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TECHNICAL REPORT AND MINERAL RESOURCE ESTIMATE OF THE POINT LEAMINGTON PROJECT, NEWFOUNDLAND AND LABRADOR

UTM NAD83 ZONE 21N 599,177 m E AND 5,458,785 m N
LATITUDE 49° 16' 26'' N AND LONGITUDE 55° 38' 12" W

FOR
CALLINEX MINES INC.

NI 43-101 & 43-101F1 TECHNICAL REPORT

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P&E Mining Consultants Inc.
Report 403

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1.0 SUMMARY

The Point Leamington Property (the "Property" or the "Project") is located approximately 37 km northwest of the Town of Grand Falls-Windsor, in north-central Newfoundland. The Property is situated on North American Topographic Sheet ("NTS") 2E/5 and centered approximately on NAD83 Zone 21N at coordinates 599,436 m E and 5,458,933 m N.

Callinex Mines Inc. ("Callinex") is a Vancouver, British Columbia-based company trading on the TSX-V under the symbol CNX. Callinex executed a purchase agreement for the Project with Newmarket Gold Inc. ("Newmarket") dated May 16, 2016. Pursuant to the agreement, Callinex acquired 100% interest in the Project and the 262 ha mining lease from Newmarket. In September 2020, mineral licence 027324M was transferred from 7842384 Canada Inc. to Callinex and is contiguous with the mining lease.

P&E Mining Consultants Inc. ("P&E") prepared a Technical Report and Mineral Resource Estimate for the Point Leamington Project on behalf of Callinex, with an effective date of August 20, 2021. The purpose of this Technical Report is to support the Mineral Resource Estimate on the Project announced by the Company on October 25, 2021 and to comply with NI 43-101 and public disclosure requirements.

1.1 GEOLOGY AND MINERALIZATION

The Point Leamington Property lies within the accreted, Cambrian-Ordovician, tectonic-stratigraphic Dunnage Zone of the Newfoundland Appalachians. The Dunnage Zone consists of ophiolites and thick sequences of volcanic and sub-volcanic rocks, and sedimentary rocks. The Dunnage Zone is subdivided into the northwestern Notre Dame Subzone and southeastern Exploits Subzone, which are separated by a structural break named the Red Indian Line. The Point Leamington Property occurs within the north part of the Exploits Subzone.

The Point Leamington Deposit is hosted within the Glovers Harbour Formation, part of the subdivided Wild Bight Group, and is overlain by the Penny's Brook Formation. The Glovers Harbour Formation consist of a bimodal suite of pillowed flows and breccias and quartz-feldspar porphyritic rhyolite flows and domes interbedded with intermediate to felsic breccias and tuffs. The massive sulphide horizon of the Deposit occurs at the stratigraphic boundary between hanging wall rocks that could correlate with the Penny's Brook Formation and felsic dominant footwall rocks of the Glovers Harbour Formation. The Deposit and associated stratigraphy dip ~70° to the west.

The Point Leamington Deposit is a Kuroko/Noranda-type volcanic massive sulphide ("VMS") deposit. Well known examples of this deposit-type include Kuroko (Japan), Noranda (Québec), Kidd Creek (Ontario), Myra Falls (British Columbia), and Buchans (Newfoundland and Labrador).

1.2 HISTORY

Since the 1950s, many companies completed exploration programs on the Point Leamington Property. The majority of the diamond drilling was completed by Noranda Inc. between 1971 and 1997. A total of 93 diamond drill holes (27,813 m) have been completed on the Property, of which 79 (25,490 m) were drilled into the Point Leamington Deposit.

In 1975 Noranda estimated an inferred historical mineral resource estimate of 12.5 Mt grading 1.9% Zn, 0.48% Cu, 0.90 g/t Au and 20.9 g/t Ag.

In 1978 Noranda estimated an inferred historical mineral resource estimate of 1.5 Mt grading 7.3% Zn, 0.43% Cu, 2.25 g/t Au and 54.7 g/t Ag.

In 2004 Hatch estimated an inferred historical mineral resource estimate for TLC Ventures Inc. of 3.5 Mt grading 3.2% Zn, 0.28% Cu, 1.37 g/t Au and 25.9 g/t Ag.

The most recent inferred historical mineral resource estimate on the Property was undertaken by Tetra Tech in 2013 for Raystar Capital Inc. containing 14.1 Mt grading 1.90% Zn, 0.42% Cu, 1.07 g/t Au, 17.1 g/t Ag, 0.02% Pb and 1.91% ZnEq.

It should be noted that the preceding resource estimates are historical in nature and, as such, are based on prior data and reports prepared by previous operators. The work necessary to verify the classification of the historical mineral resource estimates has not been completed and the historical resource estimates therefore, cannot be treated as NI 43-101 defined Mineral Resources verified by a Qualified Person. The historical estimates should not be relied upon and there can be no assurance that any of the historical mineral resources, in whole or in part, will ever become economically viable.

The historical mineral resource estimate uses the term "inferred mineral resources", which is a term set forth under CIM Estimation of Mineral Resources and Mineral Reserves. Even though the historical mineral resource was calculated prior to updates to CIM in 2014, the Company considers the historical mineral resource estimate as relevant as it represents a key target at the Point Leamington Property. The historical mineral resource estimate was determined using data from historical drill hole assays and calculated using capped outlier raw assays, 3.0 m composites, ordinary kriging to estimate grades in 10 m x 10 m x 10 m blocks and a 4% ZnEq resource cut-off for reporting assuming an underground only mineral resource.

1.3 MINERAL PROCESSING AND METALLURGICAL RECOVERY

Mineral processing and metallurgical testwork on the Point Leamington Deposit has been completed by Noranda Inc. from 1971 to in 1988 and by Newmarket Gold Inc. (the previous Property) owner in 2014. Mineralogy from all data sources indicates that Point Leamington is a very fine-grained, massive sulphide deposit containing mainly pyrite. Copper and sphalerite are very finely disseminated in the pyrite host matrix. Grain sizes of chalcopyrite are <10 µm in diameter and of sphalerite grains <22 µm in diameter.

Noranda conducted metallurgical testwork on composite samples between 1972 and 1988 (Noranda, 1988). Three composite samples were produced, specifically an upper and lower low-grade composite and a high-grade Zn composite. The high-grade Zn composite was assembled from material of a single zone in a single drill hole, with testing focused on Zn recovery. This was the only sample tested that produced acceptable Zn concentrate grades, but at a relatively low recovery. The early Noranda work focused on Cu recovery, but was only able to produce a low-grade chalcopyrite concentrate with recoveries ranging from 55% to 75%.

In 2014, Newmarket Gold Inc. drilled two diamond holes for a total of 259 m to collect new massive sulphide material for metallurgical testwork. Each of the two holes intersected approximately 40 m of massive sulphides. A single representative composite sample was prepared from the drill core and submitted to Inspectorate Labs in Vancouver for metallurgical testing. The 150 kg metallurgical composite sample consists of 81 massive sulphide coarse reject samples, which each returned >4% ZnEq from grades of 2.64% Zn, 0.96% Cu, 1.11 g/t Au and 17.3 g/t Ag.

Metallurgical testing in a sequential flotation circuit indicated that at a feed grind size of P80 = 37 Pm, a copper rougher concentrate was produced grading 8.77% Cu at a recovery of 79.1%. A Zn concentrate was produced with a grade of 13.50% Zn at a recovery of 86.0%. A fine grind primary feed (<37 Pm) will be required to achieve Cu and Zn recoveries of >90% at the rougher concentrate levels. Regrinding of the Cu and Zn rougher concentrates to the 15 Pm – 17 Pm range in a cleaner flotation circuit will be required to produce saleable final concentrates. At such a fine grind, parameter testing of pH, pulp density and reagents will be required to determine optimum operating conditions.

Based on QEMScan mineralogical analysis in 2014, gold and the majority of silver appear to be refractory within pyrite and arsenopyrite, and cannot be upgraded into a sulphide concentrate through basic flotation. The precious metals could be recovered by producing a high sulphide concentrate for sale as a heat source containing payables, or by treating the sulphide concentrate by roasting, pressure leaching or bioleaching followed by cyanidation. Provided a market can be sourced or an on-site facility constructed for the sulphide concentrate as a sulphur source for gold autoclave technology, gold recovery could be estimated to be as high as 80%.

In conclusion, work by Noranda and Newmarket showed that sequential copper and zinc concentrates can be produced by standard flotation. However, very fine primary grind and regrind sizes will be required due to the fine-grained nature of the massive sulphide mineralization. All precious metal recovery methods require additional testing. The concentrates should also be analyzed for potential penalty elements, such as cadmium and selenium.

1.4 MINERAL RESOURCE ESTIMATE

A Mineral Resource Estimate has been delineated for three mineralized domains (Main and two Footwall) at Point Leamington (Table 1.1).

The Mineral Resource Estimate in this Technical Report was generated using Inverse Distance Cubed for Au and Ag and Inverse Distance Squared for Zn, Cu and Pb, for grade interpolation within a 3-D block model, constrained by mineralized zones defined by wireframed solid models. The bulk density values used in the Mineral Resource Estimate were derived from a regression equation based on data measured from samples collected from Noranda drill core stored at the Newfoundland Department of Natural Resources Core Storage Facility in St. John's. The C$/t NSR values were calculated to determine the potentially economic portions of the pit constrained and out-of-pit constrained mineralization. The calculations included: 1) approximate three-year trailing average metal prices, and 2) reasonably estimated process recovery, smelter payables, smelter treatment, refining and concentrate freight charges. The pit constrained Mineral Resource model was determined with a pit optimization, to ensure a reasonable assumption of potential economic extraction.

TABLE 1.1
POINT LEAMINGTON MINERAL RESOURCE ESTIMATE (1-5)

Resource Area	Class	Cut-off C$/t NSR	Tonnes (k)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Au (koz)	Ag (Moz)	Cu (Mlb)	Pb (Mlb)	Zn (Mlb)	AuEq (g/t)	AuEq (koz)	ZnEq (%)	ZnEq (Mlb)	CuEq (%)	CuEq (Mlb)
Pit Constrained	**Indicated**	25	5,013	0.90	12.2	0.54	0.01	1.39	145.7	2.0	60.0	1.5	153.5	2.49	402.0	6.03	666.7	1.42	156.8
	Inferred	25	13,727	0.80	14.0	0.36	0.02	1.74	354.8	6.2	110.2	7.0	527.3	2.24	986.5	5.41	1,636.2	1.27	384.8
Out-of-Pit	**Inferred**	75	1,713	1.19	25.5	0.35	0.07	2.72	65.4	1.4	13.3	2.6	102.9	3.06	168.5	7.40	279.5	1.74	65.7
Total	**Indicated**	**25**	**5,013**	**0.90**	**12.2**	**0.54**	**0.01**	**1.39**	**145.7**	**2.0**	**60.0**	**1.5**	**153.5**	**2.49**	**402.0**	**6.03**	**666.7**	**1.42**	**156.8**
	Inferred	**25 & 75**	**15,440**	**0.85**	**15.3**	**0.36**	**0.03**	**1.85**	**420.2**	**7.6**	**123.5**	**9.6**	**630.1**	**2.33**	**1,155.0**	**5.63**	**1,915.6**	**1.32**	**450.5**

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 Technical 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 (2014) and CIM Best Practices Guidelines (2019).*
5. *The Mineral Resource Estimate was based on August 2021 consensus economics forecast metal prices of US$1,625/oz gold, US$22/oz silver, US$3.50/lb copper, US$1.20/lb. zinc.*

1.5 RECOMMENDATIONS

It is P&E's opinion that additional exploration expenditures are warranted on the Point Leamington Property. Exploration and general recommendations are summarized below.

1.5.1 Exploration Recommendations

P&E recommend that Callinex proceed with step-out and infill diamond drilling designed to increase the overall size of the Point Leamington Deposit, expand the Mineral Resource, and advance classification from Inferred to Indicated. In addition to the drilling, surface and downhole electromagnetic survey programs should be conducted to identify additional targets for drill testing. Confirmative metallurgical testwork should be performed (including flotation and concentrate work and gold liberation and deleterious metal studies), and then an updated Mineral Resource Estimate completed. The proposed timeline and budget to complete the recommended program is 12 months and $1.4M (Table 1.2).

TABLE 1.2
RECOMMENDED EXPLORATION PROGRAM AND BUDGET

Task	Unit Price ($)	Units	Budget ($)
Surface Geophysics & Target Definition			120,000
Diamond Drilling	200/m	2,500 m	500,000
Assays	100/sample	650 samples	65,000
Salaries	10,000/month	12 months	120,000
Logistics (lodging, fuel, food, consumables)	10,000/month	12 months	120,000
Surveying (differential GPS)	1,000/day	10 days	10,000
Downhole EM Geophysical Surveys			50,000
Metallurgical Testwork			100,000
Updated Mineral Resource Estimate			50,000
Subtotal			**1,135,000**
Contingency (20%)			**227,000**
Total			**1,362,000**

1.5.2 General Recommendations

P&E makes the following general recommendations for advancing the Project:

- Design, implement and maintain an industry best practice QA/QC program, which includes submitting 1% to 2% of the coarse rejects or pulps for check analysis at an accredited umpire laboratory;

- Submit all future assay samples to an accredited laboratory. Consider submitting 1% to 2% of the coarse rejects or pulps for check analysis at an accredited umpire laboratory, as part of an industry best practice QA/QC program; and

- Collect more bulk density measurements for the host and country rock types and significant alteration styles. Approximately 5% of the database should have a bulk density measurement, in order to allow for more accurate calculation of tonnage and increased confidence in any subsequent Mineral Resource Estimates.

2.0 INTRODUCTION AND TERMS OF REFERENCE

2.1 TERMS OF REFERENCE

This Technical Report was prepared by P&E Mining Consultants Inc. ("P&E") at the request of Mr. Max Porterfield, President & CEO and Director of Callinex Mines Inc. ("Callinex" or the "Company"). Callinex is a public, TSX-V listed mining company trading under the symbol "CNX", with its head office located at: Suite 1555 – 555 West Hastings Street, Vancouver, British Columbia V6B 4N6. This Technical Report has an effective date of August 20, 2021.There has been no material change to the Point Leamington Project between the effective date of this Technical Report and the signature date.

This Technical Report was prepared as a National Instrument 43-101 Technical Report, in accordance with Form 43-101F1. The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in P&E's services and based on:

i) information available at the time of preparation;
ii) data supplied by outside sources; and
iii) the assumptions, conditions, and qualifications set forth in this Technical Report which is intended to be used by Callinex, subject to the terms and conditions of its contract with P&E. This contract permits Callinex to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to National Instrument 43-101, Standards of Disclosure for Mineral Projects.

This Technical Report has been prepared to provide a fully compliant NI 43-101 Technical Report and Mineral Resource Estimate of the existing mineralization at the Point Leamington Project (or the "Point Leamington Deposit" or the "Point Leamington Property"), located in the Province of Newfoundland and Labrador, Canada. The Project is held 100% by Callinex, who executed a purchase agreement for the Project with Newmarket Gold Inc. on May 16, 2016. Pursuant to the agreement, Callinex acquired 100% interest in the Project and a 262 ha mining lease from Newmarket. The Mineral Resource Estimate reported herein is based on up-to-date drilling results and appropriate metal pricing, and is fully conformable to the "CIM Standards on Mineral Resources and Reserves – Definitions and Guidelines", as referred to in National Instrument ("NI") 43-101 and Form 43-101F, Standards of Disclosure for Mineral Projects.

Callinex accepts that the qualifications, expertise, experience, competence and professional reputation of P&E's Principals and Associate Geologists and Engineers are appropriate and relevant for the preparation of this Technical Report. The Company also accepts that P&E's Principals and Associates are members of professional bodies that are appropriate and relevant for the preparation of this Technical Report. P&E understands that this Technical Report will support the public disclosure requirements of Callinex and will be filed on SEDAR as required under NI 43-101 disclosure regulations.

2.2 SITE VISITS AND DUE DILIGENCE SAMPLNG

Separate site visits were made to the Point Leamington Property area in 2016 and 2020.

2.2.1 2016 Site Visit

Mr. Cameron Bartsch, P.Geo., a Qualified Person under the terms of NI 43-101, conducted a site visit to the Point Leamington Property on October 26, 2016. No work was taking place on the property at the time and the visit focused on examining drill core, verifying collar locations, and reviewing property access and infrastructure.

2.2.2 2020 Site Visit

Mr. Eugene Puritch, P.Eng., FEC, CET, a Qualified Person under the terms of NI 43-101, conducted a site visit to the Point Leamington Project on July 14, 2020. A data verification sampling program was conducted at the Newfoundland Department of Natural Resources Core Storage Facility in St. John's subsequent to the on-site review (see Section 12 of this Technical Report). Confirmation samples from selected drill core intervals were taken by Mr. Puritch and submitted to AGAT Laboratories ("AGAT") in Mississauga, Ontario for analysis. The Qualified Person is not aware of any material changes to the Project since the site visit.

2.2.1 2021 Due Diligence Sampling

An additional data verification sampling program was conducted by Mr. Tim Froude, P.Geo., a Qualified Person under the terms of NI 43-101, in May 2021. The sampling program was conducted at the Newfoundland Department of Natural Resources Core Storage Facility in St. John's, during which 150 confirmation samples from selected drill core intervals were taken by Mr. Froude and submitted to AGAT Laboratories ("AGAT") in Mississauga, Ontario for analysis (see Section 12 of this Technical Report).

2.3 TECHNICAL REPORTS

A historical Technical Report was completed by Tetra Tech in 2013 and another by Hatch in 2004. The Tetra Tech report is referenced as Tetra Tech (2013) and the Hatch report as (Hatch, (2004) in the Reference section (Section 27) of this Technical Report.

More recently, a Technical Report on the Point Leamington Project was completed by P&E in 2021. It is referenced to as P&E (2021) in the Reference section (Section 27) of this Technical Report.

2.4 SOURCES OF INFORMATION

P&E carried out a study of all relevant parts of the available literature and documented results concerning the Project and held discussions with technical personnel from the Company regarding all pertinent aspects of the Point Leamington Project. The reader is referred to the sources of data, citations for which are compiled in the "References" section of this Technical Report, for further detail on the Project.

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 (Section 27) of this Technical Report. Additional details of the topic can be found in the public filings of Callinex on SEDAR at www.sedar.com.

The most recent Technical Report on the Point Leamington Project was completed by Tetra Tech (2013) and dated July 4, 2013. The Tetra Tech (2013) Technical Report has been relied on by P&E for the historical, geological, exploration and drilling sections of the current Technical Report.

The initial NI-43-101 compliant Technical Report on the Point Leamington Project was completed by Hatch (2004).

Considerable historic exploration activities were carried out in the area of the Point Leamington Property since the 1950s. Drill programs on the Property has been completed mainly by Noranda Inc. (1971 to 1997) and smaller programs by Getty Canadian Minerals (1982), Tri-Origin Exploration (1997), Rubicon Minerals (1999), Altius Resource (2000, TLC Ventures (2004), and Newmarket (2014). No exploration has been completed on the Property since Callinex acquired it in 2016.

During the undertaking of this Technical Report, principals and associates of P&E, reviewed technical documents and prepared a Mineral Resource Estimate on the Point Leamington Project using data supplied by Callinex and the previously filed and historic Technical Reports. All P&E participants are Qualified Persons under NI 43-101.

Table 2.1 presents the authors and co-authors of each section of the Technical Report, who acting as Qualified Persons as defined by NI 43-101, take responsibility for those sections of the Technical Report as outlined in Section 28 "Certificate of Author" of this Technical Report. The authors acknowledge the helpful cooperation of Callinex's management and consultants, who addressed all data and material requests and responded openly and helpfully to all questions.

TABLE 2.1
QUALIFIED PERSONS RESPONSIBLE FOR THIS TECHNICAL REPORT

Qualified Person	Employer	Sections of This Technical Report
Mr. William Stone, Ph.D., P.Geo.	P&E Mining Consultants Inc.	3 to 10, 15 to 19, 21 to 24 and Co-Author 1, 2, 11, 12, 25, 26
Mr. Eugene Puritch, P.Eng., FEC, CET	P&E Mining Consultants Inc.	14 and Co-author 1, 12, 25, 26
Mr. D. Grant Feasby, P.Eng.	P&E Mining Consultants Inc.	13, 20 and Co-author 1, 25, 26
Mr. Tim Froude, P.Geo.	Independent Consulting Geologist	Co-author 1, 11, 12, 25, 26
Mr. Cameron Bartsch, P.Geo.	Fault Lines Geological	Co-author 1, 2, 11, 12, 25, 26

2.5 UNITS AND CURRENCY

Terminology and abbreviations used in this Technical Report are summarized in Table 2.2 and metric conversions listed in Table 2.3. Note that US$ are used throughout this Technical Report, except where indicated otherwise.

TABLE 2.2
TERMINOLOGY AND ABBREVIATIONS

Abbreviation	Meaning
“$”	dollar(s)
“°”	degree(s)
“°C”	degrees Celsius
<	less than
>	greater than
“%”	percent
“3-D”	three-dimensional
“AA” or “AAS”	atomic absorption or atomic absorption spectrometry
“Ag”	silver
“AGAT”	AGAT Laboratories
“As”	arsenic
“asl”	above sea level
“Au”	gold
“AuEq”	gold equivalent
“°C”	degree Celsius
“Callinex” or the “Company”	Callinex Mines Inc.
“CIM”	Canadian Institute of Mining, Metallurgy, and Petroleum
“cm”	centimetre(s)
“CN”	cyanide
“Cu”	copper
“CuEq”	copper equivalent
“$M”	dollars, millions
“EM”	electromagnetic
“Equity”	Equity Exploration Consultants
“FA”	fire assay
“FX”	USD:CDN currency exchange rate
“g”	gram
“g/t”	grams per tonne
“ha”	hectare(s)
“ICP”	inductively coupled plasma
“ID”	identification
“ID^3”	inverse distance cubed
“ID^2”	inverse distance squared
“k”	thousand(s)
“kg”	Kilograms(s)

TABLE 2.2
TERMINOLOGY AND ABBREVIATIONS

Abbreviation	Meaning
"km"	kilometre(s)
"koz"	thousand(s) of ounces
"kW"	kilowatt
"L"	litre(s)
"L/s"	litres per second
"lb"	avoirdupois pound (weight)
"m"	metre(s)
"m^3"	cubic metre(s)
"M"	million(s)
"Ma"	millions of years
"mm"	millimetre
"Moz"	million ounces
"Mt"	mega tonne or million tonnes
"NAD"	North American Datum
"NE"	northeast
"Newmarket"	Newmarket Gold Inc.
"Ni"	nickel
"NI"	National Instrument
"NN"	nearest neighbour
"NPV"	net present value
"NSR"	net smelter return
"NTS"	North American Topographic Sheet
"NW"	northwest
"oz"	Troy ounce
"P80" or "K80"	80% percent passing
"P&E"	P&E Mining Consultants Inc.
"Pb"	lead
"P.Eng."	Professional Engineer
"P.Geo."	Professional Geoscientist
"ppb"	parts per billion
"ppm"	parts per million
"Property" or "Project"	the Point Leamington Property that is the subject of this Technical Report
"QA/QC"	quality assurance/quality control
"Rubicon"	Rubicon Minerals Corporation
"S"	sulphur
"SE"	southeast
"SEDAR"	System for Electronic Document Analysis and Retrieval
"SW"	southwest
"t"	metric tonne(s)
"T"	short ton(s)

Table 2.2 **Terminology and Abbreviations**	
Abbreviation	**Meaning**
"TDEM"	time domain electromagnetic
"Technical Report"	this NI 43-101 Technical Report
"tpd"	tonnes per day
"the Company"	Callinex Mines Inc. the company that the report is written for
"US$"	United States dollar(s)
"UTM"	Universal Transverse Mercator grid system
"VLF"	very low frequency
"VMS"	volcanic massive sulphide
"Zn"	zinc
"ZnEq"	zinc equivalent

Table 2.3 **Unit Measurement Abbreviations**			
Abbreviation	**Meaning**	**Abbreviation**	**Meaning**
µm	microns, micrometer	m^3/s	cubic metre per second
$	dollar	m^3/y	cubic metre per year
$/t	dollar per metric tonne	mØ	metre diameter
%	percent sign	m/h	metre per hour
% w/w	percent solid by weight	m/s	metre per second
¢/kWh	cent per kilowatt hour	Mt	million tonnes
°	degree	Mtpy	million tonnes per year
°C	degree celsius	min	minute
cm	centimetre	min/h	minute per hour
d	day	mL	millilitre
ft	feet	mm	millimetre
GWh	Gigawatt hours	MV	medium voltage
g/t	grams per tonne	MVA	mega volt-ampere
h	hour	MW	megawatts
ha	hectare	oz	ounce (troy)
hp	horsepower	Pa	Pascal
k	kilo, thousands	pH	Measure of acidity
kg	kilogram	ppb	part per billion
kg/t	kilogram per metric tonne	ppm	part per million
km	kilometre	s	second
kPa	kilopascal	t or tonne	metric tonne
kV	kilovolt	tpd	metric tonne per day
kW	kilowatt	t/h	metric tonne per hour
kWh	kilowatt-hour	t/h/m	metric tonne per hour per metre
kWh/t	kilowatt-hour per metric	$t/h/m^2$	metric tonne per hour per

TABLE 2.3
UNIT MEASUREMENT ABBREVIATIONS

Abbreviation	Meaning	Abbreviation	Meaning
	tonne		square metre
L	litre	t/m	metric tonne per month
L/s	litres per second	t/m^2	metric tonne per square metre
lb	pound(s)	t/m^3	metric tonne per cubic metre
M	million	T	short ton
m	metre	tpy	metric tonnes per year
m^2	square metre	V	volt
m^3	cubic metre	W	Watt
m^3/d	cubic metre per day	wt%	weight percent
m^3/h	cubic metre per hour	y	year

3.0 RELIANCE ON OTHER EXPERTS

On the subject of mineral tenure records, on August 20, 2021, the Qualified Person confirmed the status and registration of the mineral tenures with information available through the web page of the Newfoundland and Labrador Geoscience Atlas:

https://www.geoatlas.gov.nl.ca

Furthermore, the Mines Branch of the NL Department of Natural Resources records tenure information for all mineral claims in the province.

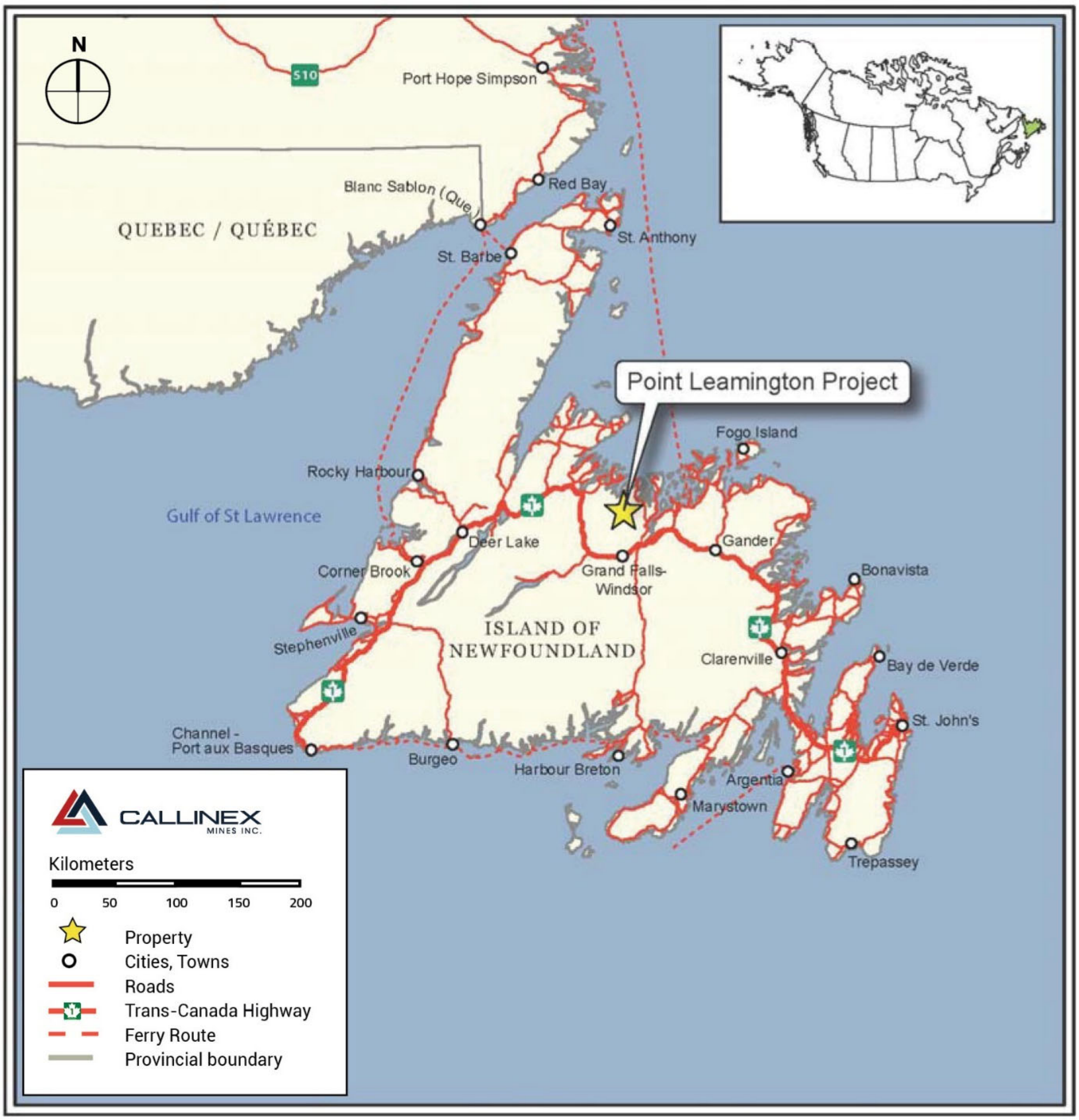
The Qualified Persons did not rely on experts regarding political, environmental, or tax matters relevant to this Technical Report.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 LOCATION

The Point Leamington Property is located approximately 37 km northwest of the Town of Grand Falls-Windsor, Newfoundland and Labrador (Figure 4.1). The Project is situated on NTS sheet 2E/5 and is centered at latitude 49° 16’ 26’’ N and longitude 55° 38’ 12” W. The UTM coordinates (NAD83 Zone 21) are 599,177 m E and 5,458,785 m N.

FIGURE 4.1 POINT LEAMINGTON PROJECT LOCATION MAP, NEWFOUNDLAND



Source: *Callinex (2020)*

4.2 PROPERTY DESCRIPTION AND TENURE

Callinex and Newmarket executed a purchase agreement dated May 10, 2016 that outlines the proposed terms by which Newmarket sold 100% interest in the Point Leamington zinc-gold-silver-copper massive sulphide deposit and the 262-ha mining lease to Callinex.

The conditions of purchase for Callinex included payment of:

- 50% of the annual rental on the Property mining lease for 2016;
- Payment of $100,000 in cash on the closing date;
- Payment of $100,000 in cash or shares 12 months after the closing date; and
- An additional $200,000 in either cash or shares within two years of the closing date, again at the election of Callinex.

The purchase agreement was subject to the renewal and transfer of ownership of the mining lease from Newmarket to Callinex. In 2016, the Property was renewed for an additional one-year term and all relevant conditions have been met by Callinex. The transfer of title from Newmarket to Callinex was completed by the Department of Natural Resources in Newfoundland and Labrador. The mining lease is currently owned 100% by Callinex (Table 4.1 and Figure 4.2).

As part of the mining lease purchase agreement, any shares issued were at a fixed price of $0.462. Newmarket also retained a 1% NSR royalty on production from the Project, which can be purchased by Callinex at any time for $1M. An additional 0.5% NSR royalty on the Property is held by Calibre, and a 2% NSR royalty is split between Noranda (1.5%) and MFC Bancorp Ltd. (0.5%).

Under an agreement between Rubicon Minerals Corporation ("Rubicon") and TLC Ventures dated February 13, 2004, Rubicon reserved the Right of First Refusal on the purchase of Noranda's interest in the Property, and reserved the option to purchase the MFC Bancorp Ltd. NSR.

TABLE 4.1
POINT LEAMINGTON MINING LEASE

Type	Lease Number	Company Name	Area (ha)
Mining Lease	Mining Lease 136 (2655)	Callinex Mines Inc.	262

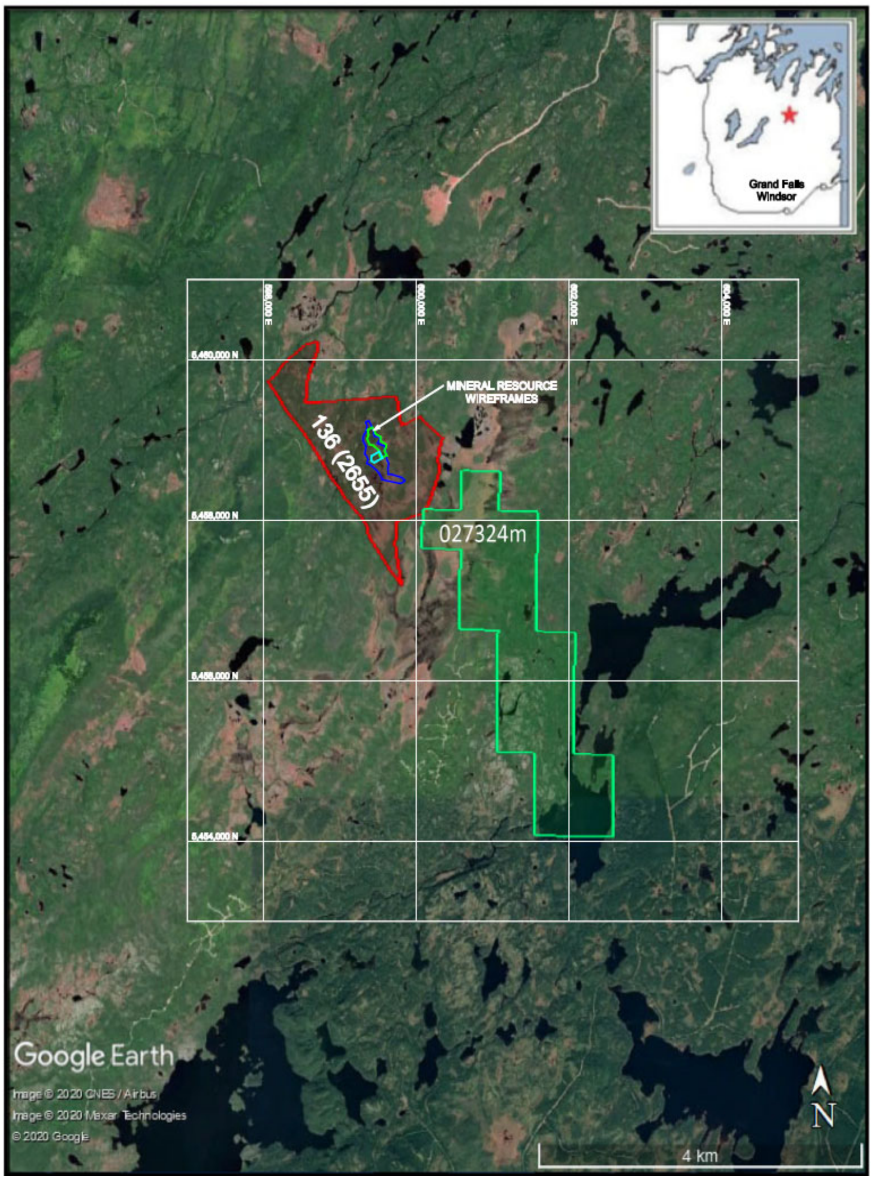
The mineral lease remains in good standing as long as the annual lease payment is made. The due date for the most recent annual payment was March 30, 2021. Payment of $31,515.44 was made on March 1, 2021.

In addition, Callinex acquired mineral licence 027324M on September 29, 2020 (Table 4.2) by transfer from 7842384 Canada Inc. That mineral licence is contiguous with Mining Lease 136 (Figure 4.2).

TABLE 4.2 POINT LEAMINGTON MINERAL LICENCE					
Type	**Licence Number**	**Company Name**	**Area (ha)**	**Transfer Date**	**Renewal Date**
Mineral Licence	027324M	Callinex	448.8	2020/09/29	2024/09/09

Note: *Land tenure information effective August 20, 2021*

FIGURE 4.2 POINT LEAMINGTON LAND TENURE



Source: *P&E (2020)*

4.3 ENVIRONMENTAL AND PERMITTING

The surface rights on the Property and immediately surrounding area, except for Callinex mineral licence 027324, appear on https://www.geoatlas.gov.nl.ca to be owned by Unity Resources Inc. There are no environmental impacts affecting the Point Leamington Property at this time. Work and water use permits for exploration work are required to be obtained from the Newfoundland and Labrador Department of Natural Resources.

4.4 OTHER PROPERTIES OF INTEREST

In addition, Callinex has seven additional mineral licences in the region that are not contiguous with the Point Leamington Property. The land tenure details of these mineral licences are summarized in Table 4.3.

TABLE 4.3
CALLINEX OTHER PROPERTIES OF INTEREST IN THE POINT LEAMINGTON REGION

Number	Original Holder	Holder	Status	Recorded Date	Issued Date	Renewal Date
027323M	7842384 Canada Inc	Callinex Mines Inc.	Issued	20190809	20190909	20240909
027325M	7842384 Canada Inc	Callinex Mines Inc.	Issued	20190809	20190909	20240909
027326M	7842384 Canada Inc	Callinex Mines Inc.	Issued	20190809	20190909	20240909
031170M	Callinex Mines Inc.	Callinex Mines Inc.	Issued	20200807	20200906	20250906
031171M	Callinex Mines Inc.	Callinex Mines Inc.	Issued	20200807	20200906	20250906
030072M	Callinex Mines Inc.	Callinex Mines Inc.	Issued	20200807	20200906	20250906
031195M	Callinex Mines Inc.	Callinex Mines Inc.	Issued	20200813	20200912	20250912

Note: *Land tenure information effective August 20, 2021*

4.5 OTHER SIGNIFICANT FACTORS AND RISKS

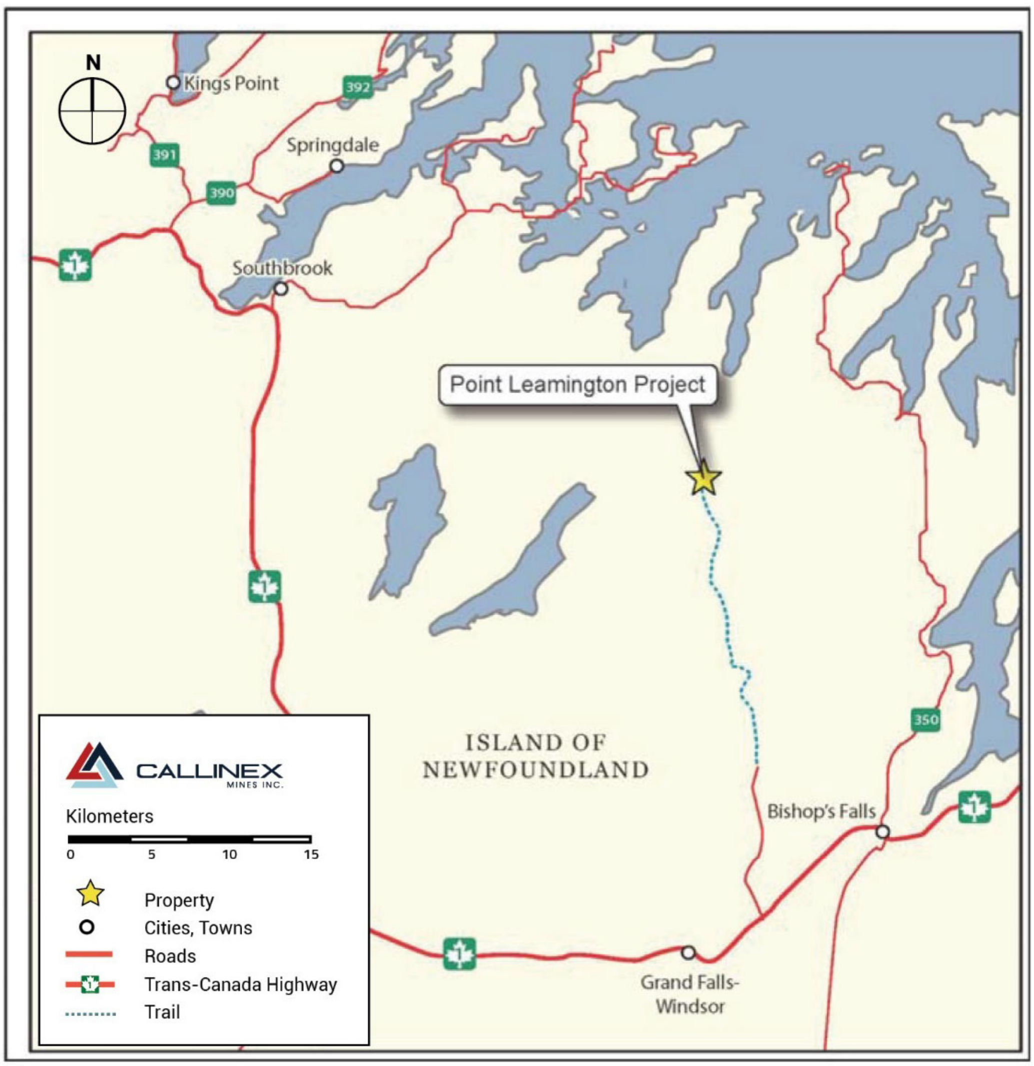
To the extent known to the author of this Technical Report section, there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Point Leamington Property that have not been discussed in this Technical Report.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 ACCESS

The Property is located approximately 37 km north of the Town of Grand Falls-Windsor, Newfoundland and Labrador (Figure 5.1). To access the Property from Grand Falls-Windsor, take the all-weather New Bay Road for approximately 12 km. There is an intersection at the 12 km marker with a large clear for parking vehicles (Figure 5.2). From this point the trail is not maintained and access by quad or snowmobile is recommended (Figure 5.3). Continue approximately 16 km on the trail, and then head northwest across the bog for approximately 2.5 km to the Property (Figure 5.4).

