NI 43-101 INDEPENDENT REPORT ON THE ZINC-LEAD EXPLORATION PROJECT AT STONEPARK, COUNTY LIMERICK, IRELAND

Group Eleven Resources Corp.

Effective Date: 26th April, 2018

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CSA Global
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1.0 Summary

In January 2018, SLR Consulting Ireland ("SLR") was requested by the directors of Group Eleven Resources Corporation ("GERC"), registered in British Columbia with offices at 2200-885 West Georgia Street, Vancouver, BC, Canada, to update an earlier independent National Instrument 43-101 technical report (the "2017 Report") on the Stonepark zinc-lead project (the "Project"). This updated report (the "Independent Report" or "this report") is to include a maiden mineral resource estimate for the Stonepark mineral deposit. This Report was prepared by Paul Gordon and Dr John Kelly of SLR (the "Authors") who are "qualified persons" and independent of GERC and all its subsidiaries within the meaning of National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI43-101"). Section 14 (Resource Estimates) was prepared by Dr Belinda van Lente (Qualified Person for Mineral Resources) and Nerys Walters of CSA Global.

CSA Global (UK) Ltd ("CSA Global") was engaged by SLR Consulting Ireland ("SLR", on behalf of Group Eleven Resources Corporation "GERC") to generate a Maiden Mineral Resource Estimate ("MRE") of the Stonepark Zinc-Lead Project ("Stonepark"), based in County Limerick, Ireland, in February 2018.

On July 17th, 2012, Teck Ireland Ltd. ("TIL", a wholly owned subsidiary of Teck Resources Limited, "Teck") entered into a Joint Venture Agreement with Limerick Zinc Limited ("LZL") in respect of the Stonepark Project (Monaster Block), consisting of six (6) prospecting licences ("PL"s), in Co. Limerick, Ireland. LZL is a wholly-owned subsidiary of AIM-listed Connemara Mining plc (now called Connemara Mining Company of Ireland Ltd., "CON"). TIL had previously entered into an agreement with CON on October 11th, 2007 under which TIL was given the option to acquire a 75% indirect interest in the licences. Under the 2012 agreement and subject to approval by the EMD, the Monaster Block PLs were transferred to a joint venture company called TILZ Minerals Ltd. ("JVCo") and TIL was given 75% of the shares in JVCo. Prior to the GERC transaction (described below), TIL held 4,604,512 shares in JVCo representing a 76.56% equity interest and LZL held 1,409,783 shares in JVCo representing a 23.44% equity interest.

On September 8 2017, GERC completed a transaction with TIL to acquire its total accumulated equity interest of 76.56% in JVCo. The consideration payable by GERC to TIL for the acquisition of the equity in JVCo is summarized below:

- Cash consideration of CAD$2,150,000 payable on closing
- Net smelter return (NSR) royalty of 4.5% (on 100% basis of production), which is adjusted for Teck's attributable current interest in JVCo, payable on declaration of commercial production in perpetuity ("the Royalty"). The Royalty will be subject to the following buyback options:
    - GERC may buyback 1/9th (0.5%) of the Royalty at any time by making a cash payment of CAD$2,000,000 to Teck.
    - GERC may buyback 2/9th (1.0%) of the Royalty at any time up to 30 days after completion of the first preliminary economic assessment ("PEA"), for CAD$1,000,000. Should GERC not exercise this right, Teck would have an option (for a further 90 days) to put GERC to this buyback.
    - GERC may buyback 2/9th (1.0%) of the Royalty at any time up to 30 days after completion of the preliminary feasibility study ("PFS"), for CAD$1,000,000. Should GERC not exercise this right, Teck would have an option (for a further 90 days) to put GERC to this buyback.
    - GERC may buyback 2/9th (1.0%) of the Royalty at any time up to 30 days after completion of a bankable feasibility study, for CAD$3,000,000. Should GERC not exercise this right, Teck would have an option (for a further 90 days) to put GERC to this buyback.

For clarity, if all the Royalty (NSR) buybacks were exercised, Teck would retain 1.0% NSR royalty on 76.56% of production.

As independent geologists, the Authors were requested to review the available exploration data for the Stonepark Project and to prepare a Mineral Resource estimate ("MRE") for the Stonepark deposit, on the property. The Authors have also been requested to review and assess the current and planned exploration programme (to be implemented by the JVCO) set out in this Report. This Report outlines the previous work carried out on the Project Area and particularly by TIL and JVCo since 2007 to the time of writing to this Report, as well as describing the generation of an MRE for Stonepark.

The Project consists of six (6) contiguous prospecting licences ("PLs") covering a total of 183.54km^2, located in County Limerick. Five PLs were initially awarded to Clontarf Resources Ltd. (related to Connemara Mining Company) on 31 January 2005; whereas the sixth licence (PL2531) was awarded on 13 April 2006. The PLs were awarded by the Exploration and Mining Division of what is now named the Department of Communications, Climate Action and the Environment. PLs are valid for six (6) years with extensions routine once PLs have been kept in good standing by meeting expenditure commitments. The Project area is located south of Limerick, the third largest city in the Republic of Ireland. The Project Area is only 40 kilometres from the deep-water port of Foynes and is adjacent to Glencore's Pallas Green zinc-lead project with an inferred resource of 44.2 million tonnes averaging 8.4% combined zinc and lead (Glencore, 2017). The Authors have been unable to verify the inferred resource and the resource is not necessarily indicative of mineralisation on the Stonepark project.

The Project area is considered highly prospective for Irish-type zinc-lead deposits within the Lower Carboniferous sedimentary package and specifically the base of Waulsortian Reef.

GERC has acquired a comprehensive exploration database from TIL. GERC estimates that TIL's sunk cost on the Project total approximately €6.1 million as of 31 December 2016. TIL diligently compiled all historical data and information on the Project and drilled 133 diamond drill-holes on the Project. TIL commenced exploration of the Stonepark Project in 2007. Initial drilling testing of target horizons led to the discovery of the Stonepark prospect followed by Stonepark North in 2009 and Stonepark West in 2011. Drilling was highly focused on two prospects, Stonepark and Stonepark North, with very little drilling within the rest of the 183km^2 project area. Very limited regional drilling kilometers from the Stonepark prospects identified alteration related to at least three additional hydrothermal cells.

TIL undertook extensive target definition programmes on the Project including pole-dipole IP (induced polarization), ground magnetics, soil geochemical surveys, seismic reflection and airborne FTG gravity. Drill testing was highly focused on the initial discoveries, which are thought to be extensions of the Pallas Green system (possibly analogous to the distal K Zone at Galmoy). Overall, there has been very little regional exploration within the broader Project Area.

Seismic surveys have in recent years led to significant exploration success around the giant Navan zinc deposit in NE, Ireland. GERC is optimistic that TIL's seismic profiling, supplemented by newly commissioned seismic surveys, will highlight any 'blind" deep-seated structures (below current drill depths) which might control shallower plumbing systems for mineralizing fluids.

1.1 Work since the Previous Technical Report

A fully holistic, region-wide basin analysis model is underway for the Limerick Basin to prioritize areas within the Project and adjacent PLs controlled by GERC. Between Stonepark and GERC's nearby PG West project, considerable compilation and synthesis (similar to that completed for Ireland's North Midlands) is ongoing to effectively target and increase the probability of making new zinc discoveries within the Limerick Basin west and south of Pallas Green.

1.1.1 Mineral Resource Estimate

Mineral Resources were estimated using Ordinary Kriging ("OK"), within mineralised volumes created around a 2% Zn+Pb grade envelope (derived from an assessment of the natural grade cut-off), with a minimum true thickness of two meters, and which honoured stratigraphical and geological controls (derived from drill hole logging and cross-sectional interpretation).

The MRE compiled by CSA Global has been classified and is reported as Inferred Mineral Resources based on the Canadian Institute for Mining ("CIM") guidelines, adopted for Technical reports which adhere to the regulations defined in Canadian National Instrument 43-101 ("NI 43-101").

The MRE for Stonepark as at 26th April 2018 (Table 1.1), comprised 5.1 Mt at grades of 8.7% Zn and 2.6% Pb. Inferred Mineral Resources were reported using a zinc equivalent ("ZnEq") cut-off grade of 4.8%, based on Net Smelter Return ("NSR") calculations of conceptual operating costs and metal revenue, in support of "reasonable chances of eventual economic extraction".

Conceptual costs and assumptions were made based on costs of nearby and similar mines and incorporated the following parameters: Life of Mine ("LOM"), mining methodology (including mining cost), flotation and plant recovery (including processing cost), and selling cost.

However, no mining optimisation or Economic Study has been completed, and the reported Inferred Mineral Resources do not have proven economic viability and are not Mineral Reserves.

Even though the database does contain Ag values, 150 of the 185 samples within the mineralisation wireframes are below detection limit, which equates to 81% of the Ag sample population. The sample composites mean Ag grade for the combined mineralisation domains is 1.58 g/t. As such, CSA Global did not report Ag as part of the MRE since it is not considered to make a material contribution.

Table 1.1. Mineral Resource Estimate – Stonepark Zinc-Lead Project - as at 26th April 2018

Group Eleven Resources Corporation							
Stonepark Mineral Resource Estimate as at 26 April, 2018							
Resource Category	Tonnes ('000)	Grades			Metal Content (pounds)		
		Zn (%)	Pb (%)	Zn+Pb (%)	Zn ('000)	Pb ('000)	Zn+Pb ('000)
Inferred	5,100	8.7	2.6	11.3	982,200	296,600	1,278,800

Notes:

- Classification of the MRE was completed based on the guidelines presented by Canadian Institute for Mining (CIM), adopted for Technical reports which adhere to the regulations defined in Canadian National Instrument 43-101 (NI 43-101).
- Inferred Mineral Resources are at 4.8% zinc equivalent cut-off grade.
- Zinc Equivalent (ZnEq) = (NSRPb+NSRZn+Mc+Pc)/(RZn*PZn*(PrZn-ScZn)-RZn*PZn*PrZn*(RoyZn/100))
- ZnEq cut-off grade (calculated from Net Smelter Return) using the following parameters:
    - Zinc price of US$3,284/t, recovery 88%; Lead price of US$2,425/t, recovery 80%.
    - Concentrate grade 60% zinc, 50% lead.
    - Processing cost of US$21.25/t; Mining cost of US$46.50/t; Treatment charges of US$1.00/t of concentrates.
    - Payable zinc 85%, lead 94%, with selling cost zinc US$1,257/t metal and lead US$1,026/t metal.
    - Royalty of 4.5%.

- The Inferred Mineral Resource classification is based on geology, trends in mineralisation, drilling spacing, sampling QA/QC, estimation search pass number and number of samples, and zinc equivalent grade.
- Tonnages and metal are rounded to the nearest 100,000 to reflect this as an estimate.
- Average In Situ Dry Bulk Density for mineralised material is 3.24 t/m^3, based on available data.
- Mineralisation wireframes were constructed using a minimum true thickness of 2.0 m, at 2% Zn+Pb natural cut-off.
- CSA Global is not aware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the MRE.

Conclusions

GERC has developed the Stonepark deposit into a project with reasonable chances of eventual economic extraction. CSA Global believes that there is potential upside at the project, assuming that geological and structural controls on mineralisation can be better constrained.

There are resource risks, which resulted in the classification of Inferred Mineral Resources. However, these risks are largely attributed to wide drill spacing, a lack of In Situ Dry Bulk Density ("BD") data and limited visibility on dykes and inability to model these, due to the scale of data provided.

Recommendations

Summary recommendations include:

- The database is incomplete, with outstanding data comprising geophysical surveys and ground magnetic data collected by previous vendors. CSA Global recommends sourcing and collation of missing data into a complete dataset, as well as the collection of new magnetic and seismic data on a project scale, for use in modelling of intrusives and structural trends, and to assist in future drill planning and MRE updates.
- CSA Global reviewed the proportion of logged dyke material within the modelled mineralisation volumes, which equated to 4%, and does not consider it material to the current MRE. However, additional data and analysis is needed to define the aspect, geometry and possible dilution of these intrusives and it should be considered in all future work and modelled if possible.
- GERC collect and review a suite of BD data from diamond drill hole ("DDH") core, particularly when intersecting mineralisation, to build up a useful bulk density database of values that can be used to determine the tonnage factors for the Stonepark deposit.
- Continue to improve the 3D geological, alteration and structural models by logging new holes, surface mapping and geophysics. Dolomite should also be included in any subsequent models. These 3D models should be used in defining along and across strike mineralisation intersection targets.
- Additional infill drilling to a drill spacing of about 50 x 50 m to increase the current level of understanding of the Zn and Pb distribution and geological controls, and to potentially upgrade Inferred Mineral Resources to Indicated Mineral Resources.
- The Mineral Resource is open along and across strike. CSA Global recommends additional step-out drilling to a drill spacing of about 100 x 100 m to potentially augment the Resource estimate.
- Undertake preliminary metallurgical testwork to refine the Zn% and Pb% plant feed grades and recoveries, for use in the zinc equivalent cut-off grade and Net Smelter Return calculations of conceptual operating costs and metal revenue, in support of "reasonable chances of eventual economic extraction".

2.0 Introduction and Terms of Reference

At the request of the directors of Group Eleven Resources Corp. ("GERC") and SLR Consulting ("SLR"), CSA Global completed a Mineral Resource estimate for the Stonepark Zinc-Lead Project located in County Limerick, Ireland (Figure 2.1).

On September 8th, 2017, GERC completed a transaction with Teck Ireland Ltd. ("TIL") to acquire its total accumulated equity interest of 76.56% in TILZ Minerals Ltd ("JVCo"). GERC wholly owns Irish-registered Group Eleven Resources Limited ("GERL") which, in turn, wholly owns Irish-registered Group Eleven Mining & Exploration Limited ("GEM"). GEM wholly owns 82 Prospecting Licences ("PLs"), covering approximately 2,703 km^2 of prospective ground in in the world-class Irish zinc district, including the Stonepark Project. The Stonepark Project comprises six PLs that were initially granted to Connemara Mining Co. Limited ("CON"), by the Exploration and Mining Division "(EMD") of the Department of Communications, Climate Action and Environment, Republic of Ireland, for a period of six years (see Section 4).

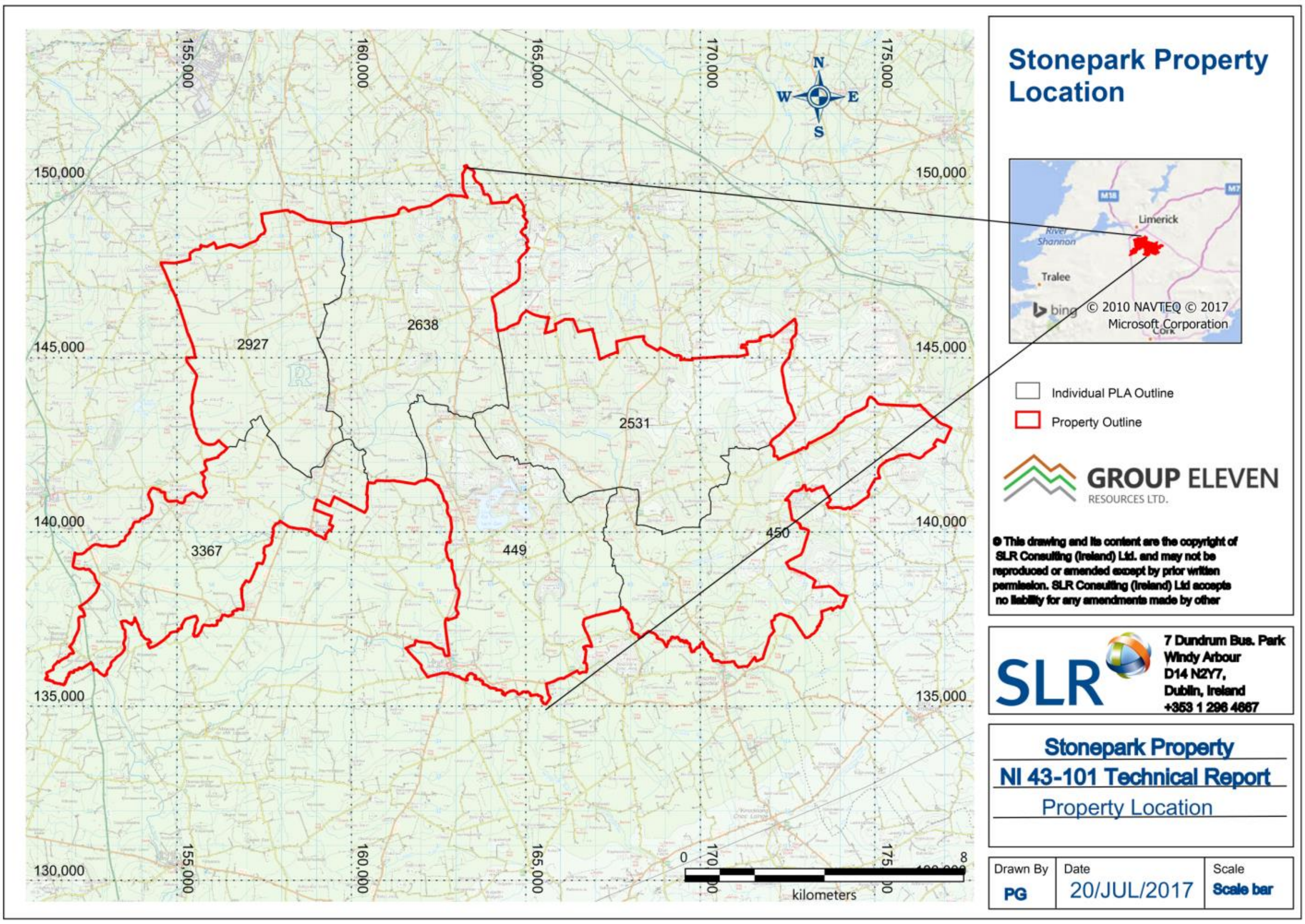

Figure 2.1 Stonepark Project Location

Six (6) prospecting licences were initially granted to Connemara Mining Co. Limited, by what is now called the Minister of Communications, Climate Action and Environment, Republic of Ireland, for a period of six years (see Section 4). TIL referred to the group of licences as the "Monaster Block". Ownership of the Monaster Block was transferred to JVCo as part of the joint venture agreement signed between TIL and LZL on July 17, 2012 (see Summary for further details)

2.1 Terms of Reference

SLR and CSA Global were requested by the directors of GERC, registered in British Columbia, Canada with offices at 2200-885 West Georgia Street, Vancouver, BC, Canada, to complete an independent technical report (the "Independent Report"; this "Report") on the Stonepark Project specific to the standards dictated by National Instrument 43-101 ("NI 43-101"), companion policy NI43-101CP and Form 43-101F1 (Standards of Disclosure for Mineral Projects).

The Report focuses on the completion by CSA Global of a maiden Mineral Resource estimate for the Project and is intended to enable the Issuer and potential partners and investors to reach informed decisions with respect to the Project. Given that the generation of a maiden Mineral Resource estimate is material to the underlying value of the asset, an updated Independent Report was deemed necessary.

The effective date of this Report is 26th April, 2018. The Report is based on information known to CSA Global and SLR at that date.

The Issuer reviewed draft copies of this Report for factual errors. Any changes made because of these reviews did not include alterations to the interpretations and conclusions made. Therefore, the statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this Report.

2.2 Sources of Information

The Independent Report is based on:

- Technical data, documents, reports and information from provided by TIL to GERC.
- Archive of historic reports obtained from the Geological Survey of Ireland ("GSI") archive and copies of prospecting licence documents;
- Published papers on the geology and mineral deposits of the region.
- A site visit and review meeting undertaken by Mr Paul Gordon (SLR) and Dr Belinda van Lente (CSA Global) on 11th April 2018 to the Stonepark Project.
- Reports and data in the public domain.
- Previous extensive Consultant experience with base metal exploration and mining projects in the region.

2.3 Data Gathering and Site Visit by SLR Consulting (Ireland) Ltd. and CSA Global

A site visit to the Project was carried out on behalf of SLR and CSA Global by Qualified Persons ("QPs"), Paul Gordon and Dr Belinda van Lente on 11th April 2018. The visit comprised a visit to GERC's core storage facility and to a drill site. The visit was in addition to previous visits by Paul Gordon and Dr John Kelly on 28 February 2017 and 17 May 2017, which also comprised a visit to the Stonepark project area and GERC's core storage facility in Crecora, Co. Limerick, to examine key drill-holes and mineralised intersections. The authors were accompanied by David Furlong, Chief Operating Officer of GERC. GERC provided the Authors with hard and electronic copies of documentation pertinent to the Project and maps showing geology, geochemical anomalies, past drilling, and the results of geophysical surveys.

By reason of their education, experience and affiliation with the Institute of Geologists of Ireland and South African Council for Natural Scientific Professions, respectively, Mr. Paul Gordon and Dr. Belinda van Lente fulfil the requirements for conducting a technical review for the purpose of NI 43-101.

2.4 Units and Abbreviations

For the purpose of this report, all measurements are given in metric units. All tonnages are in metric tonnes of 1,000 kilograms, and silver values are given in grams per metric tonne. The following is a list of abbreviations used in this report (Table 2.1):

Table 2.1 List of Units and Abbreviations Used.

Abb.	Description		Abb.	Description
%	Percent		ITM	Irish Transverse Mercator Grid (2001)
<	Less than		Kg	Kilogram
>	Greater than		kg/m^2	Kilograms per square metre
°	Degree		kg/t	Kilograms per tonne
°C	degrees Celsius		km	kilometre(s)
µm	Micrometre (micron)		km^2	Square kilometre
1 gram	0.3215 troy oz.		Kt	Thousand tonnes
1 oz./Ton	28.22 gm/tonne		M	Metre
1 troy oz.	31.104 gm		M	Million
A	Year (annum)		m^2	Square metre
Ag	Silver		Ma	Million years ago
Asl	above sea level		Masl	Metres above sea level
Ba	Barite		mm	millimetre(s)
c.	circa (approximately)		Mt	Million tonnes
Cm	Centimetre		n.a.	not available/applicable
Cu	Copper		NI 43-101	Canadian National Instrument 43-101
DDH	Diamond drill hole		oz.	troy ounce
DEM	digital elevation model		PGeo.	Professional Geoscientist
EMD	Exploration and Mining Division of Ireland		Pb	lead
Fn, FMn	Formation		PL	Prospecting Licence
g or gm	gram(s)		PLA	Prospecting Licence Area: the pre-defined area of a prospecting licence.
g/t	grams per metric tonne		ppb	parts per billion
GPS	Global Positioning System		ppm	parts per million
GSI	Geological Survey of Ireland		Project	Stonepark base metal exploration project
H	Hour		QA	quality assurance
Ha	hectare(s)		QC	quality control
ICP-MS	Inductively Coupled Plasma - Mass Spectrometry		QP	Qualified Person
In	Inch(es)		TSX	Toronto Stock Exchange
ING	Irish National Grid		Zn	Zinc
IP	Induced Polarisation			

3.0 Reliance on Other Experts

The Authors did not rely on any other experts in the compilation of this Report.

4.0 Project Location and Description

The Stonepark Project is named after the zinc-lead prospects located at Stonepark within the Project Area, along the western margin of the Limerick Basin and about 15 kilometres southeast of Limerick City. The Stonepark Project consists of six contiguous prospecting licences (PLs) totalling 183 square kilometres.

4.1 Project Location

The Project Area extends from the small rural villages of Ballyneety in the north, to Bruff in the south (a distance of some 13.5 km) and from just south of Pallas Green in the east, almost to Croom (population 1,157) in the west, a distance of 25 km (see Figure 2.1). The northern boundary of PLs 2927 and 2638 are about 6 km south of the outskirts of the city of Limerick (population just under 200,000), the third largest city in the Republic of Ireland. The Caherconlish zinc-lead deposit, which is part of the Glencore's Pallas Green cluster of zinc-lead deposits, is only 2 km east of the Stonepark North prospect, within GERC's PL 2638.

Table 4.1 shows the approximate furthest extents of the Project in each cardinal direction.

Table 4.1 Project area bounding coordinates

Area Boundaries	ITM
North	650557 (northing)
South	635642 (northing)
East	576791 (easting)
West	5511129 (easting)

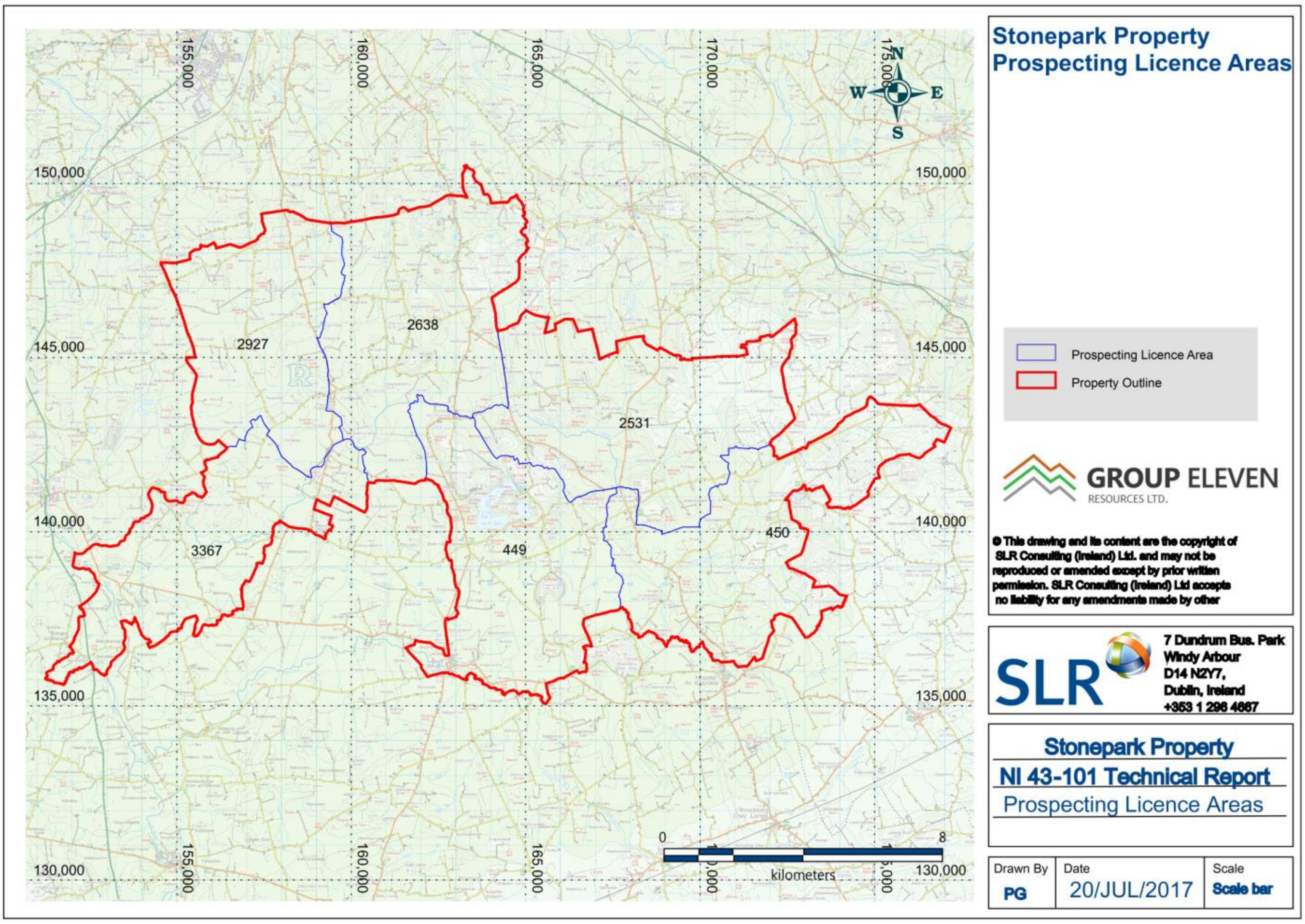

Figure 4.1 Stonepark Project Prospecting Licences

4.2 Project Description

The Project area consists of six (6) prospecting licences covering a total of 183.54 km^2, as listed in Table 4.2 below, five were granted to LZL on 31 January 2005 and one on 28 April 2006. The boundaries of the exploration licences correspond to official, pre-defined, administrative boundaries as outlined by the Exploration and Mining Division "(EMD") of the Department of Communications, Climate Action and Environment, Republic of Ireland. The licence outlines are irregular, based on clearly defined geographical features such as river and stream courses and townland boundaries.

Table 4.4.2 Stonepark Project prospecting licence summary information

PLA No.	County	Area (km^2)	Metals
PLA 2638	Limerick	33.64	Base Metals, Ba, Ag, Au
PLA 2927	Limerick	26.22	Base Metals, Ba, Ag, Au
PLA 3367	Limerick	26.29	Base Metals, Ba, Ag, Au
PLA 449	Limerick	30.90	Base Metals, Ba, Ag, Au

PLA No.	County	Area (km^2)	Metals
PLA 450	Limerick	31.66	Base Metals, Ba, Ag, Au
PLA 2531	Limerick	34.83	Base Metals, Ba, Ag, Au
	Total	**183.54**	

4.3 Prospecting Licence Regulations in Ireland

The right to explore and the associated access rights are inherent in the terms of a valid prospecting licence. In practice, access rights are negotiated with individual landowners without the need to invoke the terms of a prospecting licence. GERC management has extensive experience of exploring in Ireland.

To date, GERC, and previously, TIL have not had any difficulty in gaining access for the purposes of either drilling or geophysical surveying, nor are difficulties anticipated by GERC. The Authors also have extensive experience of exploring in Ireland, and are in agreement with GERC that it should not be necessary to invoke the terms of the prospecting licences in order to gain access to land.

Mineral ownership in Ireland is, in most cases, vested in the State, although some landowners hold private mineral rights. Mineral exploration is carried out entirely by the private sector, using a permitting system governed by several Minerals Development Acts dating from 1940 to 1999. EMD acts as the agency responsible for the administration of regulatory aspects, including the issuing of PLs.

In Ireland, PLs average approximately 35 km^2 and are issued for a six-year period either on a 'first come, first served' or competitive basis, subject to certain conditions. Under the regulations, a licence holder is committed to progressively increasing minimum exploration work programmes and expenditures for each of the three 2-year terms of the 6-year period. In addition, the licence holder is required to provide written work reports every two years to the Minister of the Department, one calendar month before the end of period. These work reports are held confidential for six years after submission or until expiry or surrender of the relevant licence.

PLs can be renewed beyond the initial six-year period, for another six-year period, and thereafter for two-year periods, with increased minimum work programme and expenditure commitments. Licences can be relinquished at any time. There is no statutory limit to the number of times a licence can be renewed.

Table 4.4.3 PL Terms and Minimum Expenditure Requirements

Area No.	County	Initially Granted	End License Period	Status	Expenditure Commitment*
PL 2638	Limerick	31/01/2005	31/01/2019	12th Year	€50,000
PL 2927	Limerick	31/01/2005	31/01/2019	12th Year	€50,000
PL 3367	Limerick	31/01/2005	31/01/2019	12th Year	€50,000
PL 449	Limerick	31/01/2005	31/01/2019	12th Year	€50,000
PL450	Limerick	31/01/2005	31/01/2019	12th Year	€50,000
PL2531	Limerick	28/04/2006	27/04/2018	11th Year	€37,000
Total					€287,000

***** This is for the first two-year term only. There are also consideration fees to be paid for each property at each bi-annual reporting date increasing from €190 to a maximum of €1,500 for each property

In the event of a commercial discovery, award of a Mining Licence is normally granted exclusively to the PL holder, subject to the holder complying with certain terms and conditions. Land access for exploration and mining development is negotiated with landowners with payment of agreed compensation for access and land/mineral use where minerals are privately owned. The state takes no shareholding in mines, but will require a royalty to be paid.

Mining Licence terms are currently on a project-specific basis and generally on a phased schedule. As an example, at the Lisheen zinc-lead mine in County Tipperary, a concessionary royalty of 1.5% to 1.75% was levied from commencement of mining in 1999, rising to 3.5% after 2007 until closure in November 2015. At the Galmoy zinc-lead mine (along trend from Lisheen), the royalty rate varied over the life of mine between 1.25% and 2.25%. Applicants for a Mining Licence are required to obtain planning permission and an integrated Pollution Control Licence. From discovery of Lisheen in 1990 to mine production in 1999, it took nine years to delineate a Mineral Resource, complete feasibility studies, acquire the necessary permits and construct the new mine.

4.4 Prospecting License Terms

The PLs, details of which are presented in Table 4-2, allow GEM (a wholly-owned subsidiary of GERL) to prospect for base metals, barytes and silver within the limits of the licensed area, and are valid for a period of six years from the last issue date (see Table 4.3, above). The PLs are subject to the standard work and expenditure commitments, as set out in Section 4.3 of this Report.

Under the terms of the PLs, GEM is required to comply with Local Government (Planning and Development) Acts, 1963 -1999; Local Government (Planning and Development) Regulations 1994 – 2004; Local Government (Water Pollution) Acts, 1977 and 1990; Wildlife Act, 1976 and 2000 and Ministerial Orders under these various Acts, Regulations; National Monuments Acts, 1930-2004; European Communities (Natural Habitats) Regulations, 1997; Planning and Development Act 2000 and 2002 and Planning and Development Regulations 2001 and 2004.

SLR have reviewed the PLs through the Minerals Ireland – Exploration and Mining Division website to identify the detailed spatial locations of the PLs that are the subject of this Report. The results are consistent with information provided by GERC to SLR.

4.5 Environmental Liabilities

The Authors are not aware of any environmental liabilities related to the Stonepark Project as defined. No obvious environmental issues were observed during the site visit.

The authors are not aware of any significant risk-factors that may affect access, title, or the right or ability to perform work on the Project.

4.6 Exploration Permits and Significant Risk Factors

The Authors are not aware of nor has GERC communicated to the Authors any material risks or issues that might impact title or the access or ability to undertake work on the Project Area. There are no permits on the properties nor is any required for the recommended work programme. Appropriate assessments to establish that exploration work will not impact designated areas will be undertaken prior to invasive exploratory works.

4.7 Protected Areas

Protected sites within Ireland are designated by the National Parks and Wildlife Service (NPWS) and are categorized as Natural Heritage Areas (“NHA”), Special Areas of Conservation (“SAC”) and Special Protection Areas (“SPA”) (see maps below). NHA is a fundamental designation for wildlife. These are areas considered important for particular species of plants and animals whose habitats need protection. Proposed (pNHAs) were published on a non-statutory basis in 1995 but have not yet been statutorily proposed or designated.

SACs are the prime wildlife conservation areas in the country and considered to be important on a European, as well as, Irish level.

SPAs are protected areas for birds at their breeding, feeding, roosting and wintering areas. Particular protection is given to those species identified, which are rare, in danger of extinction (such as the Curlew) or vulnerable to changes in habitat. Screening for appropriate assessment is required before work can be carried out, and is carried out, with particular consideration given for SACs and SPAs, as sites of European importance. These environmentally-protected areas are not excluded from exploration and underground mining provided that impact to fauna, flora and hydrology is at an acceptable level and balanced with the economic benefits to the local community and national economy.

