019 SITE VISIT

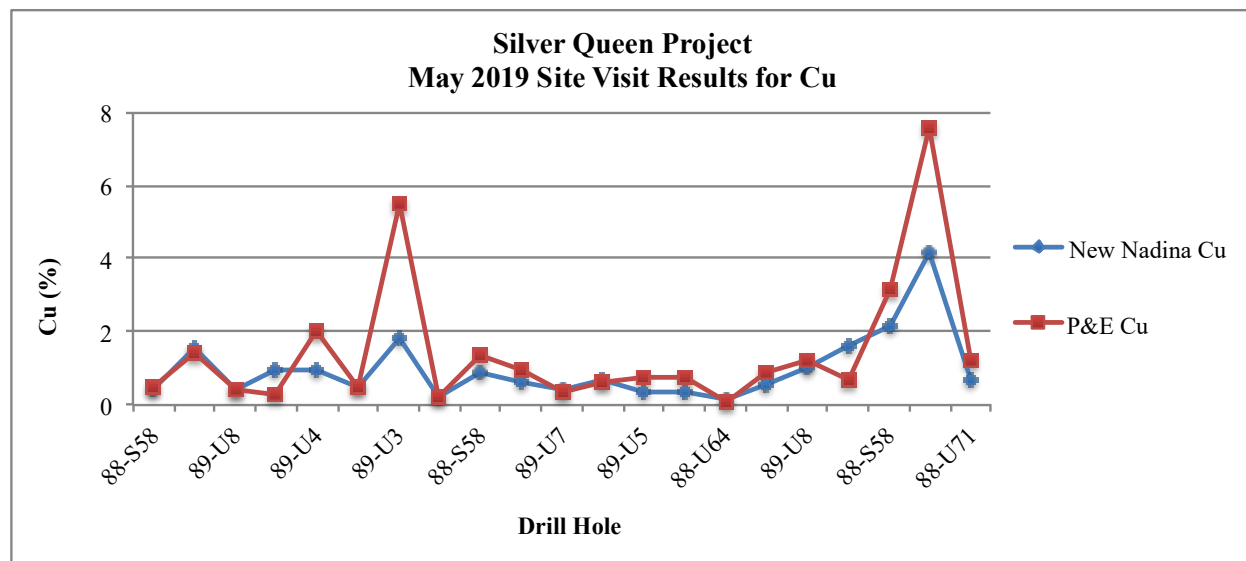


FIGURE 12.4 SILVER QUEEN DUE DILIGENCE SAMPLE RESULTS FOR LEAD: MAY 2019 SITE VISIT

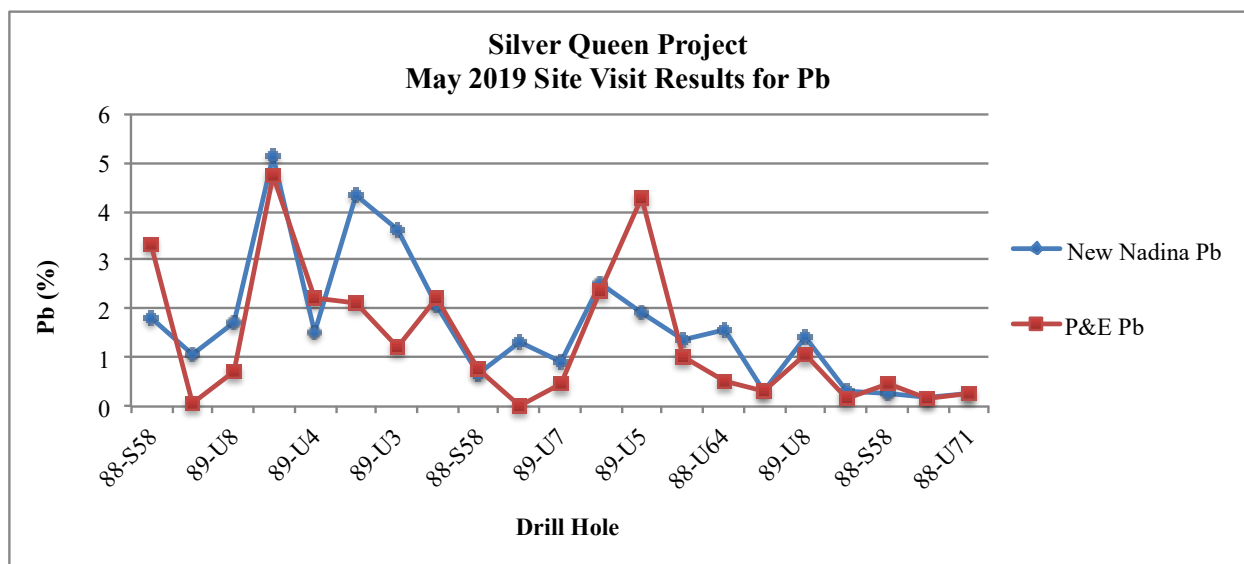
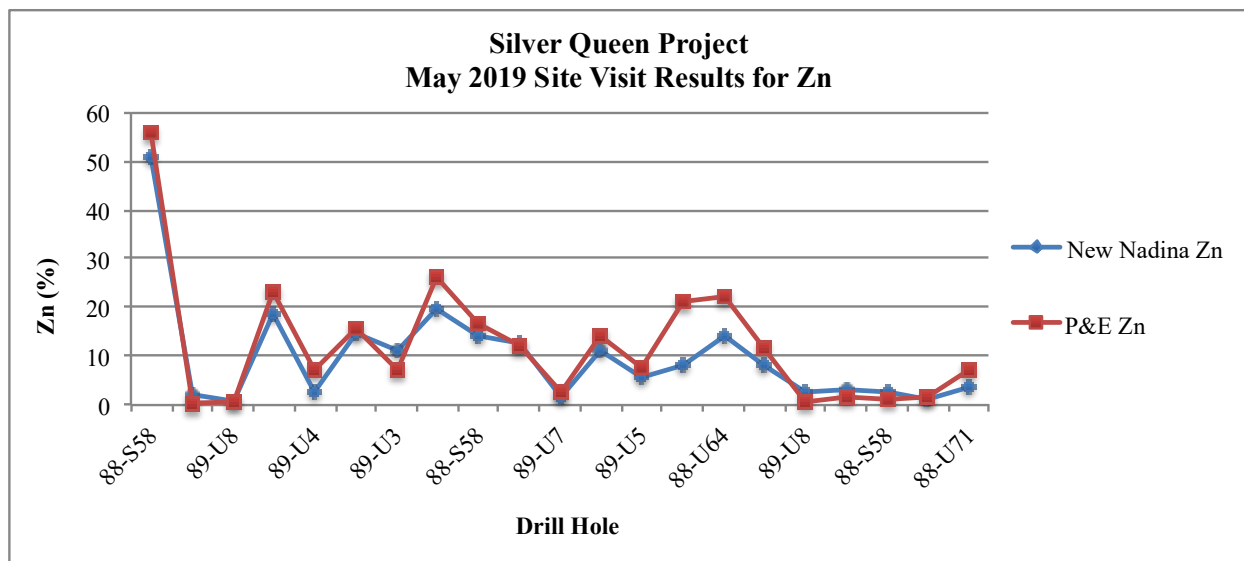


FIGURE 12.5 SILVER QUEEN DUE DILIGENCE SAMPLE RESULTS FOR ZINC: MAY 2019 SITE VISIT



P&E considers there to be good correlation between the majority of P&E's independent verification samples analyzed by Actlabs and the original analyses in the Silver Queen database. Grade variation is evident in some samples; however, the authors consider the due diligence results to be acceptable.

Based upon the evaluation of the 2010 check-sampling program undertaken by New Nadina, as well as P&E's due diligence sampling, it is P&E's opinion that the results are suitable for use in the current Mineral Resource Estimate.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 INTRODUCTION

The Silver Queen Deposit was first discovered over 100 years ago. The No. 3 Vein was intersected in 1929 by an adit cross-cut at the 2600 level. Various exploration campaigns were undertaken and metallurgical tests events were completed. In 1972 a 600-700 ton/day 550-640 tpd process plant was constructed and processing initiated. Mining and processing ended in September 1973 after processing 180,000 t due to mining and metallurgical performances below expectations.

In the following decades, several additional exploration campaigns took place with accompanying sampling and analyses, mineral resource estimation and in some cases, metallurgical testing. The mineral processing approach has been consistently composed of crushing-grinding followed by selective froth flotation to produce copper-lead-silver, zinc and later, gold-containing pyrite concentrates for sale to a smelter or a hydrometallurgical facility.

Pyrite-sphalerite-chalcopyrite and sphalerite-galena have been identified as the main types of sulphide mineralisation (ref. JDS 2011).

13.2 HISTORICAL METALLURGY

Pre-1972 metallurgical testwork indicated high rougher flotation concentrate recoveries of Au-94 %, Ag-97 %, Cu-99 % Pb-98 % and Zn-99 %. However, cleaning to produce marketable concentrates resulted in a high percentage of gold and silver reporting to tailings (ref. Bacon and Donaldson 1983). The 1972 process plant had been expected to produce recoveries of Au-50 %, Ag-60 %, Cu-70 % and Zn-95 %. Partially due to alleged low-grade mineralised material feed and oxidation, the process plant performance fell short of expectations.

Some research was targeted at improving gold recovery but the reported inclusions in all sulphides including pyrite and the contemporary low price of gold (\$39/oz) ended consideration of a separate gold recovery circuit.

13.3 RECENT METALLURGICAL TESTWORK

13.3.1 Bacon and Donaldson

In 1983, Bacon and Donaldson, conducted metallurgical tests under the direction of Morris Vreugde. The primary objective of this testwork was gold recovery from a composite sample with the following contents:

6.2 g/t Au, 230 g/t Ag, 0.32 % Cu, 0.8 % Pb, 8.46 % Zn.

Rougher Cu-Pb and Zn concentrates were produced which combined contained 85 % of the gold and 94% of the silver. The rougher tails, containing only 15 % of the gold, were subjected to a cyanide leach. The achieved gold extraction was only 33 % in this leach.

From these simple tests it may be concluded that:

- Gold and silver are associated with the all of the metal sulphides; and
- A significant proportion of the gold could be listed as “refractory” – requiring sulphide breakdown for high % gold recovery.

In 1987, Cominco Engineering Services Limited (“CESL”) conducted an extensive metallurgical program at various laboratories in support of a Feasibility Study to determine the maximum payable metals (ref. JDS 2011). The tests included flotation to produce concentrates, bio-oxidation of sulphides, cyanidation and roasting. This resulted a process that produced Cu/Pb, Zn and pyrite concentrates. The Cu/Pb concentrate was roasted to reduce arsenic to a smelter-acceptable level, and the pyrite concentrate was bio-oxidized to liberate the gold content for cyanide extraction. The zinc concentrate was to be sold as is.

13.3.2 Lakefield Research

The most significant metallurgical tests appear to have been locked cycle and pilot scale flotation tests that were performed at Lakefield Research in 1988 (now known as SGS Lakefield). Locked cycle and pilot scale tests gave similar results. The following Table 13.1 shows a result from the 600 kg/h pilot plant tests on representative bulk samples:

The overall recovery, resulting from the pilot scale test, in the three concentrates of Au, Ag, Cu, Pb and Zn was quite high at 83 %, 95 %, 93 %, 91%, and 98% respectively. The Cu-Pb concentrate grade is reasonable containing about 75 % chalcopyrite and galena and significant concentrations of gold and silver. The arsenic content (4.4%) of the Cu-Pb concentrate would be considered problematic for feed to a smelter; less than 1 % is a general objective. The zinc concentrate contains a smelter-acceptable concentration of zinc; the gold content of the pyrite concentrate is low at 7.5 g/t, especially considering the indication in earlier testwork that the gold associated with pyrite could be considered “refractory”.

A Lakefield bench scale “locked cycle” test on a sample, assaying approximately twice the content of the five metals of interest, produced a pyrite concentrate with slightly higher gold content at 9.7 g/t Au/t. Cumulative recoveries of all payable metals in this test exceeded 94 %.

TABLE 13.1
1988 PILOT PLANT RESULTS, SILVER QUEEN, NO. 3 VEIN

Fraction	Wt %	(g/t)		(%)					% Distribution						
		Au	Ag	Cu	Pb	Zn	As	S	Au	Ag	Cu	Pb	Zn	As	S
Cu-Pb Concentrate	2.4	22.2	5220	10.1	39.0	9.5	4.44	23	15.8	51.5	65.8	78.4	4.4	60.5	4.8
Zn Concentrate	8.4	7.71	855	0.87	1.27	56.6	0.26	31.6	19.1	29.5	19.8	9.0	92.4	12.4	23.3
Pyrite Concentrate	21.5	7.5	158	0.13	0.23	0.27	0.18	30.2	47.9	14.0	7.6	4.1	1.1	21.5	57.3
Tails	67.8	0.87	158	0.037	0.15	0.16	0.015	2.4	17.2	5.0	6.8	8.5	2.1	5.6	14.7
Calculated Heads	100	3.37	243	0.37	1.19	5.14	0.18	11.3	100	100	100	100	100	100	100

13.4 DISCUSSION OF SILVER QUEEN EXTRACTIVE METALLURGY

Mineral processing research and development has focussed on a strategy that would accommodate the variations in vein mineralogy. Tests have been focused on the application of conventional mineral concentration by grinding and froth flotation. Optional, supplementary approaches such as the use of ore sorting or gravity separation do not appear to have been considered.

13.4.1 Possible Mineral Processing Flowsheet

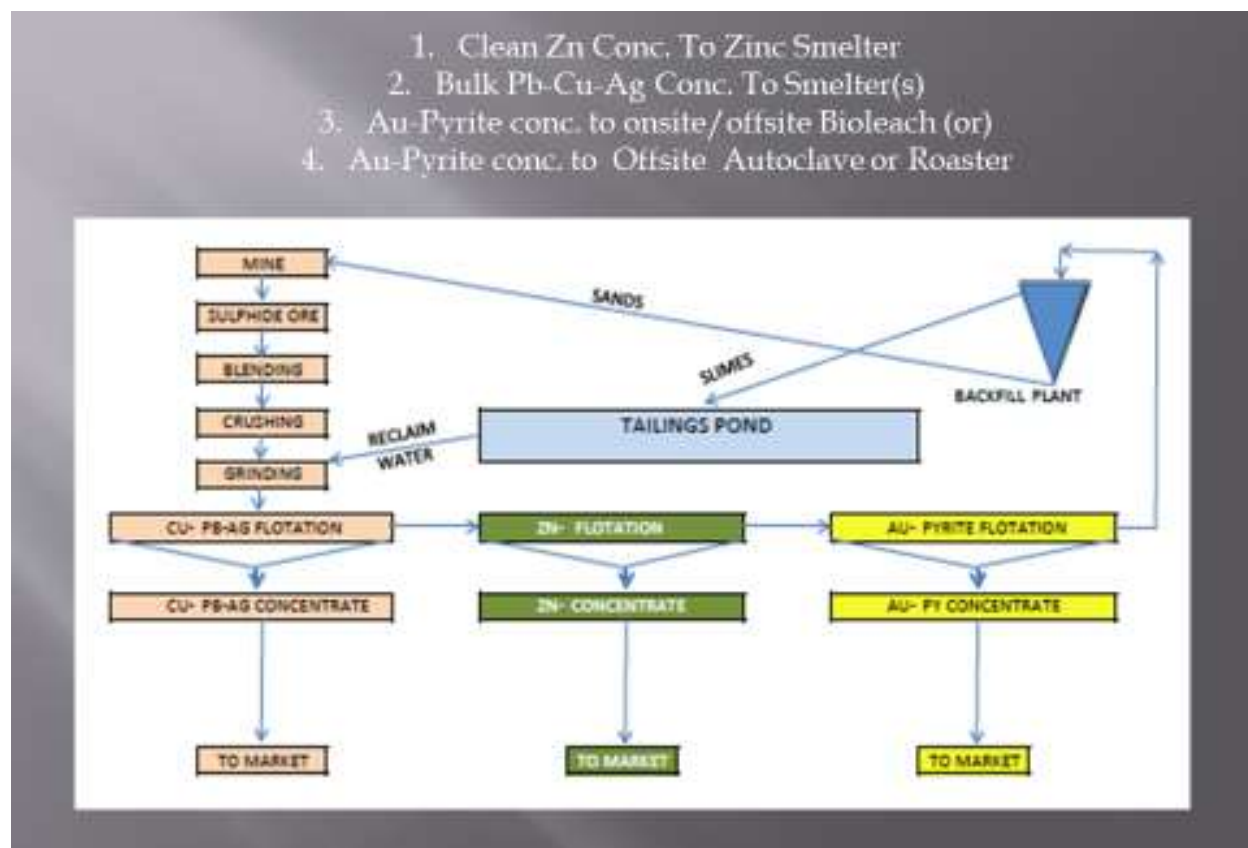
Three flotation concentrates would be produced as outlined in a process shown in Figure 13.1. A copper-lead concentrate, containing significant concentrations of silver and gold would be the first concentrate produced. As noted above, this concentrate contains a general lead smelter prohibitive level of arsenic. There 2 primary strategies for considering the management and ultimately sale of this arsenic-contaminated concentrate are:

1. Reduce the arsenic content at the mine site by either roasting (As_2O_3 is volatilized and collected) or arsenic is removed by a wet metallurgical process as earlier attempted at the Equity Silver Mine in the region. Either option is quite costly and it is likely that an official permit to operate an arsenic removal process would be very difficult to obtain. The disposal of an arsenic-rich waste could be challenging.
2. Market the copper-lead-silver-gold concentrate to speciality international smelters that will accept and blend in the Silver Queen concentrate. Arsenic-related penalties could be anticipated.

Zinc is the second concentrate that would be produced. This concentrate could be processed at a British Columbia location (Trail) or sold to an international zinc smelter/refinery.

A third process plant product could be a gold-containing pyrite concentrate. Historical cyanide leaching test data indicated a poor extraction of gold from such a concentrate (33 %). This indicates either much of the gold is tied up in the pyrite and/or a “preg-robbing” substance, such as organic carbon, is present. Roasting this concentrate on site, prior to on-site cyanide leaching is possible, but likely uneconomic and environmentally challenging. Freeing up the gold from the pyrite using a bioleach followed by cyanide leach is possible, but this also may be uneconomic. Sale of the concentrate as feed to an autoclave-equipped gold ore processing plant somewhere in the Americas is a reasonable option and if high gold recovery is achieved and is payable, this option may represent the best financial return.

FIGURE 13.1 MINERAL PROCESSING FLOWSHEET EXAMPLE



Source: Lakefield Research 1988

13.4.2 Metal Recovery Estimates

As noted above the cumulative process metal recoveries are reasonably high. However, the actual payable metals are subject to reductions as determined by smelter and processing contracts and pricing terms. Contract specifics are unknown at this time, but some assumptions based on historical arrangements can be assumed. From these, estimates of metal payables, based on expected metallurgical recoveries and possible % payable by a smelter or a pyrite processor are shown in Table 13.2 below. Smelter contracts often include a certain g/t deduction for each precious metal. Penalties for exceeding impurity thresholds, e.g. arsenic are also commonly included in contract terms. Neither such deductions nor penalties are included in Table 13.2.

TABLE 13.2
ESTIMATED PERCENT FOR METALLURGICAL RECOVERIES AND METALS PAYABLE

Silver Queen Concentrate	Metal	Estimated Silver Queen Metallurgical Recovery (%)	Estimated Smelter or Process Payable (%)	Metal Payable in Concentrates (%)	Notes
Cu-Pb	Au	16	95	15	
Zn	Au	19	95	18	
Fe	Au	48	90	43	
	Total Au	83		76	
Cu-Pb	Ag	52	95	49	
Zn	Ag	30	70	21	
Fe	Ag	14	50	7	
	Total Ag	97		77	
Cu-Pb	Cu	66	40	26	
Zn	Cu	20	0		Cu assumed below threshold @ <1%
	Total Cu	86		26	
Cu-Pb	Pb	78	95	74	
Zn	Pb	9	50	5	Assume above payable threshold
	Total Pb	82		79	
Cu-Pb	Zn	4	50	2	
Zn	Zn	92	85	78	
	Total Zn	96		80	
Fe	Cu, Pb, Zn	13 total	0	0	No base metal credit

13.4.3 Opportunities for Metallurgical Optimization

While the No. 3 Vein mineralogy has been described as either galena-sphalerite or pyrite-sphalerite- chalcopyrite, details of gold and silver mineralogy are not available. Also, while the presence of tennantite ($\text{Cu}_{12}\text{As}_4\text{S}_{13}$) has been identified, the lack of correlation with copper content, suggests that arsenic mineralization is uncertain. Arsenopyrite may also be present.

A detailed mineralogy study of each type of mineralised material in the No. 3 Vein could assist in targeting approaches to improved metallurgical results and concentrate purity.

Bench scale metallurgical tests on recent, unoxidized drill core could be considered. Targets could include:

- Potential for high intensity gravity separation to isolate free gold;

- Optimization of primary grind size and determination of benefits of rougher concentrate regrinding;
- Potential for reduction of arsenic content of the Cu-Pb-Ag-Au concentrate using mineral processing methods; and
- Upgrading of gold concentration in a pyrite concentrate.

The production of three separate concentrates at a low tonnage (500–750 tpd) process plant presents operational challenges. Three separate thickening-filtration-bagging-sampling facilities will be needed. Metallurgical tests should include determination of filtration rates and methods to minimize moisture content to reduce shipping costs.

14.0 MINERAL RESOURCE ESTIMATES

14.1 INTRODUCTION

The purpose of this Technical Report section is to summarize Mineral Resource Estimate for the Silver Queen Project, Owen Lake, British Columbia, for New Nadina Explorations Ltd. The Mineral Resource Estimate presented herein is reported in accordance with the Canadian Securities Administrators' National Instrument 43-101 and has been estimated in conformity with the generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the Mineral Resource will be converted into a Mineral Reserve. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Mineral Resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent Mineral Resource Estimates.

This Mineral Resource Estimate was based on information and data supplied by New Nadina Explorations, and was undertaken by Yungang Wu, P.Geo. and Eugene Puritch, P.Eng. of P&E Mining Consultants Inc. of Brampton, Ontario, independent Qualified Persons in terms of NI 43-101. The effective date of this Mineral Resource Estimate is July 15, 2019.

14.2 DATABASE

All drilling and assay data were provided in the form of Excel data files by New Nadina Explorations. The Geovia Gems V6.8 database for this Mineral Resource Estimate, compiled by P&E, consisted of 535 drill holes totalling 66,045 m, of which a total of 194 drill holes were intersected the mineralization wireframes used for the Mineral Resource Estimate (Table 14.1). In the database, 75 drill holes totalling 7,688 m didn't have any assays and were not utilized for the Mineral Resource Estimate. A drill hole plan is shown in Appendix A.

TABLE 14.1 SILVER QUEEN DRILL HOLE SUMMARY						
Drill Hole Areas	Total No. of Holes	Total Amount of Drilling (m)	No. of Holes Intersecting Mineralization Wireframes	Amount Intersecting Mineralization Wireframes (m)	No. of No Assay Holes	No. of m of No Assay Holes
Surface	324	49,341	69	8,678	50	6,026
Underground	211	16,704	125	10,344	25	1,662
Total	535	66,045	194	19,022	75	7,688

The database contained assays for Au, Ag, Zn, Cu and Pb as well as other lesser elements of non-economic importance. The basic statistics of all raw assays for the elements of economic interest are presented in Table 14.2.

<p style="text-align: center;">TABLE 14.2 SILVER QUEEN ASSAY DATABASE SUMMARY</p>					
Variable	Zn (%)	Ag (g/t)	Au (g/t)	Cu (%)	Pb (%)
Number of samples	5,865	5,970	4,738	5,829	5,848
Minimum value	0.00	0.00	0.00	0.00	0.00
Maximum value	50.80	14,400.10	39.57	19.80	32.10
Mean	0.90	43.81	0.50	0.12	0.22
Median	0.07	1.53	0.04	0.02	0.01
Variance	7.74	79,333.31	3.11	0.25	0.81
Standard Deviation	2.78	281.66	1.76	0.50	0.90
Coefficient of variation	3.10	6.43	3.52	4.06	4.19
Skewness	5.96	30.54	8.42	17.63	14.11
Kurtosis	54.51	1,332.39	106.58	511.71	349.41

All drill hole survey and assay values are expressed in metric units, with grid coordinates in the NAD 83, Zone 9N UTM system.

14.3 DATA VERIFICATION

Verification of Au, Ag, Cu, Zn and Pb assay database was performed by Mr. Jim Hutter, P.Geo., an independent Qualified Person in terms of NI43-10. Mr. Hutter took 120 core samples in 2010, of which 61 samples from intervals within the mineralization wireframes; and collected 21 samples in 2019 from holes located within the Mineral Resource wireframes. A total of approximately 26 % (82 out of 317) wireframe constrained assays have been validated by the resampling.

P&E also validated the Mineral Resource database by checking for inconsistencies in analytical units, duplicate entries, interval, length or distance values less than or equal to zero, blank or zero-value assay results, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, survey and missing interval and coordinate fields. Some errors were noted and corrected in the database. P&E believes that the supplied database is suitable for Mineral Resource estimation.

14.4 DOMAIN INTERPRETATION

Four (4) mineralization wireframes were constructed for the Mineral Resource Estimate. The wireframes were created from successive cross-sectional polylines on northwest-facing vertical sections with a 25 m spacing. A NSR C\$100/t cut-off value was applied to the mineralization wireframes. The NSR was calculated with the formula:

$$\text{NSR (CDN)} = (\text{Cu}\% * \$57.58) + (\text{Pb}\% * \$19.16) + (\text{Zn}\% * \$30.88) + (\text{Au g/t} * \$39.40) + (\text{Ag g/t} * \$0.44) - \$78.76.$$

In some cases, mineralization below the NSR cut-off value were included for the purpose of maintaining zonal continuity. On each section, polyline interpretations were digitized from drill hole to drill hole, but not typically extended more than 25 m into untested territory. The minimum constrained sample length for grade interpretation was 1.8 m.

The main mineralization domain is named Vein No. 3, which is modeled proximately 1,150 m long, 300 m deep, average true width 2.1 m, with a general strike Az of 130°, dipping 55°-60° to the northeast. Vein No. 3 was historically mined by underground methods.

The resulting Mineral Resource domains were utilized as constraining boundaries during Mineral Resource estimation, for rock coding, statistical analysis and compositing limits. The 3-D domains are presented in Appendix B.

A topographic surface was provided by New Nadina. P&E created an overburden surface using drill hole logs, and digitized shapes of mined out voids and non-mineralized dykes based on a vertical longitudinal projection drawing provided by New Nadina.

14.5 ROCK CODE DETERMINATION

A unique rock code was assigned for each mineralized domain in the Mineral Resource model as presented in Table 14.3.

TABLE 14.3 MODEL CODES USED FOR THE MINERAL RESOURCE ESTIMATE		
Domains	Rock Type	Volume (m³)
Vein No. 3	100	779,788
Vein No. 3HW	200	17,906
Vein No. 3FW	300	32,154
Vein No. 3 EX	400	40,985
Air	0	
OVB	10	
Waste	99	
Voids	999	

14.6 COMPOSITING

The basic statistics of all constrained assays and sample lengths are presented in Table 14.4.