FIGURE 5.1 POINT LEAMINGTON ACCESS

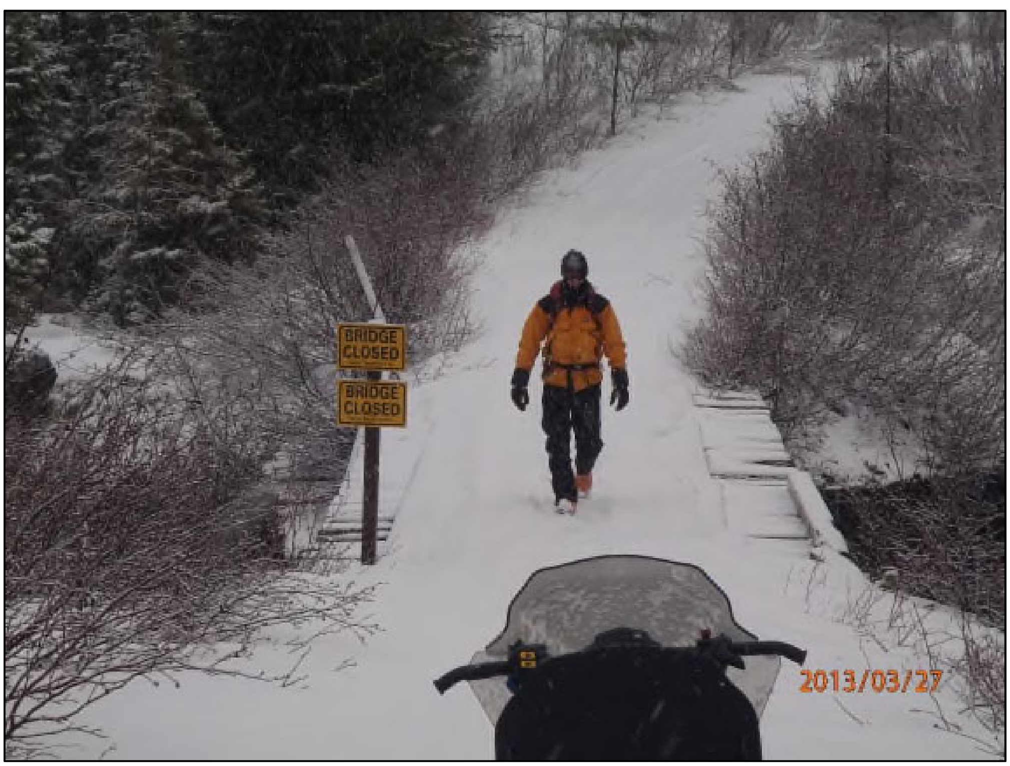


Source: *Callinex (2020)*

FIGURE 5.2 SNOW VEHICLES PARKED AT THE END OF NEW BAY ROAD (2013)

Source: *Callinex (2020)*

FIGURE 5.3 ROAD ACCESS (2013)



Source: *Callinex (2020)*

FIGURE 5.4 BOG NEAR POINT LEAMINGTON PROPERTY (2016)

Source: *Callinex (2020)*

The closet airport is located in Gander, approximately 95 km east on Highway 1. The Gander International Airport is designated an international airport serviced by several domestic carriers, with daily flights to other parts of the country with connecting internationals flights. The airport has a 10,500 ft runway capable of supporting the largest cargo aircraft.

Tidewater access to the Property is possible from Botwood, located approximately 25 km east on the Bay of Exploits. Currently this location only services small fishing vessels. The Property is accessible year-round from Botwood by ATV or snowmobiles. Larger equipment access would require some improvements to bridges and roads.

5.2 CLIMATE

The climate is typical for an Atlantic Province of Canada, with pleasant summers, cool wet springs and autumns, and snowy, windy winters. Although most ponds freeze over by mid-December, the ice is rarely thick enough to support heavy equipment.

Summers temperatures can reach 34°C with the average around 23°C. Winter weather is moderate with highs of 3ºC and lows around -34°C, with an average of -12°C (www.accuweather.com).

Annual precipitation is estimated to be approximately 1,078 mm, of which rain accounts for approximately 85%.

5.3 INFRASTRUCTURE

The Town of Grand Falls-Windsor, a modern community that in 2020 had a population of approximately 14,250 (Statistics Canada), was a former pulp and paper mill town. The town is a potential source of skilled labour.

The Town of Springdale is located approximately 107 km west of the Property along Highway 1. Springdale has a population of approximately 3,080 (2020 per en.wikipedia.org) and is the main exploration services center for the region, with an analytical laboratory, core box and core rack manufacturers, and several diamond drill companies.

The Point Leamington Property is located approximately 22 km from the provincial power grid, 37km from Grand Falls-Windsor and 150km from the former Duck Pond Mine.

5.4 PHYSIOGRAPHY

Topography in the area is dominated by a broad, northeast trending plateau, bordered by major valleys with significant fault scarps. The plateau is poorly drained with numerous bogs and ponds. The maximum elevation is approximately 160 masl. The entire area has been extensively logged and regrowth has been slow. The main tree species present are alders, spruce, fir and birch.

6.0 HISTORY

6.1 EXPLORATION HISTORY

Although this part of Newfoundland and Labrador has been actively explored for more than a century, the Point Leamington region only experienced extensive exploration activity beginning in the early 1970s. This historical work was conducted mainly by Noranda, Rubicon, TLC Ventures and Newmarket Gold (Table 6.1). The Point Leamington Deposit was a geophysical discovery made by Noranda in 1971 (Hatch, 2004). The Deposit is in a low-lying, swampy area.

TABLE 6.1
HISTORICAL EXPLORATION IN THE POINT LEAMINGTON AREA

Year	Company	Program
1953	Newmont Mining	geological mapping
1956	NALCO	geological mapping and sampling
1967	Phelps Dodge	airborne and ground electromagnetic (“EM”) and magnetic survey
1971	Noranda	optioned the Property from NALCO and drilled 23 diamond holes totalling 4,363 m
1972	Noranda	11 diamond drill holes totalling 1,128 m
1973	Noranda	9 diamond drill holes totalling 2,915 m and metallurgical test completed on the remaining core from three drill holes
1975	Noranda	resource estimation completed
1977	Noranda	1 diamond drill hole totalling 564 m and resource estimation completed
1978	Noranda	line cutting, electromagnetic survey and geological mapping
1978	Hudson’s Bay Oil and Gas	optioned a portion of the Property from Noranda and geological mapping and sampling
1979	Hudson’s Bay Oil and Gas	geological mapping, 1,985 line-km of airborne EM and magnetic surveys, soil and stream sediment sampling, option dropped and returned the Property to Noranda
1980	Noranda	1 diamond drill hole totalling 569 m
1980	Getty Canadian Metals	optioned a portion of the Property from Noranda, airborne very-low frequency (“VLF”) survey, geological mapping and sampling
1981	Getty Canadian Metals	30 km line cutting with ground magnetic survey, detailed grid mapping, soil sampling and stream sediment sampling
1982	Getty Canadian Metals	VLF-EM ground survey, 3 diamond drill holes totalling 351 m, dropped option and returned the Property to Noranda
1983	Noranda	geochemical survey, EM and magnetic survey
1984	Noranda	basal till sampling and gravity survey and 5 diamond drill holes totalling 1,906 m
1986	Noranda	6 diamond drill holes totalling 2,131 m, 4 diamond drill holes for metallurgical testing by CANMET totalling 610 m

Year	Company	Program
1987	Noranda	3 diamond drill holes totalling 1,516 m
1988	Noranda	line cutting and EM survey, 4 diamond drill holes totalling 1,439 m
1989	Noranda	line cutting, EM survey, lake sediment survey and geological mapping, 1 diamond drill hole totalling 484 m
1997	Noranda	2 diamond drill holes totalling 1,265 m
1997	Tri-Origin Exploration	line cutting, basil till and soil geochemistry, ground geophysics, geological mapping, 9 diamond drill holes totalling 2,128 m
1998	Rubicon Minerals	acquired the Property from Noranda, geochemical sampling
1999	Rubicon Minerals	3 diamond drill holes totalling 1,213 m
1999-2000	Altius Resources	optioned the Property from Rubicon Minerals, geological mapping and geochemical sampling
2000	Altius Resource	line cutting, time domain electromagnetic ("TDEM") survey, 2 diamond drill holes totalling 759 m, dropped the option on the Property with Rubicon Minerals
2004	TLC Ventures	optioned the Property from Rubicon Minerals in February, resource estimate completed by Hatch, 5 diamond drill holes totalling 2,402 m, metallurgical test
2006-2007	TLC Ventures	purchased the Property from Rubicon Minerals in December, airborne EM and magnetic survey totalling 2,532 line-km
2008	Calibre	TLC Ventures changes name to Calibre Mining Corp., geological mapping and geochemical sampling

Table 6.1
Historical Exploration in the Point Leamington Area

6.2 HISTORICAL DRILL PROGRAMS

The historical diamond drilling completed on the Property by previous operators is summarized in this sub-section. Seven companies drilled on the Property (Table 6.2), but only four drilled in the current Mineral Resource area.

TABLE 6.2 SUMMARY OF HISTORICAL DRILLING ON POINT LEAMINGTON					
Company	**Date**	**No. of Holes**	**Total Metres**	**Core Size**	**Used in Mineral Resource Estimation**
Noranda	1971-1997	71	20,967	AQ/NQ	yes
Getty Canadian Mines	1982	3	351	?	
Tri-Origin	1997	9	2,121	NQ	
Rubicon	1999	12	3,818	NQ	yes
Altius	2000	2	759	?	
TLC Ventures	2004	5	2,402	NQ	yes
Newmarket Gold	2014	2	259	NQ2	

6.2.1 Noranda

Noranda discovered the Point Leamington Deposit in 1971 by drilling one hole to test a geophysical feature and discovered the Point Leamington Deposit, and subsequently advanced it as a potential open pit operation. In total, Noranda drilled 71 inclined core holes totalling 20,967 m the Property from 1971 to 1974, 1984, 1986-1988, and 1997. The drill hole series was PL-001 to PL-066, PL-066A and L-1 to L-4. Holes Pl-001 to PL-045 were drilled AQ size and all remaining holes were drilled NQ size.

The records are incomplete on which drilling companies completed the work. The drill records prior to 1980 do not contain any details of the methodology used during the programs. From 1980 to 1987, the drilling was completed Petro Drilling of Springdale, Newfoundland. In 1997, the drilling was completed by Lantech Drilling of Dieppe, New Brunswick.

Multiple down-hole surveys were completed, yet the methodology used for the surveys was not well documented. From 1980 to 1987 and in 1997, the downhole surveys were completed using a tropari instrument. Core logging was completed manually as typed logs, which were then converted to scanned .pdf files.

Significant intersections from the Noranda deeper drilling are:

- 7.62 m grading 4.43% Zn 6.85 g/t Au, 90.07 g/t Ag and 0.44% Cu in hole 71-08;
- 11.58 m grading 11.82% Zn, 3.84 g/t Au, 50.19 g/t Ag and 0,66% Cu in hole 73-36; and
- 12.80 m grading 6.12% Zn, 3.51 g/t Au, 97.50 g/t Ag, and 0.41% Cu in hole 73-40.

6.2.2 Rubicon Minerals

Rubicon Minerals drilled 12 inclined NQ core holes in two phases totalling 3,818 m on the Property. Drilling was completed by Logan Drilling of Springdale, Newfoundland. Multiple downhole surveys were completed, but the methodology for the surveys was not documented (Singh and Gray, 2000). Core logging was completed in LAGGER© software. The Rubicon drill program provided indications of extensions to the Point Leamington Deposit (Hatch, 2004).

Significant intersections from the Rubicon deeper drilling are:

- 21.72 m grading 5.59% Zn, 1.99 g/t Au, 34.42 g/t Ag and 0.69% Cu in hole PL-67; and

- 16.74 m grading 4.07% Zn, 1.95 g/t Au, 40.88 g/t Ag and 0.26% Cu in hole PL-68.

6.2.3 TLC Ventures

TLC Ventures drilled the last exploration holes on the Point Leamington Property. They drilled five inclined NQ core holes (PL04-073 to PL04-077) totalling 2,402 m. Drilling was completed by Petro Drilling of Springdale, Newfoundland. Downhole surveys were completed using a FlexIT© survey tool (Jones, 2005).

PL04-077, the most recent exploration hole drilled, intersected 4.67 m grading 15.05% Zn, 4.37 g/t Au, 57.88 g/t Ag and 0.36% Cu, and therefore expanded the high-grade zone. The mineralization intersected in this hole is down-plunge from the historic Mineral Resources, which may therefore be open for expansion with more drilling.

Hole PL04-073, drilled approximately 275 m along strike from the Point Leamington Deposit, intersected 3.9 m grading 5.18% Zn, 1.65 g/t Au, 33.1 g/t Ag and 0.27% Cu. This area is largely untested at depth and additional drilling may be warranted in the future. The Point Leamington Project also has potential to host additional deposits along strike from the Deposit.

6.2.4 Newmarket Gold

Newmarket completed two diamond drill holes totalling 259 metres in 2014, in order to collect material to make a composite sample for additional metallurgical testwork. Hole PL14-078 totalled 116 m and PL14-079 totalled 143 m, with both intersecting approximately 40 m of massive sulphides in previously defined Mineral Resource areas. A 150 kg metallurgical composite was created from 81 coarse rejects from the 2014 core, each of which returned >4% ZnEq.

6.3 HISTORICAL MINERAL RESOURCE ESTIMATES

Four historical Mineral Resource Estimates have been completed for the Point Leamington Property (Table 6.3): two by Noranda in 1975 and 1978; one by TLC Ventures Inc. (Hatch, 2004); and one by Raystar Capital Inc. (Tetra Tech, 2013). These Mineral Resource Estimates are historical resources and have not been verified by a Qualified Person as required by NI 43-101, and should not be relied upon. A Mineral Resource Estimate is presented in Section 14 of this Technical Report.

TABLE 6.3
SUMMARY OF HISTORICAL MINERAL RESOURCE ESTIMATES OF POINT LEAMINGTON

Year	Company	Cut-off	Specific Gravity	Class	Tonnes	Zn (%)	Cu (%)	Au (g/t)	Ag (g/t)	Pb (%)	ZnEq (%)	Methodology
1975	Noranda	N/A	N/A	Inferred	12,500,000	1.9	0.48	0.90	20.9	-		-
1978	Noranda	6% ZnEq	4.00	Inferred	1,490,566	7.3	0.43	2.25	54.7	-		Long Section Polygonal
2004	TLC Ventures	2% Zn	3.03	Inferred	3,500,000	3.2	0.28	1.37	25.9	-		Ordinary Kriging
2013	Raystar Capital	4% ZnEq	N/A	Inferred	14,093,000	1.9	0.42	1.07	17.1	0.02	1.91	Ordinary Kriging

It should be noted that the preceding resource estimates are historical in nature and, as such, are based on prior data and reports prepared by previous operators. The work necessary to verify the classification of the historical mineral resource estimates has not been completed and the historical resource estimates therefore, cannot be treated as NI 43-101 defined Mineral Resources verified by a Qualified Person. The historical estimates should not be relied upon and there can be no assurance that any of the historical mineral resources, in whole or in part, will ever become economically viable.

The historical mineral resource estimate uses the term "inferred mineral resources", which is a term set forth under CIM Estimation of Mineral Resources and Mineral Reserves. Even though the historical mineral resource was calculated prior to updates to CIM in 2014, the Company considers the historical mineral resource estimate as relevant as it represents a key target at the Point Leamington Property. The historical mineral resource estimate was determined using data from historical drill hole assays and calculated using capped outlier raw assays, 3.0 m composites, ordinary kriging to estimate grades in 10 m x 10 m x 10 m blocks and a 4% ZnEq resource cut-off for reporting assuming an underground only mineral resource..

6.4 PAST PRODUCTION

The Point Leamington Deposit has never been mined.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGY

The Point Leamington Deposit lies within the accreted Cambrian-Ordovician, tectono-stratigraphic Dunnage Zone of the Newfoundland Appalachians (Figure 7.1) (Williams, 1978). The Dunnage Zone consists of ophiolites and thick sequences of volcanic and sub-volcanic rocks, and their sedimentary equivalents. These rocks are mainly of island arc–back arc affinity (Swinden et al., 1990), though some are of non-arc affinity (MacLachlan, 1998).

The Dunnage Zone is subdivided into the northwestern Notre Dame and southeastern Exploits Subzones, which are separated by the structural break known as the Red Indian Line (Williams et al., 1988). The Point Leamington Deposit occurs within the northern part of the Exploits Subzone.

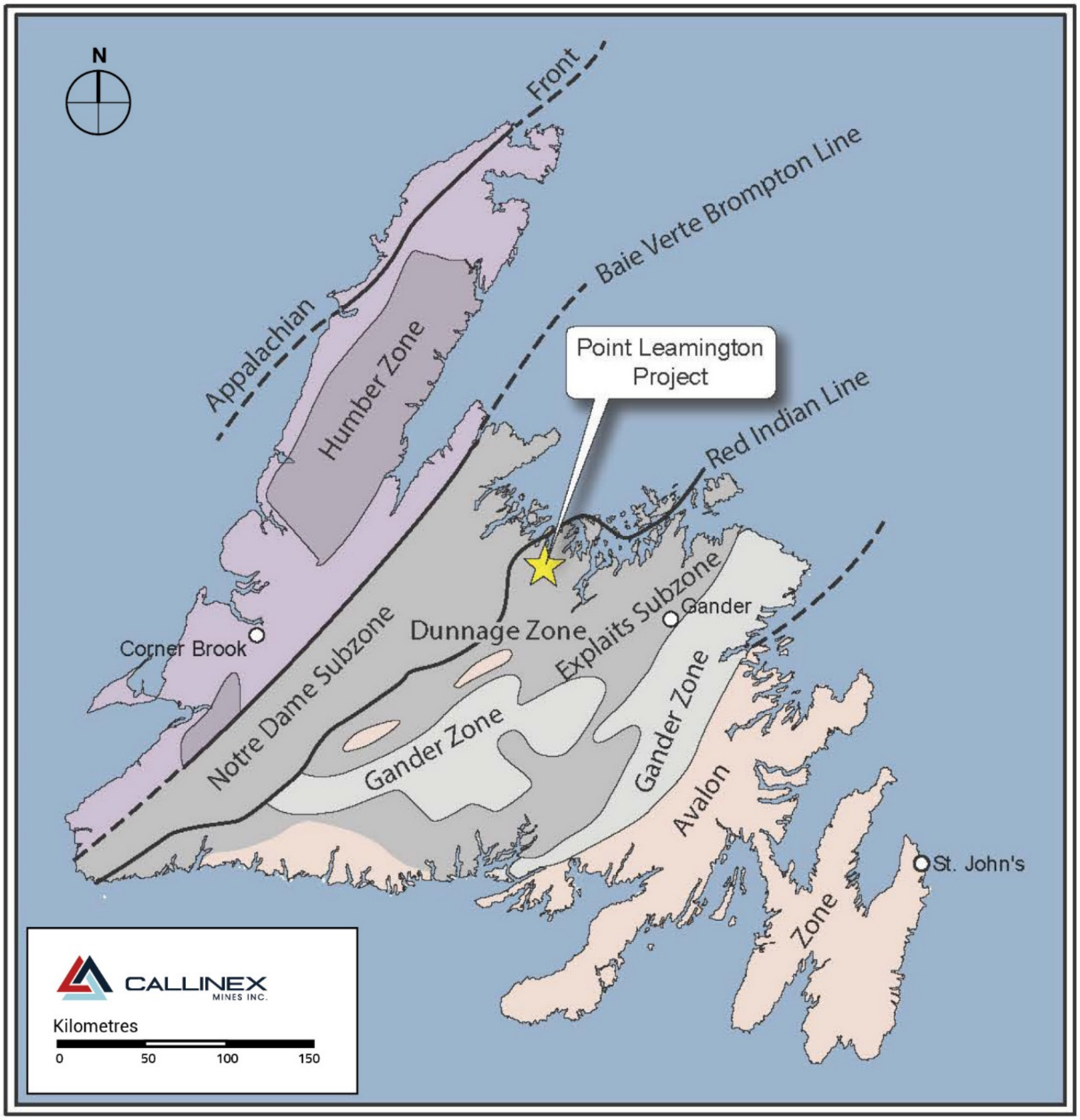
The northern Exploits Subzone is subdivided into the Wild Bight Group and the Badger Group (Dean, 1977). The Wild Bight group consists of volcanic and sedimentary rocks of early Ordovician to mid-Ordovician age. The Badger Group consists of mid-Ordovician to early Silurian shale-turbidite sequences (MacLachlan, 1998).

The Wild Bight Group lies within the broad north-south trending Seal Bay Anticline (O'Brien, 2001). MacLachlan and Dunning (1998) and O'Brien (2001) further subdivided the Wild Bight Group into the lower Tremadoc-Early Arenig section and the upper Late Arenig-Early Llanvirn Omega Point section (Figure 7.2).

The lower Wild Bight Group section consists of the Glover's Harbour Formation and the Seal Bay Brook Formation. The Glover's Harbour Formation hosts the Point Leamington Deposit and consists of a bimodal tholeiitic volcanic suite (MacLachlan et al., 2001). This unit occurs in several geographically separate areas and is always fault-bounded, except for one locality where it is in disconformable contact with the Omega Point Formation of the upper Wild Bight section (O'Brien, 2001). The Glover's Harbour Formation consists of pillowed and brecciated mafic flows with minor chert and argillite, and quartz and plagioclase phyric felsic flows and domes interbedded with felsic to intermediate pyroclastic and volcaniclastic rocks. The Seal Bay Brook Formation may be correlative with the Glover's Harbour Formation. The Seal Bay Brook Formation consists of basalt flows and mixed mafic-felsic volcanic breccia, felsic flows and tuffs.

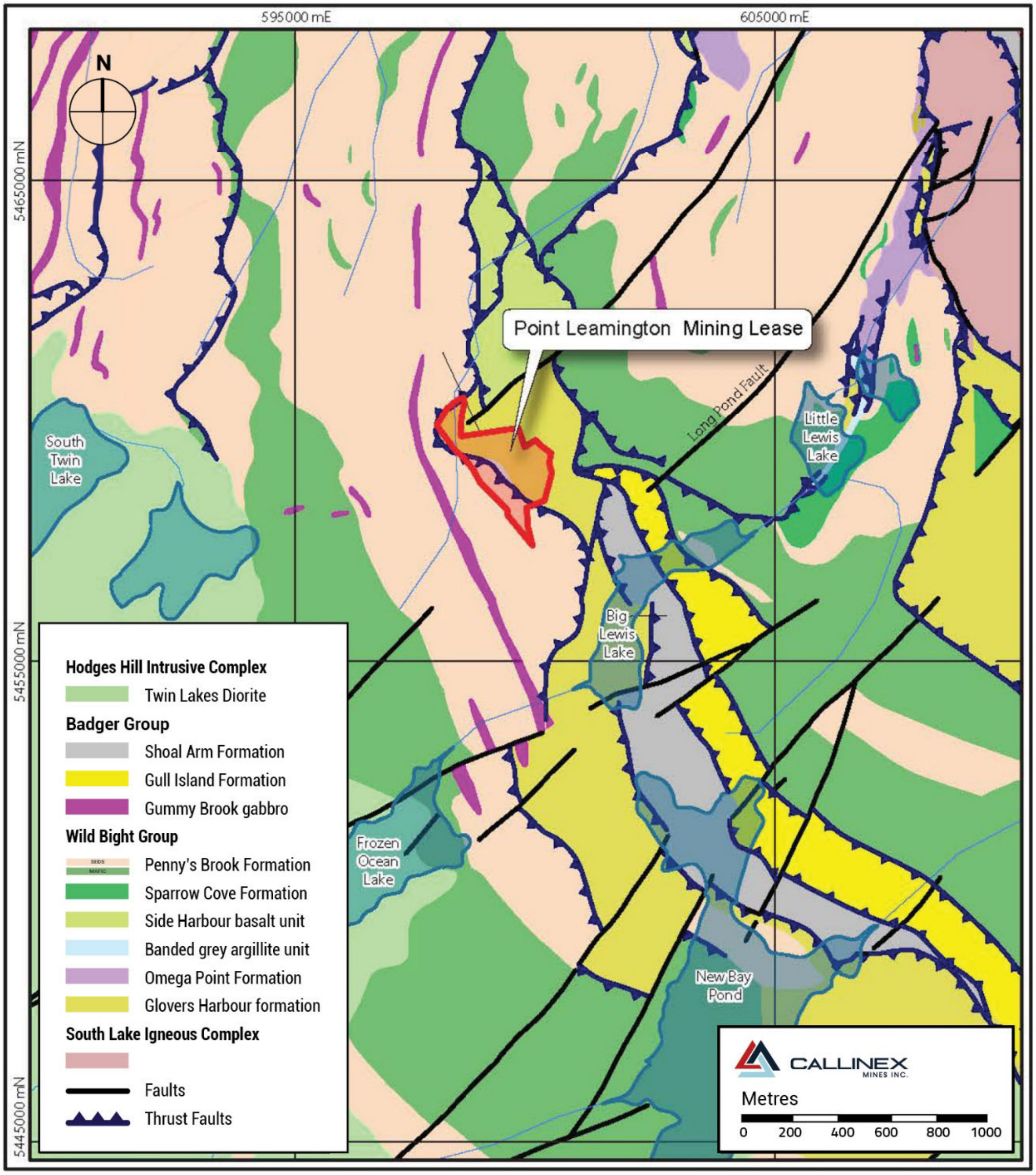
The upper Wild Bight Group section consists of the Omega Point Formation and the Penny's Brook Formation (MacLachlan et al., 2001). The Omega Point Formation consists of thinly bedded, grey to green greywacke and argillite with additional components of chert, shale, and minor iron formation. The Penny's Brook Formation is made up of thinly to thickly bedded green tuffaceous greywacke and agglomerate, with massive to graded grits and conglomerates and local laminated chert and argillite. Discrete lenses of calc-alkaline pillowed, brecciated, and pyroclastic mafic volcanic rocks are common throughout the formation.

FIGURE 7.1 GEOTECTONIC SETTING OF POINT LEAMINGTON



Source: *Callinex (2020)*

FIGURE 7.2 REGIONAL GEOLOGIC SETTING OF POINT LEAMINGTON



Source: *Callinex (2020)*

The rocks in the Point Leamington Deposit region are disposed in a complex arcuate shaped thrust stack, which in the southwest dips in the west and in the southeast dips in the east (O'Brien, 2001). Numerous thrust faults are localized along rock unit boundaries, suggesting re-activation by later compression of early normal faults that were related to extension and volcanism, particularly those bounding the Glover's Harbour Formation (MacLachlan et al., 2001). Faulting in this early phase, D1, is interpreted to have been oriented northeast-southwest. The main phase of compression, D2, created northeast-trending regional folds and faults, locally transposing D1 structures. Minor deformation occurred later.

Several large, northeast trending, primarily dextral faults, such as the Long Pond Fault, occur throughout the region. These faults can be seen to offset stratigraphy on the order of hundreds of metres and are obvious on airborne magnetic geophysical maps.

7.2 PROPERTY GEOLOGY

The Point Leamington Deposit is hosted within the Glover's Harbour Formation of the Wild Bight Group (Figure 7.3) (MacLachlan et al., 2001; O'Brien, 2001). This volcanic-dominated formation is in fault contact with the overlying Penny's Harbour Formation, which consists of thickly-bedded coarse-grained volcaniclastic rocks, chert, argillite and mafic pillowed flows and pyroclastic units (MacLachlan et al., 2001) in the Point Leamington area. The underlying section is dominated by mafic volcanic rocks, possibly of the Glover's Harbour Formation, but also units (magnetic) of the Seal Bay Brook Formation (MacLachlan et al., 2001). These rocks define a strong magnetic high traceable to Seal Bay in the north and to New Bay Pond in the southeast (Swinden and Jenner, 1992).

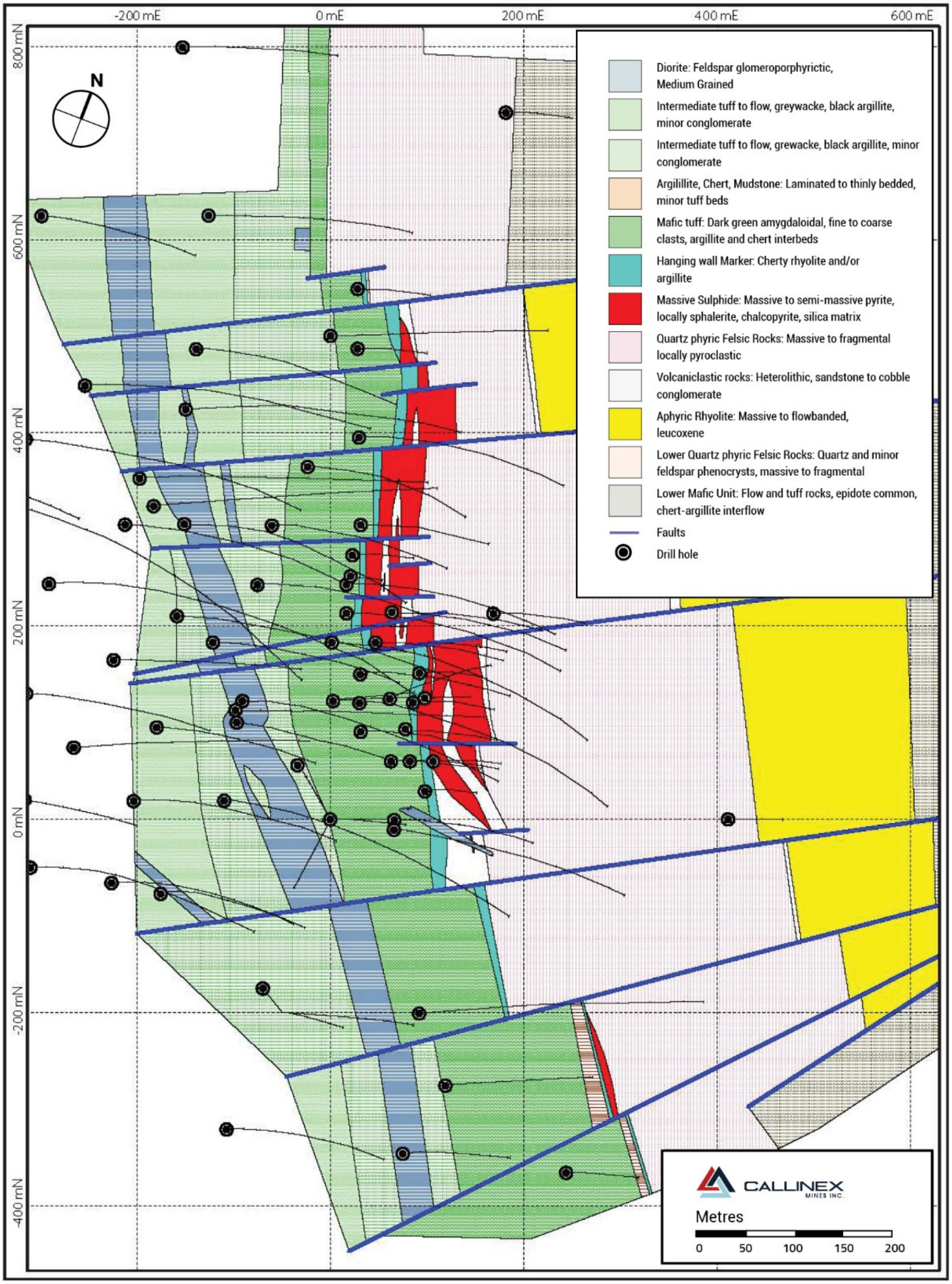
7.2.1 Stratigraphy

The geologic section on the Point Leamington Property can be divided into five stratigraphic units and an intrusive element (Jones, 2005). These six main subdivisions in the section, roughly ordered from structurally highest to lowest unit, are as follows (Figure 7.4):

1. Hanging wall clastic rocks, intermediate tuffs/flows;
2. Hanging wall mafic pyroclastic rocks and flows;
3. Marker chert and rhyolite-argillite, massive sulphides and interbedded volcaniclastics;
4. Footwall felsic rocks, consisting of quartz phyric flows and fragmental rocks, aphyric rhyolite, lower phyric felsic and interbedded volcaniclastic units;
5. Lower mafic unit; and
6. Intrusive units.

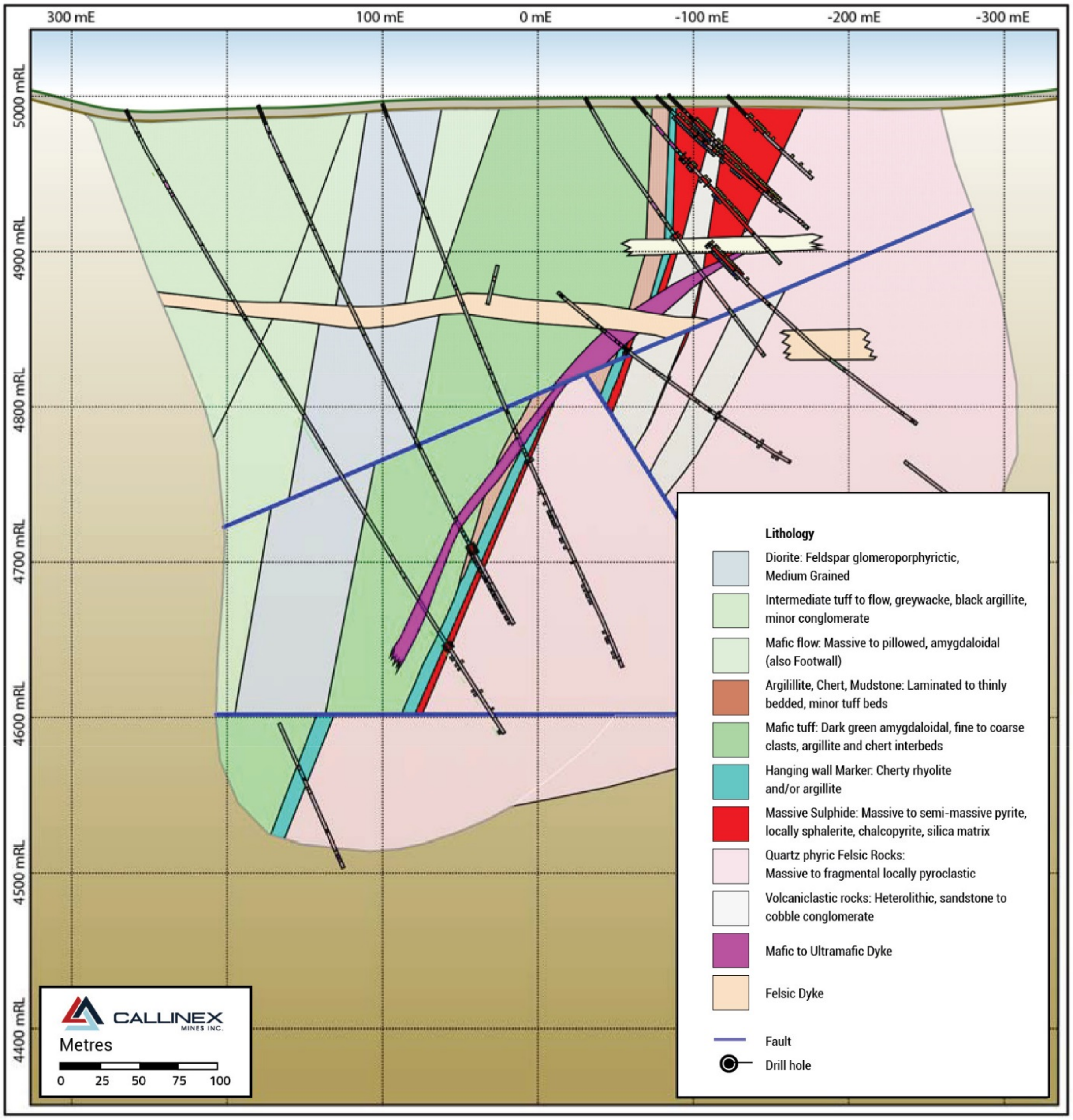
The Marker chert unit is the immediate hanging wall of the massive sulphide mineralization in the Point Leamington Deposit.

FIGURE 7.3 PROPERTY GEOLOGY PLAN VIEW OF POINT LEAMINGTON



Source: *Callinex (2020)*

FIGURE 7.4 GEOLOGICAL CROSS SECTION



Source: *Callinex (2020)*

7.2.1.1 Hanging Wall Clastic and Intermediate Volcanic Rocks

The clastic rocks include greywacke, black argillite, and conglomerate, mixed with mafic- intermediate pyroclastic rocks and minor volcanic flows. The intermediate volcanics consist of tuff and minor amygdaloidal flows, interbedded with finer grained sediment including minor light green chert. Compositions range from andesite to dacite.

7.2.1.2 Hanging Wall Mafic Volcanic Rocks

The hanging wall mafic volcanics consists of coarse mafic tuff units, with interlayered flows in the upper half of the section. The pyroclastic layers are predominantly amygdaloidal and locally vitric rocks, consisting of mostly mixed tuff, lapilli tuff, and agglomerate, but including some very coarse agglomerate layers. Sections have very well-defined bedding in the tuff layers and graded bedding indicates strata are upright. There are highly variable widths of interspersed amygdaloidal mafic flows, which are pillowed, brecciated, and massive. The mafic rocks are commonly chloritic, but also contain weak epidote and calcite alteration, and very minimal sulphides.

Interspersed with the mafic rocks are sections of finer-grained mafic tuff, with chert interbeds, and local argillaceous sections, commonly with disseminated to massive pyrite and (or) pyrrhotite in beds up to 5 cm thick.

7.2.1.3 Marker Units, Massive Sulphide Horizon

This unit is primarily a “cherty rhyolite” to argillite marker unit, which locally may be massive chert or siliceous tuff. Jasper-hematite alteration is common, as is sulphidic matrix in brecciated sections. Thickness ranges from a few centimetres to tens of metres and may include interlayers of fine-grained mafic tuff to lapilli tuff. Overall, this unit forms a useful marker horizon, because it is widespread and continuous on the Property. However, this unit is not always present, even where massive sulphide occurs. This marker unit normally forms a conformable contact with the underlying massive sulphide, but the contact is commonly obscured by dykes.

The main massive sulphide horizon on the Property has a very consistent stratigraphic position, immediately below, or within a few metres of the Marker Chert. There appears to be lateral variation on the horizon and the Main Zone may, in fact, consist of a series of massive sulphide lenses, interfingering with volcaniclastic lenses, chert layers and footwall felsic flows or pyroclastic units. Earlier workers pointed out metal zoning within the Deposit. The zonation consists of a lower-grade upper portion or lens, and a lower high-grade zinc-gold section (Walker and Collins, 1988). These two zones are commonly separated by a volcaniclastic unit, but also can be distinguished where the sulphide body consists of one massive lens.

7.2.1.4 Footwall Felsic Volcanic Rocks

This unit is the uppermost footwall rock encountered in all the drill holes at the Point Leamington Deposit. The section varies from 100 m to 250 m in true thickness. The rock is a quartz-phyric, massive to brecciated to fragmental (pyroclastic?) intermediate or felsic volcanic rock. Fragmental texture is common, but it is generally not obvious whether this is a pyroclastic rock or flow breccia or massive to brecciated dome. The rock has a generally aphanitic matrix and tan to grey colour.

Quartz phenocrysts compose up to 8% or 10% of the rock and are up to 10 mm in diameter, but 2% to 5% content and 2 mm to 5 mm in diameter are typical. The phenocrysts are rounded, but do not appear to be amygdales. There are minor feldspar phenocrysts locally, but these are uncommon. The rock is characterized by fine-grained leucoxene, which is ubiquitous and comprises up to 3% of the rock.

Alteration is variable and generally consists of weak to strong sericite-chlorite-quartz mineral assemblages, particularly in spatial association with the Main Zone. Pyrite content increases concomitantly with alteration, up to 20%, locally as disseminations and breccia filling. Quartz and (or) chalcedony veining is common, also as breccia-fill locally, and contains blebby to disseminated pyrite, sphalerite and chalcopyrite. Alteration is commonly proportional to the amount of fracturing present. Strong bleaching is also present, related to silica-sericite alteration and destruction of chlorite. Hematite and magnetite alteration occur in apparently less altered rock, possibly peripheral to the main Deposit area.

Within the footwall quartz-phyric section, there are volcaniclastic interbeds characterized by clasts of quartz phyric felsic rock, aphyric rhyolite, strongly chlorite altered rock, and quartz vein. However, rare small clasts of massive pyrite occur. Matrix- and clast-supported volcaniclastic beds occur, commonly with disseminated pyrite in the rock matrix. Narrow massive pyrite beds occur within these volcaniclastic units in a few localities associated with relatively strong sericite and chlorite alteration.

The footwall mafic flow consists of a couple of 2 m to 5 m thick flows, that occur in the lower part of the quartz-phyric to upper aphyric rhyolite section. The mafic flow is grey, fine-grained, amygdaloidal, “blobby” pillow breccia with bleached rims on breccia clasts. Locally, the texture appears to be peperitic, as the contact intermingles on small scale with adjacent aphyric rhyolite.

Aphyric rhyolite underlies the quartz-phyric footwall unit. The rock is massive and fine-grained, with a light grey to tan colour, and ubiquitous, finely disseminated leucoxene. This unit is characterized by a lack of quartz phenocrysts and, locally, presence of very sparse feldspar phenocrysts. Flow banding and hyaloclastite textures are common, particularly in the upper part. Fracturing is prevalent, with fractures filled by chlorite and pyrite, and locally forming curvilinear patterns marked by weak chlorite and silica alteration of the host rock. The aphyric rhyolite is commonly medium to light-green in colour, possibly due to weak, pervasive chlorite-sericite alteration. True thicknesses range from less than 20 m to greater than 150 m. This variability in thickness may be, in part, due to faulting.