There is one SAC and no SPAs or NHAs in the project (see Table 4.4 and Figure 4.2)

Table 4.4 List of Special Areas of Conservation within the Area of Interest

Site Code	Site Name	Area (Ha)	Site Synopsis
001430	Glen Bog	27.6	http://www.npws.ie/protected-sites/sac/0000679

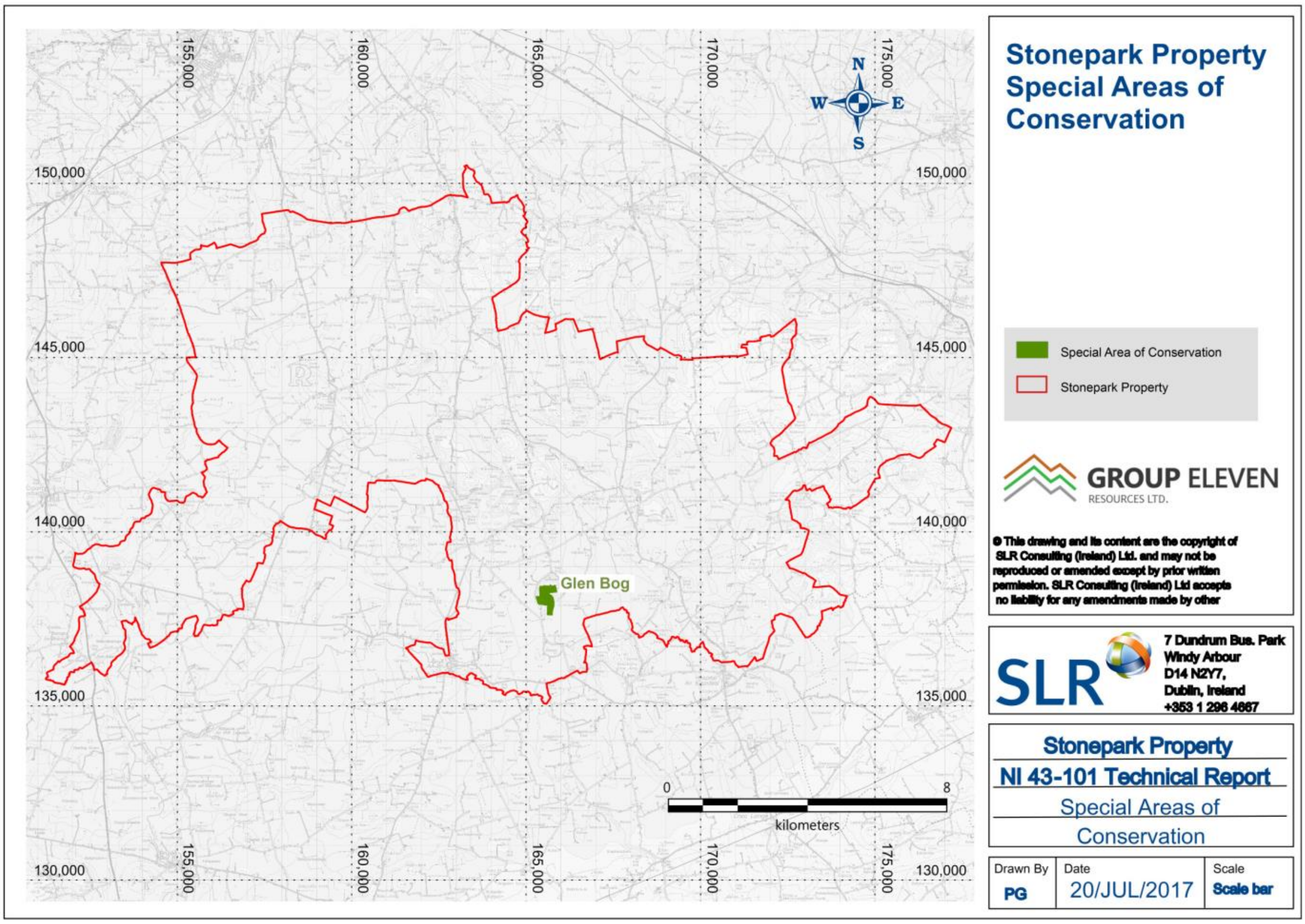

Figure 4.2 SACs on the Stonepark project.

5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Project is well-located, with access to local infrastructure. Ireland has a mild climate, allowing year-round exploration.

5.1 Project Access

The Project is within a few kilometres of both the M20/N20, the national route connecting the cities of Limerick and Cork, and the N24, which connects Limerick to Waterford. The M20/N20 runs to the north and west of the Project, while the N24 is to the northeast. The railway linking Limerick city to Limerick Junction, where the lines from Cork, Waterford and Killarney intersect, runs approximately parallel to the N24, with the nearest station at Limerick.

Three regionally important roads, the R511, R512 & R516 run through the Project; the R511 runs north-south through the centre, the R512 runs north-south along the eastern margin of the Project and the R516 runs through the south-eastern part of the Project. There is also a network of locally important roads throughout, with most points in the Project being within 1km of a public, paved road.

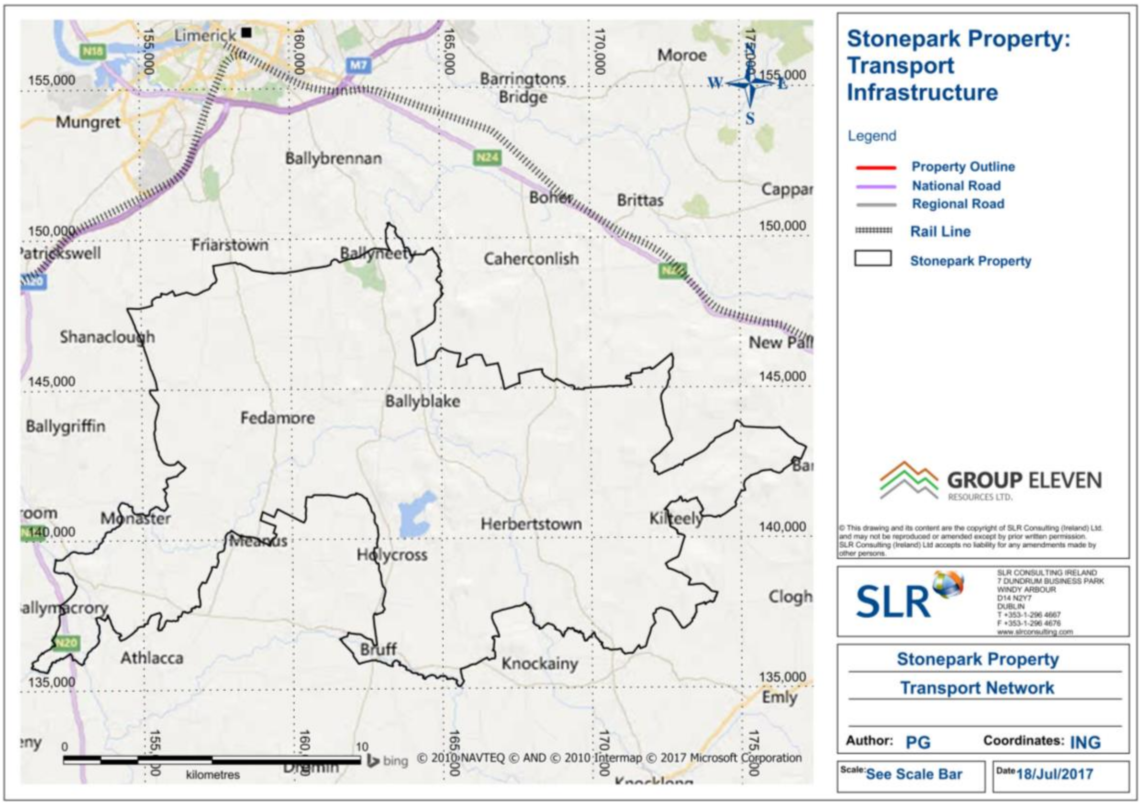

Figure 5.1 Stonepark Block – Transport Network

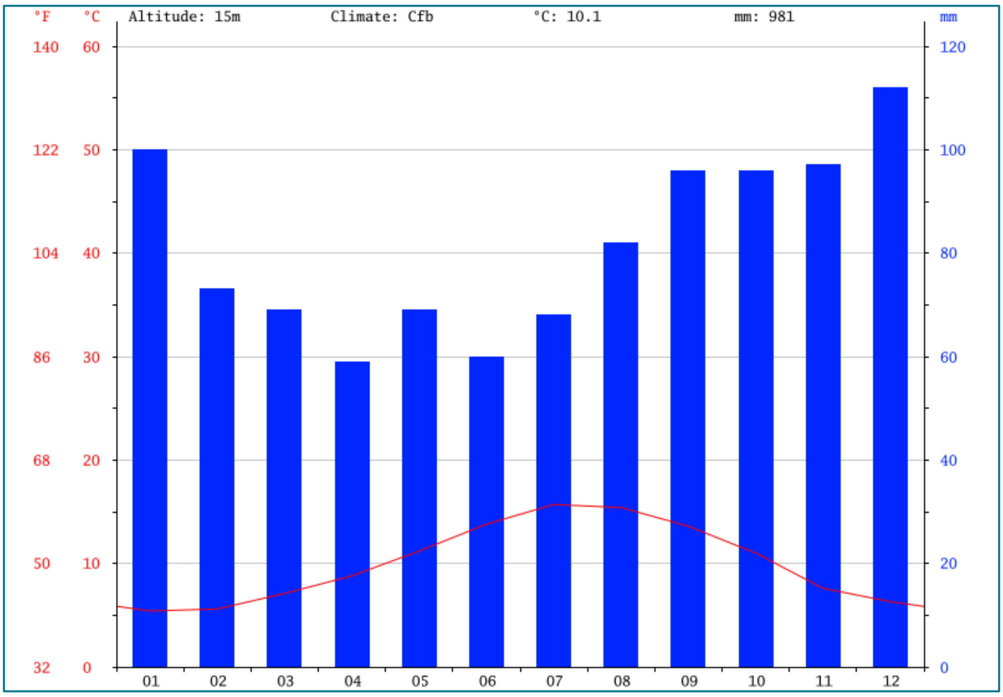

Figure 5.2 Climate graph for Limerick[1]

Apart from the weather, field work is only constrained by short days of daylight in winter (minimum 8 hours) at these high latitudes (Figure 5.3).

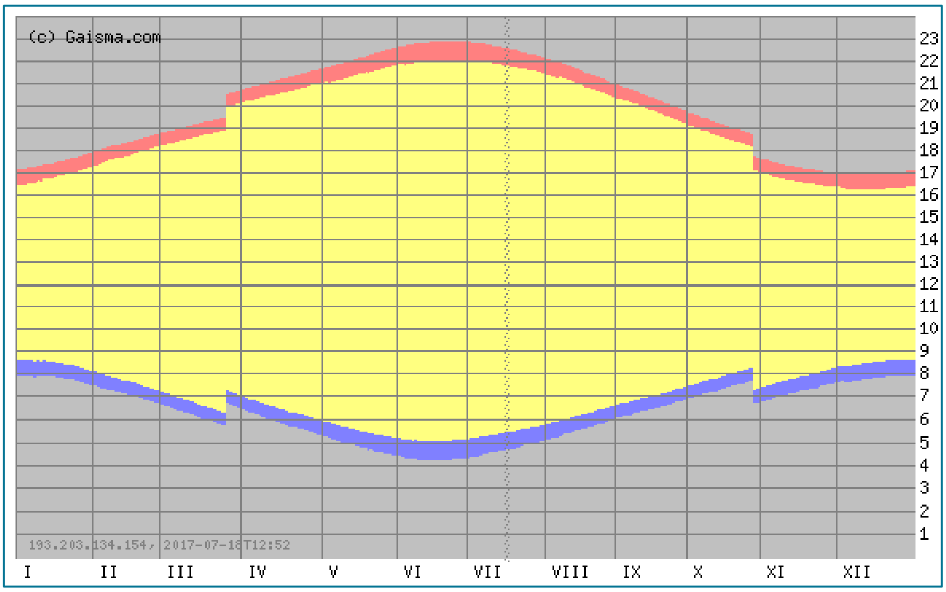

Figure 5.3 Graph of sunrise and sunset for Limerick[2]

[1] https://images.climate-data.org/location/4553/climate-graph.png
[2] https://www.gaisma.com/en/graph/limerick.png

5.2 Physiography and Vegetation

The Project area located is located along the western margin of the Limerick Syncline approximately 15 kilometres southeast of Limerick city. The project area covers gently rolling agricultural land with subdued topography within the Shannon Basin with an average elevation between 50 and 100 metres MASL. It is an area of good quality agricultural land, with extensive tillage and grassland for grazing.

The area is largely covered by Quaternary glacial drift largely derived from the underlying bedrock geology with an average thickness of 10 to 50 metres, although extensive areas with bedrock at, or close to surface, are present especially in elevated locations.

Several small hills represent Chadian-Arundian age volcanic centres located on the north and south limbs of the Limerick Syncline and range in height from 150 – 230 metres MASL.

The Camogue River meanders westward through the Project area, north of Lough Gur, before joining the Maigue River just off the western boundary of the Project near Croom. The Maigue flows north into the Shannon Estuary.

5.3 Infrastructure

Excellent road and rail connectivity have been described above. Typical of many parts of rural Ireland there is a dense network of secondary and tertiary roads and boreens (narrow lanes) which facilitate relatively easy penetrative access The Project is located close to the major city of Limerick. From Limerick to the deep-water port of Foynes on the Shannon estuary is 69km via the N69. The Stonepark prospects are located 40km from the Foynes deep water port.

A main railway line skirts around the northern extent of the Project Area (Figure 5.1). A 220kV power line transects the Project and a second 220kV power lines crosses to the northwest of the area (Figure 5.5).

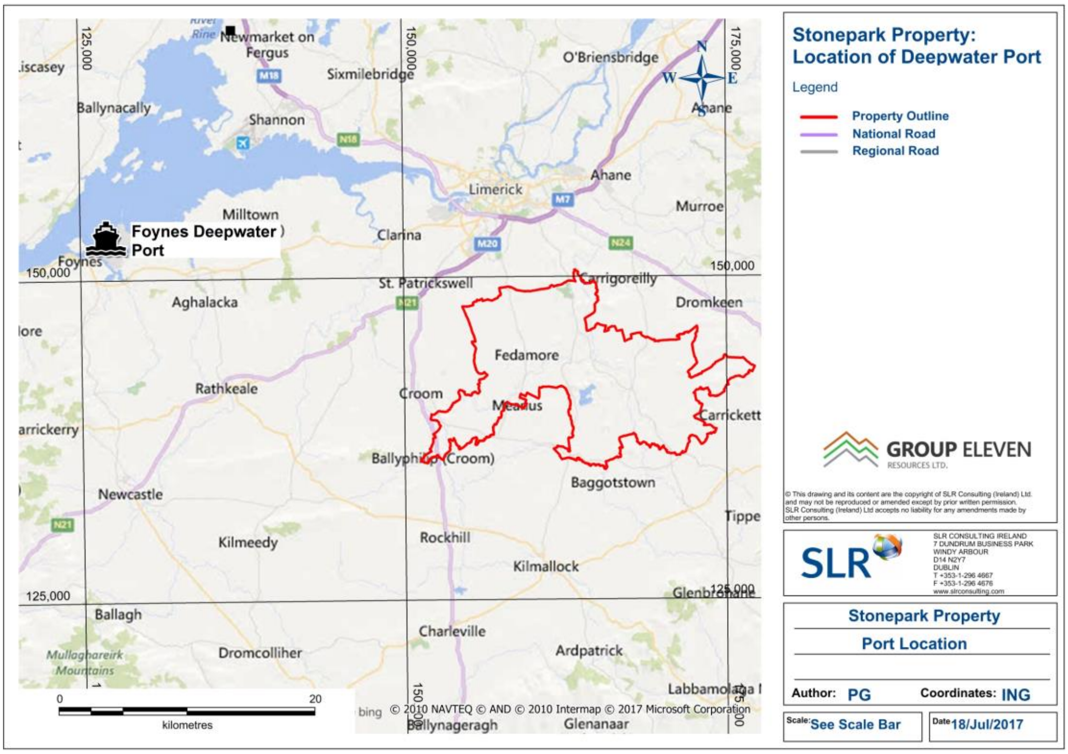

Figure 5.4 Stonepark Project – Proximity to Foynes Deepwater Port

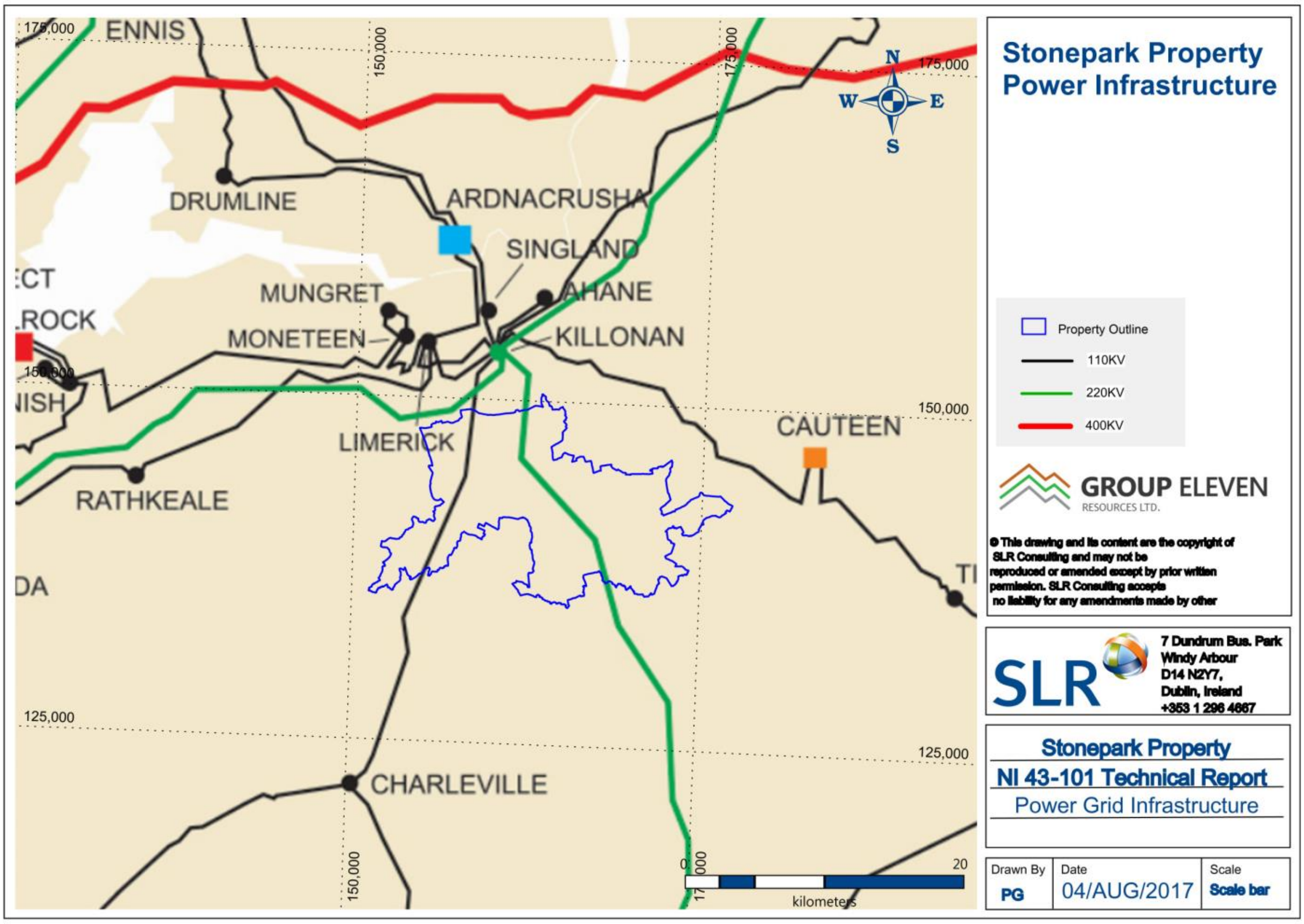

Figure 5.5 Stonepark Project – Power Infrastructure Network

6.0 History

The Limerick Basin of southwest Ireland has only become the focus of intense exploration since about 1998, relatively late compared to the North Midlands and Rathdowney Trend, although a number of smaller occurrences had been identified. The Limerick Basin is now recognised as an important Zn-Pb district in Ireland with the discovery of Pallas Green by Minco-Noranda and Stonepark by Teck generating industry interest not seen since the discovery of Galmoy in 1984 and Lisheen in 1990 along the Rathdowney Trend.

6.1 Early Exploration

No significant discoveries were made in the decade following the discovery of Lisheen in 1990 until the more recent discoveries in the Limerick Basin.

Zinc-lead exploration in the Limerick area began in the early 1960's during a country-wide exploration boom that followed the discoveries of Tynagh and Silvermines. This phase of exploration resulted in the sub-economic discoveries of Courtbrown in 1962 (1 Mt averaging 3.5% Zn, 2% Pb & 14 g/t Ag), and Carrickittle prospect (0.2 Mt averaging 6% Zn & 1.5% Pb) in 1965. The historic resources are not classified as current resources, as the resource estimation was carried out before the introduction of NI 43-101. The assumptions, parameters and methods of calculating the resource are not known. Significant compilation of data, re-drilling and re-sampling and data verification would need to be carried out by a qualified person before the historic resources can be verified and upgraded to current, classified resources. Such work is not considered to be a priority at this stage in the project.

A qualified person has not done sufficient work to classify the historic resources as current resources. GERC is not treating the historic resources as current resources.

These discoveries bracketed the discovery in 1963 of the Gortdrum Cu-Ag-(+Hg) orebody (now owned by GERC and viewed as a brownfield exploration project). Stream sediment and soil geochemistry surveys combined with IP geophysical surveys were effective at the time in finding these shallow deposits.

Gortdrum was a small (3.8 Mt @ 1.2% Cu, 12 g/t Ag) but open-pittable deposit, opening in 1967 and operating until 1975. It produced a total of 35,000 tonnes Cu, 83,000 kg of Ag and 17,000 kg mercury (Steed, 1986). The Cu-Ag-Hg mineralisation at Gortdrum is hosted within the Lower Limestone Shale sequence. The mineralisation is also associated with intense shearing and reverse movement on the Gortdrum fault and hydrothermally altered basaltic dikes and sills similar to those in the Limerick Volcanics. Gortdrum produced a total of 35,000 tonnes Cu, 83,000 kg of Ag and 17,000 kg mercury (Steed, 1986).

The historic resources are not classified as current resources, as the resource estimation was carried out before the introduction of NI 43-101. The assumptions, parameters and methods of calculating the resource are not known. Significant compilation of data, re-drilling and re-sampling and data verification would need to be carried out by a qualified person before the historic resources can be verified and upgraded to current, classified resources. Such work is not considered to be a priority at this stage in the project.

A qualified person has not done sufficient work to classify the historic resources as current resources. GERC is not treating the historic resources as current resources.

In the 1970's, exploration by Gortdrum Mines Ltd in the area north of Gortdrum led to the discovery of low-grade, breccia-hosted zinc-lead mineralisation in Waulsortian Limestone, approximately 10km northeast of the Gortdrum mine. In the mid-1990's, this area was acquired by Minco Ireland and became known as the Pallas Green licence block, after a local village. The ground was joint-ventured to Noranda in 1998, and subsequent exploration led to discovery of a number of other pods of zinc-lead sulphide mineralisation at depths below 300 m. In 2002-2003, thick high-grade mineralisation was discovered at the Tobermalug zone.

In 2006, Xstrata acquired Falconbridge-Noranda which had merged the previous year. Drilling in 2006 and 2007 delineated a resource of 11.3 Mt averaging 10.2% Zn and 1.9% Pb with additional resources in two smaller but open zones at Caherconlish and Srahane West. With subsequent drilling campaigns, Xstrata defined resources along a roughly 2km long zone of Waulsortian limestone subcrop on the northeast of the Limerick syncline (Blaney et al., 2003). In 2008, Glencore acquired Xstrata. Glencore's published Inferred Mineral Resource for the Pallas Green Project reported in accordance with the JORC Code stands at 44 Mt at 7% and 1.0% Pb as at 31st December 2016 (reference).

The discoveries at Pallas Green led to great interest in the Limerick Basin and the staking of all prospective ground. LZL acquired the Stonepark tenements in 2005-2006. Teck Resources entered a joint venture with LZL in October 2007 and commenced exploration of the Project.

6.2 Stonepark Historical Exploration

Previous PLs overlapping the current Stonepark PLs are provided in Table 6.1 and exploration completed by PL holders prior to TIL is summarised in Table 6.2. A well-defined west-northwest striking 2km wide alteration trend, the Pallas Green Alteration Trend, was recognised and can be traced over approximately 30 km from the Gortdrum Mine in the east to the outskirts of Limerick city in the west.

Initial exploration in the Limerick area began in the early 1960's during a country-wide exploration boom that followed the discoveries of Tynagh and Silvermines. This phase of exploration resulted in the sub economic discoveries of Courtbrown in 1962 (1Mt averaging 5.5% Zn+Pb), and Carrickittle prospect (0.2 Mt averaging 7.6% Zn+Pb) in 1965.

These discoveries bracketed the discovery in 1963 of the Gortdrum Cu-Ag-(+Hg) orebody (now owned by GERC and viewed as a brownfield exploration project). Steam sediment and soil geochemistry surveys combined with IP geophysical surveys were effective at the time in finding these shallow deposits.

Gortdrum was a small (3.8Mt @ 1.2% Cu, 12 g/t Ag) but open-pittable deposit and was put into production by the Northgate group in 1967, operating until 1975. The Cu-Ag-Hg mineralisation at Gortdrum is hosted within the Lower Limestone Shale sequence. The mineralisation is also associated with intense shearing and reverse movement on the Gortdrum fault and hydrothermally altered basaltic dikes and sills similar to those in the Limerick Volcanics. Gortdrum produced a total of 35,000 tonnes Cu, 83,000 kg of Ag and 17,000 kg mercury (Steed, 1986).

In the 1970's, exploration by Gortdrum Mines Ltd in the area north of Gortdrum led to the discovery of low-grade, breccia-hosted zinc-lead mineralization in Waulsortian Limestone, approximately 10km northeast of the Gortdrum mine at a place called Castlegarde. In the mid-1990's, this area was acquired by Minco Ireland and became known as the Pallas Green licence block, after a local village.

The ground was joint-ventured to Noranda in 1998. A well-defined west-northwest striking alteration trend, the Pallas Green Alteration Trend, was recognised as superimposed on the Limerick Trend and was fully covered by the Pallas Green licence block except to the east where the Waulsortian Limestones had been eroded. The alteration trend is approximately two kilometres in width and can be traced over approximately 30 kilometres from the Gortdrum Mine in the east to the outskirts of Limerick City in the west. The Waulsortian or target host-lithology is present along this trend except for an area over five kilometres extending west of the Gortdrum copper mine.

Exploration by the Noranda-JV led to discovery of a number of other pods of zinc-lead sulphide mineralisation at depths below 300 metres. In 2002 – 2003, thick high-grade mineralisation was discovered at the Tobermalug zone.

In 2006, Xstrata acquired Falconbridge-Noranda which had merged the previous year. Drilling in 2006 and 2007 delineated a resource of 11.3 Mt averaging 10.2% zinc and 1.9% lead with additional resources in two smaller but open zones at Caherconlish and Srahane West. With subsequent drilling campaigns, Xstrata built a global resource for the project along a roughly two-kilometre long zone of Waulsortian limestone sub crop on the northeast of the Limerick syncline (Blaney et al., 2003).

This cluster of zinc-lead deposits became known as the Pallas Green district and currently the aggregate inferred resource stands at 44 million tonnes averaging 7% zinc + 1.0% lead (JORC-compliant; as at 31 December 2016). Not surprisingly, the discoveries at Pallas Green led to great interest in the Limerick Basin and the staking of all prospective ground by both Juniors and Majors.

Table 6.1 PL Number History for the Stonepark Project

Current PL Number	Previous PL Numbers
PLA 2638	PL 778
PLA 2927	PL 638
PLA 3367	PL 100, PL 319, PL 528, PL 637, PL 642, PL 1359, PL 2841, PL 2926
PLA 449	n/a
PLA 450	PL 113, PL 427
PLA 2531	PL 641

Table 6.2 Summary of Tenures of Pre-Teck Explorers and Summary of Work Undertaken

PL Number & Owner	From (Year)	To (Year)	Review of historic data	Geological Mapping	Prospecting & Mapping	Soil Geochemistry	Deep OB Geochemistry	Lithogeochemistry	VLF Ground Geophysics	IP Ground Geophysics	Ground Magnetics	Ground Radiometrics	Gravity Survey	Airborne Magnetic	Drilling No. of Holes	Lithogeochemistry (drilling)	Geological review
PL 2638																	
Tara Prospecting	1966	1976				■	■										
Central Mining Finance	1976	1977				■	■										
Noranda	1981	1982		■		■											
Outokumpu	1993	1995	■	■									■				
Noranda	2000	2002	■	■										■			■
Connemara	2005	2007	■	■		■		■		■							■
PLs 450 and 449																	
Tara Prospecting	1964	1968		■		■	■			■	■				4		
Noranda	1981	1982			■		■										
Conroy	1982	1984	■							■		■			6		
Arcon	1994	1998				■				■					1		
Noranda	2000	2004	■	■										■			■

PL Number & Owner	From (Year)	To (Year)	Review of historic data	Geological Mapping	Prospecting & Mapping	Soil Geochemistry	Deep OB Geochemistry	Lithogeochemistry	VLF Ground Geophysics	IP Ground Geophysics	Ground Magnetics	Ground Radiometrics	Gravity Survey	Airborne Magnetic	Drilling No. of Holes	Lithogeochemistry (drilling)	Geological review
Connemara	2004	2005															
PL 3367																	
Southern Union	1962	1963															
Greenhills	1967	1975													1		
Central Mining Finance	1975	1977															
Billiton	1979	1983															
Tara	1988	1997													1		
Noranda	2000	2004															
Connemara	2005	2007															
PL 2927																	
Central Mining Finance	1975	1977															
Billiton	1979	1983															
Noranda	2000	2004															
Connemara	2005	2007															
PL 2531																	
Greenhills	1967	1972															

PL Number & Owner	From (Year)	To (Year)	Review of historic data	Geological Mapping	Prospecting & Mapping	Soil Geochemistry	Deep OB Geochemistry	Lithogeochemistry	VLF Ground Geophysics	IP Ground Geophysics	Ground Magnetics	Ground Radiometrics	Gravity Survey	Airborne Magnetic	Drilling No. of Holes	Lithogeochemistry (drilling)	Geological review
Celtic Gold	1977	1979															
Noranda	1981	1982															
Cobh Exploration	1988	1990															
Noranda	2000	2004															
Connemara	2006	2008															
Teck	2008	2010															

6.3 Work Undertaken By Teck Ireland Ltd

6.3.1 Data Compilation

All previous work undertaken, where not completed by Connemara Mining, was digitised and compiled into relevant drill-hole, surface geochemistry and GIS databases.

6.3.2 Mapping and Geochemical Sampling

Reconnaissance Mapping and Lithogeochemical Sampling

Two mapping and lithogeochemical sampling programmes were undertaken in 2007. The aim was to:

1. Field check historic geological control points.
2. Generate new geological control points; data collected included, lithology, alteration, and structural data.
3. Collect additional lithogeochemical samples.

A total of 117 localities were examined and 17 samples were taken for analysis.

Soil Geochemistry

Two soil geochemistry sampling programmes were completed by TIL. A total of 101 samples were collected from 72 sites. These surveys were directed to:

1. Generate multi-element, pH and LOI soil data; only Zn, Pb and Cu were completed in the previous 1965 survey.
2. Follow up an anomalously high Zn soil geochemistry value (750ppm) reported by Tara Exploration in 1965.

6.3.3 Geophysics

Pole – Dipole IP

Three separate dipole-dipole IP surveys were completed for a total of 30.3 line km. Previous work by Connemara Mining comprised 7.5km of IP. Pole-dipole IP was collected in order to find resistivity breaks that may correspond to changes in carbonate formation (or other lithologies), or to major structural breaks.

Gradient Array IP

Gradient Array IP was conducted to detail some features of interest identified by the pole-dipole surveying. A total of 7 panels were completed for a total area coverage of 16.72 km^2.

Downhole IP

A number of downhole IP surveys were conducted on three drill holes to determine the resistivity and chargeability properties of the various lithological units present in the Stonepark block to assist with interpretation of surface geophysical surveying.

In addition to the above, directional IP surveying was also conducted in an attempt to geophysically explore areas adjacent to completed boreholes. A total of 6 drill holes were surveyed.

Regional Magnetics

Airborne magnetic data from surveys undertaken by previous or adjacent operators that has been made publicly available by the Exploration and Mining Division was acquired by TIL and re-processed.

Detailed Magnetics

Following re-interpretation of the airborne surveys, a programme of ground magnetics was conducted in the area of the Stonepark prospect. The survey assisted with defining the distribution of volcanic rocks in the immediate area of the Stonepark prospect, no further interpretation was undertaken.

Gravity Surveying

The Dublin Institute of Advanced Studies (DIAS) national dataset was modelled and a programme of infill surveying was conducted to achieve greater detail across the entire licence block at a grid spacing of 500m. In the Stonepark prospect, a survey of 117 readings was taken on a grid spacing of 100m.

6.3.4 Seismic Surveying

TIL completed a total of 18 line km of seismic surveying within the Stonepark Block, consisting of two seismic lines, on PLs 2638, 2927, 2531 and 449.

6.4 Stonepark Discovery

In October 2007, Teck entered into an option agreement with Connemara Mining Co. Ltd. to spend $3.0 million to earn a 75% interest in the Monaster Block (PLs 2638, 2927, 3367, 449 and 450) zinc project immediately to the west of Pallas Green, as well as, the Newcastle Block (PLs 2845, 1942, 1303, 3650, 2594, 1943, 3651, 1946, 1940, 1947), located approximately 4 to 30 kilometres to the southwest. Note, the Newcastle Block is currently wholly owned by the Company.

TIL generated drill targets using a combination of historic soil geochemistry, pole-dipole IP and gravity data, and a structural interpretation based on geophysics and limited outcrop data. Targets closest to the Pallas Green deposits were tested first.

Diamond drilling started in June 2007. TC-2638-001 was drilled adjacent to a major structural break with an associated soil geochemical anomaly; thick Waulsortian with patchy zones of dolomite was intersected with no significant sulphides. TC-2638-002 was then drilled 4km to the northeast of TC-2638-001 to test an IP chargeability anomaly and structural target. Trace amounts of pyrite were intersected in the Waulsortian but no sphalerite or galena. Note: Lisheen was discovered by drilling on 500 metre step-outs radially from the first drill-hole (Hitzman, et al., 1992). TC-2638-003 was drilled 840m southwest of TC-2638-001 and again was drilled on an IP chargeability anomaly. This hole intersected a thick section of black matrix breccia near the base of the Waulsortian. The hydrothermal breccia matrix contained disseminated pyrite and locally, sericite-pyrite-altered dike clasts, but assayed < 100 ppm zinc.

TIL was encouraged with the discovery of this hydrothermal system and hole TC-2638-004 was drilled 300m northwest of TC-2638-003 and closer to an inferred north-east trending fault. The fault traced a significant topographic break in slope and an interpreted change in sub-surface lithology. Hole TC-2638-004 intersected a 4m zone of sulphide mineralisation containing 11.6% Zn and 3.5% Pb from 376m. TC-2638-004 was completed in October 2007 some four months after the drilling programme commenced.

This discovery and more encouraging drilling around hole TC-2638-004 during 2008 led to the area becoming known as the Stonepark Prospect. An extensive geophysical program consisting of gradient array, downhole and directional IP, detailed magnetics, roadside and detailed gravity was also undertaken in 2008, to better define the geology of the area. TC-2638-012 collared 1km southwest of Stonepark. The hole tested an IP chargeability anomaly and intersected a narrow gossanous zone (0.95 m @ 2.37% Zn & 4.73% Pb from 203.15 m) at the base of a significant karstic depression.

At the end of 2008, drilling was suspended because of the global financial crisis. When drilling resumed in August 2009, the second hole of that programme (TC-2638-026) tested an IP chargeability anomaly and intersected 7.2m averaging 13.1% Zn and 2.2% Pb from 216m. This hole was drilled 1.5km north of TC-2638-004 and signalled the discovery of a higher-grade and shallower zone of zinc-lead mineralisation, which subsequently became known as Stonepark North. Stonepark North became the focus of the 2009 and 2010 drilling programme, with 39 holes for 15,250m being completed during this period. The conclusion appears to be that Stonepark North is a narrow, high grade, N-S trending stratiform ore horizon over 600m in strike length. In addition, a new mineralised zone, Stonepark West, was discovered in 2011 and is still open to the southwest.

Despite intersections of black matrix breccia with trace sphalerite in PL2927 (Rockfield Prospect) and PL3367 (Rathmore Prospect), Teck confined the large part of its exploration drilling to just the northeast corner of PL2638. The outlying hydrothermal systems identified from drilling indicate that the Stonepark prospects are part of a much larger mineralising system supported by proximity to the Pallas Green deposits. Stonepark and Pallas Green may represent the fringes of a major hydrothermal system and likely it is genetically part of the Pallas Green camp.

In summary, TIL has identified three high-grade zinc-lead zones within the Stonepark Block, all located within five to 10 kilometres of Glencore's Pallas Green zinc project. Teck has also identified a number of drill- ready targets with the opportunity to define a significant zinc lead resource (see Figure 14.1).