TABLE 14.4 BASIC STATISTICS OF ALL CONSTRAINED ASSAYS AND SAMPLE LENGTHS						
Variable	Au (g/t)	Ag (g/t)	Zn (%)	Cu (%)	Pb (%)	Length (m)
Number of Samples	442	442	442	442	442	442
Minimum Value	0.001	0.001	0.009	0.001	0.000	0.12
Maximum Value	39.57	4,339.90	50.8	6.98	6.12	6.1
Mean	2.84	209.48	5.25	0.33	0.83	1.05
Median	1.1	92.25	2.49	0.09	0.31	0.85
Variance	19.7	114,772.55	41.91	0.49	1.3	0.63
Standard Deviation	4.44	338.78	6.47	0.7	1.14	0.79
Coefficient of Variation	1.56	1.62	1.23	2.11	1.37	0.76
Skewness	3.07	5.37	2.01	4.52	2.16	1.87
Kurtosis	16.94	54.49	9.47	30.02	7.89	8.34

Approximately 63 % of the constrained sample lengths were less than 1 m in length, with an overall average length of 1.05 m. In order to regularize the assay sampling intervals for grade interpolation, a 1.0 m compositing length was selected for the drill hole intervals that fell within the constraints of the above-mentioned Mineral Resource domains. The composites were calculated for Au, Ag, Zn, Cu, and Pb over 1.0 m lengths starting at the first point of intersection between assay data hole and hanging wall of the 3-D zonal constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Un-assayed intervals and below detection limit assays were set to 0.001 g/t for Au and Ag, and 0.001% for Zn, Cu and Pb. If the last interval is less than 0.25 m, the composite length is adjusted to make all intervals of the hole equal in length so as not to introduce any short sample bias in the grade interpolation process. The constrained composite data were extracted to point files for a capping study. The composite statistics are summarized in Table 14.5.

<p align="center">TABLE 14.5 COMPOSITE SUMMARY STATISTICS</p>					
Variable	Au (g/t)	Ag (g/t)	Zn (%)	Cu (%)	Pb (%)
Number of Samples	581	581	581	581	581
Minimum Value	0.001	0.001	0.001	0.001	0.001
Maximum Value	22.70	2,303.04	38.57	4.15	5.14
Mean	2.27	150.93	4.18	0.23	0.66
Median	0.82	65.29	1.84	0.07	0.26
Geometric Mean	0.16	13.76	0.73	0.05	0.14
Variance	13.40	47,246.14	26.62	0.21	0.78
Standard Deviation	3.66	217.36	5.16	0.46	0.88
Coefficient of Variation	1.61	1.44	1.23	1.99	1.34
Skewness	2.53	3.36	1.82	4.40	1.98
Kurtosis	10.05	23.23	7.59	28.71	7.23

14.7 GRADE CAPPING

Grade capping was investigated on the 1.0 m composite values in the database within the constraining domains to ensure that the possible influence of erratic high values did not bias the database. Log-normal histograms for Au, Ag, Zn, Cu and Pb composites were generated for each mineralized zone and the selected resulting graphs are exhibited in Appendix C. The statistics of capped composites are summarized in Table 14.6 and the grade capping values are detailed in Table 14.7. The capped composites were utilized to develop variograms and for block model grade interpolation.

<p align="center">TABLE 14.6 CAPPED COMPOSITE SUMMARY STATISTICS</p>					
Variable	Au (g/t)	Ag (g/t)	Zn (%)	Cu (%)	Pb (%)
Number of Samples	581	581	581	581	581
Minimum Value	0.001	0.001	0.001	0.001	0.001
Maximum Value	22.70	900.00	26.00	2.00	5.14
Mean	2.23	145.72	4.13	0.22	0.66
Median	0.82	65.29	1.84	0.07	0.26
Geometric Mean	0.16	13.70	0.72	0.04	0.14
Variance	12.23	35,298.63	24.91	0.14	0.78
Standard Deviation	3.50	187.88	4.99	0.37	0.88
Coefficient of Variation	1.57	1.29	1.21	1.72	1.34
Skewness	2.33	1.82	1.57	2.82	1.98
Kurtosis	8.69	6.33	5.35	11.55	7.23

<p>TABLE 14.7 CAPPED COMPOSITES VALUES</p>										
Variables	Domains	Rock Type	Total No. of Composites	Capping Value	No. of Capped Composites	Mean of Composites	Mean of Capped Composites	CoV of Composites	CoV of Capped Composites	Capping Percentile
Au	Vein No. 3	100	518	15	6	2.26	2.22	1.58	1.53	98.8
	Vein No. 3 HW	200	21	No Cap	0	4.38	4.38	1.49	1.49	100.0
	Vein No. 3 FW	300	22	No Cap	0	0.48	0.48	1.59	1.59	100.0
	Vein No. 3 EX	400	20	No Cap	0	2.20	2.20	1.00	1.00	100.0
Ag	Vein No. 3	100	518	900	6	146.65	143.65	1.35	1.28	98.8
	Vein No. 3 HW	200	21	830	1	295.38	225.24	1.75	1.28	95.2
	Vein No. 3 FW	300	22	No Cap	0	111.17	111.17	1.17	1.17	100.0
	Vein No. 3 EX	400	20	No Cap	0	153.84	153.84	1.16	1.16	100.0
Cu	Vein No. 3	100	518	2	8	0.23	0.22	2.03	1.74	98.5
	Vein No. 3 HW	200	21	No Cap	0	0.11	0.11	1.92	1.92	100
	Vein No. 3 FW	300	22	No Cap	0	0.31	0.31	1.21	1.21	100
	Vein No. 3 EX	400	20	No Cap	0	0.20	0.20	1.56	1.56	100
Pb	Vein No. 3	100	518	No Cap	0	0.69	0.69	1.32	1.32	100
	Vein No. 3 HW	200	21	No Cap	0	0.46	0.46	1.38	1.38	100
	Vein No. 3 FW	300	22	No Cap	0	0.53	0.53	1.26	1.26	100
	Vein No. 3 EX	400	20	No Cap	0	0.28	0.28	1.75	1.75	100
Zn	Vein No. 3	100	518	26	1	4.33	4.31	1.21	1.19	99.8
	Vein No. 3 HW	200	21	No Cap	0	1.86	1.86	1.31	1.31	100
	Vein No. 3 FW	300	22	8	2	3.94	3.15	1.21	0.95	90.9
	Vein No. 3 EX	400	20	No Cap	0	2.95	2.95	1.39	1.39	100

14.8 SEMI-VARIOGRAPHY

A semi-variography study was performed as a guide to determining a grade interpolation search strategy. Omni, along strike, down dip and across dip semi-variograms were attempted for Vein No. 3 on each element (Au, Ag, Zn, Cu and Pb) using capped composites. Selected variograms are attached in Appendix D.

Continuity ellipses based on the observed ranges were subsequently generated and used as the basis for estimation search ranges, distance weighting calculations and Mineral Resource classification criteria.

14.9 BULK DENSITY

Mr. Jim Hutter, P.Geo. collected 21 samples during his site visit in May 2019. The samples were analyzed at Activation Laboratories in Kamloops, BC, and an average bulk density of 3.56 t/m³ was attained with a variance between 2.70 to 4.34 t/m³.

14.10 BLOCK MODELING

The Silver Queen block model was constructed using Geovia Gems V6.8 modelling software, and the block model origin and block size are tabulated in Table 14.8. The block model consists of separate model attributes for estimated grade of Au, Ag, Cu, Zn and Pb, rock type, volume percent, density, NSR value and classification.

TABLE 14.8 SILVER QUEEN BLOCK MODEL DEFINITION			
Direction	Origin	No. of Blocks	Block Size (m)
X	649,720	592	1
Y	5,994,520	506	3
Z	982	124	3
Rotation	Counter clockwise 45°		

All blocks in the rock type block model were initially assigned a waste rock code of 99, corresponding to the surrounding country rocks. All mineralized domains were used to code all blocks within the rock type block model that contain 1 % or greater volume within the domains. These blocks were assigned their appropriate individual rock codes as indicated in Table 14.3. The overburden and topographic surfaces were subsequently utilized to assign rock code 10 and 0, corresponding to overburden and air respectively, to all blocks 50 % or greater above the respective surfaces.

A volume percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside the constraining domains. As a result, the domain boundary was properly represented by the percent model ability to measure individual infinitely variable block inclusion percentages within that domain. The historical mined area and non-

mineralized dykes were depleted in the percent model. The minimum coding percentage of the mineralized block was set to 1 %.

The Au and Ag grade blocks were interpolated with Inverse Distance Cubed (“ID³”), while Zn, Cu and Pb were interpolated with Inverse Distance Squared (“ID²”). Multiple passes were executed for the grade interpolation to progressively capture the sample points in order to avoid over-smoothing and preserve local grade variability. Search ranges were based on the variograms and search directions which were aligned with the strike and dip directions of each domain/sub-domain accordingly. Grade blocks were interpolated using the parameters in Table 14.9.

<p style="text-align: center;">TABLE 14.9 BLOCK MODEL INTERPOLATION PARAMETERS</p>						
Pass	Dip Range (m)	Strike Range (m)	Across Dip Range (m)	Max No. of Samples per Hole	Min No. Samples	Max No. Samples
I	45	45	5	2	5	12
II	90	90	10	2	3	12
III	135	135	15	2	1	12

Selected cross-sections and plans of the Zn, Au, Ag and NSR grade blocks are presented in Appendix E, F, G and H.

The NSR values of blocks were manipulated with formula:

$$\text{NSR (CDN)} = (\text{Cu}\% * \$57.58) + (\text{Pb}\% * \$19.16) + (\text{Zn}\% * \$30.88) + (\text{Au g/t} * \$39.40) + (\text{Ag g/t} * \$0.44) - \$78.76.$$

A bulk density model was populated with a uniform bulk density of 3.56 t/m³ derived from 21 samples collected by the independent Qualified Person of this Technical Report.

14.11 RESOURCE CLASSIFICATION

In P&E's opinion, the drilling, assaying and exploration work on the Silver Queen Project supports this Mineral Resource Estimate and are sufficient to indicate a reasonable potential for economic extraction and thus qualify it as a Mineral Resource under the CIM definition standards. The Mineral Resource was classified as Indicated and Inferred based on the geological interpretation, semi-variogram performance and drill hole spacing. The Indicated Mineral Resource was classified within the blocks of Vein No. 3 interpolation Pass I and II in Table 14.9, which used at least three composites from a minimum of two holes; and Inferred Mineral Resources were categorized for all remaining grade populated blocks within all mineralized domains. The classifications have been adjusted to reasonably reflect the distribution of each category. Selected classification block cross-sections and plans are attached in Appendix I.

14.12 NSR CALCULATION

The Mineral Resource Estimates were derived from applying NSR cut-off values to the block models and reporting the resulting tonnes and grades for potentially mineable areas. The following parameters were used to calculate the NSR values that determine the underground mining potentially economic portions of the constrained mineralization. Selected NSR block cross-sections and plans are attached in Appendix H.

NSR Value Calculation

Au Price	US\$1,300/oz (Approx Jun 30/19 two yr trailing average)
Ag Price	US\$17/oz (Approx Jun 30/19 two yr trailing average)
Cu Price	US\$3.00/lb (Approx Jun 30/19 two yr trailing average)
Pb Price	US\$1.05/lb (Approx Jun 30/19 two yr trailing average)
Zn Price	US\$1.35/lb (Approx Jun 30/19 two yr trailing average)
Au Process Recovery	79%
Ag Process Recovery	80%
Cu Process Recovery	81%
Pb Process Recovery	75%
Zn Process Recovery	94%
Cu Refining Charge	\$0.10/lb
Au Refining Charge	\$8/oz
Ag Refining Charge	\$1/oz
Au Smelter Payable	96.5%
Ag Smelter Payable	94.0%
Cu Smelter Payable	96.5%
Zn Smelter Payable	85.0%

14.13 MINERAL RESOURCE ESTIMATE

The resulting Mineral Resource Estimate at an NSR C\$100/t cut-off (C\$70/t mining, C\$20/t processing and C\$10/t G&A) as of the effective date of this Technical Report, is tabulated in Table 14.10. P&E considers the mineralization of Silver Queen to be potentially amenable to underground economic extraction.

TABLE 14.10
SILVER QUEEN MINERAL RESOURCE ESTIMATE ⁽¹⁻⁶⁾

Classification	Tonnes (kt)	Zn (%)	Zn (Mlb)	Au (g/t)	Au (koz)	Ag (g/t)	Ag (koz)	Cu (%)	Cu (Mlb)	Pb (%)	Pb (Mlb)	AuEq (g/t)	AuEq (koz)	AgEq (g/t)	AgEq (koz)
Indicated	815	6.35	114	3.24	85	201. 4	5,280	0.26	5	0.96	17	9.31	244	835.4	21,900
Inferred	801	5.21	92	2.49	64	184. 3	4,748	0.31	5	0.88	16	7.51	193	674.1	17,360

Notes:

1. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.
2. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
3. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
4. The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
5. The Mineral Resource Estimate was based on metal prices of US\$1,300/oz gold, US\$17/oz silver, US\$1.35/lb zinc, US\$3.00/lb copper and US\$1.05/lb lead.
6. The historical mined areas were depleted from the Mineral Resource.

Mineral Resource Estimates are sensitive to the selection of a reporting NSR cut-off value and are demonstrated in Table 14.11.

TABLE 14.11 SILVER QUEEN MINERAL RESOURCE ESTIMATE SENSITIVITY									
Classification	NSR Cut-off (C\$/t)	Tonnes (kt)	Zn (%)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	AuEq (g/t)	AgEq (g/t)
Indicated	500	183	10.2 ₉	6.88	342.52	0.41	1.50	18.10	1,624.8
	450	229	9.89	6.31	317.76	0.39	1.44	16.88	1,515.2
	400	281	9.48	5.78	297.62	0.37	1.38	15.74	1,412.9
	350	344	9.03	5.24	279.76	0.35	1.31	14.59	1,309.9
	300	422	8.49	4.73	264.11	0.33	1.23	13.41	1,204.2
	250	510	7.95	4.29	248.17	0.31	1.16	12.32	1,105.5
	200	596	7.46	3.94	233.44	0.29	1.09	11.36	1,019.4
	150	698	6.91	3.59	218.32	0.28	1.03	10.34	928.5
	100	815	6.35	3.24	201.40	0.26	0.96	9.31	835.4
	50	950	5.78	2.90	182.64	0.24	0.89	8.26	741.1
	0.01	1,103	5.21	2.57	164.10	0.22	0.81	7.20	646.7
Inferred	500	89	8.49	7.64	369.79	0.56	1.53	17.98	1,614.4
	450	127	8.84	6.17	319.23	0.50	1.59	16.17	1,451.2
	400	179	8.65	5.18	291.86	0.45	1.56	14.63	1,313.2
	350	231	8.31	4.63	270.19	0.40	1.47	13.46	1,208.7
	300	294	7.81	4.16	254.40	0.38	1.37	12.34	1,108.1
	250	393	7.08	3.61	238.39	0.38	1.23	10.98	986.0
	200	492	6.49	3.25	224.21	0.36	1.11	9.91	889.7
	150	629	5.86	2.84	206.16	0.34	0.99	8.71	782.0
	100	801	5.21	2.49	184.30	0.31	0.88	7.51	674.1
	50	1,004	4.65	2.15	161.79	0.27	0.78	6.38	572.9
	0.01	1,205	4.16	1.86	143.78	0.25	0.70	5.43	487.3

14.14 CONFIRMATION OF ESTIMATE

The block model was validated using a number of industry standard methods including visual and statistical methods.

- Visual examination of composites and block grades on successive plans and sections were performed on-screen in order to confirm that the block models correctly reflect the distribution of composite grades. The review of estimation parameters included:
 - Number of composites used for estimation;
 - Number of drill holes used for estimation;

- Mean distance to sample used;
 - Number of passes used to estimate grade; and
 - Mean value of the composites used.
- Comparisons of mean grades of composites with the block models of Vein No. 3 at zero grade are presented in Table 14.12.

TABLE 14.12 VEIN NO. 3 AVERAGE GRADE COMPARISON OF COMPOSITES WITH BLOCK MODELS					
Data Type	Au (g/t)	Ag (g/t)	Zn (%)	Cu (%)	Pb (%)
Composites	2.26	146.7	4.33	0.23	0.69
Capped Composites	2.22	143.7	4.31	0.22	0.69
Block Model IDW*	1.85	130.7	3.95	0.21	0.64
Block Model NN**	1.87	128.9	3.94	0.21	0.64

Notes:

* block model grades were interpolated using Inverse Distance Cubed for Au and Ag, while Inverse Distance Squared was used for Zn, Cu and Pb.

** block model grades were interpolated using Nearest Neighbour.

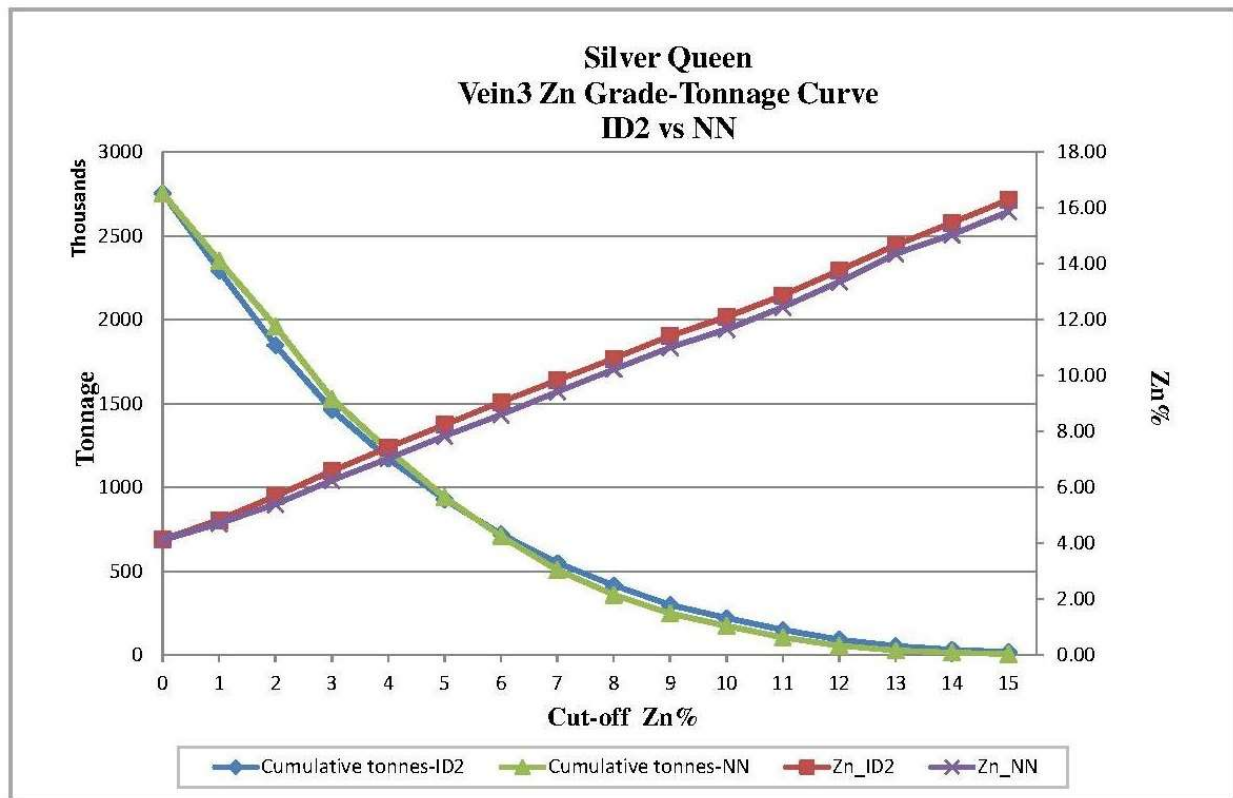
The comparisons above show the average grades of the block models to be somewhat lower than that of capped composites used for the grade estimations. These are most likely due to the smoothing by the grade interpolation process. The block model values will be more representative than the capped composites due to 3-D spatial distribution characteristics of the block models.

- A volumetric comparison was performed with the block model volume versus the geometric calculated volume of the domain solids and the differences are shown in Table 14.13.

TABLE 14.13 VOLUME COMPARISON OF BLOCK MODEL WITH GEOMETRIC SOLIDS	
Geometric volume of wireframes	890, 833 m ³
Block model volume	889,942 m ³
Difference %	0.10%

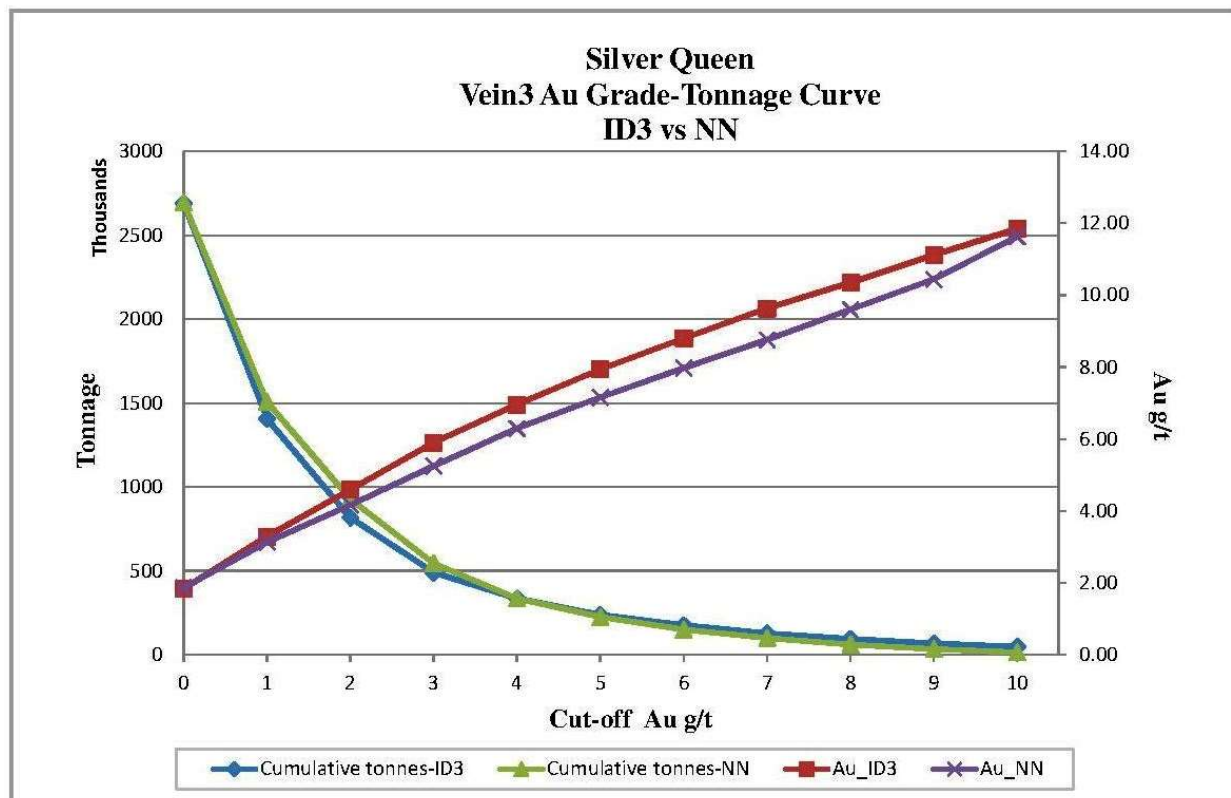
- Comparisons of the grade-tonnage curve of the Zn grade model interpolated with ID² and Nearest Neighbour (“NN”) on a global resource basis for Vein No. 3 are presented in Figure 14.1.

FIGURE 14.1 VEIN NO. 3 ZN GRADE-TONNAGE CURVE FOR ID² AND NN INTERPOLATION



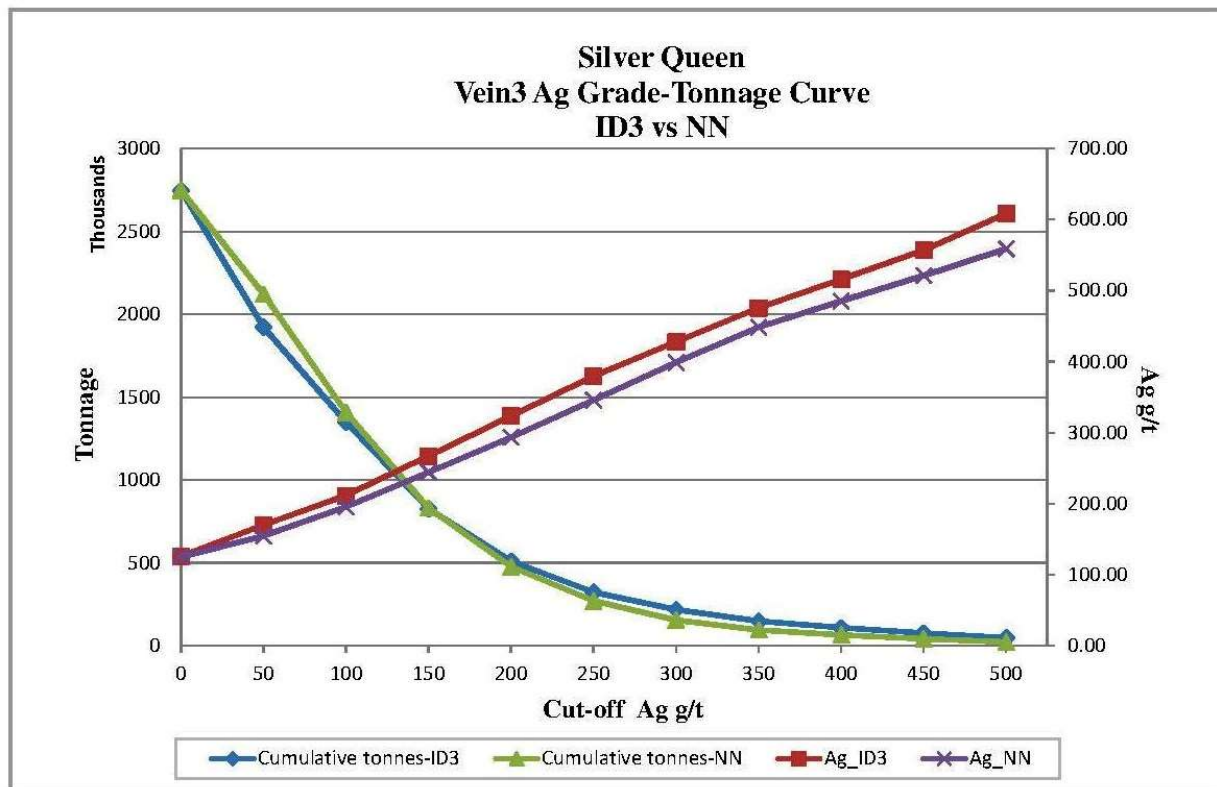
Comparisons of the grade-tonnage curve of the Au grade model interpolated with ID³ and NN on a global resource basis for Vein No. 3 are presented in Figure 14.2.

FIGURE 14.2 VEIN NO. 3 AU GRADE-TONNAGE CURVE FOR ID³ AND NN INTERPOLATION



Comparisons of the grade-tonnage curve of the Ag grade model interpolated with ID³ and NN on a global resource basis for Vein No. 3 are presented in Figure 14.3.

FIGURE 14.3 VEIN NO. 3 AG GRADE-TONNAGE CURVE FOR ID³ AND NN INTERPOLATION



- Zn local trends of Vein No. 3 were evaluated by comparing the ID² and NN estimate against Zn Composites and Capped Composites. As shown in Figures 14.4 to 14.6, Zn grade interpolations with ID² and NN agreed well.