Alteration in the aphyric rhyolite is mainly chlorite and quartz, focused in zones of strong brecciation. Pyrite is very common in altered sections, primarily as disseminations in the host rock and also as breccia and fracture fillings. Arsenopyrite and sphalerite are also common, in breccia matrices and fractures. Strong massive chlorite-pyrite alteration is observed at the upper contact of the aphyric rhyolite in the north half of the Deposit area. A zone of intense, texturally destructive silica alteration occurs above the basal contact of the aphyric rhyolite.

Minor volcaniclastic beds have been recorded within the aphyric rhyolite section. These beds range from thick-bedded sandstone and matrix supported conglomerate to thin, clast-supported conglomerate beds. Clast composition is moderately heterolithic, with aphyric rhyolite, quartz-phyric rhyolite, massive chlorite and very minor pyrite and pyrite-arsenopyrite sulphidic (though not massive sulphide) clasts. Clasts and matrix are commonly sericite and silica altered, with disseminated pyrite concentrated in the matrix.

Underlying the aphyric rhyolite, there is another quartz and feldspar phyric felsic unit. This unit is highly variable in appearance. The unit is generally massive, but is locally fragmental with coarse quartz phenocrysts and ghost-like feldspar phenocrysts. This rock is observed in drill holes below the northern-half of the Deposit and has a maximum thickness of 32 m. Sericite-chlorite alteration is weak to moderate overall, but stringer chlorite-pyrite-chalcopyrite alteration and mineralization is present.

7.2.1.5 Lower Mafic Unit

The Lower Mafic Unit is the lowermost volcanic unit observed on the Property. The unit varies from calcite and chlorite amygdaloidal, fine- to medium-grained massive and brecciated flows to pyroclastic units. The rock is dark-green in colour with feldspar prevalent in the groundmass of the massive flows and moderate chlorite-epidote alteration. Argillite and chert, and locally massive pyrite, occur as interflow beds and in pillow interstices. This rock is commonly in fault contact with the overlying units and may occur below a thrust fault.

7.2.1.6 Intrusive Units

The intrusive units on the Property are primarily dykes, which are abundant throughout the geologic section. Earlier dykes show stratigraphic concordance, especially the hanging wall diorite. These dykes are also commonly pervasively altered by carbonate, chlorite, and epidote. Some apparently later dykes show much steeper dip and cross-cut strike, such as the red feldspar porphyry dyke and the magnetic feldspar porphyry dykes. These later dykes are less altered and deformed. Hematite and calcite alteration are common. Veins within these later dykes tend to be quartz or quartz-calcite, and are rarely mineralized.

The diorite unit, occurring in the hanging wall section, has a feldspar glomeroporphyritic to medium-grained ophitic texture (diabasic?), with randomly oriented feldspar laths. The unit is generally weakly sausseritized with chlorite alteration. The diorite is a thick, anastomosing unit that is sub-parallel to stratigraphy, strikes roughly grid north-south, and is observed throughout the strike extent of the Deposit. The diorite dyke is cut by fine-grained, weakly porphyritic mafic dykes and chloritic to serpentinized mafic to ultramafic dykes.

The ultramafic dykes are generally fine-grained and have strong chlorite-serpentine alteration, with thick, serpentinized fracture envelopes. Massive dykes commonly have a “pseudo-cumulate” texture in the core, which consists of ovoids with serpentinized rims, possibly a weak shear texture. These dykes are generally strongly magnetic and have moderate to strong pervasive carbonate alteration.

In addition, mafic-ultramafic dyke complexes are very common and consist of intermingling dykes, with chloritic phenocrysts in fine-grained mafic sections and serpentinized sections too. These complexes are commonly weakly magnetic in specific sections.

The mafic dykes are fine- grained, medium- to dark-green in colour, weakly altered, have chloritic and locally feldspar phenocrysts, and are generally not magnetic. The mafic dykes cross cut the diorite unit and may or may not be equivalent to the mafic part of the mafic-ultramafic complex dykes. This unit is fine-grained, light-to medium-green in colour, commonly with pervasive calcite alteration, and sporadic hematite and magnetite contents. This unit is recorded in drill holes PL04-073 and PL04-074 and primarily on Section 200S. These dykes appear to be relatively late in the overall sequence. Some of these dykes may be related to the red feldspar porphyry felsic dyke.

The red, feldspar porphyry felsic dykes have darkly coloured, magnetic chill margins with disseminated feldspar phenocrysts, that pass into light-red coloured and fine-grained feldspar porphyritic and glomeroporphyritic centres. Minor mafic phenocrysts occur and leucoxene is common throughout the groundmass. The dyke commonly contains scattered sericite- and (or) chlorite-altered xenoliths, and possibly weak potassium feldspar alteration in the groundmass. These dykes generally strike at high-angle to the stratigraphy and appear to be emplaced relatively late in the overall geological sequence.

A set of generally narrow dykes have a light yellowish grey to pale yellow colour and are fine grained with tiny quartz and feldspar phenocrysts or amygdales. Leucoxene is disseminated throughout and pervasive calcite alteration is common. The narrow dykes are associated with brittle faulting and cut the red feldspar porphyritic dykes, making them the youngest unit in the geological section.

7.2.2 Alteration

Significant zones of chlorite-sericite-pyrite alteration underlie the Main Zone of the Point Leamington Deposit. There is an extensive zone of strong chlorite-sericite footwall alteration at the upper levels of the Deposit, centred on the Central Fault. Significant footwall alteration also occurs underlying the mineralization from Section 025N to Section 100N. Similar alteration is found within the footwall stratigraphy on section 350N. The footwall alteration there is highlighted by a 2 m to 3 m wide section of massive chlorite-pyrite alteration in drill hole PL-055 at the upper contact of the aphyric rhyolite.

Hematite alteration occurs at several localities around the Main and South Zone deposits. There is a prevalence of hematite alteration (and some magnetite) of the footwall and hanging wall rocks at the north end of the Deposit. The hematite tends to be pervasively distributed in the footwall, but also occurs in pillow or agglomerate interstices in the hanging wall mafic rock section. Hematite also occurs in various stratigraphic units overlying the Deposit, more or less covering the overall strike. To the south, hematite occurs locally in the quartz-phyric underlying the South Zone of the Deposit.

7.2.3 Structure

The Deposit faces west, strikes approximately 160°, and dips an average of 70° west. The dips appear to be flatter near the South Zone, where hole-to-hole projection of identifiable units reveals dips to be as shallow as 45°. The rocks in drill core generally do not appear to be deformed. Little evidence of folding exists in the rocks, other than some possible drag folds on shears. Faults are apparent on most sections, where simple dip projections between drill holes are too incongruous. Evidence of reverse or thrust faulting (O'Brien, 2001) is minimal, but may simply be due to lack of recognition. The reverse faults would likely be west-dipping, sub-parallel to the stratigraphy and, as such, are difficult to recognize on sections and plans.

Several subvertical to north-dipping faults, broadly perpendicular to the Deposit strike, offset the stratigraphy in a sinistral sense by up to 100 m. The main faults are called the North, Central and South faults, although numerous additional similar faults occur throughout the strike-length of the Deposit and beyond. In plan, these faults apparently offset stratigraphy sinistrally and dextrally, but true offset may be more vertical than horizontal. The large number of faults creates a complex array of jogs in the Deposit and obscures determination of whether the massive sulphide body is a continuous zone or a series of lenses.

Interpretation of the drill sections has led to recognition of flat-lying faults within the stratigraphy (Tetra Tech, 2013). The main fault of this type is the 4600 Fault, in reference to its approximate elevation. The 4600 Fault underlies the length of the Deposit, and generally offsets stratigraphy in a top-side eastwards manner, on the order of 75 m to 150 m. The fault gives the appearance of thickening of units in section, such as the aphyric rhyolite as interpreted on sections 050S, 350N, and 450N. A similar flat-lying fault may be present at about the 4800 to 4850 Level (Tetra Tech, 2013). The relative timing of the flat-lying faults appears to be late and they may post-date the numerous steep, east-west faults that cut the Deposit. A connection to the regional thrust faulting in the area is likely.

7.3 MINERALIZATION

The mineralization has been traced in drilling along a 500 m strike length and from surface to a vertical depth of 350 m. As summarized by Hughes (2014), the massive sulphide mineralization consists of massive very fine-grained pyrite and angular clasts of very fine-grained pyrite. Pyrite composes from 75% to 90% of the massive sulphide body. Patchy aggregates and wispy lenses of red-brown sphalerite occur throughout and average 2% to 5%, but can be locally up to 25%. Minor chalcopyrite occurs locally. Trace sulphide and allied phases are pyrrhotite, covellite, galena, chalcocite, tetrahedrite, stannite, jamesonite, covellite and native copper (Hatch, 2004). The massive sulphide body is weakly magnetic, consistent with the presence of pyrrhotite. The major gangue mineral is quartz. Approaching the footwall contact, the mineralization in drill core becomes more semi-massive with increased void space in-filled with quartz and chlorite.

Lateral variation may be represented in drilling within the Main Zone of the Deposit, where massive sulphide interfingers with chert horizons, volcaniclastic lenses and footwall fragmental rhyolite as suggested by downhole lithological changes in the 2014 drilling. Base metal zonation is not evident within the massive sulphide portion of the Deposit. Instead, the mineralization is characterized by semi-continuous Zn mineralization associated with fairly uniform, but locally spiky Cu mineralization. Sizeable Zn-rich or Cu-rich zones are generally not present, but an area of higher-grade Zn with erratic Cu has been identified towards the south end of the Main Zone (Stowe, 1988; Hughes 2014). Higher-grade Au does appear to be concentrated closer to the footwall contact of the massive sulphide body within the higher-grade Zn area of the central Main Zone. Metal contents within massive sulphide decrease body decrease towards its margins due to the presence of intercalated volcaniclastic lenses of breccia and cross-cutting mafic and ultramafic dykes.

Stringer mineralization occurs in the Deposit footwall rocks, particularly immediately below the massive sulphide zones. Stringer mineralization consists of pyrite and minor sphalerite, arsenopyrite and chalcopyrite. Pyrite commonly occurs up to 15% or 20% as disseminations and fracture fillings, in chalcedony and quartz veinlets, and lenses and small masses. Sphalerite occurs in pyrite stringers, chalcedony veinlets and breccia matrix in the footwall, but rarely exceeds trace amounts. Chalcopyrite is less common and primarily restricted to veinlets with quartz and pyrite. Arsenopyrite is nearly as common as sphalerite and occurs in narrow shears and sulphidic breccias. Sulphide mineralization occurs variably in the footwall felsic section, as far down-section as the Lower Mafic unit.

Sulphide mineralization is uncommon in the hanging wall rocks to the Main Zone. Disseminated pyrite and, locally, arsenopyrite occur in shears associated with quartz-carbonate veining. Minor disseminated to massive pyrite and (or) pyrrhotite mineralization occurs in argillite-chert-tuff sections. Strong arsenopyrite mineralization also occurs locally in these units. Arsenopyrite also occurs in quartz-pyrite shears cross-cutting the hanging wall diorite.

8.0 DEPOSIT TYPES

8.1 CLASSIFICATION

The style of mineralization, alteration, host rock and tectonism of the Point Leamington Deposit indicates that it is a Kuroko-type VMS deposit hosted in Cambro-Ordovician age rocks. Kuroko-type VMS deposits occur in bimodal felsic-dominated calc-alkaline volcanic sequences of Archean to Paleogene (Tertiary) age in continental margin arc areas (Sawkins, 1976; Franklin, 2007) (Figure 8.1). Additional examples of Kuroko-type VMS deposits are Buchans (Newfoundland), Bathurst (New Brunswick), Myra Falls (British Columbia), Kidd Creek (Ontario), Noranda (Québec) and Kuroko (Japan) (Thurlow, 1981; Lefebure et al., 1995).

The Kuroko-type VMS deposits are characterized by the following geologic elements:

- **Geological Setting**
  Island arc; typically, in a local extensional setting or rift environment within, or perhaps behind, an oceanic or continental margin arc Marine volcanism; commonly during a period of more felsic volcanism in an andesite (or basalt) dominated succession; locally associated with fine-grained marine sediments; also associated with faults or prominent fractures.

- **Host Rock Types**
  Submarine volcanic arc rocks: rhyolite, dacite associated with andesite or basalt; less commonly, in mafic alkaline arc successions; associated epiclastic deposits and minor shale or sandstone; commonly in close proximity to felsic intrusive rocks. Ore horizon grades laterally and vertically into thin chert or sediment layers called informally “exhalites”.

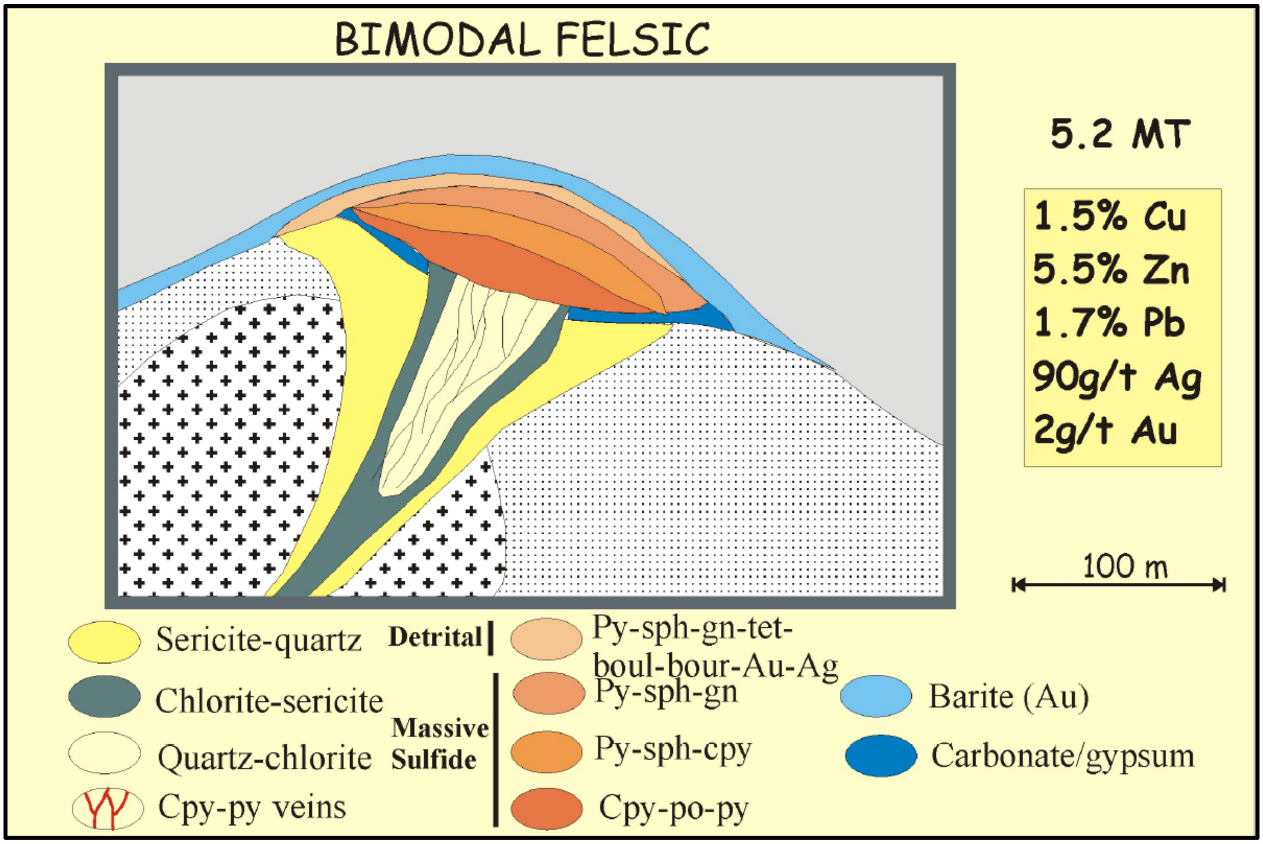
- **Deposit Forms**
  Concordant massive to banded sulphide lens, which is typically metres to tens of metres thick and tens to hundreds of metres in horizontal dimension; there can be a peripheral apron of "clastic" massive sulphides.

- **Zonation and Ore Mineralogy**
  The Kuroko-type VMS deposits consist of two zones, each with distinctive mineralogy: 1) Upper massive zone: pyrite, sphalerite, galena, chalcopyrite, pyrrhotite, tetrahedrite- tennantite, bornite, and arsenopyrite; and 2) Lower massive zone: pyrite, chalcopyrite, sphalerite, pyrrhotite, and magnetite.

- **Alteration**
  Footwall alteration pipes are commonly zoned from the core with quartz, sericite or chlorite and a margin of clay minerals, albite and carbonate (siderite or ankerite).

VMS deposits typically consist of massive to semi-massive sulphide deposits hosted in submarine mafic-felsic volcanic rock sequences formed during periods of rifting and volcanism along volcanic arcs, fore arcs and in back-arc basins (Franklin et al., 2005). The deposits form at or near the seafloor by reaction of metal-rich hydrothermal fluids with wall rock and with seawater during volcanism (Lydon, 1988; Franklin, 2007) (Figure 8.2). Heat sources driving the hydrothermal systems are subvolvanic intrusions at depth. Collectively and globally, VMS deposits are a major source of Cu, Zn, Pb, Ag and Au (Galley et al., 2007).

FIGURE 8.1 SCHEMATIC CROSS SECTION THROUGH A KUROKO-TYPE VMS DEPOSIT



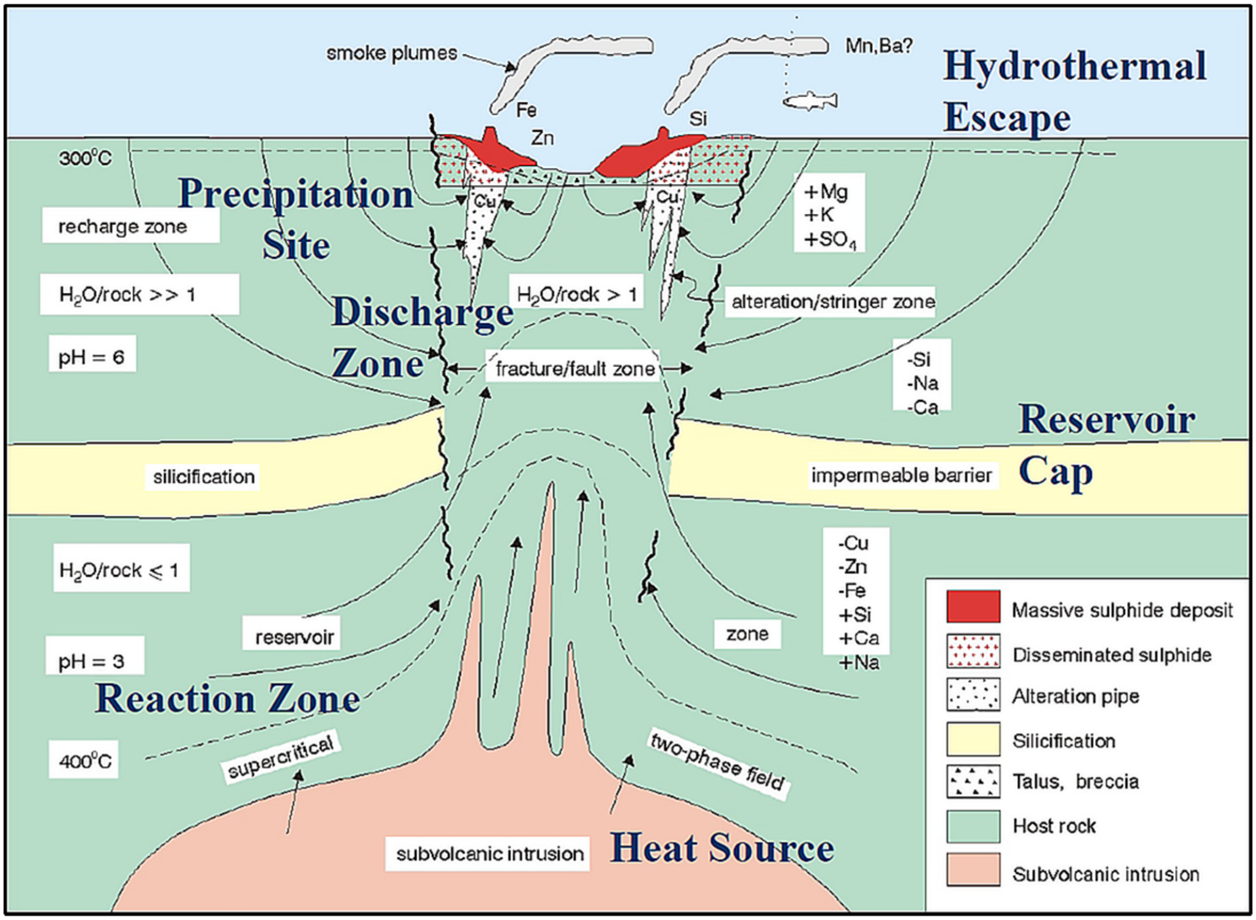
Source: *Franklin (2007)*

8.2 VMS DEPOSIT FORMATION

VMS deposits typically consist of massive to semi-massive sulphide deposits hosted in submarine mafic-felsic volcanic rock sequences formed during periods of rifting and volcanism along volcanic arcs, fore-arcs and in back-arc basins (Franklin et al., 2005). The deposits form at or near the seafloor by reaction of circulating, metal-rich hydrothermal fluids with wall rock and seawater during volcanism (Lydon, 1988; Franklin, 2007) (Figure 8.2). Heat sources driving the hydrothermal systems are commonly subvolvanic intrusions at depth. Collectively, VMS deposits are a major source of copper, zinc, lead, silver and gold for the world's economies (Galley et al., 2007).

Many VMS deposits occur in clusters defining a mining camp or district. Canadian examples of mining camps include Flin Flon and Snow Lake, (Manitoba), Noranda (Québec), and Bathurst (New Brunswick) (Galley et al., 2007). These clusters of deposits typically occur in linear rifts or caldera features. Regional scale alteration reflects a fluid convection system developed above subvolcanic intrusions, in the order of 5-15 km long and 1-3 km thick, and reacting with the surrounding country rocks and seawater to form hydrothermal mineral assemblages and Cu-Zn-Pb (Ag, Au) sulphide deposits (Dimroth et al., 1983; Gibson and Watkinson, 1990; Galley, 1993; Powell et al., 1993; Franklin, 2007).

FIGURE 8.2 MINERALIZATION MODEL FOR VMS DEPOSIT



Source: *Franklin (2007)*

An important component of VMS systems is the associated hydrothermal alteration, which is ultimately responsible for producing the sulphide mineralization. Alteration can also serve as a larger fingerprint for mineral exploration. VMS deposits form on or near the seafloor from the focused discharge of hot, saline, low-pH hydrothermal fluids (Galley, 1993). The result of this seawater-rock interaction at temperatures that range from approximately 140°C to >400°C is the formation of alteration zones of varying composition and size (Galley, 1993). These zones may range in size from several tens of kilometres to several tens of metres. For example, the Snow Lake mining camp is affected by a zone of silicification and bleaching >15 km long (Galley et al., 2007). Each alteration facies has a characteristic mineral assemblage and geochemical signature, which reflect the rock composition, fluid composition and temperature of rock-fluid reactions. Their close genetic and spatial relationship to VMS deposits means that alteration zones can provide effective vectors in exploration for massive sulphide mineralization.

VMS deposits in many mining camps are overprinted by the superimposed effects of metamorphism and deformation. Nevertheless, the characteristic features of the alteration zones about VMS deposits can be preserved through amphibolite facies regional metamorphism and deformation. At the Chisel Deposit (Snow Lake mining camp), for example, zones of silica and iron-magnesium metasomatism, and garnet-amphibole alteration underlie the VMS mineralization within the Chisel Sequence (Skirrow and Franklin, 1994; Bailes and Galley, 1999).

9.0 EXPLORATION

Callinex has not conducted any exploration work on the Point Leamington Property.

The last significant exploration programs on the Property were completed by Calibre Mining in 2008 (refer to Section 6) and by Newmarket in 2014 (refer to Section 6).

10.0 DRILLING

Callinex has not conducted any drilling on the Point Leamington Property.

The last two significant drill programs carried out on the Property were by Newmarket Gold in 2014 and TLC Ventures in 2004 (refer to Section 6).

11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

Callinex has not completed any sampling on the Point Leamington Property. The information in this Section is taken largely from the previous Technical Reports (Hatch, 2004; Tetra Tech, 2013), except where otherwise noted.

11.1 CORE SAMPLING

Drill core sampling on the Property has been completed by Noranda, Rubicon Minerals, TLC Ventures and Newmarket.

11.1.1 Noranda

A search of the NL Department of Natural Resources assessment files located information on the drill core sampling procedures followed by Noranda. For the 1986 drilling, drill core samples were split or sawed at Fred's Rock Shop in Springdale, NL and sent to Chemex Labs Ltd., Pasadena, NL (Walker and Collins, 1986).

11.1.2 Rubicon Minerals

There is no documentation of the core sampling procedures followed by Rubicon Minerals.

11.1.3 TLC Ventures

All drill core was logged, and samples selected and sawn on site. The 2004 drill core is stacked at the 2004 camp site, but P&E found it to be in good condition (Figures 11.1 and 11.2).

Core samples were taken from mineralized and altered zones by splitting the core along its length using a diamond blade core saw. One-half of the core was submitted to an analytical lab for analysis and the other half returned to the core box for storage.

11.1.4 Newmarket

All drill core was logged, with selected mineralized intervals assigned sample intervals and cut using a diamond blade core saw on-site (Hughes, 2014). The core from the 2014 drill program is cross stacked on the Property at 599,392 m E and 5,458,803 m N (NAD 83 Zone 21).

11.2 SAMPLE PREPARATION, ANALYTICAL PROCEDURES AND SECURITY

11.2.1 Noranda

There are no records on sample preparation or security for the Noranda diamond drill programs. Prior to 1984, there is no documentation on the analytical procedures used by Noranda. All samples in 1984 and again in 1997 were submitted to the Noranda Assay Laboratory in

Bathurst, New Brunswick. There is no documentation as to the analytical procedure completed at the Noranda facility.

In 1986 and 1987, samples were submitted for preparation to the Chemex Preparation facility in Pasadena, Newfoundland, and the pulps were shipped to ALS Chemex in North Vancouver, B.C. for analysis. All gold and silver assays were analyzed by the fire assay method. The base metals were assayed by atomic absorption in Chemex's main assay laboratory in Vancouver, B.C. (Walker and Collins, 1986).

FIGURE 11.1 TLC DRILL CORE ON SITE AT POINT LEAMINGTON PROPERTY

Source: *P&E (2020)*

FIGURE 11.2 TLC VENTURES POINT LEAMINGTON DRILL CORE

Source: *Callinex (2020)*

11.2.2 Rubicon Minerals

There are no records on sample preparation or security for the diamond drill program (Singh and Gray, 2000). As for analyses, fire assay (“FA”) with atomic absorption (“AA”) finish for gold and silver and inductively coupled plasma (“ICP”) for base metals were completed by Eastern Analytical in Springdale, Newfoundland. Check analyses were done at ALS Chemex in North Vancouver, B.C.

Eastern Analytical is not a certificated analytical facility, nor was it certified during the time that program was run. ALS Chemex was a certified laboratory at the time this program was completed. ALS Chemex has since changed its name to ALS Ltd.

11.2.3 TLC Ventures

All samples were submitted to Eastern Analytical of Springdale, Newfoundland. Eastern Analytical is not a certificated analytical facility, nor was it certified at the time of that program.

The following list summarizes the procedure used for analysis at Eastern Analytical:

- Samples are organized and labelled when they enter the lab.
- Samples were placed in drying ovens until completely dry.
- Dry samples are crushed in a Rhino Jaw Crusher to approximately 75% -10 mesh.
- The sample is rifle split until approximately 250 to 300 g of material remains.
- The course reject is bagged and stored.
- The 250 g to 300 g split is pulverized using a ring mill to approximately 98% -150 mesh.
- A 30 g sample is weighed into an earthen crucible containing lead oxide fluxes.
- Silver nitrate is then added and the sample is fused in a FA oven to obtain a liquid, which is poured into a mold to cool. The lead button is then separated from the slag and cupelled in a fire assay oven to obtain a silver bead containing the gold.
- The bead is dissolved in acid and diluted with de-ionized water prior to AA analysis.
- A second 0.5 g sample is digested with 2 ml nitric acid in a 95°C water bath for a half-hour, after which 1 ml hydrogen chloride is added and the samples is returned to the water bath for an additional half hour. After cooling, samples are diluted to 10 ml with de-ionized water, stirred and let stand for 1 hour to allow precipitate to settle, and then analyzed by ICP.

11.2.4 Newmarket

The 2014 drill program was carried out on behalf of Newmarket by Equity Exploration Consultants ("Equity") of Vancouver, B.C. (Hughes, 2014). A total of 181 samples were submitted for geochemical analyses, including standards, blanks, field and preparation duplicates. The core was cut along its length with one-half submitted to the lab for analysis and the other returned to the box for storage. In addition, 22 core samples were collected for physical property testing.

All samples were submitted to ACME analytical labs in Vancouver, B.C. for multi-element analysis, which included gold by fire assay with an atomic absorption finish and an additional 24 elements analyzed by ICP+ES (aqua regia digestion).

11.3 QA/QC PROGRAMS

Review of the historic drill programs indicate limited QA/QC programs done by previous operators on the Property prior to 2014 (Hatch, 2004). The results of these QA/QC programs were not available for review.

The analytical program by Newmarket was monitored by a QA/QC program comprising standards, blanks, and field and preparation duplicates (Hughes, 2014). A total of nine standards and nine blanks were inserted into the sampling stream at a rate of one every twenty. Field duplicate samples were collected by quartering the core, with each of the two quarters assigned different, but sequential sample numbers. Preparation duplicates were also prepared at the lab and were taken after the coarse crushing stage during sample preparation. No significant issues were identified during the QA/QC program (Hughes, 2014).

11.4 CONCLUSION

Based on the review of previous drill programs, the author of this Technical Report section is satisfied that the sampling, assay, and QA/QC procedures were all carried out according to industry best practices at the time they were conducted.

12.0 DATA VERIFICATION

Cameron Bartsch completed an internal validation of the diamond drill hole file against the original drill hole logs and assay certificates for the Point Leamington datasets. Tetra Tech also completed a site visit in 2013 and a visit was conducted in 2016 by Cameron Bartsch. P&E conducted a search through the NL Department of Natural Resources (now the NL Department of Industry, Energy and Innovation) web-based assessment file repository (https://gis.geosurv.gov.nl.ca/minesen/geofiles/) and completed a site visit in July 2020. Assessment files containing laboratory assay certificates were located for some of the drilling completed by Noranda. Hughes (2014) contains the laboratory assay certificates for the two holes drilled in 2014.

The site visits (2013 and 2016) did not include independent sampling. The P&E site visit on July 15, 2020 included independent sampling at the Department of Natural Resources core storage facility in St. John's for data verification purposes, as described in Sub-Section 12.3 below. Additional independent core sampling at the storage facility in St. John's was completed by P&E in May, 2021 (see Sub-Section 12.3 below).

12.1 DRILL DATA REVIEW

12.1.1 Collar Location, Hole Survey and Geology Checks

The validation of the data files by was completed on 18 of the 97 drill holes in the dataset, or approximately 18%. Data verification was completed on collar coordinates, end-of-hole depth, down-the-hole survey measurements, and "from" and "to" intervals (Table 12.1).

TABLE 12.1
DRILL HOLE DATABASE VALIDATION SUMMARY

Analysis	Total No.	Verified	Verification Rate (%)	Error Rate (%)	Comments
Collar	98	18	18	11	two possible depth errors
Survey	438	140	32	3.7	one dip error and three azimuth errors, but all three azimuth errors due to an incorrect interval
Lithology	2,901	197	7	0.4	one missing interval
Assay	3,920	512	13	0	

The two collar errors, or 11% error rate detected in the header files, were due to minor errors in end of hole depths in the digital files compared to the logs. A total of four survey records, or 4%, indicated errors, of which three were due to incorrect interval.

The drill hole data into the Datamine program, which has a routine that checks for duplicate intervals, overlapping intervals, and intervals beyond the end-of-hole. The errors identified in the routine were checked against the original logs and corrected.

Visual observations of the historical diamond drill setups on surface were made during the site visits. Manual GPS validation was completed using a Garmin GPSMAP® 60Cx handheld device. Coordinates were collected using NAD27 summarizes the findings. Locating drill collars proved difficult, because not all the collars are well marked (Figure 12.1 to 12.2).

FIGURE 12.1 HISTORICAL POINT LEAMINGTON DRILL COLLAR

Source: *Callinex (2020)*

FIGURE 12.2 2014 POINT LEAMINGTON DRILL COLLAR

Source: *Callinex (2020)*

A total of 13 drill collars or 13% of the dataset were located in the field during the 2013 site visit. There appeared to be a substantial shift of the data that required explanation, such that the conversion from grid co-ordinates to UTM needed to be reviewed. It was recommended that the drill collar locations be re-surveyed using a differential GPS.

Check samples were not collected to validate the assay results. A selection of the drill core was reviewed at the Department of Natural Resources Core Library in St John's (Figure 12.3). Intervals, unit descriptions, and assays observed in the drill core were compared to the drill logs and no significant discrepancies were reported.

FIGURE 12.3 NORANDA DRILL CORE LAID OUT IN THE DEPARTMENT OF NATURAL RESOURCES CORE LIBRARY IN ST JOHN'S

Source: *Callinex (2020)*

12.1.2 Assay Checks

All assay data validated with no errors compared to the assay certificates (Table 12.1). All assays in the database below detection limit entered with a "<" sign were converted to half-the-detection limit and not considered to be errors in the data.

P&E conducted verification of the drill hole assay data database by comparison of the database entries with the assay certificates in the assessment files. Assay data from the 1980s Noranda drilling (Graves, 1984b; Walker and Collins, 1986) and 2014 Newmarket drilling (Hughes, 2014) were verified for the Point Leamington Project. Approximately 16% (186 of 1162) of the constrained assay data were checked for Au. Ag, Cu, and Zn against the assay certificates. Very few data errors were observed, with the overall impact to the database considered negligible.

12.2 2014 COLLAR TRANSITION

The shift in drill collars noted above was reconciled by Equity in 2014 (Hughes, 2014). As part of the 2004 field season, GPS locations were captured for several drill collars and mine grid picket locations in order to transform the historic collars from original mine grid into a UTM datum (Jones, 2005). A control point table was used to perform an affine transformation of the mine grid into UTM grid using MapInfo. Available comparisons of the 2004 GPS field data, translated 2004 collar dataset, and the 2013 field data were found to agree within a few metres, which is in line with the accuracy of the handheld GPS units. However, the Calibre drill database used plotted 70 m to 100 m from the others.

To update the Project database into UTM (NAD 83) coordinates during the 2014 program, Equity verified the appropriate collar shift using a three-pronged approach. Firstly, an affine transformation was completed in MapInfo using control points that overlapped with the 2004 GPS field data. Secondly and as a check, an affine transformation was completed in ArcGIS using a different control table. Thirdly, a transformation check was completed using a triangulation method in which a bearing and distance was measured from surrounding historic collars to the proposed holes. The three transformation methods produced planned 2014 holes that are located within 1.5 m of one another.

As a field check for the suspected collar shift, two historical collars were located in the field at locations predicted by the MapInfo transformation. In addition, hard chaining from these known collars to the proposed 2014 drill holes was completed to double-check that the 2014 holes were collared in the correct location. Geologic results in the 2014 drill holes confirm that the transformation was correct.

The drill hole database supporting the Mineral Resource Estimate in Section 14 of this Technical Report was updated to the correct coordinates as determined by Equity in 2014.

12.3 P&E SITE VISIT AND INDEPENDENT SAMPLING

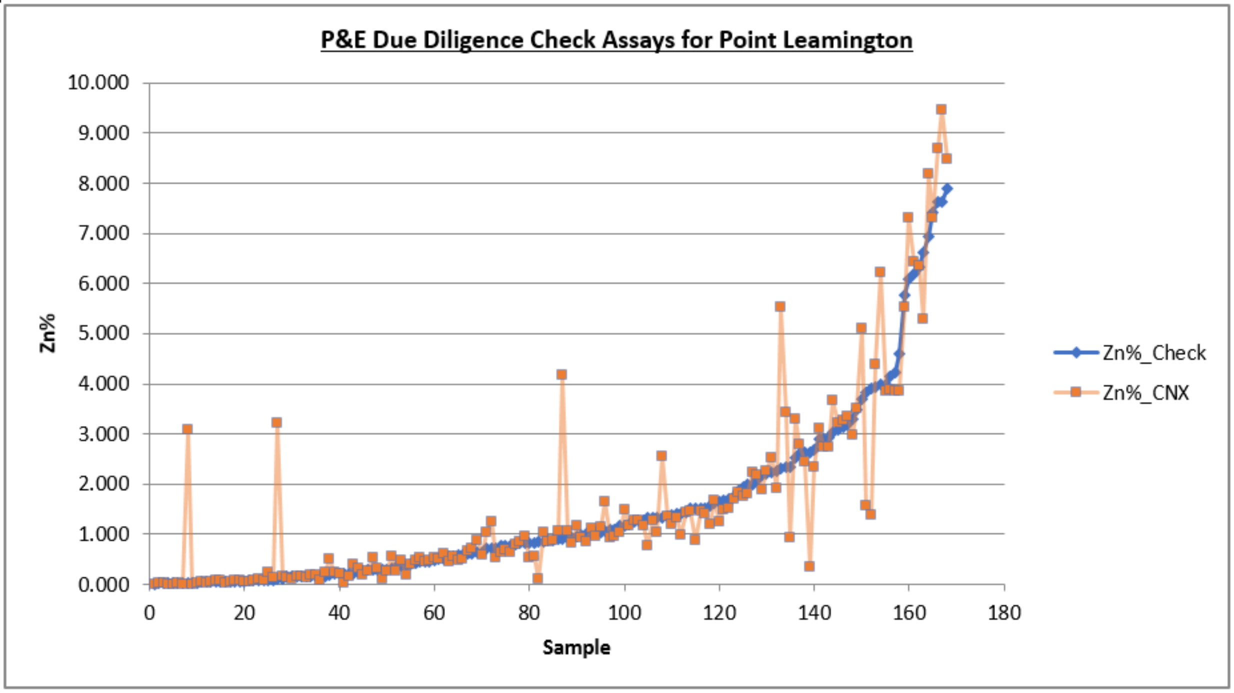
In its site visit of July 15, 2020, P&E took eighteen (out of 1,204; 1.50% of wireframe constrained assays above cut-off) independent core samples for comparative analyses. Selected core intervals of low-grade to high-grade mineralized material were sampled by collecting drill core material from the Noranda holes stored at the Department of Natural Resources Core Storage Facility in St. John’s. Prior to sampling, employees or other associates of Callinex were not informed of the location or identification of any of the samples to be collected. The objective of these check samples was to verify the presence and approximate grades of zinc, gold, silver and copper metals encountered during drilling.

The 18 samples were collected by Mr. Eugene Puritch, P.Eng., FEC, CET, placed in appropriately numbered sample bags, sealed, and delivered by him to AGAT Laboratories in Mississauga, Ontario for analysis. Zinc, copper and lead were analyzed by sodium peroxide fusion with ICP-OES finish. Gold was analyzed by fire assay with ICO-OES finish and silver by aqua regia digest with ICP/ICP-MS finish. One sample was assayed in duplicate.

In May 2021, an additional 150 (out of 1,204; 12.46% of wireframe constrained assays above cut-off) independent core samples were taken by Mr. Tim Froude, P.Geo., placed in appropriately numbered sample bags, sealed, and delivered by courier to AGAT Laboratories in Mississauga, Ontario for analysis. Zinc, copper and lead were analyzed by sodium peroxide fusion with ICP-OES finish. Gold was analyzed by fire assay with ICO-OES finish and silver by aqua regia digest with ICP/ICP-MS finish.

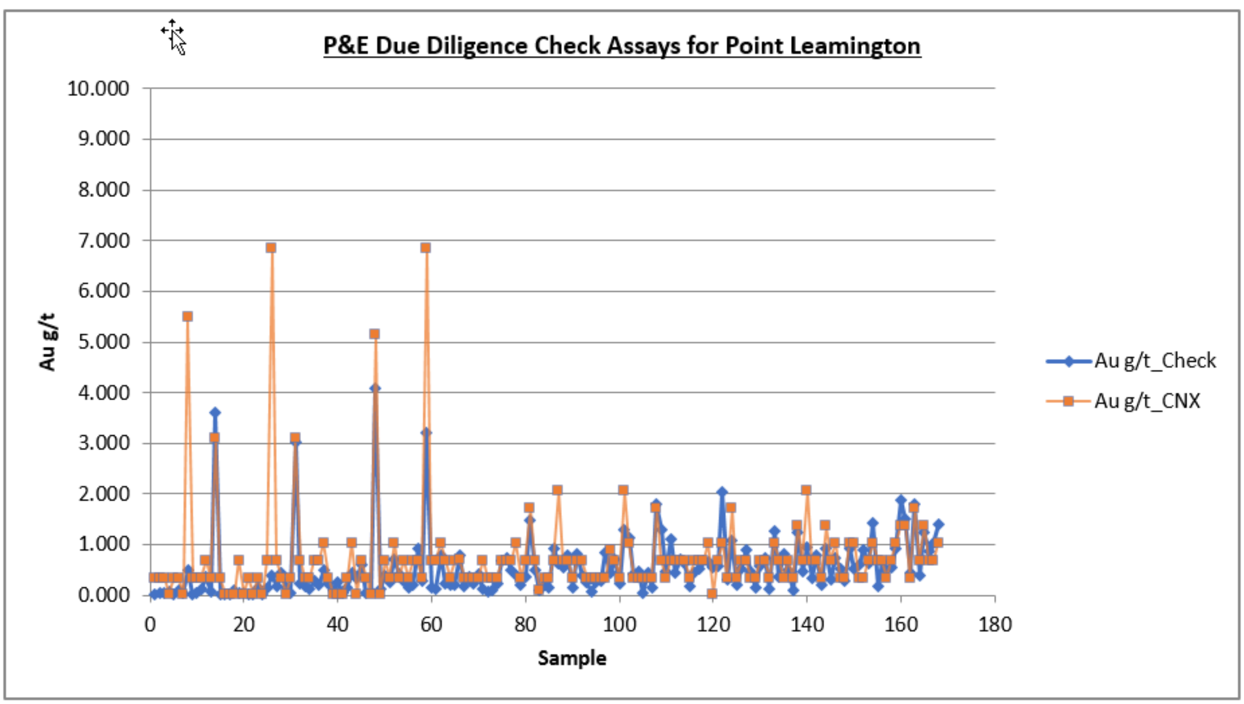
P&E’s independent comparisons of the core sample verification results to the original assay results for all 168 independent core samples are illustrated in Figures 12.4 to 12.7. The P&E results for the core samples are satisfactory.