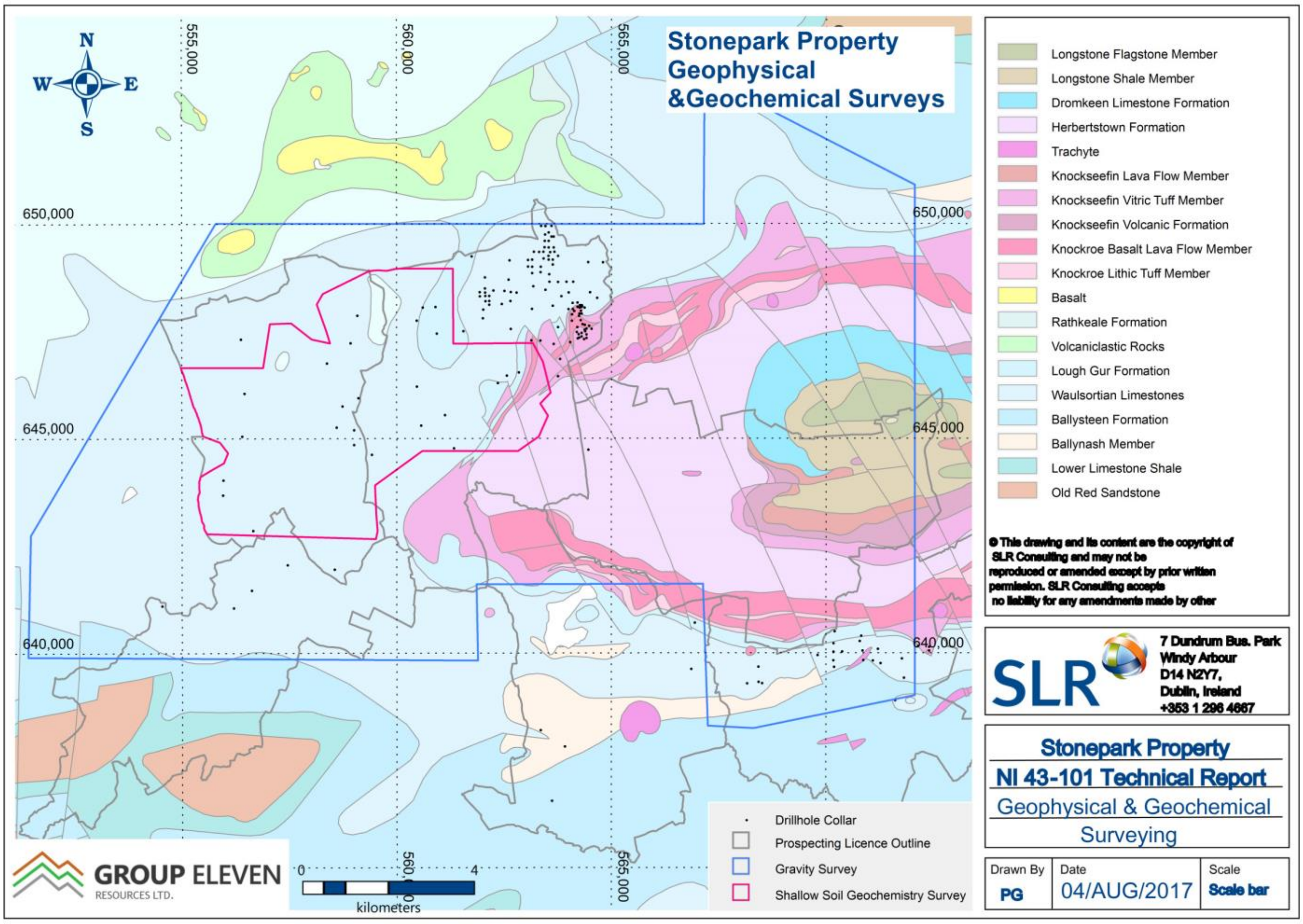

Figure 6.1 Stonepark Block – Teck Geophysical and Geochemical Surveying Areas

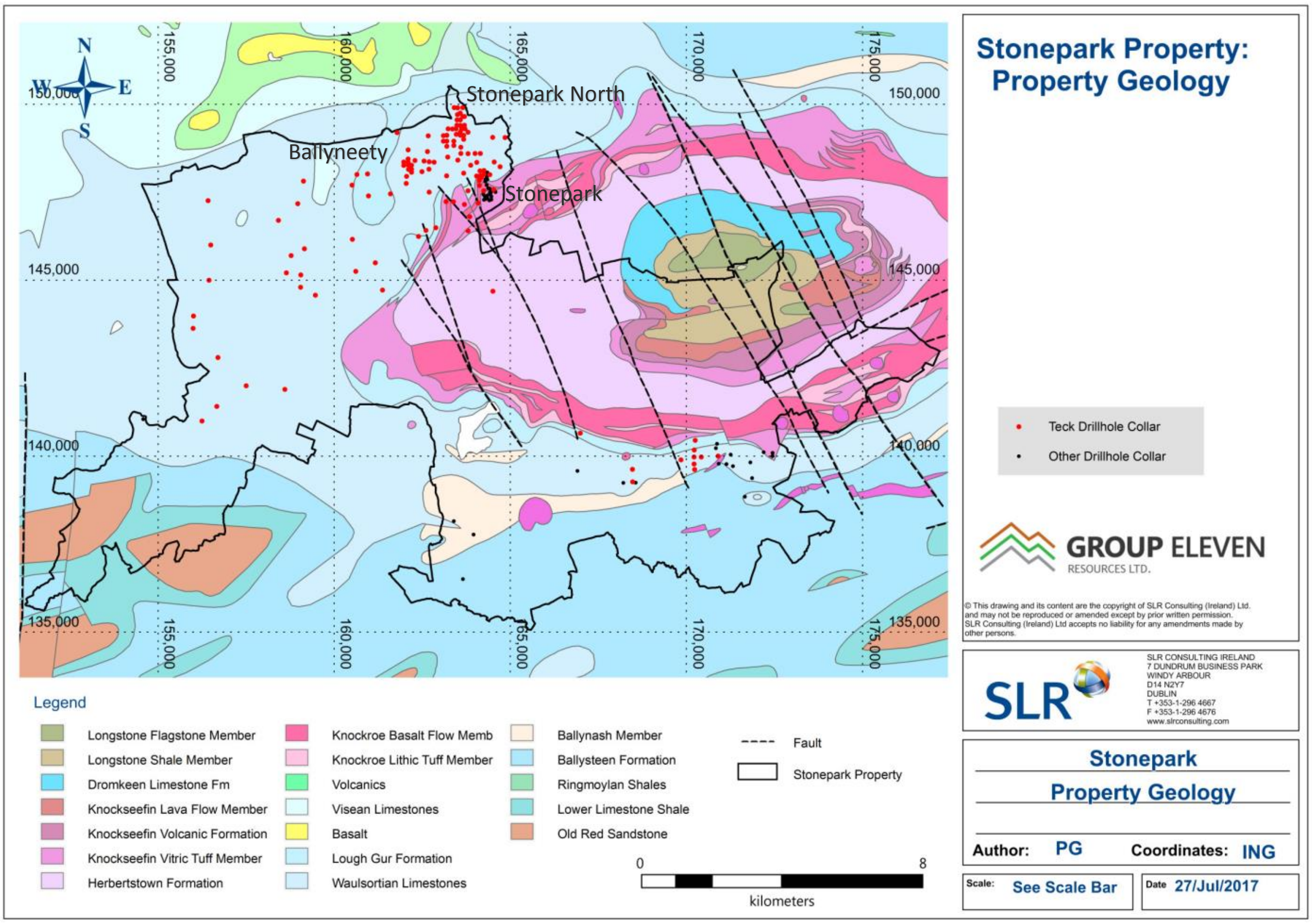

Figure 6.2 Stonepark Project Drilling to Date, Note Concentration on Stonepark, Stonepark North and Ballyneety Areas

7.0 Geological Setting and Mineralisation

The Stonepark Deposit is hosted in the Lower Carboniferous carbonate sequence in the southwestern part of the Irish Midlands. Unlike the known major deposits, no major controlling structure has been identified to date.

7.1 Regional Setting

During the Tournaisian and Viséan, Ireland lay in Tropical latitudes. Through the late Palaeozoic, sliver terranes splintering away from the northern margin of Gondwana drifted north and docked with Laurentian, Avalonian and Baltic plates (specifically, during the Variscan orogeny), closing the Rheis ocean and opening the Palaeotethys ocean, before forming the supercontinent of Pangea. Ireland lay on the outer part of the orogenic belt in a back arc setting north of the Ligerian arc, which runs through southern Brittany.

A marine transgression during the Tournaisian and Viséan inundated the land so that by the Serpukhovian (latest Mississippian) most of the island was submerged beneath the sea. By the Viséan, Ireland had become the location of a shallow water carbonate shelf, which enclosed localised deeper water basins. North of the South Munster Basin, mixed terrigenous and carbonate sediments accumulated along the margins of the shrunken remnant of the Old Red Sandstone continent (p. 217, Holland and Saunders, 2009). The sub-Waulsortian sequences in this region north of the South Munster Basin have been sub-divided by Philcox, 1984, into the Limerick Province, North Midlands Province and sub Dunmore Province, extending into the Northern Province and the Kildare Province.

Stonepark is located within the Limerick Province of Philcox, which extends eastward from the Limerick area into the Silvermines and Tynagh areas. The northern boundary lies north of the Slieve Aughty mountains where the Dunmore Province is located and the north-eastern boundary with the North Midlands Province is currently ill-defined but is marked by the transition from Lower Limestone Shale Group to Navan Beds type basal carbonate sequences.

7.2 Local and Project Geology

Blaney and Redmond (2003) described the geological setting and alteration and mineralisation styles in the Limerick Basin in some detail, including Glencore's Pallas Green deposits and the Stonepark mineralisation.

Devonian and lowermost Carboniferous Red Beds, overlying Lower Palaeozoic basement rocks, are succeeded by marine sandstones and shales, succeeded by a sequence of calcareous shales, argillaceous limestones and limestones (Lower Limestone Shale and Argillaceous Bioclastic Limestone Groups). The Lower Limestone Shale Group is known to host significant Cu-Ag (+Hg) mineralisation at several localities within the region.

These are, in turn, overlain by the massive, clean Waulsortian limestones (the first clean carbonate unit in the sequence) which hosts the hydrothermal alteration and the bulk of the base-metal mineralisation in the region. Waulsortian limestone is succeeded by a generally shallowing sequence of deep shelf to shallow shelf limestones (Lough Gur and Herbertstown Limestone Formations), with two phases of major volcanism represented by the Knockroe/Carrigogunnel and Knockseefin volcanics. The presence of major volcanism in the Lower Carboniferous, particularly during the Chadian – Arundian when mineralisation is suspected to have occurred, is particularly significant – especially given the scale and extent of the Limerick alteration/mineralisation hydrothermal systems.

The Stonepark mineralisation lies along strike and west of Glencore's Pallas Green deposits, but no major controlling structure to the mineralisation has been identified to date (Irish deposits are typically located on the immediate hanging wall of major faults which control the location of the deposits). The style of hydrothermal alteration and mineralisation is similar to that at successfully mined deposits at Silvermines and in the Rathdowney Trend (Lisheen and Galmoy), although the extent and scale of the Limerick syncline mineralising systems is significantly larger than the Silvermines and Rathdowney systems.

A number of boreholes located significant distances from the Stonepark mineralisation have intersected weak mineralisation or significant hydrothermal alteration, indicating significant potential for other hydrothermal centres elsewhere within the Stonepark Project.

The Project is located within the southwestern part of the "Irish Midland Ore Field" which extends across central Ireland and which constitutes one of world's major districts for zinc and lead mineralisation. Stratigraphically, the Stonepark project and GERC's contiguous licences lie within the Limerick Province of Philcox (1984).

Of particular note is the fact that the main major structures controlling mineralisation, i.e. the "feeder structures" have not yet been located within the Limerick area. This is of great significance as it is has been determined that at the known major deposits with similar mineralisation and alteration systems (such as those at Lisheen, Galmoy and Silvermines); the thickest and highest-grade mineralisation (i.e. the bulk of the mineable metal) is located in the immediate hanging wall and proximal to the main structures.

7.3 Geological Sequence

The geological sequence in the Stonepark Block and the adjacent contiguous licence areas held by GERC in the Limerick Basin is summarised in Table 7.1 below.

Table 7.1 Summary stratigraphic column for the Limerick Basin (Stonepark - Pallas Green area). Based on Philcox (1984), Somerville and Jones, (1985), Strogen (1988), Somerville et al. (1992), Elliott (2015), GSI (1999) and Blaney and Redmond (2003)

Age	"General" Term	East Limerick Basin Stratigraphy (Strogen 1988, Somerville et al. 1992, Elliott 2015)	Northwest Limerick (Shannon) (Somerville and Jones, 1985, Strogen 1988, Somerville et al. 1992)	Approximate Thickness
DISCONFORMITY				
Late Asbian - Brigantian	Supra-"Reef"	Dromkeen Limestone Formation		0 – 320m
Early Asbian		Knockseefin Volcanic Formation		0 – 500m
Early Arundian to Early Asbian		Herbertstown Limestone Formation	Mungret Formation Cooperhill Formation	190 – 500m
Late Chadian to Early Arundian		Knockroe Volcanic Formation	Carrigogunnel Volcanic Formation	250 – 550m
Chadian		Lough Gur Formation		50 – 100m
Late Courceyan to Early Chadian	"Reef"	Limerick Limestone Formation (Waulsortian Mudbank Limestones)		140 – 440m
Mid to late Courceyan	Argillaceous Bioclastic Limestone (ABL)	Ballysteen Limestone Formation		190m
		Ballymartin Limestone Formation		45m
	Lower Limestone Shales	Ballyvergin Shale Formation		6m
Early Courceyan		Ringmoylan Shale Formation		30m
		Mellon House Formation		40m

Late Devonian	Upper Old Red Sandstone	Old Red Sandstone "facies"	Base not seen

7.3.1 Basal Clastics Sequence

Old Red Sandstone Facies

The uppermost Old Red Sandstone lithologies recorded in the area are pale to white calcareous sandstone with black mudstone specks and rip-up clasts.

7.3.2 Lower Limestone Shale Group

The Lower Limestone Shale Group represents the initial marine flooding at the start of the Carboniferous transgression over the Old Red Sandstone continent. The Lower Limestone Shale sequence in the Limerick area (Philcox 1984) is largely understood from coastal sections and the Pallaskenry borehole (Somerville and Jones, 1985). The Lower Limestone Shale Group is sub-divided into the Mellon House Formation, the Ringmoylan Formation and the Ballyvergin Formation.

Mellon House Formation

The Mellon House Formation succeeds the pale-cream and white terrestrial sandstones of the uppermost Old Red Sandstone facies and is composed of dark-grey laminated siltstones, grey fine-grained sandstones and calcareous shales. Flaser-bedding and cross-stratification area common as are desiccation cracks. The Formation is 34.4m thick in the Pallaskenry borehole (LI-68-10), and is known to thicken to the north, but it thins to the northeast and east, being 12.5m in thickness at Ballyvergin.

Ringmoylan Formation

The Ringmoylan Formation is largely composed of dark-grey to black calcareous shales, with subordinate thin beds or bands of bioclastic limestone which are estimated to form only 20 – 30% of the formation. The formation is 31m thick at Pallaskenry, but thickens northwards where 47m is recorded at Shannon and then thins north-eastwards, with 23.5m at Ballyvergin.

Ballyvergin Formation

The Ballyvergin Formation (or Ballyvergin Shale) overlies the Ringmoylan Formation and is composed of a distinctive green-grey non-calcareous mudstone with siltstone laminae. The formation varies from about 5m to 10m and marks a distinctive transition from argillaceous dominated sequence below to a carbonate dominated sequence above.

7.3.3 Argillaceous Bioclastic Limestone Group

The Argillaceous Bioclastic Limestone Group is composed of two formations, the Ballymartin Formation and the overlying Ballysteen Formation.

Ballymartin Formation

The Ballymartin Formation is composed of thinly-bedded pale-grey muddy limestones and dark-grey calcareous shales. The proportion of shale to limestone is approximately 1:1. The Formation varies between 11.45m and 45.6m in thickness in the Limerick area. It is equivalent to the Lower Pale Limestone at Gortdrum and the Lower Ballysteen

Limestone at Silvermines. It is distinguishable in core, but rarely outcrops and in mapping is generally included within the Ballysteen Limestone Formation.

Ballysteen Formation

The Ballysteen Formation is distinguished from the underlying Ballymartin Formation by the development of thick-bedded, rather than thin-bedded, bioclastic, slightly argillaceous limestones, with the basal unit forming a distinctive carbonate rich (>90% limestone) marker (Pallaskenry Member of Somerville and Jones, 1985).

Above this, the formation can be sub-divided into three separate units, a lower unit of dark, well-bedded argillaceous wackestones, a middle unit of more markedly argillaceous limestones; and a formally named uppermost unit, the Ballynash Member (also termed the Wavy Nodular Limestone or Nodular Micrite Unit), composed of nodular micritic limestone (frequently cherty) and shales that immediately precedes the onset of Waulsortian limestone deposition.

7.3.4 Limerick Limestone (Waulsortian) Formation

The Waulsortian limestone (Limerick Limestone Formation) forms the primary host rock for hydrothermal alteration and base-metal mineralisation in the southern Irish Midlands (Stonepark, Pallas Green, Silvermines, Lisheen, Galmoy, Tynagh etc.). The Waulsortian comprises a mound complex composed of stacked mounds, sheets or tabular bodies of massive to poorly bedded biomicrite wackestone with large cavity spaces (stromatactis) infilled with reworked calcite muds and fibrous or later blocky calcite spar cements (Lees and Miller, 1995). The clean limestone mounds may be separated by slightly argillaceous to argillaceous (frequently cherty) “intermound or offbank” beds referred to as ‘Waulsortian equivalent’ facies.

Drilling in the Stonepark and Pallas Green areas indicates highly variable thickness in the Waulsortian on the northern limb of the Limerick syncline, from 140m to 440m, almost certainly related to differential subsidence across syn-depositionally active structures. Evidence from drilling at Newcastle indicates that the formation thickens to the west.

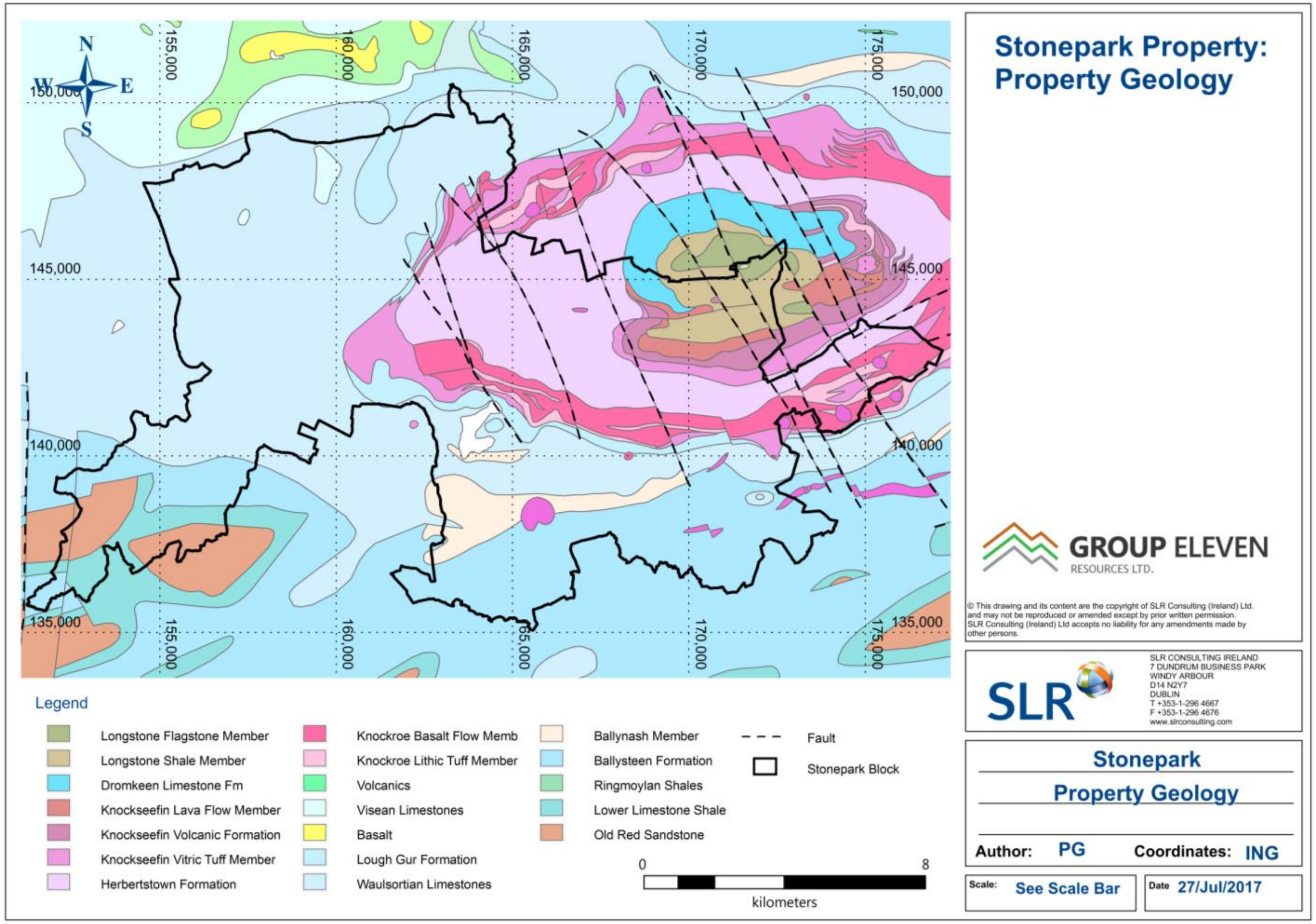

Figure 7.1 Stonepark Project Area Geology

7.3.5 Lough Gur Formation

The Waulsortian limestones are overlain by dark-grey to black cherty argillaceous wackestones of the Lough Gur Formation, which is equivalent to the Crosspatrick Formation in the Rathdowney Trend (Lisheen/Galmoy) and the Oldcourt Cherty Limestone Formation (Silvermines District). Formation thickness is variable, initially infilling relict topography on the upper surface of the Waulsortian mound complex, estimated at 100 m in the east of the Limerick syncline and appearing to thin westwards. The upper part of the formation may contain tuffs and lavas associated with the onset of volcanism.

7.3.6 Knockroe Volcanic Formation

The Knockroe Volcanic Formation consists of a complex package of volcaniclastic sediments, lavas and igneous intrusions of alkali basalt to trachytic composition. The initial phase of alkali basalt magmatism is marked by the emplacement of a number of large diatremes ranging from 100-500 m in diameter and related to surface maar cone development on the Carboniferous land surface at that time. The Knockroe volcanics vary in thickness from 250 to 500 m and dating of interbedded limestones indicates a largely Chadian age for the volcanism, younging from west to east.

Intrusions consists of a swarm of alkali basalt sills and dykes hosted within the Waulsortian and Lough Gur Formations and a late stage suite of porphyritic trachyte-syenite dykes and plugs.

7.3.7 Herbertstown Limestone Formation

The lower part of the Herbertstown Limestone Formation was deposited during the end of the Knockroe volcanism and consists of coarse grainstones, including oolitic and coralline limestones. Deposition of Herbertstown facies limestone continued for a significant period, from the late Chadian to the early Asbian, and a total thickness of 500 m is estimated for the formation. North of the Stonepark area, the formation can be sub-divided into sub-units based on carbonate shelf facies.

7.4 Structure

The dominant regional structural feature of the Stonepark area is the large, roughly east-west trending Limerick Syncline, with the Stonepark area located at the north-western edge of the syncline. The Limerick Syncline marks a significant change in structural regime in southwest Ireland, with roughly northeast – southwest trending perianticlinal fold systems to the northeast of the area at Silvermines, Devils Bit and the Slieve Phelim hill ranges, rotating to a more east-northeast trend to the southwest of the syncline.

The distribution and timing of volcanism suggests a strong east – west oriented structural control on the volcanism and significant variations in formation thicknesses and facies distributions from the lowermost Courceyan to the Asbian indicates on-going syn-depositional structural movement. The significant thickness variations in the Waulsortian complex (see above) are indicative of significant tectonic activity and differential subsidence during Waulsortian deposition.

Drilling to date at Stonepark has not intersected any large normal faults but the mineralised zone has a strong north-south to north-northeast trend which is discordant to stratigraphy and so implies a structural control. It is likely that, as at other Irish deposits (e.g. Lisheen, Galmoy, Kilbricken), the morphology of the mineralised bodies is at least partly controlled by accommodation faults orthogonal to the primary controlling structure. The major structures controlling mineralisation have not yet been located within the Limerick area, which is significant as the major deposits with similar mineralisation and alteration systems (Lisheen, Galmoy and Silvermines) all show thickest and highest-grade mineralisation in the immediate hanging wall and proximal to the main structures.

It is not unusual for the orthogonal accommodation faults to have relatively small offsets, which are not easily observed unless drilling is closely spaced. For example, the K Zone at Galmoy is a narrow, linear orebody, extending >1 km from the G Fault at Galmoy. There is little obvious movement along the K Zone trend, but its trend clearly implies structural control and evidence for a structure was identified underground.

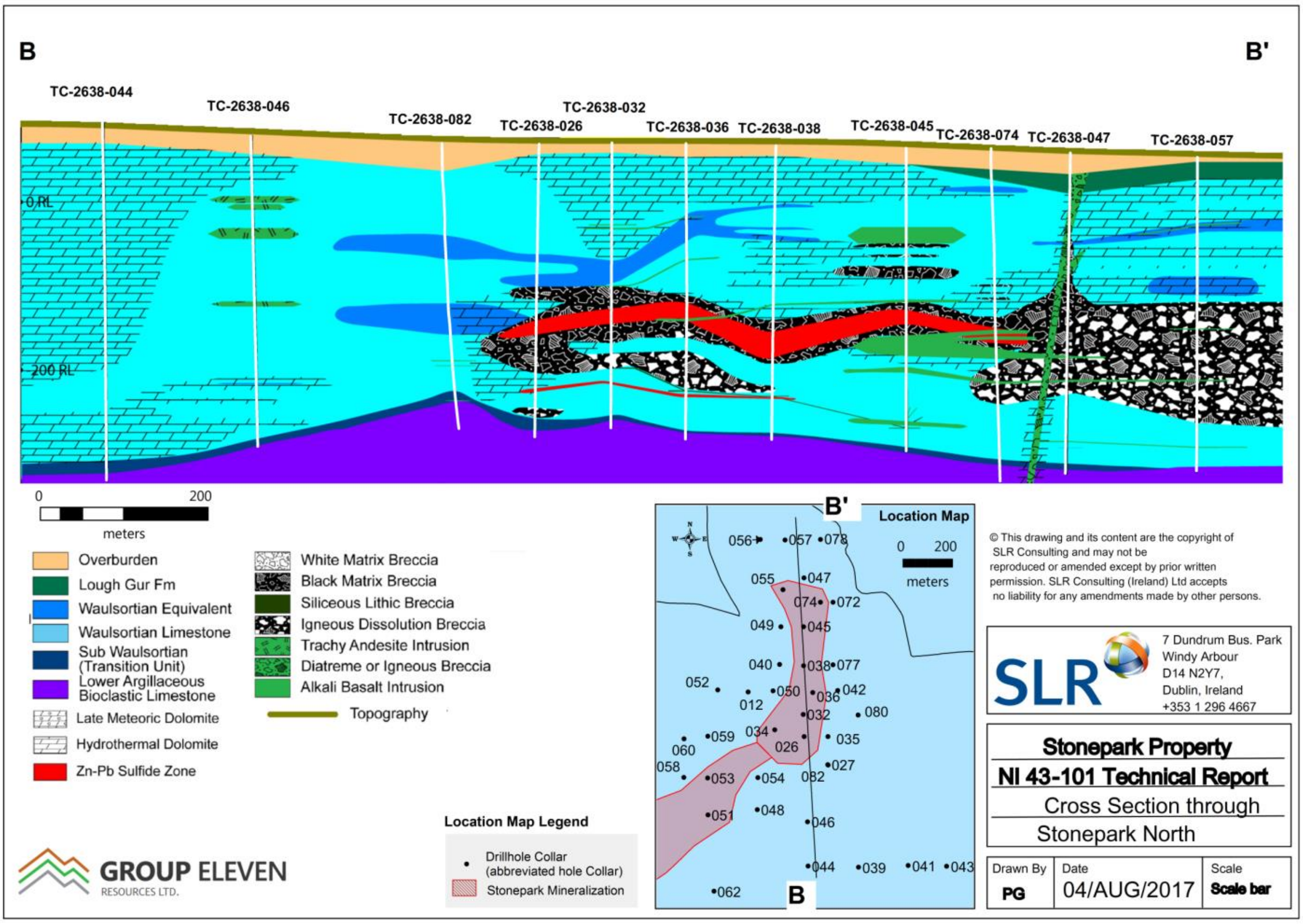

Figure 7.2 Stonepark North Cross-Section (from Nick Kerr, Thesis, 2012)

7.5 Mineralisation and Alteration

7.5.1 Stonepark Block

The bulk of the high-grade zinc-lead mineralisation at Stonepark occurs in sub-horizontal, stratiform (1.0 to c.7.5m thick) lenses of massive and semi-massive sphalerite, galena, and pyrite hosted within thick (10 to c.75m) hydrothermal dissolution bodies - similar to the 'Black Matrix Breccia[3]' of the Rathdowney Trend - within the Waulsortian Limestone Formation. Colloform textures are common with alternating bands of dark to light-brown

[3] Black Matrix Breccia (BMB) is a hydrothermal alteration/dissolution breccia, comprised of clasts of Waulsortian in a dark grey to black matrix of very fine-grained dolomite and solution detritus.

sphalerite, galena and pyrite. Disseminated pyrite (1 to 5 %) frequently occurs in the breccia matrix with trace sphalerite and galena occurring locally, particularly above zones of high-grade massive sulphide.

In general, sulphides clearly replace the matrix and clasts (in that order) of the black matrix breccia. However, massive sulphide clasts (with truncated sulphide textures) also occur as clasts within the breccia. Significant evidence for open-space fill by finely-laminated mineralisation or finely-laminated dolomites and sulphides is present.

Distal to the main Stonepark alteration and mineralisation zones, a number of boreholes within the Stonepark Project have intersected significant alteration, e.g. hydrothermal breccias and sulphides at Ballyneety; weak mineralisation (0.6m @ 6.5% Zn) at Crecora; thread dolomite veining with sulphides (including sphalerite) and haematitic alteration at Rockfield; and very strong and extensive haematitic alteration at Rathmore. Such haematisation has been shown to be part of an alteration spectrum from weak haematisation to ironstone (Hitzman et al. 1995; Cruise, 1996, 2000) which has been shown to be associated with base-metal hydrothermal systems in Ireland. These distal alteration and mineralisation occurrences indicate the presence of hydrothermal systems distal to, or separate from, the Stonepark occurrences and warrant significant follow-up to investigate the nature and extent of these hydrothermal systems.

7.5.2 Comparison with Silvermines and the Rathdowney Trend Deposits

While the Pallas Green trend mineralisation (including Stonepark) shows many similarities in host rock, alteration and mineralisation styles, it has become apparent that there are some differences between the Pallas Green trend mineralisation and the other BMB-enveloped base of Waulsortian deposits (i.e. Silvermines and the Rathdowney Trend deposits at Lisheen and Galmoy).

At Silvermines and in the Rathdowney Trend, the mineralisation is almost entirely confined to the immediate base of Waulsortian interval (i.e. the base of the mineralisation is at, or just above, the base of Waulsortian) and total thickness of mineralisation and alteration rarely exceeds 30-40m. In the Pallas Green trend, the base of mineralisation is frequently some 10s of metres above the base of Waulsortian and combined mineralisation/alteration packages frequently reach over 100m (and locally >200m) in thickness.

The total tonnages of mineralisation identified also vary significantly. Lisheen and Galmoy contained a combined tonnage of 30.2Mt of mineralisation. To date, Glencore has reported an Inferred Mineral Resource of 44 Mt, excluding several "pods" of mineralisation of lower grade or distance from the defined resource[4].

It is apparent therefore that the lateral and vertical extent and overall magnitude of the hydrothermal systems along the Pallas Green trend are significantly greater than both the Silvermines district and the Rathdowney Trend. It remains possible that the identified mineralisation may only be the distal part of a very large system with the deposit-controlling structures and associated thickest and highest grade mineralisation yet to be located.

7.6 Mineralogy

The mineralogy of the Stonepark mineralisation is broadly typical of the Irish Midlands deposits. The sulphide mineralogy is relatively simple, composed of sphalerite, galena, pyrite and minor marcasite. The sulphides are frequently finely laminated or colloform, similar to other base-of-Waulsortian deposits in the southern Irish Midlands.

The sphalerite is primarily fine-grained, varying in colour from pale-grey to honey-yellow, cream, brown and dark red. Coarse yellow "honeyblende" occurs locally, associated with late stage carbonate veining. Two main textural

[4] www.glencore.com

styles of sphalerite have been recognised: 1) disseminated, fine-grained sphalerite in BMB or associated with dolomite and 2) massive, frequently colloform colour-banded sulphides.

Galena is associated with the sphalerite, in a number of forms, as finely disseminated crystals, euhedral crystalline blebs or coarse crystal masses in veins and cavities. The galena is typically coarser than the sphalerite. Local galena and pyrite rich zones are also present above the main massive sulphide accumulations.

8.0 Deposit Types

The Stonepark Deposit fits into the carbonate-hosted zinc-lead deposit sub-type known as 'Irish Type' and shows many similarities to classic mined or undeveloped Irish-Type deposits such as Silvermines, Lisheen, Galmoy and Pallas Green.

8.1 General Description of Irish Type Deposits

Lower Carboniferous carbonate rocks of Ireland contain many significant concentrations of base metals ranging from small-tonnage pods of zinc-lead mineralisation to the giant Navan orebody 55 km northwest of Dublin. Zinc-lead mineralisation is primarily hosted by rocks of the Waulsortian Limestone or the Navan Group.

Almost six decades of mineral exploration has resulted in the sequential discovery of five economic zinc–lead deposits – Tynagh, Silvermines, Navan, Galmoy and Lisheen, as well as, one copper-silver deposit at Gortdrum. There are more than 20 other sub-economic deposits and prospects (Figure 8.2) and anomalous base metal concentrations are widespread throughout the Irish Orefield (>35,000 km^2). The intensity of zinc mineralisation within the Irish Orefield is impressive given its area, which is only a little larger than Vancouver Island.

GERC is focused on the "Irish-type" zinc-lead deposits. These deposits belong to a distinct class of carbonate-hosted zinc-lead mineralisation, which has a number of characteristic features. The following summary from Hitzman and Beaty (1996) provides a brief description of the main characteristics of this deposit type:

- The deposits occur preferentially in the stratigraphically lowest, non-argillaceous carbonate unit, (i.e., the first permeable, reactive unit encountered by the ascending fluids);
- They occur along, or immediately adjacent to, steeply-dipping normal fault systems which provided conduits for ascending hydrothermal fluids, i.e., typically, in the downthrown blocks of the faults;
- The deposits are strata bound and many display generally stratiform morphologies;
- Most deposits display pre-mineralisation, diagenetic or hydrothermal dolomite alteration of the carbonate host rocks (i.e. mineralisation post-dates the dolomite which post-dates lithification);
- Sphalerite and galena are the principal base-metal sulphides. Iron sulphides occur in variable amounts; some deposits are dominated by iron sulphides, while others contain very minor amounts. Barite is present in all the deposits, ranging from a dominant phase to a minor constituent. Many deposits contain minor tennantite, chalcopyrite, and/or Pb-Cu-Ag-As sulfosalt minerals;
- Sulphide textures range from replacement of host rock by fine-grained, anhedral and coloform sulphides to infill of solution cavities by fine-grained, colloform and medium- to coarse-grained crystalline sulphides. Layered sulphide textures, other than colloform banding, are restricted to replacement of geopetal cavity fillings. Sulphides replace sedimentary, diagenetic, and hydrothermal wall rock, as well as previously deposited sulphides adjacent to feeder faults;
- The deposits display a general textural zonation with massive sulphide adjacent to "feeder faults" grading outward to veinlet-controlled and/or disseminated sulphides on the periphery of wedge-shaped sulphide lenses. Metals are also laterally and horizontally zoned, typically Pb-rich closest to structures and the base of the orebody, then Zn rich, with high Fe to Zn+Pb ratios in the distal parts of the orebodies.
- The deposits share the following generalised paragenesis: early carbonates → early diagenetic dolomitisation → "iron formation" (silica + iron oxides ± siderite) → barite → hydrothermal dolomitisation → Fe sulphides → sphalerite (becoming increasingly coarse-grained) → mixed sulphides (sphalerite, galena, Fe sulphides, Cu sulphides, As sulphides etc.) ± barite → late carbonates.

In the Irish Midlands, the most favourable horizon in the southern half of the Irish Midlands Limestone zinc district is the base of the Waulsortian ("Reef") limestone. In the northern half of the district, the Pale Beds in the Navan Group is the preferred host. These observations are explained by the mineralisation typically forming in the first "clean" carbonate horizon above the base of the Carboniferous sequence. Southward in the basin the Pale Beds give way to the Lower Limestone Shales which do not provide a suitable host rock.

The Limerick Basin, Silvermines, Lisheen and Galmoy zinc-lead deposits are located in the southern Irish Midlands and are considered to be typical of the Waulsortian-hosted 'Irish-type' zinc-lead deposits (see Figure 8.1, below).

In the Limerick basin and at Stonepark, GERC is focused on the Waulsortian-hosted sub-set of the "Irish Type" deposits. Previously operated mines (Tynagh, Silvermines, Lisheen, and Galmoy) exploited fault-controlled clusters of mineral "pods", occurring along structural trends, ranging from a few million tonnes up c. 20 million tonnes. Deposits are relevantly "compact" and as an example a 22 Mt orebody with several zones can fit within a 6km^2 area such as Silvermines, Lisheen and Galmoy.

The Stonepark Block forms part of a much larger ground holding in the Limerick basin held by GERC and is significant as it contains mineralisation along strike from Glencore's Pallas Green deposits, the main structure(s) controlling mineralisation have not been identified to date and a number of areas distal to the Stonepark mineralisation and alteration have intersected "Irish-Type" hydrothermal alteration in isolated boreholes indicating the presence of hydrothermal alteration centres outside the Stonepark footprint.