FIGURE 14.4 VEIN NO. 3 ZN GRADE SWATH EASTING PLOT

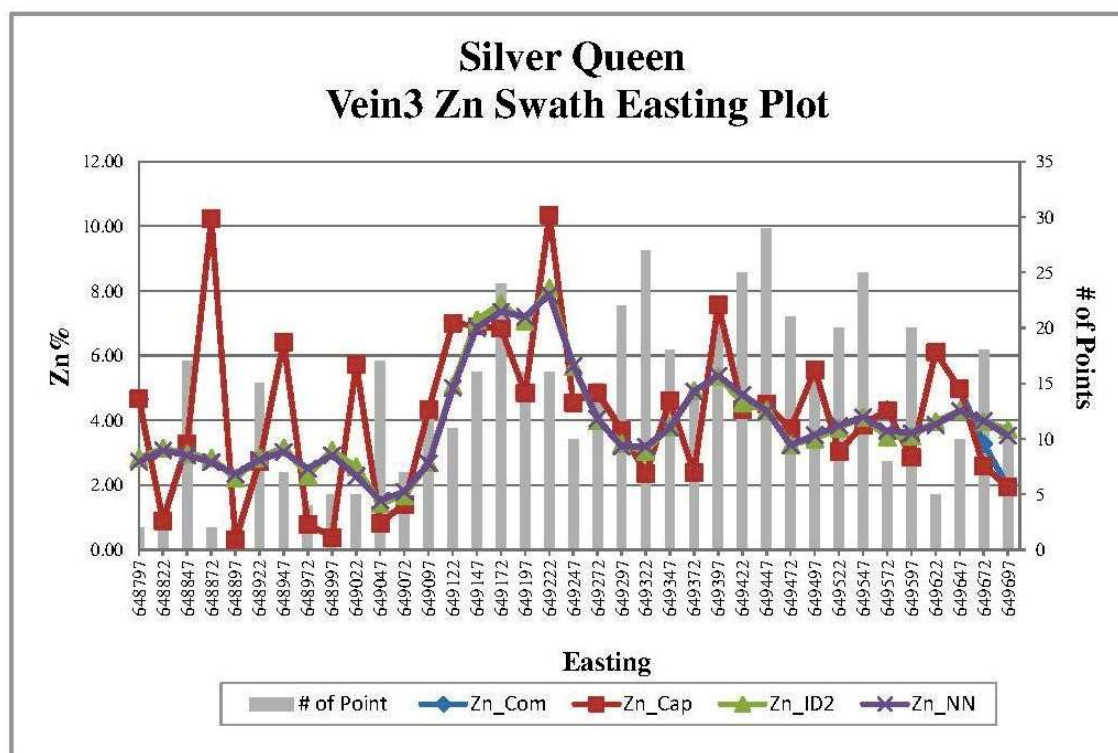


FIGURE 14.5 VEIN NO. 3 ZN GRADE SWATH NORTHING PLOT

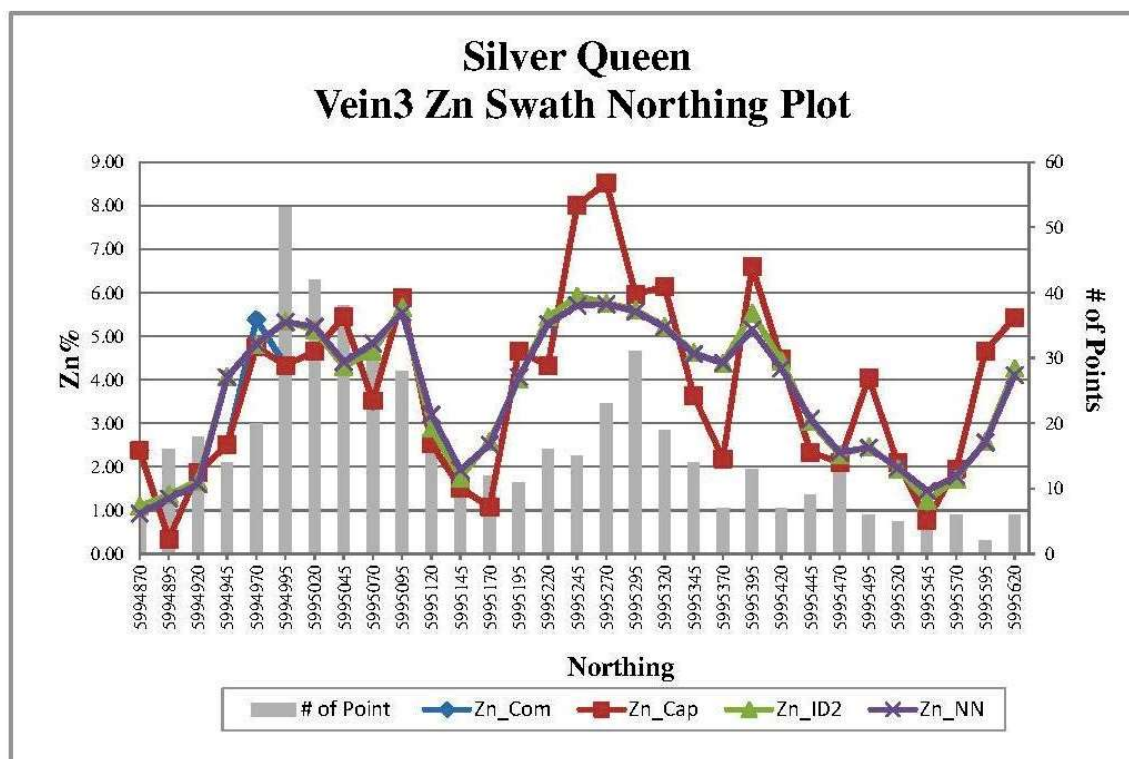
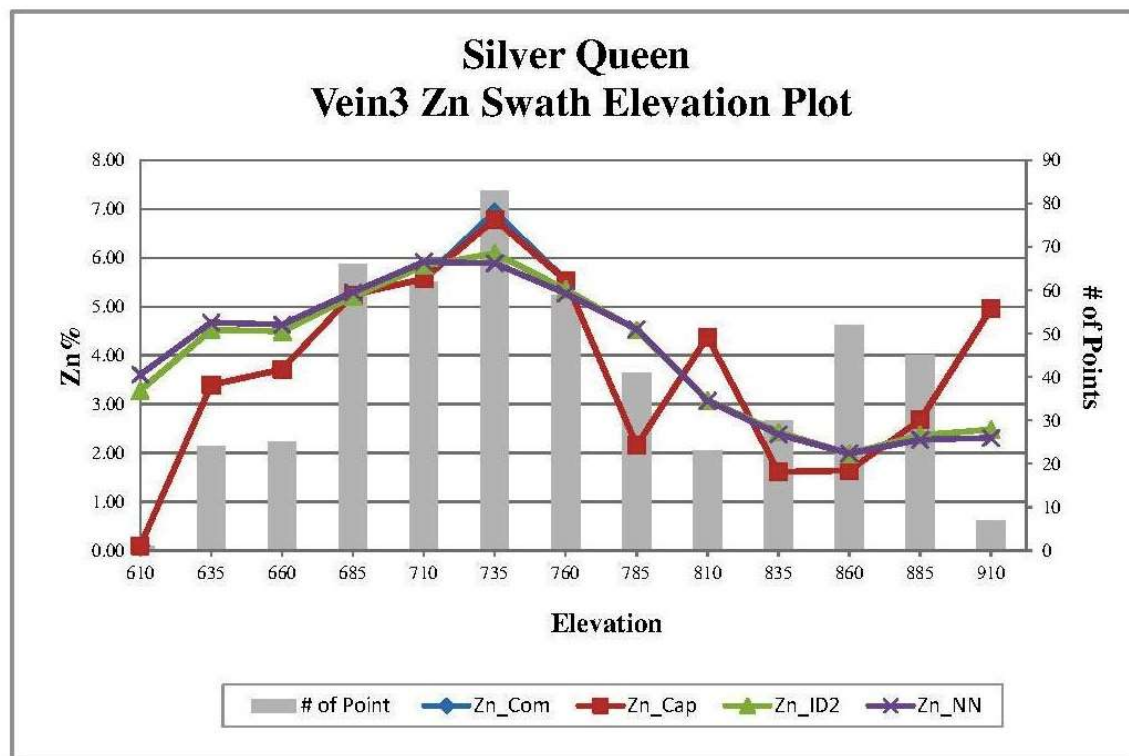


FIGURE 14.6 VEIN NO. 3 ZN GRADE SWATH ELEVATION PLOT



Au local trends of Vein No. 3 were evaluated by comparing the ID³ and NN estimate against Au Composites and Capped Composites. As shown in Figure 14.7 to 14.9, Au grade interpolations with ID³ and NN agreed well.

FIGURE 14.7 VEIN NO. 3 AU GRADE SWATH EASTING PLOT

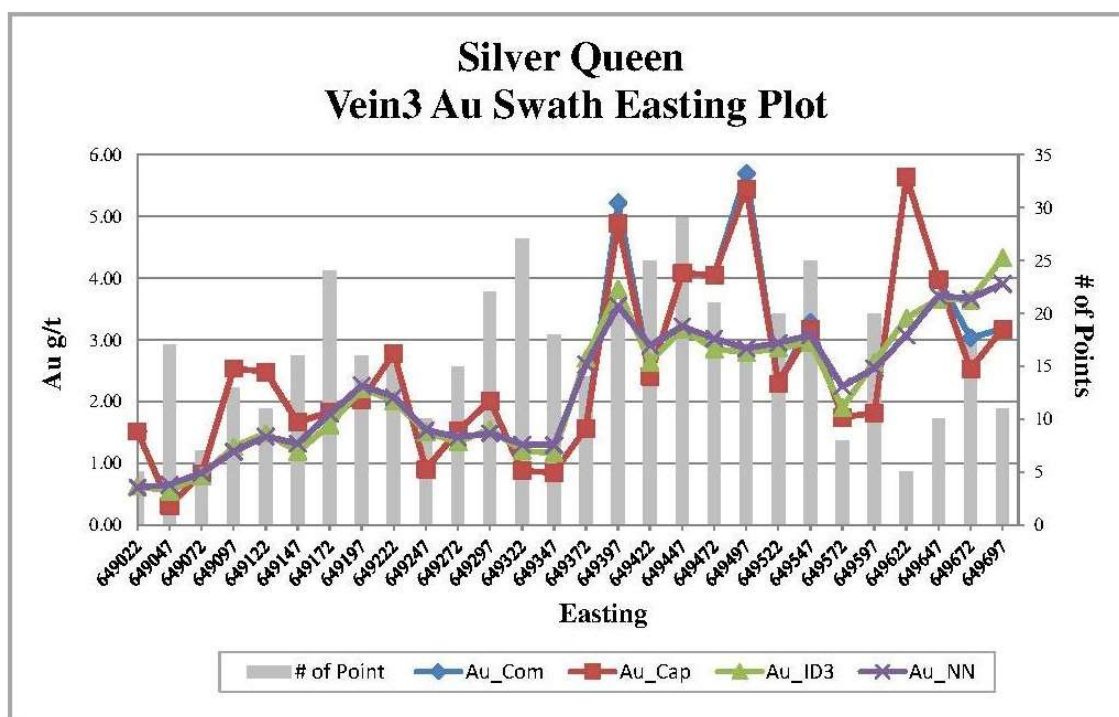


FIGURE 14.8 VEIN NO. 3 AU GRADE SWATH NORTHING PLOT

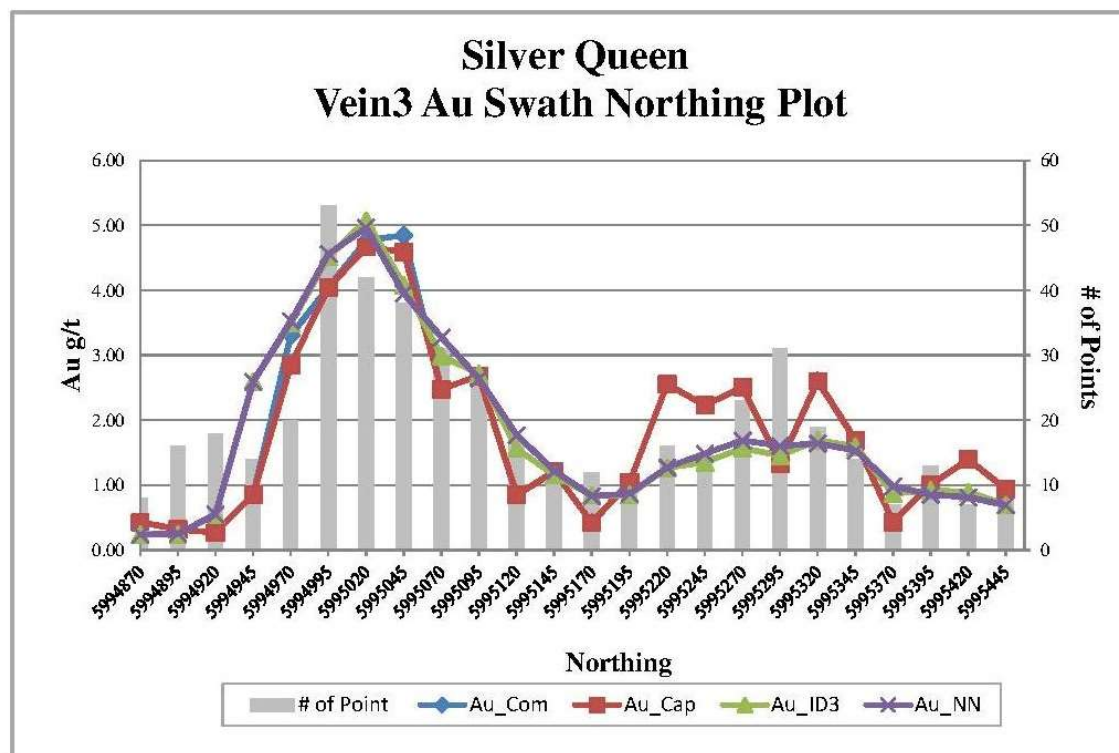
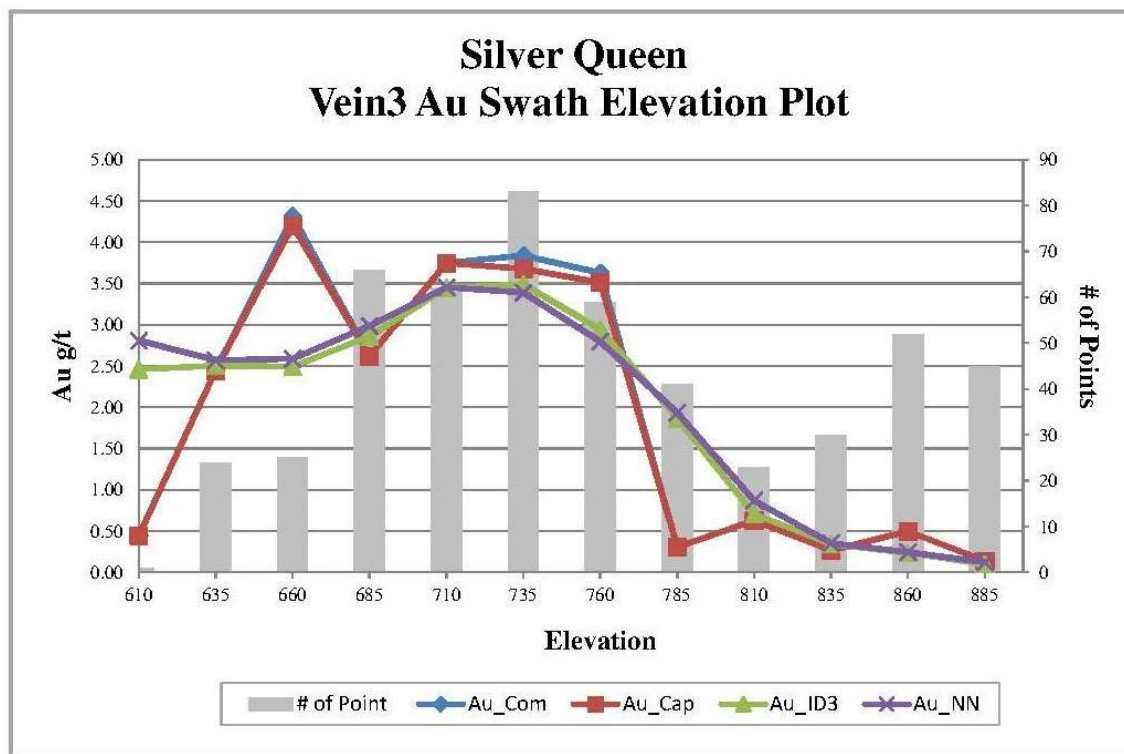


FIGURE 14.9 VEIN NO. 3 AU GRADE SWATH ELEVATION PLOT



Ag local trends of the No. 3 Vein were evaluated by comparing the ID³ and NN estimate against Ag Composites and Capped Composites. As shown in Figures 14.10 to 14.12, Ag grade interpolations with ID³ and NN agreed well.

FIGURE 14.10 VEIN NO. 3 AG GRADE SWATH EASTING PLOT

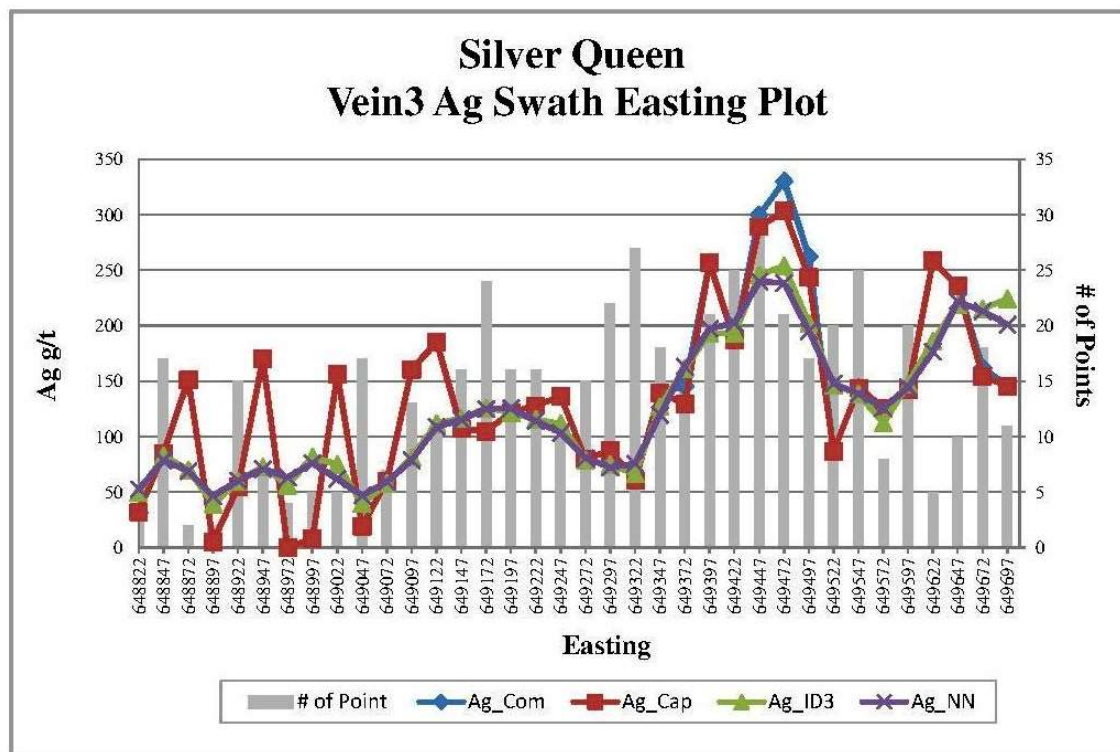


FIGURE 14.11 VEIN NO. 3 AG GRADE SWATH NORTHING PLOT

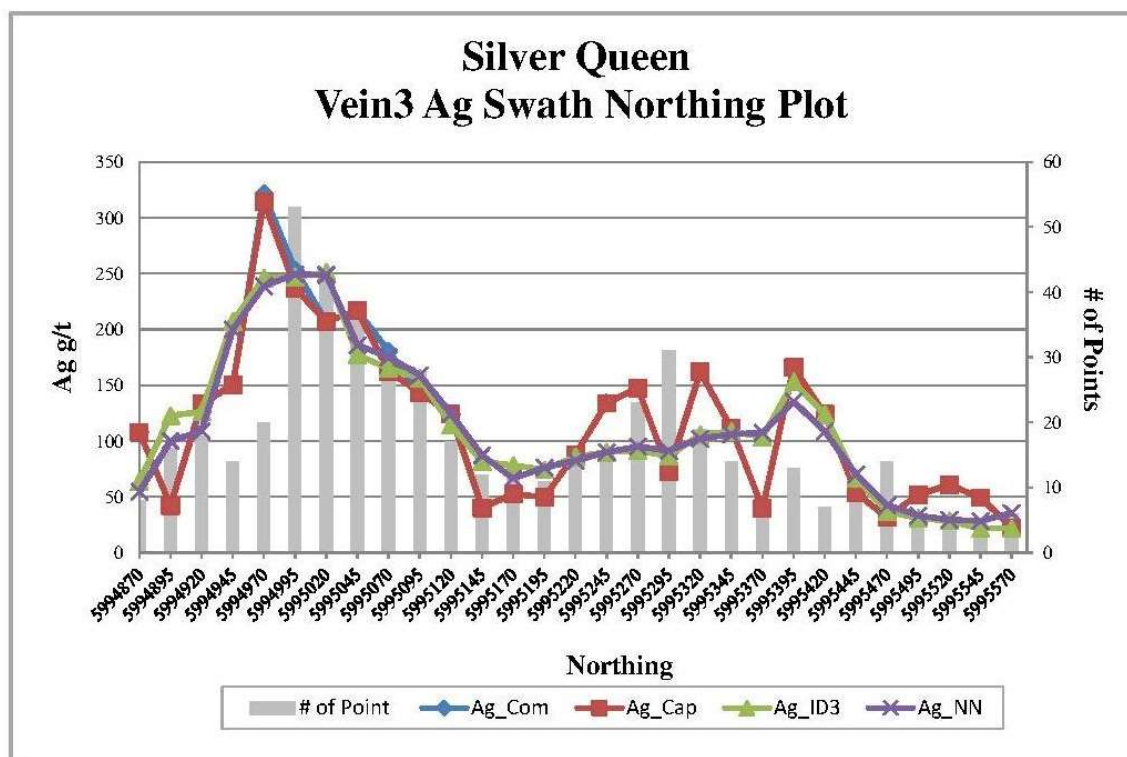
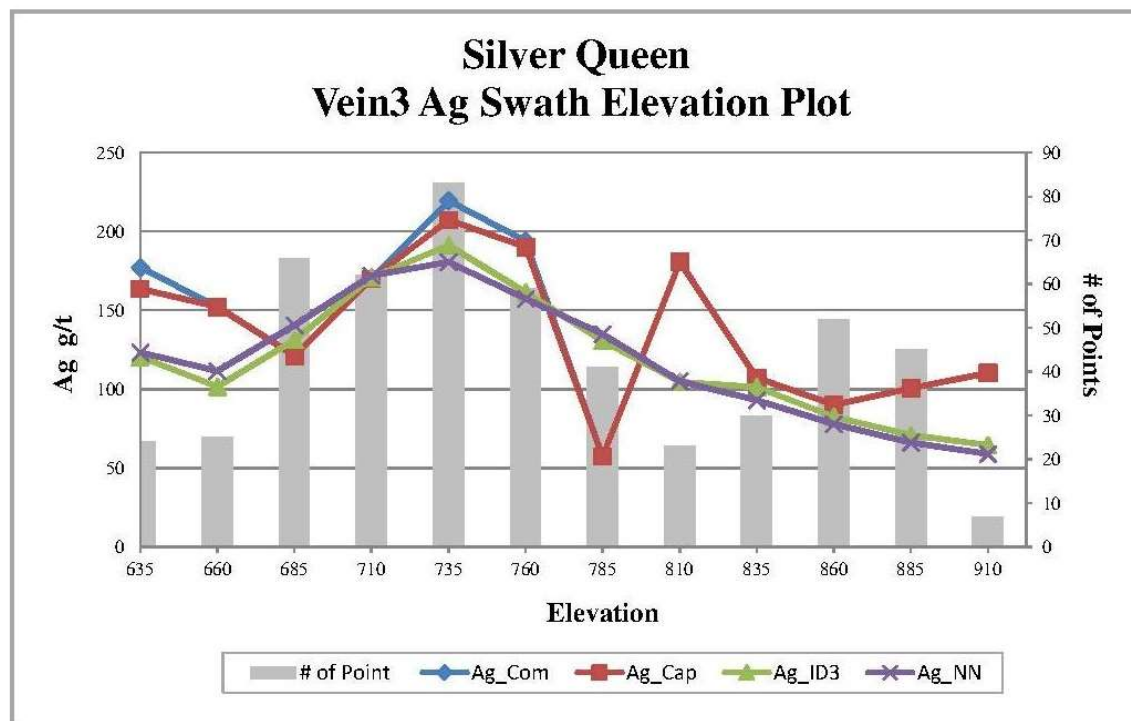


FIGURE 14.12 VEIN NO. 3 AG GRADE SWATH ELEVATION PLOT



15.0 MINERAL RESERVE ESTIMATES

This section is not applicable to this Technical Report.

16.0 MINING METHODS

This section is not applicable to this Technical Report.

17.0 RECOVERY METHODS

This section is not applicable to this Technical Report.

18.0 PROJECT INFRASTRUCTURE

This section is not applicable to this Technical Report.

19.0 MARKET STUDIES AND CONTRACTS

This section is not applicable to this Technical Report.

20.0 ENVIRONMENTAL STUDIES, PERMITS, AND SOCIAL OR COMMUNITY IMPACTS

20.1 SILVER QUEEN SITE ENVIRONMENTAL CHARACTERISTICS

The Silver Queen Property is located on the eastern shore of Owen Lake 36 km south Houston BC and is readily accessible by all-weather road. Exploration and resource evaluation activities on the Property, which have occurred over 100 years, have included trenching, surface drilling, geophysical surveys, and geological mapping. The diamond drilling has been extensive with a total of 469 holes for a total length 51 km. The underground adits and crosscuts extend a total of 3.7 km plus an equal amount of drifting and raises. The workings are currently naturally flooded with natural drainage to surface driven by the significant 11% hydrological profile to the south west from the No. 3 Vein surface exposure to the 2590 decline portal near the previous milling site.

The Silver Queen property, particularly the No. 3 Vein zone, the focus of this report, could be described as a “flooded pin cushion brownfield site with a leaky bottom”.

Fortunately, from an environment perspective, the current surface disturbance resulting from historical activity can be considered limited as indicated in Figure 20.1. The principal current liabilities that will need to be addressed in a Project development include:

- Surface hazards – unsecured raises and open trenches;
- Metal leaching tailings (200,000 t) and development rock;
- Unsecure portals, and most importantly; and
- Mine drainage.

FIGURE 20.1 SILVER QUEEN PROPERTY



Source: Google Earth 2019

Figure 20.1 Legend

1. Exploration camp and 2600 portal into the flooded workings
2. 1972-73 mill and tailings site, and 2590 decline portal
3. No. 5 Vein
4. No. 3 Vein; trenches and raises
5. Owen Lake

The historical tailings pond and waste rock from the 2600 portal development are shown in Figure 20.2. The tailings are mostly water covered. The waste rock shows some indication of acid generation. The significant slope in the picture background is an important aspect – in the upper right corner of the picture, waste rock from the No. 5 Vein is evident on the hill.