FIGURE 12.4 P&E CHECK SAMPLE RESULTS FOR ZINC



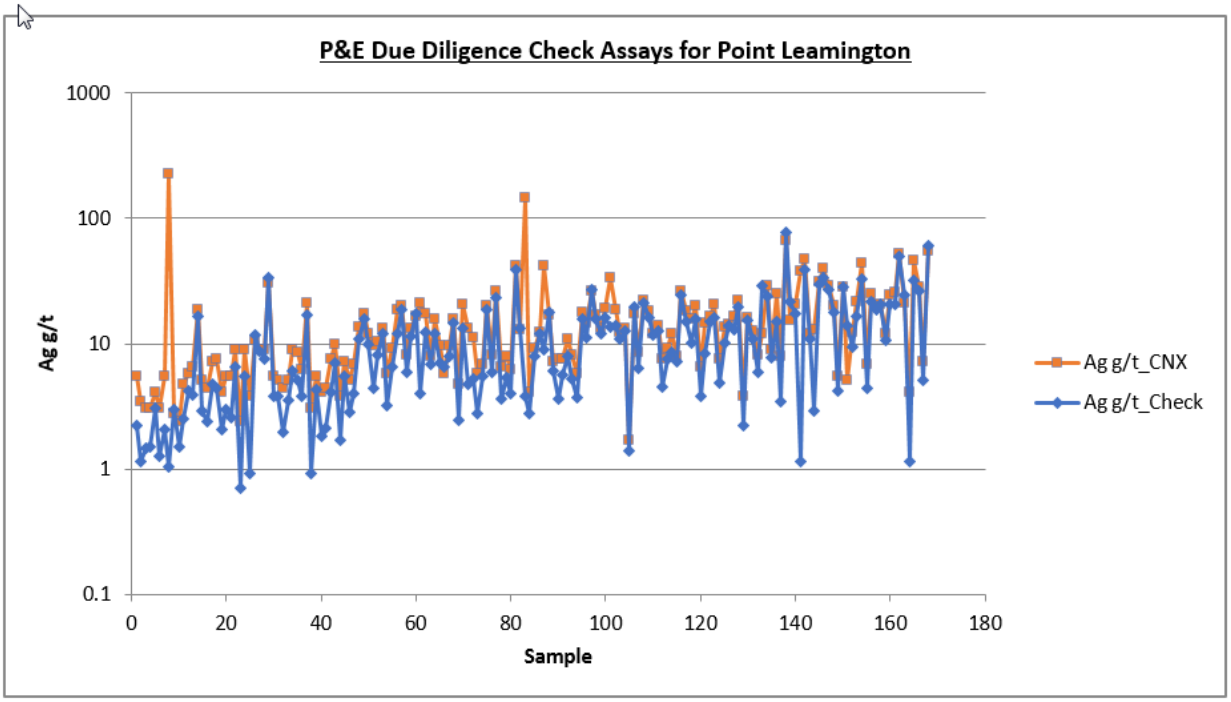
Source: *P&E (2021)*

FIGURE 12.5 P&E CHECK SAMPLE RESULTS FOR GOLD



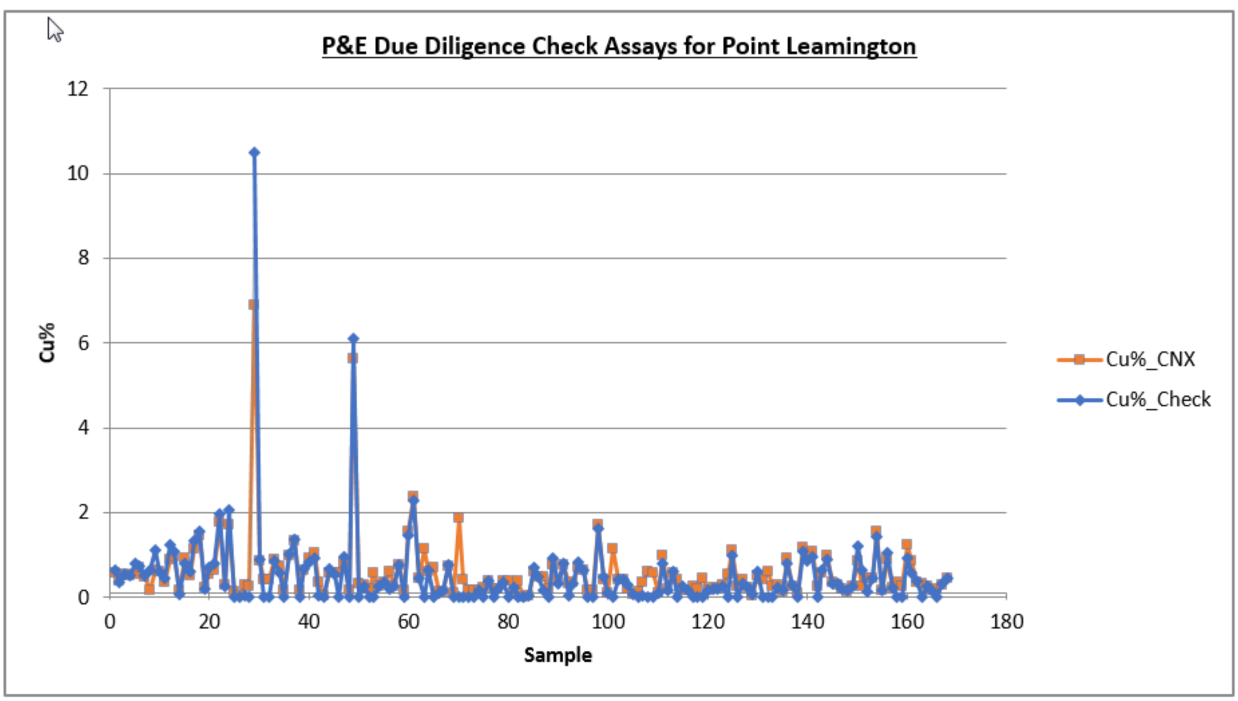
Source: *P&E (2021)*

FIGURE 12.6 P&E CHECK SAMPLE RESULTS FOR SILVER



Source: *P&E (2021)*

FIGURE 12.7 P&E CHECK SAMPLE RESULTS FOR COPPER



Source: *P&E (2021)*

12.4 CONCLUSION

Based on the very extensive due diligence sampling and assay program performed by P&E and the QA/QC evaluation undertaken Tetra Tech (2013) and, the author of this Technical Report section concludes that the assay data are suitable for use in the Mineral Resource Estimate for the Point Leamington Project.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 SUMMARY METALLURGICAL CHARACTERISTICS

Metallurgical testing focused in three separate campaigns on producing marketable copper and zinc concentrates from the massive sulphide mineralization. Flotation tests supported by mineralogical examination revealed that the chalcopyrite and sphalerite are present in the pyrite matrix at an average particle size of <10 µm. The most recent tests (Hughes, 2014) were conducted at a P80 grind size of 37 µm and results confirmed that only 56% of the chalcopyrite and 63% of the sphalerite are liberated. All test results confirmed that the gold and silver values were tied up in the pyrite, and to some extent arsenopyrite.

13.2 NORANDA METALLURGICAL TESTS 1971-1975

Metallurgical tests were conducted at Brunswick Mining's laboratory near Bathurst, New Brunswick. The Brunswick laboratory had extensive relevant experience in developing processes to produce copper and zinc concentrates, as well as a lead concentrate from the very fine-grained massive sulphides found at the Brunswick mines. The tested Point Leamington composite sample contained 0.6% Cu, 3.9% Zn, 28 g/t Ag and 1.6 g/t Au. The flotation tests were moderately successful in separately recovering copper and zinc following a P80 of 37 µm (400 Mesh). Recovery of gold by direct cyanidation of tails was <5%; roasting of these pyrite-rich tailings raised the cyanide extraction of gold to 87% and silver to 18%.

At Noranda's Horne Smelter test facility, parallel tests (to Brunswick) indicated the production of a 15% copper concentrate at 75% recovery and a 50% zinc concentrate at 75% recovery was possible. Chalcopyrite was observed to occur abundantly as <15 µm inclusions in pyrite. Arsenopyrite was noted to be common. However, attempts to separate arsenopyrite from a pyrite concentrate were unsuccessful.

13.3 NORANDA RESEARCH TEST PROGRAM 1985-1988

A Government of Canada sponsored test program was conducted at Noranda's Point Claire laboratory on 1.74 t of large samples representing three distinct zones of the Point Leamington mineralization; that is, the upper, lower and high zinc zones. A summary of the sample data is shown in Table 13.1. Noranda indicated that the upper and lower zones were similar from mineralogical and metal content perspectives, but the high zinc zone contained significantly more arsenopyrite and moderately more gold. The chalcopyrite was identified as mainly present as small, <800 Mesh (15 µm) inclusions in pyrite. The gold appeared to be present as solid solutions in pyrite and, to some extent, arsenopyrite.

A total of 45 bench-scale flotation tests were performed. The average metal contents of the test samples are also shown in Table 13.1.

Table 13.1 **Point Leamington Core and Test Samples** **Assembled for Tests at Noranda Research**										
Zone	**Sample (kg)**	**Drill Core (m)**	**No. of Drill Holes**	**Drill Core Sample Assay Range**						
				(%)					**(g/t)**	
				Cu	**Zn**	**Pb**	**S**	**As**	**Au**	**Ag**
Upper	785	160	4	0.32-0.56	1.78-2.83	0.16-0.28	34.5-37.3	0.18-0.64	2.0-2.4	16.2-20.5
Lower	845	202	3	0.36-0.96	2.18-3.42	0.15-0.31	35.1-40.9	0.34-0.66	2.2-3.1	10.5-40.2
High Zn	110	22	1	0.48	12.67	0.37	34.3	1.54	3.8	43
Composite Test Samples										
Upper				0.44	2.31				0.65	19.3
Lower				0.57	2.88				1.3	28.8
High Zn				0.43	12.8				3.9	48.5

Comprehensive mineralogical examinations revealed that pyrite and quartz were the major minerals present in all three zones; calcite, sphalerite, chalcopyrite and chlorite were common in all three; and pyrrhotite was common in the high Zn zone. The pyrite content was observed to be over 50%, with the major balance being silicates and carbonates.

The extreme fineness of the chalcopyrite and sphalerite is summarized in Table 13.2.

TABLE 13.2
SIZE DISTRIBUTION OF CHALCOPYRITE (CU) AND SPHALERITE (ZN) IN THE POINT LEAMINGTON MINERALIZATION

Zone, Mineralization	% Mineralization				K80, (µm) Zn	K90, (µm) Cu
Size, µm	<4.6	4.6 - 9.2	9.2 – 18.4	>18.4		
Upper, Cu	83	13	1	3		5.2
Upper, Zn	63	10	8	19	3.5	
Lower, Cu	85	11	3	1		4.9
Lower, Zn	55	26	12	7	7.6	
High Zn, Cu	76	16	5	3		6.8
High Zn, Zn	33	20	18	29	22	

Note: *K80 and K90 = % passing a specific screen size*

Noranda attempted to address the extreme fineness in the extensive flotation testing by primary grinding to >90% 400 Mesh (37 µm), followed by regrinding of rougher concentrates. However, copper recoveries were modest at only 50% for all three zones when achieving an acceptable concentrate grade of 20% Cu. Zinc metallurgy was slightly better at 60% recovery for the two low-grade zones, and 85% recovery for the high Zn zone (concentrate >50% Zn). Gold and silver recoveries in copper and zinc concentrates were poor at 10% or less. These results were attributed to the association of the two precious metals with pyrite and arsenopyrite. An earlier test by Noranda on direct cyanidation of tailings resulted in a very low extraction of gold at approximately 4.7%. Roasting of the tailings increased the cyanide extraction of gold to 87% and silver to 18%.

13.4 NEWMARKET 2014 METALLURGICAL TESTING

Five sequential flotation tests were performed by Bureau Veritas Commodities' Metallurgical Division in 2014. The metallurgical sample from fresh drilling contained 2.67% Zn, 0.9 Cu, 1.11 g/t Au and 17.3 g/t Ag. Other analyses of interest were arsenic at 0.53%, cadmium at 87 ppm, and sulphur at 41%.

Only sequential flotation rougher concentrates of copper, zinc and sulphides were produced. The fifth test's metallurgical balance is shown in Table 13.3. The sample was ground to P80 37 µm.

Table 13.3 Newmarket 2014 Metallurgical Test F5 Results									
Product	**Weight %**	**Cu (%)**	**Zn (%)**	**Au (g/t)**	**Ag (g/t)**	**Distribution %**			
						Cu	**Zn**	**Au**	**Ag**
Cu Rougher Concentrate	10	8.77	2.54	1.04	26	79.1	9.5	10.5	18.3
Zn Rougher Concentrate	17	0.46	13.5	1.47	23.9	7.1	86	25.2	28.6
Sulphide Concentrate	7	0.3	0.19	1.17	16	1.9	0.5	8.3	7.9
Tails	66	0.2	0.16	0.84	9.7	11.9	4	56	45.1
Total	**100**	**1.11**	**2.67**	**1.11**	**17.3**	**100**	**100**	**100**	**100**

Mineralogical examination of rougher concentrates confirmed the need for regrinding to achieve saleable products of < 15 µm for copper and for zinc. No potential upgrading of the gold and silver using flotation techniques was observed. The precious metals (gold and silver) appear to be distributed as refractory contents of the pyrite-arsenopyrite matrix, which is over 75% of the mineralized material. Liberation of the gold content in particular, could be achieved by oxidation of the sulphides by roasting, pressure oxidation (POX) or biological oxidation. This would be followed by conventional cyanide leaching.

13.5 RECOMMENDATIONS – METALLURGICAL TESTING AND RECOVERY ESTIMATES

The following are recommendations for confirmative metallurgical testing:

- Resume sequential rougher flotation laboratory scale testing using fine grinding P80 <37 µm;
- Regrind rougher concentrates – this is an essential element missing in all tests to date – grind size must be P80 <15 µm and multi-stage cleaner flotation would follow;
- Conduct locked cycle testing to produce marketable copper and zinc concentrates; and
- Investigate production of high purity sulphide concentrate which should increase the contained gold and examine sulphide oxidation options and gold extraction techniques.

Based on the results of testing to date on the Point Leamington mineralized material, and the yet-to-be confirmed assumption that up to 90% or more of the copper and zinc in rougher concentrates will report to the final market-grade product, process recoveries are estimated to be: copper 70% and zinc 75%. Aggressive fine grinding of rougher concentrates and strong flotation dynamics, as recently demonstrated by other operators of similar deposits, could likely improve these recoveries to as high as 80% and 85%, respectively.

Provided a market can be sourced or an on-site facility constructed for the sulphide concentrate as a sulphur source for gold autoclave technology, gold recovery could be estimated to be as high as 80%. Silver, the payable fraction present in the zinc concentrates, is estimated to represent a recovery as high as 25%.

14.0 MINERAL RESOURCE ESTIMATES

14.1 INTRODUCTION

The purpose of this Technical Report section is to provide disclosure of a Mineral Resource Estimate for the Point Leamington Project of Callinex Mines Inc. There were only the two additional holes drilled in 2014. This current Mineral Resource Estimate utilizes a C$/t NSR cut-off with variable process recoveries and a mostly open pit modelling approach.

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 Resource 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 Callinex, and was undertaken by Eugene Puritch, P.Eng., FEC, CET of P&E Mining Consultants Inc. of Brampton, Ontario, an independent Qualified Person in terms of NI 43-101. The effective date of this Mineral Resource Estimate is August 20, 2021.

14.2 DATABASE

All drilling and assay data were provided in the form of Excel data files by Callinex. The GEOVIA GEMS™ V6.8.2 database for this Mineral Resource Estimate, compiled by P&E, consisted of 94 drill holes totalling 28,172 m, of which a total of 57 drill holes (totalling 15,660 m) intersected the mineralization wireframes used for the Mineral Resource Estimate (see Table 14.1). A drill hole plan is shown in Appendix A.

TABLE 14.1
DRILL HOLE DATABASE SUMMARY

Company Drilled By	Year Drilled	Number of Drill Holes	Hole Length (m)	No. of Drill Holes Intersecting the Wireframes	Length of Drill Holes Intersecting Wireframes (m)
Noranda	1971-1997	71	20,626	47	12,455
Tri-Origin	1997	9	2,124		
Altius	2000	1	519		
Rubicon	2000	6	2,242	5	1,812
TLC Ventures	2004	5	2,402	3	1,134
Newmarket	2014	2	259	2	259
Total		**94**	**28,172**	**57**	**15,660**

The drill hole database contained assays for Au, Zn, Cu, Ag and Pb and other metals of no economic importance. The basic statistics of all raw assays for the elements of economic interest and sample length are presented in Table 14.2.

TABLE 14.2
ASSAY DATABASE SUMMARY

Variable	Au (g/t)	Zn (%)	Cu (%)	Ag (g/t)	Pb (%)	Length (m)
Number of Samples	4,004	4,004	4,004	4,004	4,004	4,004
Minimum Value	0.005	0.005	0.005	0.05	0.005	0.1
Maximum Value	14.06	34.80	6.88	462.86	3.00	84.30
Mean	0.38	0.74	0.24	7.02	0.02	1.46
Median	0.11	0.09	0.04	2.06	0.01	1.50
Geometric Mean	0.10	0.10	0.06	1.92	0.01	1.27
Variance	0.55	3.94	0.18	268.98	0.01	5.11
Standard Deviation	0.74	1.98	0.42	16.40	0.09	2.26
Coefficient of Variation	1.95	2.69	1.74	2.34	5.43	1.54
Skewness	5.92	6.82	4.53	12.19	20.56	26.10
Kurtosis	62.59	70.33	43.66	263.69	559.83	808.94

All drill hole survey and assay values are expressed in metric units, with grid coordinates in UTM NAD83 Zone 21N.

14.3 DATA VERIFICATION

Verification of Au, Zn, Cu, Ag and Pb assays of the historic database was performed by P&E with a 168-sample drill core selection program from the Department of Natural Resources drill core storage facility in St. John's Newfoundland. An acceptable correlation between verification samples and historic values was obtained and the historical database is now considered valid.

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. A few errors were identified and corrected in the database. P&E believes that the supplied database is suitable for Mineral Resource estimation.

14.4 DOMAIN INTERPRETATION

Three mineralization domains (Main and two Footwall) were constructed for the Mineral Resource Estimate. The wireframes were created from successive cross-sectional polylines on Northwest-facing vertical cross-sections with 30 m spacing. A C$25/t NSR cut-off value was applied to the mineralization wireframes. The C$25/t NSR value inclusive of process recovery and smelter payables shown in Section 14.13 was calculated using the following formula:

C$/t NSR = (Au g/t x 37.92)+(Cu % x 66.67)+(Zn % x 15.68)+(Ag g/t x 0.19)+(Pb % x 0)
At US$ metal prices: Zn=$1.20/lb, Au=$1,625/oz, Cu=$3.50/lb, Ag=$21/oz. and FX=0.77

The minimum constrained sample length for the constraining wireframes was 2.0 m. In some cases, mineralization below the C$25/t NSR cut-off value was included for the purpose of maintaining zonal continuity and the minimum width. On each section, polyline interpretations were digitized from drill hole to drill hole, but not typically extended more than 30 m beyond the limit of drilling.

Five intrusive vein, topography and overburden models were also created. All mineralization domains were clipped against the intrusive veins and overburden.

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

14.5 ROCK CODE DETERMINATION

A unique rock code was assigned to each rock type in the Mineral Resource model as presented in Table 14.3.

TABLE 14.3
ROCK CODES USED FOR THE MINERAL RESOURCE ESTIMATE

Domain	Rock Code	Volume (m^3)
Main	100	6,747,953
FW1	200	621,935
FW2	300	131,774
Overburden	10	
Waste	99	

14.6 COMPOSITING

The basic statistics of all mineralization wireframe constrained assays are presented in Table 14.4. The average constrained sample length is 1.49 m.

TABLE 14.4
BASIC STATISTICS OF ALL CONSTRAINED ASSAYS

Variable	Au (g/t)	Zn (%)	Ag (g/t)	Cu (%)	Pb (%)	Length (m)

Number of Samples	1,633	1,633	1,633	1,633	1,633	1,633
Minimum Value	0.01	0.005	0.05	0.005	0.005	0.15
Maximum Value	14.06	34.8	462.86	6.88	3	84.3
Mean	0.77	1.61	14.81	0.5	0.03	1.49
Median	0.45	0.7	9.6	0.39	0.01	1.52
Geometric Mean	0.4	0.48	7.74	0.26	0.01	1.22
Variance	1.01	8.18	542.13	0.29	0.02	11.72
Standard Deviation	1.01	2.86	23.28	0.53	0.13	3.42
Coefficient of Variation	1.31	1.77	1.57	1.07	4.76	2.3
Skewness	4.48	4.64	9.42	3.78	13.57	18.33
Kurtosis	36.64	33.7	145.85	31.52	241.13	375.76

In order to regularize the assay sampling intervals for grade interpolation, a 1.5 m compositing length was selected for the drill hole intervals that fell within the constraints of the above-described Mineral Resource wireframe domains. The composites were calculated for Au, Zn, Cu, Ag and Pb over 1.5 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 composite intervals and below detection limit assays were set to 0.001. When the last interval was <0.50 m, the composite length was adjusted to make all intervals of the hole equal, so as not to introduce sample bias in the grade interpolation process. The constrained composite data were extracted to a point area file for grade capping analysis. The composite statistics are summarized in Table 14.5.

TABLE 14.5
POINT LEAMINGTON COMPOSITE SUMMARY STATISTICS

Variable	Au	Zn	Cu	Ag	Pb
Number of Samples	1,837	1,837	1,837	1,837	1,837
Minimum Value	0.001	0.001	0.001	0.01	0.001
Maximum Value	13.32	18.36	4.35	372.01	1.88
Mean	0.82	1.42	0.43	12.50	0.02
Median	0.45	0.66	0.36	8.63	0.01
Geometric Mean	0.25	0.29	0.16	4.18	0.01
Variance	1.00	5.05	0.18	296.72	0.01
Standard Deviation	1.00	2.25	0.43	17.23	0.09
Coefficient of Variation	1.23	1.59	1.00	1.38	4.62
Skewness	2.99	3.80	2.13	7.79	12.65
Kurtosis	23.08	21.91	12.55	123.95	214.66

14.7 GRADE CAPPING

Grade capping was investigated on the 1.5 m composite values in the database within the constraining domains, to ensure that the possible influence of erratic high-grade values did not bias the database. Log-normal histograms and probability plots for Au, Zn, Cu, Ag and Pb composites were generated for the mineralized domain and the selected resulting graphs, log normal histograms, are exhibited in Appendix C. The grade capping values are detailed in Table 14.6 and the capped composite statistics summarized in Table 14.7. The capped composites were utilized to develop variograms and for block model grade interpolation.

TABLE 14.6
POINT LEAMINGTON GRADE CAPPING VALUES

Domains	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 Capping								
Domains	**Total No. of Composites**	**Capping Value Au (g/t)**	**No. of Capped Composites**	**Mean of Composites**	**Mean of Capped Composites**	**CoV of Composites**	**CoV of Capped Composites**	**Capping Percentile**
Main	1,726	6	3	0.85	0.84	1.20	1.14	99.8%
FW1	90	No Cap	0	0.35	0.35	1.50	1.50	100.0%
FW2	21	No Cap	0	0.190	0.190	0.50	0.50	100.0%
Zn Capping								
Domains	**Total No. of Composites**	**Capping Value Zn (%)**	**No. of Capped Composites**	**Mean of Composites**	**Mean of Capped Composites**	**CoV of Composites**	**CoV of Capped Composites**	**Capping Percentile**
Main	1,726	17	5	1.48	1.48	1.55	1.54	99.7%
FW1	90	No Cap	0	0.25	0.25	2.18	2.18	100.0%
FW2	21	No Cap	0	1.21	1.21	0.55	0.55	100.0%
Cu Capping								
Domains	**Total No. of Composites**	**Capping Value Cu (%)**	**No. of Capped Composites**	**Mean of Composites**	**Mean of Capped Composites**	**CoV of Composites**	**CoV of Capped Composites**	**Capping Percentile**
Main	1,726	3	2	0.43	0.43	0.98	0.96	99.9%
FW1	90	No Cap	0	0.40	0.40	1.24	1.24	100.0%
FW2	21	No Cap	0	0.07	0.07	0.58	0.58	100.0%
Pb Capping								
Domains	**Total No. of Composites**	**Capping Value Pb (%)**	**No. of Capped Composites**	**Mean of Composites**	**Mean of Capped Composites**	**CoV of Composites**	**CoV of Capped Composites**	**Capping Percentile**
Main	1,726	0.8	5	0.02	0.02	4.65	3.82	99.7%
FW1	90	No Cap	0	0.01	0.01	3.46	3.46	100.0%
FW2	21	No Cap	0	0.030	0.030	1.83	1.83	100.0%

TABLE 14.6 POINT LEAMINGTON GRADE CAPPING VALUES								
Ag Capping								
Domains	**Total No. of Composites**	**Capping Value Ag (g/t)**	**No. of Capped Composites**	**Mean of Composites**	**Mean of Capped Composites**	**CoV of Composites**	**CoV of Capped Composites**	**Capping Percentile**
Main	1,726	150	3	12.96	12.80	1.36	1.20	99.8%
FW1	90	No Cap	0	4.77	4.77	1.07	1.07	100.0%
FW2	21	No Cap	0	7.660	7.660	0.79	0.79	100.0%

Note: *CoV = coefficient of variance.*

TABLE 14.7 POINT LEAMINGTON CAPPED COMPOSITE SUMMARY STATISTICS					
Variable	**Au Cap**	**Zn Cap**	**Cu Cap**	**Ag Cap**	**Pb Cap**
Number of Samples	1,837	1,837	1,837	1,837	1,837
Minimum Value	0.001	0.001	0.001	0.01	0.001
Maximum Value	6.00	17.00	3.00	150.00	0.80
Mean	0.81	1.41	0.43	12.35	0.02
Median	0.45	0.66	0.36	8.63	0.01
Geometric Mean	0.25	0.29	0.16	4.18	0.01
Variance	0.88	4.98	0.17	226.10	0.00
Standard Deviation	0.94	2.23	0.42	15.04	0.07
Coefficient of Variation	1.16	1.58	0.98	1.22	3.81
Skewness	1.86	3.72	1.74	3.94	7.97
Kurtosis	7.03	21.01	7.95	27.92	78.12

14.8 VARIOGRAPHY

A variography analysis was performed as a guide to determining a grade interpolation search strategy. Omni, along strike, down-dip and across dip variograms were attempted using the Au, Zn and Cu composites. Selected variograms are attached in Appendix D.

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

14.9 BULK DENSITY

A total of 18 core samples were collected by Eugene Puritch, P.Eng. during his Department of Natural Resources St. John's Core Storage Facility site visit, and were tested for bulk density at AGAT Laboratories in Mississauga, ON. The results were utilized to develop a regression equation that uniquely coded the bulk density of each constrained block in the Mineral Resource model using the following formula:

Bulk Density = ((Zn% - 1.4) x 0.14) + 3

14.10 BLOCK MODELLING

The Point Leamington block model was constructed using GEOVIA GEMS™ V6.8.2 modelling software. The block model origin and block size are presented in Table 14.8. The block model consists of separate model attributes for estimated grades of Au, Zn, Cu, Ag and Pb, rock type (mineralization domains), volume percent, bulk density, C$/t NSR value, and classification.

TABLE 14.8
POINT LEAMINGTON BLOCK MODEL DEFINITION

Direction	Origin	No. of Blocks	Block Size (m)
X	599,276.421	320	2.5
Y	5,457,993.224	252	5
Z	195	96	5
Rotation	Counter-clockwise 28°		

All blocks in the rock type block model were initially assigned a waste rock code of 99, corresponding to the surrounding country rocks. The 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 model rock codes as presented in Table 14.4, above. The overburden and topographic surface were subsequently utilized to assign rock codes 10 and 0, corresponding overburden and air respectively, to all blocks 50% or greater above those 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 wireframe domains. As a result, the domain boundary was properly represented by the volume percent model ability to measure individual infinitely variable block inclusion percentages within that domain. The minimum percentage of the mineralized block was set to 1%.

The Au and Ag grade blocks were interpolated with Inverse Distance Cubed ("ID^3"), whereas Zn, Cu, and Pb were interpolated with Inverse Distance Squared ("ID^2"). 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 were aligned with the strike and dip directions of the domains accordingly. Grade blocks were interpolated using the parameters in Table 14.9.

TABLE 14.9
POINT LEAMINGTON BLOCK MODEL INTERPOLATION PARAMETERS

Pass	Dip Range (m)	Strike Range (m)	Across Dip Range (m)	Max No. of Samples per Hole	Min No. of Samples	Max No. of Samples
I	60	40	15	5	11	20
II	120	80	30	5	6	20
III	240	160	60	5	2	20

Selected cross-sections and plans of the Au and Zn grade blocks are presented in Appendix E and Appendix F.

14.11 MINERAL RESOURCE CLASSIFICATION

In opinion of the author of this Technical Report section, all the drilling, assaying and exploration work on the Point Leamington Project supports this Mineral Resource Estimate 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, variogram performance and drill hole spacing. The Indicated Mineral Resource was classified for the blocks interpolated with the Pass I in Table 14.10, which used at least eleven composites from a minimum of three holes; and Inferred Mineral Resources were classified for all remaining grade populated blocks within the mineralized domain. The classifications have been adjusted on a longitudinal projection to reasonably reflect their distribution. Selected classification block cross-sections and plans are presented in Appendix G.

14.12 C$/T NSR VALUE PARAMETERS AND CUT-OFF

The Point Leamington Mineral Resource Estimate was derived from applying C$/t NSR cut-off values to the block models and reporting the resulting tonnes and grades for potentially mineable areas. The following parameters were used to calculate the C$/t NSR values that determine the open pit and underground mining potentially economic portions of the constrained mineralization.

C$/t NSR Value Calculation

USD:CDN Exchange Rate	0.77
Au Price	US$1,625/oz (Aug/21 long term consensus forecast)
Zn Price	US$1.20/lb (Aug/21 long term consensus forecast)
Cu Price	US$3.50//lb (Aug/21 long term consensus forecast)
Ag Price	US$22/oz (Aug/21 long term consensus forecast)
Pb Price	Not used

Au Process Recovery	75%
Zn Process Recovery	85%
Cu Process Recovery	80%
Ag Process Recovery	25%

Au Smelter Payable	85%
Zn Smelter Payable	85%
Cu Smelter Payable	90%
Ag Smelter Payable	90%

Zn Smelter Treatment	US$220/t
Cu Smelter Treatment	US$80/t
Au Smelter Treatment	US$100/t
Concentrate Freight	C$90/t

The C$/t NSR values of blocks were determined with the following formula:

C$/t NSR = (Au g/t x 37.92)+(Cu % x 66.67)+(Zn % x 15.68)+(Ag g/t x 0.19)+(Pb % x 0)

Open Pit Mining Cost	C$2.25/t mined
Out-of-Pit Mining Cost	C$60/t mined
Processing Cost	C$14/t processed
G&A	C$3/t processed
Concentrate Freight & Smelter	C$8/t processed

Pit constrained C$/t NSR Cut-off = ($14 + $3 + $8) = **$25/t**
Out-of-pit C$/t NSR Cut-off = ($50 + $14 + $3 + $8) = **$75/t**

Pit Optimization Parameters

A pit constrained Mineral Resource model was further investigated with a pit optimization to ensure a reasonable assumption of potential economic extraction could be made (see pit shell in Appendix H). The following parameters were utilized in the pit optimization:

C$/t NSR Values	From parameters above
Mineralized Material Mining Cost	C$2.25/t mined
Waste Rock Mining Cost	C$2.00/t mined
Overburden Mining Cost	C$1.50/t mined
Process Cost	C$14/t processed
General & Administration Cost	C$3/t processed
Concentrate Freight & Smelter	C$8/t processed
Process Capacity	4,000 tpd
Pit Slopes	50°

14.13 MINERAL RESOURCE ESTIMATE

The resulting Mineral Resource Estimate as of the effective date of this Technical Report is tabulated in Table 14.10. The author considers the mineralization of the Point Leamington Project to be potentially amenable to both open pit and underground economic extraction.

Table 14.10 Point Leamington Mineral Resource Estimate (1-5)																			
Resource Area	**Class**	**Cut-off C$/t NSR**	**Tonnes (k)**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**	**Pb (%)**	**Zn (%)**	**Au (koz)**	**Ag (Moz)**	**Cu (Mlb)**	**Pb (Mlb)**	**Zn (Mlb)**	**AuEq (g/t)**	**AuEq (koz)**	**ZnEq (%)**	**ZnEq (Mlb)**	**CuEq (%)**	**CuEq (Mlb)**
Pit Constrained	**Indicated**	25	5,013	0.90	12.2	0.54	0.01	1.39	145.7	2.0	60.0	1.5	153.5	2.49	402.0	6.03	666.7	1.42	156.8
	Inferred	25	13,727	0.80	14.0	0.36	0.02	1.74	354.8	6.2	110.2	7.0	527.3	2.24	986.5	5.41	1,636.2	1.27	384.8
Out-of-Pit	**Inferred**	75	1,713	1.19	25.5	0.35	0.07	2.72	65.4	1.4	13.3	2.6	102.9	3.06	168.5	7.40	279.5	1.74	65.7
Total	**Indicated**	**25**	**5,013**	**0.90**	**12.2**	**0.54**	**0.01**	**1.39**	**145.7**	**2.0**	**60.0**	**1.5**	**153.5**	**2.49**	**402.0**	**6.03**	**666.7**	**1.42**	**156.8**
	Inferred	**25 & 75**	**15,440**	**0.85**	**15.3**	**0.36**	**0.03**	**1.85**	**420.2**	**7.6**	**123.5**	**9.6**	**630.1**	**2.33**	**1,155.0**	**5.63**	**1,915.6**	**1.32**	**450.5**

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 Technical 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 (2014) and CIM Best Practices Guidelines (2019).*
5. *The Mineral Resource Estimate was based on August 2021 consensus economics forecast metal prices of US$1,625/oz gold, US$22/oz silver, US$3.50/lb copper, US$1.20/lb. zinc.*

Mineral Resource Estimates are sensitive to the selection of a reporting C$/t NSR cut-off values and are demonstrated in Table 14.11 for pit constrained and out-of-pit resources.

Table 14.11
Point Leamington Mineral Resource Estimate Sensitivity

Resource Area	Class	Cut-off C$/t NSR	Tonnes (k)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Au (koz)	Ag (Moz)	Cu (Mlb)	Pb (Mlb)	Zn (Mlb)	AuEq (g/t)	AuEq (koz)	ZnEq (%)	ZnEq (Mlb)	CuEq (%)	CuEq (Mlb)
Pit Constrained	Indicated	60	3,822	1.08	14.2	0.60	0.02	1.67	132.7	1.7	50.6	1.3	140.5	2.90	355.8	7.00	590.1	1.65	138.8
		55	4,069	1.04	13.8	0.59	0.02	1.60	136.3	1.8	52.9	1.3	143.9	2.81	367.8	6.80	610.1	1.60	143.5
		50	4,313	1.01	13.4	0.58	0.02	1.54	139.3	1.9	55.2	1.4	146.7	2.73	378.7	6.61	628.1	1.55	147.7
		45	4,507	0.98	13.0	0.57	0.01	1.50	141.4	1.9	56.9	1.4	148.8	2.67	386.5	6.45	641.1	1.52	150.8
		40	4,669	0.95	12.8	0.57	0.01	1.46	143.1	1.9	58.2	1.4	150.3	2.61	392.4	6.32	650.8	1.49	153.1
		35	4,800	0.93	12.6	0.56	0.01	1.43	144.1	1.9	59.0	1.5	151.6	2.57	396.6	6.21	657.7	1.46	154.7
		30	4,907	0.92	12.4	0.55	0.01	1.41	145.0	2.0	59.5	1.5	152.6	2.53	399.5	6.12	662.6	1.44	155.8
		25	5,013	0.90	12.2	0.54	0.01	1.39	145.7	2.0	60.0	1.5	153.5	2.49	402.0	6.03	666.7	1.42	156.8
		20	5,091	0.89	12.1	0.54	0.01	1.37	146.2	2.0	60.3	1.6	154.0	2.47	403.5	5.96	669.2	1.40	157.4
	Inferred	60	9,042	1.03	17.1	0.43	0.03	2.22	298.3	5.0	85.1	5.2	442.4	2.78	808.3	6.72	1,340.7	1.58	315.3
		55	9,914	0.98	16.5	0.42	0.03	2.12	311.1	5.3	91.4	5.7	462.6	2.67	850.8	6.46	1,411.2	1.52	331.9
		50	10,756	0.93	16.0	0.41	0.03	2.02	322.6	5.5	97.0	5.9	480.0	2.57	888.3	6.21	1,473.4	1.46	346.5
		45	11,524	0.90	15.5	0.40	0.02	1.95	332.4	5.7	101.1	6.1	495.0	2.48	919.3	6.00	1,524.7	1.41	358.6
		40	12,211	0.87	15.1	0.39	0.02	1.88	340.0	5.9	104.7	6.5	507.0	2.40	944.0	5.82	1,565.7	1.37	368.2
		35	12,780	0.84	14.7	0.38	0.02	1.83	346.0	6.0	107.4	6.8	515.4	2.34	962.2	5.66	1,595.9	1.33	375.3
		30	13,297	0.82	14.3	0.37	0.02	1.78	351.4	6.1	109.1	7.0	522.5	2.28	976.4	5.52	1,619.5	1.30	380.9
		25	13,727	0.80	14.0	0.36	0.02	1.74	354.8	6.2	110.2	7.0	527.3	2.24	986.5	5.41	1,636.2	1.27	384.8
		20	14,015	0.79	13.8	0.36	0.02	1.72	356.4	6.2	110.9	7.1	530.3	2.20	992.0	5.32	1,645.3	1.25	386.9
Out of Pit	Inferred	120	425	1.67	46.0	0.30	0.05	5.21	22.8	0.6	2.9	0.5	48.9	4.59	62.8	11.10	104.1	2.61	24.5
		110	562	1.54	40.9	0.28	0.08	4.77	27.7	0.7	3.5	1.0	59.1	4.21	76.0	10.18	126.1	2.39	29.7
		100	863	1.39	34.8	0.29	0.09	3.96	38.4	1.0	5.4	1.8	75.3	3.70	102.7	8.95	170.3	2.10	40.1
		95	1,107	1.32	31.4	0.30	0.09	3.50	46.9	1.1	7.3	2.2	85.4	3.45	122.8	8.35	203.7	1.96	47.9
		90	1,464	1.25	26.3	0.36	0.08	2.87	59.0	1.2	11.7	2.5	92.7	3.21	151.0	7.76	250.5	1.83	58.9
		85	1,559	1.23	26.1	0.36	0.07	2.81	61.6	1.3	12.3	2.5	96.8	3.15	158.1	7.63	262.2	1.79	61.7
		80	1,634	1.21	25.8	0.36	0.07	2.77	63.5	1.4	12.8	2.6	99.8	3.11	163.4	7.52	270.9	1.77	63.7
		75	1,713	1.19	25.5	0.35	0.07	2.72	65.4	1.4	13.3	2.6	102.9	3.06	168.5	7.40	279.5	1.74	65.7
		70	1,793	1.17	25.0	0.35	0.07	2.68	67.2	1.4	13.8	2.6	105.8	3.01	173.5	7.28	287.7	1.71	67.7

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.

- A comparison of mean grades of the Main Zone composites with the block model at zero grade are presented in Table 14.12.

TABLE 14.12
MAIN ZONE AVERAGE GRADE COMPARISON
COMPOSITES WITH BLOCK MODEL

Data Type	Au (g/t)	Zn (%)	Cu (%)	Ag (g/t)	Pb (%)
Composites	0.85	1.48	0.43	12.96	0.02
Capped Composites	0.84	1.48	0.43	12.80	0.02
Block Model ID*	0.80	1.65	0.35	13.93	0.02
Block Model NN	0.78	1.61	0.35	13.45	0.02

Notes: ***ID**** *= Zn, Cu and Pb grades were interpolated with Inverse Distance Squared, whereas Au and Ag were interpolated with Inverse Distance Cubed*
NN*= block model grades were interpolated using Nearest Neighbour("NN").*

The comparisons above show the average grades of block models were different from that of composites used for the grade estimations. These were most likely due to the smoothing by the grade interpolation process. The block model values will be more representative than the 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	7,501,662 m^3
Block model volume	7,499,003 m^3
Difference %	0.04%

- A comparison of the grade-tonnage curves of the Au and Zn grade model interpolated with Inverse Distance Cubed ("ID^3") and Inverse Distance Squared ("ID^2") and Nearest Neighbour ("NN") on a global resource basis are presented in Figures 14.1 and 14.2.

- Au local trends were evaluated by comparing the ID^3 and NN estimate against the composites. As shown in Figures 14.1 to 14.8, Au and Zn grade interpolations with ID^3 and NN agreed well.