The Waulsortian Limestones in the Limerick Basin are not initially diagenetically dolomitised, and in this respect, the Limerick Basin and Stonepark is more similar to Silvermines than the Rathdowney Trend deposits. Silvermines is well recognized to host replacement, dissolution and open space fill mineralisation, associated with dissolution collapse breccias, cemented by hydrothermal dolomite and sulphides in the form of Black Matrix Breccias ("BMB").

Some geologists consider the Irish-type deposits to be Mississippi Valley Type (Leach et al, 2010) but most now agree that the Irish-type deposits are a distinct sub-type. Differences with 'typical' MVT deposits include higher formation temperature, higher silver concentrations and formation by replacement of carbonates and dissolution open space fill after early diagenesis, rather than cavity fill-dominated mineralisation (which occurs a significant period post lithification).

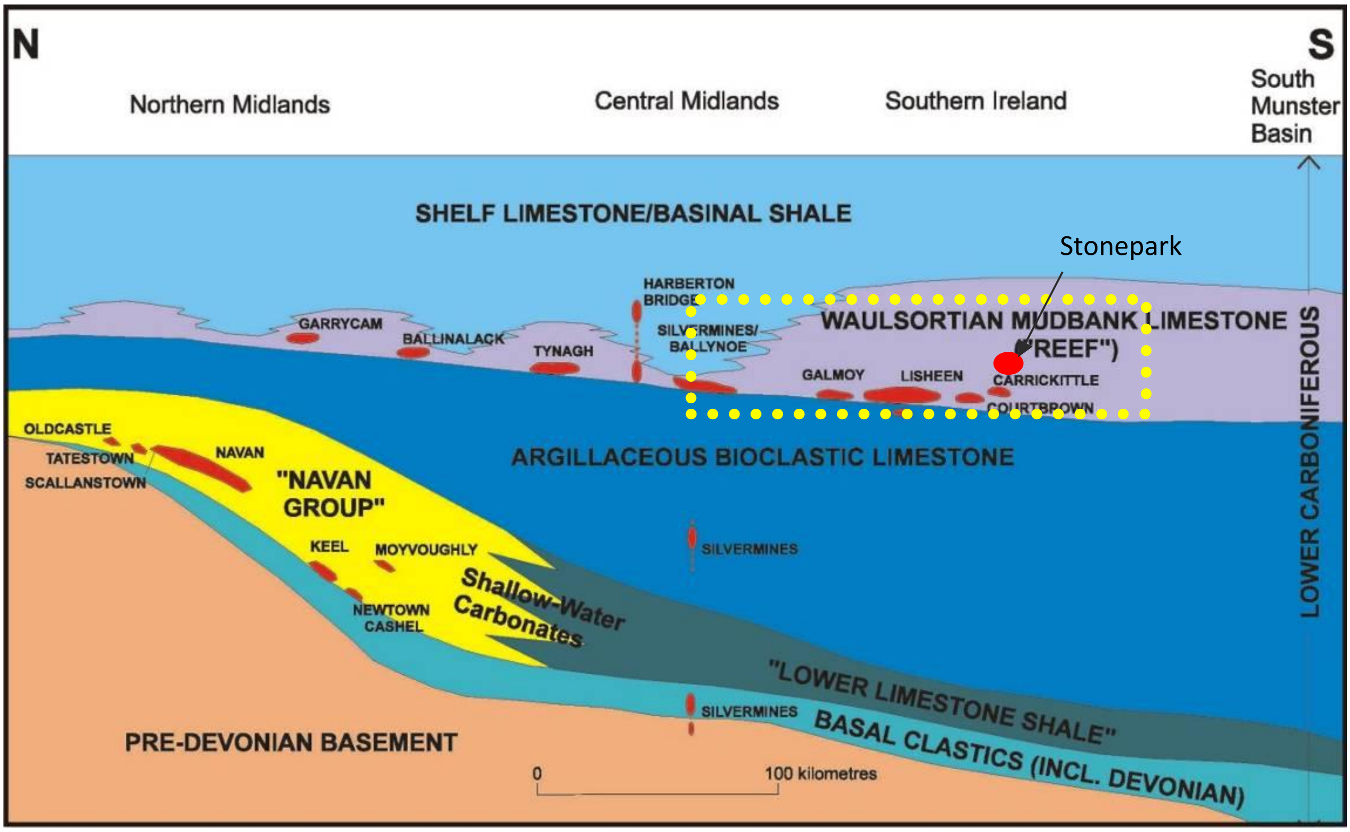

Figure 8.1 Stratigraphic location of Carboniferous-hosted mineralisation in Ireland. Southern midlands deposits highlighted (Source: EMD)

8.2 Variability within the Waulsortian-hosted Deposits

There are a number of features that are common to all Irish-Type deposits in the Irish Midlands province, while each individual deposit may exhibit unique or differing characteristics compared to other superficially very similar deposits.

8.2.1 Common Features

All Irish-Type deposits show the following characteristics:

- Hosted on the hanging wall of normal fault zones, frequently overlying transtensional basement shear zones.
- Faults were syn-depositionally active during late Courceyan to Chadian - Arundian rifting.
- Faults control margins of intra-platform basins, marked by significant carbonate facies and thickness variations.
- Host rocks are typically the first major clean carbonate unit in the sequence.
- Host rocks are more permeable or reactive than other lithologies in the sequence.

8.2.2 Host Rock Variation

- Limerick Basin (Stonepark, Pallas Green), Silvermines, Tynagh and Ballinalack, - host rock is a limestone; and
- Lisheen and Galmoy have dolomite as a host rock, indicating lithification and diagenetic alteration to dolomite prior to the mineralising event.

8.2.3 Alteration Variation

- The Limerick Basin, Silvermines and Rathdowney Trend deposits have extensive hydrothermal dissolution breccias (Black Matrix Breccias) overlying, and distal to, the sulphide mineralisation.
- The Rathdowney Trend deposits (Lisheen and Galmoy) have extensive hydrothermal dissolution breccias (BMBs) and white dolomite cemented crackle breccias (White Matrix Breccias) overlying, and distal to, the sulphide mineralisation.
- Tynagh has an extensive ironstone extending for some considerable distance beyond the sulphide bodies, but has no recorded hydrothermal breccia halo.
- Lisheen has remnant ironstone fragments at the edges of the orebodies/alteration halo, suggesting that an initial ironstone body was present, but was overprinted and reduced during the sulphide phase.
- Silvermines has a significant hydrothermal oxide body (barite, ironstone) lateral to the sulphide bodies (MagCoBar Barite Mine at Ballynoe)
- Tynagh has extensive evidence of breccia formation within the orebodies.
- In all cases above, alteration systems associated with the sulphide orebodies are present and significantly increase the exploration footprint, assisting in finding hydrothermal sulphide-bearing systems.

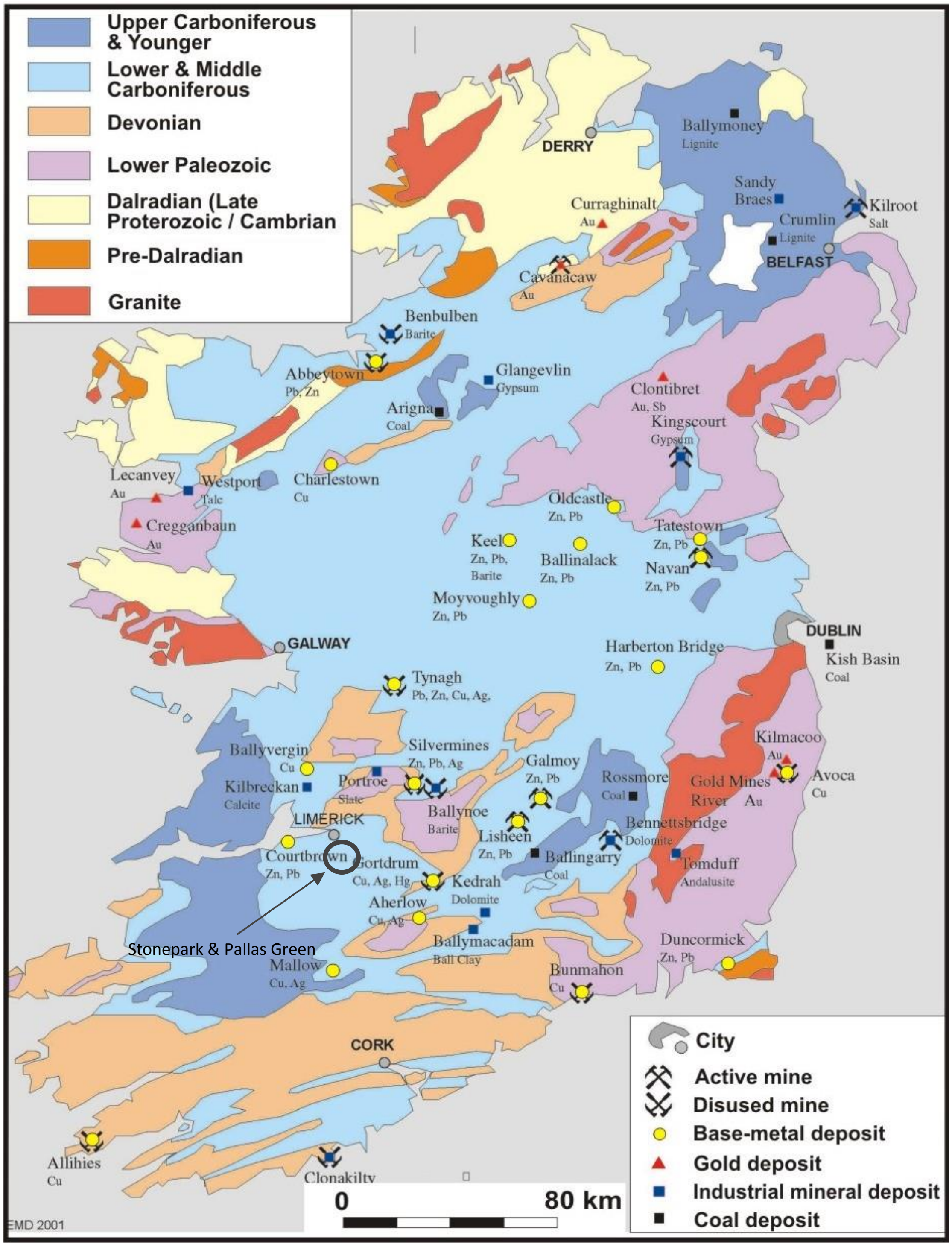

Figure 8.2 Geological Map of Ireland showing the location of Zn-Pb-Ag mines and significant prospects. (Geologicial Survey of Ireland)

9.0 Exploration

GERC has not yet conducted any fieldwork of its own on the Project, however, since the 2017 NI43-101 Report (Kelly and Gordon, 2017), a basin-wide structural and stratigraphic study has begun and is underway at the effective date of this Report. The details of all work carried out by previous operators are available on the EMD Open File System or have been made available by JVCo.

9.1 Summary

The Stonepark Project block is contiguous with a much larger block of licences in the Limerick Basin, termed the 'PG West' project, by GERC. The Stonepark Block provides GERC with an advanced project area which can be interpreted as the distal portion of a poorly explored hydrothermal system, part of the Pallas Green trend which contains Glencore's Pallas Green deposits. A number of isolated intersections of minor mineralisation and hydrothermal alteration are located a significant distance from Stonepark Mineral Resources and suggest additional, poorly explored and untested hydrothermal systems.

9.1.1 Data Integration and Regional Synthesis

The TIL datasets have been integrated into the existing GERC GIS database for the Stonepark-PG West licence block. The combined dataset forms the base for a detailed regional basin structural and stratigraphic assessment directed at identifying and prioritising more prospective areas and structurally controlled corridors for targeted exploration.

Previously recorded formation facies and thickness variations have been identified in nearly all parts of the stratigraphy from the Lower Limestone Shale Group to the Asbian shelf and volcanic rocks. Thickness variations in the Waulsortian and overlying Chadian – Arundian carbonates and volcanics are considered to be especially significant in locating potential mineralisation controlling structures. This work has already begun and is expected to be completed within Q2 of 2018.

9.1.2 Seismic Reassessment

Over the last few years, seismic profiling has been the main tool for target reduction and refinement in Ireland, attributed to the great success in the discovery and delineation of the SWEX SE "deeps" at Navan. Similar to other geophysical exploration methods, the processing and interpretation is key.

GERC will use the same consultants who pioneered the seismic approach at Navan to re-assess the Teck Stonepark area seismic survey results to assist in unlocking the deeper potential of their Limerick Basin holding (including the Stonepark Block) in the context of basin tectono-stratigraphic evolution. Seismic profiles providing definition to depths of up to five kilometres and more reveal deep-seated structurally-controlled plumbing for hydrothermal systems significantly below conventional and historical drilling depths generally within a few hundred metres and up to one kilometre below surface.

The results of these studies reveal the main hydrothermal conduits which can be traced closer to surface and highly prospective areas where they intersect the target horizon nearer surface. It is critical to know if these structures were active in the right geological time interval and for this, a detailed knowledge of the stratigraphy and the evolution of the basin is key.

9.1.3 Ground Investigations

Following the delineation of prospective areas or structures, these will be targeted with geochemistry, geophysics and drilling.

At the present drill spacing, it appears possible that mineralisation continues from Stonepark North to Ballyneety (Stonepark West), and further drilling should confirm or deny the continuous nature of the mineralization. Access for such drilling is likely to be complicated by the presence of a golf course between the two prospects. Teck successfully permitted drill holes on the golf course in the past, but that does not guarantee that access will be granted in the future.

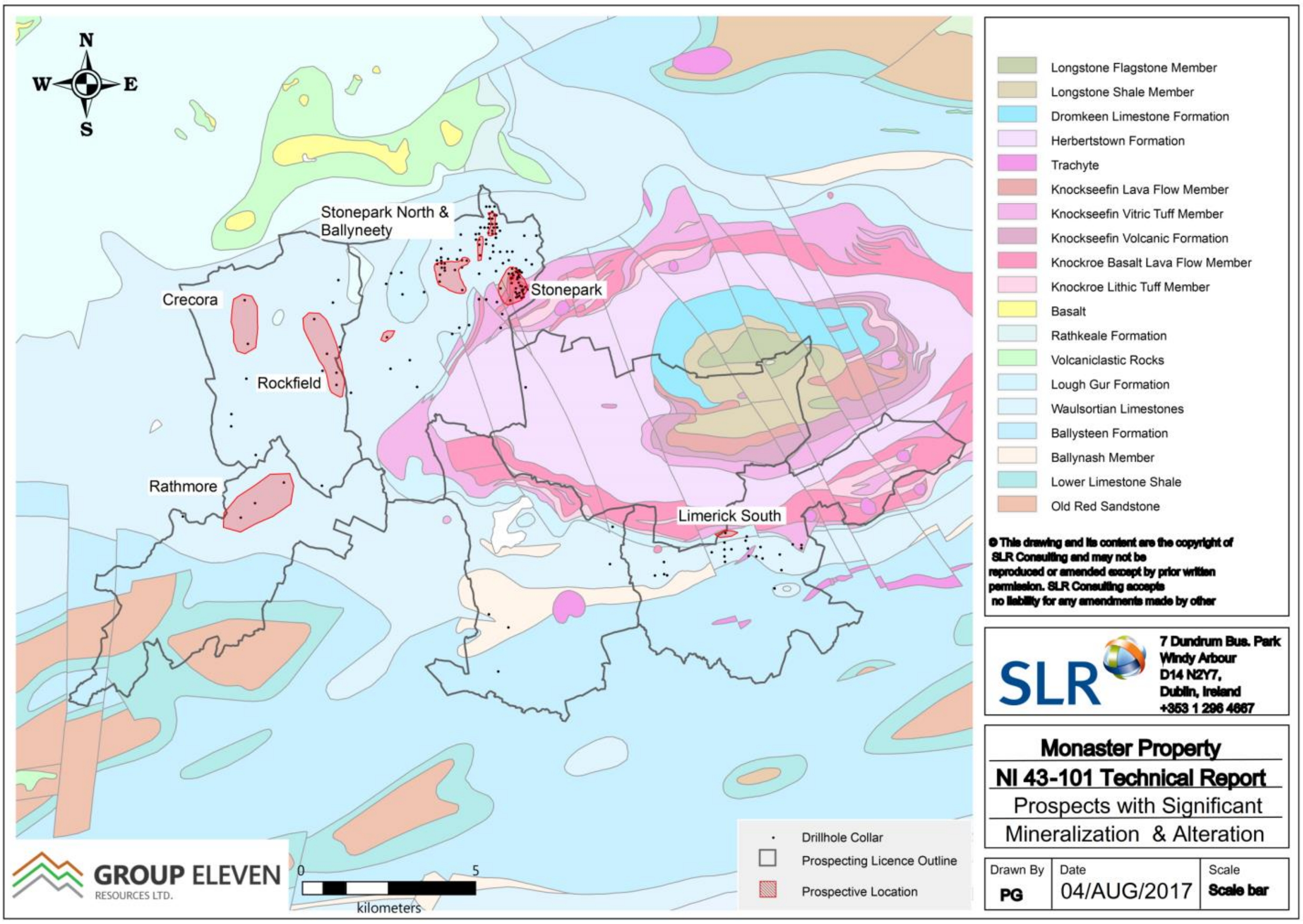

Figure 9.1 Stonepark Project Area – Intersected Mineralisation and Hydrothermal Alteration Occurrences

10.0 Drilling

Little drilling was undertaken on the Stonepark Block prior to the TIL tenure, with only a limited number of generally shallow drill holes completed (average depth of 65m). All drilling has been diamond drilling with core recovery ranging in size from AQ to NQ. Drilling procedures are not well documented for any drilling carried out prior to TIL's drill programme.

TIL carried out a programme with a drill spacing of c. 100-150m. Core recovery was generally very good, with occasional core loss due to weathering of the carbonates. Drillholes were surveyed using a Reflex downhole survey tool, at intervals of 6-20m. In the initial year of the project, drill core was palleted and delivered to TIL's core store in Wicklow, Ireland. Once the Project became fully established, TIL rented a large storage facility within the Project area and drill core was logged, sampled and stored there.

TIL completed a total of 133 drill holes within the Project area, the majority directed at Stonepark, Stonepark North and Stonepark West (Ballyneety). Drilling also focussed on testing a possible south-westward extension of the Stonepark North occurrence towards Ballyneety.

Other drilling within the Project was more sparsely distributed, with a number of encouraging intersections of alteration and mineralisation intersected and significant potential for follow-up of these areas.

Table 10.1 Summary of Drilling Completed in the Stonepark Block

PLA No.	Pre-Teck No. of DDH	Pre-Teck Drilling (m)	Teck No. of DDH	Teck Drilling (m)	Total DDH	Total Drilling (m)
PLA 2638	27	512	103	44,804	130	45,316
PLA 2927	0	0	15	5684	15	5684
PLA 3367	1	92	3	586	4	678
PLA 449	4	573	1	639	5	1212
PLA 450	14	1798	10	2127	24	3925
PLA 2531	0	0	1	927	1	927
Block Total	46	2975	133	54,767	179	57,742

The various Stonepark prospects (see Section 9.0) are defined by a number of drill holes and the significant intercepts are summarised in Table 10.2, below.

Table 10.2 List of key intercepts at Stonepark

Hole No	From (m)	Interval (m)	Zn+Pb (%)	Zn (%)	Pb (%)	Ag (g/t)	Gr x Th* (m%)	Dip (°)	Azimuth (°)
Stonepark North									
TC-2638-026	216.10	7.20	15.3	13.1	2.2	7.5	110	-90	0
TC-2638-032	207.60	2.00	12.7	5.5	7.2	2.5	25	-90	0
and	212.00	3.40	8.5	6.8	1.7	3.5	29	-90	0
and	281.80	0.35	13.5	11.4	2.1	2.5	5	-90	0
TC-2638-034	210.40	0.90	7.5	5.1	2.5	2.3	7	-90	0

Hole No	From (m)	Interval (m)	Zn+Pb (%)	Zn (%)	Pb (%)	Ag (g/t)	Gr x Th* (m%)	Dip (°)	Azimuth (°)
TC-2638-036	202.70	5.35	16.4	13.2	3.2	4.3	88	-90	0
TC-2638-038	238.10	3.60	4.0	3.9	0.1	3.7	14	-90	0
and	251.35	1.80	6.6	5.7	0.9	2.5	12	-90	0
TC-2638-045	209.10	7.45	27.8	19.2	8.5	6.6	207	-90	0
TC-2638-051	221.40	4.85	8.9	6.8	2.1	5.2	43	-90	0
incl	224.05	1.00	29.2	21.9	7.3	14.4	29	-90	0
TC-2638-053	209.40	6.85	14.2	10.5	3.7	2.8	97	-90	0
incl	212.80	2.75	26.8	19.8	7.0	2.5	74	-90	0
TC-2638-055	196.15	3.75	17.4	13.4	4.0	10.6	65	-90	0
TC-2638-074	220.00	7.30	11.6	8.97	2.60	5.9	85	-90	0
Stonepark West (Ballyneety)									
TC-2638-064	275.00	1.10	5.1	3.8	1.3	2.5	6	-90	0
TC-2638-065	345.30	2.00	0.1	0.1	0.0	0.3	0	-90	0
TC-2638-066	398.00	1.30	0.3	0.3	0.0	0.3	0	-90	0
TC-2638-068	423.77	0.95	10.7	9.0	1.7	2.5	10	-90	0
TC-2638-070	298.71	0.49	1.2	0.1	1.1	0.3	1	-90	0
TC-2638-071	260.30	1.70	3.1	3.0	0.1	2.5	5	-90	0
TC-2638-079	401.20	0.50	3.2	3.2	0.0	2.5	2	-90	0
TC-2638-083	368.00	2.00	0.3	0.3	0.0	0.3	1	-90	0
TC-2638-086	382.50	2.50	8.5	4.2	4.4	2.5	21	-90	0
TC-2638-089	380.00	0.50	3.4	3.4	0.1	2.5	2	-90	0
TC-2638-091	376.30	0.90	4.1	3.7	0.5	2.5	4	-90	0
and	381.20	1.50	5.7	5.4	0.3	2.5	9	-90	0
TC-2638-095	248.80	2.00	12.1	11.6	0.5	2.5	24	-90	0
TC-2638-096	292.00	2.00	0.7	0.7	0.0	0.3	1	-90	0
TC-2638-097	396.10	1.90	2.2	1.6	0.7	2.5	4	-90	0
TC-2638-098	372.00	9.50	0.3	0.2	0.0	0.3	3	-90	0
TC-2638-099	244.10	11.16	6.1	4.6	1.5	2.5	69	-90	0
incl	244.80	1.44	22.1	15.7	6.4	2.5	32	-90	0
TC-2638-100	267.00	13.00	0.2	0.1	0.0	0.3	2	-90	0
TC-2638-103	264.15	3.85	6.9	5.4	1.6	2.5	27	-90	0
Stonepark									
TC-2638-004	372.75	7.35	9.6	7.6	1.9	2.5	71	-90	0
incl	376.10	4.00	15.1	11.6	3.5	2.5	61	-90	0

Hole No	From (m)	Interval (m)	Zn+Pb (%)	Zn (%)	Pb (%)	Ag (g/t)	Gr x Th* (m%)	Dip (°)	Azimuth (°)
TC-2638-006	460.70	0.45	3.8	2.3	1.5	0.3	2	-90	0
TC-2638-009	578.00	1.00	0.7	0.6	0.1	1.1	1	-90	0
TC-2638-016	349.05	2.60	3.1	2.8	0.3	2.5	8	-90	0
and	354.20	3.30	4.4	4.3	0.1	2.5	15	-90	0
TC-2638-017	317.05	1.05	2.7	1.70	0.97	0.25	3	-85	0
and	326.30	2.15	19.1	13.6	5.6	2.5	41	-90	0
and	353.00	1.50	4.1	3.5	0.6	0.7	6	-90	0
TC-2638-021	422.80	1.00	0.5	0.2	0.2	1.7	1	-90	0
TC-2638-023	361.85	3.90	1.5	1.3	0.2	0.3	6	-90	0
TC-2638-025	372.80	1.25	1.7	1.5	0.1	0.3	2	-90	0
TC-2638-028	465.9	2.50	0.8	0.8	0.0	0.3	2	-90	0
TC-2638-030	516.8	1.70	7.8	3.0	4.8	1.8	13	-90	0
TC-2638-062	207.75	2.00	0.4	0.4	0.0	0.3	1	-90	0

Note: * m% = Zn+Pb% multiplied by thickness. The intercepts reported are the best contiguous intercepts, ranked by m%, for each drillhole.

All drill holes other than TC 2638-017 are vertical and as the mineralised body is sub-horizonal, the interval width approximates true thickness. TC-2638-017 was drilled at an angle of 85°, giving a negligible difference between downhole thickness and true thickness.

11.0 Sample Preparation, Analyses and Security

GERC has not carried out any sampling on the Project. Little or no sampling of core took place prior to TIL's involvement, and sampling procedures have not been preserved.

11.1 TIL's sampling procedure

Core samples were submitted as half core, cut with a diamond core saw. The core saw was cleaned regularly and between high and low grade samples. The minimum sample length was 30cm and the maximum 1.5m for mineralised samples and 5m for lithogeochemistry samples.

Sample intervals were recorded in a ticket book which was completed by the geologist. The ticket book records the details of the interval in duplicate with a third tear-off tab with the sample number only which was included with the sample submitted to the laboratory. The duplicate copy was stapled into the core tray and the original ticket book was stored in TIL's field office when the book was completed. Each batch of samples was checked by TIL personnel prior to leaving the field office and transported to ALS by TIL personnel.

A record of each batch of samples submitted to the laboratory is kept using the Teck Ireland despatch sheet in duplicate. This sheet includes:

1) Unique batch number;

2) the details of the geologist submitting the samples;

3) the number of samples;

4) the sample numbers;

5) the sample type;

6) the preparation required; and

7) the analytical method required.

A copy of the despatch sheet is submitted with the samples and a duplicate is kept in the Irish head office for reference. Results are imported directly into AcQuire and accepted into the database when QAQC checks have been passed.

All samples were analysed by ALS Laboratories in Loughrea, Co. Galway, Ireland, using one of three analyses. The type of analysis was chosen based on the visual estimation of sulphide percentage. ICP ORE is a proprietary analytical method at OMAC for the analysis of high sulphide samples. ICP ORE was used for all samples which contained more than approximately 2% visual sphalerite. The second method, ICP AES/MS MA/UT was used for all samples submitted for lithogeochemistry as it provided lower detection limits. ICP AES/MS MA/UT was not suitable for samples with Pb>2%. Any intervals which returned Pb>2% were rerun using the pulps for ICP ORE. Detection limits for each method are listed in Table 11.1

ICP ORE

ICP-ORE requires 0.200 g of material and uses a digestion that OMAC laboratory calls strong oxidising digestion. The digestion mixture includes nitric acid, hydrochloric acid, hydrobromic acid and potassium chlorate which completely oxidises sulphide minerals. The samples are digested for a certain amount of time, cooled, and made to volume so that their final matrix is equivalent to 10% aqua regia.

ICP AES/MS MA/UT

Multi acid digest is a four acid digest carried out in open PTFE beakers provides effective dissolution of silicates, with Si volatilised as the fluoride. It is a near total solution for rock forming elements.

ME-MS61

This is a four-acid digestion requiring a minimum sample size of 1g.

Table 11.1 Summary of detection limits for analytical techniques used by TIL

	ICPORE	MAUT	ME-MS61
Ag range	5 – 1500 ppm	5 – 100 ppm	0.01 – 100 ppm
Pb range	0.01 – 30.0%	0.2 – 20,000 ppm	0.5 – 10,000 ppm
Zn range	0.01 – 100%	0.2 -10,000 ppm	2 – 10,000 ppm

11.1.1 Standards

TIL inserted standards into each batch at a rate of one in every twenty samples. Standards were inserted at the discretion of the geologist. For example, instead of inserting them systematically every 20 samples, the geologist could choose to adjust the placement to coincide with a particularly high grade sample.

A standard was considered a failure if its returned value for Fe, Pb or Zn lay outside of the given +/- three times standard deviation (3SD) control limits calculated for the standard. When there is a standard failure all of the samples from one sample after the previous passing standard to one sample before the following passing standard are rerun.

TIL used a variety of standards in its QAQC programme, summarised in Table 11.2, below. The main standards used were MVT-2, MVT-6 and MVT-12, all of which are proprietary Teck standards. The Teck standards were prepared by CDN laboratories and verified by five umpire laboratories. The standards are considered by Mr Gordon and Dr Kelly to be of suitable quality for the purposes of this report.

Table 11.2 Summary of standards used by TIL

Standard	No. of analyses
STD_17	1
UNK-Standard	2
OREAS-42p	5
OREAS-22d	6
OREAS-160	2
OREAS-132a	4
MVT-2	108
MVT-6	15
MVT-12	42
GS-1	10

Most of the standards were used in low quantities, however, MVT-2 and MVT-12 were used in significant numbers and the results are discussed below.

MVT-2

MVT-2 is a low-grade Zn-Pb standard (see Table 11.3), and is suitable for use as a standard close to the expected cut-off grade for many Zn-Pb deposits. Two different analysis suites from ALS were used; ICPORE and MAUT. ICPORE has higher detection limits than MAUT and is suitable for material that is expected to return significant values of Pb and Zn. ICPORE results are reported as percentages, MAUT results are reported as parts per million (ppm). The mean and standard deviation for Pb and Zn are given in Table 11.3, the standard is not certified for Ag. Of the 108 MVT-2 samples sent for analysis, 28 were analysed using ICPORE and 80 analysed using MAUT.

ICPORE

No samples exceeded the +/- 3SD limits for either Zn or Pb (see Figure 11.1). There is a an obvious low bias in the results for both elements. All but two of the Zn values are below the certified value of the standard, while all of the Pb values are below the certified value. There is a period from November 2009 to May 2010 when the results being returned dropped by c. 0.14%, however, that trend is based on just three analyses. The results returned for the standard samples are considered to be acceptable.

MAUT

One sample exceeded the +/- 3SD limit for Zn, however ALS was reporting values >2% Zn for information only at that time and the real detection limit was 1%, therefore the result is not reliable. The batch also contained only lithogeochemistry samples and not significant grade samples. No samples exceeded the +/- 3SD limit for Pb. There is an obvious low bias for both Zn and Pb.

Table 11.3 Certified values and standard deviations for MVT-2 & MVT-12

	Certified Values			Standard Deviation		
	Ag	Pb	Zn	Ag	Pb	Zn
MVT-2	n/a	0.066%	2.96%	n/a	0.01%	0.12%
MVT-2 + 3SD	n/a	0.102%	3.32%	n/a	n/a	n/a
MVT-2 - 3SD	n/a	0.03	2.60%	n/a	n/a	n/a
MVT-12	4.09 ppm	4.69%	17.13%	0.44 ppm	0.08%	0.43%
MVT-12 + 3SD	5.41 ppm	4.93%	18.42%	n/a	n/a	n/a
MVT-12 - 3SD	2.77 ppm	4.45%	15.84%	n/a	n/a	n/a