FIGURE 20.2 HISTORICAL TAILINGS FACILITY AT THE SILVER QUEEN PROJECT LOCATION

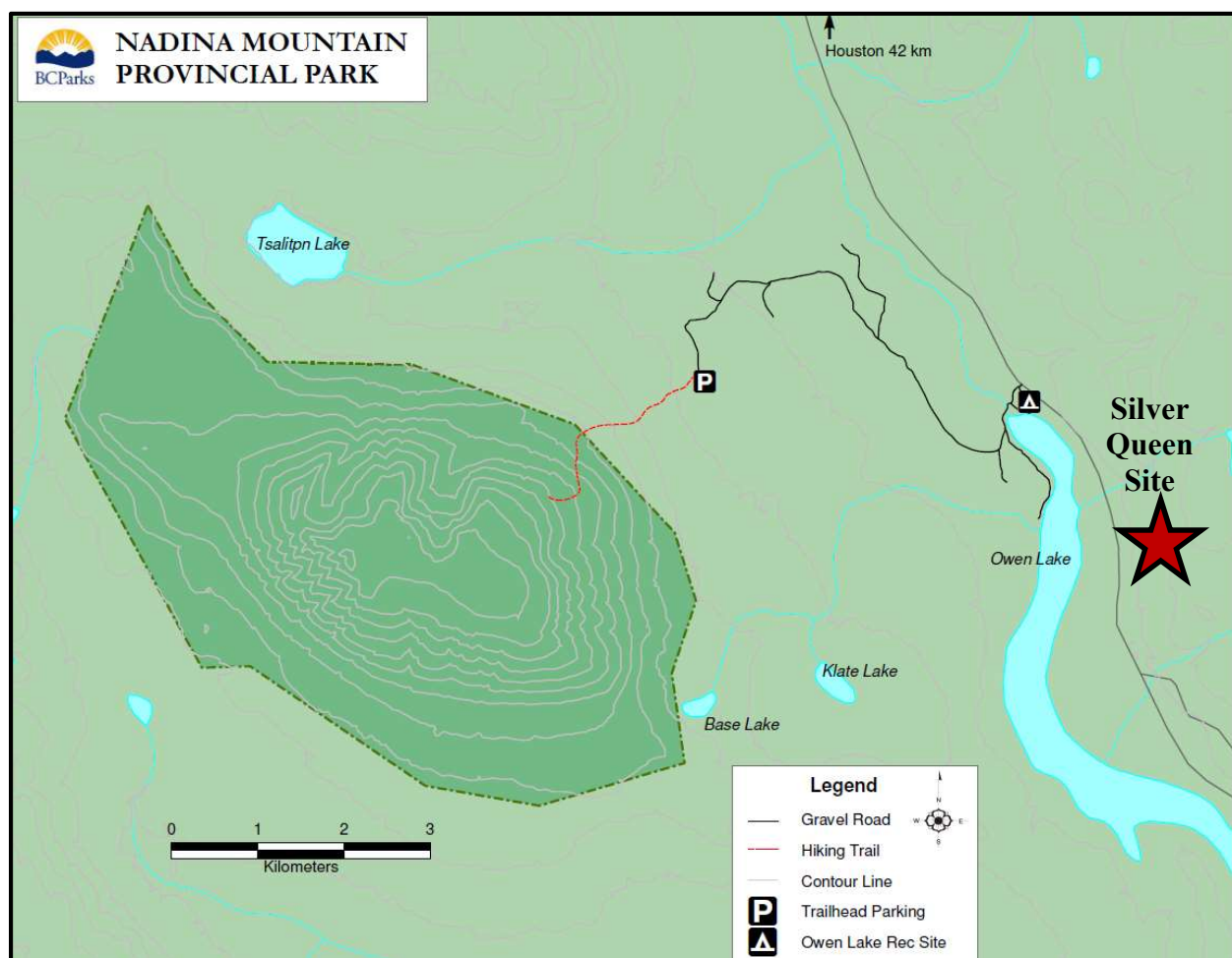


The mine water and tailings drainage water quality are currently being monitored, and based on records, dissolved zinc is the metal of some concern – exceeding water quality objectives. A passive, wetland-based water treatment system was installed in 1992 and performance has been moderately successful.

It can be anticipated that perpetual contaminated water discharge from the mine workings will occur whether or not the Project advances to production. Should the mine be dewatered for a new development, water quality can be expected to temporarily worsen – metal leaching increase and acid drainage will be enhanced as mineralisation is exposed.

At the Silver Queen site and in the surrounding area, ranching and some forestry activities occur. There are two recreational sites close to the proposed Project. As shown in Figure 20.3, there is a camp site at the north end of Owen Lake and the popular Nadina Mountain Provincial Park is 5 km west. While the Project is anticipated to have no to minimal negative impact at the Camp or in the Park, some public sensitivity to a mine development may arise. The closest ranch buildings and accommodation are 2 km north of the Project location.

FIGURE 20.3 LOCAL RECREATIONAL ASSETS



Source: BC Parks and Recreation

20.2 ENVIRONMENTAL ASPECTS OF THE SILVER QUEEN PROJECT

The Silver Queen Project is a relatively small-scale underground mining project (<1,000 tpd), and will be designed and operated to have no discernable off-site impacts during development, operations and closure. No hazardous chemicals will be used to process (on surface) the mineralised feed material. While the mineralized material and waste rock may be mildly acid generating and metal leaching, measures will be taken to minimise occurrence and effects.

The Project will be designed for closure. At end of operations, all structures will be removed and the mine openings will be permanently sealed off as tightly as possible. However, as noted above some discharge of mine water will occur on a continuous basis following closure. Provision will be made for water treatment using proven methodology that is economical, effective and robust. Engineered passive treatment methods will be preferred, possibly backed up by lime addition on an interim basis. Some tailings will be stored on surface under a water cover to minimize metal leaching. Since it is anticipated that a high percentage of the sulphides will be removed as concentrates and that most of the tailings will be returned to the mine as backfill, tailings can be expected provide minimal risk for metal leaching and acid rock drainage. The expansion and

upgrading of the current tailings facility with an engineered containment structure is one option that will be considered. Regardless, Silver Queen tailings management will meet New Nadina, public, and regulatory short and long term objectives.

During Project development, the mine will be dewatered and this water will be treated to meet all provincial and federal chemical and biological test criteria before discharge to Owen Lake. During operations, fresh water use will be minimised – treated mine and tailings water will be the main source of process and mine operations water.

20.2.1 Environmental Studies

An Environmental Impact Assessment, (“EIA” or “EA”) which forms the basis for public discussion and Provincial permitting, is expected to be required by the Province of British Columbia. Supporting this, the baseline studies will include:

- Meteorology and air quality. The nearest climate station data may be at the Smithers airport.
- Soils. The soil cover in the area is mainly composed of glacial till. The soils study will include the consideration of organic and aggregate resources suitable for the developing and closing out the Project. Mine waste may not be suitable for aggregate use. The soils at the proposed process plant and infrastructure locations will be closely evaluated.
- Waste rock, mineralization and tailings geochemistry. This will be a laboratory-based testing program for acid generation (“ARD”) and metal (and non-metal) leaching (“ML”).
- Hydrology. Seasonal drainage patterns and flows will be assessed for the Project area. Potential interruption (i.e. diversion) of surface hydrology by infrastructure, processing plant, and the tailings management facility (“TMF”) will outlined. Groundwater flows to creeks, Owen Lake and wetlands will be evaluated but is expected to be limited. Mine water discharge – volumes and quality.
- Hydrogeology. An assessment may be needed to determine the hydraulic properties of the overburden and of the bedrock, particularly down gradient of mine workings.
- Surface water quality. Downstream of the mine and surface facilities will be sampled to represent seasonal variations. Stream sediment will be sampled and analysed.
- Aquatic resources. Multi-season studies of fisheries and aquatic resources will be carried out, with a focus on the aquatic resources that may be impacted by mine and TMF development. Limited aquatic resources are expected be identified between the Project area and Owen Lake.
- Vegetation. Vegetative communities of the Project Area will be determined and studied.

- Land use. Domestic land use on and adjacent to the Project site.
- Wildlife. Wildlife surveys including a Species at Risk Assessment.
- Surface disturbances. An examination of previous exploration and mining activities including mine development rock, tailings and associated engineered wetland will be performed.

These studies will establish most of the baseline conditions for a detailed Environmental Assessment that will likely be required for the Project.

20.2.2 Environmental Regulations and Permitting

The federal and provincial Environmental Assessment (“EA”) processes and permitting framework for metal mining in Canada are well established. Following the EA approval, the Silver Queen Project will enter a permitting phase which will outline the Project regulations through all phases - construction, operation, closure, and even post-closure. Throughout all of these processes, consultation with, and advice from, local First Nations, local residents and ranchers, and communities as far away as Houston are considered essential.

20.2.3 Federal Environmental Assessment Process

The 1992 Canadian Environmental Assessment Act (“CEAA”) was updated to CEAA 2012. CEAA 2012 has recently been updated under Federal Legislation C-69. The updated act includes the earlier definition of what aspects may “trigger” a federal EA. Under CEAA 2012 and C-69, an EA focuses on issues within federal jurisdiction including:

- Fish, fish habitat and other aquatic species;
- Migratory birds;
- Federal lands and effects of crossing interprovincial boundaries;
- Effects on Aboriginal peoples such as their use of traditional lands and resources; and
- A physical activity that is designated by the Federal Minister of Environment that can cause adverse environmental effects or result in public concerns.

None of these issues can be expected to result in a requirement of an EA under federal legislation for the Silver Queen Project.

20.2.4 Provincial Environmental Assessment Process

The British Columbia EA process is administered by the Environmental Assessment Office (“EAO”) of the Ministry of Environment and Climate Change Strategy. In addition to promoting responsible environmental management, interested third parties (e.g. members of the public) can comment on a mining project and request that the Ministry require the proponent outline an EA.

The environmental assessment process is outlined by the EAO in a roadmap that is composed of 8 steps. These are summarized in Table 20.1.

TABLE 20.1 SILVER QUEEN ENVIRONMENTAL ASSESSMENT ROADMAP			
EA Step	Details	Time	Applicability to Silver Queen
Does Project need an EA?	Application of Prov. Environmental Assessment Act	Unlimited	EA likely needed. Silver Queen supplies project details
Who is consulted?	Indigenous groups, gov't agencies, public		Wet'su'weten First Nation, local residents, BC Ministry of Energy, Mines and Petroleum Resources and other Ministries
Consultations	EAO seeks advice from all groups re what should be considered in an EA		This is the EA and Project description shopping list
Silver Queen Submits Project Description, Environmental Assessment and Closure Plan			
Information	Determine if all info provided by Silver Queen	30 days	Supplementary may be requested
EA Review	EAO reviews info, seeking advice from First Nations, public and Ministries to identify environmental, economic, social and heritage effects	180 days	Possible public meetings
EA Decision	EAO provides report to Ministries re Project Approval – yes or no.		Approval anticipated
Ministry Decision	Approval, rejection, or further assessment	45 days	Assuming approval, application made for various permits
EAO grants Environmental Certificate. Construction completed and operation starts.			
EAO Monitoring	EAO works First Nations, Ministries to conduct inspections and confirm compliance	Life of project including closure	

It is possible that Participation Agreement may be considered. This Agreement could cover the following aspects:

- Environmental protection;
- Employment;
- Education and training;
- Business opportunities; and
- Financial.

20.4 MINE CLOSURE

Silver Queen will develop a Reclamation and Closure Plan that will satisfy all regulatory requirements and will be consistent with best Canadian industrial practice. The Plan will be submitted to the EAO and the Ministry of Energy, Mining and Petroleum Resource and is expected to include:

- Results of consultations with First Nations, local communities and provincial agencies;
- Provision for progressive closure of tailings, waste rock storage and mined openings;
- Restoration of surface disturbances including process plant and infrastructure sites; and
- Provision for long term treatment of mine water discharge.

The anticipated mine water discharge aspect will render the closed-out Silver Queen Project site to be a long-term care and maintenance site. While this designation is undesirable, the historical mine excavations combined with a very large number of open drill holes and mine access at levels below much of the historical excavations make this condition unavoidable.

For closure planning and the related financial assurance considerations, closure will be addressed in four phases:

- Construction and Pre-production;
- Production and modification of production;
- End of operations; and
- Post-closure.

21.0 CAPITAL AND OPERATING COSTS

This section is not applicable to this Technical Report.

22.0 ECONOMIC ANALYSIS

This section is not applicable to this Technical Report.

23.0 ADJACENT PROPERTIES

The region is well-mineralized, with a number of past producing mines and mineral deposits with estimated mineral resources. The area has been an important supplier of base and precious metals in the Province of British Columbia. In addition to the past producing Silver Queen Mine, the area hosts the past-producing Equity Silver Mine and the Huckleberry Cu Mine that is currently on care and maintenance.

Universal Copper Ltd.'s Poplar Cu-Mo Project is a large 65,800 ha property located south west of and contiguous with the Silver Queen Property. The property is actively being explored and hosts the Poplar Co-Mo deposit located on the north side of Tagetochlain Lake approximately 20 km southwest of Owen Lake. The Poplar Project hosts an Indicated Mineral Resource of 131 million tonnes grading 0.31% Cu, 0.009 % Mo, 0.09 g/t Au, and 2.39 g/t Ag, and an Inferred Mineral Resource of 132 million tonnes grading 0.27 % Cu, 0.005 % Mo, 0.07 g/t Au and 3.75 g/t Ag that has been identified through the drilling of 147 DDH (Giroux, 2012, NI43-101 technical report for Lion's Gate Metals Inc.)

The Poplar Deposit is a Cu-Mo porphyry-type deposit associated with a diorite to monzonite stock of Late Cretaceous age that is intrusive into stratified volcanic and sedimentary rocks of the Kasalka and Skeena Groups. Chalcopyrite occurs as disseminations and less commonly as 1-5 mm veinlets associated with quartz. Molybdenite mineralization is largely restricted to quartz veins. The sulphide mineralization is contained within broad envelopes of propylitic, argillic, phyllic and postassic alteration.

24.0 OTHER RELEVANT DATA AND INFORMATION

To the best of the authors' knowledge there is no other relevant data, additional information or explanation necessary to make the Technical Report understandable and not misleading.

25.0 INTERPRETATION AND CONCLUSIONS

New Nadina's 100 % owned Silver Queen Property is a silver-rich, polymetallic precious and base metal property that comprises 45 contiguous unpatented mineral claims covering an area of 18,852 ha in the Omineca Mining Division, near Owen Lake, British Columbia. The Property is located 35 km south of the town of Houston, BC, and 590 km north northwest of the city of Vancouver. The Property is located approximately 32 km southwest of the past-producing Equity Silver Mine.

The Silver Queen Property is accessible by the Morice-Owen Forest Service Road and is 43.5 road km south from Trans Canada Highway 16. Exploration activities can be conducted year-round. The area is in the rain shadow of the coastal mountains and relatively dry with summer temperatures averaging approximately 14.5°C and winter temperatures averaging -12.7°C. The Silver Queen Property benefits from its proximity to the past-producing Equity Silver Mine and the region supports a mining workforce with significant resources for mineral exploration, mine development and mine operations.

The Silver Queen Deposit is located in the Stikine Terrane of the Canadian Cordilleran Province that includes Late Triassic through Tertiary volcanic-arc related rocks that have been intruded by plutonic rocks of Jurassic through Tertiary age. The plutonic rocks are associated with porphyry copper, stockwork molybdenum and mesothermal and epithermal base and precious metal veins. High-grade vein hosted mineralization at the Silver Queen Deposit is best characterized as having been deposited in a transitional porphyry-epithermal-type environment similar to the past-producing Equity Silver Deposit.

Ag, Au, Zn, Pb and Cu mineralization on the Silver Queen Property consists of quartz-carbonate-barite-specularite veins that contain disseminated to locally massive pyrite, sphalerite, galena, chalcopyrite, tennantite and argentian tetrahedrite. Approximately 20 mineralized veins have been discovered. The main quartz vein systems are the Wrinch (including the No. 3 Vein), Camp, Portal, Chisholm, George Lake and Cole systems. The average width of the veins is 0.9 to 1.2 m and locally increases up to 4.6 m. Silver Queen mineralization is associated with widespread alteration including regional propylitic alteration and pervasive kaolinization-pyritization. The extent of alteration suggests a deep source of mineralizing solutions.

The Silver Queen Property has a long history of exploration dating back to 1912. The Property hosts a past-producing mine with historical production from the Wrinch Vein systems that includes the No. 3 Vein that is the focus of the current report, plus the Cole, and Chisholm vein systems. Most recently, the property was operated by the Bradina Joint Venture between 1972 to 1973 during which 190,676 t of mineralized material were mined from the No. 3 Vein. By 1973, a total of 1,050 m of adits and crosscuts plus 810 m of drifting and raises and 1,500 m of diamond drilling had been completed on the Wrinch Vein system. The Wrinch Vein system has an overall strike of 130° and is traceable over a length of more than 1,300 m.

P&E considers that the sampling methodology as implemented by New Nadina meets industry standards for an advanced exploration project and that sample preparation, security and analytical procedures for the Silver Queen Property drill programs were adequate for the purposes of this resource estimate. Mr. James Hutter, P.Geo., a Qualified Person under the regulations of NI 43-101 completed an on-site review of New Nadina's Silver Queen Property for the current Technical Report on May 29, 2019. P&E's due diligence sampling show acceptable correlation with the

original New Nadina assays and it is P&E's opinion that New Nadina's results are suitable for use in the current Mineral Resource Estimate.

The Geovia Gems V6.8 database for this Mineral Resource Estimate, compiled by P&E, consisted of 535 drill holes totalling 66,045 m, of which a total of 194 drill holes were intersected the mineralization wireframes used for the Mineral Resource Estimate. After conducting industry standard validation checks, P&E considers that the drill hole database supplied is suitable for Mineral Resource estimation. An average bulk density within the defined mineralized domains of 3.56 t/m³ was applied to the estimation.

Four mineralization wireframes representing Vein No. 3, Vein No. 3HW (hanging wall), Vein No. 3FW (footwall) and Vein No. 3EX (extension) were constructed for the Mineral Resource Estimate. P&E created an overburden surface using drill hole logs, and digitized shapes of mined out voids and non-mineralized dykes based on a vertical longitudinal projection drawing provided by New Nadina. A 1.0 m compositing length was used in order to regularize the assay sampling intervals for grade interpolation and certain high-grade assays in Vein No. 3 were capped for Au and Ag 15 g/t and 900 g/t respectively.

A NSR cut-off value at C\$100/t (C\$70/t mining, C\$20/t processing and C\$10/t G&A) was applied to the mineralization wireframes to **reflect underground mining costs of potentially economic portions of the mineralization**. The NSR model uses approximate 2-year trailing average commodity prices, estimated process recoveries, plus estimated smelter and refining charges. Au, Ag, Cu, Pb, and Zn prices used were US\$1,300/oz, US\$17/oz, US\$3.00/lb, US\$1.05/lb and US\$1.35/lb respectively. The Au and Ag grade blocks were interpolated with ID³, while Zn, Cu and Pb were interpolated with ID².

In P&E's opinion, the drilling, assaying and exploration work on the Silver Queen Project supports this Mineral Resource Estimate and are sufficient to indicate a reasonable potential for economic extraction and thus qualify it as a Mineral Resource under the CIM definition standards. The Mineral Resource Estimate was classified as Indicated and Inferred based on the geological interpretation, semi-variogram performance and drill hole spacing.

The Mineral Resource Estimate presented in the current Technical Report has been prepared following the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1 and in conformity with generally accepted "CIM Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral Resources have been classified in accordance with the "CIM Standards on Mineral Resources and Reserves: Definition and Guidelines" as adopted by CIM Council on May 10, 2014. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the Mineral Resource will be converted into a Mineral Reserve. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

26.0 RECOMMENDATIONS

P&E considers that the Silver Queen Property hosts significant high-grade mineralization that may potentially be amenable to underground economic extraction and warrants further exploration. P&E recommends that the next exploration phase focus on core drilling to potentially increase the Mineral Resources on the Property. The recommended drilling will focus on the southeast part of the No. 3 Vein and the NG-3 Vein.

The program should include updated metallurgical studies and continued environmental baseline studies.

The results of the recommended program will be utilized in a future Preliminary Economic Assessment (“PEA”) focussing on the No. 3 Vein. The total program budget is shown in Table 26.1.

TABLE 26.1 RECOMMENDED PROGRAM AND BUDGET (\$)			
Program	Units (m)	Unit Cost (\$/M)	Budget (\$)
Drilling Program			
Extend N.3 Vein South – 9 holes	2,000	\$200	\$400,000
NG-3 Vein – 7 holes	4,000	\$200	\$800,000
Additional targets (e.g. Chisholm Vein – 4 holes; George Lake Vein – 3 holes)	2,800	\$200	\$560,000
Subtotal Drilling Program	8,800		\$1,760,000
Metallurgical Studies			\$80,000
Environmental Baseline Studies			\$80,000
Total			\$1,920,000

27.0 REFERENCES

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28.0 CERTIFICATES

CERTIFICATE OF QUALIFIED PERSON

DAVID BURGA, P.GEO.

I, David Burga, P. Geo., residing at 3884 Freeman Terrace, Mississauga, Ontario, do hereby certify that:

1. I am an independent geological consultant contracted by P & E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Initial Mineral Resource and Technical Report on the Number 3 Vein, Silver Queen Property, Omenica Mining Division, British Columbia, Canada”, (The “Technical Report”) with an effective date of July 15, 2019.
3. I am a graduate of the University of Toronto with a Bachelor of Science degree in Geological Sciences (1997). I have worked as a geologist for over 20 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by the Association of Professional Geoscientists of Ontario (License No 1836).

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

My relevant experience for the purpose of the Technical Report is:

- | | |
|--|--------------|
| • Exploration Geologist, Cameco Gold | 1997-1998 |
| • Field Geophysicist, Quantec Geoscience | 1998-1999 |
| • Geological Consultant, Andeburg Consulting Ltd. | 1999-2003 |
| • Geologist, Aeon Egmond Ltd. | 2003-2005 |
| • Project Manager, Jacques Whitford | 2005-2008 |
| • Exploration Manager – Chile, Red Metal Resources | 2008-2009 |
| • Consulting Geologist | 2009-Present |

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Sections 9 and 10 and co-authoring Sections 1, 25, 26 and 27 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
7. I have had no prior involvement with the Property that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: July 15, 2019

Signed Date: August 29, 2019

{SIGNED AND SEALED}

[David Burga]

David Burga, P.Geo.

CERTIFICATE OF QUALIFIED PERSON

JARITA BARRY, P.GEO.

I, Jarita Barry, P.Geo., residing at 4 Creek View Close, Mount Clear, Victoria, Australia, 3350, do hereby certify that:

1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Initial Mineral Resource and Technical Report on the Number 3 Vein, Silver Queen Property, Omenica Mining Division, British Columbia, Canada”, (The “Technical Report”) with an effective date of July 15, 2019.
3. I am a graduate of RMIT University of Melbourne, Victoria, Australia, with a B.Sc. in Applied Geology. I have worked as a geologist for a total of 14 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by Engineers and Geoscientists British Columbia (License No. 40875), Professional Engineers and Geoscientists Newfoundland & Labrador (License No. 08399) and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (License No. L3874). I am also a member of the Australasian Institute of Mining and Metallurgy of Australia (Member No. 305397);

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

My relevant experience for the purpose of the Technical Report is:

- Geologist, Foran Mining Corp. 2004
- Geologist, Aurelian Resources Inc. 2004
- Geologist, Linear Gold Corp. 2005-2006
- Geologist, Búscore Consulting 2006-2007
- Consulting Geologist (AusIMM) 2008-2014
- Consulting Geologist, P.Geo. (APEGBC/AusIMM) 2014-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible co-authoring Sections 1, 11, 12, 25, 26 and 27 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.
7. I have had no prior involvement with the Project that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: July 15, 2019

Signed Date: August 29, 2019

{SIGNED AND SEALED}

[Jarita Barry]

Jarita Barry, P.Geo.

CERTIFICATE OF QUALIFIED PERSON

D. GRANT FEASBY, P. ENG.

I, D. Grant Feasby, P. Eng., residing at 12,209 Hwy 38, Tichborne, Ontario, K0H 2V0, do hereby certify that:

1. I am currently the Owner and President of:
FEAS - Feasby Environmental Advantage Services
38 Gwynne Ave, Ottawa, K1Y1W9
2. This certificate applies to the Technical Report titled “Initial Mineral Resource and Technical Report on the Number 3 Vein, Silver Queen Property, Omenica Mining Division, British Columbia, Canada”, (The “Technical Report”) with an effective date of July 15, 2019.
3. I graduated from Queens University in Kingston Ontario, in 1964 with a Bachelor of Applied Science in Metallurgical Engineering, and a Master of Applied Science in Metallurgical Engineering in 1966. I am a Professional Engineer registered with Professional Engineers Ontario. I have worked as a metallurgical engineer for over 50 years since my graduation from university.

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

My relevant experience for the purpose of the Technical Report has been acquired by the following activities:

- Metallurgist, Base Metal Processing Plant.
 - Research Engineer and Lab Manager, Industrial Minerals Laboratories in USA and Canada.
 - Research Engineer, Metallurgist and Plant Manager in the Canadian Uranium Industry.
 - Manager of Canadian National Programs on Uranium and Acid Generating Mine Tailings.
 - Director, Environment, Canadian Mineral Research Laboratory.
 - Senior Technical Manager, for large gold and bauxite mining operations in South America.
 - Expert Independent Consultant associated with several companies, including P&E Mining Consultants, on mineral processing, environmental management, and mineral-based radiation assessment.
4. I have not visited the Property that is the subject of this Technical Report.
 5. I am responsible for authoring Sections 13 and 20 and co-authoring Sections 1, 25, 26 and 27 of this Technical Report.
 6. I am independent of the issuer applying the test in Section 1.5 of NI 43-101.
 7. I have had no prior involvement with the Project that is the subject of this Technical Report.
 8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
 9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: July 15, 2019

Signed Date: August 29, 2019

{SIGNED AND SEALED}

[D. Grant Feasby]

D. Grant Feasby, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

JAMES HUTTER, P.GEO.

I, James Hutter, P.Geo., residing at residing at 4407 Alfred Avenue, Smithers, BC, do hereby certify that::

1. I am an independent geological consultant contracted by New Nadina Explorations Ltd.
2. This certificate applies to the Technical Report titled “Initial Mineral Resource and Technical Report on the Number 3 Vein, Silver Queen Property, Omenica Mining Division, British Columbia, Canada”, (The “Technical Report”) with an effective date of July 15, 2019.
3. I am a graduate of the University of British Columbia with a Bachelor of Science degree in Geological Sciences (1976). I have worked as a geologist for over 40 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by Engineers and Geoscientists BC (License No 19247).

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

My relevant experience for the purpose of the Technical Report is:

- Geologist, Houston Metals Corporation 1987-1989
 - Exploration Manager, Blue Pearl Mining Ltd. and Thompson Creek Metals Ltd. 2005-2011
 - Mine Planner, Gavin Mines Ltd. 2012
 - Consultant on various projects in North-western BC, including Silver Queen 1990-present
4. I have visited the Property that is the subject of this Technical Report on May 29, 2019 and on many previous occasions, often for extended periods.
 5. I am responsible for co-authoring Sections 1, 11, 12, 25, 26 and 27 of this Technical Report.
 6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
 7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Technical Report for the Silver Queen Property”, with an effective date of April 18, 2011. I worked for Houston Metals Corporation from 1987 to 1989 and on various projects on the Silver Queen for New Nadina Explorations Ltd. since that time.
 8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
 9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: July 15, 2019

Signed Date: August 29, 2019

{SIGNED AND SEALED}

[James Hutter]

James Hutter, P.Geo.

CERTIFICATE OF QUALIFIED PERSON

EUGENE PURITCH, P. ENG., FEC, CET

I, Eugene J. Puritch, P. Eng., FEC, CET, residing at 44 Turtlecreek Blvd., Brampton, Ontario, L6W 3X7, do hereby certify that:

1. I am an independent mining consultant and President of P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Initial Mineral Resource and Technical Report on the Number 3 Vein, Silver Queen Property, Omenica Mining Division, British Columbia, Canada”, (The “Technical Report”) with an effective date of July 15, 2019.
3. I am a graduate of The Haileybury School of Mines, with a Technologist Diploma in Mining, as well as obtaining an additional year of undergraduate education in Mine Engineering at Queen’s University. In addition I have also met the Professional Engineers of Ontario Academic Requirement Committee’s Examination requirement for Bachelor’s Degree in Engineering Equivalency. I am a mining consultant currently licensed by the: Professional Engineers and Geoscientists New Brunswick (License No. 4778); Professional Engineers, Geoscientists Newfoundland and Labrador (License No. 5998); Association of Professional Engineers and Geoscientists Saskatchewan (License No. 16216); Ontario Association of Certified Engineering Technicians and Technologists (License No. 45252); Professional Engineers of Ontario (License No. 100014010); Association of Professional Engineers and Geoscientists of British Columbia (License No. 42912); and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (No. L3877). I am also a member of the National Canadian Institute of Mining and Metallurgy.

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

I have practiced my profession continuously since 1978. My summarized career experience is as follows:

- Mining Technologist - H.B.M. & S. and Inco Ltd., 1978-1980
- Open Pit Mine Engineer – Cassiar Asbestos/Brinco Ltd., 1981-1983
- Pit Engineer/Drill & Blast Supervisor – Detour Lake Mine, 1984-1986
- Self-Employed Mining Consultant – Timmins Area, 1987-1988
- Mine Designer/Resource Estimator – Dynatec/CMD/Bharti, 1989-1995
- Self-Employed Mining Consultant/Resource-Reserve Estimator, 1995-2004
- President – P&E Mining Consultants Inc, 2004-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for co-authoring Sections 1, 14, 25, 26 and 27 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
7. I have had no prior involvement with the Project that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: July 15, 2019

Signing Date: August 29, 2019

{SIGNED AND SEALED}

[Eugene Puritch]

Eugene Puritch, P.Eng., FEC, CET

CERTIFICATE OF QUALIFIED PERSON

RICHARD SUTCLIFFE, PH.D., P. GEO.