FIGURE 14.1 AU GRADE-TONNAGE CURVE FOR ID^3 AND NN INTERPOLATION

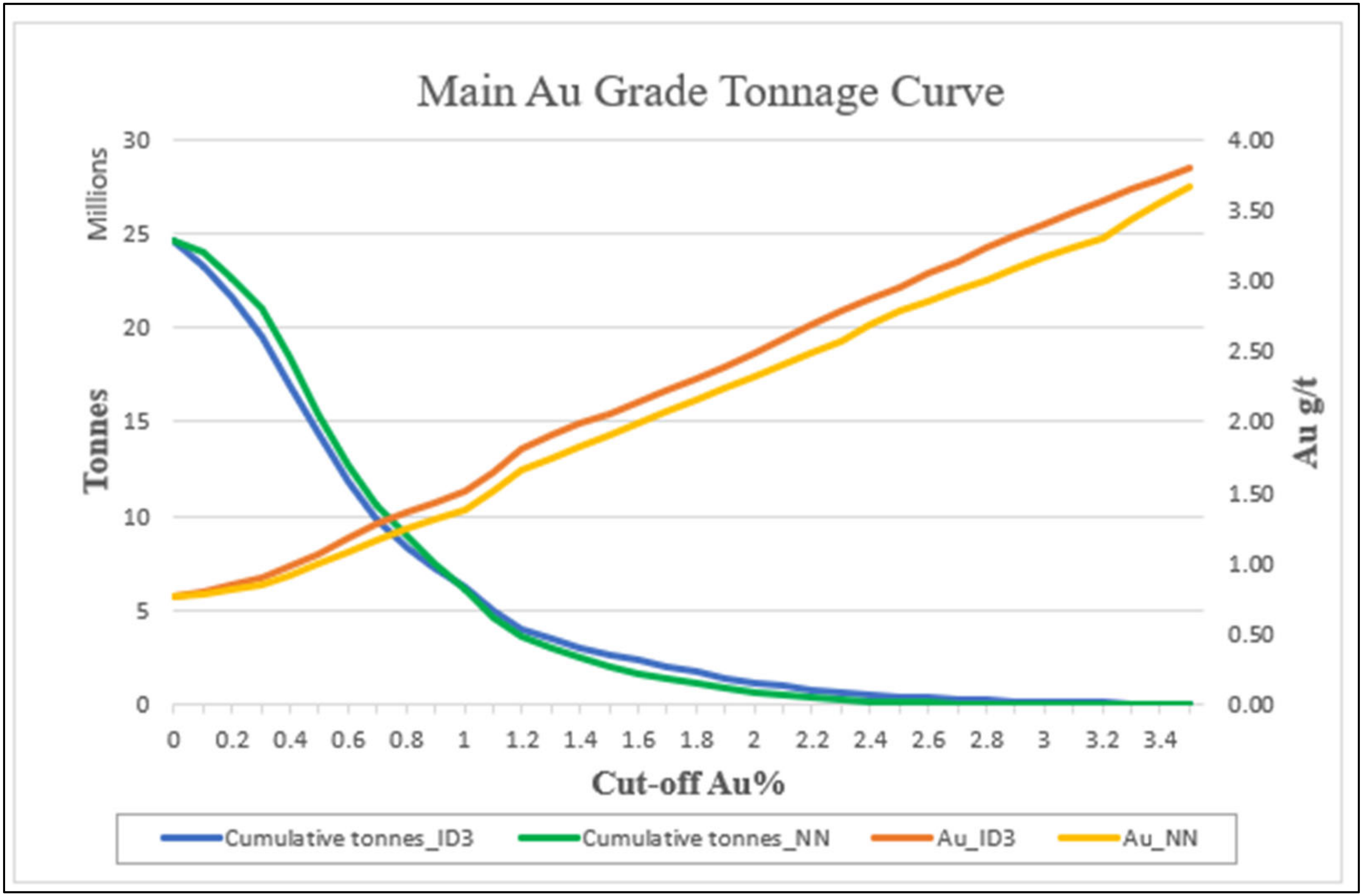


FIGURE 14.2 ZN GRADE-TONNAGE CURVE FOR ID² AND NN INTERPOLATION

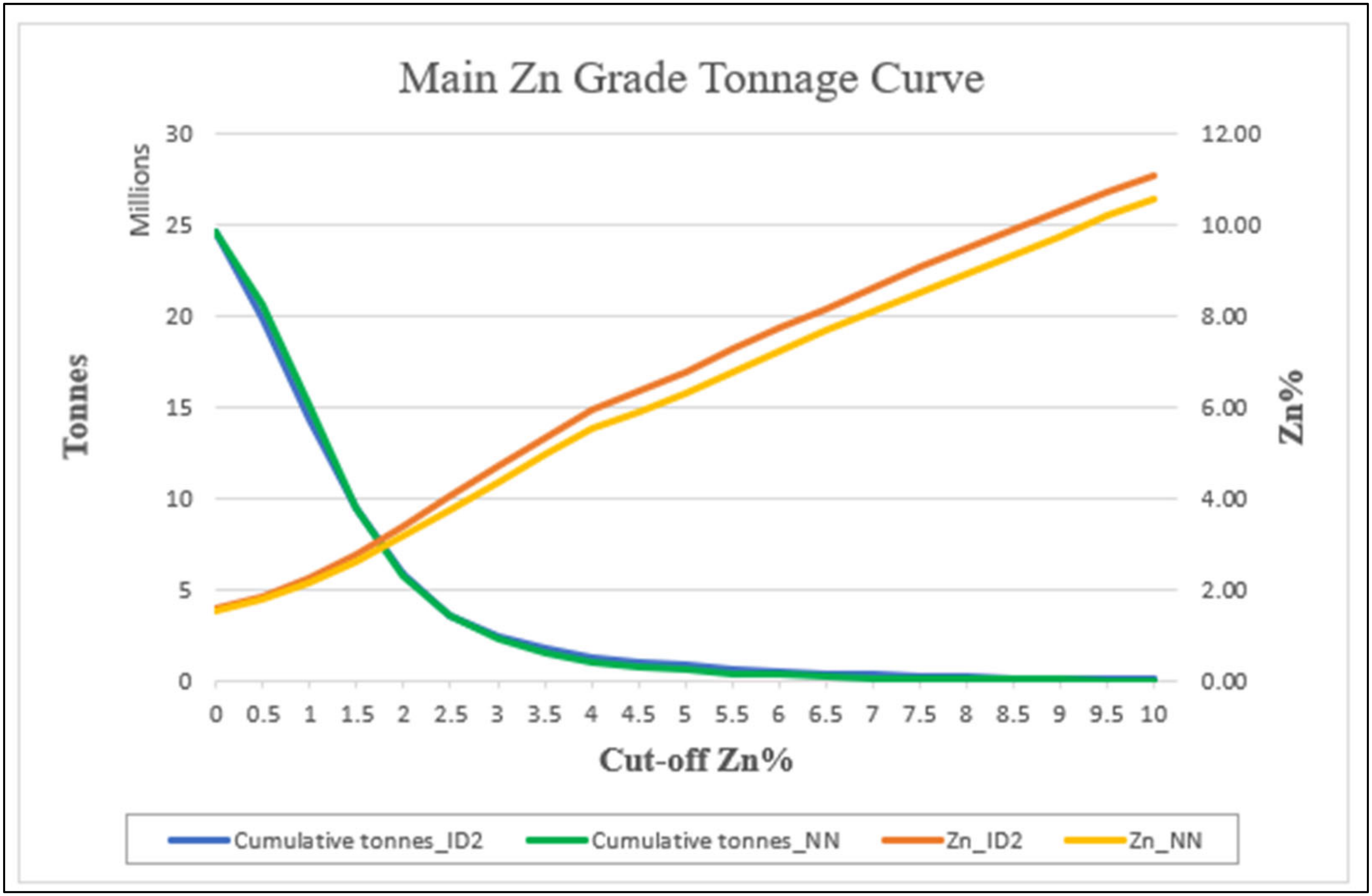


FIGURE 14.3 AU GRADE SWATH EASTING PLOT OF MAIN ZONE

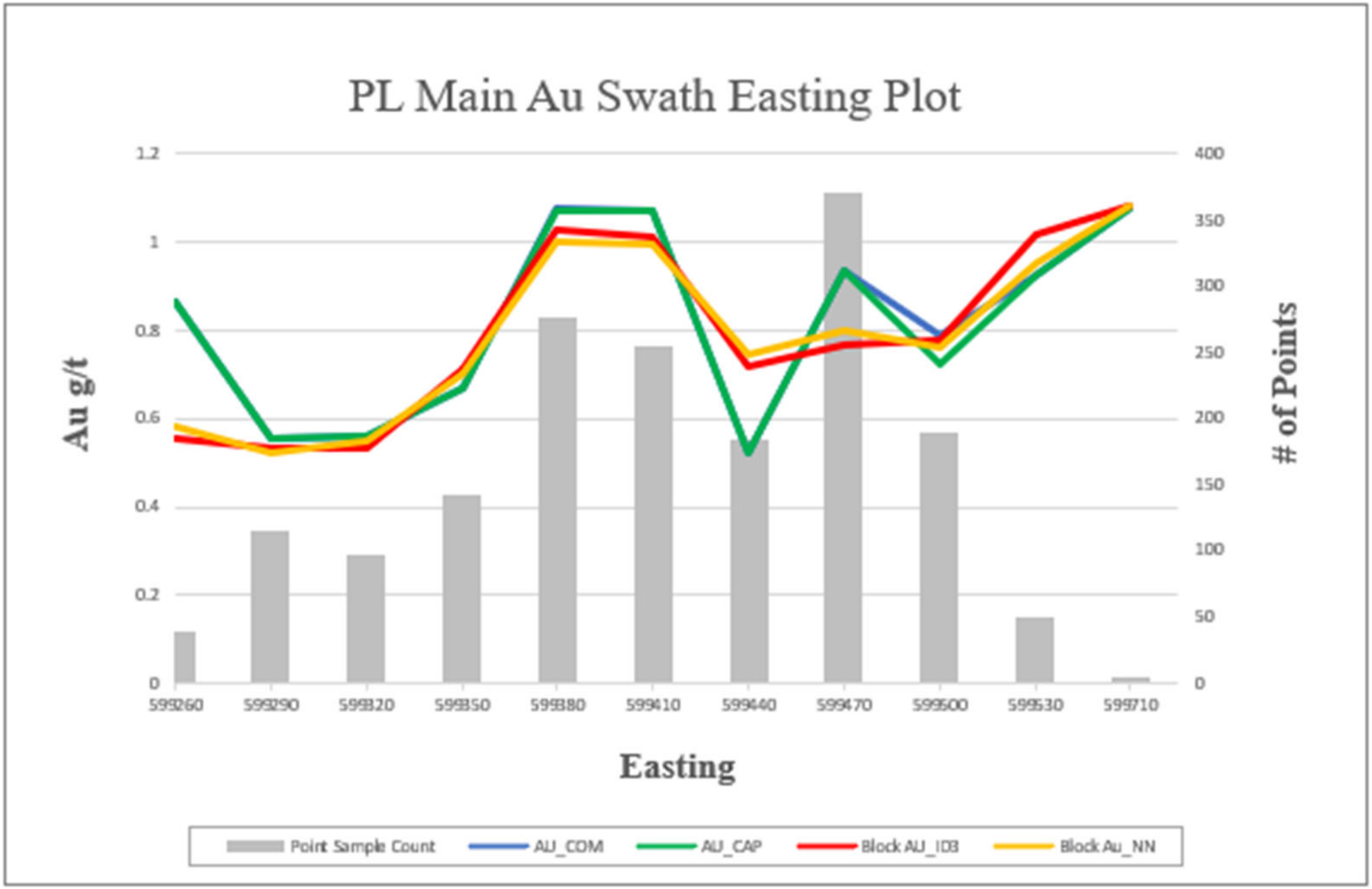


FIGURE 14.4 AU GRADE SWATH NORTHING PLOT OF MAIN ZONE

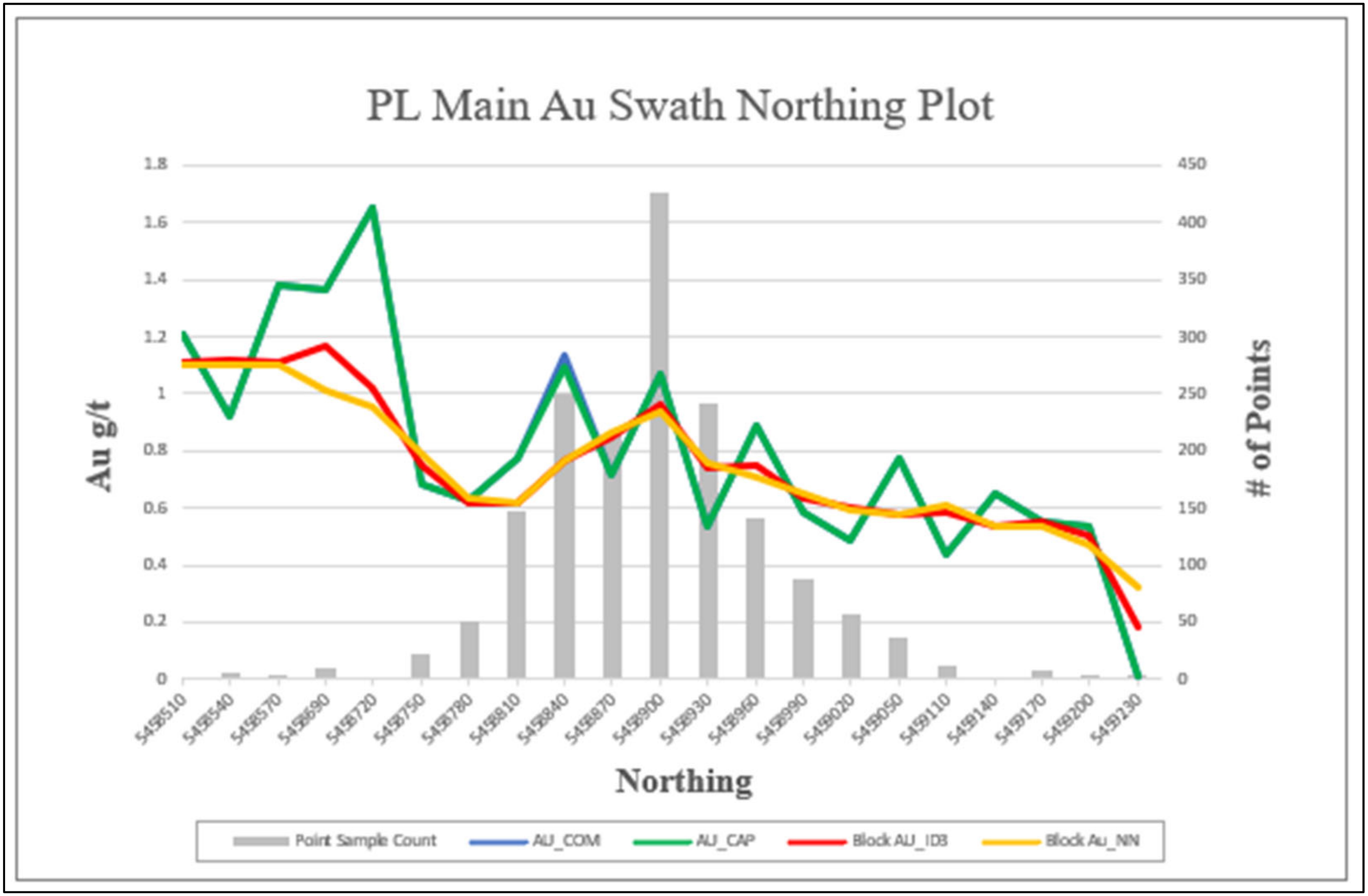


FIGURE 14.5 AU GRADE SWATH ELEVATION PLOT OF MAIN ZONE

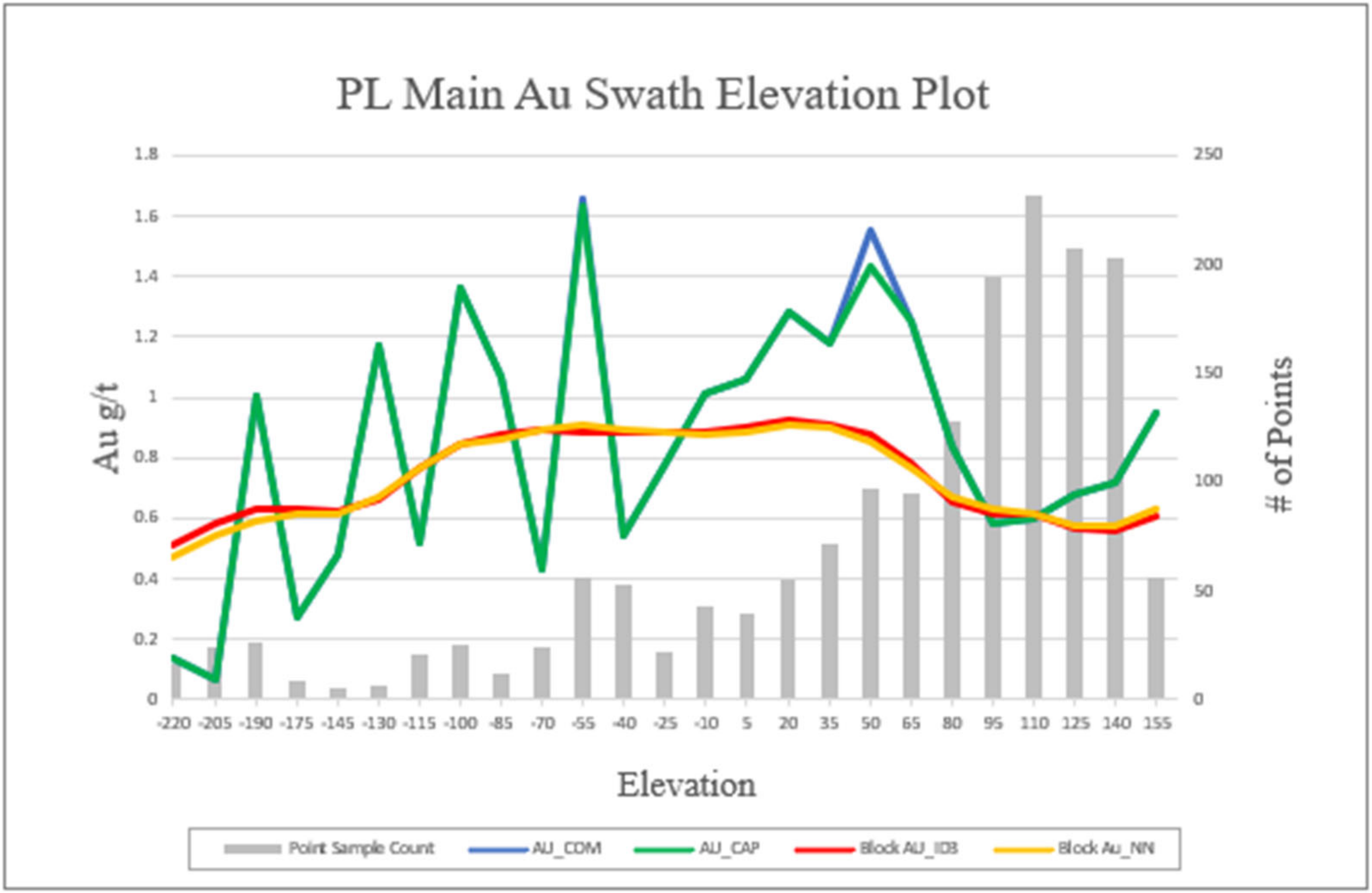


FIGURE 14.6 ZN GRADE SWATH EASTING PLOT OF MAIN ZONE

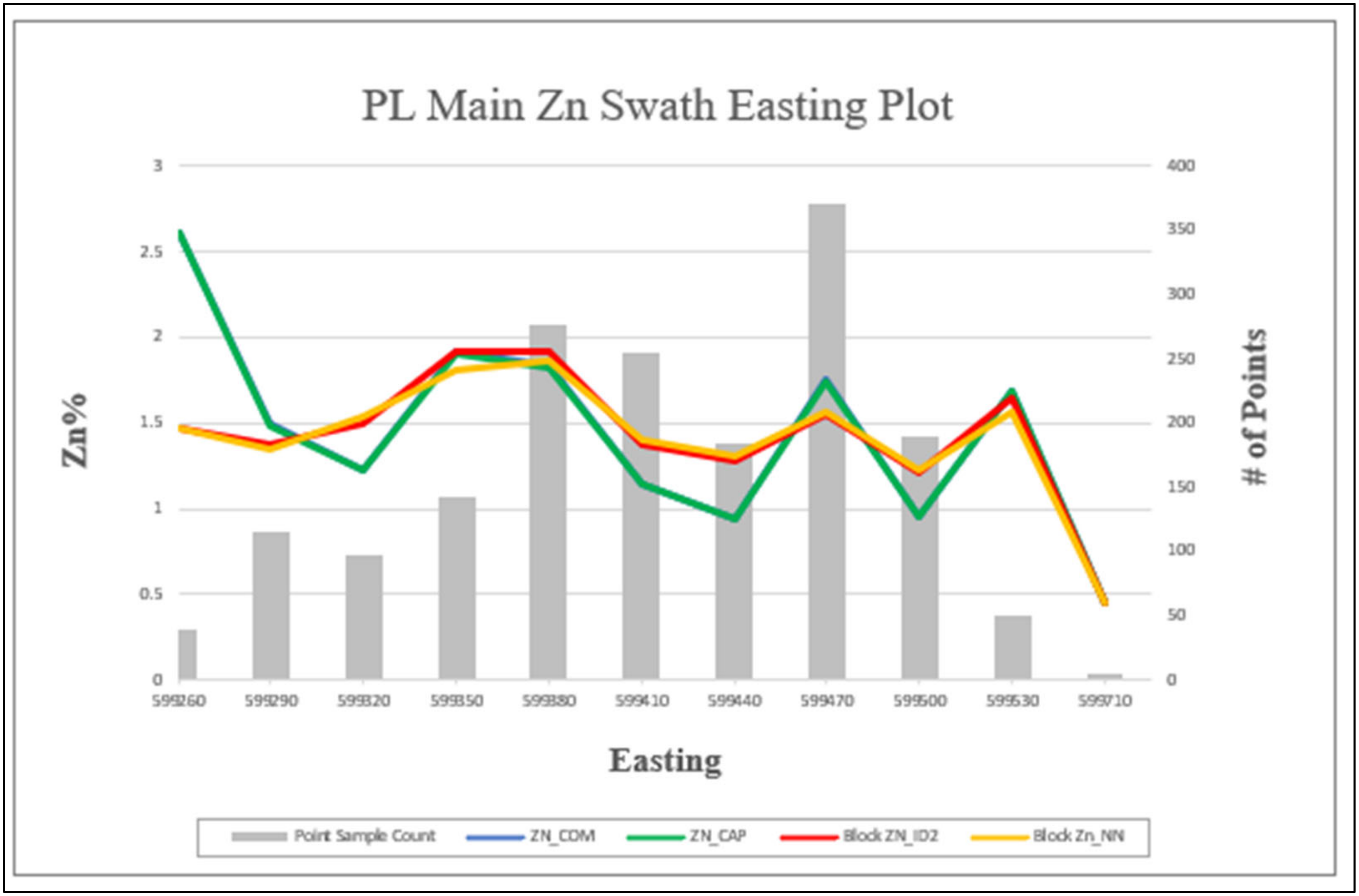


FIGURE 14.7 ZN GRADE SWATH NORTHING PLOT OF MAIN ZONE

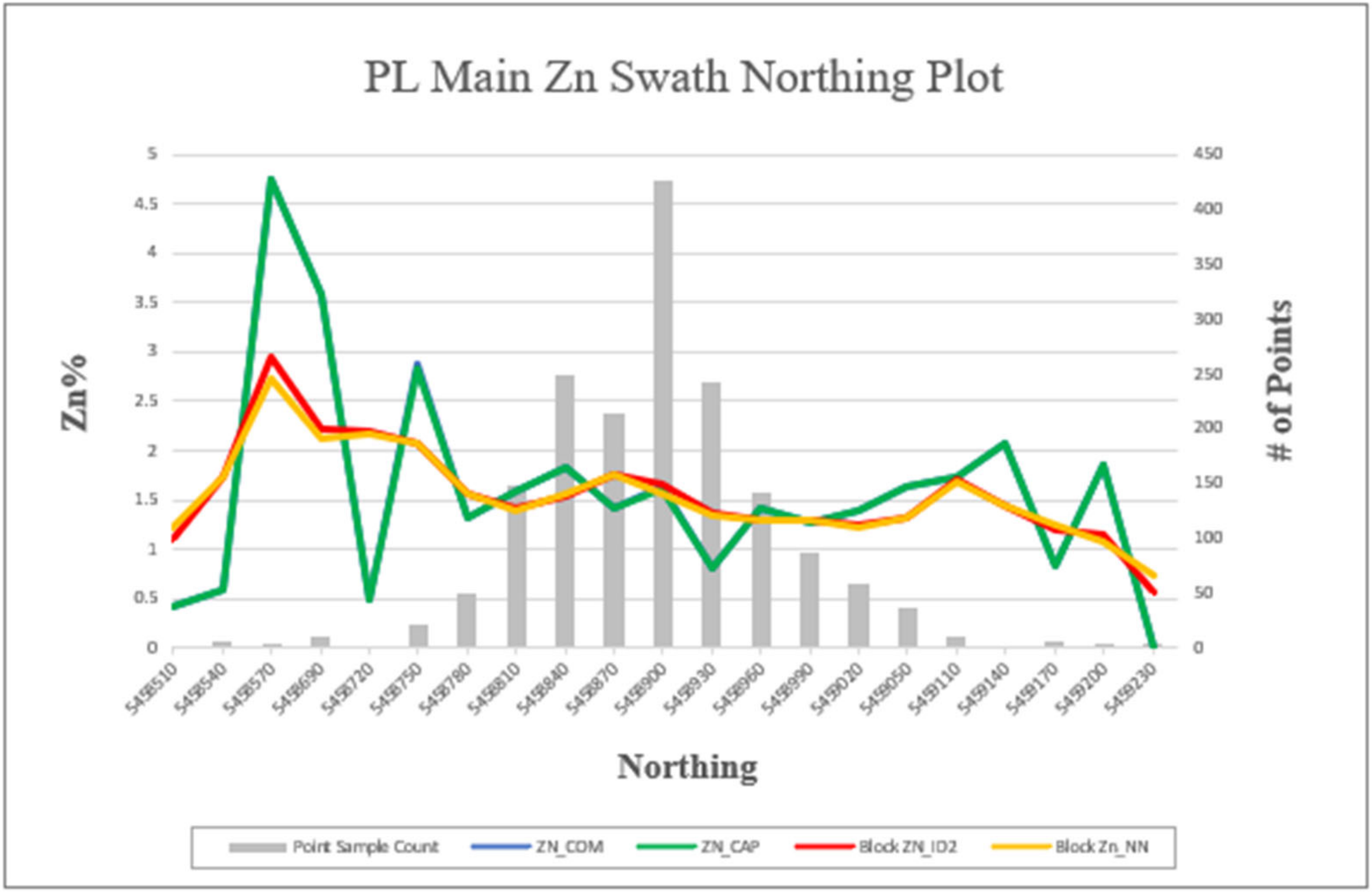
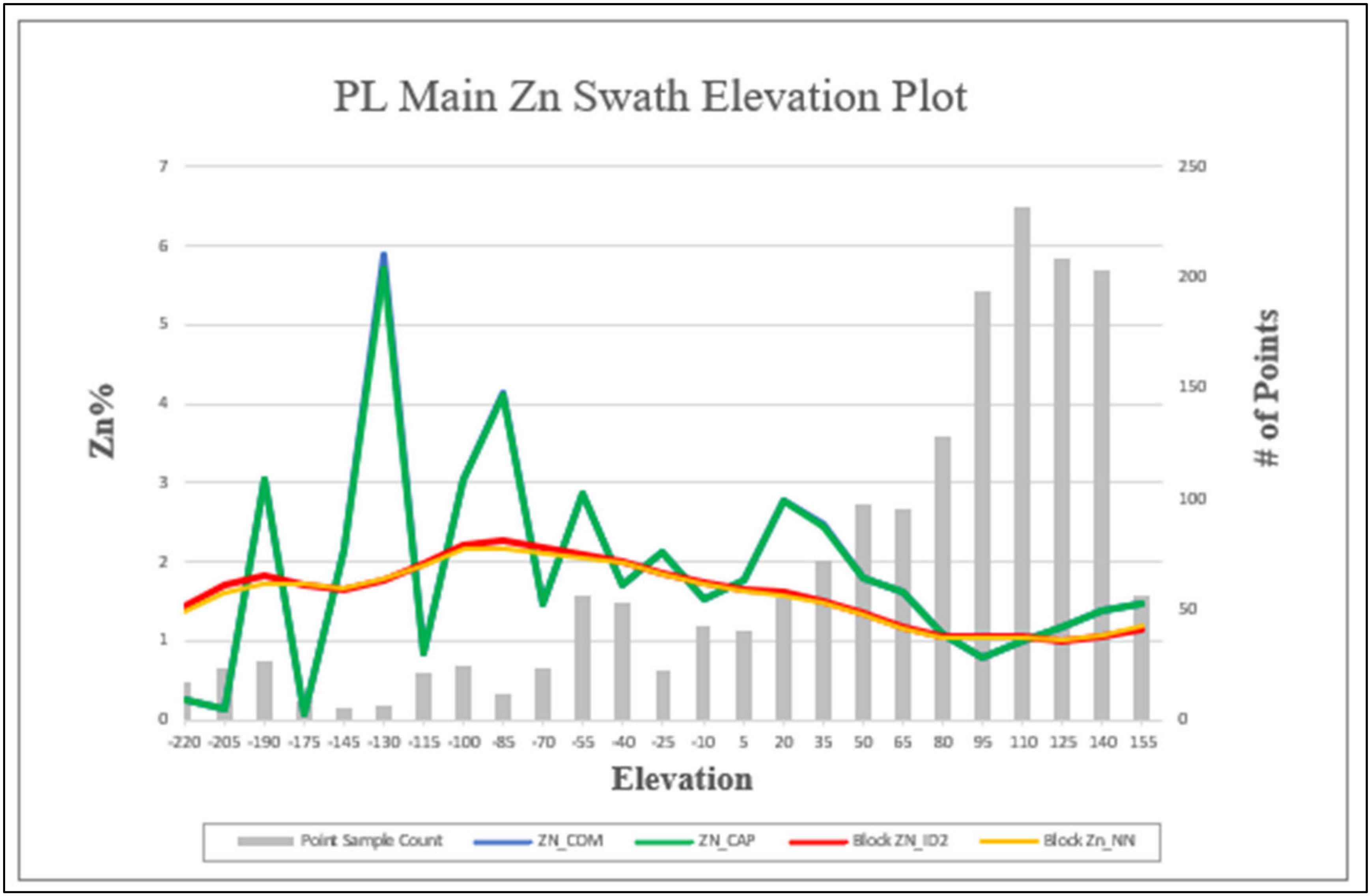


FIGURE 14.8 ZN GRADE SWATH ELEVATION PLOT OF MAIN ZONE



15.0 MINERAL RESERVE ESTIMATES

No National Instrument 43-101 Mineral Reserve currently exists for the Point Leamington Project. 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

No recovery methods have been designed for the Project. 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

No market studies or contracts have been carried out for the Point Leamington Project. This section is not applicable to this Technical Report.

20.0 ENVIRONMENTAL STUDIES, PERMITS, AND SOCIAL OR COMMUNITY IMPACTS

This section is not applicable to this Technical Report.

21.0 CAPITAL AND OPERATING COSTS

No capital and operating costs have been estimated for the Point Leamington Project. This section is not applicable to this Technical Report.

22.0 ECONOMIC ANALYSIS

Economic analyses have not been conducted for the Point Leamington Project. This section is not applicable to this Technical Report.

23.0 ADJACENT PROPERTIES

There are no adjacent properties that materially affect the Point Leamington Property.

24.0 OTHER RELEVANT DATA AND INFORMATION

To the best of the authors' knowledge there are no other relevant data, additional information or explanation necessary to make this Technical Report on the Point Leamington Project understandable and not misleading.

25.0 INTERPRETATION AND CONCLUSIONS

The interpretations and conclusions regarding the geology and Mineral Resource Estimate for the Point Leamington Project are summarized below:

- Callinex acquired the 100% of the Point Leamington Property from Newmarket in 2016;
- The Property is currently held 100% by Callinex, subject to a 3.5% NSR, of which 1.5% can be re-purchased for $2.0M;
- There is a strong understanding of the regional and local geology to support the interpretation of the mineralized zones on the Property;
- The Deposit is hosted in altered felsic to mafic volcanic flows and intercalated sedimentary rocks. Alteration types are carbonatization, silicification, sericitization and chloritization;
- The Point Leamington Deposit is a VMS type base metal mineral deposit;
- Mineralization is currently defined in three domains; Main and two footwall domains;
- Callinex has not conducted any drilling, sampling and exploration on the Property;
- Drilling and sampling procedures, sample preparation and assay protocols conducted by previous operators were generally conducted in agreement with best industry practices at the time, but may not meet current standards;
- Verification of the drill hole collar coordinates indicated a shift in the dataset that likely occurred during the conversion from NAD 27 Zone 21N to NAD 83 Zone 21N. This shift was corrected during the work by Equity. The drilling database provided by Callinex for the current Mineral Resource Estimate is in NAD83 Zone 21N coordinates.
- Verification of the downhole surveys, assays, core, and drill hole logs indicated that the current drill database is reliable;
- The historic diamond drill programs were not supported by a QA/QC program;
- The geological understanding is sufficient to support a Mineral Resource Estimate;
- The density values used to determine that tonnage was derived from samples collected during P&E's due diligence site visit;
- Mineral Resources:
  At a cut-off value of C$25/t NSR:
  - Pit constrained Indicated Mineral Resources are 5.0 Mt grading 0.90 g/t Au, 12.2 g/t Ag, 0.54% Cu and 1.39% Zn;

- Pit constrained Inferred Mineral Resources are 13.7 Mt grading 0.80 g/t Au, 14.0 g/t Ag, 0.36% Cu and 1.74% Zn

At a cut-off value of C$75/t NSR:

- Out-of-pit Inferred Mineral Resources are 1.7 Mt grading 1.19 g/t Au, 25.5 g/t Ag, 0.35% Cu and 2.72% Zn
- Total pit constrained and out-of-pit Indicated Mineral Resources are 5.0 Mt grading 0.90 g/t Au, 12.2 g/t Ag, 0.54% Cu and 1.39% Zn;
- Total pit constrained and out-of-pit Inferred Mineral Resources are 15.4 Mt grading 0.85 g/t Au, 15.3 g/t Ag, 0.36% Cu and 1.85% Zn;

- The Mineral Resource Estimate was generated using Inverse Distance Cubed (ID^3) for Au and Ag and Inverse Distance Squared (ID^2) for Zn, Cu and Pb, for grade interpolation within a 3-D block model, constrained by mineralized zones defined by wireframed solid models. The C$/t NSR values were calculated to determine the potentially economic portions of the open pit and underground mining constrained mineralization.

  The calculations included:

  - Approximate two-year trailing average metal prices, and
  - Reasonably estimated process recovery and smelter payable proportions and smelter treatment and mining, processing, G&A costs and concentrate freight charges.

The Mineral Resource model was investigated by a pit optimization, to constrain it to ensure a reasonable assumption of potential economic extraction.

26.0 RECOMMENDATIONS

It is P&E's opinion that additional exploration expenditures are warranted on the Point Leamington Property. Exploration and general recommendations are summarized below.

26.1 EXPLORATION RECOMMENDATIONS

P&E recommend that Callinex proceed with step-out and infill diamond drilling designed to increase the overall size of the Point Leamington Deposit, expand the Mineral Resource, and advance classification from Inferred to Indicated. In addition to the drilling, surface and downhole electromagnetic survey programs should be conducted to identify additional targets for drill testing. Confirmative metallurgical testing should be performed, and then an updated Mineral Resource Estimate completed.

The following are recommendations for confirmative metallurgical testing:

- Resume sequential rougher flotation laboratory-scale testing using fine grinding P80 <37 µm;
- Regrind rougher concentrates, an essential element missing in all tests to date. Grind size must be P80 <15 µm and multi-stage cleaner flotation must follow;
- Conduct locked cycle testing to produce marketable copper and zinc concentrates;
- Investigate production of high purity sulphide concentrate and gold liberation techniques; and
- Each of the concentrates should be analyzed for penalty elements, such as cadmium and selenium.

The proposed timeline and budget to complete the recommended program is 12 months and $1.4M (Table 26.1).

TABLE 26.1 RECOMMENDED EXPLORATION PROGRAM AND BUDGET			
Task	**Unit Price ($)**	**Units**	**Budget ($)**
Surface Geophysics & Target Definition			120,000
Diamond Drilling	200/m	2,500 m	500,000
Assays	100/sample	650 samples	65,000
Salaries	10,000/month	12 months	120,000
Logistics (lodging, fuel, food, consumables)	10,000/month	12 months	120,000
Surveying (differential GPS)	1,000/day	10 days	10,000
Downhole EM Geophysical Surveys			50,000
Metallurgical Testwork			100,000
Updated Mineral Resource Estimate			50,000
Subtotal			**1,135,000**
Contingency (20%)			**227,000**
Total			**1,362,000**

26.2 GENERAL RECOMMENDATIONS

P&E make the following general recommendations for advancing the Project:

- Design, implement and maintain an industry best practice QA/QC program, which includes submitting 1% to 2% of the coarse rejects or pulps for check analysis at an accredited umpire laboratory;

- Submit all future assay samples to an accredited laboratory. Consider submitting 1% to 2% of the coarse rejects or pulps for check analysis at an accredited umpire laboratory, as part of an industry best practice QA/QC program; and

- Collect more bulk density measurements for the host and country rock types and significant alteration styles. Approximately 5% of the database should have a bulk density measurement, in order to allow for more accurate calculation of tonnage and increased confidence in any subsequent Mineral Resource Estimates.

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28.0 CERTIFICATES

CERTIFICATE OF QUALIFIED PERSON

WILLIAM STONE, PH.D., P.GEO.

I, William Stone, Ph.D., P.Geo, residing at 4361 Latimer Crescent, Burlington, Ontario, do hereby certify that:

1. I am an independent geological consultant.
2. This certificate applies to the Technical Report titled "Technical Report and Mineral Resource Estimate of the Point Leamington Project, Newfoundland and Labrador", (The "Technical Report") with an effective date of August 20, 2021.
3. I am a graduate of Dalhousie University with a Bachelor of Science (Honours) degree in Geology (1983). In addition, I have a Master of Science in Geology (1985) and a Ph.D. in Geology (1988) from the University of Western Ontario. I have worked as a geologist for a total of 35 years since obtaining my M.Sc. degree. I am a geological consultant currently licensed by the Professional Engineers & Geoscientists Newfoundland & Labrador (Member Number 10221).

   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:

   - Contract Senior Geologist, LAC Minerals Exploration Ltd. 1985-1988
   - Post-Doctoral Fellow, McMaster University 1988-1992
   - Contract Senior Geologist, Outokumpu Mines and Metals Ltd. 1993-1996
   - Senior Research Geologist, WMC Resources Ltd. 1996-2001
   - Senior Lecturer, University of Western Australia 2001-2003
   - Principal Geologist, Geoinformatics Exploration Ltd. 2003-2004
   - Vice President Exploration, Nevada Star Resources Inc. 2005-2006
   - Vice President Exploration, Goldbrook Ventures Inc. 2006-2008
   - Vice President Exploration, North American Palladium Ltd. 2008-2009
   - Vice President Exploration, Magma Metals Ltd. 2010-2011
   - President & COO, Pacific North West Capital Corp. 2011-2014
   - Consulting Geologist 2013-2017
   - Senior Project Geologist, Anglo American 2017-2019
   - Consulting Geoscientist 2020-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Sections 2-12, 15-19, 21-24 and co-authoring Sections 1 and 25-26 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: August 20, 2021

Signed Date: December 9, 2021

{SIGNED AND SEALED}

[William Stone]

Dr. William E. Stone, 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 "Technical Report and Mineral Resource Estimate of the Point Leamington Project, Newfoundland and Labrador", (The "Technical Report") with an effective date of August 20, 2021.
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 visited the Property that is the subject of this Technical Report in May 2008.
5. I am responsible for authoring Section 14 and co-authoring Sections 1 and 25-26 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 August 20, 2021
Signed Date: December 9, 2021

{SIGNED AND SEALED}
[Eugene Puritch]

____
Eugene Puritch, P.Eng., FEC, CET

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 "Technical Report and Mineral Resource Estimate of the Point Leamington Project, Newfoundland and Labrador", (The "Technical Report") with an effective date of August 20, 2021.
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 & Geoscientists Newfoundland & Labrador (Member No. 10206). 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 and 25-26 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: August 20, 2021
Signed Date: December 9, 2021
{SIGNED AND SEALED}
[D. Grant Feasby]

____

D. Grant Feasby, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

TIM FROUDE, B.SC. P.GEO.

I, Timothy Froude, B.Sc., P.Geo., residing at 113 Monument Road, Conception Bay South, NL, A1W 2B4, do hereby certify that:

1. I am an independent geologist working for Sokoman Minerals Corp.
2. This certificate applies to the Technical Report titled "Technical Report and Mineral Resource Estimate of the Point Leamington Project, Newfoundland and Labrador", (The "Technical Report") with an effective date of August 20, 2021.
3. I am a graduate of Memorial University of Newfoundland with a Bachelor of Science degree in Geology (1988). I have worked as a geologist for a total of 33 years since graduating in 1988. I am a professional geologist currently licensed by the Association of Professional Engineers and Geoscientists of Newfoundland and Labrador (License No 03046).

   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:
   - President and CEO, Sokoman Minerals Corp. 2007-present
   - Vice President Exploration, Crosshair Exploration Inc. 2003-2007
   - Vice President Exploration, Cornerstone Resources Inc. 2000-2003

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for co-authoring Sections 1, 12, 25 and 26 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, but have worked on multiple occasions in the jurisdiction.
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: August 20, 2021
Signed Date: December 9, 2021

{SIGNED AND SEALED}
[Timothy Froude]

____
Timothy Froude, B.Sc., P. Geo.

CERTIFICATE OF QUALIFIED PERSON

CAMERON BARTSCH, P.GEO.