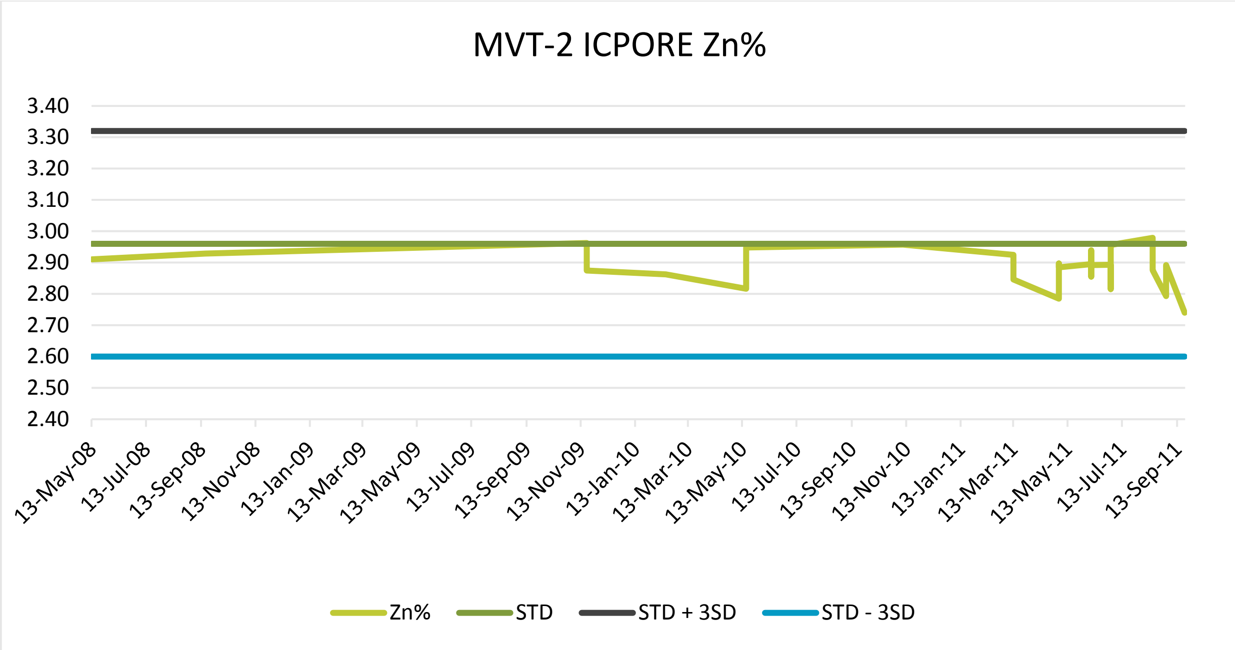

Figure 11.1 Chart showing ICPORE results (Zn) for MVT-2

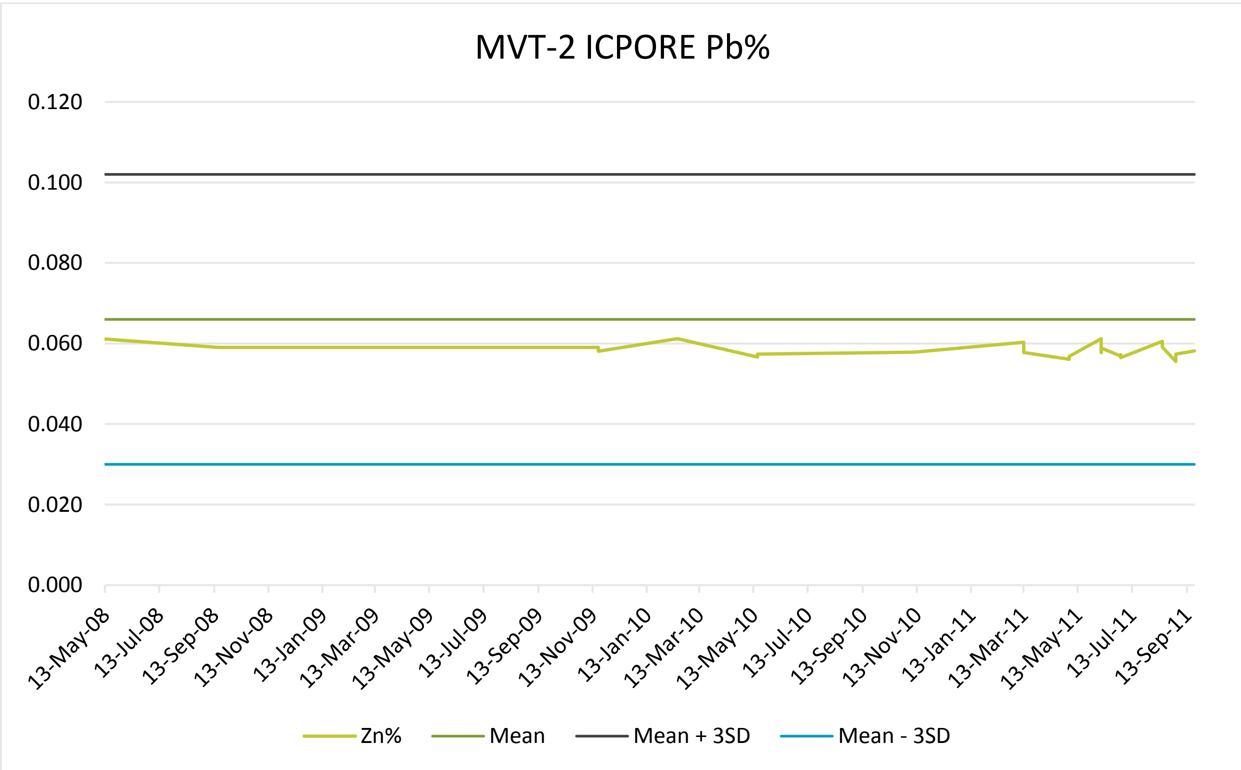

Figure 11.2 Chart showing ICPORE results (Pb) for MVT-2

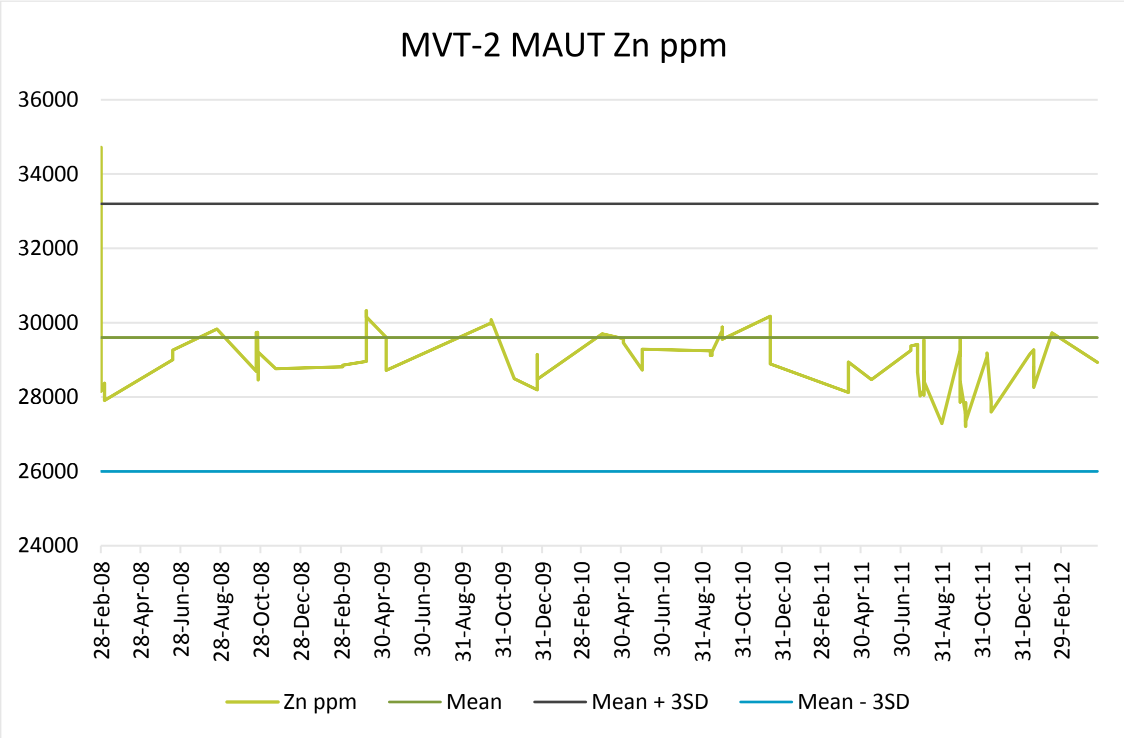

Figure 11.3 Chart showing MAUT results (Zn) for MVT-2

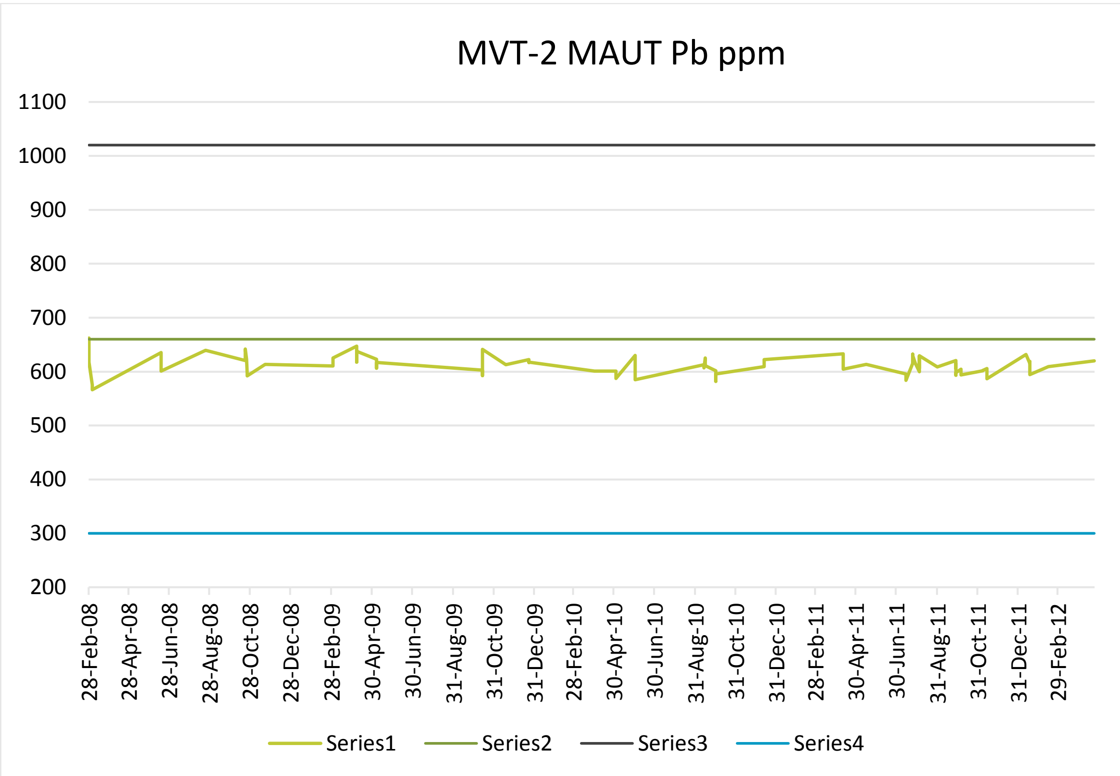

Figure 11.4 Chart showing MAUT results (Pb) for MVT-2

MVT-12

MVT-12 is a high-grade Zn-Pb-Ag standard. As with MVT-2, both ICPORE and MAUT were used. The certified values and standard deviations are given in Table 11.3, above.

ICPORE

No samples exceeded the +/- 3SD threshold for either Zn or Pb (see Figure 11.5 and Figure 11.6). There is a distinct low bias for Zn, with all results plotting below the certified values. There is a higher bias for Pb, with most results plotting above the certified value. Ag results are of little value, as the lower detection limit of 5ppm is higher than the certified value of 4.09ppm, however, there were three samples >5ppm returned on 17th September 2008. Ag was not one of the three elements of importance for the purposes of QAQC, therefore TIL did not carry out any further action. Mr Gordon and Dr Kelly consider the QC results to be satisfactory for the purposes of this report.

MAUT

No samples exceeded the +/- 3SD threshold for either Zn or Ag (see Figure 11.7 and Figure 11.8). The certified Pb value exceeds the maximum detection limit for the technique and is therefore disregarded. There is no obvious bias or pattern for either Zn or Ag.

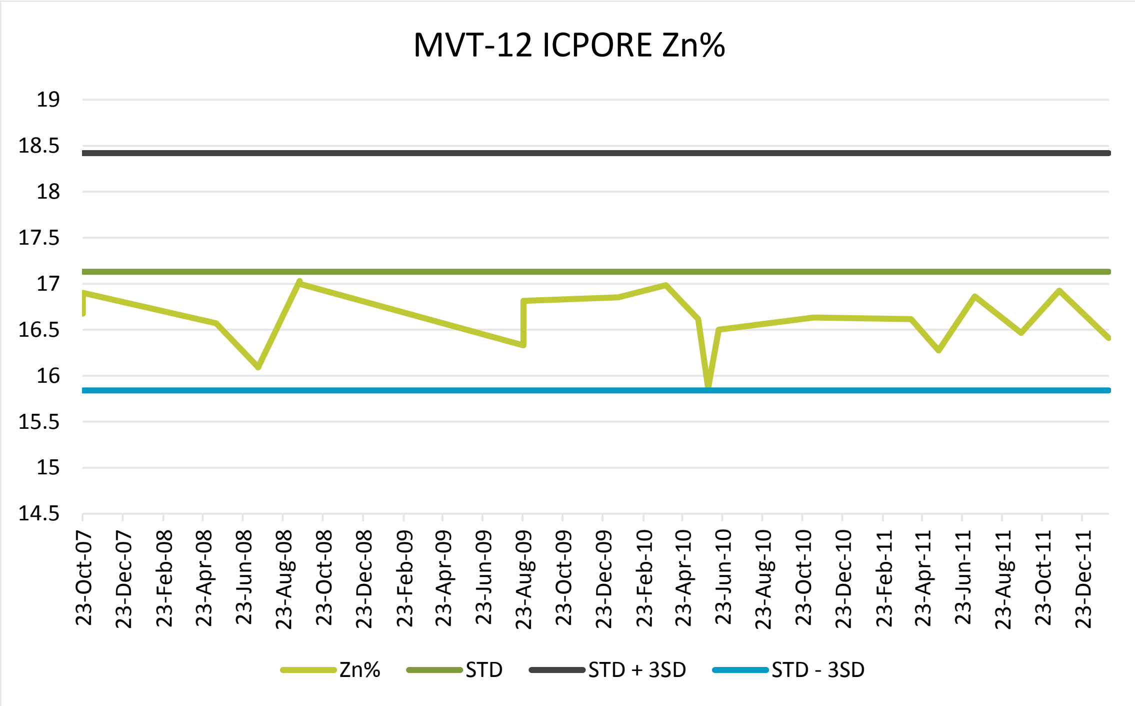

Figure 11.5 Chart showing ICPORE (Zn) results for MVT-12

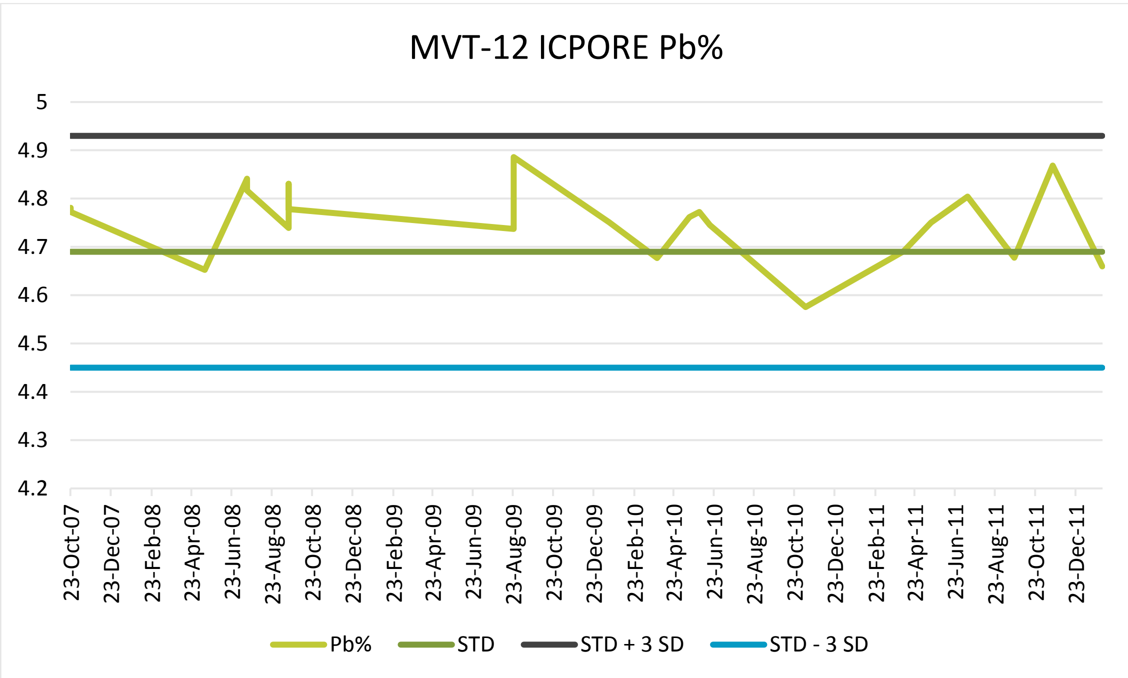

Figure 11.6 Chart showing ICPORE (Pb) results for MVT-12

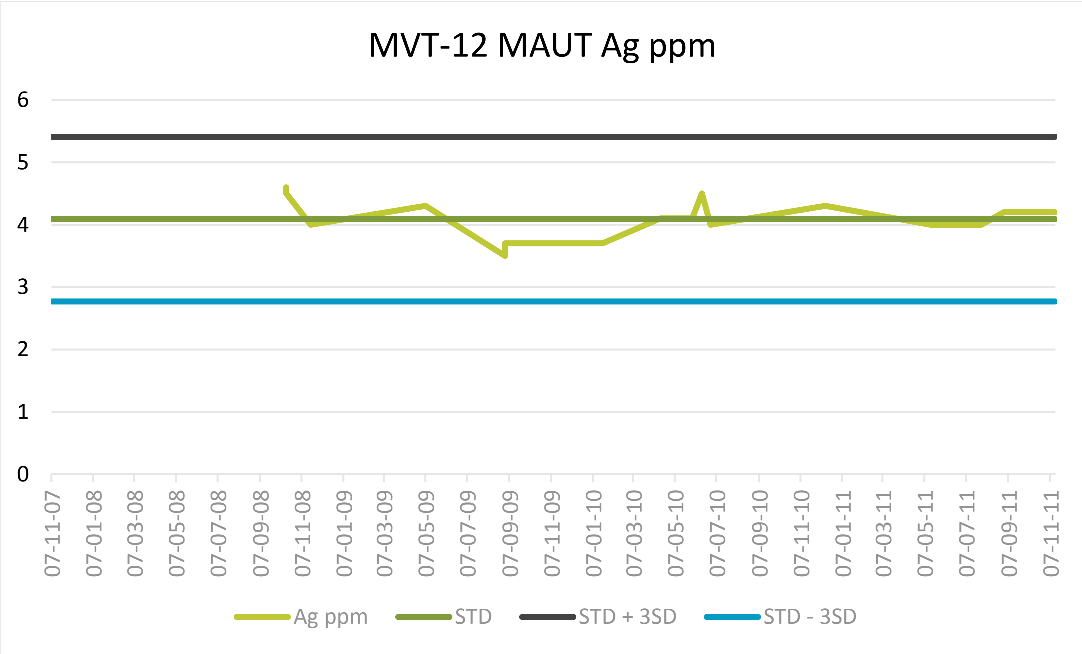

Figure 11.7 Chart showing MAUT (Ag ppm) results for MVT-12

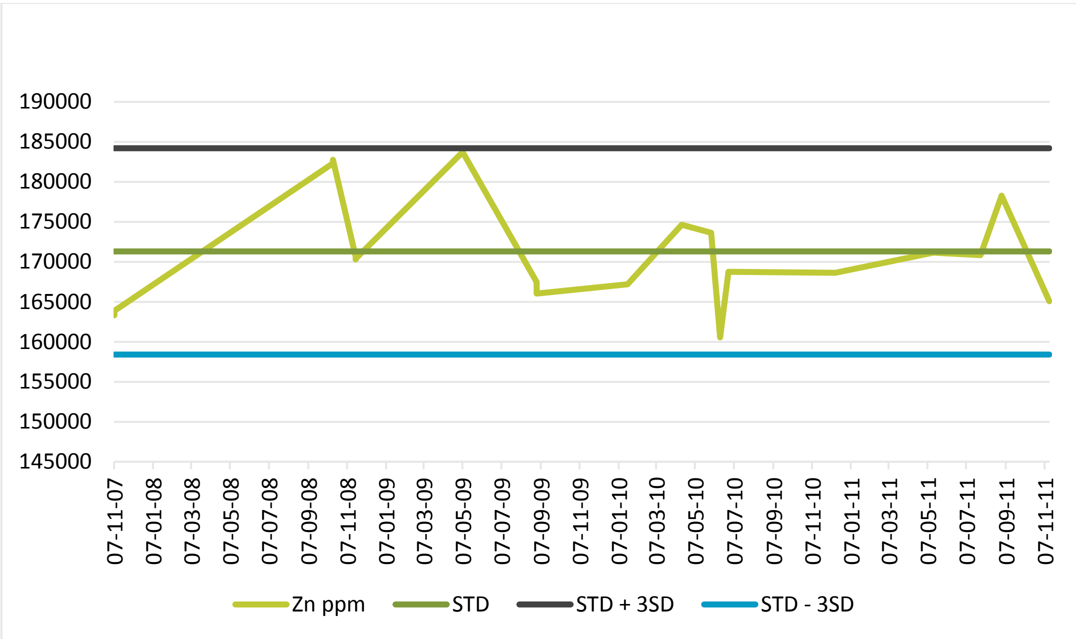

Figure 11.8 Chart showing MAUT (Zn ppm) results for MVT-12

Other Standards

OREAS-22d

The standard was used on one batch, using the ME-MS61 analytical technique. The technique is normally used for high precision at high grades. The standard is not rated for Ag. All four Zn and Pb samples were within the +/- 3SD limit.

OREAS-42p

The standard is not supplied with a value for standard deviation, instead, upper and lower 95% confidence levels are supplied. Five samples from four different batches were analysed using MAUT. All returned values fell outside the 95% confidence levels. Three of the four batches contained the MVT-2 standard and all three passed. The sample in the only batch that did not also contain one of the other standards returned values corresponding to MVT-2, and it is the authors' opinion that this represents a mislabelling of the standard and not a laboratory error. TIL discontinued the use of the standard shortly after first using it, as it was considered to be unreliable.

OREAS-132a

This standard was used on only one batch of analyses, for MAUT. No silver values were outside the +/- 3SD limit. The certified values for Zn and Pb are over the detection limit for the analytical technique.

OREAS-160

The standard was used on one batch, using the ME-MS61 analytical technique on two samples. The technique is normally used for high precision at high grades. The standard is not rated for Ag. All four Zn and Pb samples were within the +/- 3SD limit.

11.1.2 Blanks

Field blanks were inserted after high grade samples to assess cross contamination during preparation. The blanks were Waulsortian Limestone sourced from barren holes drilled by TIL. If a field blank returned anomalous values, then the pulp was rerun to confirm the anomaly. If the pulp again returned anomalous values then the remaining half core of the same interval is split and the quarter core was submitted. If the corresponding quarter core confirms the anomalous values then the blank was considered to have passed. If the quarter core does not confirm the anomalous values then the blank is considered to have failed and the batch is rerun using the coarse rejects. If this again fails, then quarter core was submitted. This situation has not occurred. The Authors have not ascertained what TIL defined as anomalous, but ten times the lower detection limit is considered good practice in the wider industry.

For the 30 sample blanks sent for ICPORE analysis, the returned values are summarised as follows:

- all Ag values below the detection limit of 5ppm;
- all Zn values below ten times the detection limit of 0.01% (see Figure 11.9); and
- all Pb values below ten times the detection limit of 0.01% (see Figure 11.10).

For the 80 sample blanks sent for MAUT analysis, the returned values are summarised as follows:

- all Ag values below the detection limit of 0.5ppm;
- eight Zn values below ten times the detection limit of 0.2ppm (see); and
- three Pb values below ten times the detection limit of 0.2ppm (see).

While the majority of the values returned are below 100ppm for both Zn and Pb, and therefore not significantly anomalous, if using a protocol of ten times the detection limit, almost all of the samples failed. It is therefore the opinion of authors Mr Gordon and Dr Kelly that either the choice of sample blank from within the Project was not appropriate, or that the detection limit is so low that it would be difficult to source any material suitably low in Zn and Pb to be used as a blank. From the authors' experience, it seems as if the values returned for Zn and Pb are slightly elevated against the typical values in the Waulsortian Limestone across the Irish Orefield, but not significantly so. It is the authors' opinion that for the MAUT analysis, sample blanks from other drill programmes are not appropriate, and that commercially-sourced blanks should be used.

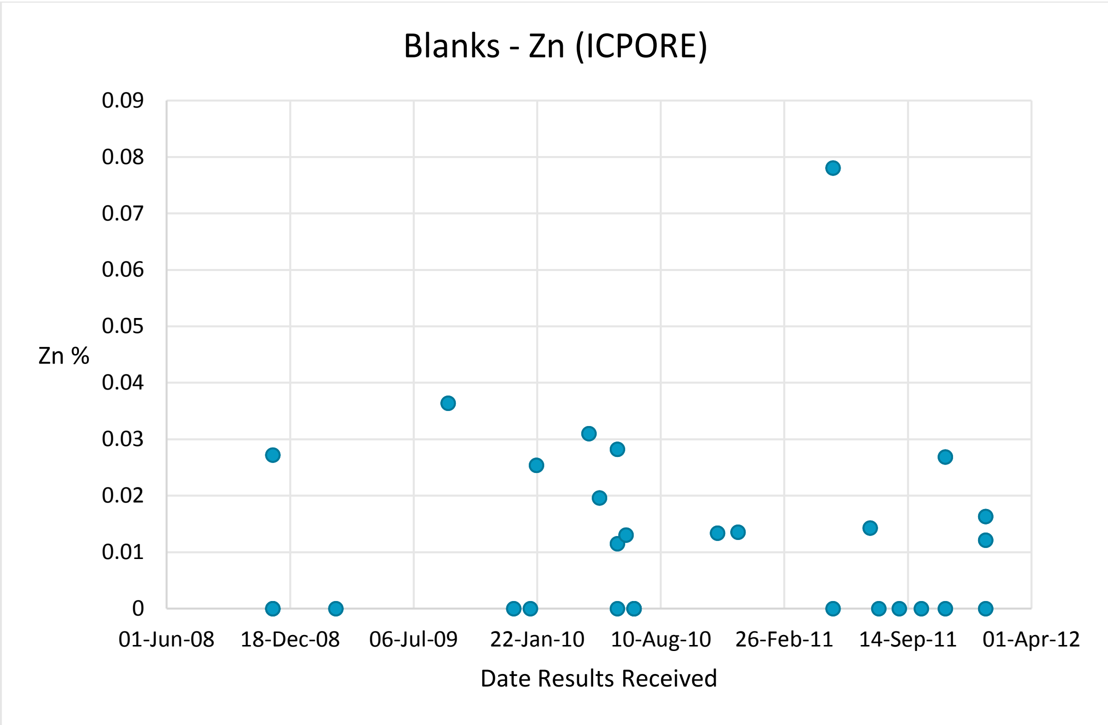

Figure 11.9 QC Results: ICPORE Sample Blanks (Zn%)

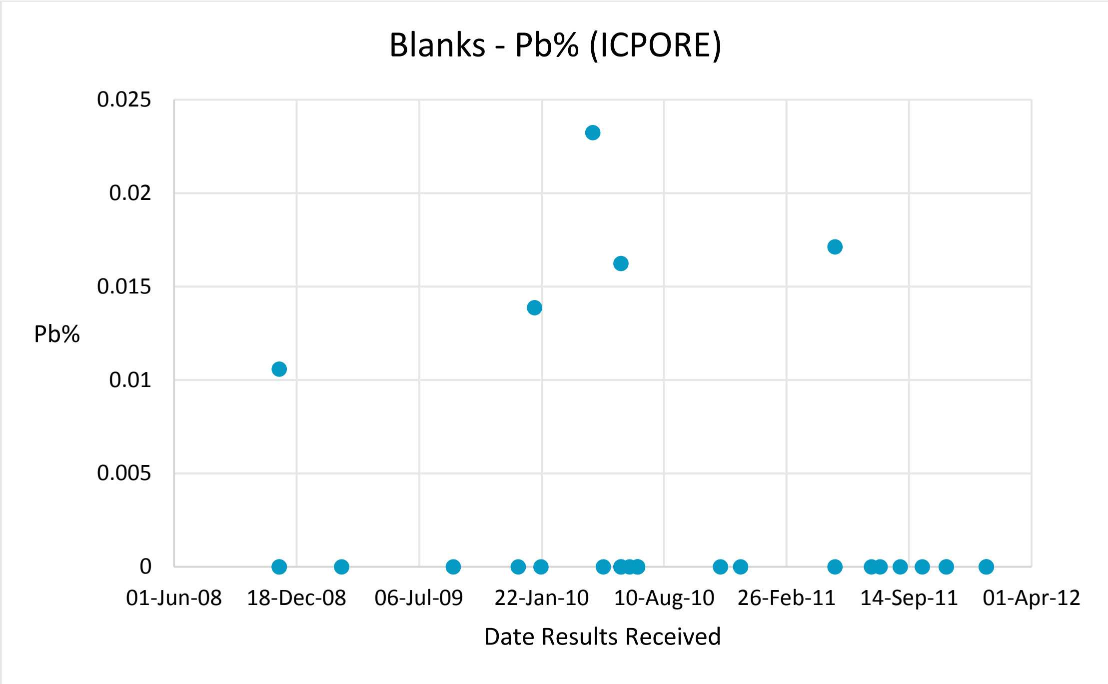

Figure 11.10 QC Results: ICPORE Sample Blanks (Pb%)

11.1.3 QAQC Procedure

Each batch of results returned from the laboratory was first checked for QAQC before the results were entered into the assay database and made available for interpretation. For QAQC, the standards and blanks in each batch are compared against the known expected results. If a batch fails then the results are kept in quarantine until the issue is resolved.

The Assay results that have passed QAQC were stored in a Microsoft Access database. This database was subsequently migrated to acQuire. The database has set permissions that allow only the database administrator to make changes. All other uses have access to queries of the results only and do not have the ability to write changes. This protects the validity of the data. The laboratory also previously provided hard copies of the results which were filed in the Irish head office.

The pulps and coarse rejects were returned by the lab and stored in the core shed for future reference.

Mr Gordon and Dr Kelly are of the opinion that TIL's procedure is robust and in line with expected industry standards.

11.1.4 Density Procedure

Specific gravity measurements for the Stonepark deposit were determined using the water immersion method. The density is calculated with the following formula:

$$\text{Density} = \frac{\text{Weight in air}}{\text{Weight in air} - \text{Weight in water}}$$

The in situ dry bulk densities ("BD") within the MRE area were reviewed by CSA Global, by mineralisation domain, as well as by lithology (geology unit).

There is a limited amount of data available within the modelled mineralisation wireframes (23 out of 1,627 samples), and an average BD of 3.24 t/m^3 was applied to modelled mineralised material.

Review of BD data for use in the MRE is further discussed in Section 14.9.3.

TIL's current procedure is to select representative pieces of drill core for each sample interval, soak them in water for two to three days, and then take the measurements. TIL personnel have been unable to confirm whether that procedure was in place at the time of the Stonepark drill programme.

12.0 Data Verification

At the effective date of this report, GERC had not gathered any data on the Project. However, GERC has acquired the TIL database and the Authors have carried out data verification on that. The Authors have used the EMD's open file system to check randomly chosen drill logs and drill log summaries in order to verify the data in the GERC database which was acquired from TIL. The historic drilling is not material to the report.

Historic drill depths were recorded in feet, and there are some very minor discrepancies arising from rounding of decimal places, but none are significant. One historic barren drillhole is recorded with the incorrect total depth in the collars file, but is correctly captured in the downhole lithology file. No other such discrepancies were noted.

Regarding the TIL drillholes, the data were verified in a number of ways. The Authors visited the core shed and were able to visually check drillhole depths, numbers, and assay results against both the TIL drill logs and the data provided by GERC. Drillhole location maps were also compared against the reported coordinates in licence reports submitted by TIL to EMD, for a random selection of drillholes. No significant errors were observed.

Due to agricultural constraints, it is not possible to allow drill collars to remain in the field, so collar locations could not be verified with field checks.

12.1 Site visit verification

CSA Global and SLR visited the Stonepark Project on 11th April 2018.

This visit was undertaken for the purposes of inspection, ground truthing, review of activities, and collection of information and data and to satisfy NI 43-101 "personal inspection" requirements.

CSA Global and SLR were given full access to the relevant tenements and drill core. Discussions were held with GERC personnel to obtain information on the previous, as well as the planned, exploration work.

The following conclusions were made from the site visit:

- Local GERC geologists associated with the project are familiar with the geology, deposit type and mineralisation within the tenements.
- Access to the Stonepark Project is good, with the deposit located close to power, water and road infrastructure. The town of Limerick is approximately 6 km to the north of the project. Several roads, which includes farm tracks, are present and can be readily negotiated by 2WD vehicle.
- The position of a single drill hole, TC-2638-040, was verified by means of handheld GPS (Table 12.1). It was not possible to view the collars of any other drill holes, which had been capped and rehabilitated due to location on cultivated farmland.
- Current sampling, logging and density determination procedures were reviewed and found to be suited to the deposit type and style of mineralisation, as currently understood.
- Sample storage and security is considered good.
- The mineralisation at the Stonepark deposit contains elevated zinc and lead grades over reasonable strike lengths.
- The Stonepark deposit is relatively shallow, occurring at depths ranging from 190 to 395 m below surface.
- Drill core was inspected for selected drill holes (TC-2638-008, TC-2638-026, TC-2638-045 and TC-2638-099) that are representative of the stratigraphic sequence and mineralisation in the Stonepark and Stonepark North deposits. The geology and mineralisation conformed to reported descriptions. Photographs for TC-

2638-045 and TC-2638-099 showing mineralisation styles and host lithologies are presented in Figure 12.1 and Figure 12.2.

- The Stonepark deposit does not outcrop at surface and it was thus not possible to review any surface rock exposure.

Table 12.1 GPS and database collar surveys verified during the site visit (ITM Grid)

BHID	GERC Database			CSA Global GPS			Difference		
	Easting	Northing	Elevation	Easting	Northing	Elevation	Easting	Northing	Elevation
TC-2638-040	163,487	149,401	73.46	163,488	149,397	72.30	+1	-4	-1

Figure 12.1 Drill hole TC-2638-045: high-grade interval 216.10 – 216.55 m (Zn = 6.76% and Pb = 1.98%) (Source: CSA Global, 2018)

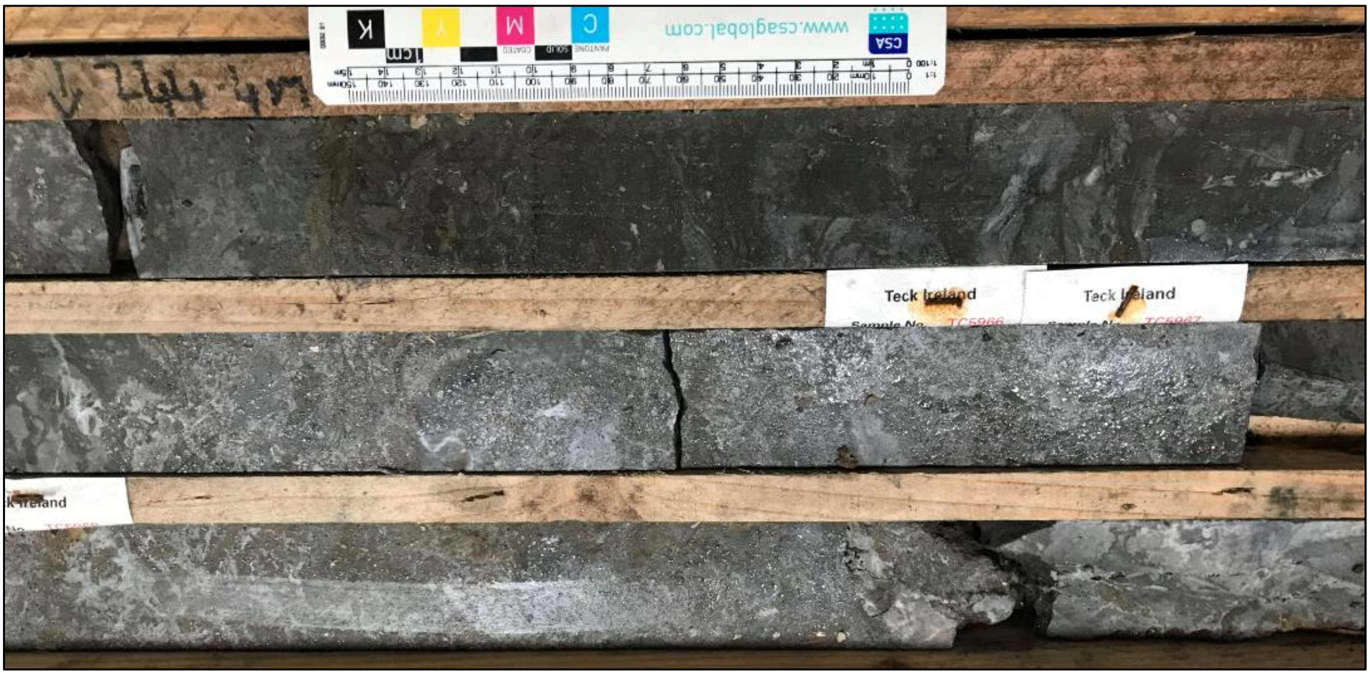

Figure 12.2 Drill hole TC-2638-099: high-grade interval 244.80 – 246.24 m (length weighted average Zn = 15.72% and Pb = 6.42%) (Source: CSA Global, 2018)

13.0 Mineral Processing and Metallurgical Testing

No mineral processing or metallurgical testing has been carried out by GERC or TIL.

14.0 Resource Estimates

CSA Global (UK) Ltd ("CSA Global") was engaged by SLR Consulting Ireland ("SLR", on behalf of Group Eleven Resources Corporation "GERC") to generate a maiden Mineral Resource estimate ("MRE") for the Stonepark Zinc-Lead Project ("Stonepark") in County Limerick, Ireland, in February 2018.

14.1 Software

CSA Global utilised the following software suites during the course of the MRE:

- Microsoft Office™
- Microsoft SQL™ – Database imports, validations and exports.
- Leapfrog Geo™ – Topography, geology, alteration and structural modelling.
- Micromine™ – Mineralisation modelling.
- Datamine StudioRM™ – Drill hole flagging, block model build, compositing, grade estimation, Mineral Resource reporting.
- Snowden Supervisor™ – Variography and Kriging Neighbourhood Analysis ("KNA").
- GeoAccess Professional™ – Statistical analysis.

14.2 Drill Hole Database Loading

CSA Global was initially provided with Microsoft Excel worksheets from SLR, exported from AcQuire™, for the Stonepark deposit containing collar, downhole survey, assay, lithology, brecciation and density data. The drill data was imported into SQL and Datamine StudioRM™ software for validation.

14.3 Database Validation

Data was loaded into a SQL database which has constraints and triggers, ensuring that only validated data was included in the database. During the validation process issues were highlighted and corrected where possible. Exports of the clean, verified data were generated for the MRE.

The list below includes the validation and checks completed:

- Collar table: Incorrect coordinates (not within known range), duplicate holes.
- Survey table: Duplicate entries, survey intervals past the specified maximum depth in the collar table, overlapping intervals, abnormal dips and azimuths.
- Geotechnical table: Overlapping intervals, missing collar data, negative widths, geotechnical results past the specified maximum depth in the collar table.
- Geology, Sample and Assay tables: Duplicate entries, lithological intervals past the specified maximum depth in the collar table, overlapping intervals, negative widths, missing collar data, missing intervals, correct logging codes, duplicated sample ID's, missing samples (assay results received, but no samples in database), missing analyses (incomplete or missing assay results).

Data for the MRE were provided at a cut-off date of the 16th of February 2018. In summary the database consisted of a total of:

- 179 drill holes, of which 133 are diamond drill holes (drilled 2007 to 2012 by the previous operator Teck Resources), and 46 are not specified in the database (pre-2007)
- The diamond drilling totals 54,767.53 m, whereas the unspecified drilling type totals 9,968.72 m
- 1,059 downhole surveys
- 2,298 assay samples (all within the diamond drill holes)
- 4,631 logged lithology intervals
- 2,418 drill hole density samples

No drill data prior to 2007 were used in the MRE and any issues with these pre-2007 data are not material.

Within the raw assay file, absent grade intervals were left absent, whereas negative values and values below detection limit, were reset to half detection limit, 0.1 ppm for both Zn and Pb, and 0.005 ppm for Ag.

The CSA Global data load validations showed the following:

- 27 collars with no logged lithology (all drilled during 1971)
- 131 collars with no density data
- 70 collars with no assays (no assays for the 46 pre-2007 drill holes).

The Stonepark MRE area (consisting of the zones Stonepark North, Stonepark West and Stonepark) was restricted by a boundary string, and data was selected within this boundary. In summary the data within the boundary, as used in the grade estimation and density analysis, consisted of a total of:

- 88 diamond drill holes (drilled 2007 to 2011), totalling 37,269.93 m
- 537 downhole surveys
- 1,874 assay samples (all within the diamond drill holes)
- 3,211 logged lithology intervals
- 1,662 drill hole density samples.

Following de-surveying, 383 missing intervals were identified in the assays, totalling 27,957.09 m. These gaps have been given values of half detection limit, relative to Zn, Pb and Ag. None of these intervals intersect the modelled mineralisation and as such are not deemed material.

14.4 Geological Interpretation

A 3D geology, alteration and structural model was built for the larger Stonepark area in Leapfrog Geo™. Mineralisation wireframes were built in Micromine™ software. Eight separate mineralisation wireframes were created within three main zones – Stonepark North, Stonepark West and Stonepark (see Figure 14.1).