I, Richard Sutcliffe, Ph.D., P. Geo., residing at 130 Foxridge Drive, Ancaster, Ontario, do hereby certify that:

1. I am an independent geological consultant and Senior Geological Advisor, P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Initial Mineral Resource and Technical Report on the Number 3 Vein, Silver Queen Property, Omenica Mining Division, British Columbia, Canada”, (The “Technical Report”) with an effective date of July 15, 2019.
3. I am a graduate of the University of Toronto with a Bachelor of Science degree in Geology (1977). In addition, I have a Master of Science in Geology (1980) from University of Toronto and a Ph.D. in Geology (1986) from the University of Western Ontario. I have worked as a geologist for over 35 years since obtaining my M.Sc. degree. I am a geological consultant currently licensed by the Association of Professional Geoscientists of Ontario (License No 852).

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

My relevant experience for the purpose of the Technical Report is:

- | | |
|--|--------------|
| • Precambrian Geologist, Ontario Geological Survey | 1980-1989 |
| • Senior Research Geologist, Ontario Geological Survey | 1989-1991 |
| • Associate Professor of Geology, University of Western Ontario. | 1990-1992 |
| • President and CEO, URSA Major Minerals Inc. | 1992-2012 |
| • President and CEO, Patricia Mining Corp. | 1998-2008 |
| • President and CEO, Auriga Gold Corp. | 2010-2012 |
| • Founder and President, Pavay Ark Minerals Inc. | 2012-present |
| • Consulting Geologist | 1992-Present |

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Sections 2 to 8, and 23, and co-authoring Sections 1, 25, 26 and 27 of this Technical Report.
6. I am independent of the issuer applying the test in Section 1.5 of NI 43-101.
7. I have had no prior involvement with the Project that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: July 15, 2019

Signed Date: August 29, 2019

{SIGNED AND SEALED}

[Richard Sutcliffe]

Dr. Richard H. Sutcliffe, P. Geo.

CERTIFICATE OF QUALIFIED PERSON

YUNGANG WU, P.GEO.

I, Yungang Wu, P. Geo., residing at 3246 Preserve Drive, Oakville, Ontario, L6M 0X3, do hereby certify that:

1. I am an independent consulting geologist contracted by P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Initial Mineral Resource and Technical Report on the Number 3 Vein, Silver Queen Property, Omenica Mining Division, British Columbia, Canada”, (The “Technical Report”) with an effective date of July 15, 2019.
3. I am a graduate of Jilin University, China, with a Master Degree in Mineral Deposits (1992). I am a geological consultant and a registered practising member of the Association of Professional Geoscientist of Ontario (Registration No. 1681).

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

My relevant experience for the purpose of the Technical Report is as follows:

- | | |
|---|--------------|
| • Geologist –Geology and Mineral Bureau, Liaoning Province, China | 1992-1993 |
| • Senior Geologist – Committee of Mineral Resources and Reserves of Liaoning, China | 1993-1998 |
| • VP – Institute of Mineral Resources and Land Planning, Liaoning, China | 1998-2001 |
| • Project Geologist–Exploration Division, De Beers Canada | 2003-2009 |
| • Mine Geologist – Victor Diamond Mine, De Beers Canada | 2009-2011 |
| • Resource Geologist– Coffey Mining Canada | 2011-2012 |
| • Consulting Geologist | 2012-Present |

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for co-authoring Sections 1, 14, 25, 26 and 27 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.
7. I have had no prior involvement with the Project that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: July 15, 2019

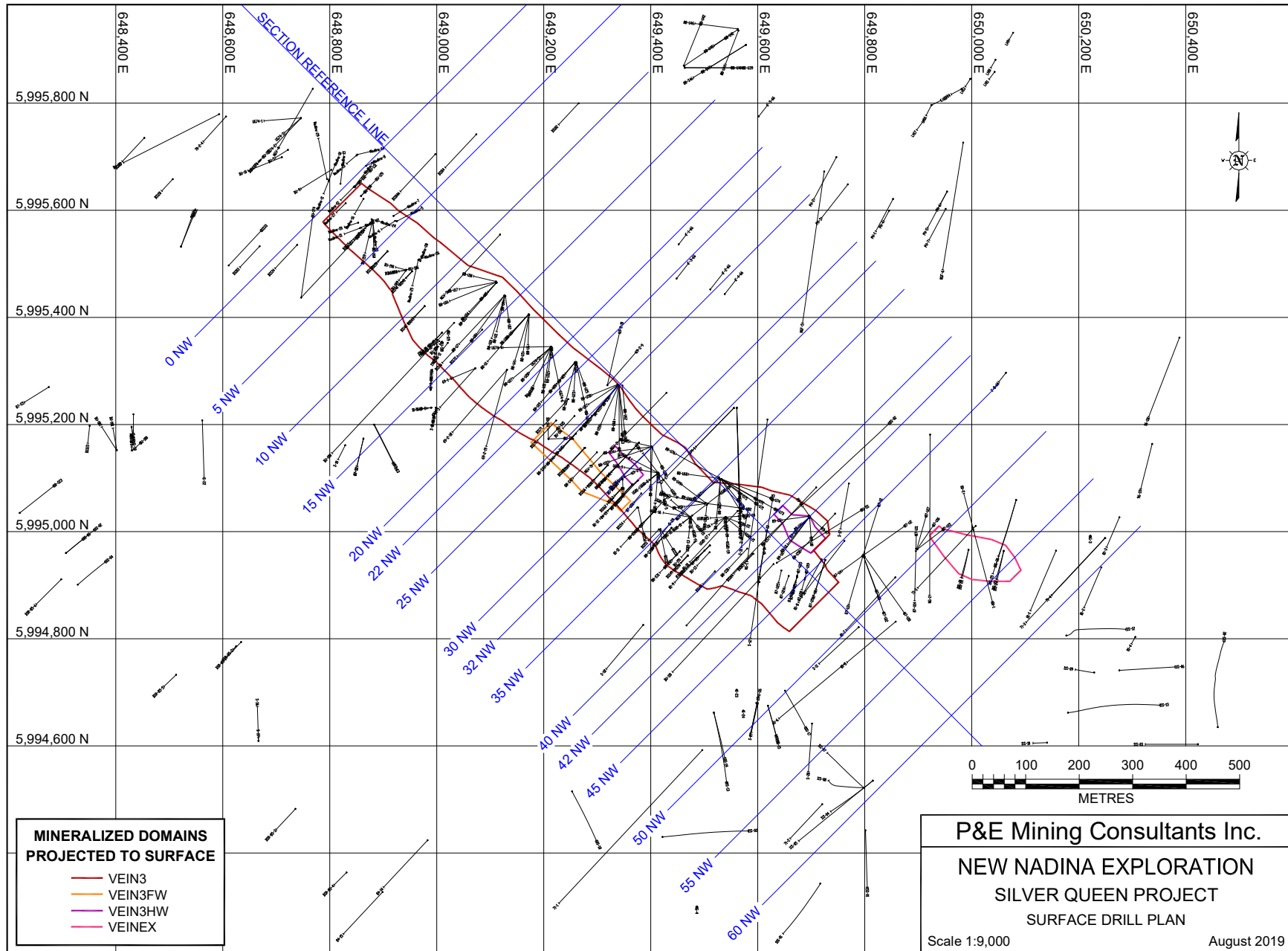
Signing Date: August 29, 2019

{SIGNED AND SEALED}

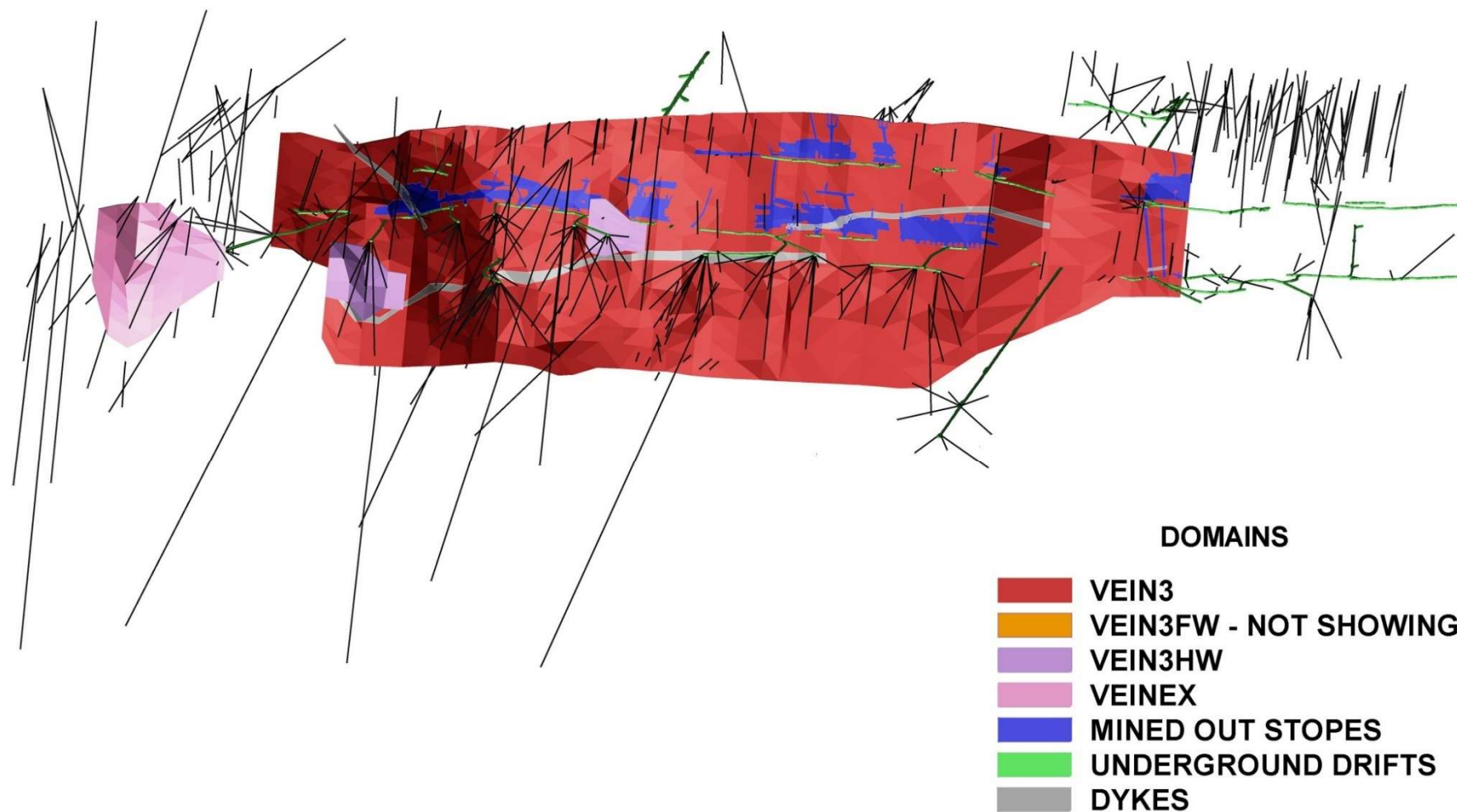
[Yungang Wu]

Yungang Wu, P.Geo.

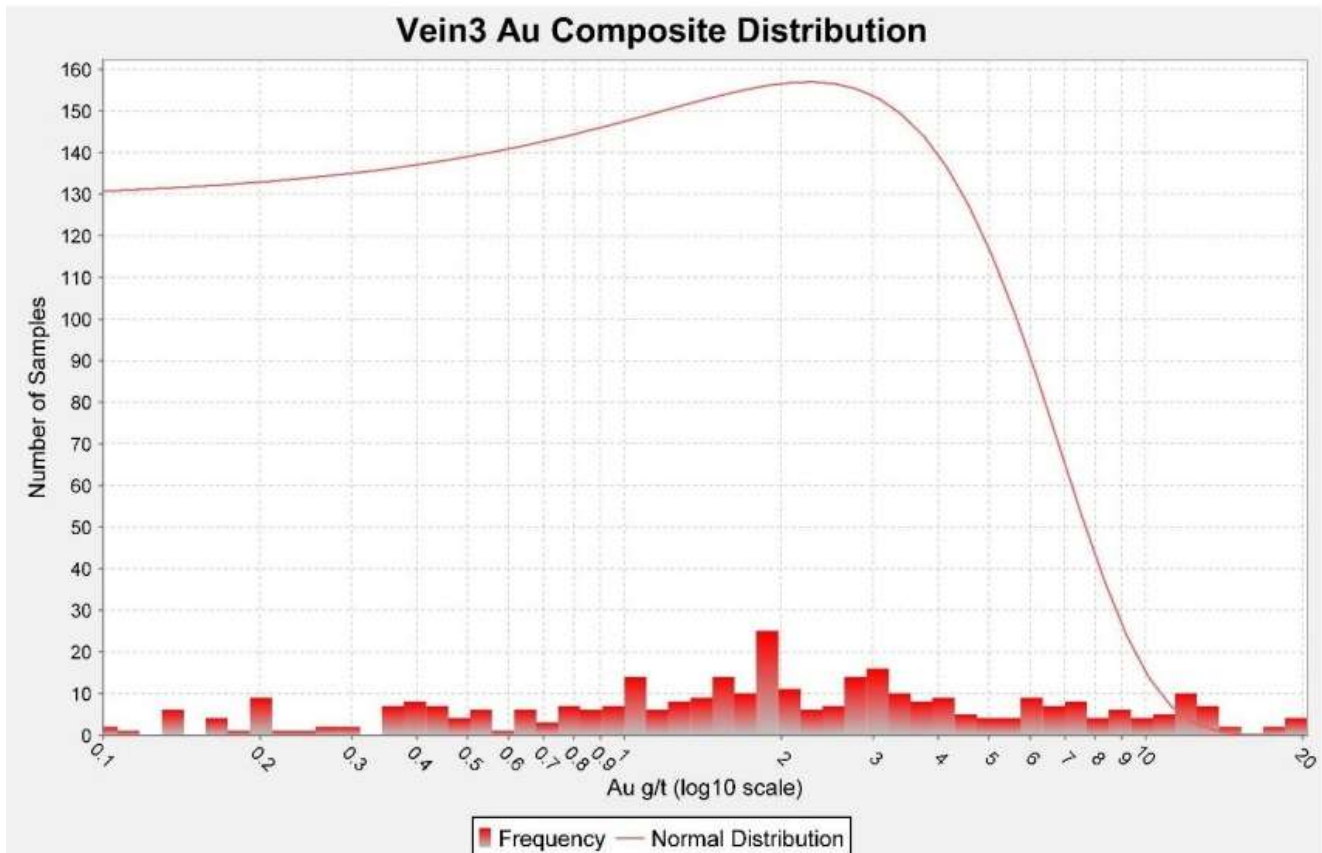
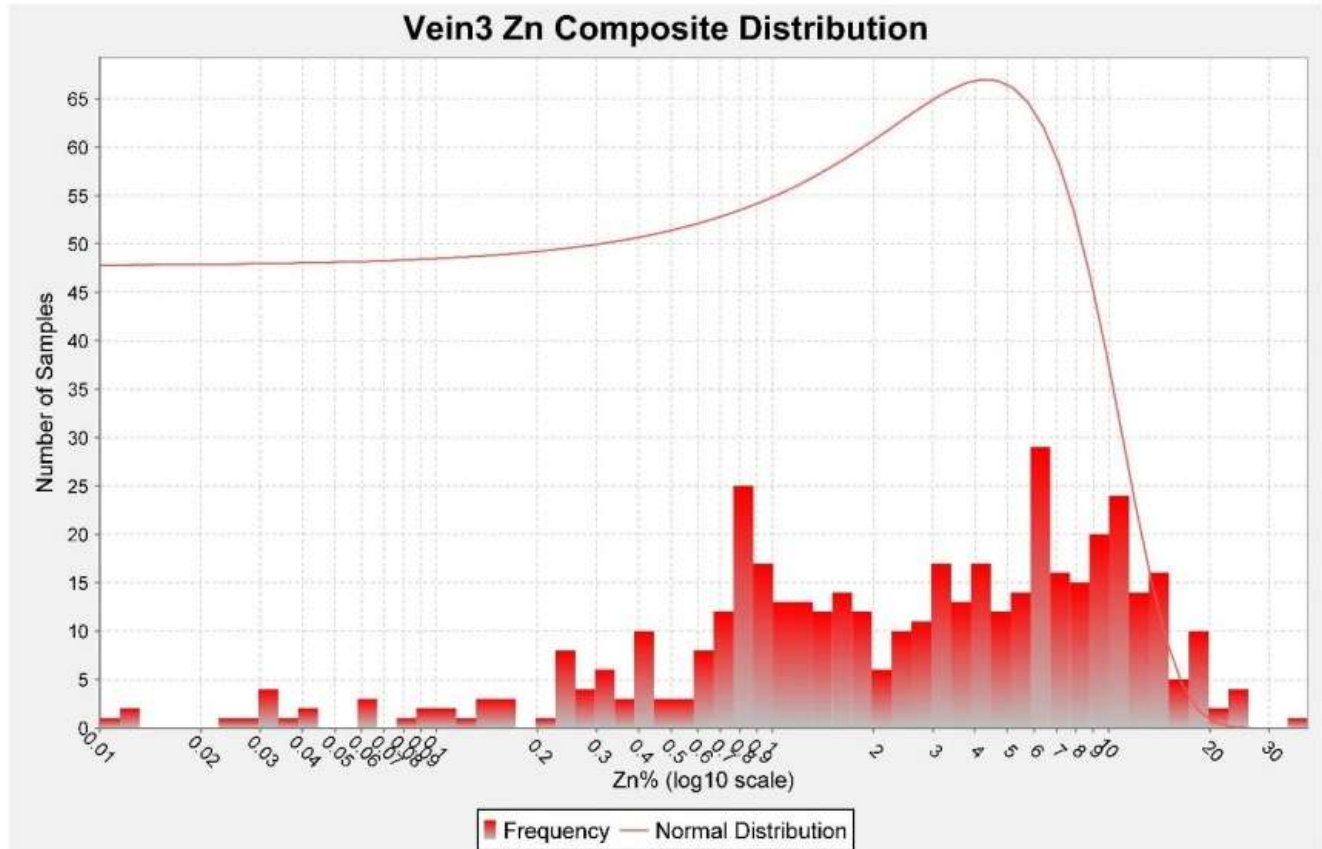
APPENDIX A SURFACE DRILL HOLE PLAN