I, Cameron Bartsch, P.Geo., of Parksville, British Columbia, do hereby certify that:

1. I am a currently the Owner and Principal Geologist of:
   Fault Lines Geological
   647 Morison Ave.
   Parksville, BC V9P 1G3

2. This certificate applies to the technical report entitled Technical Report and Mineral Resource Estimate of the Point Leamington Project, Newfoundland and Labrador", (The "Technical Report") with an effective date of August 20, 2021.
3. I graduated from the University of Saskatchewan in 2001 with a B.Sc. (Honours) in Geology, and from Acadia University in 2005 with a M.Sc. in Geology. I am registered as a Professional Geoscientist with Professional Engineers & Geoscientists Newfoundland & Labrador (Member No. 10462) and Engineers and Geoscientists of British Columbia (Reg.# 35418). I have worked continuously as a structural and economic geologist for a total of 20 years since my graduation.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I 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 includes exploring for and modelling precious and base metals deposits globally, as well being a contributing author for numerous technical reports while employed as:
   - Senior Structural Geologist – Terrane Geoscience Inc. (2017-2021)
   - Senior Consulting Geologist – Tetra Tech (2012-2017)
   - Senior Geologist – British Columbia Securities Commission (2010-2012)
   - Project Geologist – Equity Exploration Consultants (2007-2010)
   - Exploration Geologist – Dundee Precious Metals (2005-2007)
   - Mine Geologist – Cogema Resources (2001-2002)

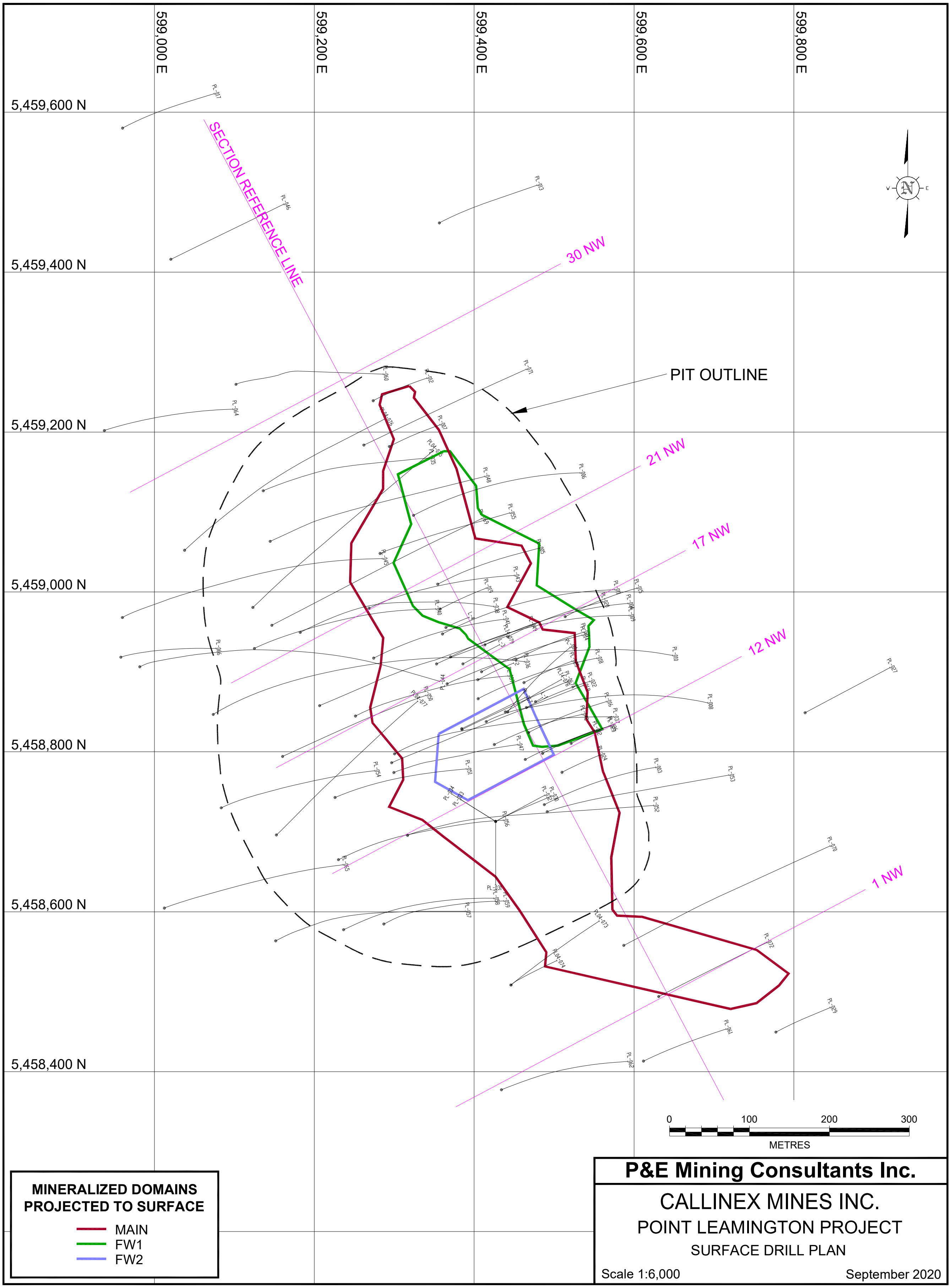
5. I visited the property that is the subject of the Technical Report on October 26th, 2016.
6. I am responsible for Sections 2.2.1, 11.0 and 12.0 – 12.2 of the Technical Report.
7. I am independent of Callinex Mines Inc., as defined by Section 1.5 of the Instrument.
8. I have had prior involvement with the Property that is the subject of the Technical Report in that I visited the property and carried out data verification in 2016.
9. I confirm that I have read NI 43-101 and Form 43-101F1, and the technical report has been prepared in accordance with them.
10. To the best of my knowledge, information, and belief, as of the date of this certificate the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Effective Date: August 20, 2021
Signed Date: December 9, 2021

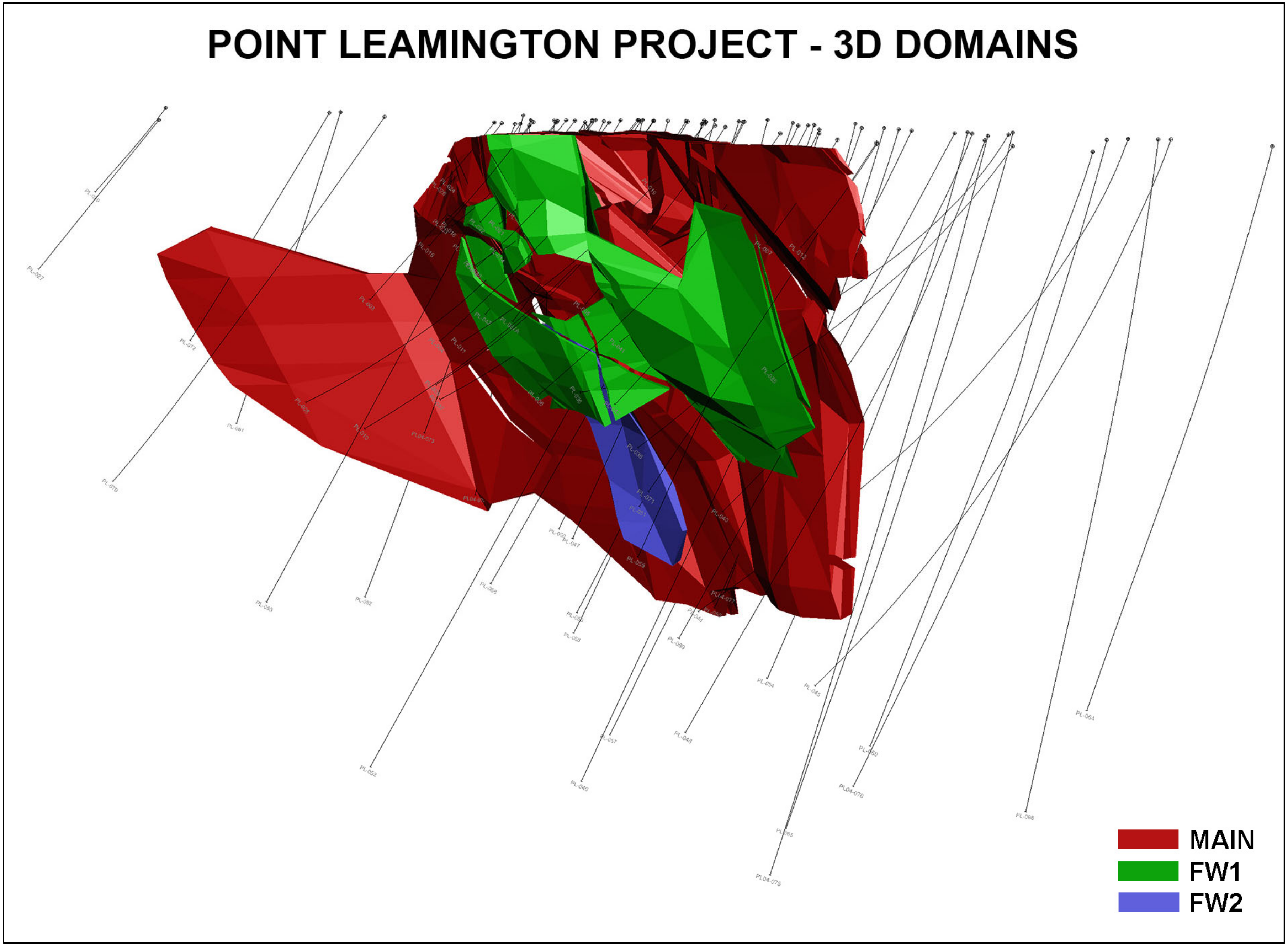
{SIGNED AND SEALED}
[Cameron Bartsch]

Cameron Bartsch, M.Sc., P.Geo.
Principal Geologist
Fault Lines Geological

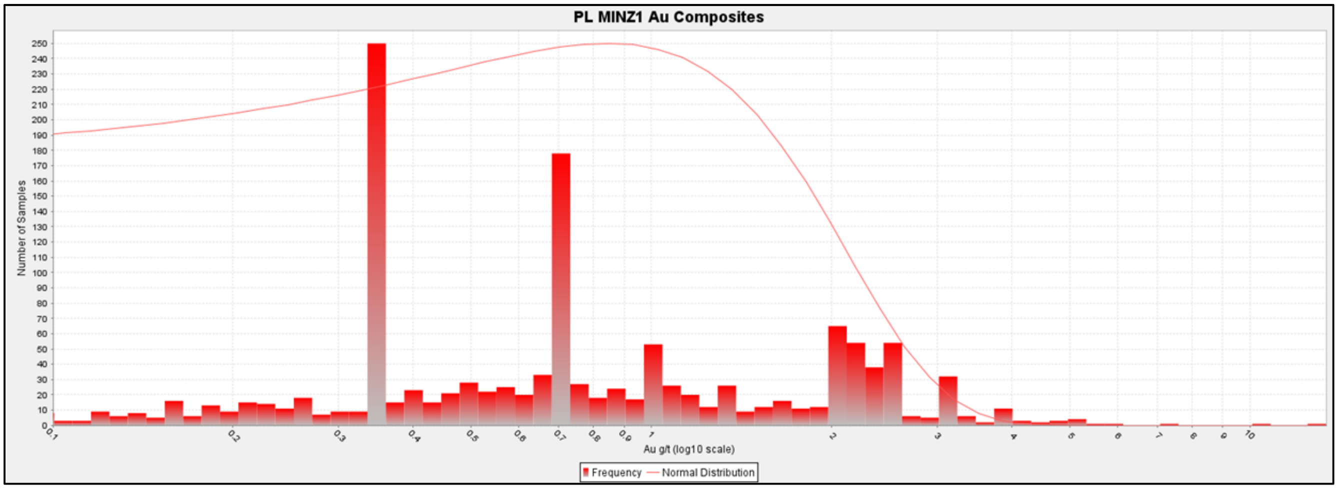
APPENDIX A SURFACE DRILL HOLE PLAN

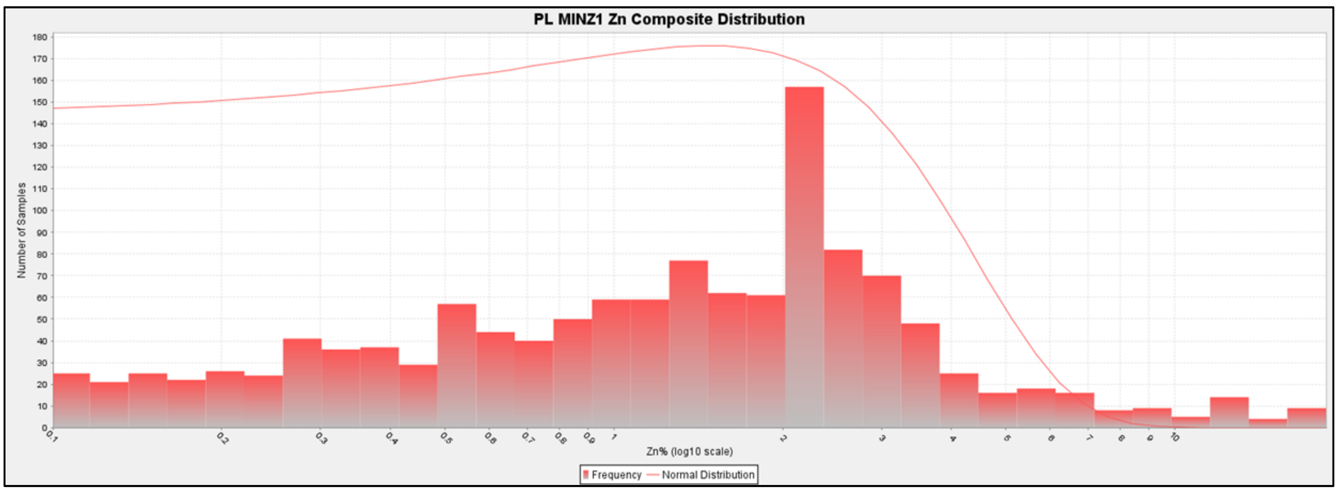

599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
SECTION REFERENCE LINE
30 NW
21 NW
17 NW
12 NW
1 NW
PIT OUTLINE
0
100
200
300
METRES
MINERALIZED DOMAINS PROJECTED TO SURFACE
MAIN
FW1
FW2
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
SURFACE DRILL PLAN
Scale 1:6,000
September 2020

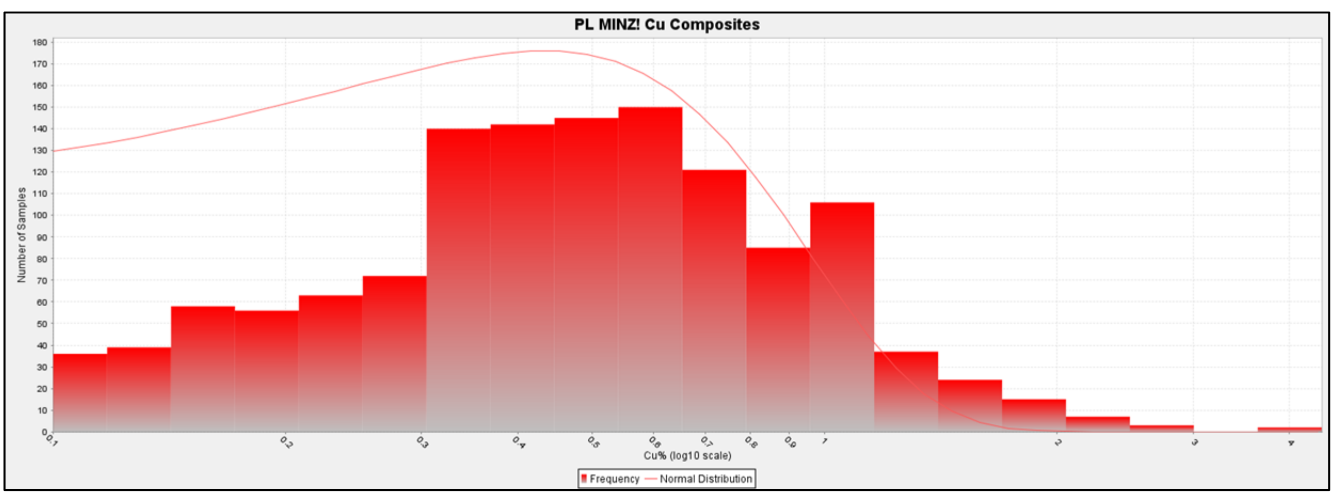
APPENDIX B 3-D DOMAINS

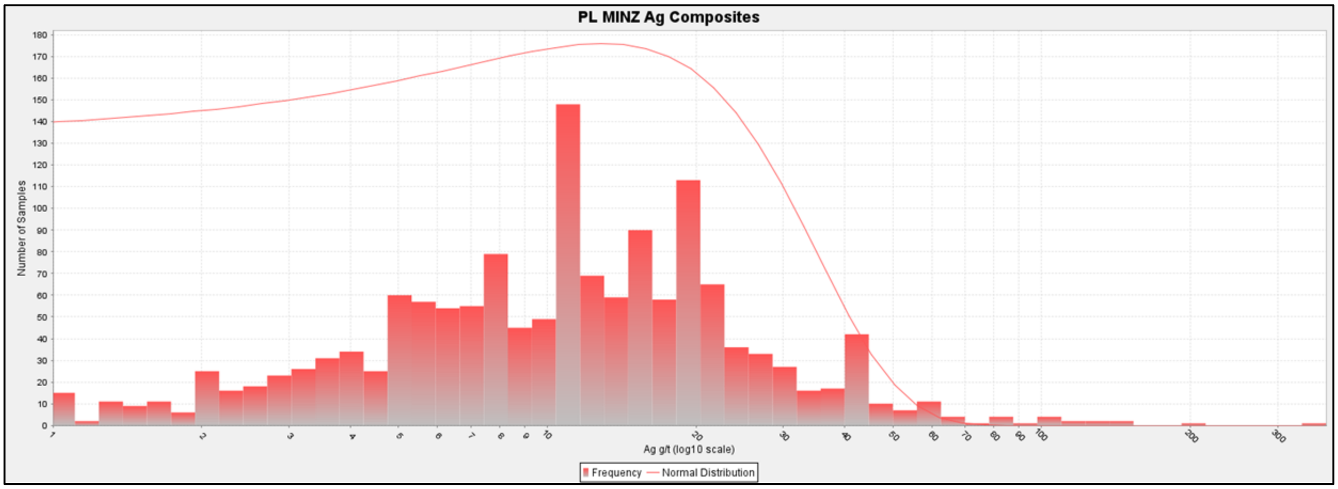

POINT LEAMINGTON PROJECT - 3D DOMAINS
MAIN
FW1
FW2

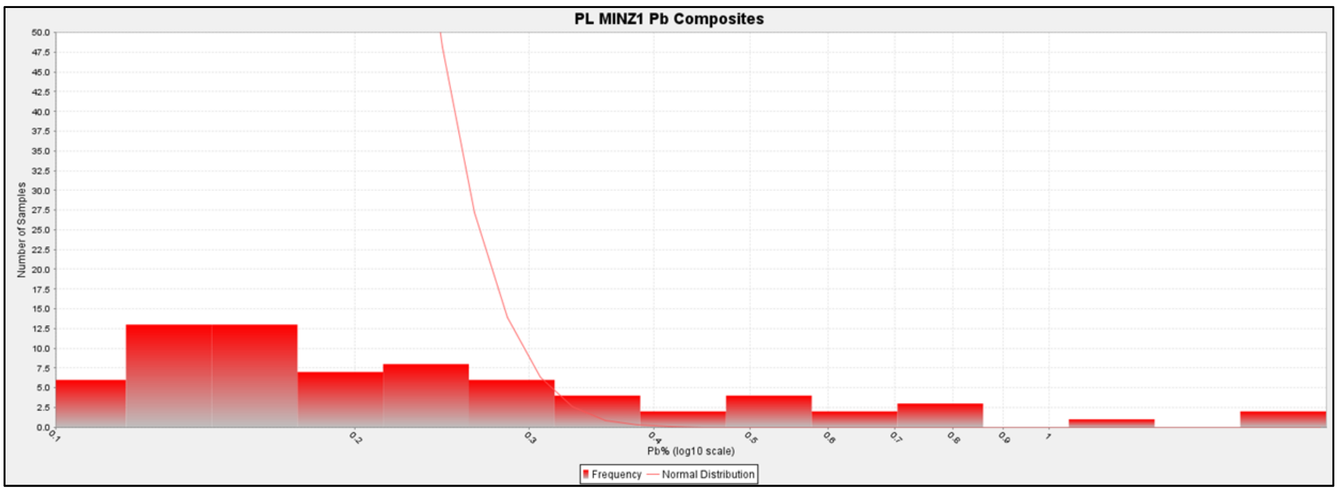
APPENDIX C LOG NORMAL HISTOGRAMS



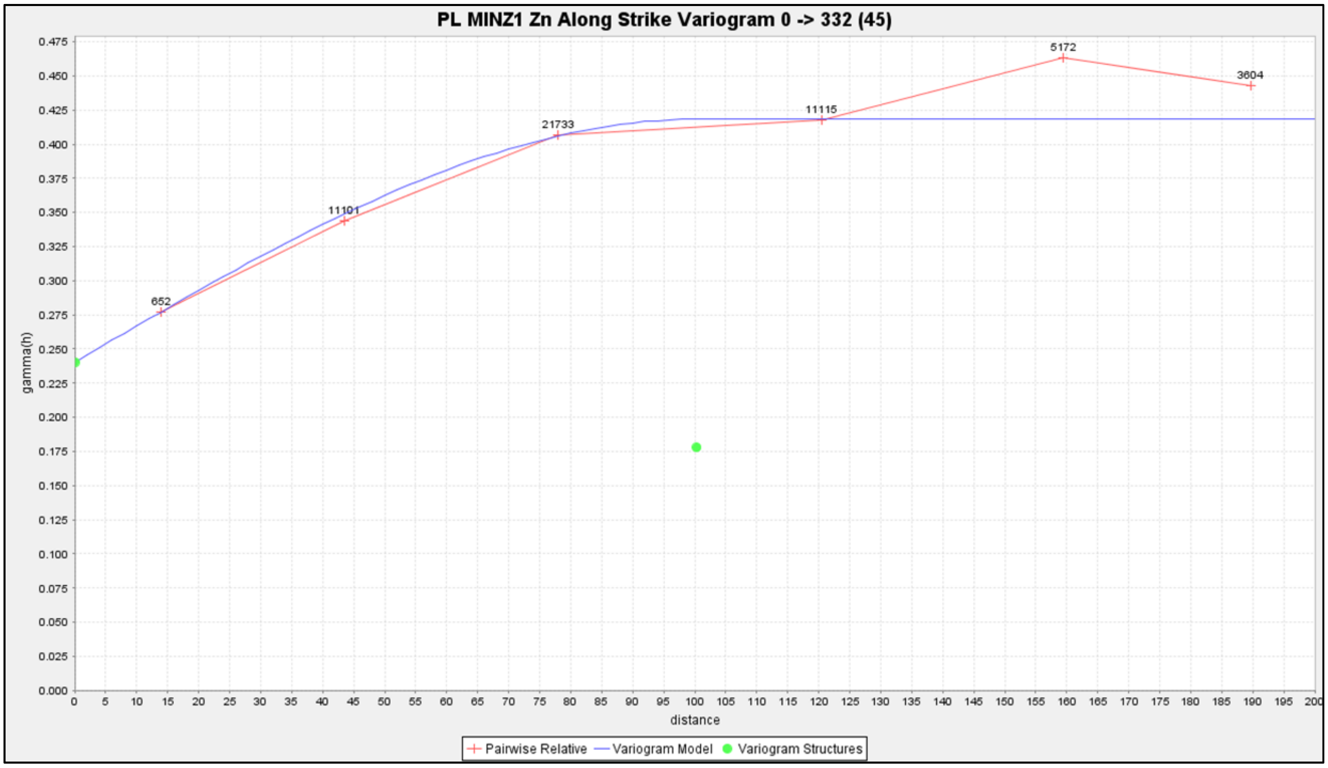


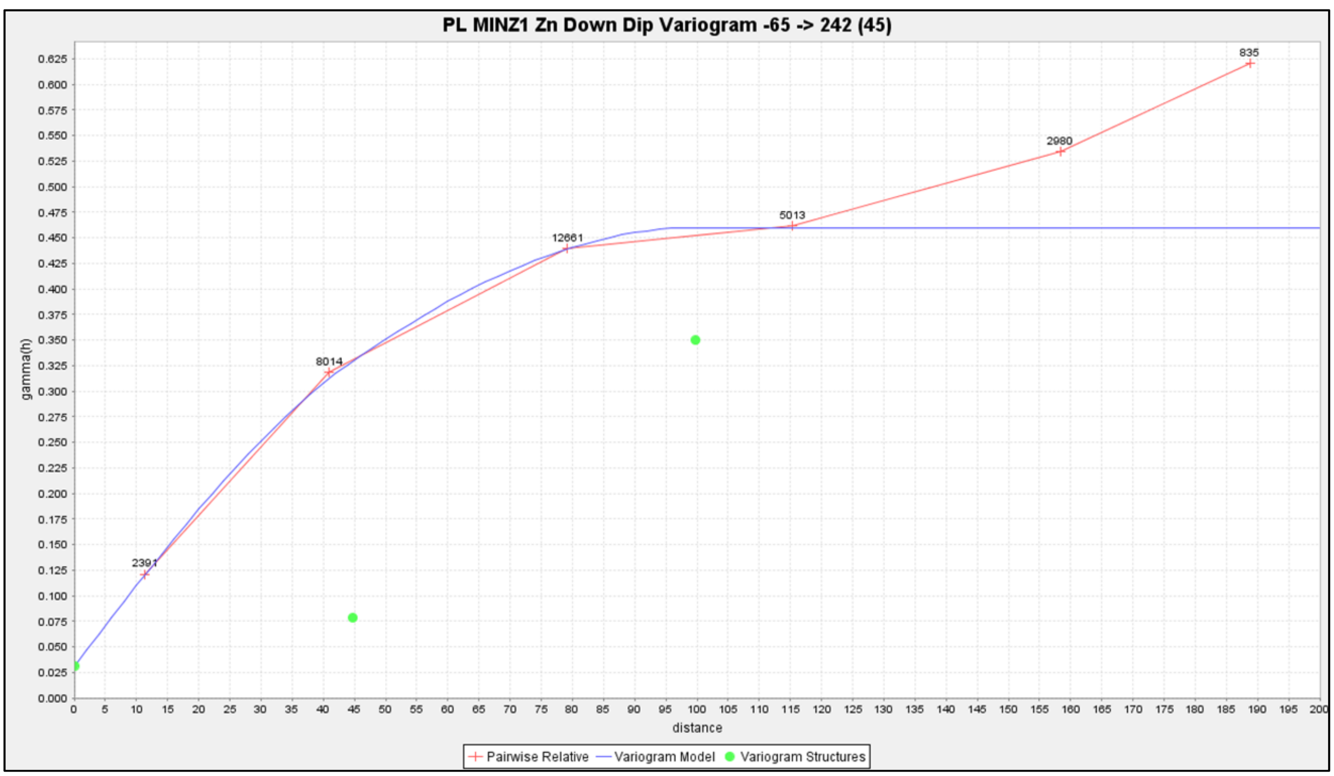


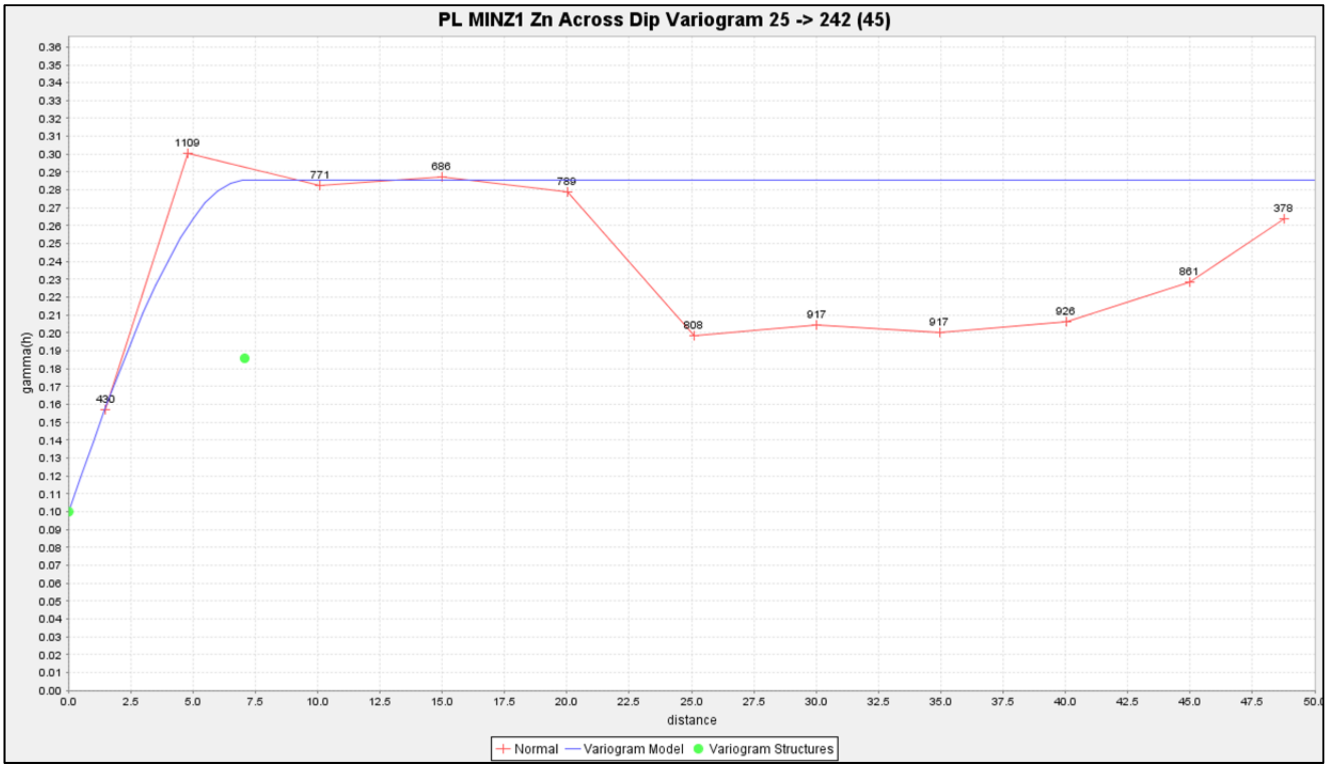

PL MINZ Ag Composites
Number of Samples
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
20
30
40
50
60
70
80
90
100
200
300
Ag g/t (log10 scale)
Frequency
Normal Distribution

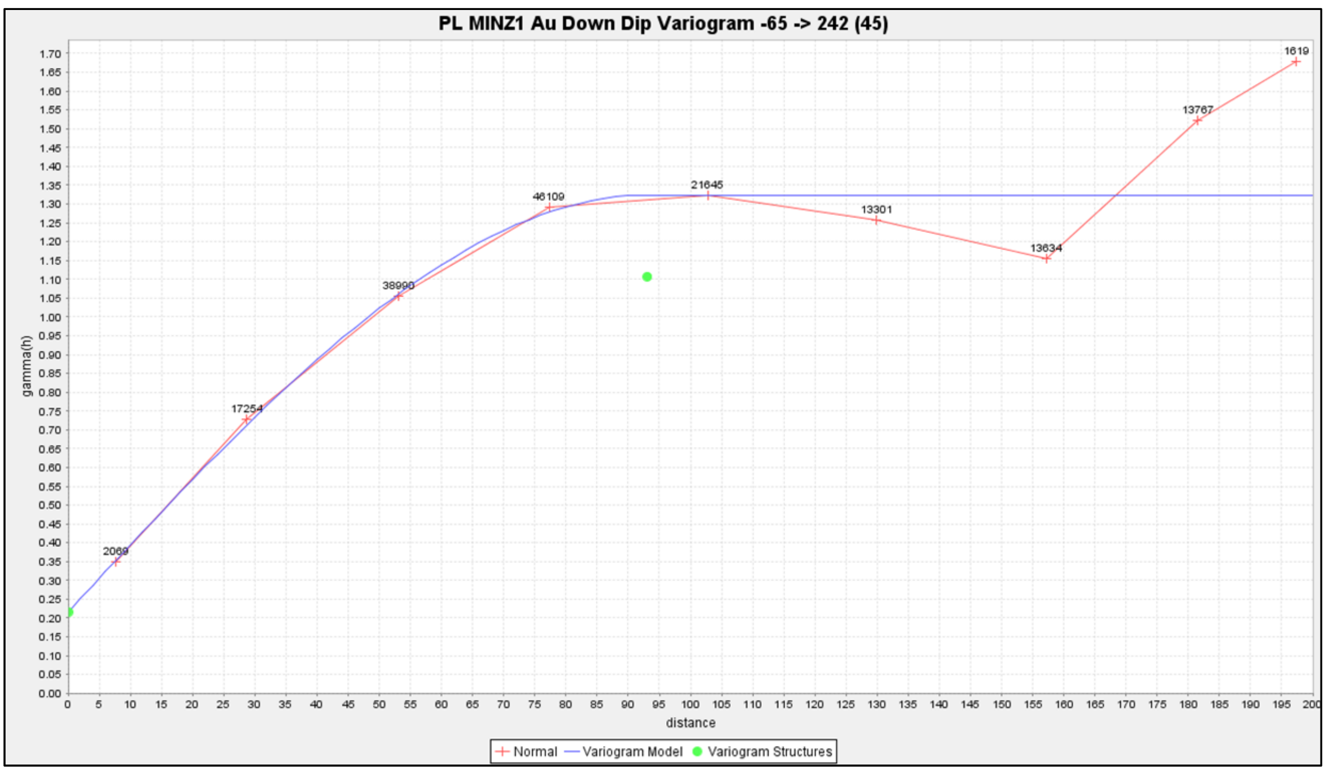

PL MINZ1 Pb Composites
Number of Samples
50.0
47.5
45.0
42.5
40.0
37.5
35.0
32.5
30.0
27.5
25.0
22.5
20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
Pb% (log10 scale)
Frequency
Normal Distribution

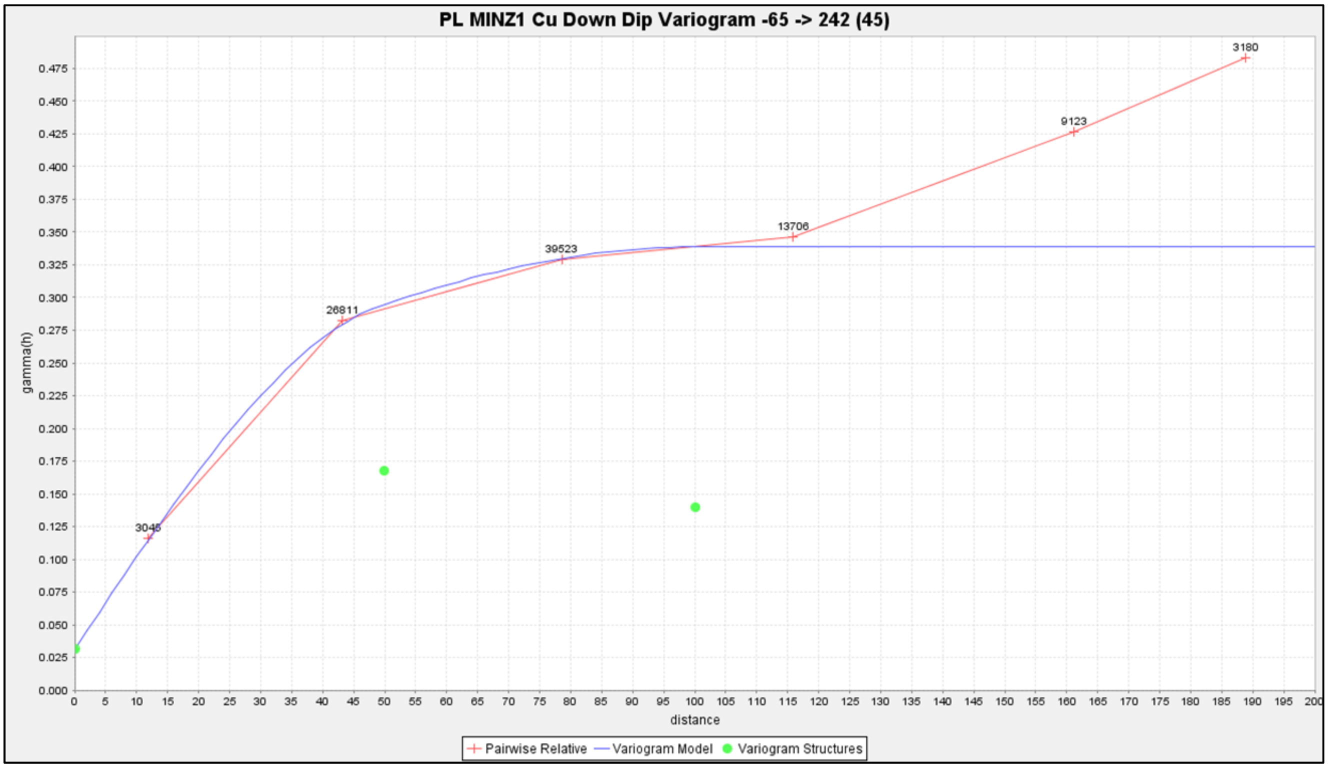
APPENDIX D VARIOGRAMS



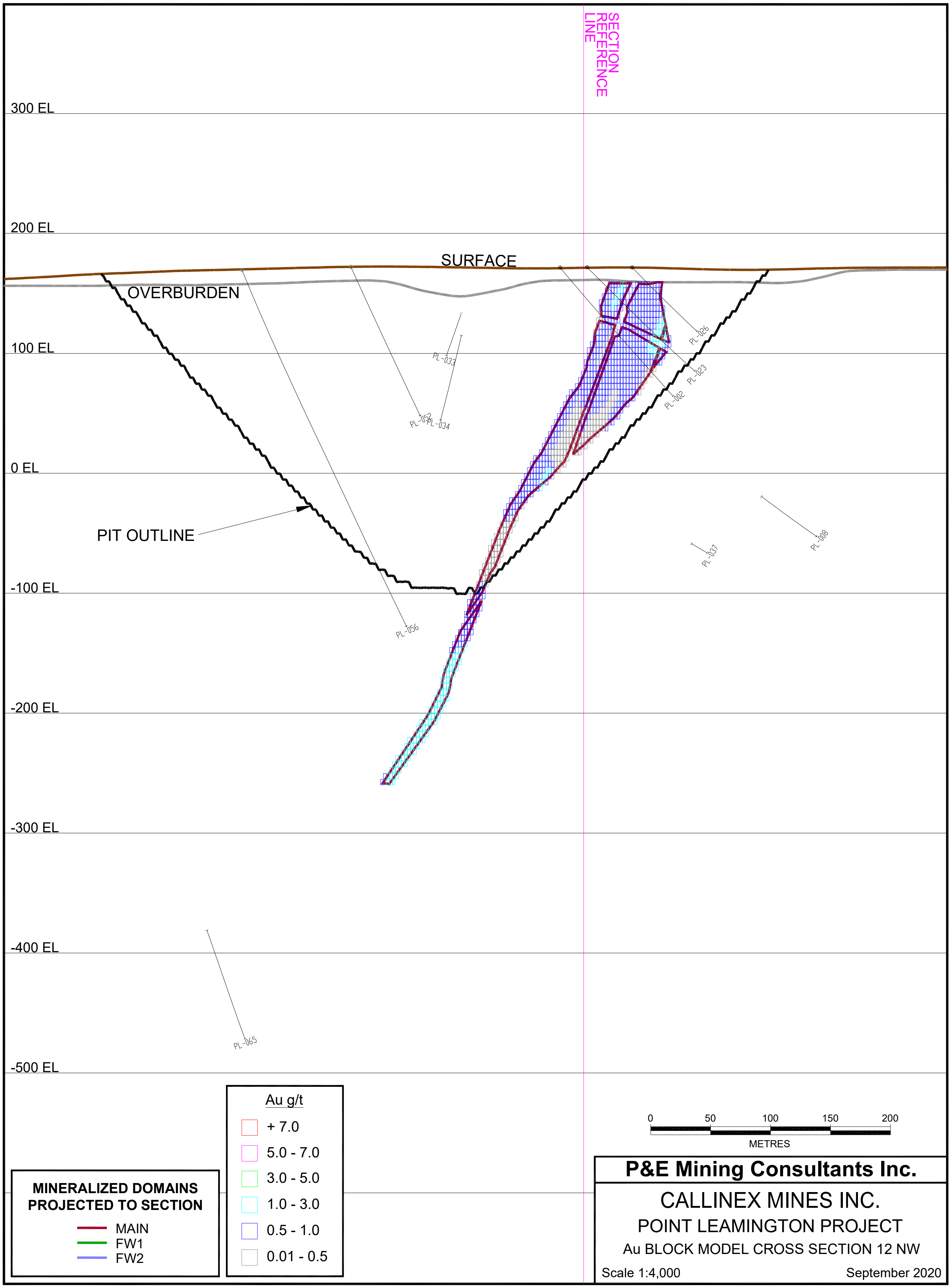


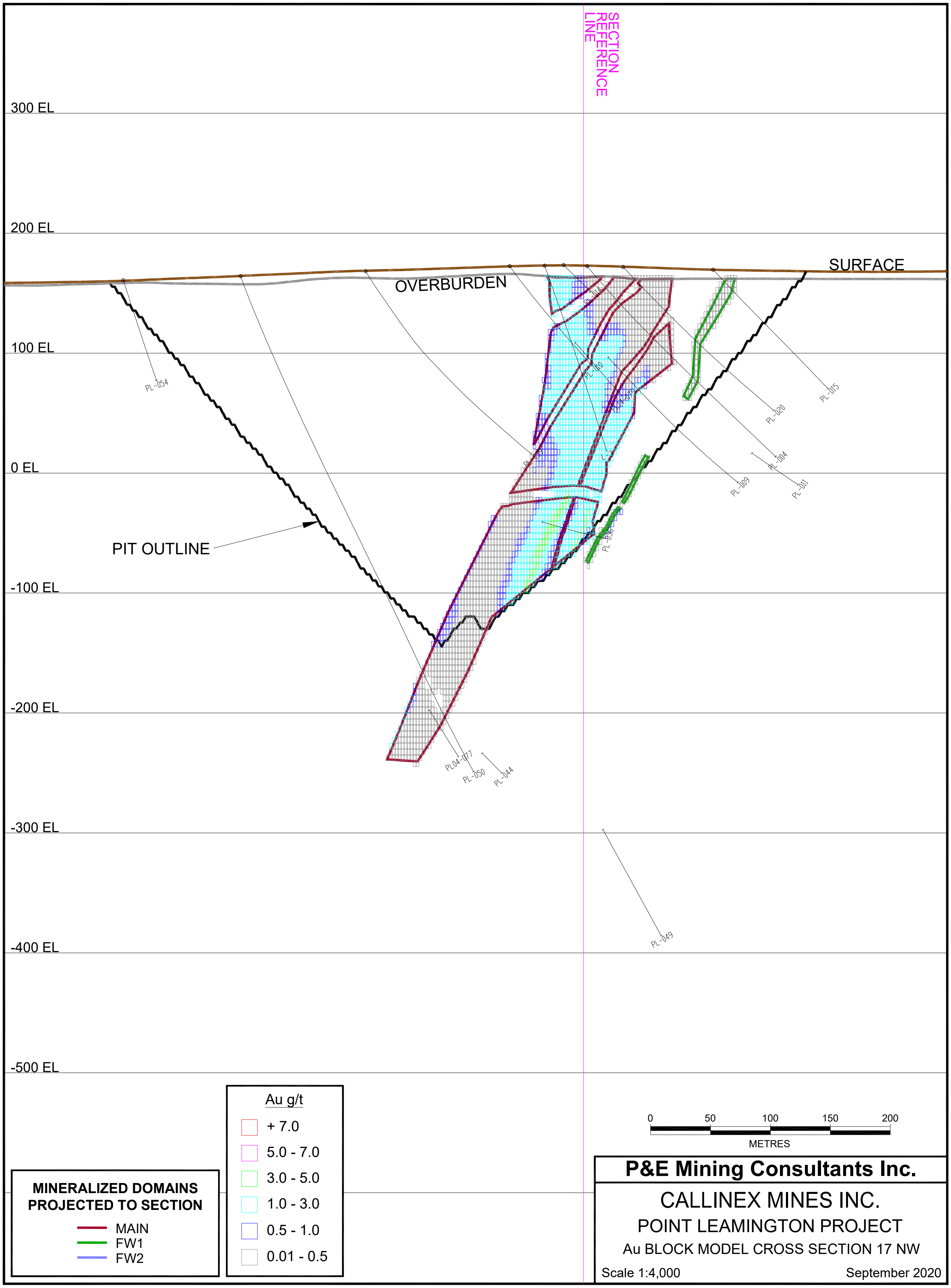

PL MINZ1 Zn Across Dip Variogram 25 -> 242 (45)
gamma(h)
distance
Normal
Variogram Model
Variogram Structures