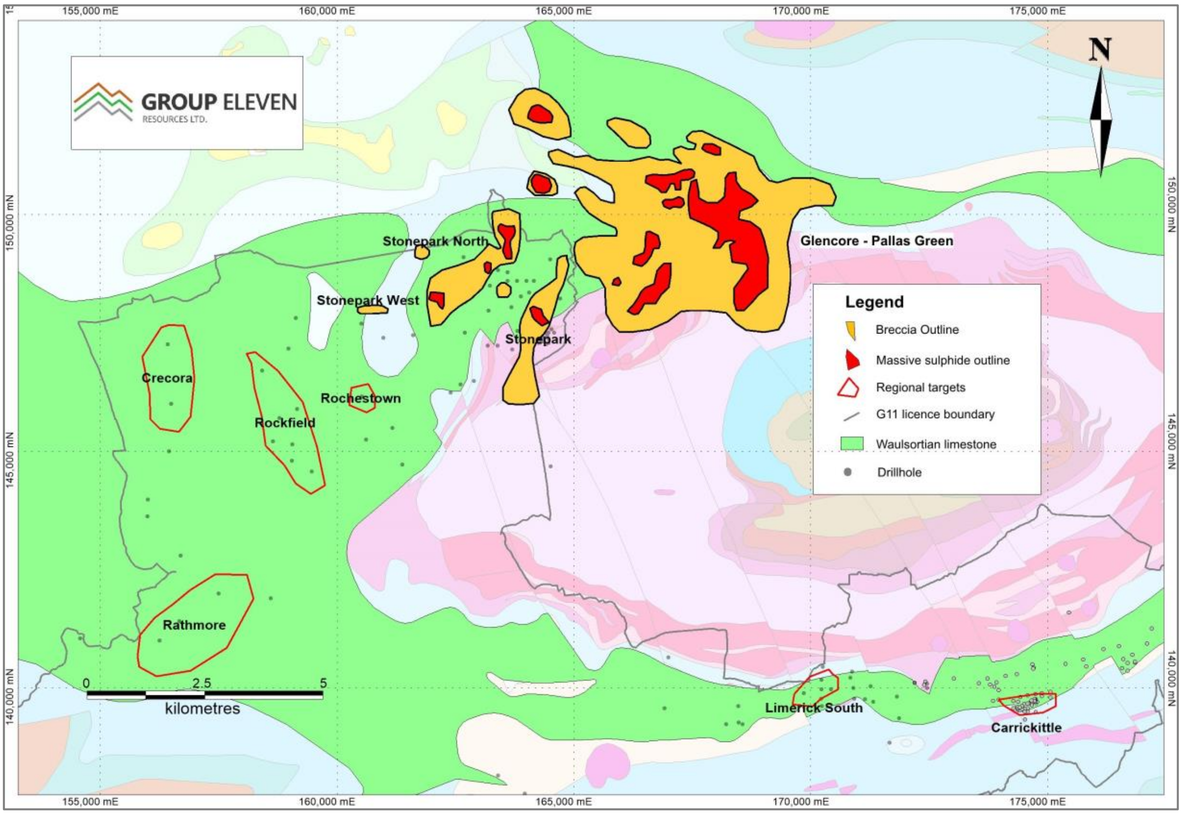

Figure 14.1. Stonepark areas, regional targets and Glencore's Pallas Green deposit, Ireland (Source: GERC and Blaney & Redmond (2015)

The geology and alteration models were built with reference to the cross and long sections provided in "The Geology of the Stonepark Zn-Pb Prospects" MSc thesis (Kerr, 2012). Whilst the stratigraphy model was well understood and supported by drill hole logging, the 3D structure of the intrusive bodies in the area was not well understood. It was not possible to correlate the majority of these structures between drill hole sections. Angled oriented drilling in the future would help resolve the geometry of intrusions.

CSA Global reviewed available geophysical data for the area and noted that the magnetic data indicate a strong NNW structural trend, with magnetic bodies along the same trend partly coincident within the southern Stonepark resource zone. Magnetic data were incomplete for the greater Stonepark area, so it was not possible to use the data when modelling the intrusions.

CSA Global noted that some drill holes within the southern Stonepark area intersected multiple intrusive horizons, assumed to be dykes; all horizons were volumetrically small. CSA Global reviewed the proportion of logged dyke material within the modelled mineralisation volumes, which equated to 4%. As such, while there is some risk of dilution to the mineralisation at Stonepark from the presence of pre- or post-mineralisation intrusions, data indicates that they are volumetrically small and CSA Global does not consider them material. Their aspect, geometry and possible dilution should, however, be considered in all future work.

14.4.1 Structure

Six faults were constructed in Leapfrog Geo™, honouring faults seen in the cross sections and in larger project-scale mapping. All faults are inferred with no surface exposure. However, they are supported by the lithology logging, especially in the Stonepark North area.

14.4.2 Lithology

Solids were generated for the Overburden ("OB"), Knockroe Volcanic Formation ("KKR"), Lough Gur Formation ("LGUR"), Waulsortian Limestone ("WA"), Sub-Waulsortian Limestone ("SWA") and the Argillaceous Bioclastic Limestone ("LABL") units. The KKR was only present in the south of the deposit.

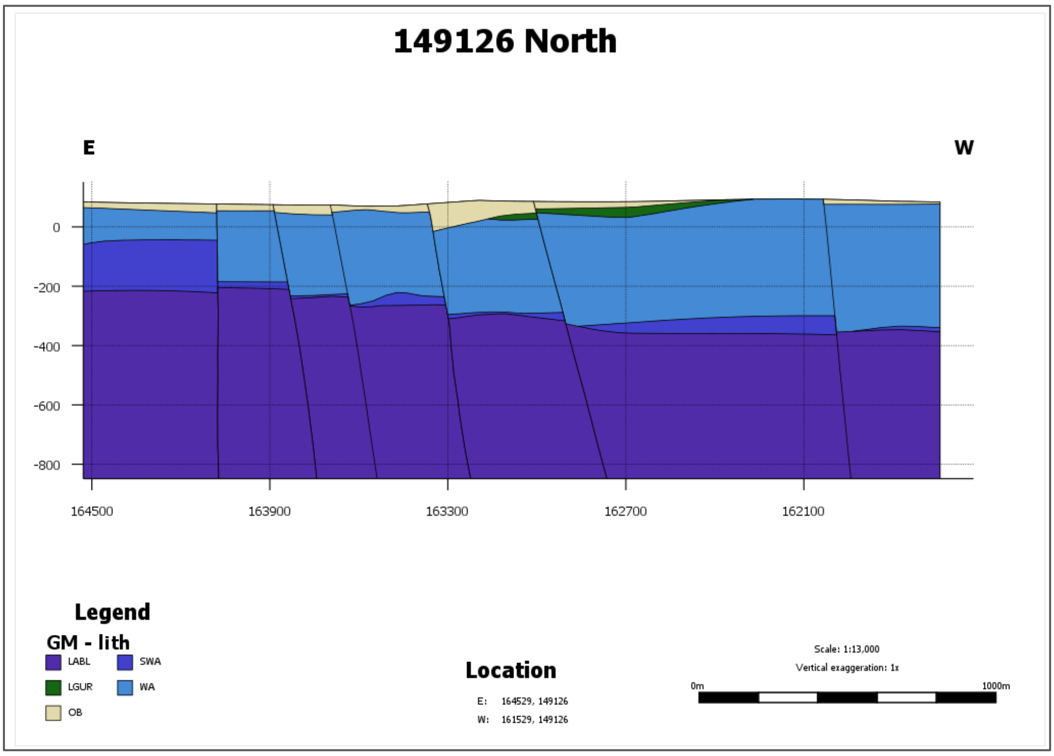

Figure 14.2 Type cross section showing general stratigraphy (KKR is missing in this area) (Source: CSA Global, 2018)

Leapfrog Geo™ solids were exported into Micromine™ software as DXF's.

14.4.3 Alteration

The Black Matrix Breccia ("BMB") was of importance in the alteration model, which has a strong correlation to mineralisation. BMB is a dolomitic hydrothermal breccia that commonly forms a halo around mineralisation in the Irish zinc-lead deposits. CSA Global was able to model a broad zone of brecciation, which honoured the sections provided. This zone of brecciation, comprising grouped breccia material, formed a rough envelope around the mineralisation wireframes providing a framework to support mineralised continuity.

14.4.4 Weathering

No weathering surfaces were produced; weathering data were not provided and it is understood that the entire rock mass is unweathered.

14.4.5 Mineralisation

Mineralisation is dominantly hosted within the WA unit and is stratigraphically controlled and surrounded by a BMB halo. Later intrusive bodies cross cut the stratigraphy and potentially the mineralisation.

14.4.6 Topography

Topography was generated from drill hole collars. Collars were surveyed by DGPS and accuracy is considered adequate for use in the MRE.

14.5 Wireframes

Mineralisation wireframes were constructed (Figure 14.3) based upon a 2% Zn+Pb lower cut-off grade, with a minimum mining width and true thickness of two metres.

Mineralisation is assumed to be stratigraphically constrained, so only mineralisation on the same stratigraphic horizon was considered to be continuous.

Wireframes were constructed where continuous mineralisation was defined in two or more drill holes within a single fault block. Mineralisation within single drill holes was not modelled.

Mineralised wireframes were extended as follows:

- Half way between drilling (to a maximum distance of 100 m), along strike and down dip, at the termination of mineralisation, or 100 m past the last mineralised drill hole at wider spacings.
- Where mineralisation met the edge of a fault block it was extended approximately 5 m past the fault trace; a buffer was applied to account for the fact that the fault traces is only indicative of the expected fault position.

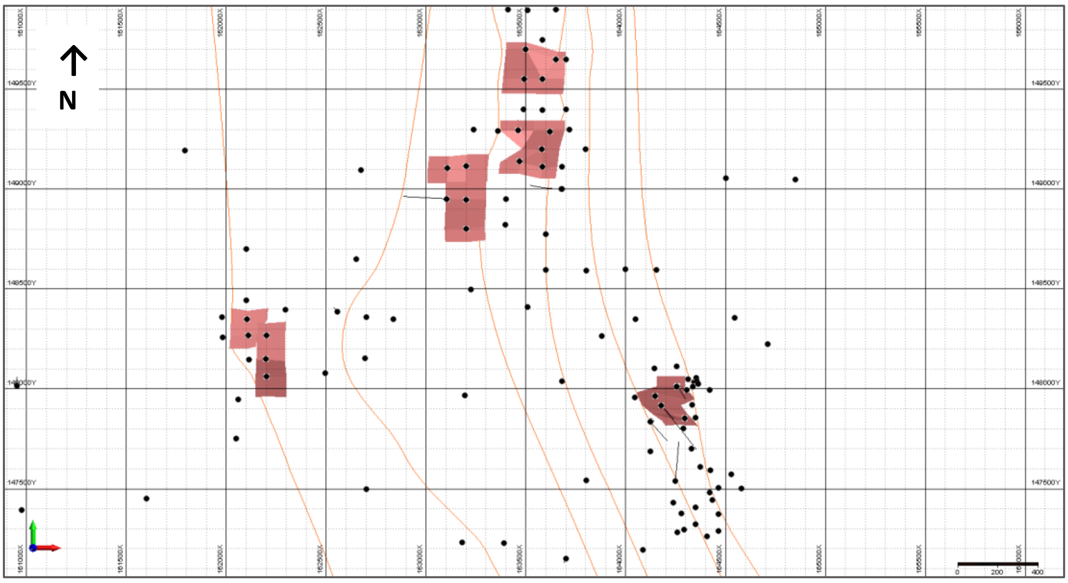

Figure 14.3. Plan of mineralised wireframes (pink), inferred faults (orange) with drill hole collars (black) (Source: CSA Global, 2018)

14.6 Statistical Analysis

Before undertaking the estimate, the data were first analysed to understand how the estimate should be accomplished. The statistical analysis was carried out by CSA Global using Datamine StudioRM™, Snowden Supervisor™ and GeoAccess Professional™ software packages.

14.6.1 Boundary Analysis

Boundaries are either classified as 'hard' or 'soft'. Hard boundaries are abrupt and may represent a sharp geological contact such as the edge of a quartz vein on its host rocks and where the boundary marks the margin of metal grade. A soft boundary is a gradational one, and represents a gradual reduction in grade, for example as one would find in the alteration zone of a copper porphyry system.

It is important to understand the nature of the boundaries between domains. If domain boundaries are gradational, then data from the adjacent domains should be used during estimation (soft boundary). If there are distinct grade boundaries, then estimation should be restricted to only use the data within that domain (hard boundary).

Contact analysis for Zn+Pb % between the modelled mineralisation and waste was carried out to assess the nature of the domain boundaries by graphing the average grade with increasing distance from the domain boundary. The average grades can be calculated by incrementally expanding the wireframes or manually by coding the samples based on distance from the domain contact, as was done in this instance. The contact analysis result for the Stonepark deposit is shown in Figure 14.4. Based on the results of the boundary analysis between mineralisation and waste, the boundary was interpreted to be hard.

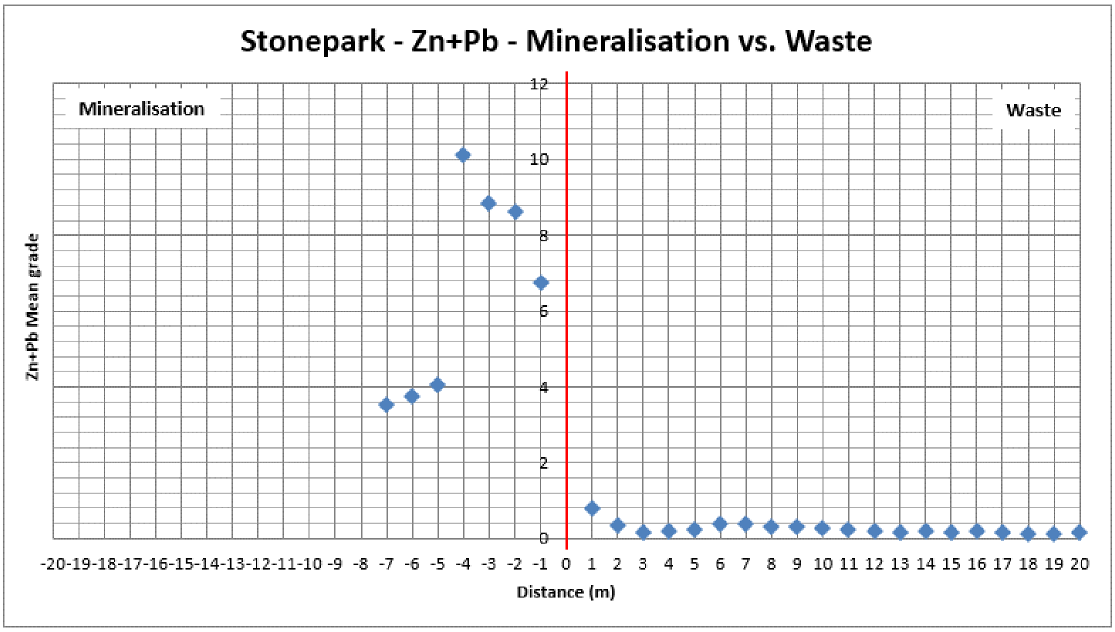

Figure 14.4. Boundary test graph for Stonepark – Zn+Pb % Mineralisation versus Waste (Source: CSA Global, 2018)

14.7 Sample Domaining

Drill hole coding is a standard procedure which ensures that the correct samples are used in statistical and geostatistical analyses, and grade interpolation. The mineralised envelopes were used to select drill hole samples. The samples were coded by geological and mineralisation domains.

14.7.1 Domain Coding

Domains were coded based on seven geology units (GEOL = 100 – 700) and eight modelled mineralisation envelopes (MINZON = 1 – 8; DOMAIN = 1).

A summary of the domain codes, used to distinguish the data during geostatistical analysis and estimation, is shown in Table 14.1 below.

Table 14.1 Data field flagging and description

Field	Code	Description
GEOL	100	Overburden
	200	Intrusives
	300	Knockroe Volcanics
	400	Lough Gur Formation
	500	Sub-Waulsortian Limestone
	600	Waulsortian Limestone
	700	Argillaceous Bioclastic Limestone
	9999	Other
MINZON	1 to 8	Mineralised
	9999	Waste
DOMAIN	1	Mineralised
	9999	Waste

14.7.2 Naïve Statistics

The naïve statistics, per MINZON, are given in Table 14.2 and shown in Figure 14.5 to Figure 14.7. There are some isolated high values within the waste domain, however, the sample populations within the MINZONs are clearly distinct.

Even though the database does contain Ag values, 150 of the 185 samples within the mineralisation wireframes are below detection limit, which equates to 81% of the Ag sample population. The sample composites mean Ag grade for the combined mineralisation domains is 1.58 g/t. As such, CSA Global did not report Ag as part of the MRE since it is not considered to make a material contribution.

Table 14.2. Naïve statistics per MINZON

Variable	Parameter	1	2	3	4	5	6	7	8	9999
Zn%	Number	32	20	10	19	52	30	5	17	1,689
	Minimum	0.08	0.21	0.08	0.14	0.17	0.04	0.24	0.02	0
	Maximum	28.61	26.70	8.05	11.40	24.74	32.88	7.35	18.68	27.69
	Mean	4.78	6.31	1.88	3.10	6.58	12.81	3.56	7.19	0.31
	Median	3.36	2.91	0.38	1.13	3.82	11.77	2.03	5.49	0.02
	Std. Dev.	6.10	7.49	2.49	3.61	6.31	10.39	3.18	6.16	1.29
	CV	1.28	1.19	1.32	1.16	0.96	0.81	0.89	0.86	4.21
Pb%	Number	32	20	10	19	52	30	5	17	1,689
	Minimum	0.01	0.01	0.01	0	0.01	0.01	0.05	0.01	0
	Maximum	7.36	9.16	0.38	2.14	12.33	23.96	5.79	7.40	33.78
	Mean	0.79	2.26	0.10	0.24	1.59	5.41	2.77	2.06	0.06
	Median	0.21	0.92	0.04	0.01	0.55	2.42	1.68	0.79	0.00

Variable	Parameter	1	2	3	4	5	6	7	8	9999
	Std. Dev.	1.54	3.01	0.13	0.58	2.35	6.42	2.61	2.45	0.89
	CV	1.95	1.33	1.22	2.41	1.48	1.19	0.94	1.19	14.03
Ag g/t	Number	32	20	10	19	52	30	5	17	1,689
	Minimum	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	Maximum	0.01	14.77	0.01	3.45	13.00	21.01	0.01	0.01	23.26
	Mean	0.01	2.11	0.01	0.25	1.88	4.93	0.01	0.01	0.11
	Median	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	Std. Dev.	-	4.69	-	0.80	3.70	6.65	-	-	0.93
	CV	-	2.23	-	3.21	1.97	1.35	-	-	8.56

Std. Dev.: Standard Deviation

CV: Coefficient of Variation

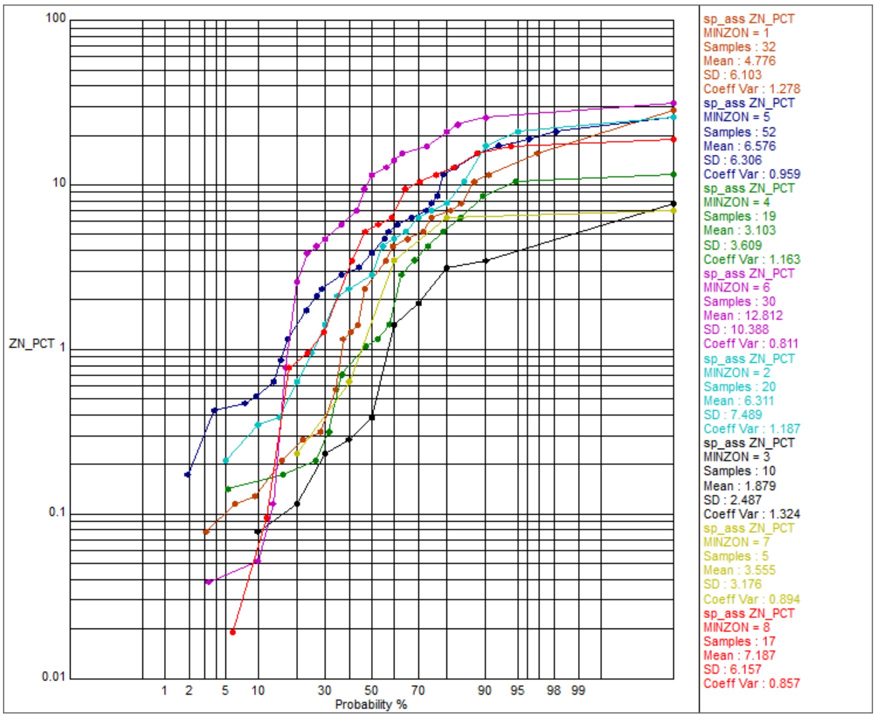

Figure 14.5. Naïve Zn% - Log probability plot overlays of mineralisation per MINZON (Source: CSA Global, 2018)

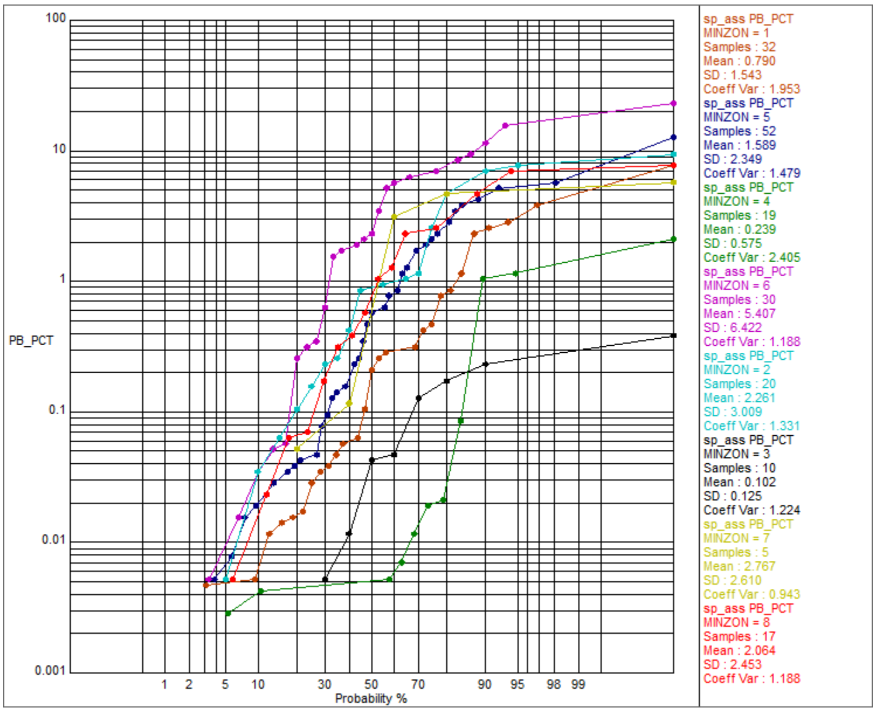

Figure 14.6. Naïve Pb% - Log probability plot overlays of mineralisation per MINZON (Source: CSA Global, 2018)

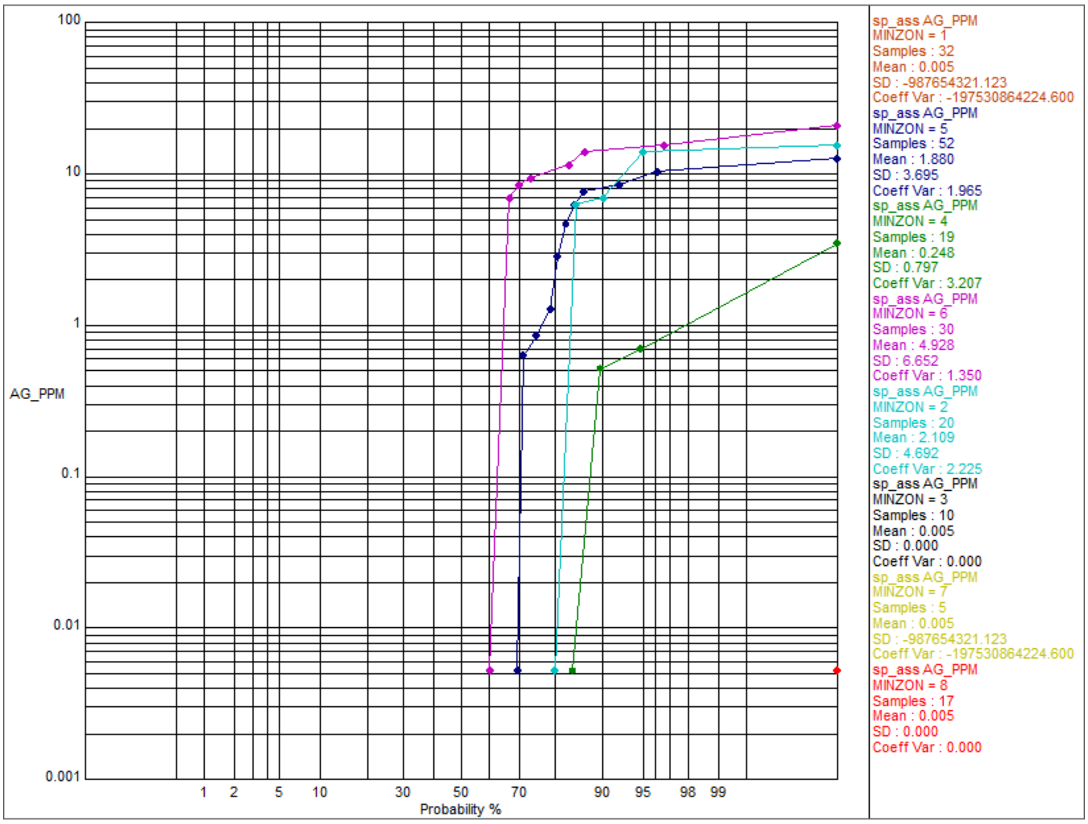

Figure 14.7. Naïve Ag g/t - Log probability plot overlays of mineralisation per MINZON

14.7.3 Sample Length Analyses

The Stonepark MRE area, consisting of Stonepark North, Stonepark West and Stonepark, was restricted by a boundary string; data was selected, and mineralisation modelled within this boundary. Assays that fall within the modelled mineralisation envelopes were down-hole composited to 1 m prior to statistical review, top-cutting, variography and grade estimation.

The dominant sampling length within the MRE area (mainly waste) was 1 m. The median sample length within the mineralisation envelopes is 0.7 m, with a mean length of 0.8 m (Figure 14.8).

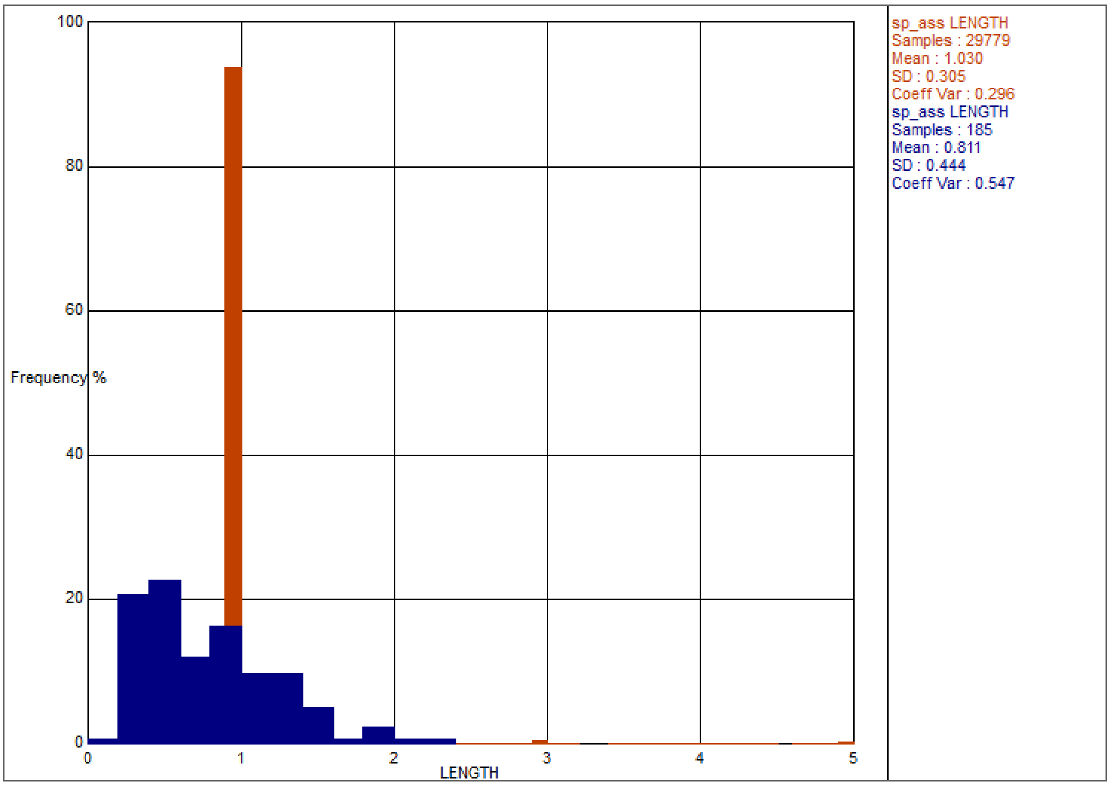

Figure 14.8. Histogram overlay of sample lengths for Mineralisation (Blue; DOMAIN = 1) versus Waste (Red; DOMAIN = 9999) (Source: CSA Global, 2018)

14.8 Sample Compositing

Statistical analysis, to ascertain the effect of compositing to either 1 m or 2 m, was carried out for samples within DOMAIN = 1 (MINZON 1 to 8). The results are presented in Table 14.3 and Table 14.4 below. Compositing was carried out using Datamine StudioRM™.

During the compositing process, the interval can be adjusted with the parameter MODE. The default setting is MODE = 0, where the composite length is forced to equal the selected interval and part of samples may be excluded. Setting MODE = 1 forces all samples to be included in one of the composites by adjusting the composite length.

For all the methods tested, metal loss for Pb% is >10%. Taking length statistics, as well as potential metal loss into account, the most appropriate method selected was compositing to 1 m, with MODE = 0, residuals <0.5 m removed.

Table 14.3. Composite totals and residual proportions (DOMAIN = 1)

Composite Length	Parameter	Values
1 m (MODE = 0)	Total Composites	160
	Composites <0.5 m	8
	Composites ≥0.5 m	152
	Proportion Residuals	5%
2 m (MODE = 0)	Total Composites	86
	Composites <1.0 m	12

Composite Length	Parameter	Values
	Composites ≥1.0 m	74
	Proportion Residuals	14%

Table 14.4. Mean grade comparisons – Naïve vs. 1m and 2 m Composites (DOMAIN = 1)

Variable	Zn%	Pb%
Naïve	6.61	2.00
Composite 1 m (MODE = 0; including residuals)	6.19	1.68
%Difference	-6%	-16%
Composite 1 m (MODE = 0; excluding residuals)	6.05	1.69
%Difference	-8%	-16%
Composite 1 m (MODE = 1)	6.06	1.68
%Difference	-8%	-16%
Composite 2 m (MODE = 0; including residuals)	6.05	1.63
%Difference	-8%	-18%
Composite 2 m (MODE = 0; excluding residuals)	6.44	1.78
%Difference	-3%	-11%
Composite 2 m (MODE = 1)	6.25	1.76
%Difference	-5%	-12%

The drill hole samples were composited to 1 m intervals, on individual MINZON domains, starting at the top of the hole. Composites (residuals) that were less than 50% (<0.5 m) of the composite length were excluded from the geostatistical analysis and the estimate. Eight residuals, ranging in length from 0.05 to 0.45 m, were removed.

14.9 Geostatistical Analysis

14.9.1 Summary Statistics – Sample Assays

A total of 152 composites were used in the statistical analysis and resource estimation. The descriptive analyses for the estimation domains, MINZON = 1 to 8, are given in Table 14.5 and shown in Figure 14.9 and Figure 14.10. The sample populations within the MINZONs are clearly distinct, and as such, the decision was made to use hard boundaries between these domains during estimation.

Table 14.5. Composite statistics per MINZON

Variable	Parameter	1	2	3	4	5	6	7	8
Zn%	Number	33	14	14	13	39	20	5	14
	Minimum	0.08	0.75	0.08	0.14	0.44	0.04	0.24	0.79
	Maximum	23.78	21.78	8.05	5.62	24.53	29.68	6.13	16.73
	Mean	4.06	7.84	1.87	2.13	6.42	13.06	3.29	6.66
	Median	2.89	4.68	1.04	0.81	3.93	12.49	3.06	5.22
	Std. Dev.	4.88	6.84	2.12	2.07	5.84	9.31	2.13	4.91
	CV	1.20	0.87	1.13	0.97	0.91	0.71	0.65	0.74
Pb%	Number	33	14	14	13	39	20	5	14
	Minimum	0.01	0.19	0.01	0.01	0.01	0.04	0.12	0.07
	Maximum	4.78	9.16	0.38	0.76	8.64	19.76	5.79	6.81
	Mean	0.62	2.64	0.10	0.14	1.56	4.89	2.91	1.69
	Median	0.19	1.60	0.06	0.01	0.62	3.63	2.01	0.97
	Std. Dev.	1.07	2.55	0.11	0.25	1.98	4.68	2.35	1.93
	CV	1.74	0.97	1.08	1.84	1.28	0.96	0.81	1.14

Std. Dev.: Standard Deviation

CV: Coefficient of Variation

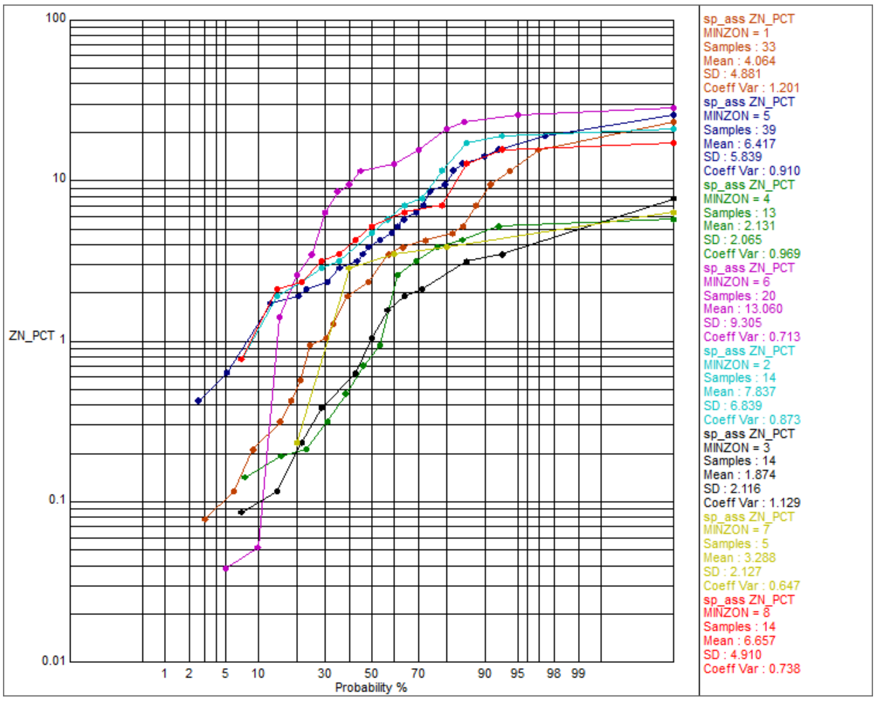

Figure 14.9. Composite Zn% - Log probability plot overlays of mineralisation per MINZON (Source: CSA Global, 2018)

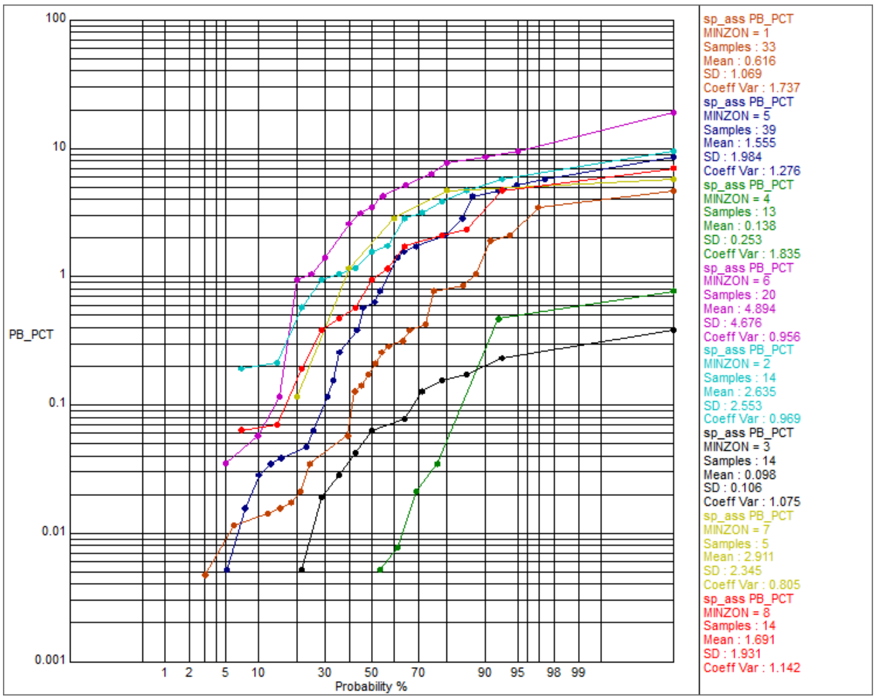

Figure 14.10. Composite Pb% - Log probability plot overlays of mineralisation per MINZON (Source: CSA Global, 2018)

14.9.2 Grade Cutting

Grade cutting (top cutting) is generally applied to data used for grade estimation in order to reduce the local influence of anomalous high-grade samples in the grade estimate. In cases where individual samples would unduly influence the values of surrounding model cells, without the support of other high-grade samples, top cuts are applied. These top-cut are quantified according to the statistical distribution of the sample population.