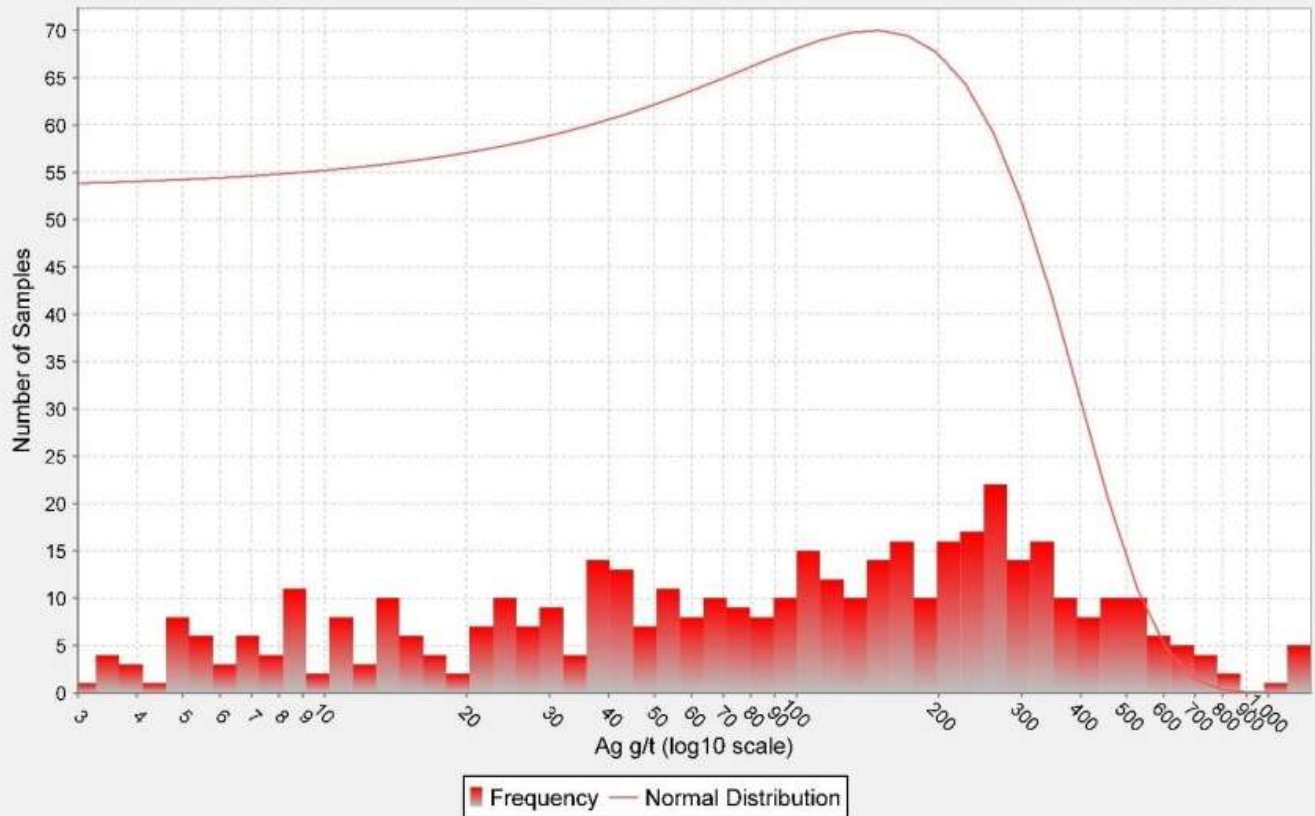
SILVER QUEEN PROJECT 3D DOMAINS



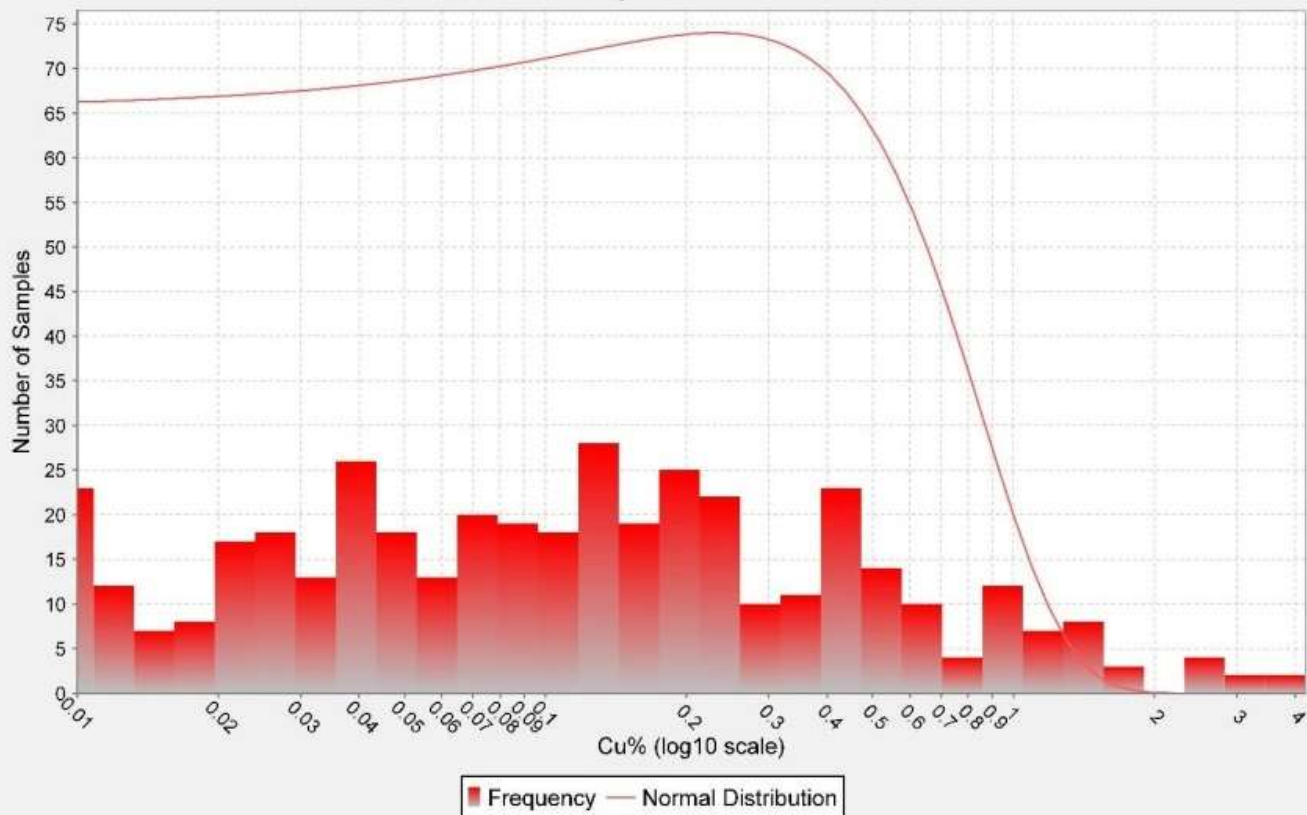
APPENDIX C LOG NORMAL HISTOGRAMS



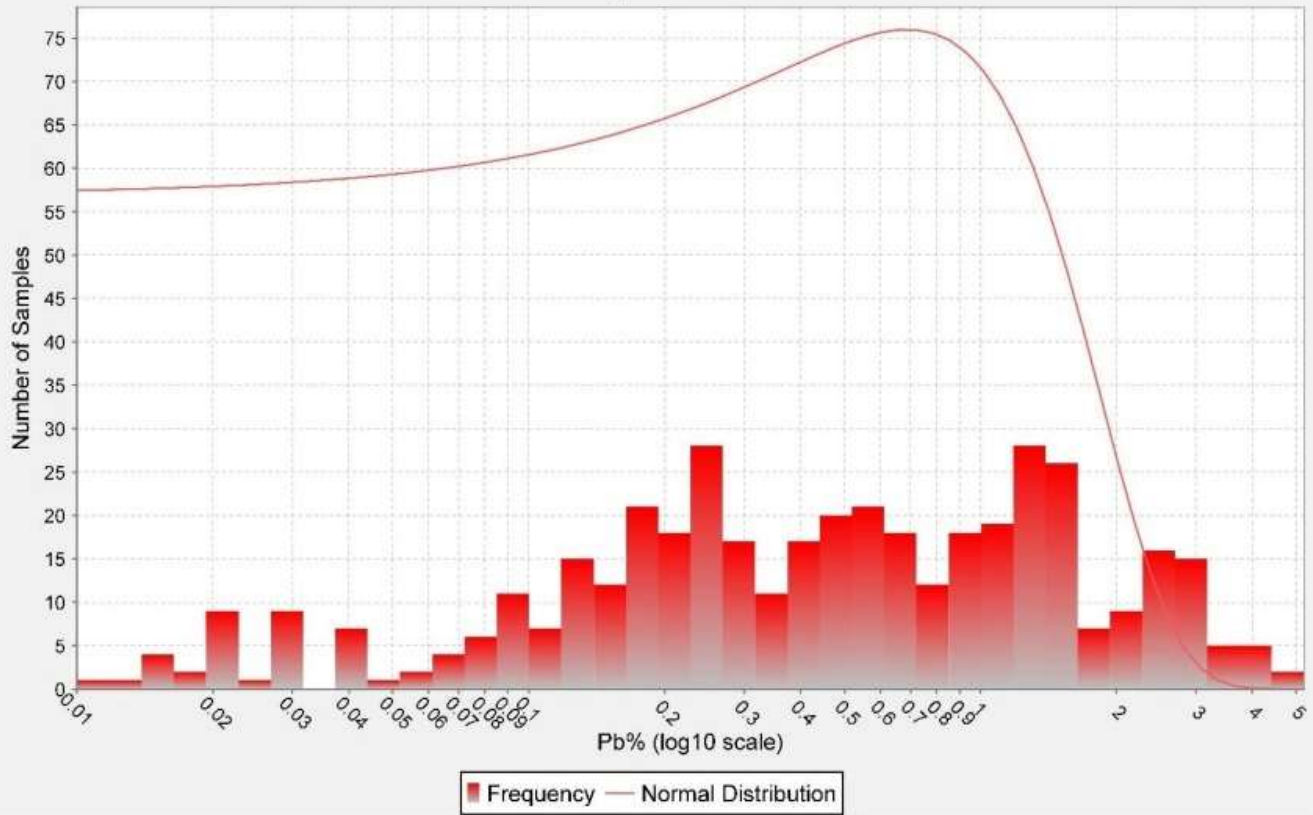
Vein3 Ag Composite Distribution



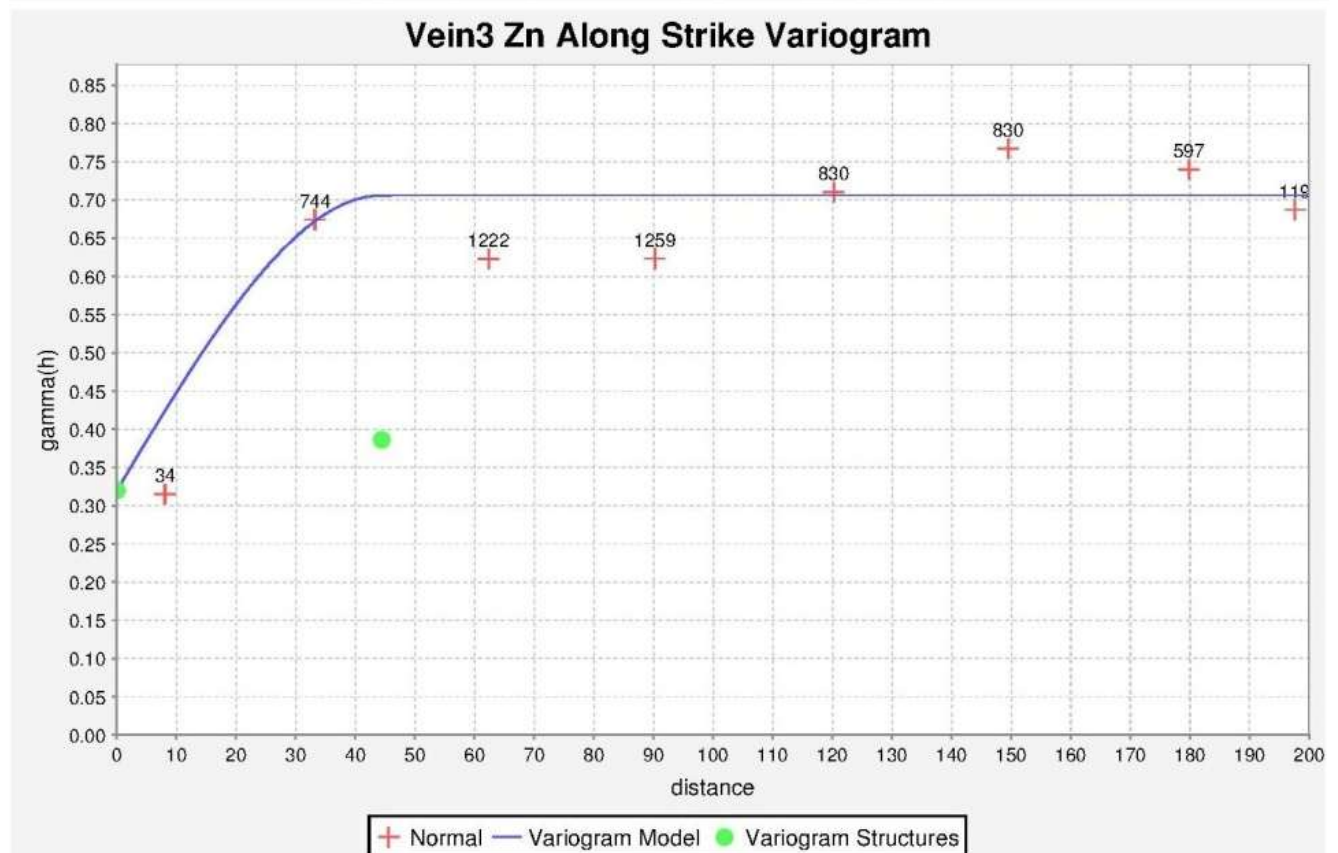
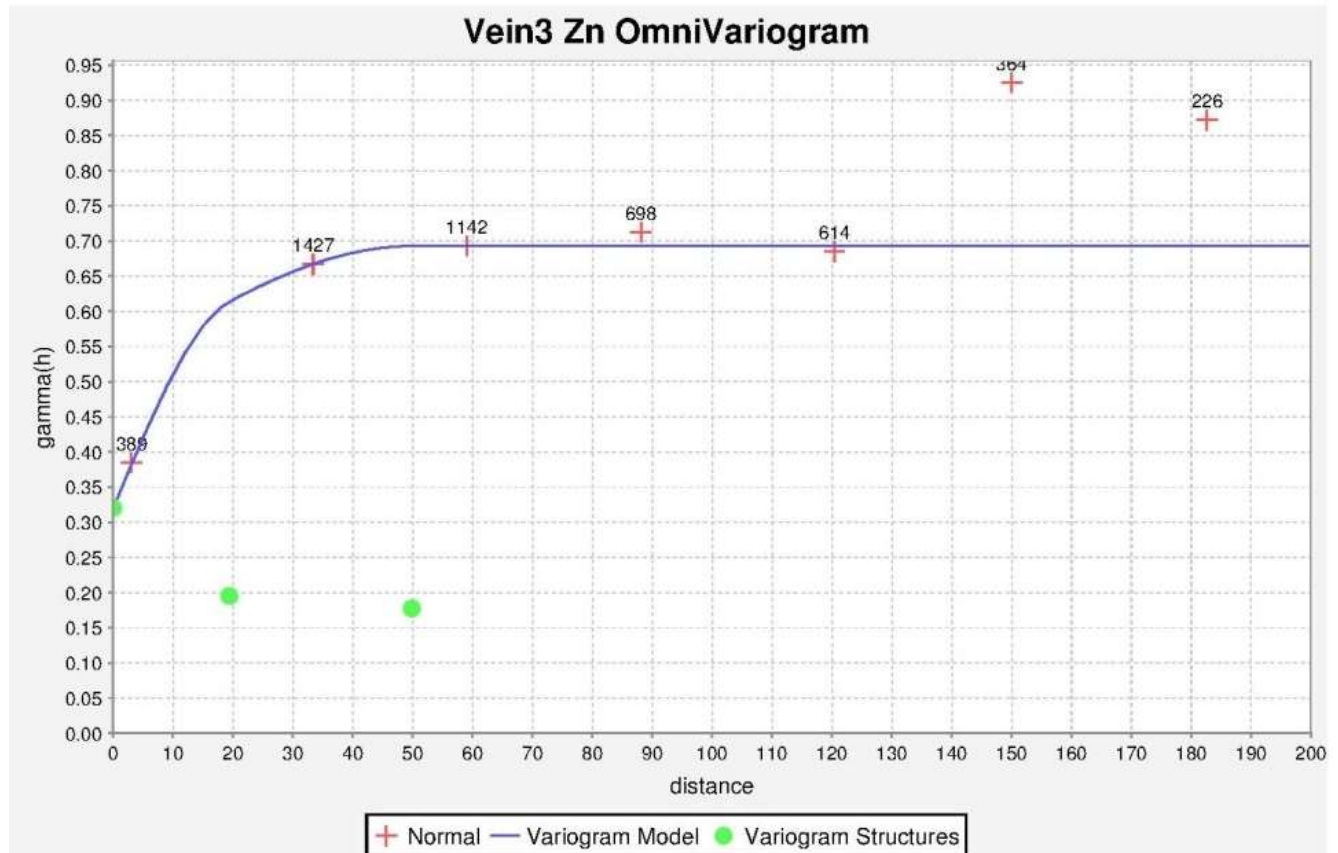
Vein3 Cu Composite Distribution