PL MINZ1 Au Down Dip Variogram -65 -> 242 (45)
gamma(h)
distance
Normal
Variogram Model
Variogram Structures

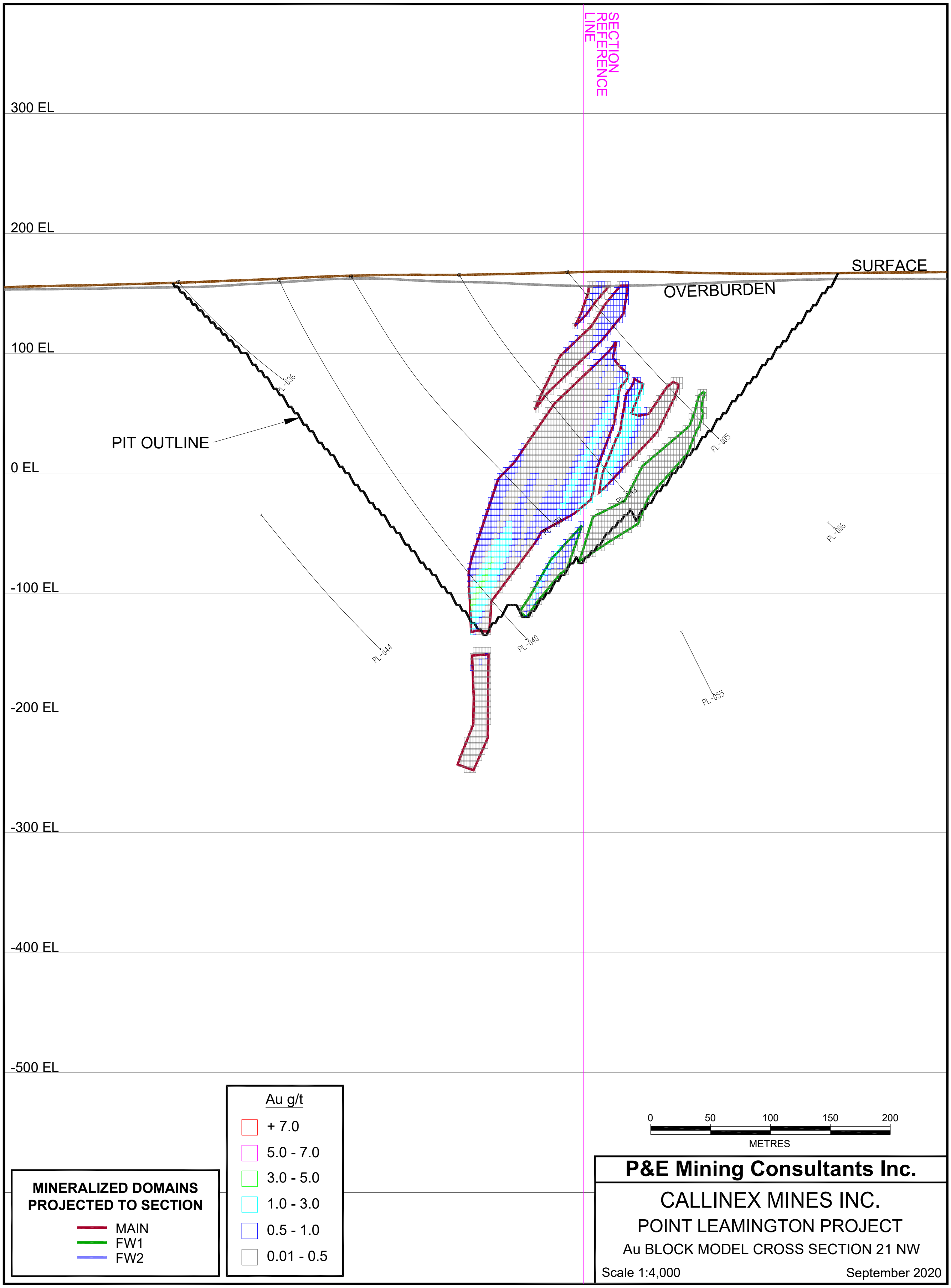

PL MINZ1 Cu Down Dip Variogram -65 -> 242 (45)
gamma(h)
distance
3046
26811
39523
13706
9123
3180
Pairwise Relative
Variogram Model
Variogram Structures

APPENDIX E AU BLOCK MODEL CROSS SECTIONS AND PLANS

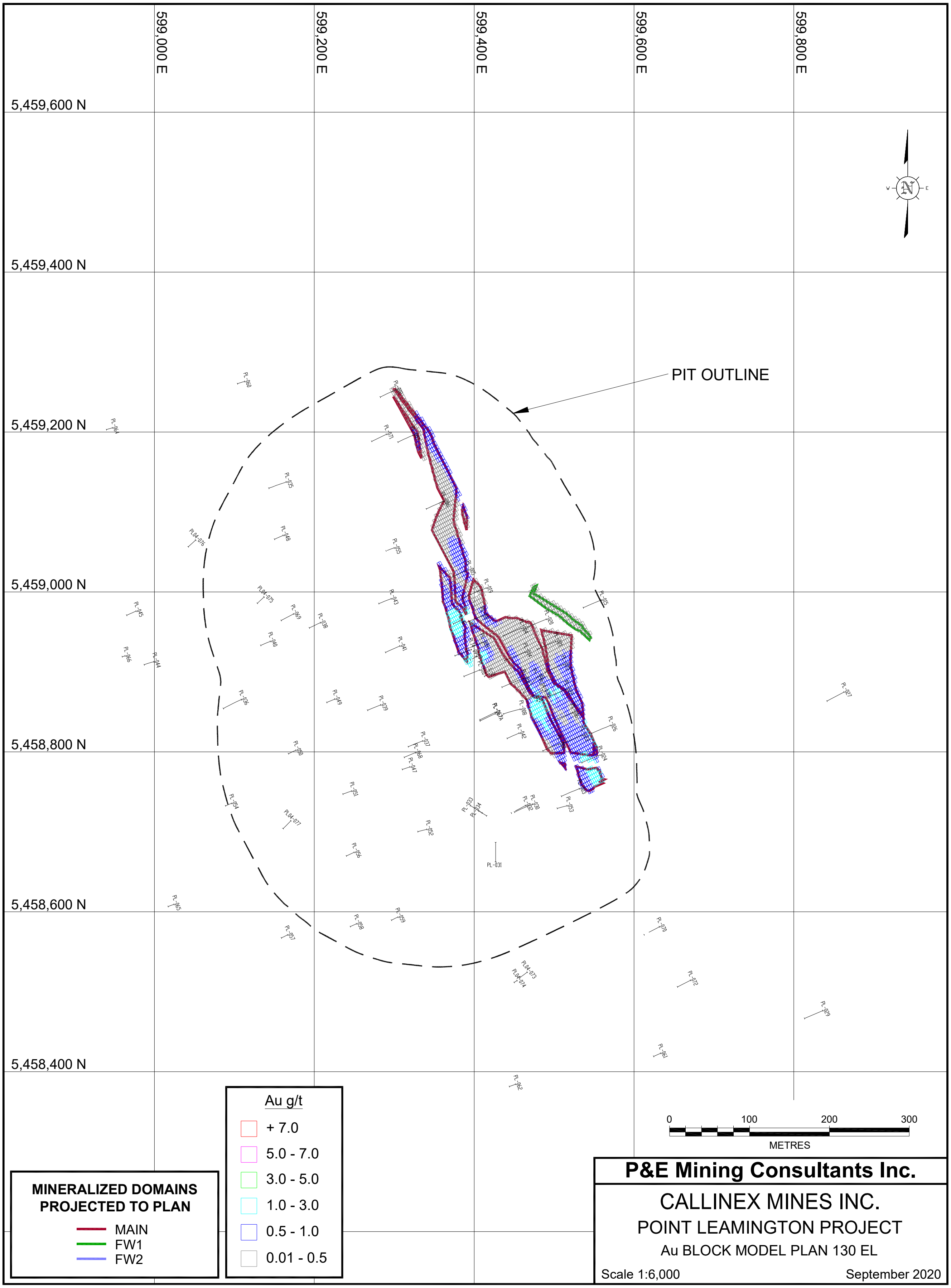

SECTION REFERENCE LINE
300 EL
200 EL
SURFACE
OVERBURDEN
100 EL
0 EL
PIT OUTLINE
-100 EL
-200 EL
-300 EL
-400 EL
-500 EL
PL-026
PL-023
PL-002
PL-033
PL-052
PL-034
PL-056
PL-037
PL-008
PL-065
Au g/t
+ 7.0
5.0 - 7.0
3.0 - 5.0
1.0 - 3.0
0.5 - 1.0
0.01 - 0.5
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
FW1
FW2
0
50
100
150
200
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Au BLOCK MODEL CROSS SECTION 12 NW
Scale 1:4,000
September 2020

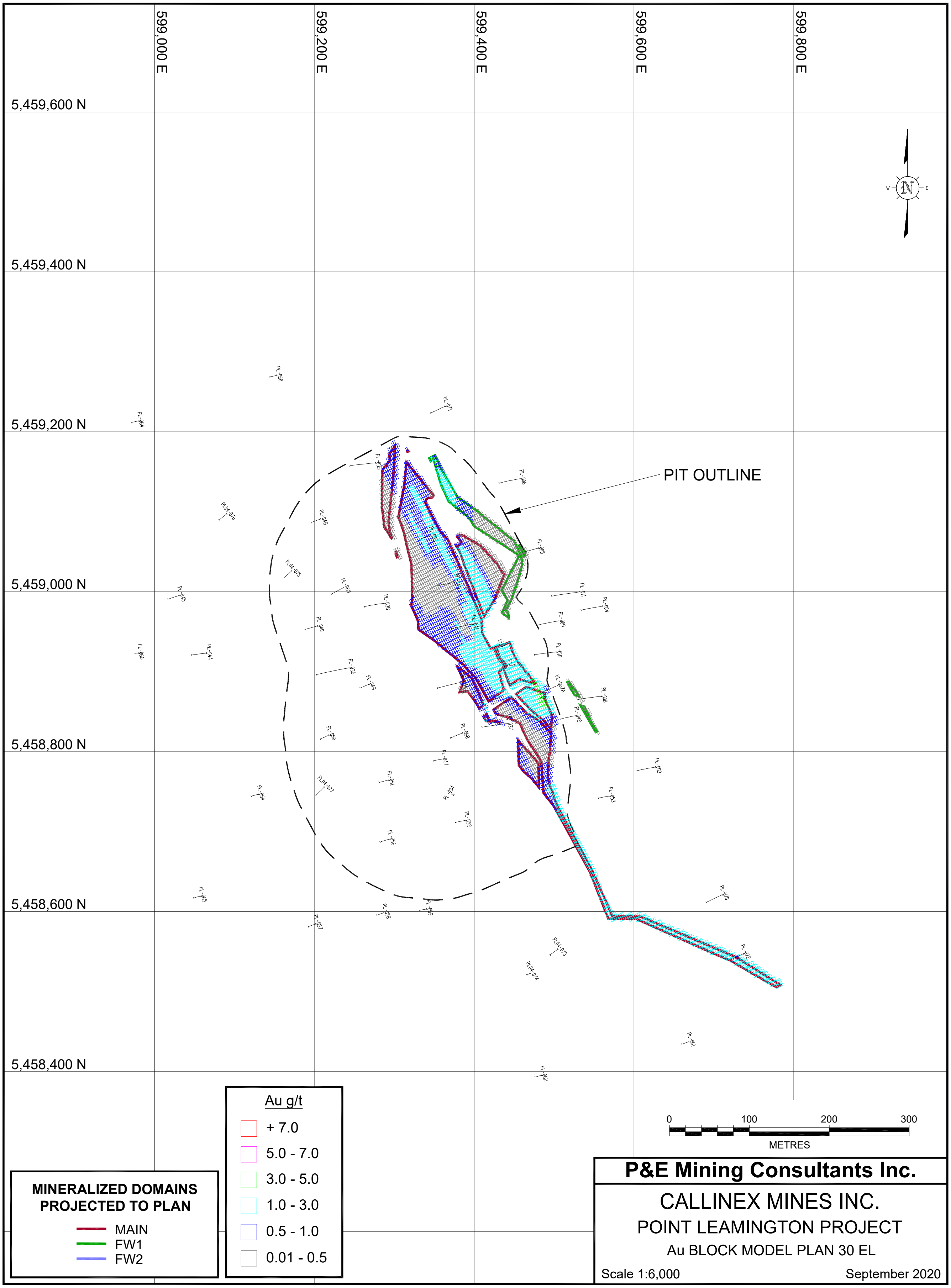


SECTION REFERENCE LINE
300 EL
200 EL
100 EL
0 EL
-100 EL
-200 EL
-300 EL
-400 EL
-500 EL
SURFACE
OVERBURDEN
PIT OUTLINE
PL-054
PL-020
PL-015
PL-004
PL-009
PL-011
PL04-077
PL-050
PL-044
PL-049
Au g/t
+ 7.0
5.0 - 7.0
3.0 - 5.0
1.0 - 3.0
0.5 - 1.0
0.01 - 0.5
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
FW1
FW2
0
50
100
150
200
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Au BLOCK MODEL CROSS SECTION 17 NW
Scale 1:4,000
September 2020

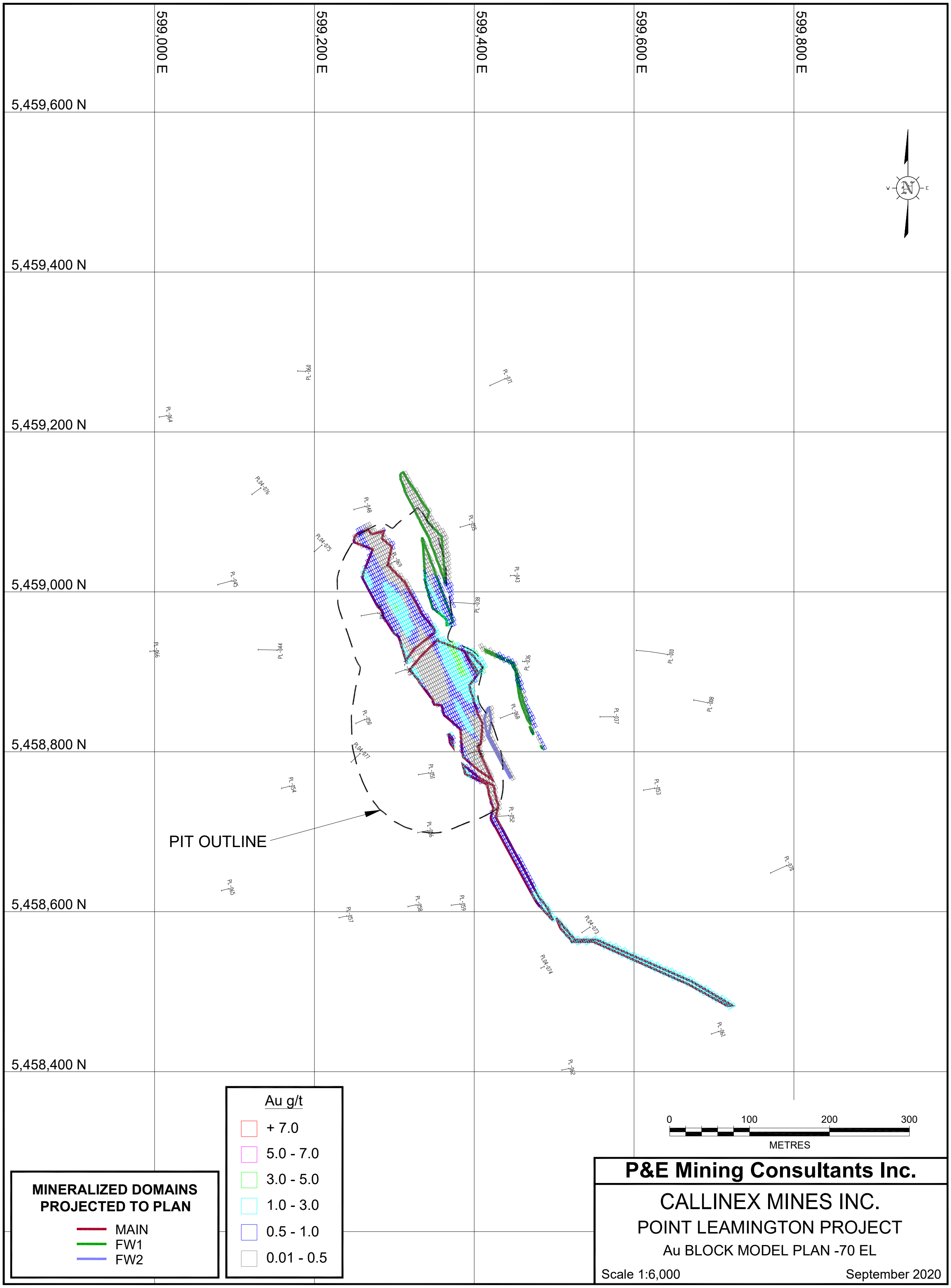


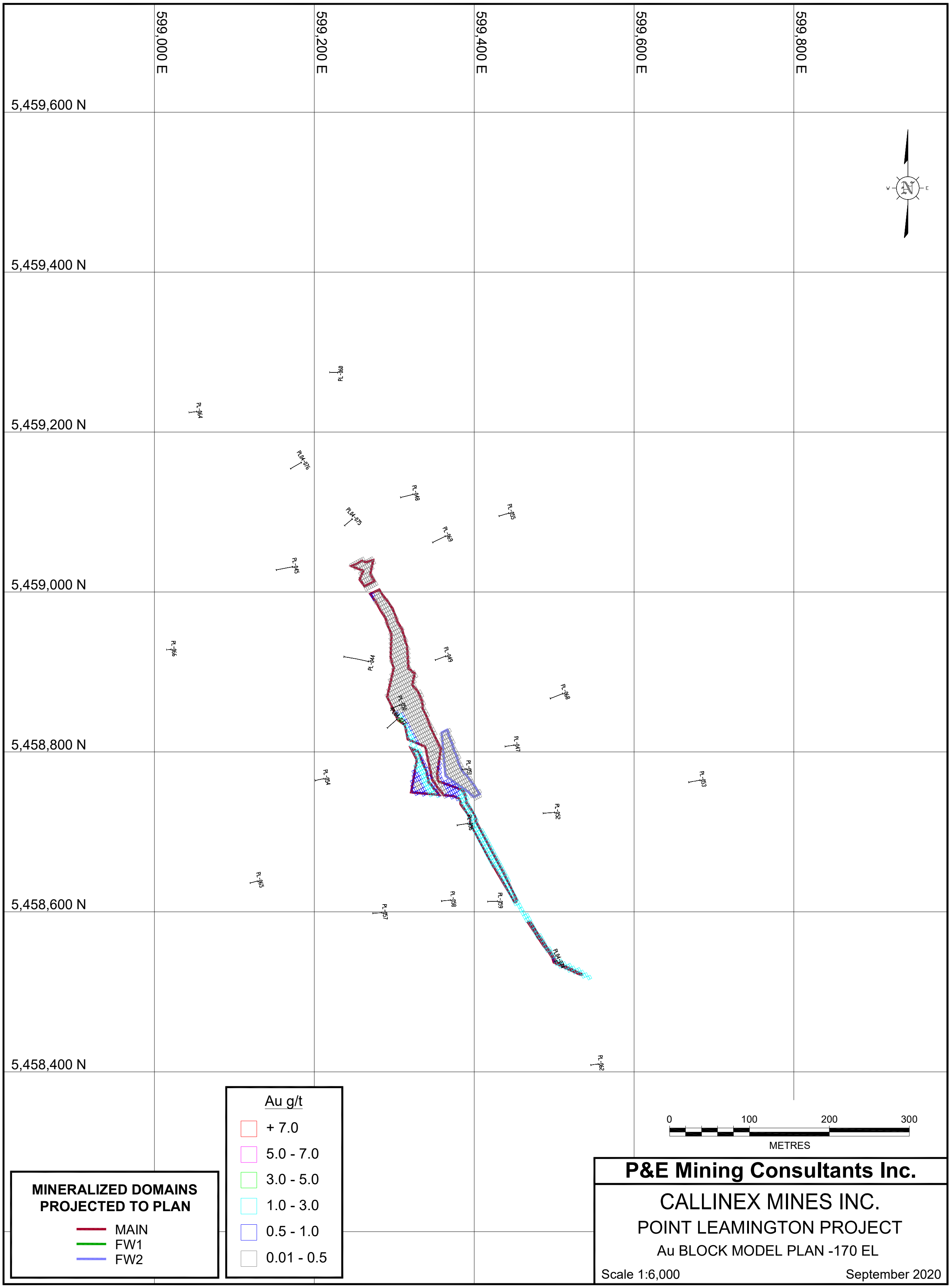
SECTION REFERENCE LINE
300 EL
200 EL
100 EL
0 EL
-100 EL
-200 EL
-300 EL
-400 EL
-500 EL
SURFACE
OVERBURDEN
PIT OUTLINE
PL-036
PL-040
PL-044
PL-005
PL-006
PL-055
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
FW1
FW2
Au g/t
+ 7.0
5.0 - 7.0
3.0 - 5.0
1.0 - 3.0
0.5 - 1.0
0.01 - 0.5
0
50
100
150
200
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Au BLOCK MODEL CROSS SECTION 21 NW
Scale 1:4,000
September 2020


599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
PIT OUTLINE
0
100
200
300
METRES
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
FW1
FW2
Au g/t
+ 7.0
5.0 - 7.0
3.0 - 5.0
1.0 - 3.0
0.5 - 1.0
0.01 - 0.5
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Au BLOCK MODEL PLAN 130 EL
Scale 1:6,000
September 2020

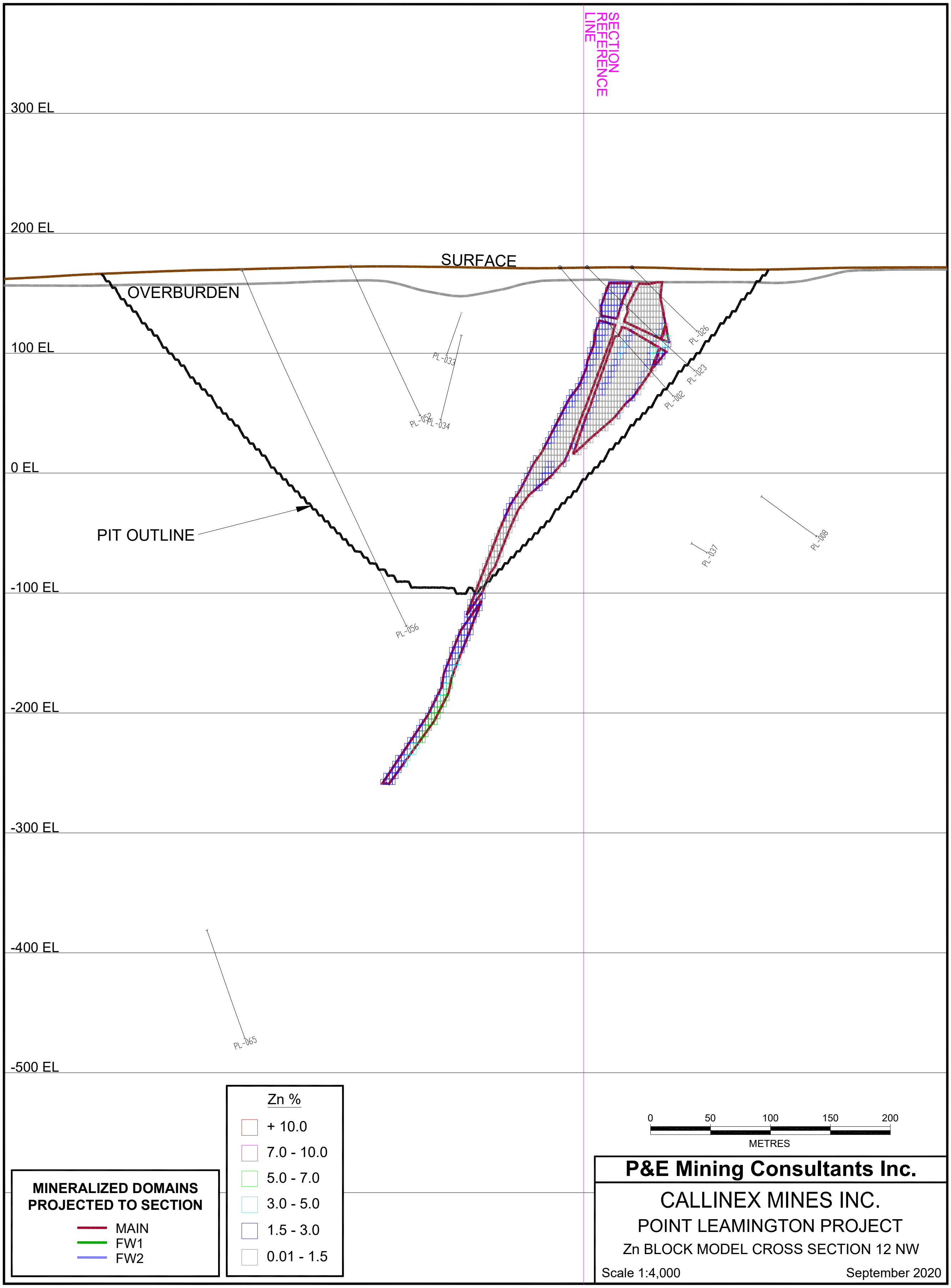


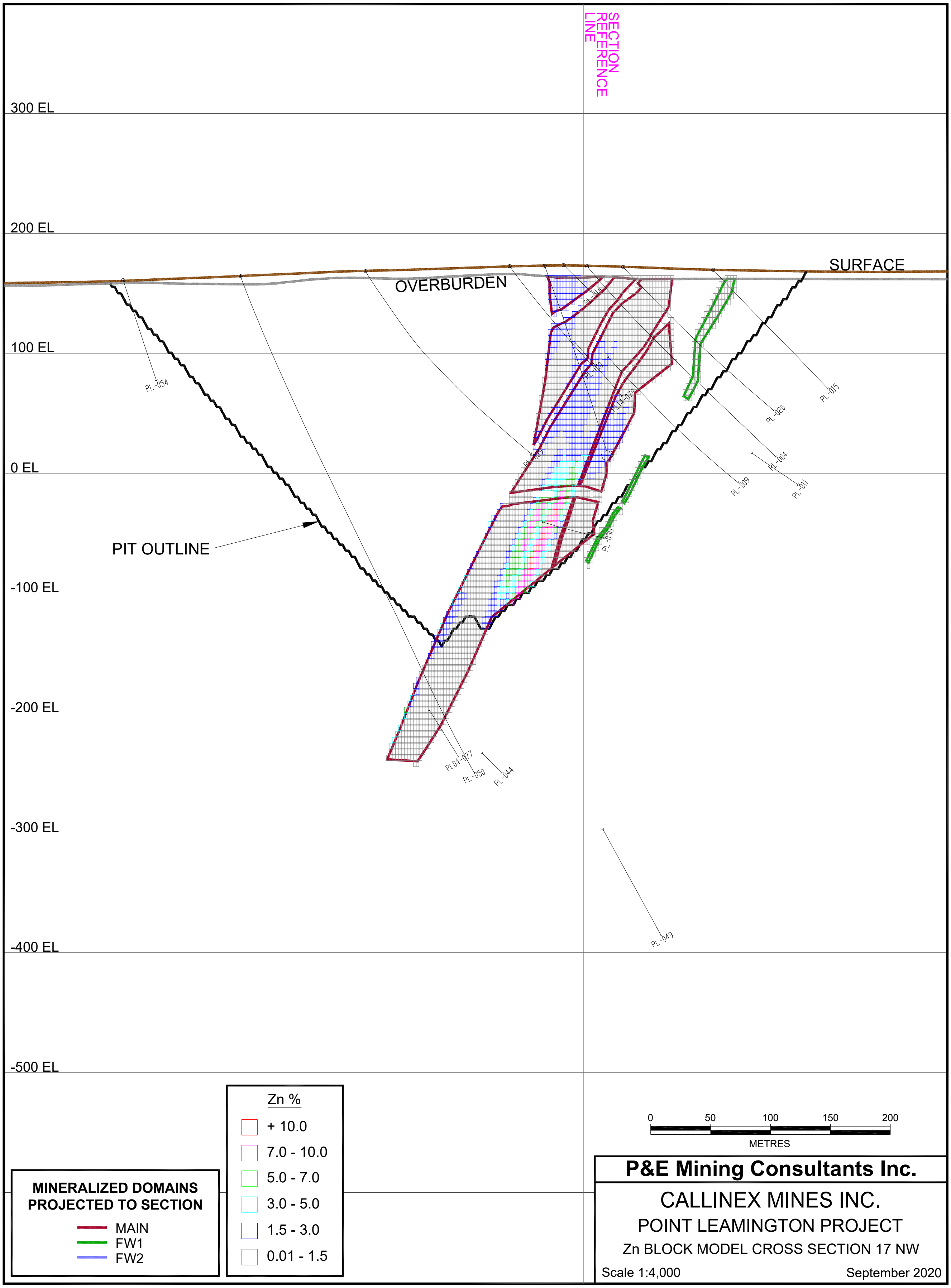
599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
PIT OUTLINE
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
FW1
FW2
Au g/t
+ 7.0
5.0 - 7.0
3.0 - 5.0
1.0 - 3.0
0.5 - 1.0
0.01 - 0.5
0
100
200
300
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Au BLOCK MODEL PLAN 30 EL
Scale 1:6,000
September 2020


599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
PIT OUTLINE
N
Au g/t
+ 7.0
5.0 - 7.0
3.0 - 5.0
1.0 - 3.0
0.5 - 1.0
0.01 - 0.5
MINERALIZED DOMAINS
PROJECTED TO PLAN
MAIN
FW1
FW2
0
100
200
300
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Au BLOCK MODEL PLAN -70 EL
Scale 1:6,000
September 2020


599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
Au g/t
+ 7.0
5.0 - 7.0
3.0 - 5.0
1.0 - 3.0
0.5 - 1.0
0.01 - 0.5
MINERALIZED DOMAINS
PROJECTED TO PLAN
MAIN
FW1
FW2
0
100
200
300
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Au BLOCK MODEL PLAN -170 EL
Scale 1:6,000
September 2020

APPENDIX F   ZN BLOCK MODEL CROSS SECTIONS AND PLANS


SECTION REFERENCE LINE
300 EL
200 EL
SURFACE
OVERBURDEN
100 EL
PL-026
PL-033
PL-023
PL-002
PL-052
PL-034
0 EL
PIT OUTLINE
PL-008
PL-037
-100 EL
PL-056
-200 EL
-300 EL
-400 EL
PL-065
-500 EL
Zn %
+ 10.0
7.0 - 10.0
5.0 - 7.0
3.0 - 5.0
1.5 - 3.0
0.01 - 1.5
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
FW1
FW2
0
50
100
150
200
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Zn BLOCK MODEL CROSS SECTION 12 NW
Scale 1:4,000
September 2020



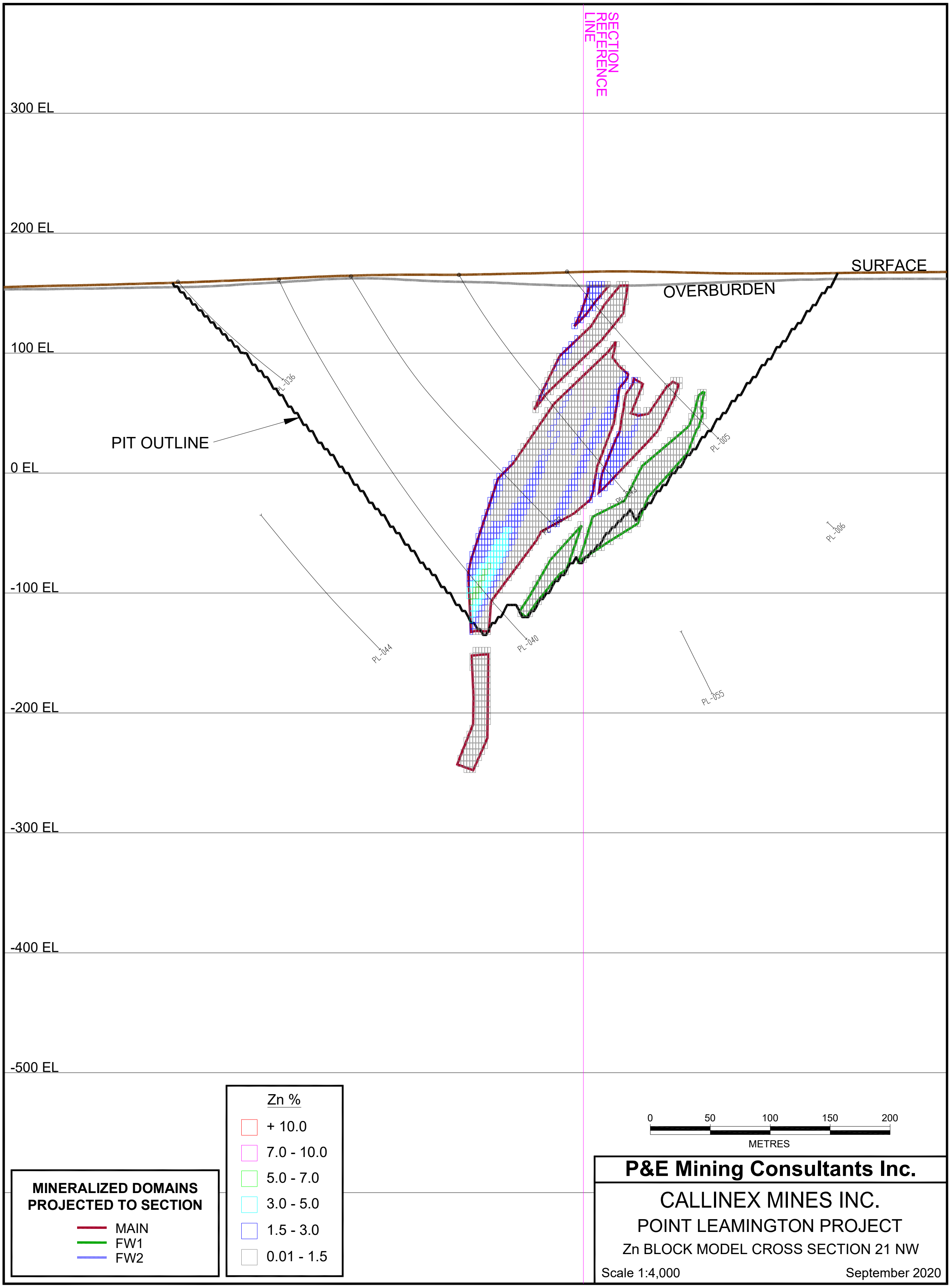
P&E Mining Consultants Inc.

CALLINEX MINES INC.