Cutting strategy was applied based on the following:

- Skewness of the data.
- Probability plots.
- Spatial position of extreme grades.

Histograms and probability plots were reviewed for Zn% and Pb% within the estimation domains to determine the top-cuts. The top-cut statistics are shown in Table 14.6. A total of two samples were greater than the top-cut value for Zn%, and only one sample was greater than the top-cut value for Pb%. These were reset to the respective top-cut values.

Table 14.6. Top-cut statistics per MINZON

Variable	Parameter	1	2	3	4	5	6	7	8
Zn%	Number	33	14	**14**	13	**39**	20	5	14
	Top Cut Value	-	-	**3.50**	-	**20.00**	-	-	-
	# Samples cut	-	-	**1**	-	**1**	-	-	-
	Minimum	0.08	0.75	**0.08**	0.14	**0.44**	0.04	0.24	0.79
	Maximum	23.78	21.78	**3.50**	5.62	**20.00**	29.68	6.13	16.73
	Mean	4.06	7.84	**1.55**	2.13	**6.30**	13.06	3.29	6.66
	%Difference from Uncut Mean	-	-	**-17%**	-	**-2%**	-	-	-
	Median	2.89	4.68	**1.04**	0.81	**3.93**	12.49	3.06	5.22
	Std. Dev.	4.88	6.84	**1.28**	2.07	**5.51**	9.31	2.13	4.91
	CV	1.20	0.87	**0.83**	0.97	**0.87**	0.71	0.65	0.74
Pb%	Number	33	14	14	13	39	**20**	5	14
	Top Cut Value	-	-	-	-	-	**10.00**	-	-
	# Samples cut	-	-	-	-	-	**1**	-	-
	Minimum	0.01	0.19	0.01	0.01	0.01	**0.04**	0.12	0.07
	Maximum	4.78	9.16	0.38	0.76	8.64	**10.00**	5.79	6.81
	Mean	0.62	2.64	0.10	0.14	1.56	**4.41**	2.91	1.69
	%Difference from Uncut Mean	-	-	-	-	-	**-10%**	-	-
	Median	0.19	1.60	0.06	0.01	0.62	**3.63**	2.01	0.97
	Std. Dev.	1.07	2.55	0.11	0.25	1.98	**3.37**	2.35	1.93
	CV	1.74	0.97	1.08	1.84	1.28	**0.77**	0.81	1.14

Std. Dev.: Standard Deviation

CV: Coefficient of Variation

The associated log histogram plots for the uncut and top-cut Zn% within MINZON = 3 and 5, and the uncut and top-cut Pb% within MINZON = 6 are shown in Figure 14.11 to Figure 14.13.

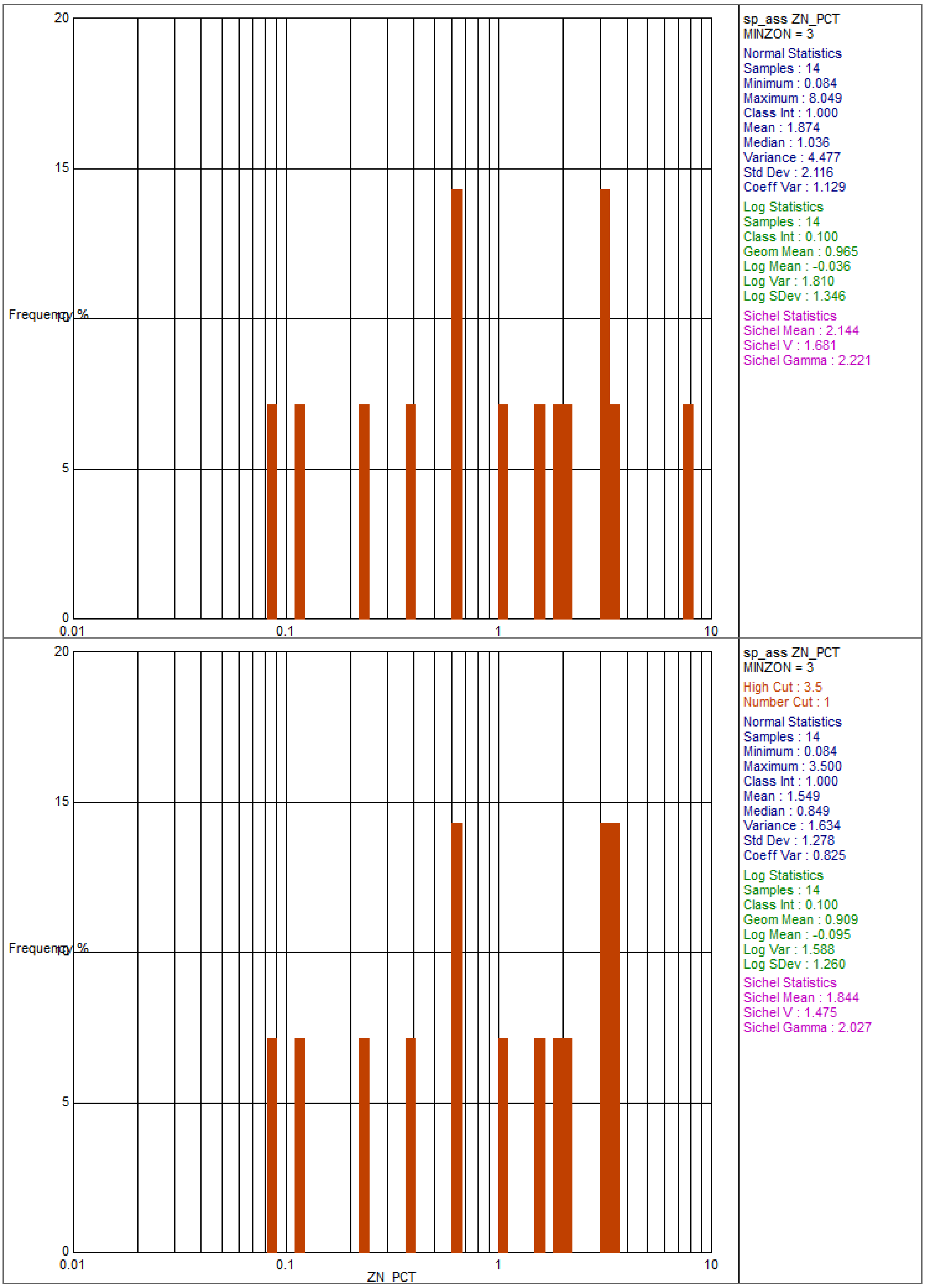

Figure 14.11. Zn% (MINZON = 3) - Log Histogram Uncut (top) and Top-Cut (bottom) (Source: CSA Global, 2018)

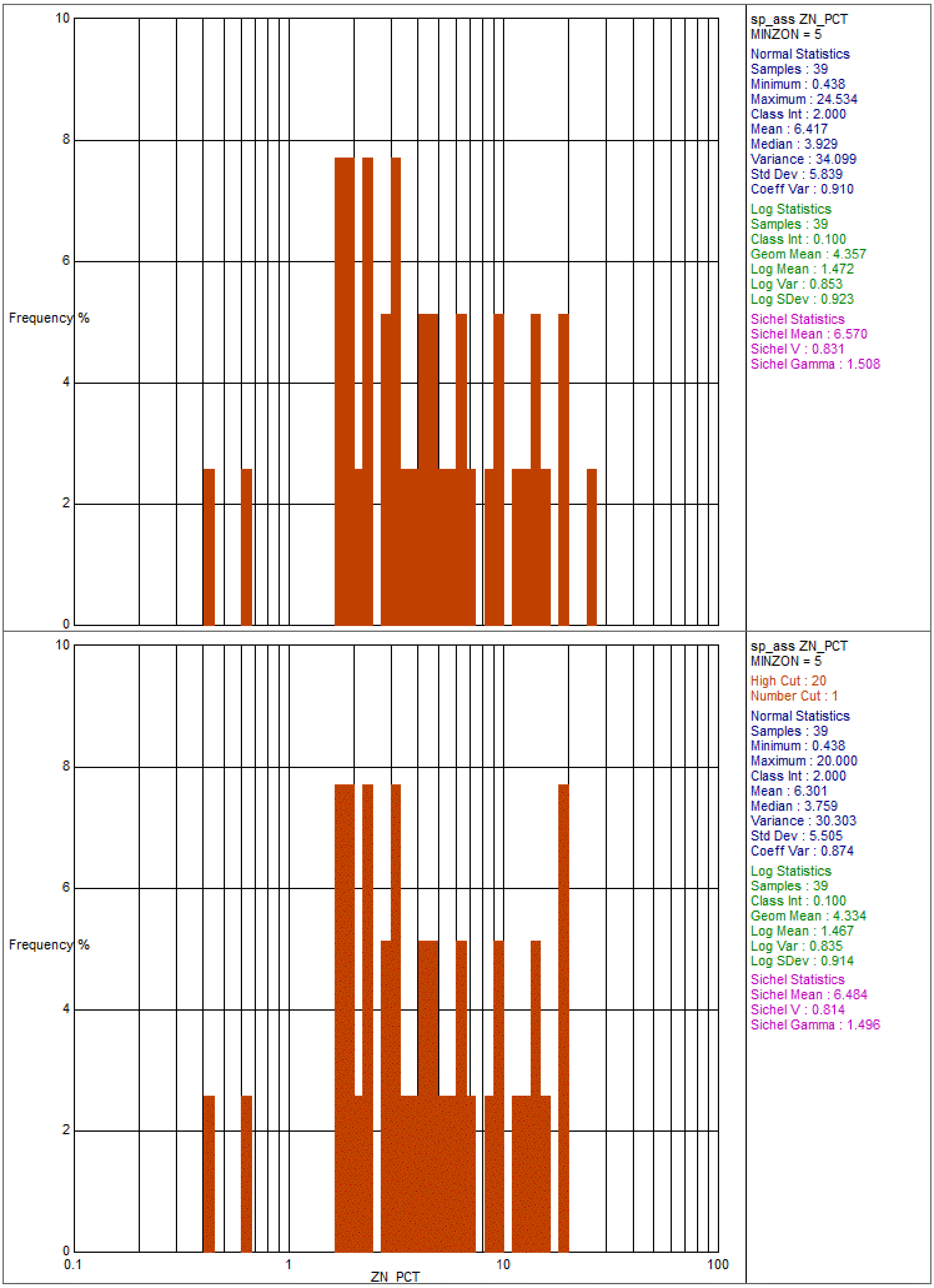

Figure 14.12. Zn% (MINZON = 5) - Log Histogram Uncut (top) and Top-Cut (bottom) (Source: CSA Global, 2018)

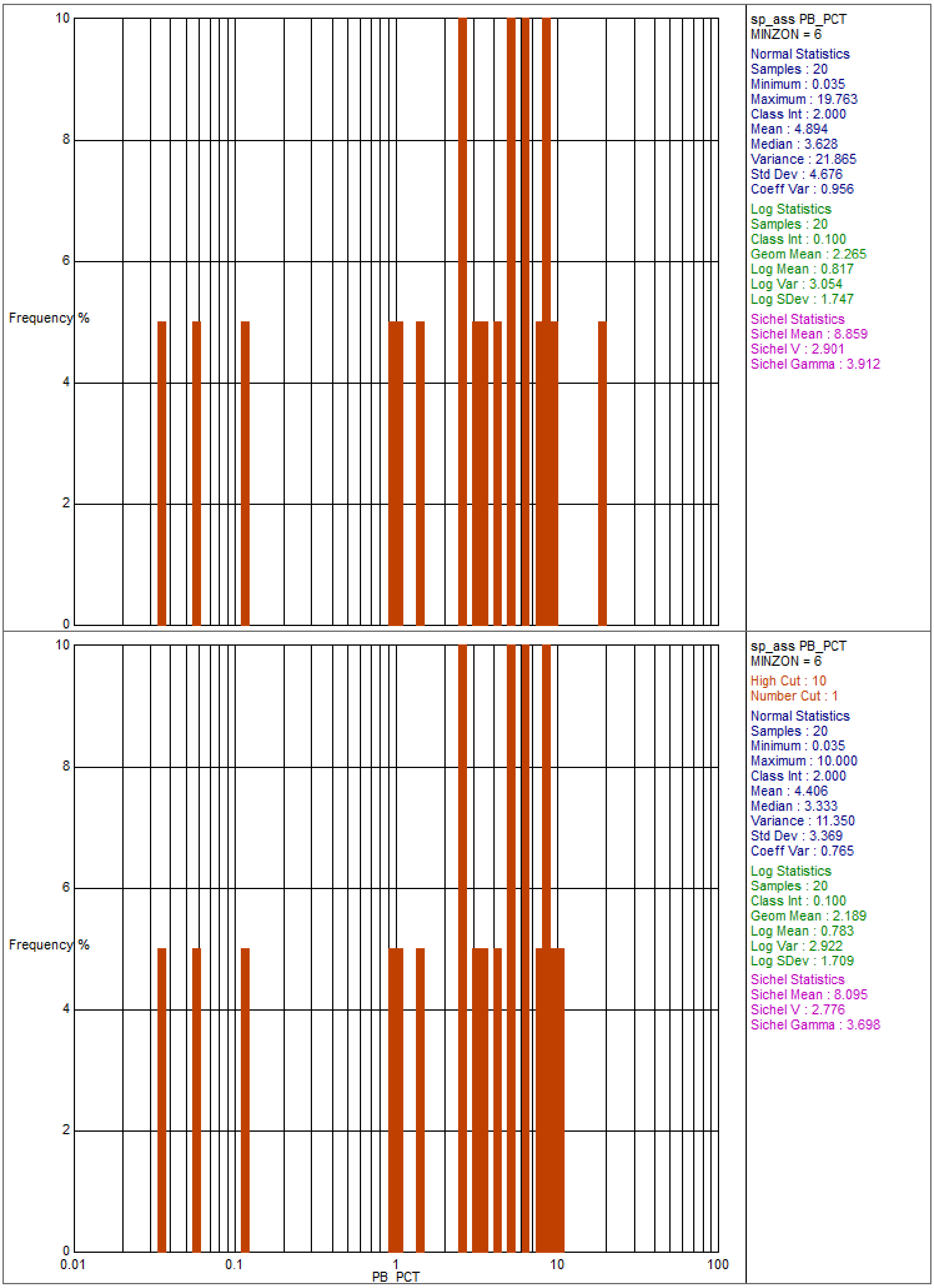

Figure 14.13. Pb% (MINZON = 6) - Log Histogram Uncut (top) and Top-Cut (bottom) (Source: CSA Global, 2018)

14.9.3 Density

Specific gravity measurements for the Stonepark deposit were determined using the water immersion method. The density is calculated with the following formula:

$$\text{Density} = \frac{\text{Weight in air}}{\text{Weight in air} - \text{Weight in water}}$$

The in situ dry bulk densities ("BD") within the MRE area were reviewed by CSA Global, by mineralisation domain, as well as by lithology (geology unit).

There is a limited amount of data available within the mineralisation wireframes (DOMAIN = 1; 23 out of 1,627 samples) and it was not possible to determine the exact correlation between BD and grades (Zn% and Pb%). As such, the average BD within DOMAIN = 1 was applied to the mineralised material, which is 3.24 t/m^3 (Figure 14.14).

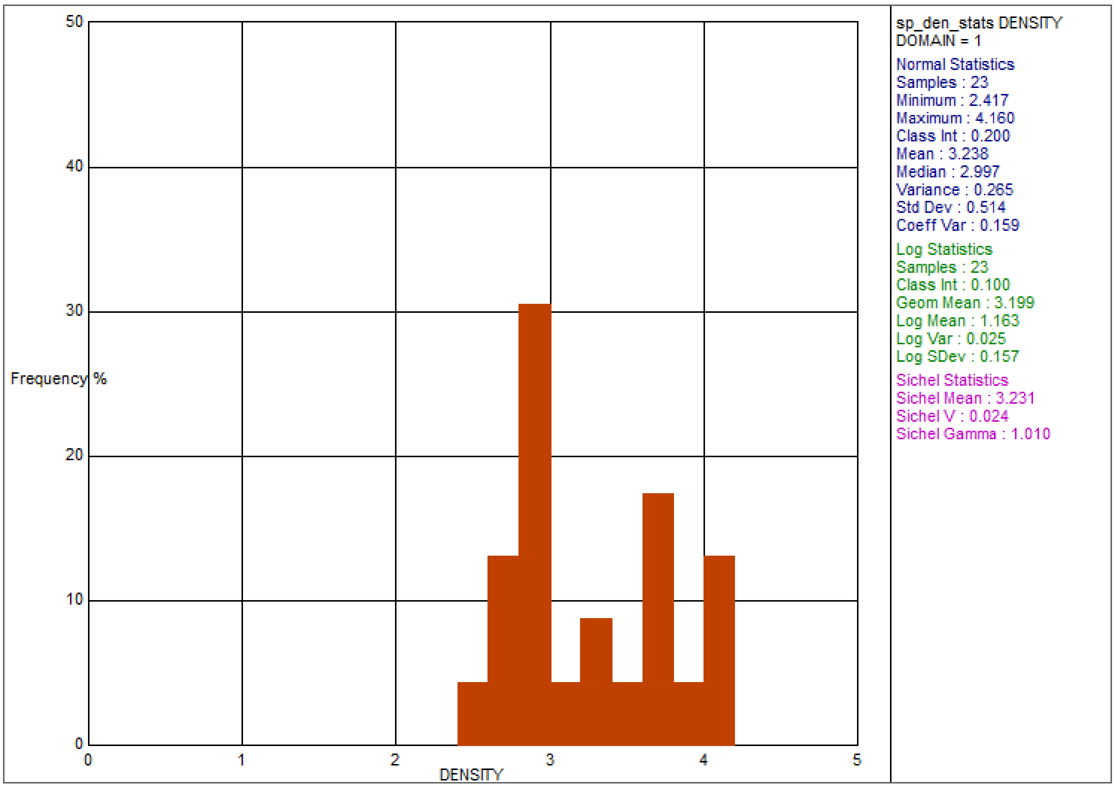

Figure 14.14. Histogram plot - In Situ Dry Bulk Density (DOMAIN = 1) (Source: CSA Global, 2018)

The BD for the material outside the mineralisation domains, was assigned by lithology (GEOL = 100 to 700). During statistical review, bottom and/or top cuts were applied to the BD values per lithology, depending on distribution. No data was available for GEOL = 100 (Overburden). The BD statistics are shown in Table 14.7.

Table 14.7. In Situ Dry Bulk Densities statistics per GEOL

Parameter	100	200	300	400	500	600	700
Number	-	17	59	71	202	1,189	66
Bottom Cut Value	-	2.63	2.57	-	2.55	2.40	2.59

Parameter	100	200	300	400	500	600	700
Top Cut Value	-	2.83	-	-	-	3.15	2.75
# Samples cut	-	2	2	-	2	18	3
Minimum	-	2.43	1.73	2.60	1.80	1.81	2.51
Maximum	-	3.18	2.77	2.80	2.85	4.78	2.96
Uncut Mean	-	2.71	2.67	2.69	2.66	2.71	2.68
Cut Mean	-	2.70	2.69	2.69	2.67	2.71	2.67
%Difference	-	-0.4%	+0.7%	0%	+0.4%	0%	-0.4%

The average BD values, as used in the MRE, are shown in Table 14.8. A BD of 2.00 t/m^3 is considered reasonable for the overburden in the deposit location. There is no mineralisation within the overburden and as such it is not material to the MRE.

Table 14.8. Stonepark MRE - In Situ Dry Bulk Densities

DOMAIN	Description	In Situ Dry Bulk Density (t/m^3)
DOMAIN = 1	Mineralised domain	3.24
GEOL = 100	Overburden	2.00
GEOL = 200	Intrusives	2.70
GEOL = 300	Knockroe Volcanics	2.69
GEOL = 400	Lough Gur	2.69
GEOL = 500	Sub-Waulsortian Limestone	2.67
GEOL = 600	Waulsortian Limestone	2.71
GEOL = 700	Argillaceous Bioclastic Limestone	2.67

Additional BD data should be collected routinely during future drilling campaigns and reviewed to build up a useful database of values that can be used to improve the confidence of the tonnage factors for the Stonepark deposit. The methodology and measurements should be verified and standardised in future MRE updates.

14.10 Variography

14.10.1 Definitions

Variography (spatial analysis) is carried out in order to understand how sample values relate to each other in space, and thus reflects the average spatial continuity for a local variable. The variogram is used to determine the weight to apply to each sample during kriging estimation and takes into consideration the average spatial characteristics of the underlying grade distribution. It can help to infer possible similarities between known samples and points that have not been sampled.

14.10.2 Methodology

The variograms for Zn% and Pb% were modelled on top-cut 1.0 m composites within a subset of the estimation domains. The subset selected comprised the five estimation domains (MINZON = 2 to 6) grouped within the North area of the MRE (Figure 14.3). Nuggets were obtained from the downhole variograms, where the lag was set equal to the composite length of 1.0 m. Normal scores transform was used for modelling the variograms. Variograms were well structured downhole and along strike. Additional infill drilling and data is needed for more robust structures across strike and down dip. The modelled variograms are adequate for the current MRE.

The variograms were back transformed prior to estimation. Variogram parameters are detailed in Table 14.9 and variogram models for Zn% and Pb% are shown in Figure 14.15 and Figure 14.16. Dynamic anisotropy was used during estimation to allow the rotation angles for variograms to be defined individually for each cell in the models, so that the variogram orientation is aligned with the axes of mineralisation.

Table 14.9. Variogram parameters

Variable	Datamine Orientation (ZXZ)	Nugget	Structure 1		Structure 2	
			Partial Sill	Range	Partial Sill	Range
Zn%	0˚	0.23	0.11	204.5	0.66	433.5
	0˚			173		348.5
	-90˚			6		33.5
Pb%	0˚	0.19	0.32	159.5	0.49	402.5
	0˚			63.5		225
	-90˚			6		20

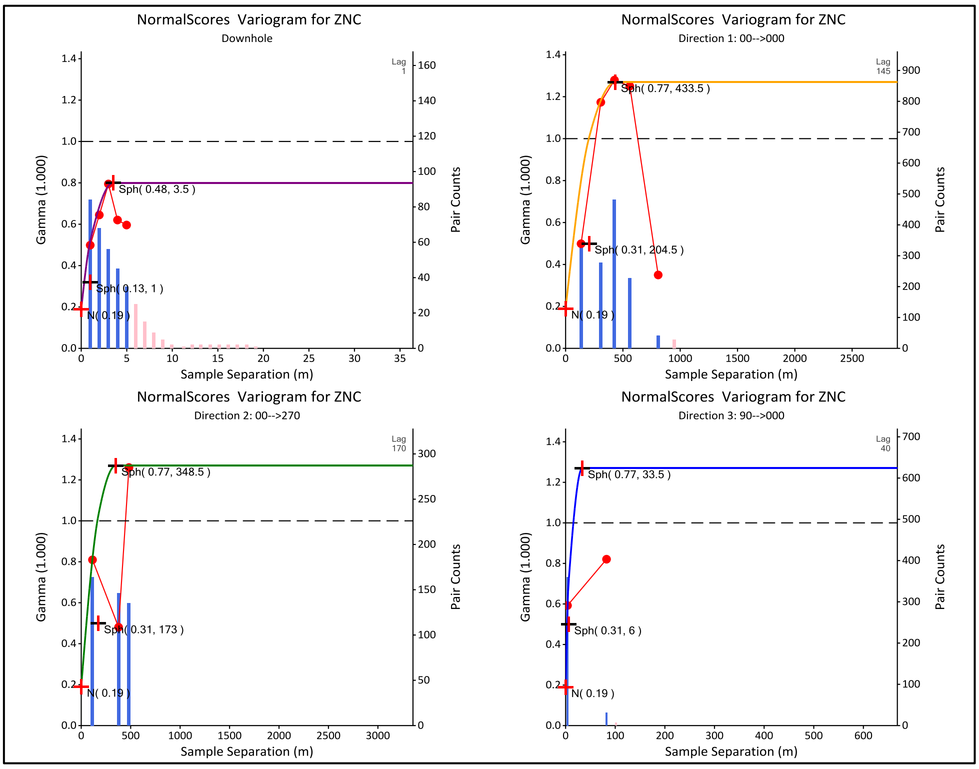

Figure 14.15. Variogram used for Zn% estimation (Source: CSA Global, 2018)

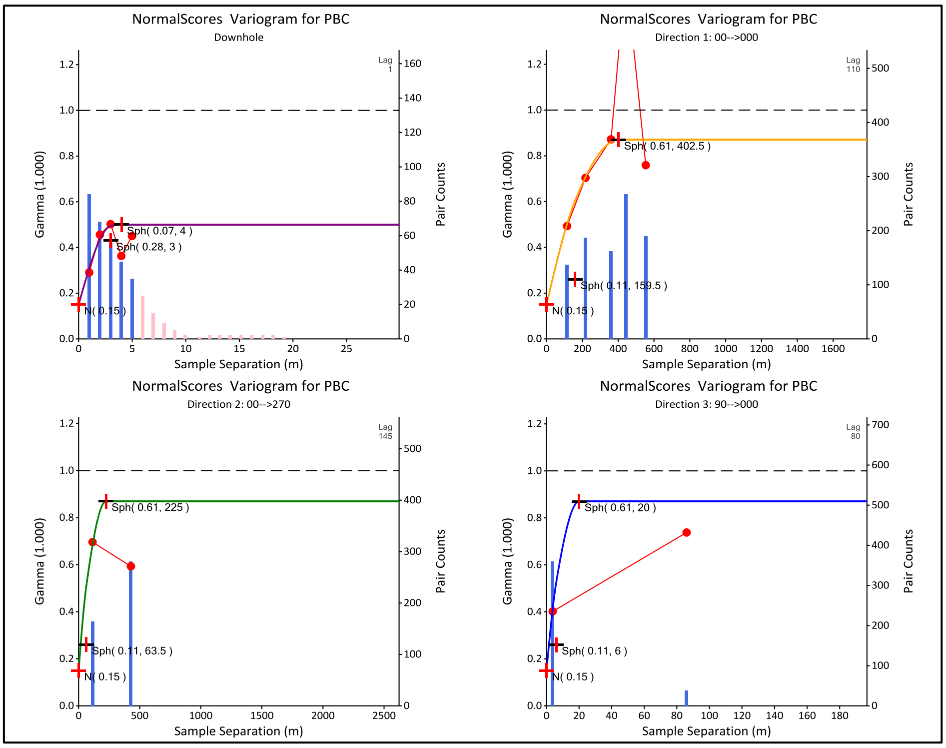

Figure 14.16. Variogram used for Pb% estimation (Source: CSA Global, 2018)

14.11 Block Model

The MRE was completed by CSA Global using the Datamine StudioRM™ software package.

14.11.1 Block Model Extents and Block Size

The model was cut to below the topographic surface and a model prototype with parent cells of 25 mN by 25 mE by 5 mRL, with sub-celling to 5 mN by 5 mE by 1 mRL, was created. The model prototypes parameters, including cell dimensions and model extents, are shown in Table 14.10.

Panel sizes for grade estimation (25 mN by 25 mE by 5 mRL) were based on the following:

- Results of Kriging Neighbourhood Analysis ("KNA")
- The density of the drilling grids
- The geometry of the mineralisation.

Table 14.10. Stonepark – Block model dimensions

Axis	Origin	Model Extent (m)	# Blocks	Parent Block dimension (m	Sub-cell dimension (m)
Easting (X)	161,650	3,100	124	25	5
Northing (Y)	147,450	2,600	104	25	5
Elevation (Z)	-650	850	170	5	1

Mineralisation wireframes were filled with model cells and the block model volume was compared to the mineralisation volume, per MINZON (Table 14.11). The volumes compare to within 1%, showing good resolution on mineralisation boundaries.

Table 14.11. Mineralisation volumes - Wireframe vs block model

MINZON	Wireframe Volume (m^3)	Block Model Volume (m^3)	%Difference
1	357,721	360,575	1%
2	407,213	393,950	-3%
3	254,933	257,525	1%
4	188,200	183,825	-2%
5	580,380	581,475	0%
6	359,332	352,475	-2%
7	67,690	67,825	0%
8	239,372	240,575	1%
Total	**2,454,842**	**2,438,225**	**-1%**

14.12 Grade Estimation

14.12.1 Data Used

Estimation of Zn% and Pb% grades were carried out using Ordinary Kriging ("OK") into parent cell panels. Grade was estimated into all estimation domain blocks (MINZON = 1 to 8), using hard boundaries and all available data within the mineralisation domain.

The parameters used for grade estimation are summarised in Table 14.12. These are discussed in the sections below.

Table 14.12. Stonepark estimation parameters summary

Attribute	Description
Parent cells (block sizes X, Y, Z)	25 mN x 25 mE x 5 mRL
Minimum number of samples	6 (3 on search pass 3)
Maximum number of samples	15 (6 on search pass 3)
Search ranges (pass 1)	Zn%: 285 m x 230 m x 10 m Pb%: 265 m x 150 m x 10 m
Search Range multiplier	Pass 2 – 2x; Pass 3 – 4x
Discretisation	3 x 3 x 3
Maxkey	3
Estimation method	Ordinary Kriging

14.12.2 Kriging Neighbourhood Analysis ("KNA")

KNA on the top-cut 1 m composites was used to optimise the parent cell sizes and to determine the optimal theoretical estimation and search parameters during kriging.

The following were reviewed for each of the variables:

- Slope and Kriging Efficiency ("KE") statistics for a well-informed block for different block sizes.
- On choosing a block size (25 m x 25 m x 5 m, X x Y x Z), optimum minimum and maximum samples were chosen. The maximum was set at the lowest number of samples from which consistently good slopes and KE could be derived. The minimum was defined as the lowest minimum from which moderate to good statistics could be derived.
- On choosing the minimum/maximum samples, search ellipse ranges were defined. The quality of the statistics was least sensitive to this parameter. The ranges chosen approximated 2/3 of the range of the second structure of the variograms.
- Negative weights were reviewed at each stage to ensure the parameters chosen were not leading to excessive negative weights.
- Discretisation was defined at 3 x 3 x 3 (X x Y x Z).
- Maximum number of samples allowed per each individual drill hole, per estimate, was set to 3.

The KNA results show that the search parameters and block size selected are suitable for use in the MRE and adequately take drill spacing, geology and practicality into account. The plots with the selected estimation parameters are shown in Figure 14.17 and Figure 14.18.

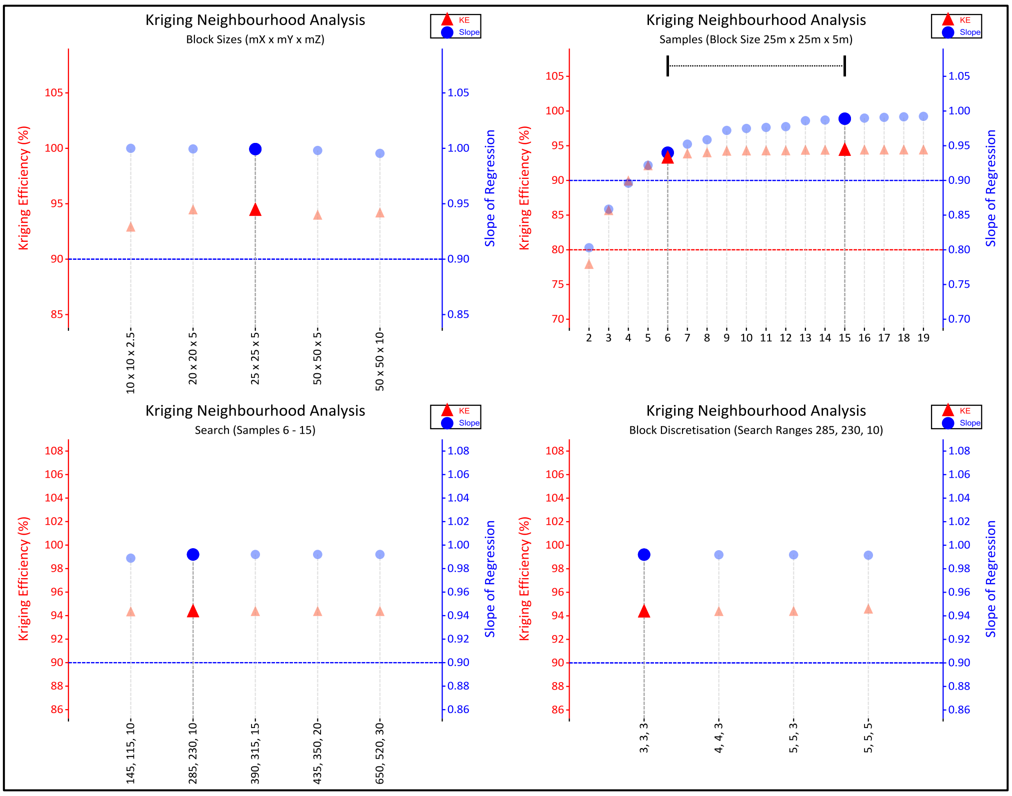

Figure 14.17. KNA block size, samples, search and discretisation results for Zn% estimation (Source: CSA Global, 2018)

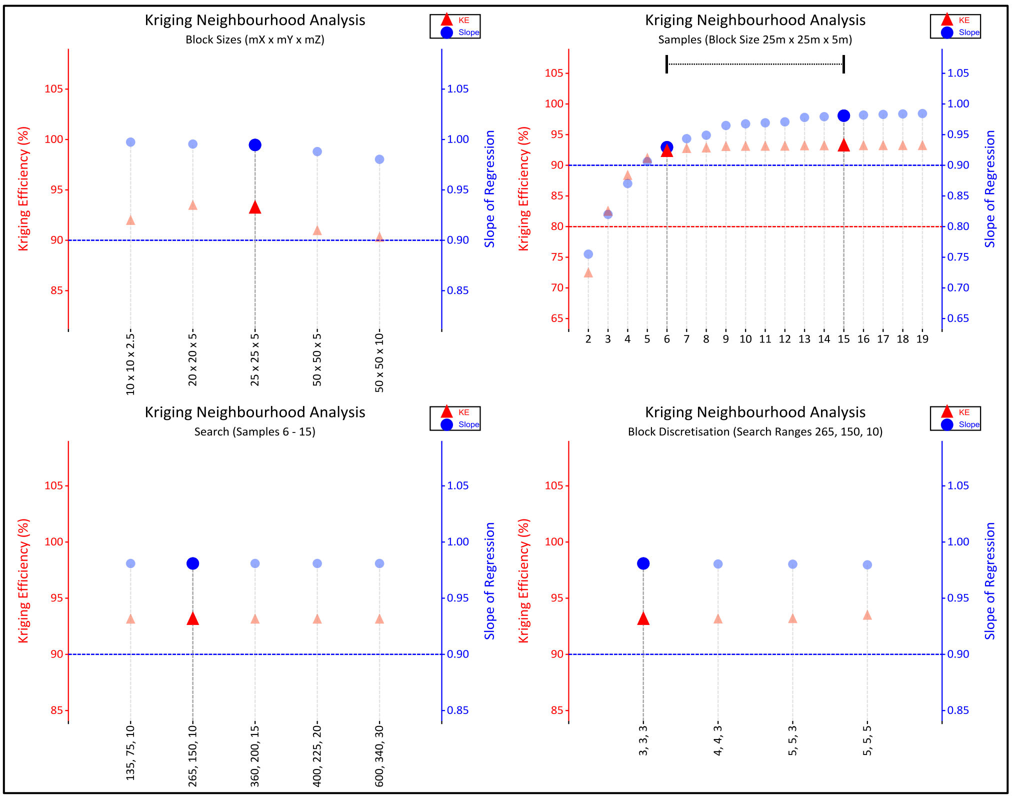

Figure 14.18. KNA block size, samples, search and discretisation results for Pb% estimation (Source: CSA Global, 2018)

The number of composites and search parameters used for the Zn% and Pb% grade estimations are presented in Table 14.13.

Table 14.13. Search neighbourhood parameters for Zn% and Pb%

Variable	Search Pass	Search Distance			Minimum Number Composites	Maximum Number Composites	Maximum samples per hole
		Major	Semi	Minor			
Zn%	1	285	230	10	6	15	3
	2	570	460	20	6	15	3
	3	1,140	920	40	3	6	3
Pb%	1	265	150	10	6	15	3
	2	530	300	20	6	15	3
	3	1,060	600	40	3	6	3

14.12.3 Methodology

Estimation of Zn% and Pb% grades was carried out using OK into parent cell panels. Zonal control with a hard boundary between mineralisation and waste, as well as between individual mineralisation domains, was used during the grade estimation. The estimation domains were assigned a unique MINZON number, corresponding to the MINZON field in the input composite data. The grade estimation domains for the Stonepark estimate are MINZON = 1 to 8.