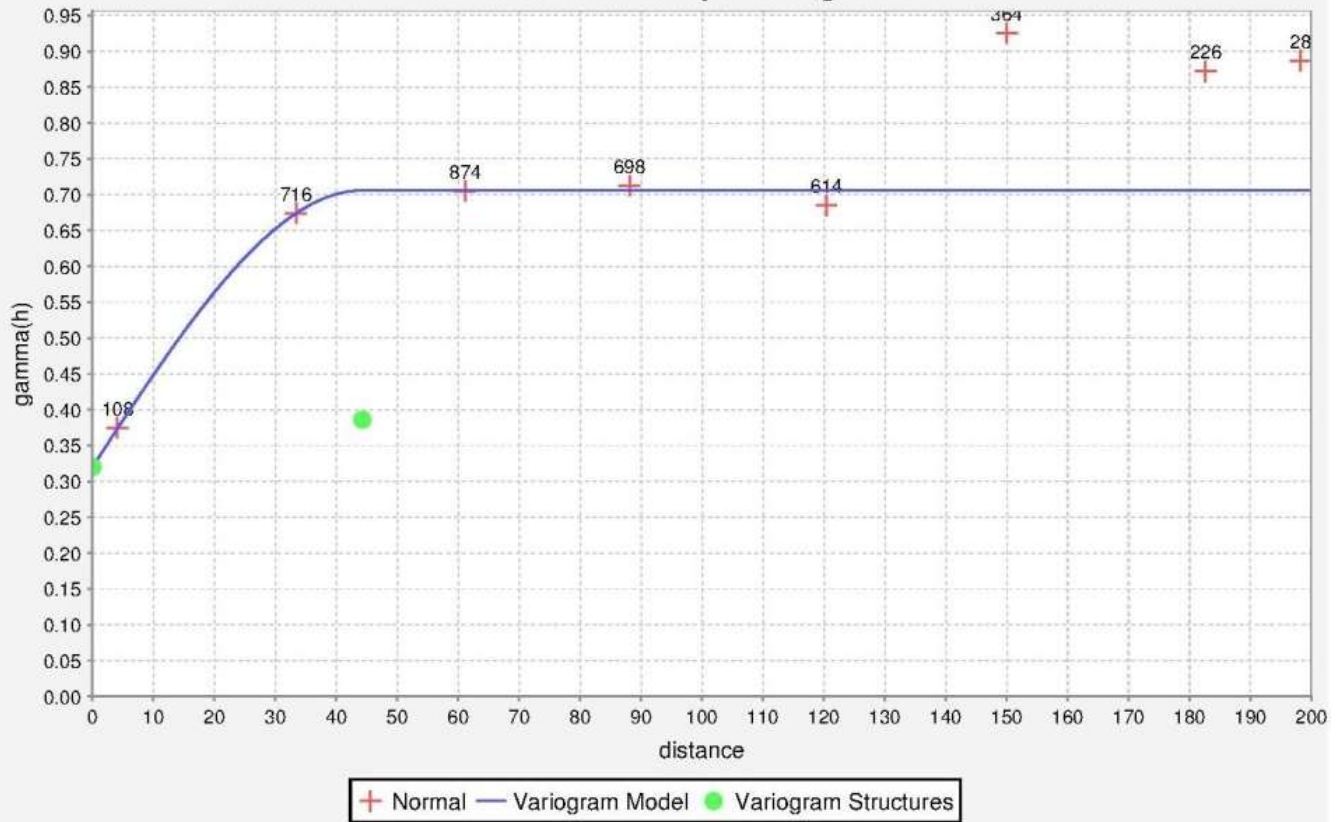
Vein3 Pb Composite Distribution



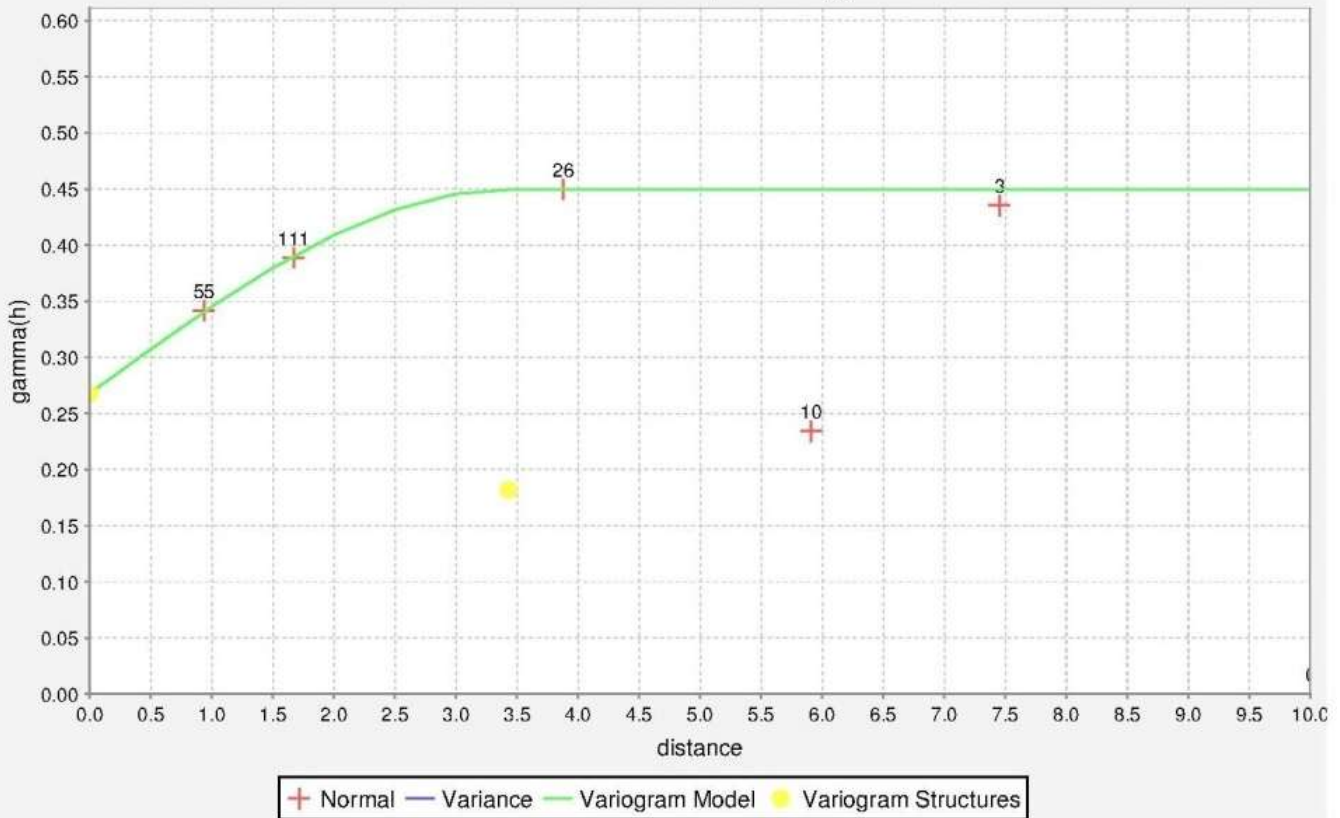
APPENDIX D VARIOGRAMS



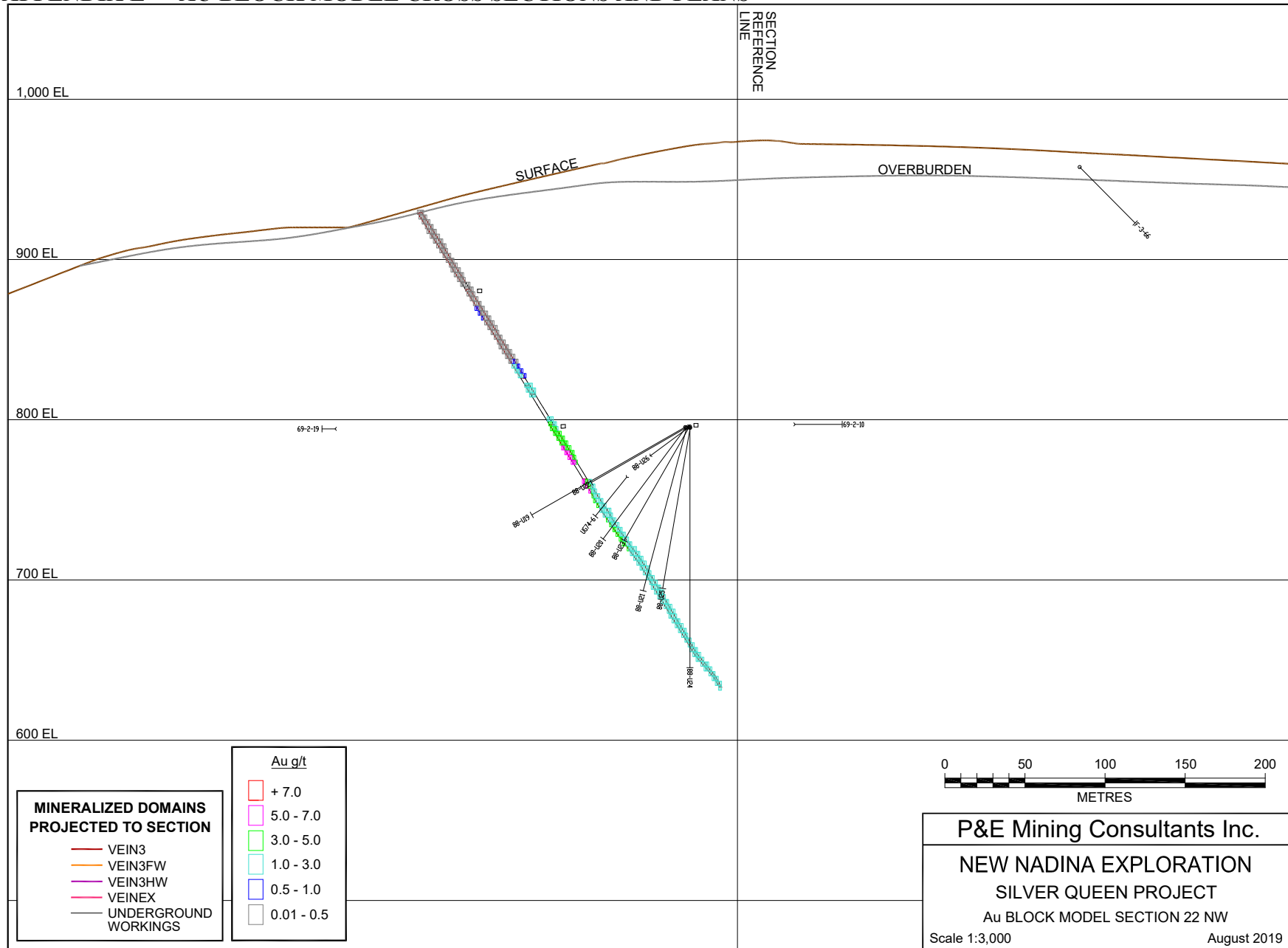
Vein3 Zn Down Dip Variogram

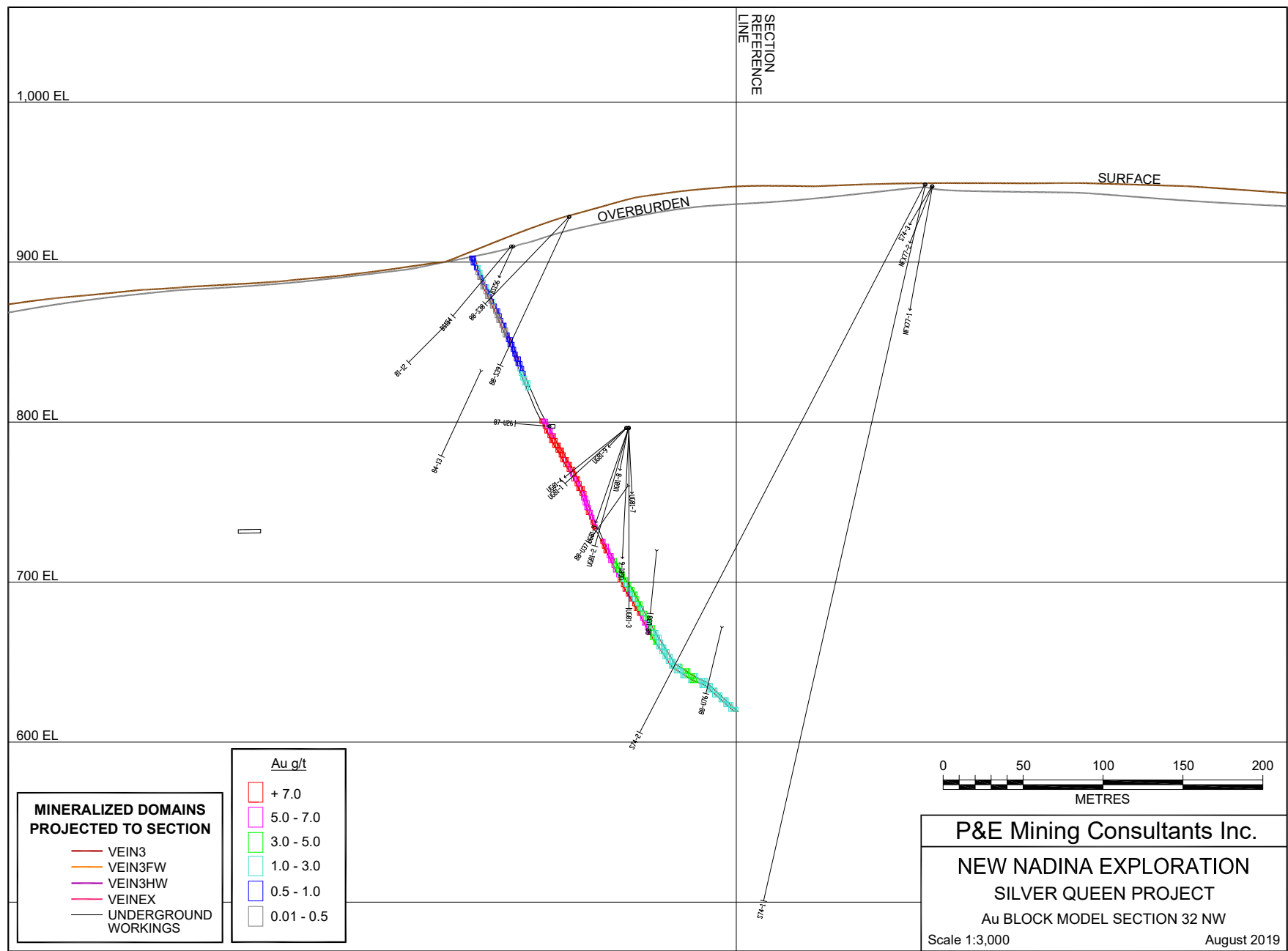


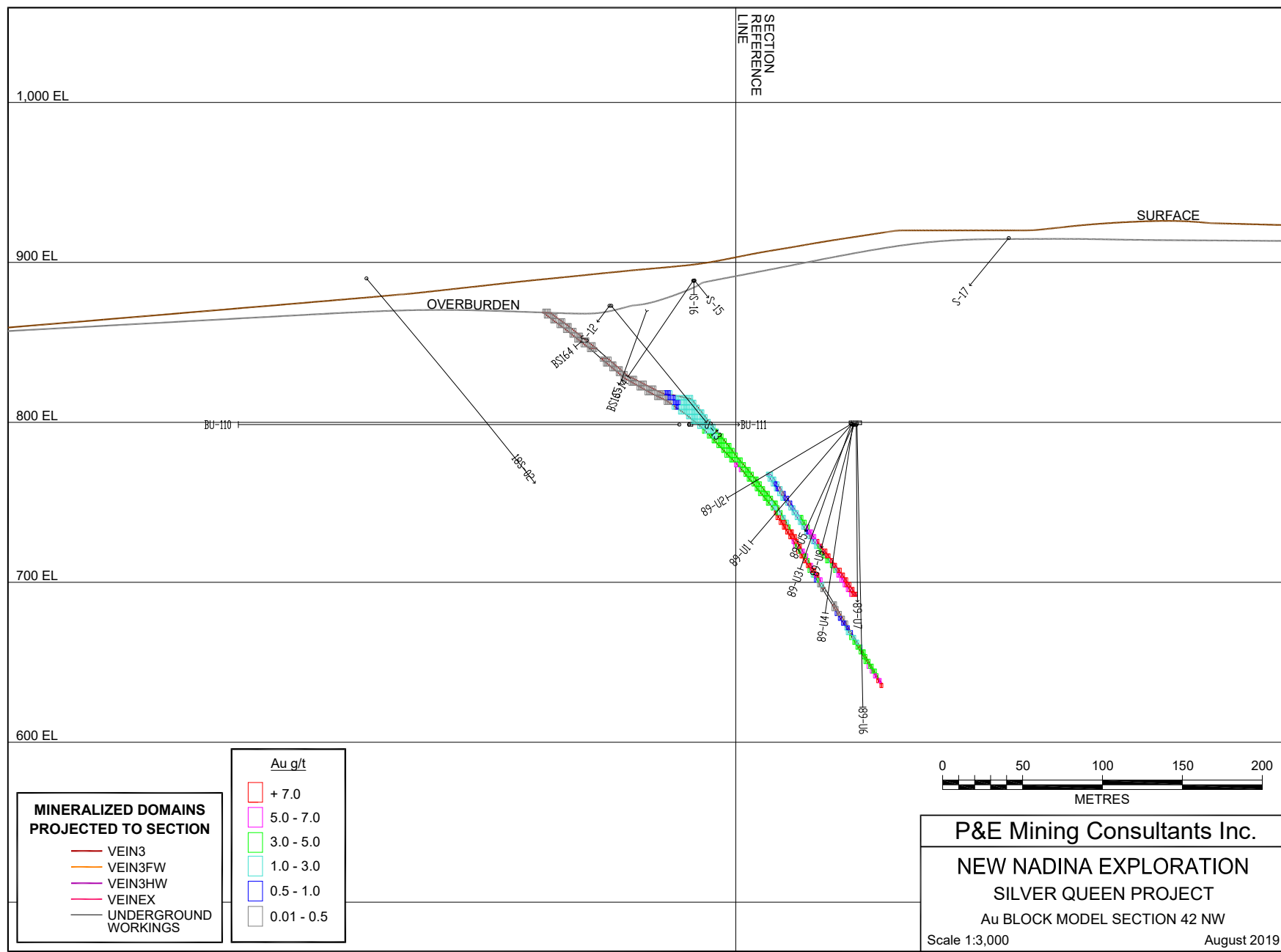
Vein3 Zn Across Dip Variogram

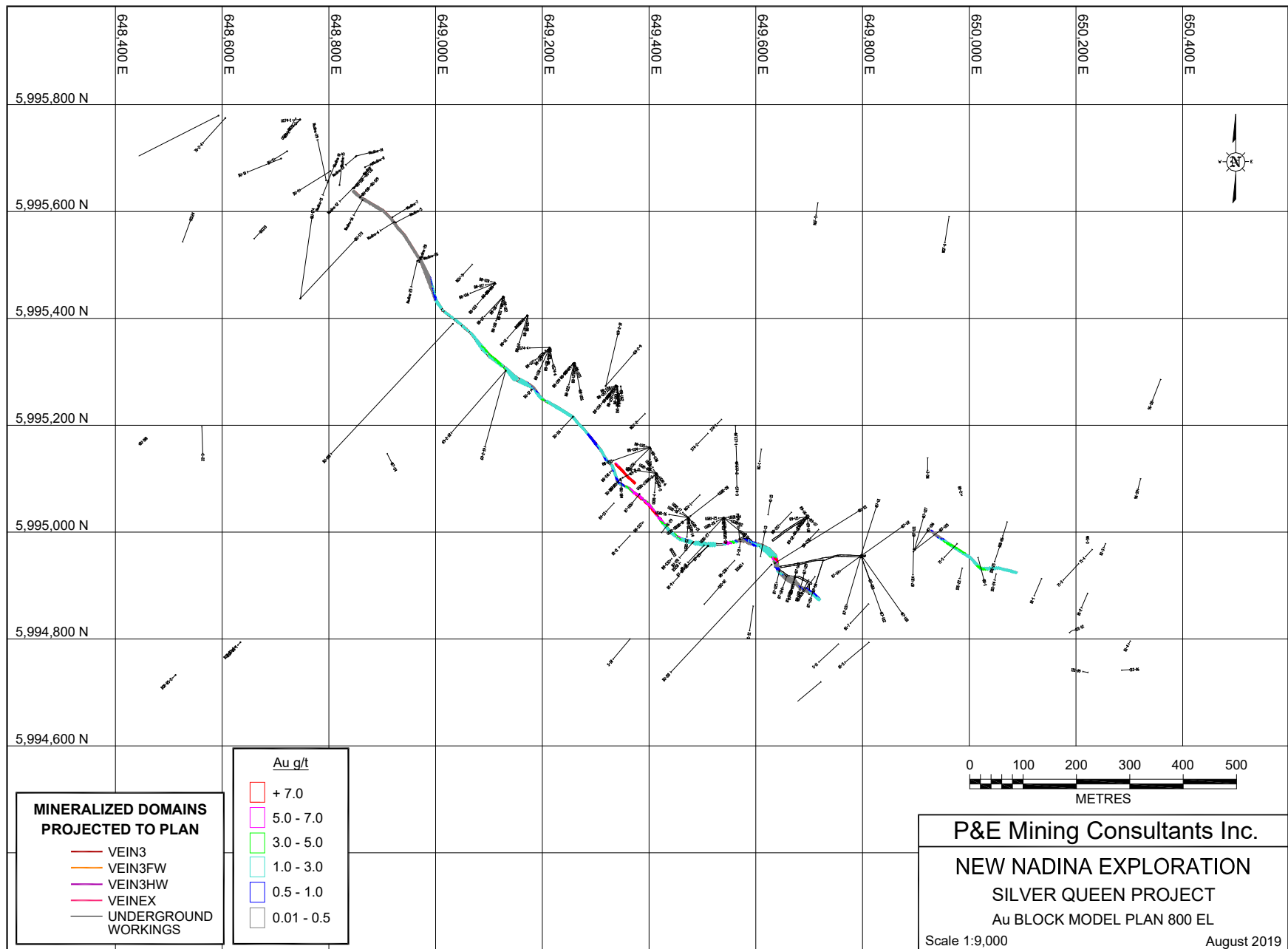


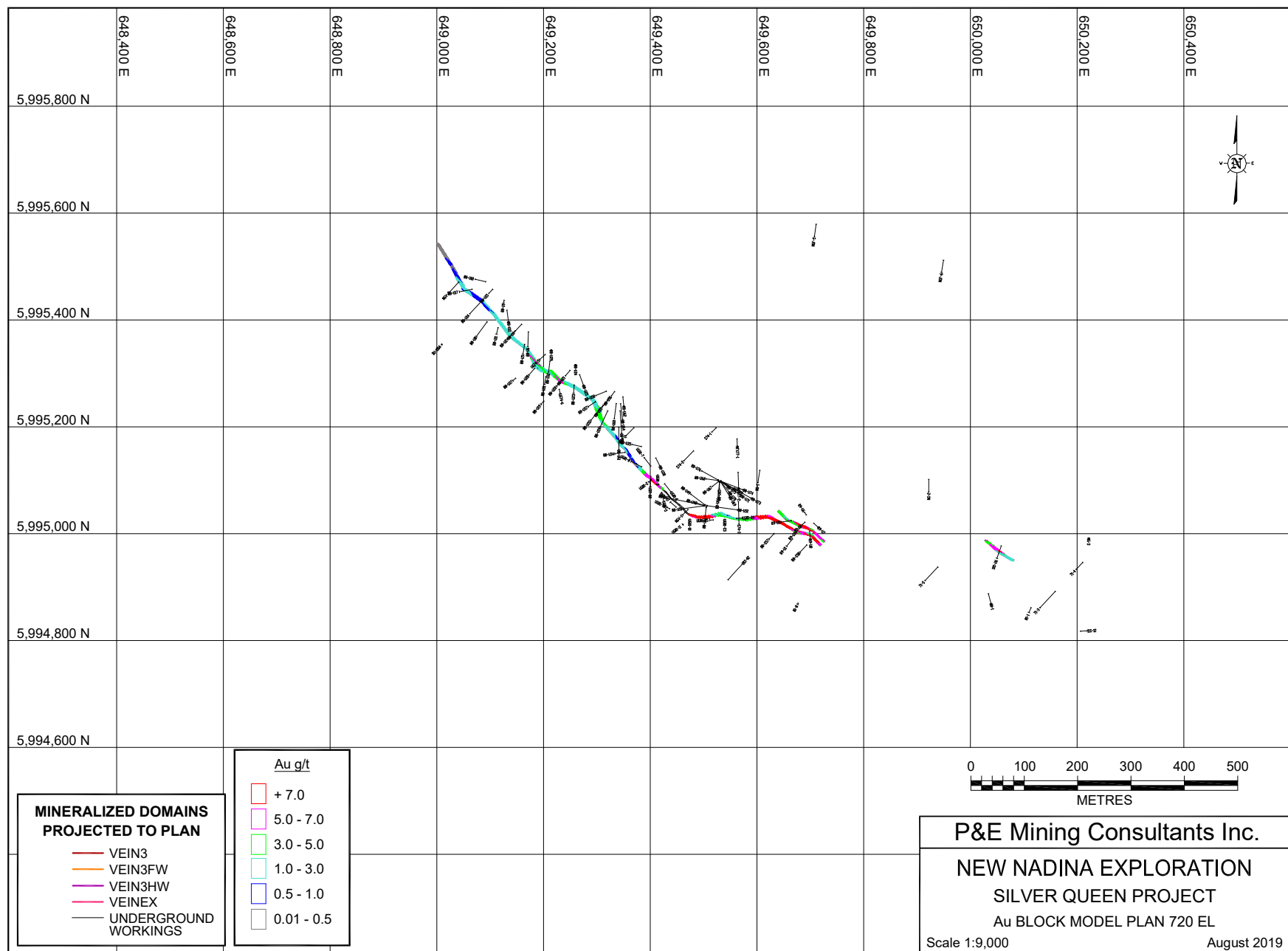
APPENDIX E AU BLOCK MODEL CROSS SECTIONS AND PLANS

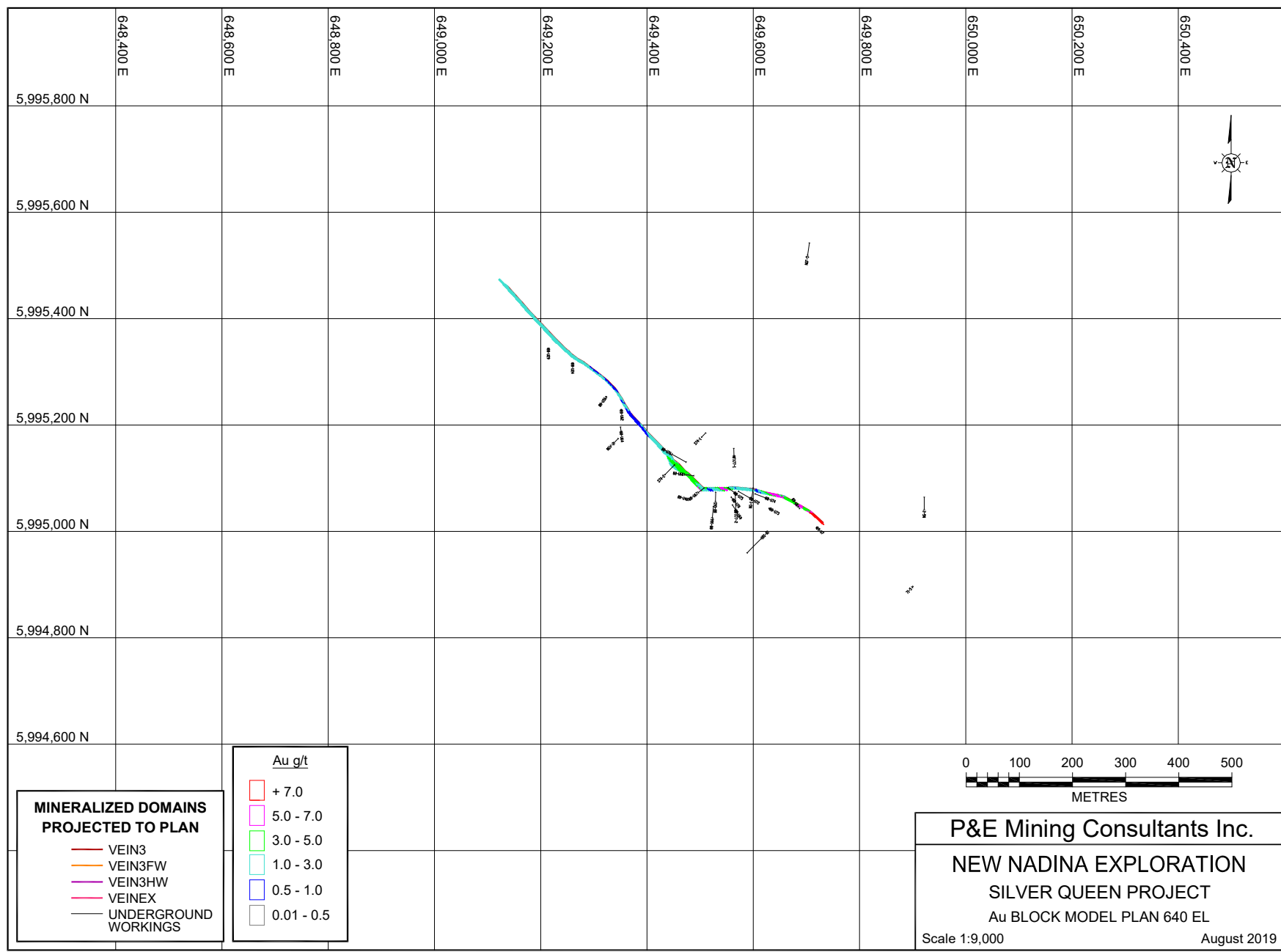




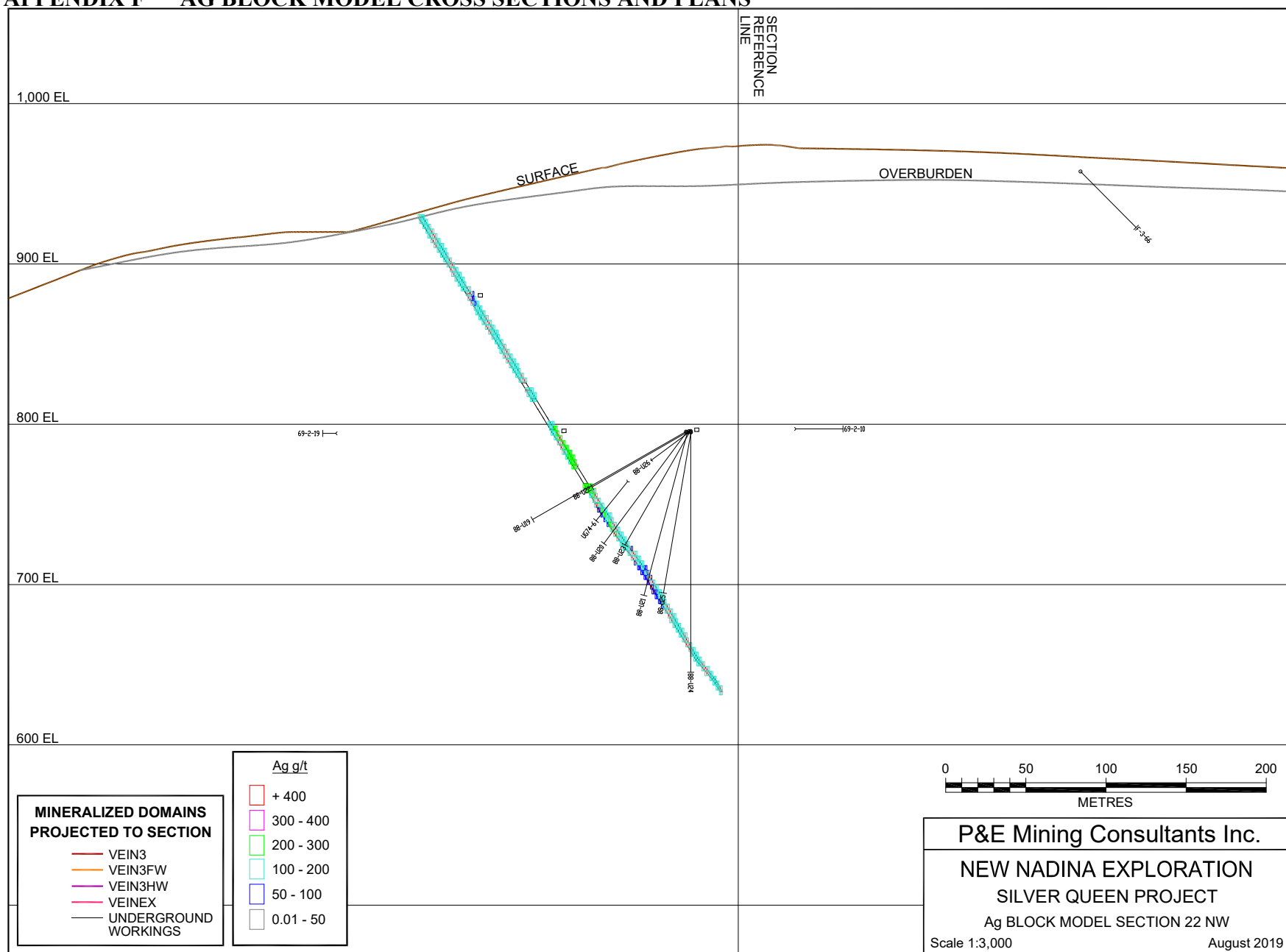


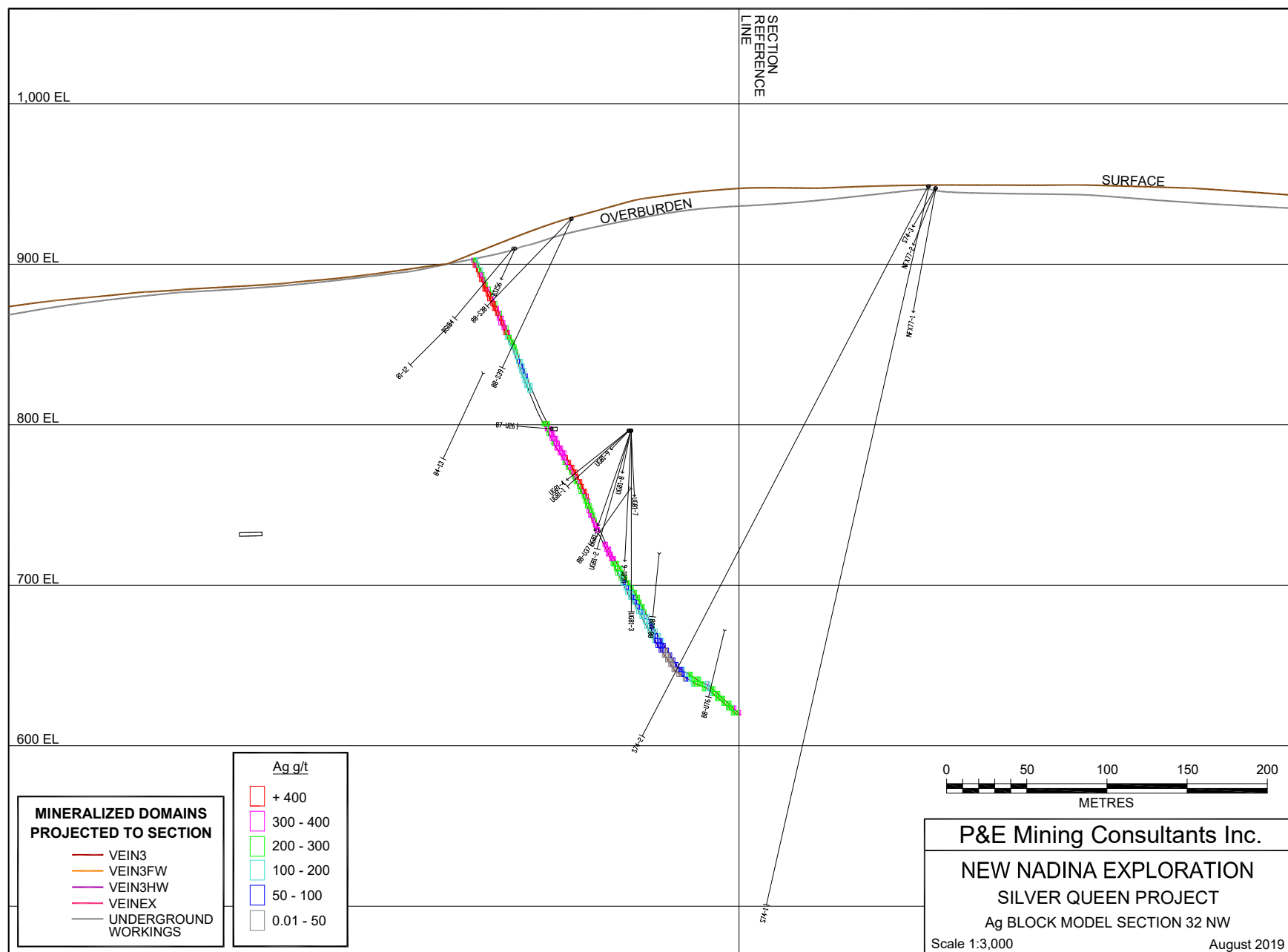


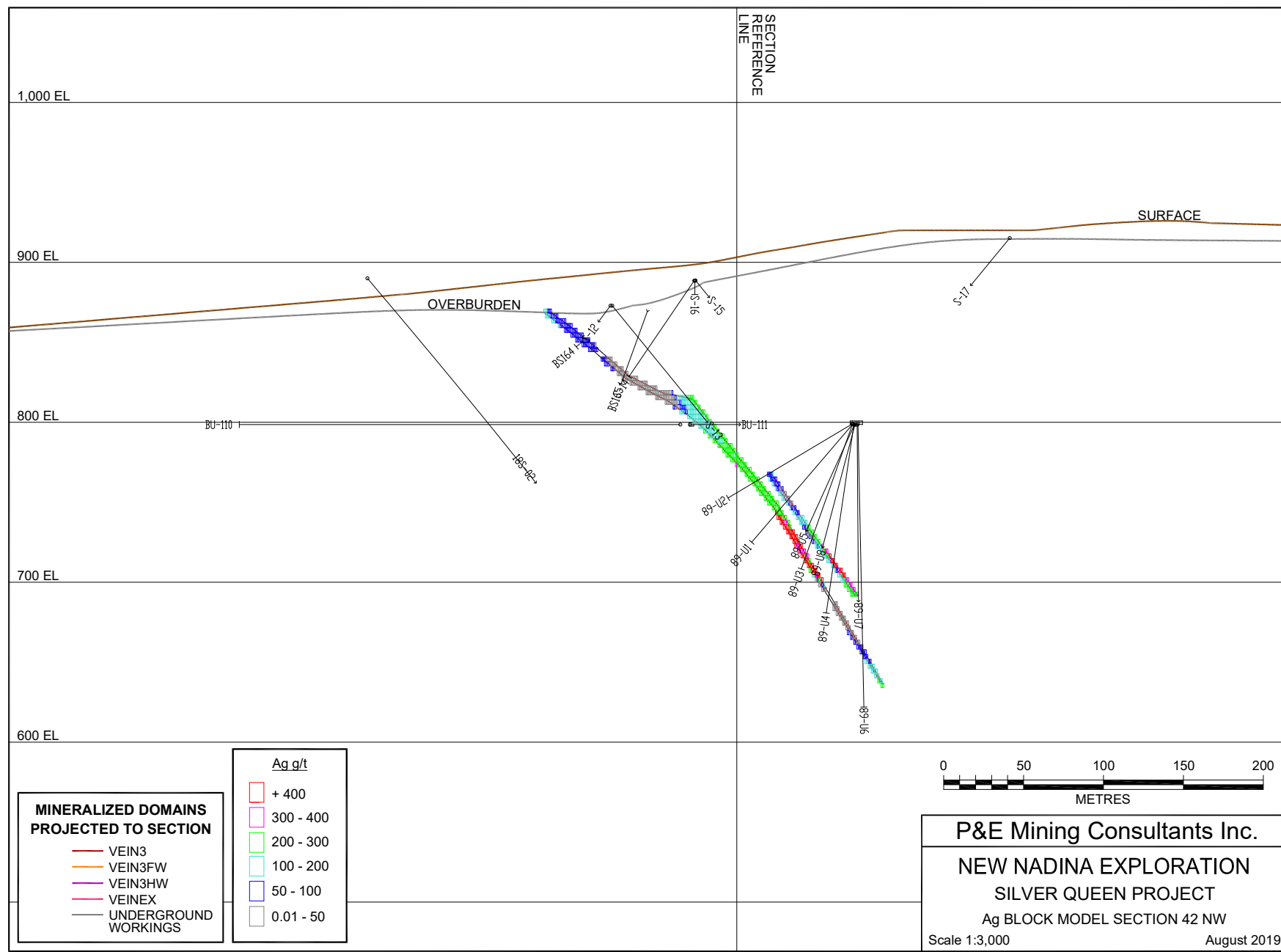


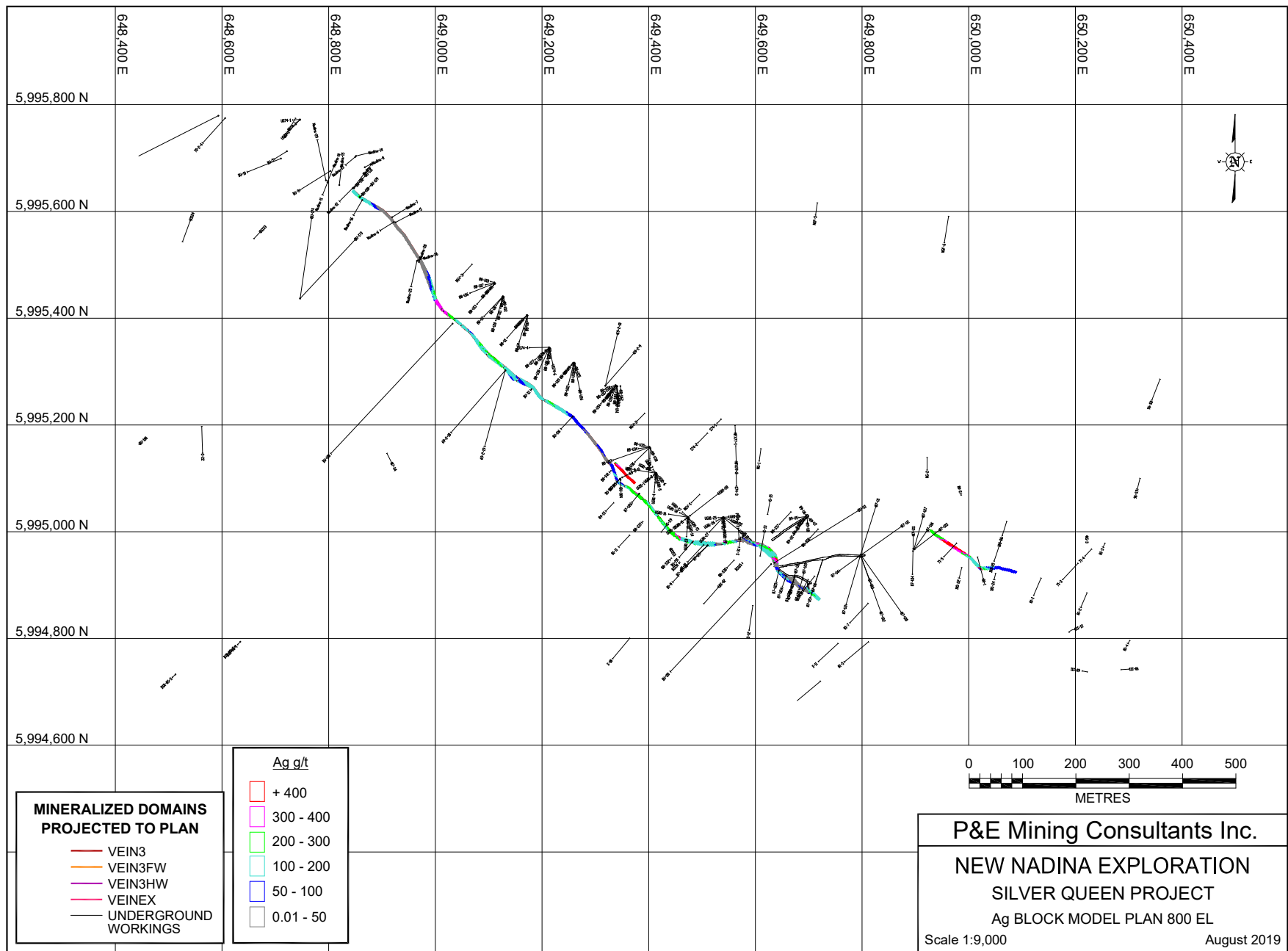


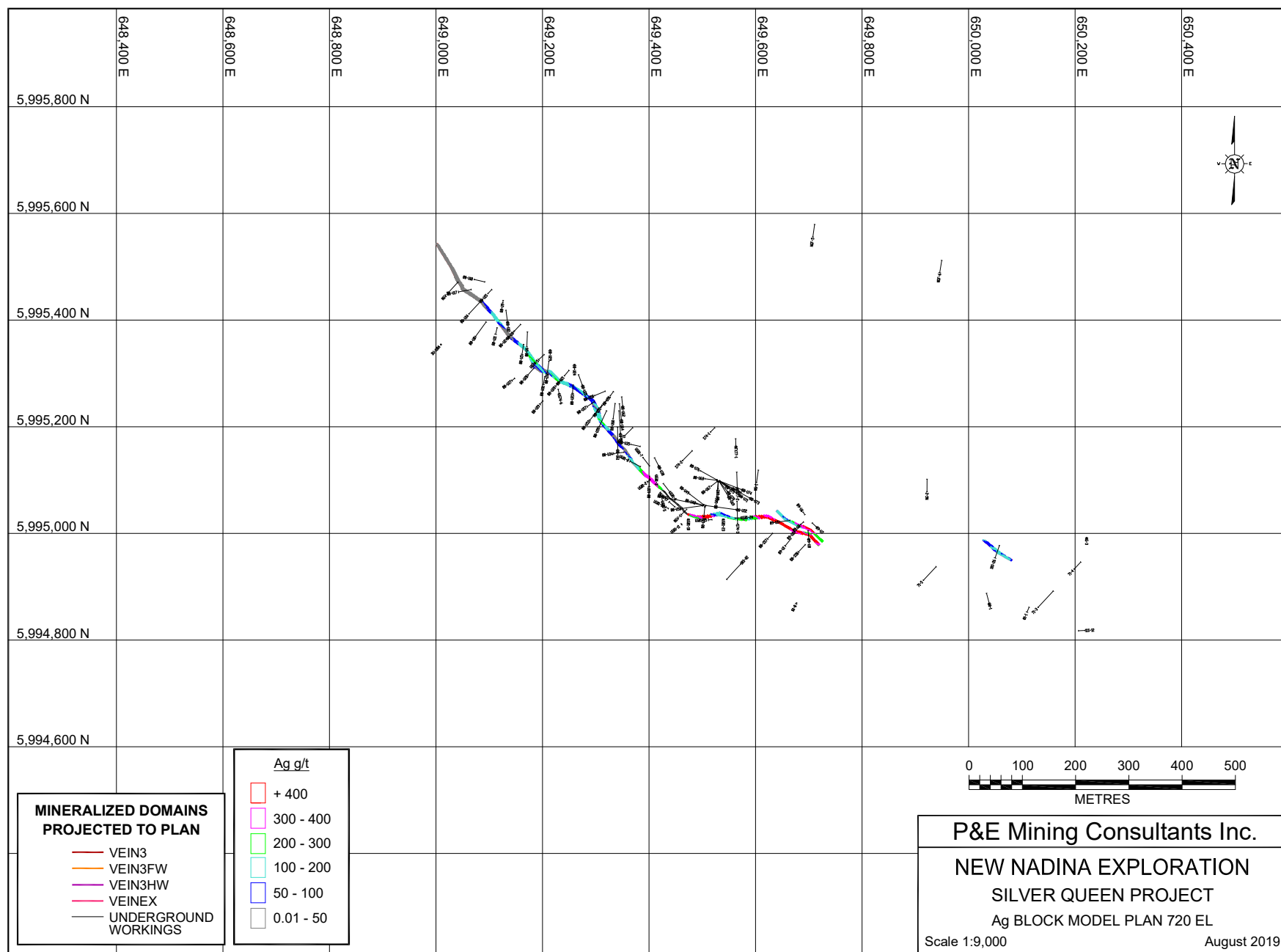
APPENDIX F AG BLOCK MODEL CROSS SECTIONS AND PLANS