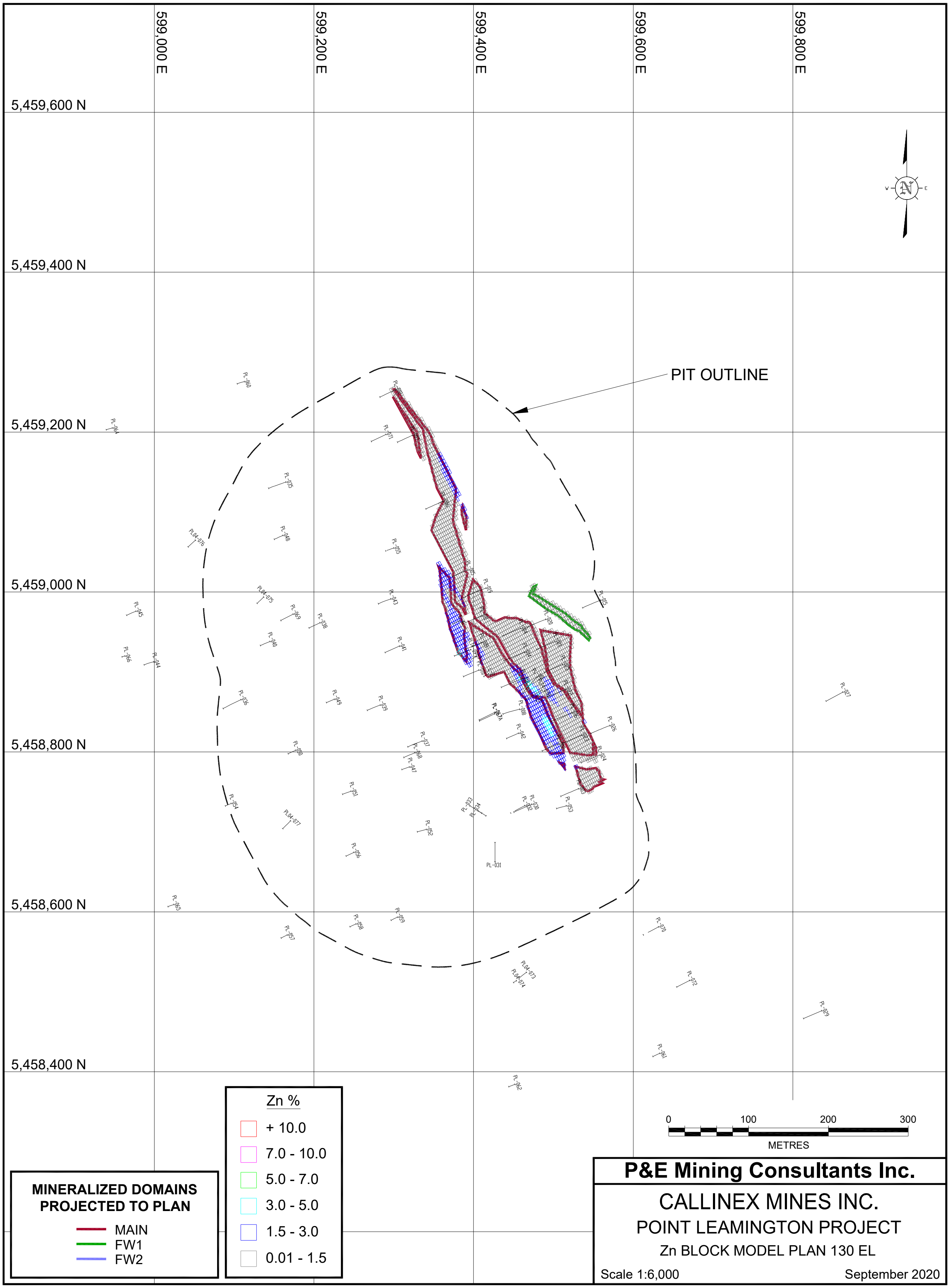
POINT LEAMINGTON PROJECT

Zn BLOCK MODEL CROSS SECTION 17 NW

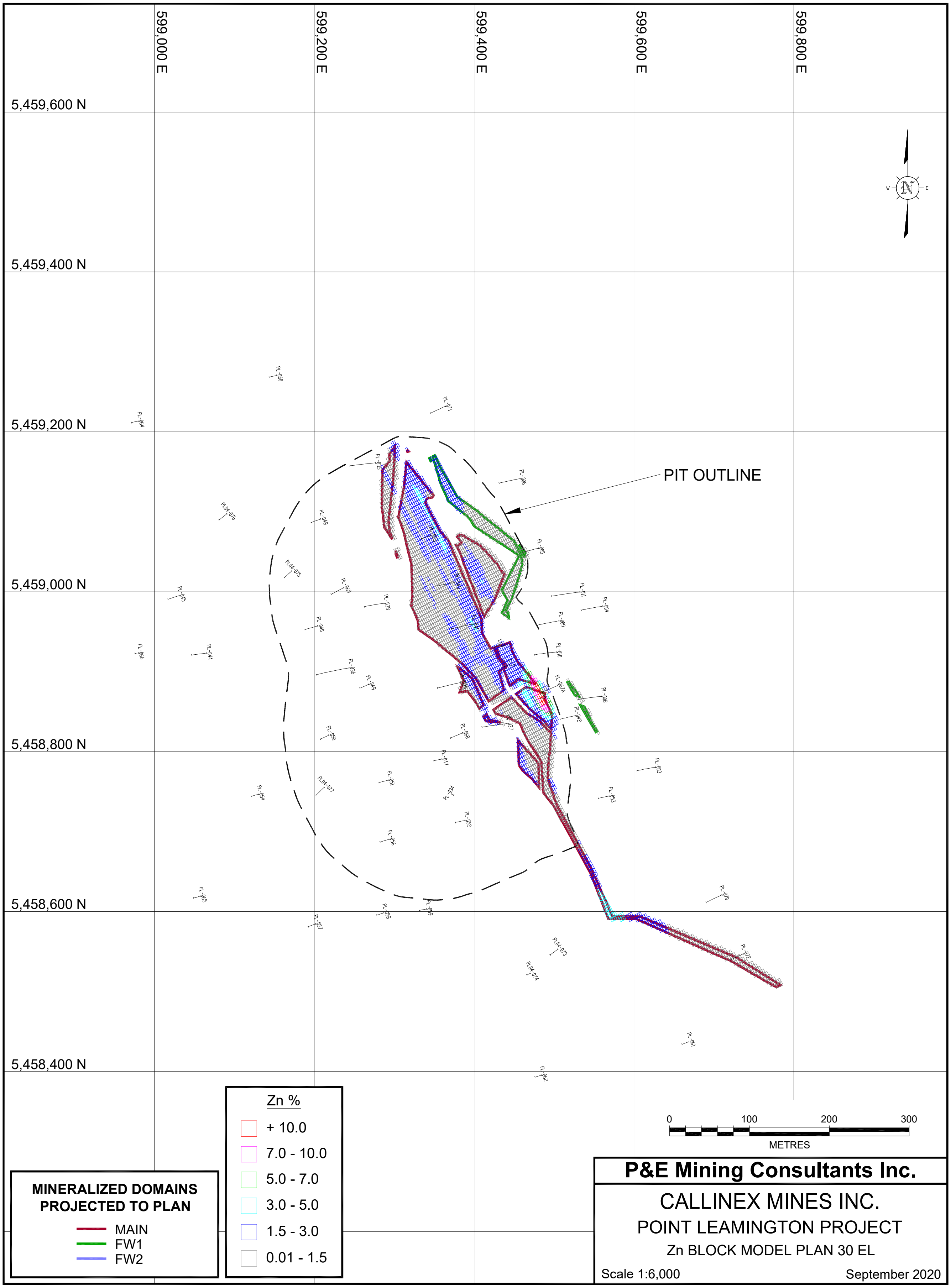
Scale 1:4,000 September 2020

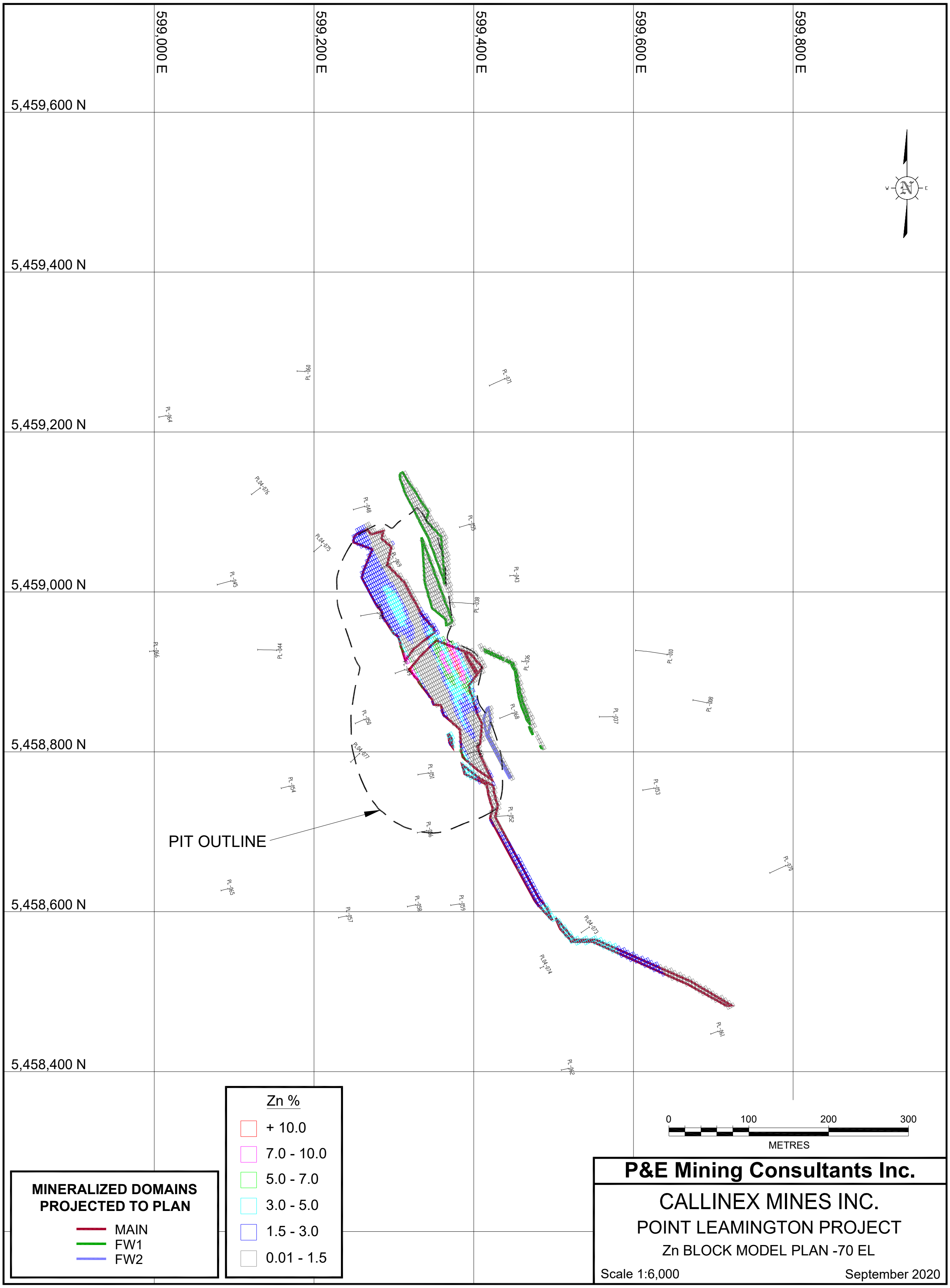


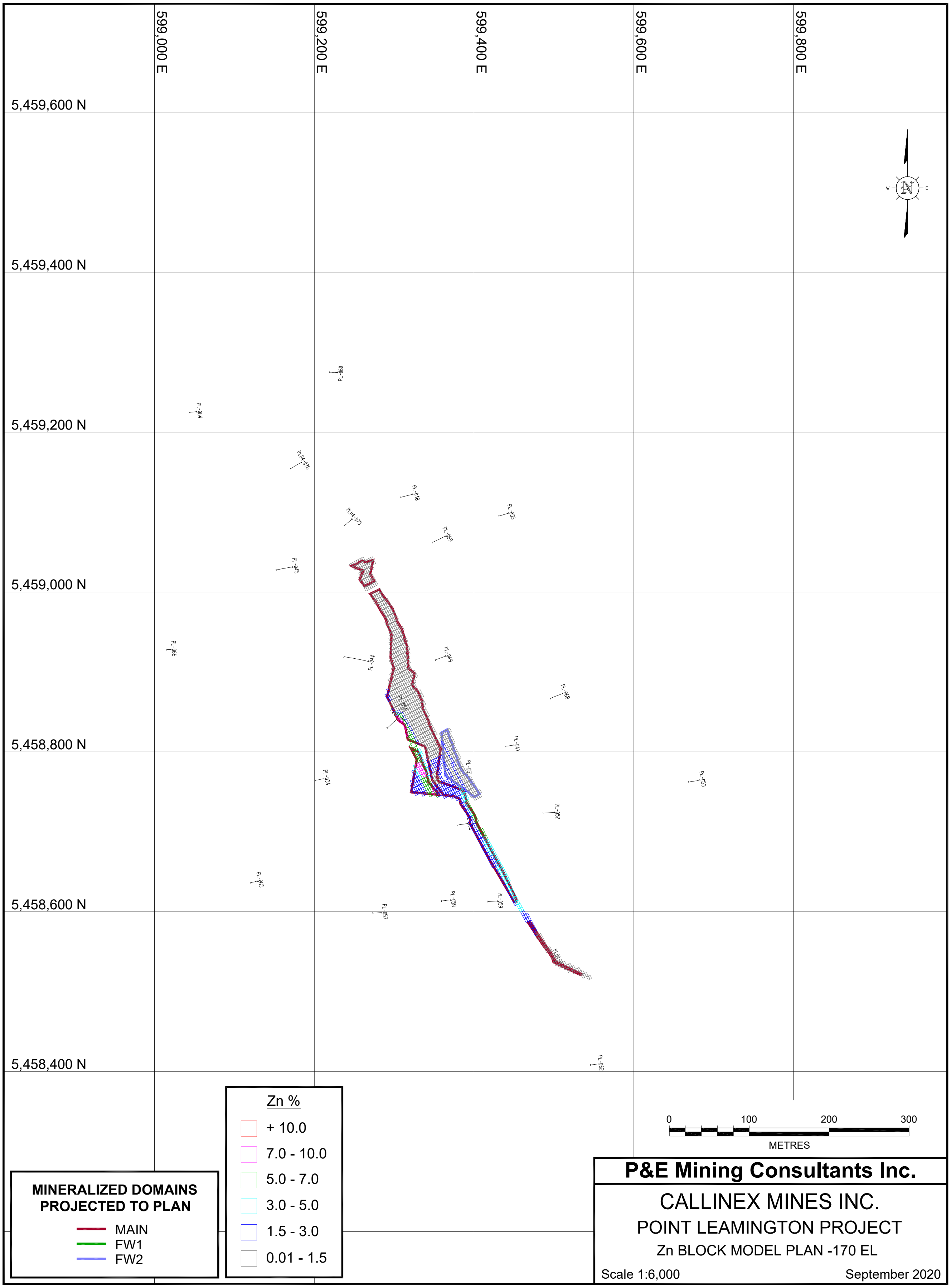
SECTION REFERENCE LINE
300 EL
200 EL
100 EL
0 EL
-100 EL
-200 EL
-300 EL
-400 EL
-500 EL
SURFACE
OVERBURDEN
PIT OUTLINE
PL-036
PL-005
PL-006
PL-044
PL-040
PL-055
Zn %
+ 10.0
7.0 - 10.0
5.0 - 7.0
3.0 - 5.0
1.5 - 3.0
0.01 - 1.5
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
FW1
FW2
0
50
100
150
200
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Zn BLOCK MODEL CROSS SECTION 21 NW
Scale 1:4,000
September 2020



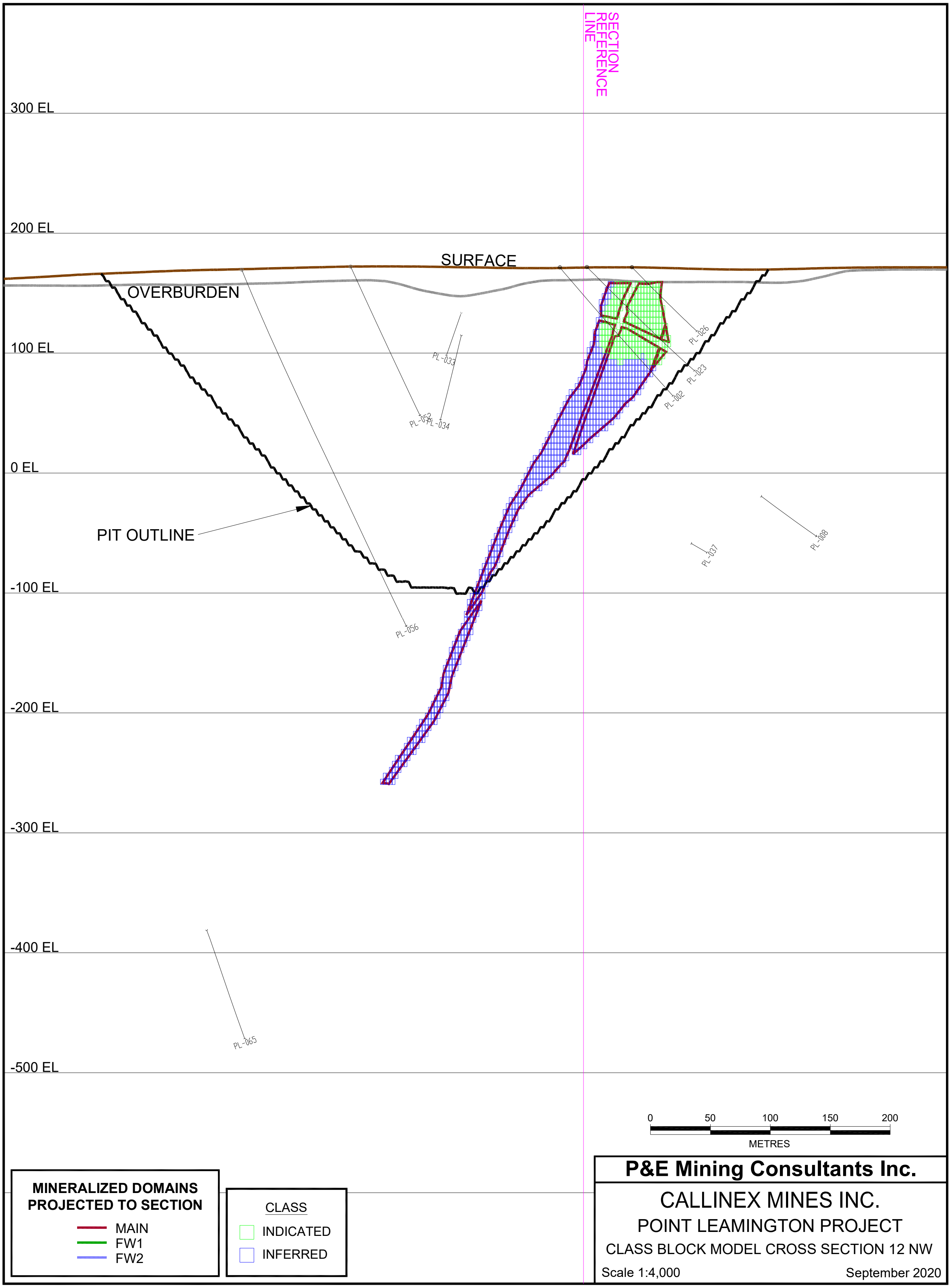
599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
PIT OUTLINE
Zn %
+ 10.0
7.0 - 10.0
5.0 - 7.0
3.0 - 5.0
1.5 - 3.0
0.01 - 1.5
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
FW1
FW2
0
100
200
300
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Zn BLOCK MODEL PLAN 130 EL
Scale 1:6,000
September 2020

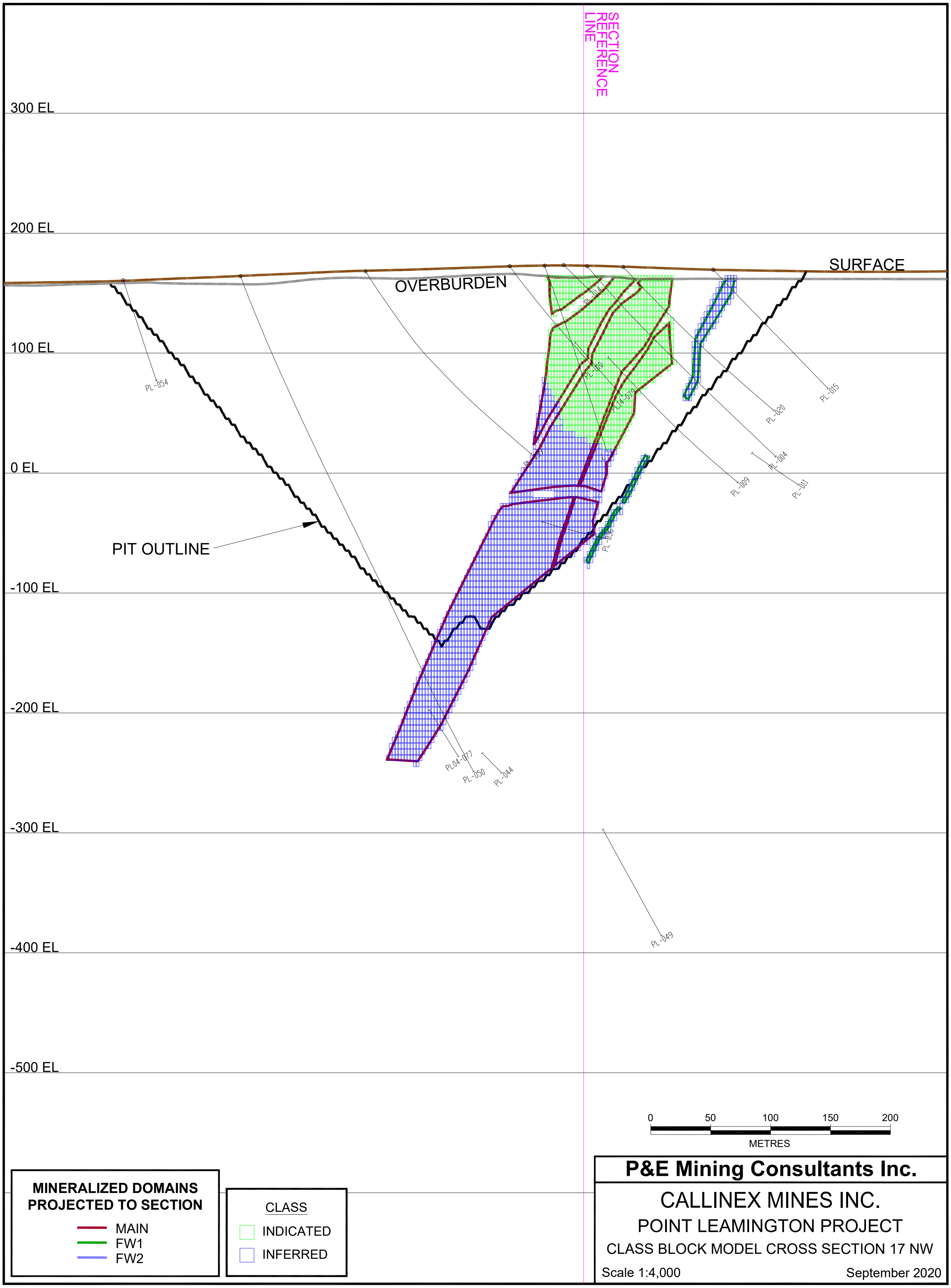

599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
PIT OUTLINE
Zn %
+ 10.0
7.0 - 10.0
5.0 - 7.0
3.0 - 5.0
1.5 - 3.0
0.01 - 1.5
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
FW1
FW2
0
100
200
300
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Zn BLOCK MODEL PLAN 30 EL
Scale 1:6,000
September 2020

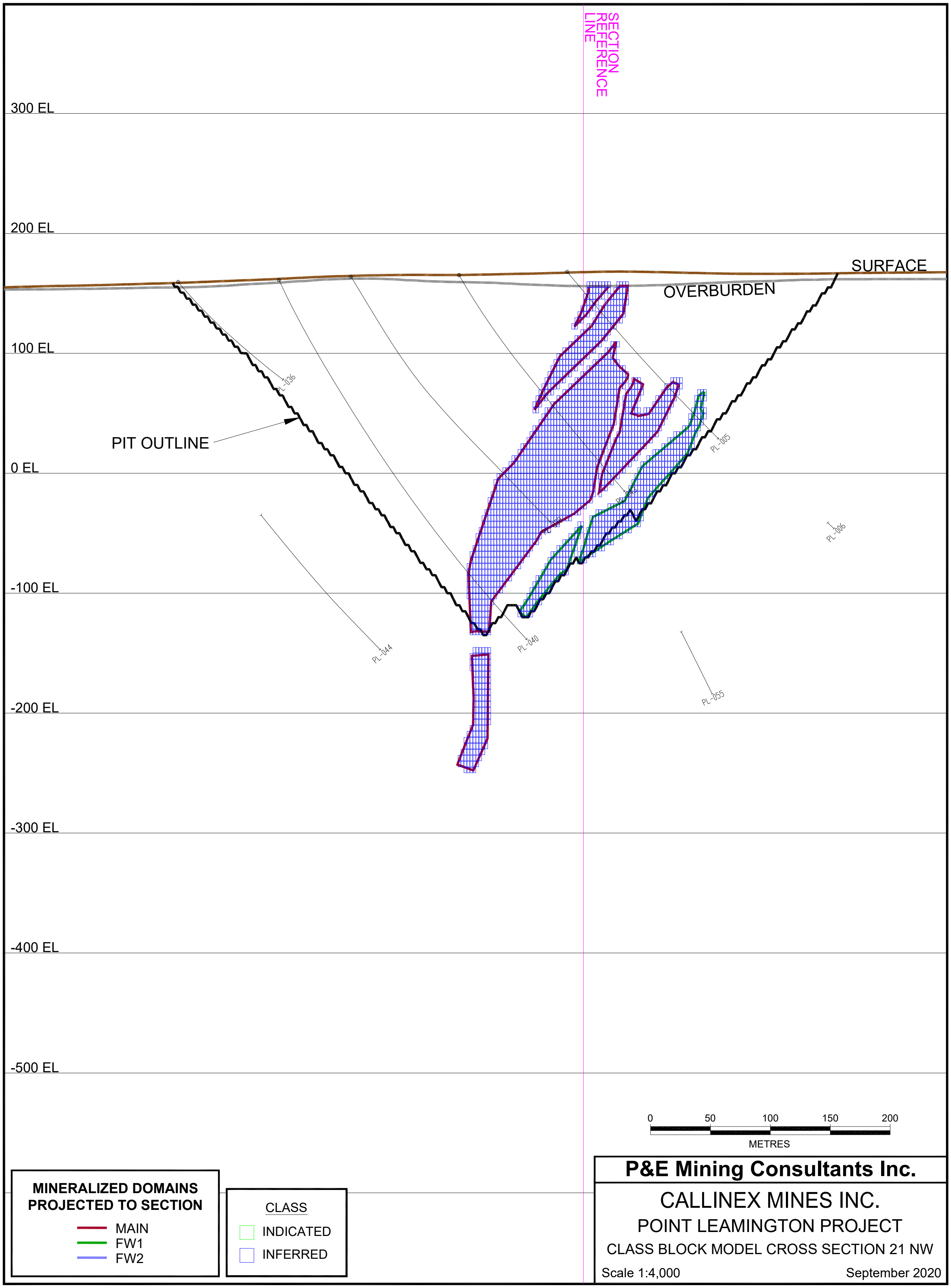

599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
PIT OUTLINE
Zn %
+ 10.0
7.0 - 10.0
5.0 - 7.0
3.0 - 5.0
1.5 - 3.0
0.01 - 1.5
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
FW1
FW2
0
100
200
300
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Zn BLOCK MODEL PLAN -70 EL
Scale 1:6,000
September 2020

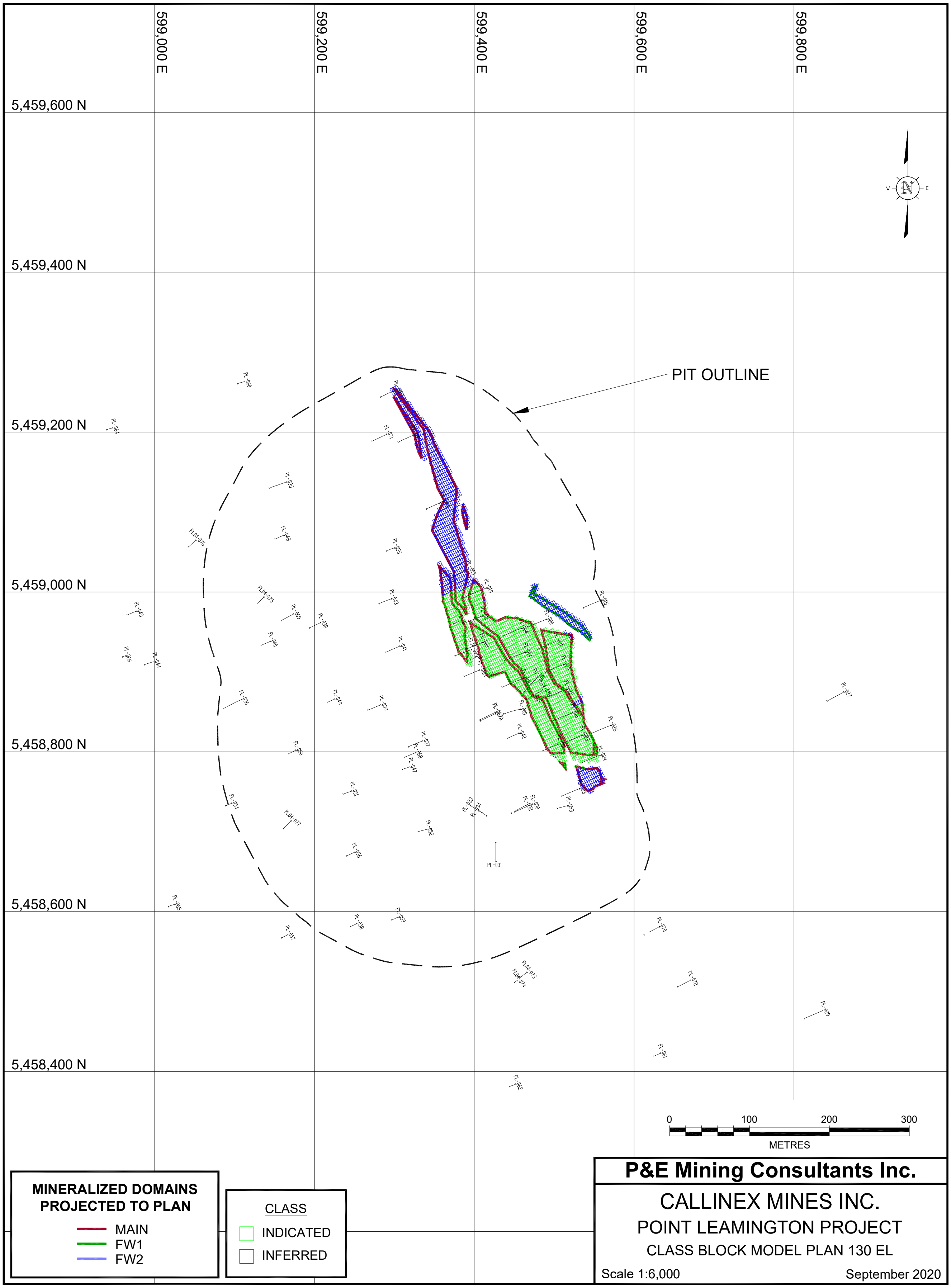

599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
N
Zn %
+ 10.0
7.0 - 10.0
5.0 - 7.0
3.0 - 5.0
1.5 - 3.0
0.01 - 1.5
MINERALIZED DOMAINS
PROJECTED TO PLAN
MAIN
FW1
FW2
0
100
200
300
METRES
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
Zn BLOCK MODEL PLAN -170 EL
Scale 1:6,000
September 2020

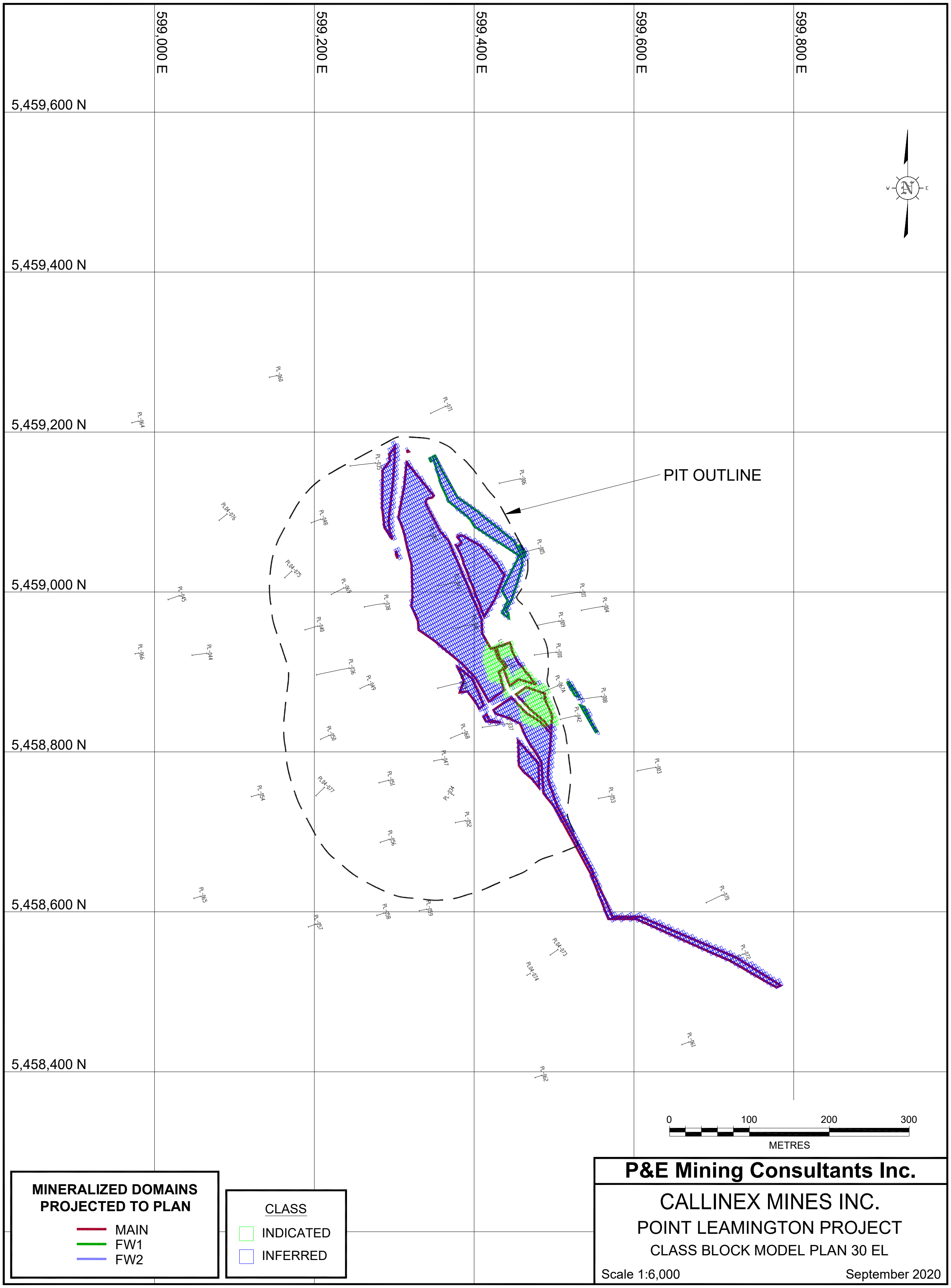
APPENDIX G CLASSIFICATION BLOCK MODEL CROSS SECTIONS AND PLANS


SECTION REFERENCE LINE
300 EL
200 EL
SURFACE
OVERBURDEN
100 EL
0 EL
PIT OUTLINE
-100 EL
-200 EL
-300 EL
-400 EL
-500 EL
PL-033
PL-052
PL-034
PL-026
PL-023
PL-002
PL-037
PL-008
PL-056
PL-065
0 50 100 150 200
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
FW1
FW2
CLASS
INDICATED
INFERRED
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
CLASS BLOCK MODEL CROSS SECTION 12 NW
Scale 1:4,000
September 2020


SECTION REFERENCE LINE
300 EL
200 EL
100 EL
0 EL
-100 EL
-200 EL
-300 EL
-400 EL
-500 EL
SURFACE
OVERBURDEN
PIT OUTLINE
PL-054
PL-020
PL-015
PL-004
PL-009
PL-011
PL04-077
PL-050
PL-044
PL-049
0
50
100
150
200
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
FW1
FW2
CLASS
INDICATED
INFERRED
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
CLASS BLOCK MODEL CROSS SECTION 17 NW
Scale 1:4,000
September 2020


SECTION REFERENCE LINE
300 EL
200 EL
100 EL
0 EL
-100 EL
-200 EL
-300 EL
-400 EL
-500 EL
SURFACE
OVERBURDEN
PIT OUTLINE
PL-036
PL-005
PL-006
PL-044
PL-040
PL-055
0
50
100
150
200
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
FW1
FW2
CLASS
INDICATED
INFERRED
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
CLASS BLOCK MODEL CROSS SECTION 21 NW
Scale 1:4,000
September 2020


599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
PIT OUTLINE
0
100
200
300
METRES
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
FW1
FW2
CLASS
INDICATED
INFERRED
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
CLASS BLOCK MODEL PLAN 130 EL
Scale 1:6,000
September 2020



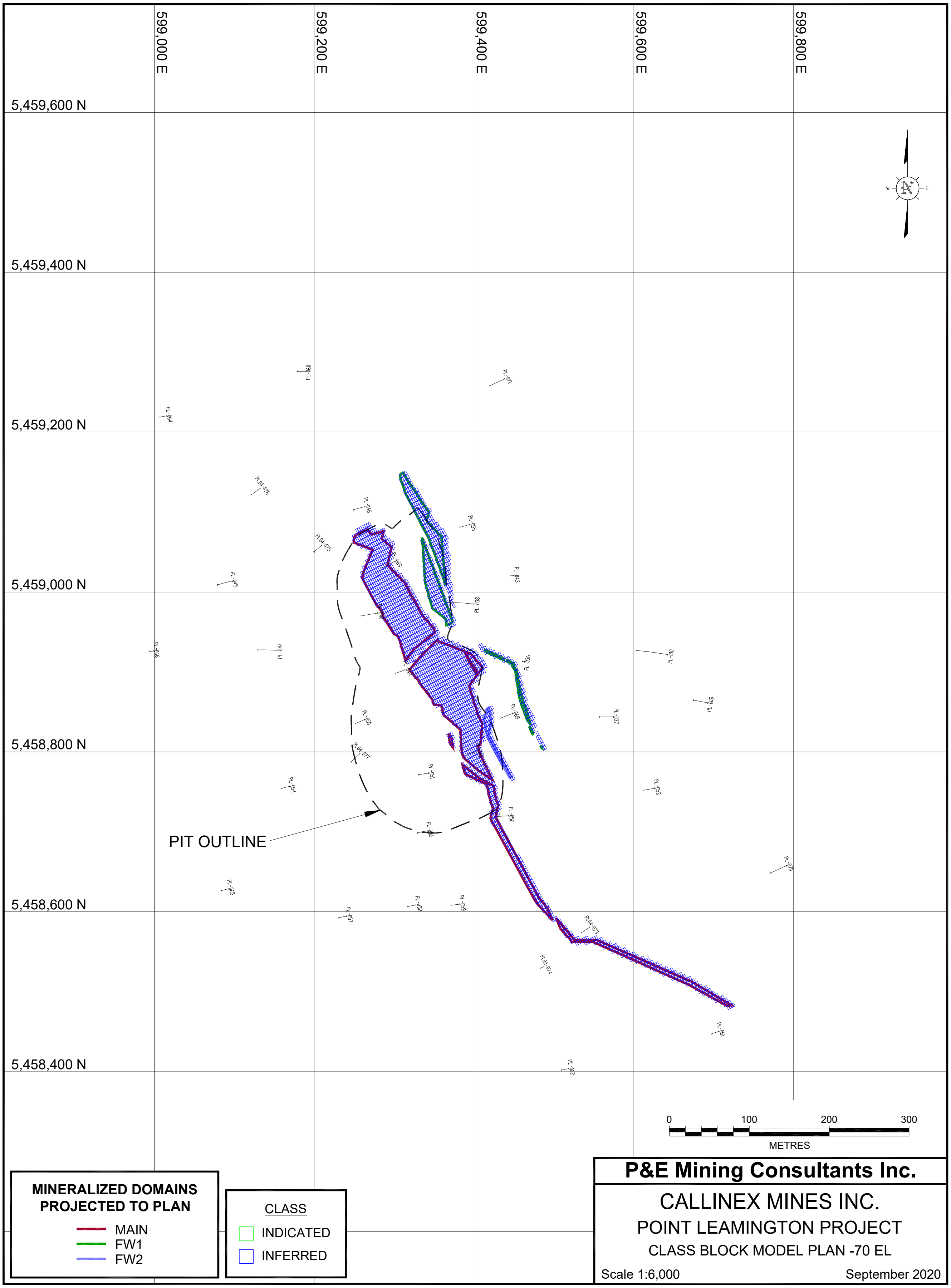
P&E Mining Consultants Inc.

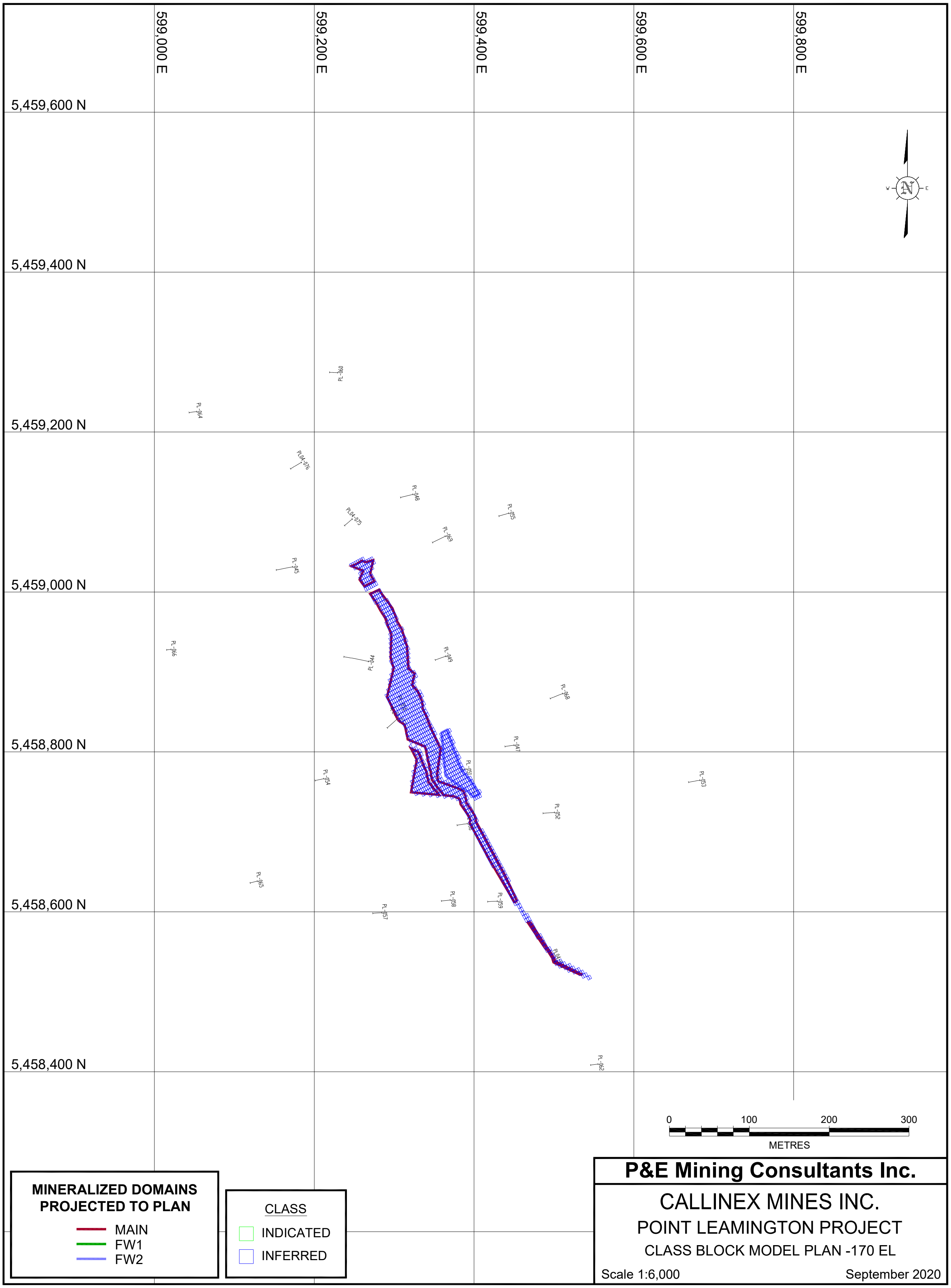
CALLINEX MINES INC.

POINT LEAMINGTON PROJECT

CLASS BLOCK MODEL PLAN 30 EL

Scale 1:6,000 September 2020


599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
PIT OUTLINE
0
100
200
300
METRES
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
FW1
FW2
CLASS
INDICATED
INFERRED
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
CLASS BLOCK MODEL PLAN -70 EL
Scale 1:6,000
September 2020


599,000 E
599,200 E
599,400 E
599,600 E
599,800 E
5,459,600 N
5,459,400 N
5,459,200 N
5,459,000 N
5,458,800 N
5,458,600 N
5,458,400 N
0
100
200
300
METRES
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
FW1
FW2
CLASS
INDICATED
INFERRED
P&E Mining Consultants Inc.
CALLINEX MINES INC.
POINT LEAMINGTON PROJECT
CLASS BLOCK MODEL PLAN -170 EL
Scale 1:6,000
September 2020

APPENDIX H OPTIMIZED PIT SHELL

POINT LEAMINGTON PROJECT - OPTIMIZED PIT SHELL