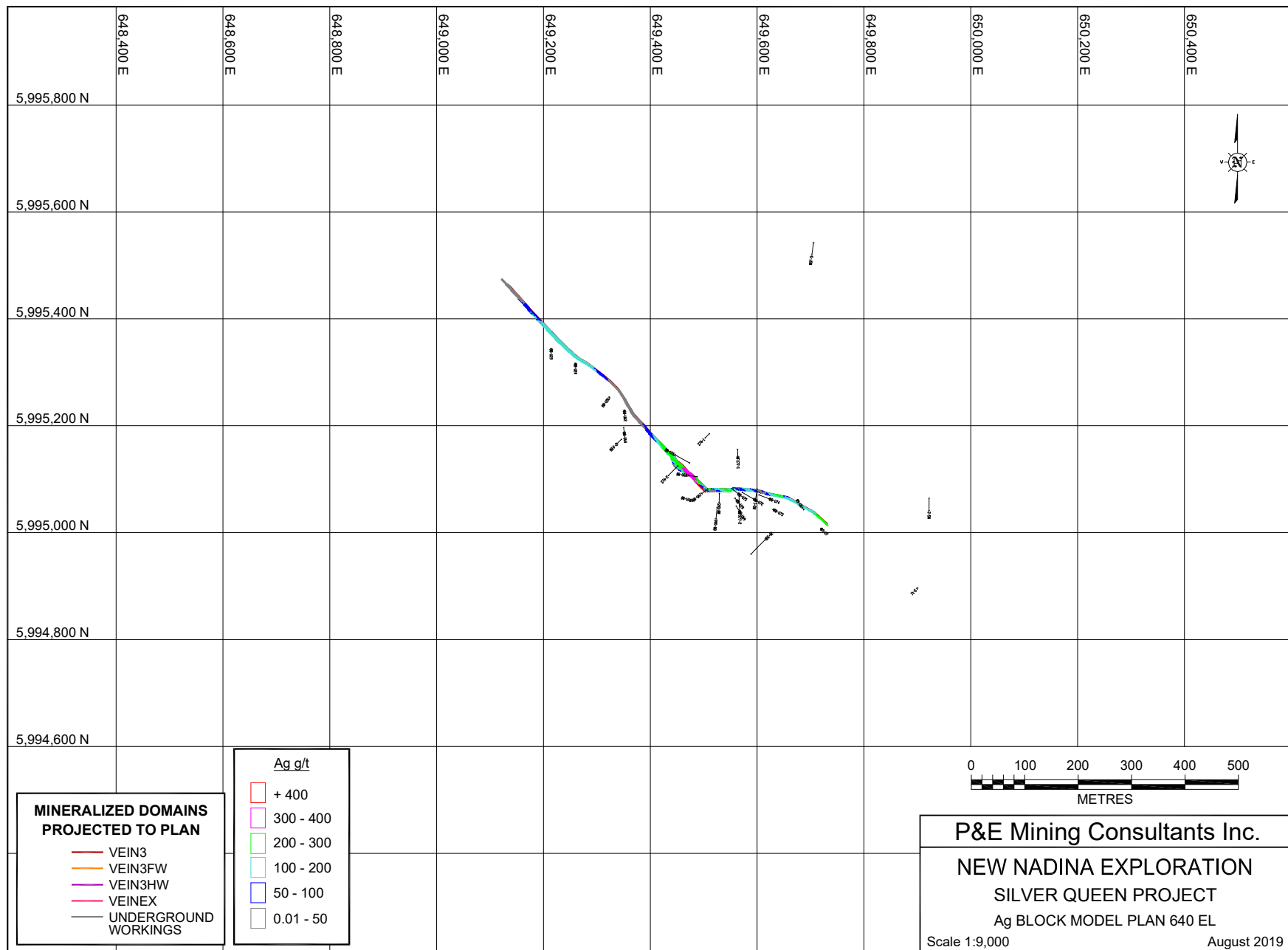




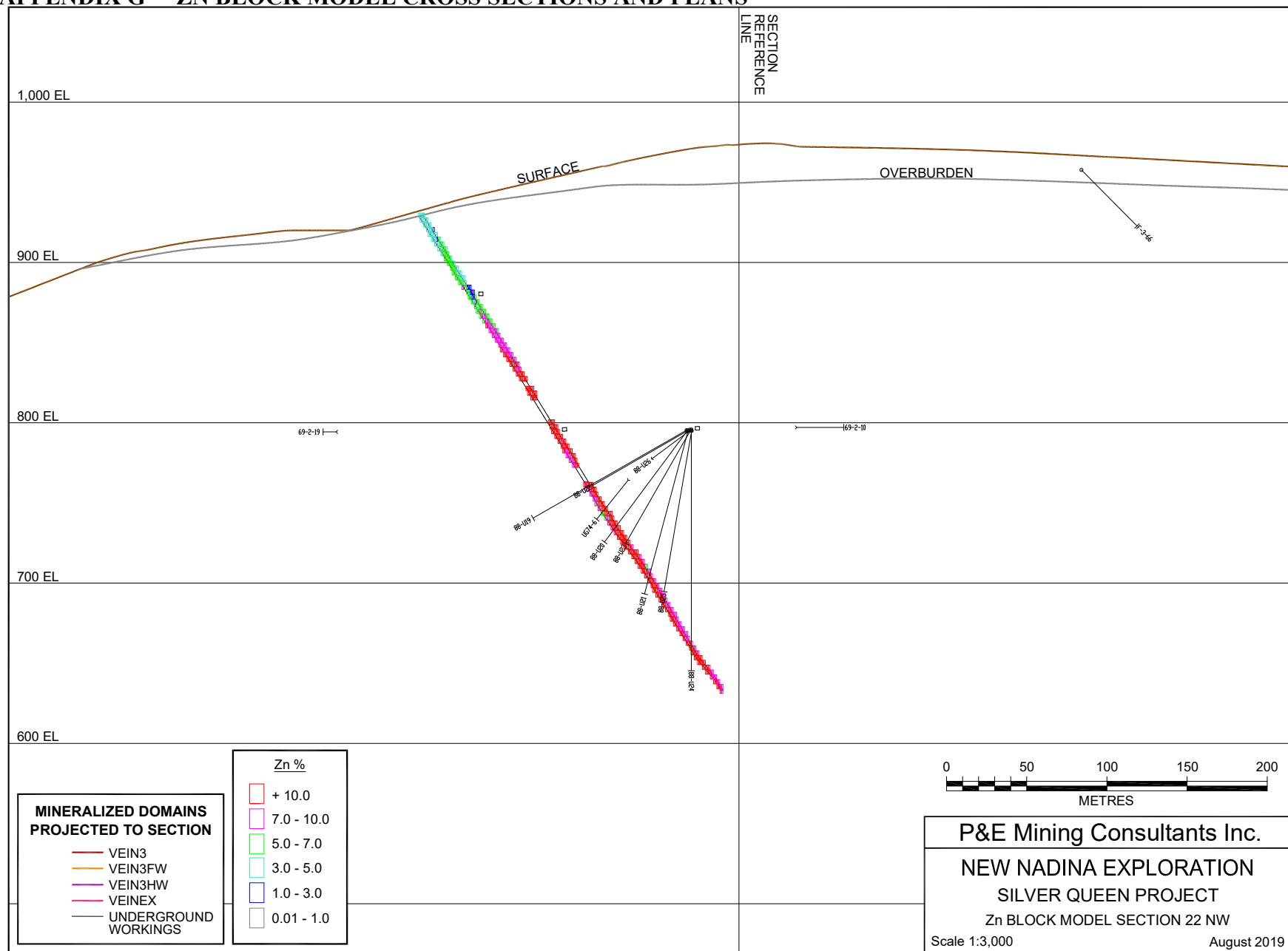


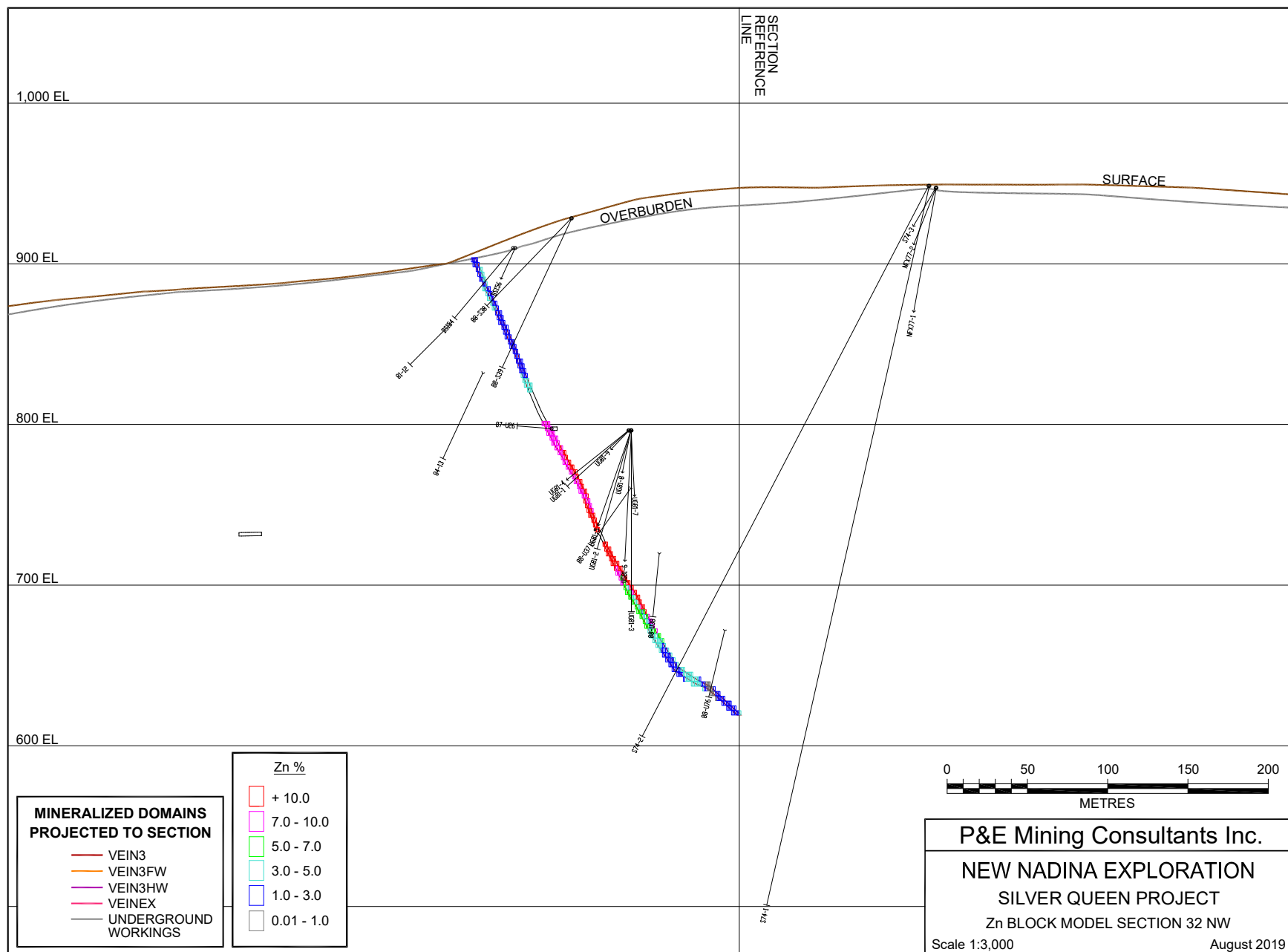


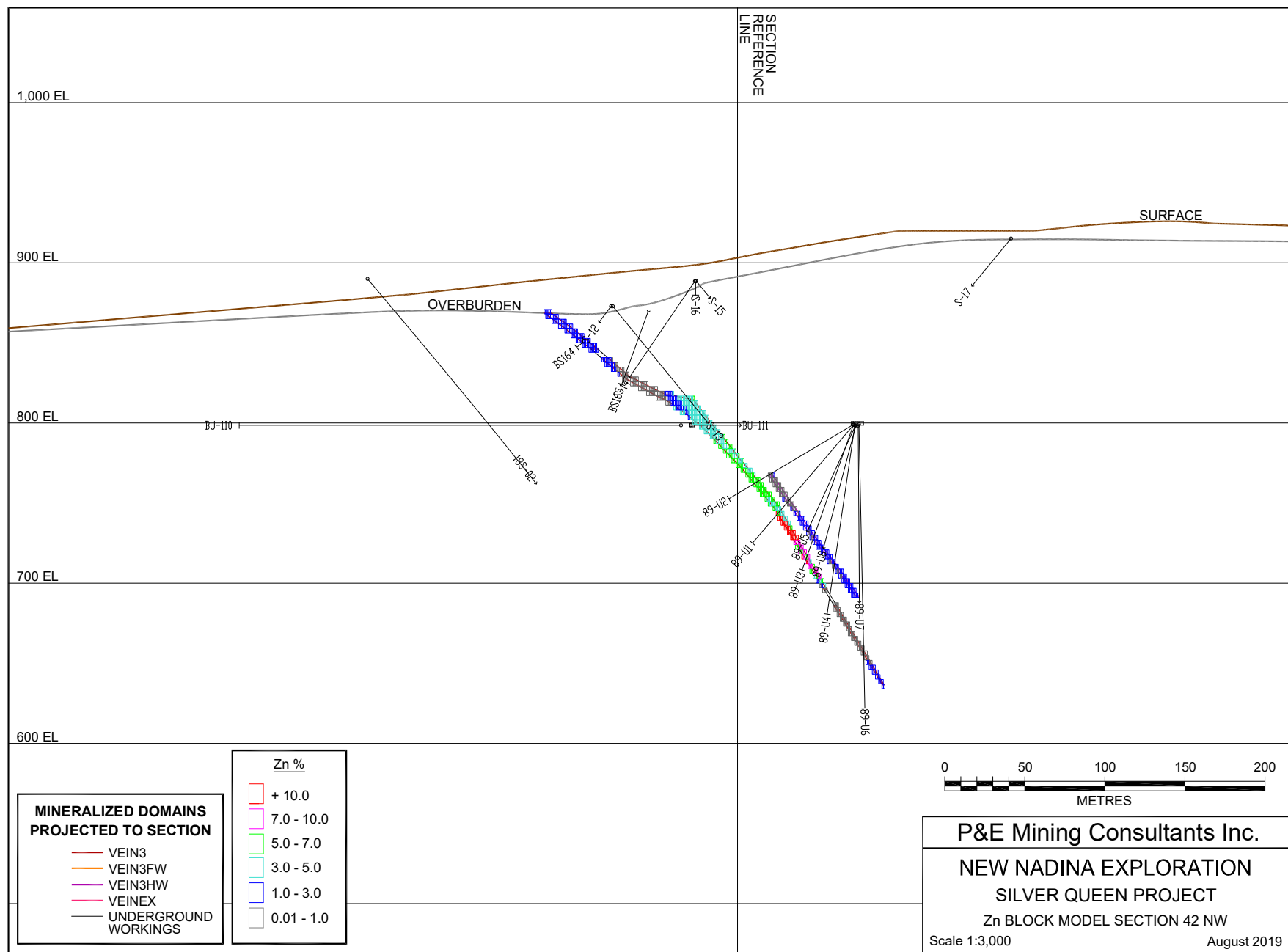


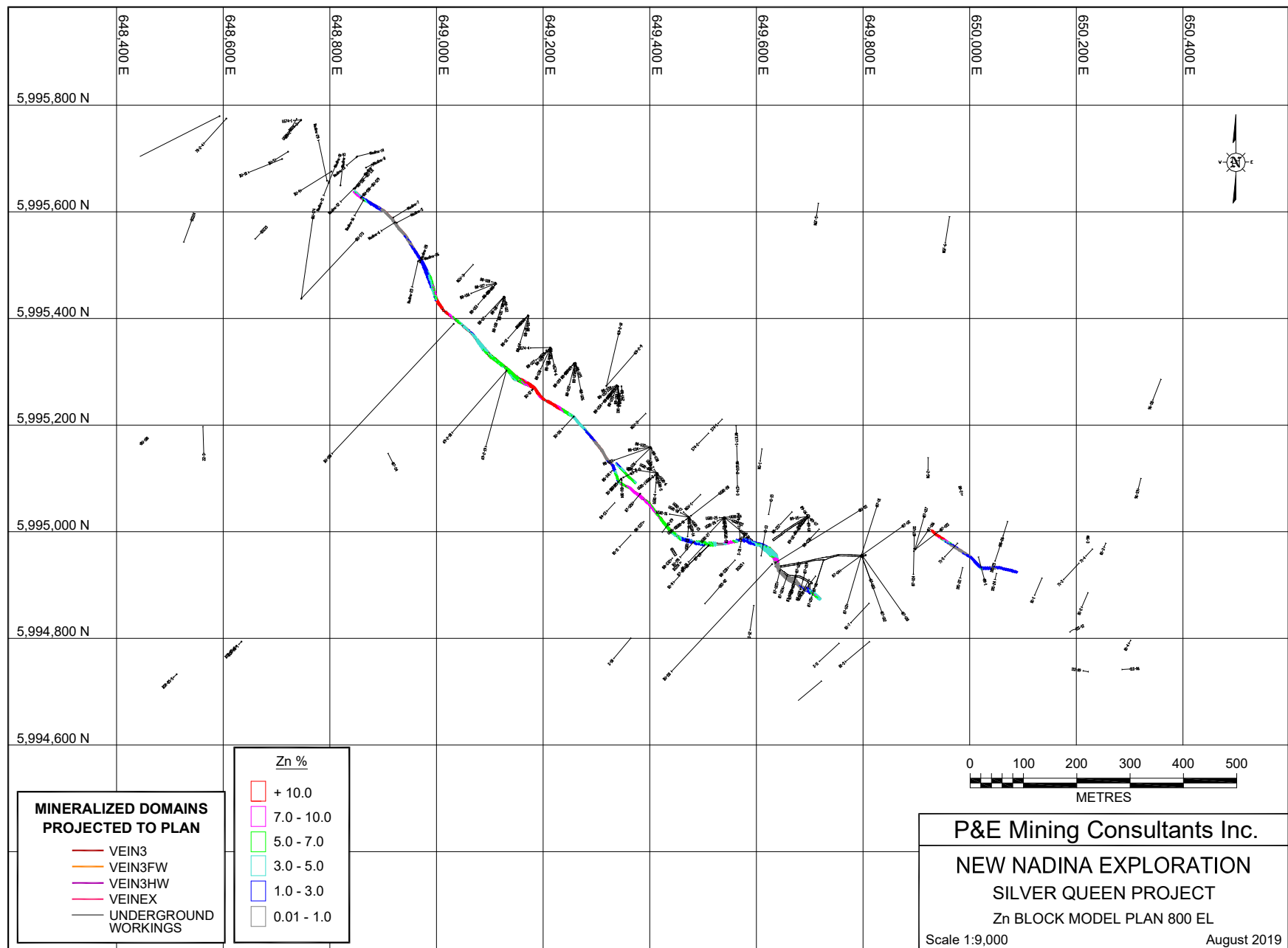


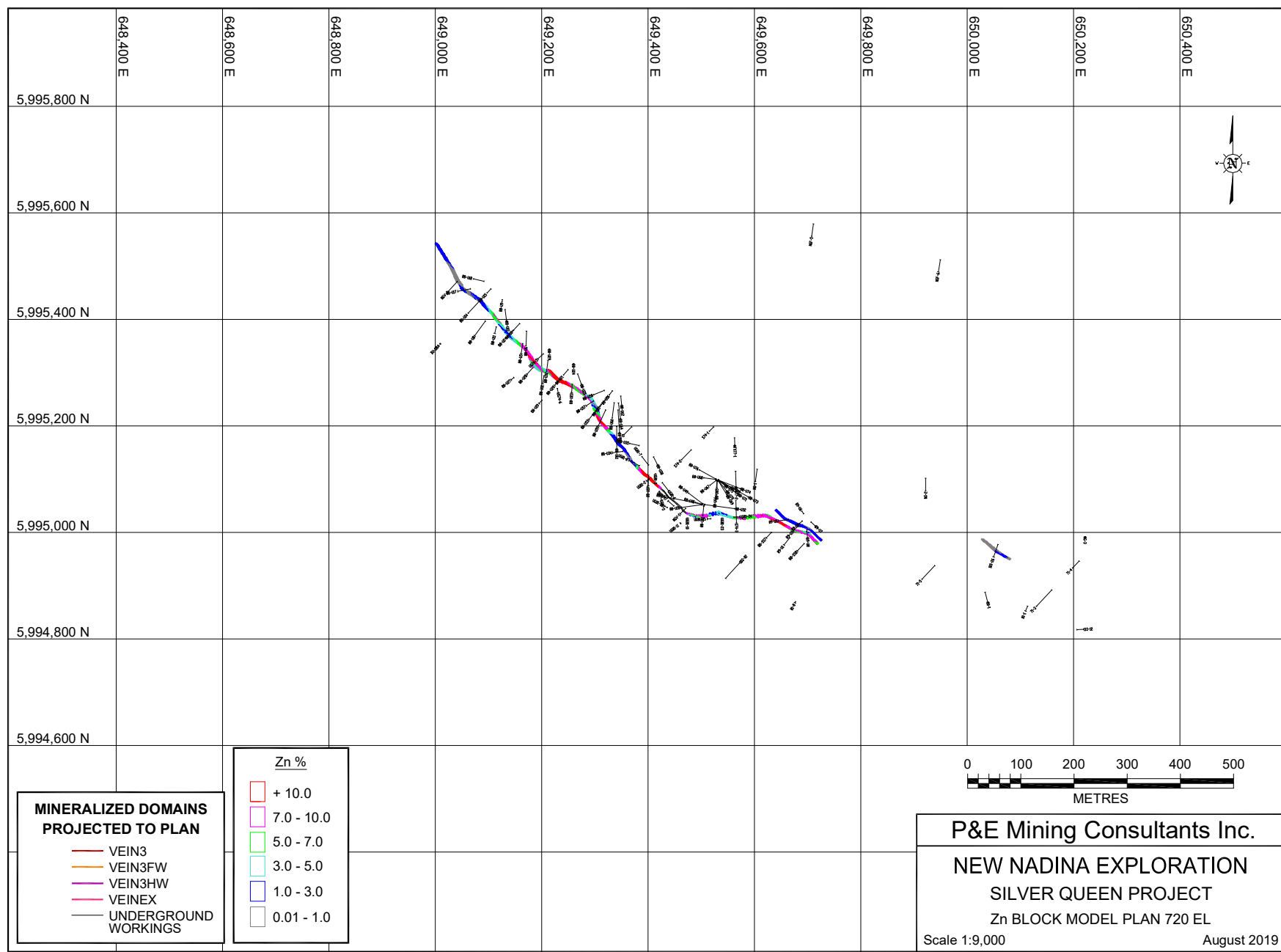
APPENDIX G ZN BLOCK MODEL CROSS SECTIONS AND PLANS

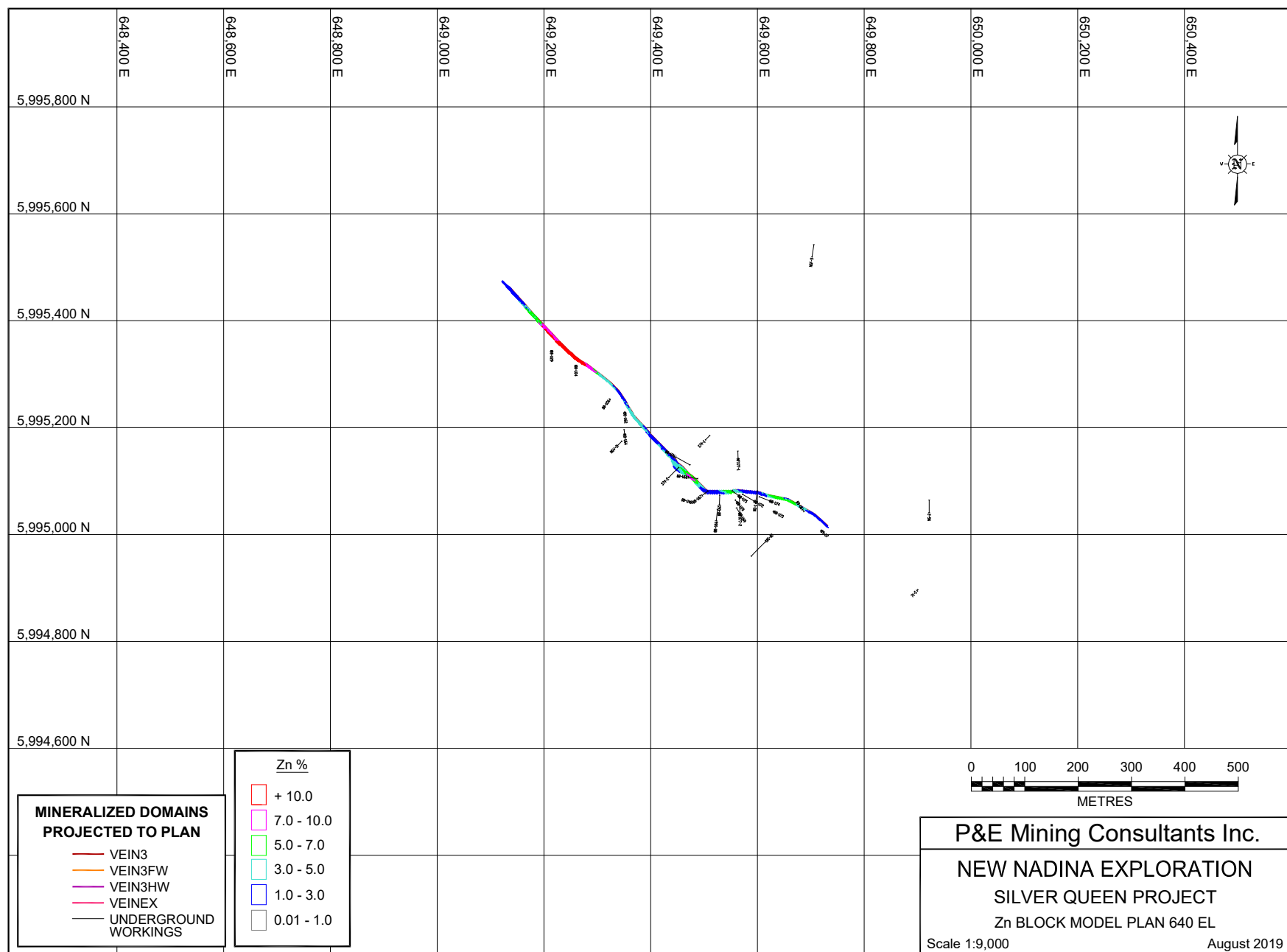












MINERALIZED DOMAINS PROJECTED TO SECTION

- VEIN3
- VEIN3FW
- VEIN3HW
- VEINEX
- UNDERGROUND WORKINGS

NSR \$/tonne

- + \$500
- \$400 - \$500
- \$300 - \$400
- \$200 - \$300
- \$100 - \$200
- \$0.01 - \$100

P&E Mining Consultants Inc.

**NEW NADINA EXPLORATION
SILVER QUEEN PROJECT**

NSR BLOCK MODEL SECTION 22 NW

Scale 1:3,000 August 2019