A three-phased search pass was applied, and the orientation of the search ellipsoid was aligned to the modelled variography. This process involves the estimation being performed three times, where two expansion factors are used. During each individual estimation run, this factor increases the size of the search ellipse used to select samples. This method ensures that blocks which are not estimated and populated with a grade value in the first run, are populated during one of the subsequent runs (Zn%: Pass 1 = 76%, Pass 2 = 14% and Pass 3 = 10%; Pb%: Pass 1 = 68%, Pass 2 = 22% and Pass 3 = 10%).

The mineralised areas were estimated using dynamic anisotropy. This process allows the rotation angles for the search ellipsoid to be defined individually for each cell in the models, so that the search ellipsoid is aligned with the axes of mineralisation. This therefore requires the rotation angles to be interpolated into the model cells, which in turn requires a set of angles as the input data file for interpolation. The dip and dip direction of the major axis of anisotropy were defined by digitising strings in section perpendicular to the strike of the mineralisation. These strings were converted to points that contained the true dip and dip direction of the mineralisation and stratigraphy (fields SANGLE1_F and SANGLE2_F in the search parameter files).

14.13 Model Validation

Validation of the block model was completed by comparing input and output means. Several techniques were used for the validation. These included visual validation of block grades, global grade comparisons and swath plots.

14.13.1 Visual Validation

The block model was visually reviewed section by section to ensure that the grade tenor of the input data was reflected in the block model (examples shown in Figure 14.19 and Figure 14.20). Generally, the estimates compare well with the input data. The grades in the composites align with the corresponding grades in the block models.

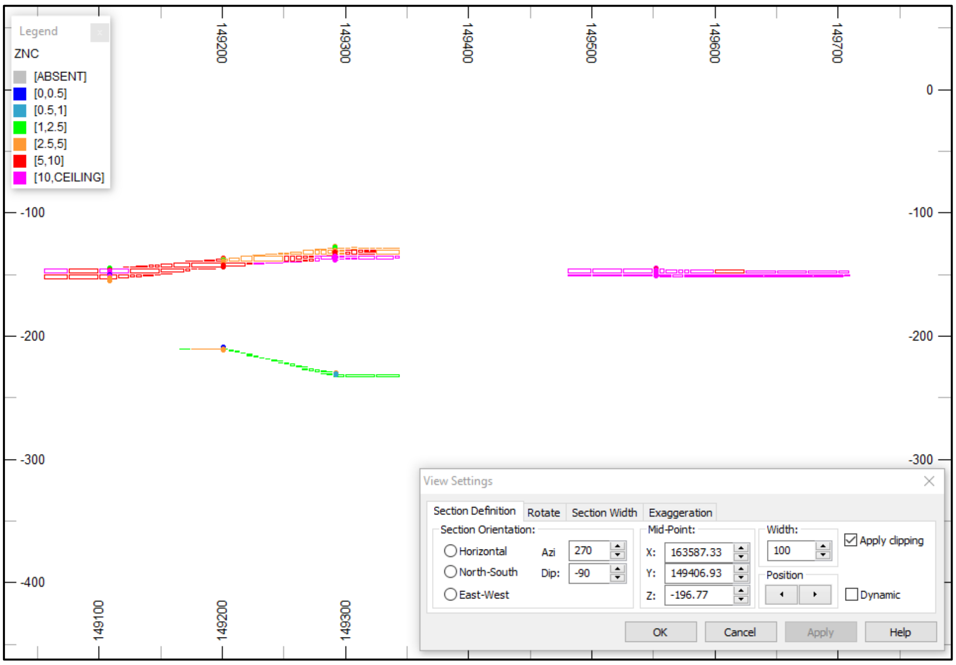

Figure 14.19. Section view – Zn% Grade Model and composites (Source: CSA Global, 2018)

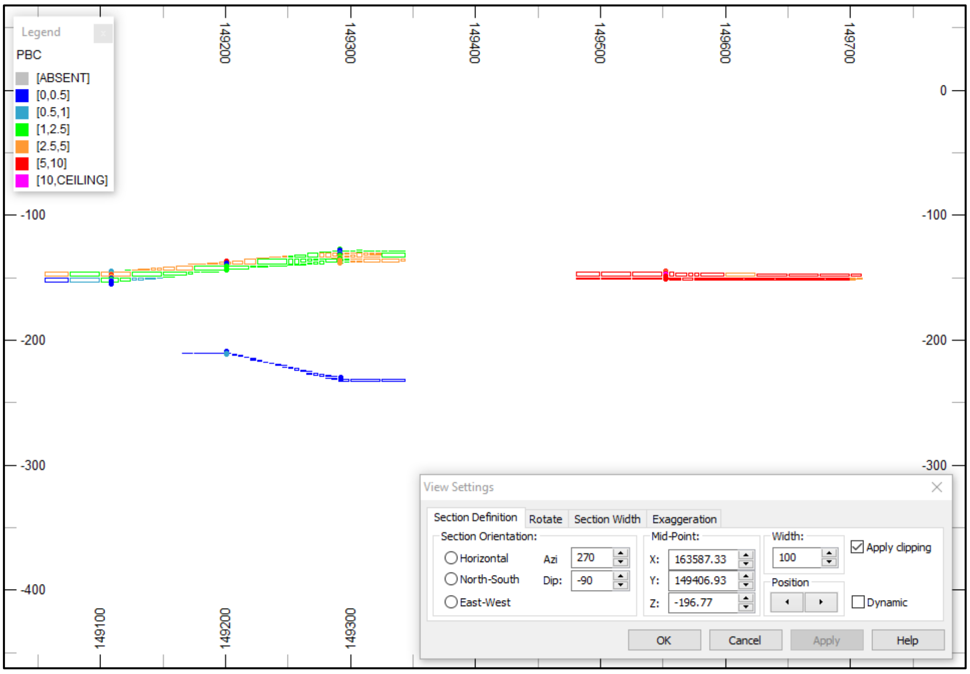

Figure 14.20. Section view – Pb% Grade Model and composites (Source: CSA Global, 2018)

14.13.2 Statistical Validation

De-clustering

Irregular sampling of a deposit, most commonly through infill drilling or drilling in multiple orientations, causes clustering. Clustering results in a disproportionate distribution of grades (usually high grades from the infill drilling) in the dataset used for statistical analysis. Mixed populations in the histogram can create a bias when comparing the drill hole sample distribution with the block model distribution (which is de-clustered) and distort the calculated mean grades and variance.

Different ways of de-clustering data each give different results. These include interactive filtering, polygonal de-clustering, nearest neighbour de-clustering and cell-weighted de-clustering.

The method used for geostatistical analysis and validation for the MRE is cell-weighted de-clustering, since all samples are considered when determining the average. This method involves placing a grid of cells over the data. Each cell that contains at least one sample is assigned a weight of one. That weight of one is distributed evenly between the samples within each cell.

The OK grade estimation process if a very efficient way of data clustering, therefore de-clustering before grade estimation is not necessary. De-clustering of the input data does give a good indication of the global mean. It is used in the validation of the estimate (comparison of the means). De-clustering was applied to remove any bias due to drill spacing prior to validation. The de-clustering parameters are presented in Table 14.14.

Table 14.14. De-clustering parameters

Cell size (m)			Block model origin		
X	Y	Z	X	Y	Z
25	25	5	161,650	147,450	-650

Results

The global statistics of Zn% and Pb% were reviewed and the results are reported below in Table 14.15.

All estimated block grades are included. The mean grades in the estimated model block parent cells were compared to the raw, as well as the de-clustered, top-cut composite data.

Generally, the model validates well, showing no difference for Zn%, and 10% difference for Pb%, between the de-clustered composites and the block estimates. This is within expected parameters.

Table 14.15. De-clustered mean grade comparisons for Zn% and Pb%

	Variable	Count	Minimum	Maximum	Mean	Std. Dev.	CV
Composites Naïve	ZNC	152	0.04	29.68	5.99	6.44	1.08
Composites De-clustered	ZNC	152	0.04	29.68	5.91	6.29	1.06
Model	ZN	2,371	0.81	22.59	5.91	3.91	0.66

	Variable	Count	Minimum	Maximum	Mean	Std. Dev.	CV
Difference [(Composite De-clustered Grade – Model Grade)/Model Grade]					**0%**		
Composites Naïve	PBC	152	0	10	1.63	2.35	1.44
Composites De-clustered	PBC	152	0	10	1.58	2.26	1.44
Model	PB	2,371	0.04	7.67	1.74	1.42	0.81
Difference [(Composite De-clustered Grade – Model Grade)/Model Grade]					**+10%**		

ZNC: Top-cut Zn%

PBC: Top-cut Pb%

Std. Dev.: Standard Deviation

CV: Coefficient of Variation

14.13.3 Trend Plots

Swath plots were created as part of the validation process, by comparing the model parent block grades and input composites (de-clustered and top cut) in spatial increments. These plots display northing, easting and elevation slices throughout the deposit for Zn% (Figure 14.21) and Pb% (Figure 14.22).

The plots show that the distribution of block grades for both Zn% and Pb% honours the distribution of the associated input composite grades. There is a minor degree of smoothing evident, mostly along the easting and northing directions, which is to be expected from the estimation method used, with block grades showing lower overall variance. The general trend of the Zn% and Pb% composite grades are reflected in the block model.

Gaps in the swath plots along the easting and northing directions show areas of no drilling and/or mineralisation.

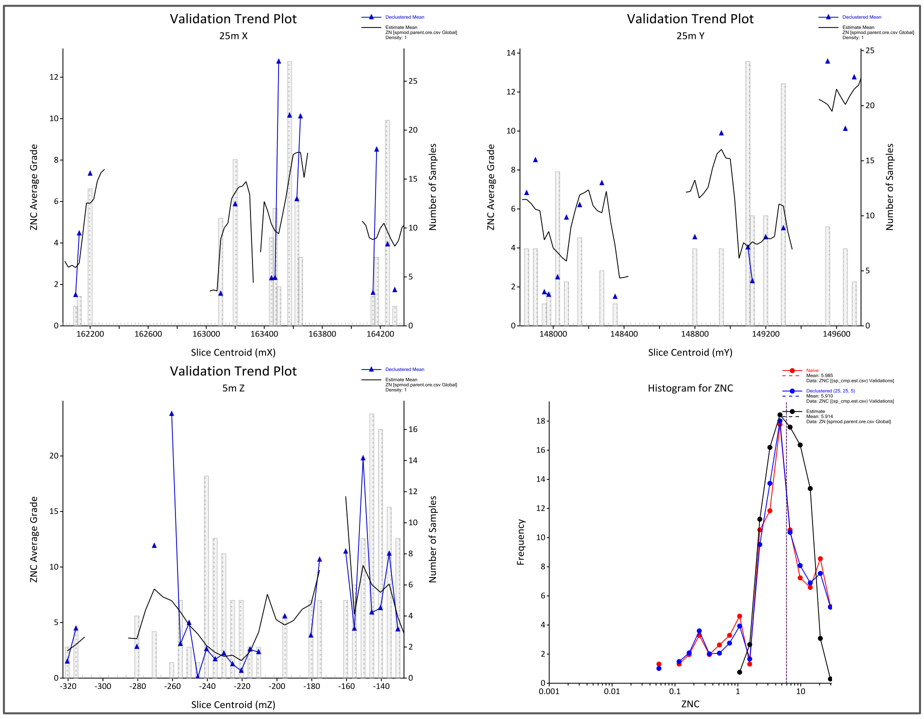

Figure 14.21. Zn% Swath plots and histogram, block model (black) vs. de-clustered composites (blue) (Source: CSA Global, 2018)

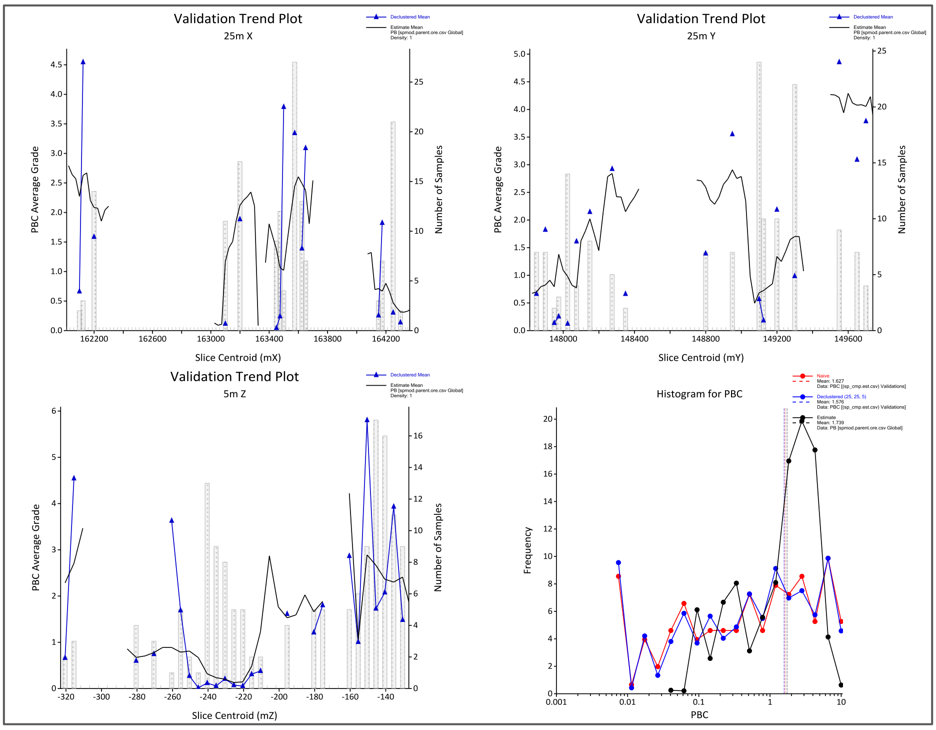

Figure 14.22. Pb% Swath plots and histogram, block model (black) vs. de-clustered composites (blue) (Source: CSA Global, 2018)

14.14 Mineral Resource Classification

The Mineral Resource has been classified as Inferred Mineral Resource based on CIM guidelines. The classification level is based upon an assessment of geological understanding of the deposit, geological and mineralisation continuity, drill hole spacing, quality control results, search and interpolation parameters, and an analysis of available density information.

The Stonepark deposit shows reasonable continuity of mineralisation within well-defined geological constraints. Drill holes are located at a nominal spacing of 100 m on 100 m sections extending out to 150 m. The drill spacing is sufficient to allow the geology and mineralisation zones to be modelled into coherent wireframes for each domain. Reasonable consistency is evident in the orientations, thickness and grades of the mineralised zones.

Validation of the drill holes and the availability of QAQC information has allowed for the classification of Inferred Mineral Resources.

Reasonable chances of eventual economic extraction are derived from using a zinc equivalent ("ZnEq") cut-off grade of 4.8%, based on Net Smelter Return ("NSR") calculations of conceptual operating costs and metal revenue. These are further discussed in Section 14.15.

A summary of the classification codes applied in the model are shown in Table 14.16.

Table 14.16. CLASS field and description

CLASS	Description
3	Inferred Mineral Resource
9	Unclassified – All waste material not estimated

14.15 Mineral Resource Reporting

The MRE for Stonepark as at the 26th April 2018 (Table 14.17), comprised 5.1 Mt at grades of 8.7% Zn and 2.6% Pb[5]. Inferred Mineral Resources were reported using a zinc equivalent ("ZnEq") cut-off grade of 4.8%, based on Net Smelter Return ("NSR") calculations of conceptual operating costs and metal revenue, in support of "reasonable chances of eventual economic extraction". The Stonepark Mineral Resource estimate is contained within three main zones – Stonepark North, Stonepark West and Stonepark (Table 14.18).

Even though the database does contain Ag values, 150 of the 185 samples within the mineralisation wireframes are below detection limit, which equates to 81% of the Ag sample population. The sample composites mean Ag grade for the combined mineralisation domains is 1.58 g/t. As such, CSA Global did not report Ag as part of the MRE since it is not considered to make a material contribution.

No mining optimisation or Economic Study has been completed, and the reported Inferred Mineral Resources do not have proven economic viability and are not Mineral Reserves.

[5] The authors note that GERC's news release dated 17/04/2018 relied on CSA Global's original MRE of 5.3Mt @ 11.15% Zn+Pb. That original estimate has since been updated, as it was felt that the concentrate grade used in the calculations for the earlier cut-off grade was not representative of the expected grade for a deposit of this type. In the opinion of the authors, the adjustment to the MRE did not make a material difference to figures quoted.

CSA Global is not aware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the MRE.

Table 14.17. Mineral Resource Estimate – Stonepark Zinc-Lead Project - as at 26th April 2018

Group Eleven Resources Corporation							
Stonepark Mineral Resource Estimate as at 26 April, 2018							
Resource Category	Tonnes ('000)	Grades			Metal Content (pounds)		
		Zn (%)	Pb (%)	Zn+Pb (%)	Zn ('000)	Pb ('000)	Zn+Pb ('000)
Inferred	5,100	8.7	2.6	11.3	982,200	296,600	1,287,800

Notes:

- Classification of the MRE was completed based on the guidelines presented by Canadian Institute for Mining (CIM), adopted for Technical reports which adhere to the regulations defined in Canadian National Instrument 43-101 (NI 43-101).
- Inferred Mineral Resources are at 4.8% zinc equivalent cut-off grade.
- Zinc Equivalent (ZnEq) = (NSRPb+NSRZn+Mc+Pc)/(RZn*PZn*(PrZn-ScZn)-RZn*PZn*PrZn*(RoyZn/100))
- ZnEq cut-off grade (calculated from Net Smelter Return) using the following parameters:
  - Zinc price of US$3,284/t, recovery 88%; Lead price of US$2,425/t, recovery 80%.
  - Concentrate grade 60% zinc, 50% lead.
  - Processing cost of US$21.25/t; Mining cost of US$46.50/t; Treatment charges of US$1.00/t of concentrates.
  - Payable zinc 85%, lead 94%, with selling cost zinc US$1,257/t metal and lead US$1,026/t metal.
  - Royalty of 4.5%.
- The Inferred Mineral Resource classification is based on geology, trends in mineralisation, drilling spacing, sampling QA/QC, estimation search pass number and number of samples, and zinc equivalent grade.
- Tonnages and metal are rounded to the nearest 100,000 to reflect this as an estimate.
- Average In Situ Dry Bulk Density for mineralised material is 3.24 t/m^3, based on available data.
- Mineralisation wireframes were constructed using a minimum true thickness of 2.0 m, at 2% Zn+Pb natural cut-off.
- CSA Global is not aware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the MRE.

Table 14.18. Zones comprising the maiden Mineral Resource Estimate – Stonepark Zinc-Lead Project - as at 26th April 2018

Area	Resource Category	Tonnes ('000)	Grades			Metal Content (pounds)		
			Zn (%)	Pb (%)	Zn+Pb (%)	Zn ('000)	Pb ('000)	Zn+Pb ('000)
Stonepark North	**Inferred**	3,900	9.2	2.9	12.1	790,200	247,600	1,037,800
Stonepark West		800	7.1	2.2	9.3	128,000	39,900	167,900
Stonepark		400	7.0	1.0	8.0	64,000	9,100	73,100
TOTAL		**5,100**	**8.7**	**2.6**	**11.3**	**982,200**	**296,600**	**1,278,800**

A ZnEq grade is used at Stonepark to generate a single value based on both the zinc and lead grades within the Mineral Resource.

$$ZnEq = (NSRPb+NSRZn+Mc+Pc)/(RZn*PZn*(PrZn-ScZn)-RZn*PZn*PrZn*(RoyZn/100))$$

The following costs and assumptions have been made based on costs of similar mines and other sources:

- Life of Mine (“LOM”).
  - Considering Zn >0% is 7,899,849 tonnes, using the Taylor rule, the LOM could be considered as:
    - LOM = 0.2*(Resources)$^{1/4}$
    - Thus, the LOM= 2,098 t/day (355 days/year).
- Mining methodology.
  - The deposit consists of sub-horizontal, stratiform (1.0 to 7.5 m thick) lenses of massive and semi-massive sphalerite, galena, and pyrite hosted within thick (10 to 75 m) hydrothermal alteration bodies (primarily BMB) within the Waulsortian Limestone Formation.
  - The methodology selected could be room and pillar mining, where:
    - Mining cost: US$46.50/t considering the administration cost.
    - Processing cost: US$21.25/t
- Conventional two-stage flotation circuit to recover separate lead and zinc concentrates. Initial crushing/grinding using conventional SAG mill/cyclone/ball mill circuits is followed by lead and then zinc recovery by flotation using Wemco cells. Concentrate thickening is followed by Dorr Oliver filter-press dewatering.
  - The plant rate could be 720,000 t/year.
  - Plant recoveries: Zn: 88%, Pb: 80%
- Selling cost.
  - Selling cost has been estimated as follows:
    - Payability: Zn = 85%, Pb = 94%
    - Grades in concentrate : 60% Zn, 50% Pb
    - Treatment charges: US$1.00/t of concentrates
    - Selling cost:
      - Zn = US$1,257/t metal
      - Pb = US$1,026/t metal
      - Royalty: 4.5%
    - Prices:
      - Zn: US$3,284/t (based on 3-month future prevision)
      - Pb: US$2,425/t

The ZnEq formula has incorporated the following criteria:

- Mc: Mining cost
- Pc: Processing cost

*NSRPb = (Pb%/100)*RPb*PPb*(PrPb-ScPb) - (Pb%/100)*RPb*PPb*PrPb*(RoyPb/100)*

Where:

- Pb%: Pb grade in % in the block model
- RPb: Processing recovery for Pb
- PPb: Payability for Pb metal
- PrPb: Pb price
- ScPb: Selling cost for Pb
- RoyPb: Royalty

*NSRZn = (Zn%/100) *RZn*PZn*(PrZn-ScZn) - (Zn%/100) *RZn*PZn*PrZn*(RoyZn/100)*

Where:

- Zn%: Zn grade in % in the block model;
- RZn: Processing recovery for Zn;
- PZn: Payability for Zn metal;
- PrZn: Zn price;
- ScZn: Selling cost for Zn; and
- RoyZn: Royalty.

14.16 Previous Mineral Resource Estimates

There are no previous Mineral Resource Estimates.

23.0 Adjacent Properties

The Stonepark Zinc-Lead deposit is immediately adjacent to Glencore's Pallas Green Property, with a reported Inferred Resource of 44.2 Mt @ 8.4% Zn+Pb (Glencore, 2017). The Authors have been unable to verify the Inferred Resource and the resource is not necessarily indicative of mineralisation on the Stonepark project.

The Stonepark Project contains the hydrothermal alteration and mineralisation identified by TIL at Stonepark, Stonepark North and Ballyneety, which lie along strike and on the same structural trend as Glencore's Pallas Green base-metal deposits. It is evident from the geological setting, style and nature of the alteration and mineralisation that the occurrences identified at Stonepark form part of the Pallas Green hydrothermal system, similar to the relationship between Lisheen and Galmoy in the Rathdowney Trend.

In addition, the Stonepark Project is adjacent to the Rathkeale block of 8 licences held by Adventus Zinc Ireland Ltd. The Courtbrown base-of-Waulsortian Zn+Pb prospect, held by Diversified Asset Holdings, is immediately north of GERC's licence holding.

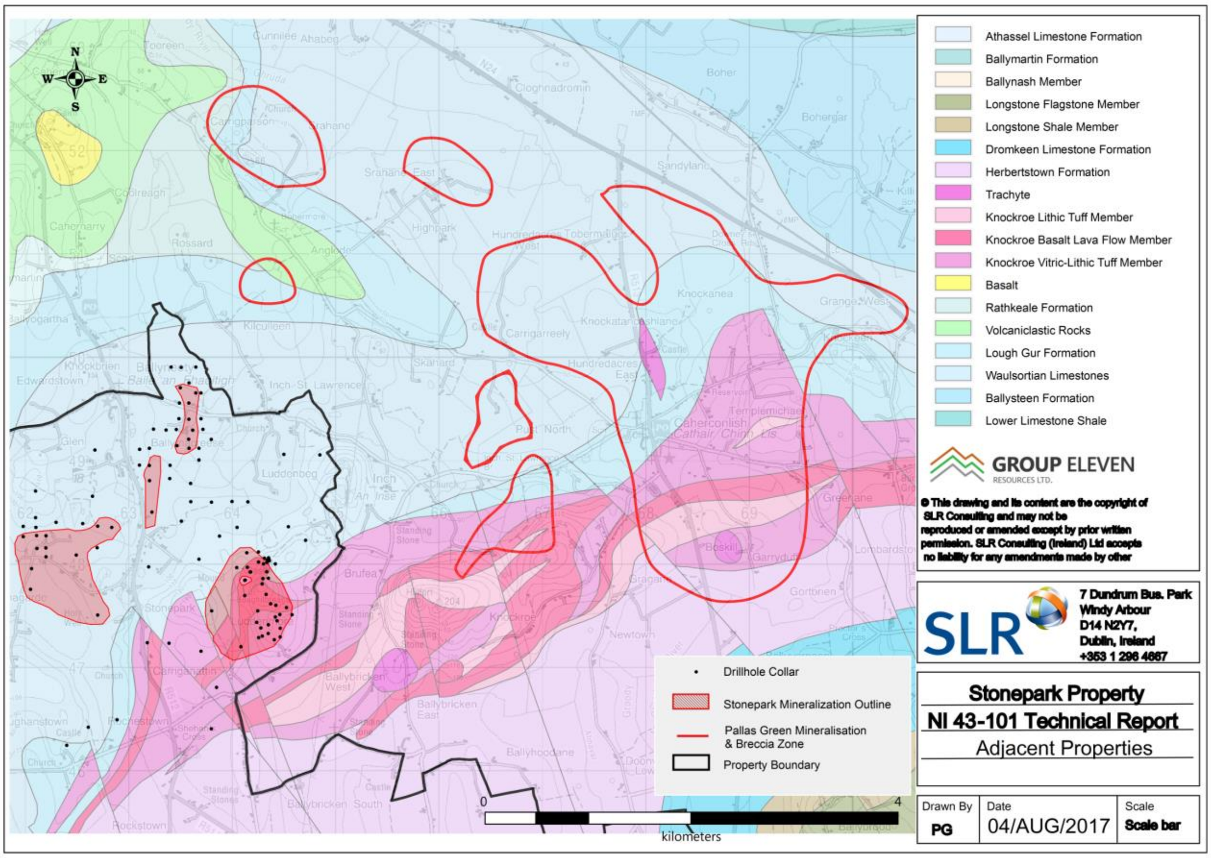

Figure 23.1 Stonepark Project area and the adjacent Pallas Green Mineralisation (from Blaney & Redmond, 2015)

25.0 Interpretation and Conclusions

The maiden Mineral Resource estimate for Stonepark highlights the economic potential of the Project and the additional known mineralised occurrences and large scale of the hydrothermal system supports the potential to add significantly to the resource mineralisation base, by thorough follow-up of encouraging drilling conducted thus far. The Project also hosts highly prospective regional ground, with isolated drill holes intersecting hydrothermal alteration and/or mineralisation that have not been rigorously followed-up.

25.1.1 Mineral Resource

CSA Global has completed a maiden mineral Resource estimate for GERC's Stonepark Project based on diamond drill data acquired by TIL. CSA Global considers that data collection techniques were consistent with industry good practice and suitable for use in the preparation of a Mineral Resource estimate to be reported in accordance with NI 43-101.

The geological understanding of the deposit is adequate to support modelling of the main stratigraphic boundaries, alteration and mineralisation, which CSA Global completed in Leapfrog Geo^{TM} and Micromine^{TM} software. However CSA Global notes that the previous vertical drilling is not suited to definition of steep intrusive bodies that may dilute the shallowly dipping to sub-horizontal sratabound-replacement mineralisation. Angled oriented drilling in the future would help with understanding of intrusive geometry and definition of structures.

The total drilling available for the geological model and Maiden Mineral Resource Estimate ("MRE") was 88 DDH holes for 37,269.93 m, consisting of 1,874 assay samples and 3,211 logged lithology intervals. Drill spacing in the mineralized zones was approximately 100 m. Following contact and domain analysis, eight mineralisation domains were used for all geostatistical analysis. Variograms were modelled for Zn% and Pb% on 1 m top-cut composites, within a combined dataset of the North area sample (MINZON = 2 to 6). Grade was estimated into parent blocks of 25 m by 25 m by 5 m (X by Y by Z) using OK, controlled by dynamic anisotropy ("DA").

Grade estimates were validated against drill data. There is good correlation between the input composites and output model for the estimated Zn% and Pb% grades. Generally, the model grade trends follow the pattern of the drill samples grades, with reasonable levels of smoothing of the higher and lower grades.

There is a limited amount of in situ dry bulk density data available within the mineralisation wireframes (23 out of 1,627 density measurements) and it was not possible to determine the exact correlation between BD and grades (Zn% and Pb%). Additional BD data for mineralisation should be prioritised to inform updated Mineral Resource estimates.

The MRE for Stonepark as at the 26th April 2018, is reported at a ZnEq cut-off grade of 4.8%, based on NSR calculations of conceptual operating costs and metal revenue, and indicates reasonable prospects for eventual economic extraction. The Stonepark MRE satisfies the requirements for the Inferred Mineral Resource category as embodied in the NI 43-101 Canadian National Instrument for the reporting of Mineral Resources and Reserve.

The Mineral Resource estimate was classified as Inferred Mineral Resources based on geology, trends in mineralisation, drilling spacing, sampling QA/QC, estimation search pass number and number of samples, and zinc equivalent grade.

Additional work required to potentially upgrade Inferred Mineral Resources to Indicated Mineral Resources include:

- Infill drilling to a drill spacing of about 50 x 50 m to increase the current level of understanding of the Zn and Pb distribution and geological controls.

- Angled orientated drill holes to better define the aspect, geometry and possible dilution of intrusive bodies and structures.
- Additional BD data.

25.1.2 Overall Prospectivity

The prospectivity of the Stonepark Project and the potential to add to the resource base is supported by a number of factors and results to date:

- the presence of significant tonnage and grade of Zn-Pb mineralisation within BMB envelopes that is directly analogous to the Pallas Green deposits and has strong similarities with other base-of-Waulsortian Irish-type deposits such as Silvermines, Lisheen and Galmoy;
- occurrence of significant alteration and mineralisation outside the Mineral Resource zones that has had limited previous follow up;
- location of the Project along strike from the Pallas Green deposits which, together, can be interpreted as part of a single very extensive hydrothermal system;
- the scale and extent of alteration and mineralisation indicates that the Pallas Green trend hydrothermal systems significantly exceed Silvermines and Rathdowney Trend systems in scale with enhanced potential for larger size deposits;
- the scale of the system may relate to the high-heat flow setting within the Limerick Volcanic Province;
- the major mineralisation-controlling structures have not yet been identified at Stonepark or Pallas Green, and the known mineralisation is likely to be distal to the main feeder structures where thicker, higher-grade mineralisation would be expected to be located;
- the style and nature of alteration and mineralisation and its likely controls are well understood by GERC team and advisors;
- only sparse drilling has been undertaken in areas distal to the known Stonepark occurrences, but this limited drilling has intersected significant evidence of other hydrothermal systems within the area which remain to be explored.

26.0 Recommendations

The Stonepark Project area contains both classified Mineral Resources and greenfields exploration ground with significant potential for further discovery. Recommendations are made regarding the resources and the future exploration of the entire property.

26.1 Mineral Resources

CSA Global recommends the following actions are completed prior to future MRE updates:

- Complete additional infill drilling to a drill spacing of about 50 x 50 m to increase the current level of understanding of the Zn and Pb distribution and geological controls, and to potentially upgrade Inferred Mineral Resources to Indicated Mineral Resources.
- The Mineral Resource is open along and across strike. CSA Global recommends additional step-out drilling to a drill spacing of about 100 x 100 m to potentially augment the Resource estimate, guided by integrated structural, lithostratigraphic and alteration interpretation and supported by additional geophysics for direct targeting and structural interpretation.
- Complete angled oriented holes to allow better modelling of intrusive bodies and structures.
- CSA Global reviewed the proportion of logged dyke material within the modelled mineralisation volumes, which equated to 4%, and does not consider it material to the current MRE. However, additional data and analysis is needed to define the aspect, geometry and possible dilution of these intrusives and it should be considered in all future work and modelled if possible, through angled drilling and detailed magnetic surveys.
- Acquire additional BD data from DDH core (existing or new drilling) focused on mineralisation to build up a useful bulk density database that can potentially be used to develop a BD regression related to Zn, Pb and Fe grade.
- Continue to improve the 3D geological, alteration and structural models by logging new holes and geophysics. Dolomite should also be included in any subsequent models. These 3D models should be used in defining along and across strike mineralisation intersection targets.
- Undertake preliminary metallurgical testwork to refine the Zn% and Pb% plant feed grades and recoveries, for use in the zinc equivalent cut-off grade and Net Smelter Return calculations of conceptual operating costs and metal revenue, in support of “reasonable chances of eventual economic extraction”.
- The database is incomplete, with outstanding data comprising geophysical surveys and ground magnetic data collected by previous tenement holders. CSA Global recommends sourcing and collation of missing data into a complete dataset, as well as the collection of new magnetic and seismic data on a project scale, for use in modelling of intrusives and structural trends, and to assist in future drill planning and MRE updates.

26.2 Recommended Programme

The Stonepark Project is of sufficient technical merit to warrant the recommendation of a robust, two phase programme encompassing resource definition, resource extension, and exploration targeting.

Phase 1 should focus on (i) confirmatory and expansion drilling at Stonepark North, Stonepark and Ballyneety (Stonepark West) and (ii) a regional tectono-stratigraphic analysis, based in part on seismic surveys; while Phase 2 should follow on from Phase 1 and focus on additional seismic work, expanding known mineralisation and exploring regional targets. The Authors have been informed by GERC that Phases 1 and 2 are expected to each be completed within a consecutive 12-month period (i.e. 24 months in total), respectively. Phase 2 will be conditional on satisfactory outcomes from Phase 1.

26.2.1 Phase 1 – Confirmatory (and Step-Out) Drilling & Basin Analysis

Phase 1 should focus on confirmatory and expansion drilling at Stonepark North, Stonepark and Ballyneety (Stonepark West), with a view to determine the full extent of sub-horizontal mineralisation, as well as tracing this mineralisation back to a controlling structure. Seven (7) holes consisting (4, 1 and 2 holes at Stonepark North, Stonepark and Stonepark West, respectively) are recommended. Importantly, drilling should be conducted with *inclined* (e.g. -60 or -70 degrees) holes, as opposed to the vertical holes which have been used thus far to identify the known mineralisation. Moderate step-outs from existing mineralised drillholes (e.g. 25-50m) should be drilled.

Concurrent with Phase 1 drilling, GERC should conduct a relatively large seismic survey line on the north-western portion of the Project area. Twenty-five line kilometres are recommended. On a property scale, the seismic line should aim to identify large-scale, basin controlling structures likely related to mineralisation.

26.2.2 Phase 2 – Regional Exploration

Phase 2 should focus on larger step-out drilling in the Stonepark North – Stonepark – Stonepark West area. Eight (8) holes are recommended. In parallel, drilling should focus on testing the outcomes of the seismic surveys from Phase 1. At least three (3) holes are recommended. Phase 2 should also include a ten (10) line km seismic line towards the south-eastern portion of the Project area.

26.3 Budget (Phase 1 and 2)

Phase 1 and 2 exploration at the Stonepark Project is expected to cost C$1,312,503 and C$1,151,897, respectively, or C$2,464,400 in total (excluding VAT; see Table 26.1, below).

Table 26.1 Stonepark Project – Proposed Expenditure Budget

Stonepark	Phase 1			Phase 2			Total		
Drilling	**Holes**	**Metres**	**C$**	**Holes**	**Metres**	**C$**	**Holes**	**Metres**	**C$**
Stonepark North	4	1,200	168,000	4	1,200	168,000	8	2,400	336,000
Stonepark	1	450	63,000	2	900	126,000	3	1,350	189,000
Stonepark West	2	900	126,000	2	900	126,000	4	1,800	252,000
Regional (5 prospects)	-	-	-	3	1,500	210,000	3	1,500	210,000
Contingency	-	-	-	-	-	-	-	-	-
Sum	**7**	**2,550**	**357,000**	**11**	**4,500**	**630,000**	**18**	**7,050**	**987,000**
Drilling related	**Unit**	**Rate**	**C$**	**Unit**	**Rate**	**C$**	**Unit**	**Rate**	**C$**
Assays	260	49	12,740	450	49	22,050	710	49	34,790
Logging (oversight)	-	-	3,000	-	-	4,000	-	-	7,000
Landowner compensation	-	-	6,100	-	-	1,400	-	-	7,500
Hydrology or other studies	-	-	1,500	-	-	1,500	-	-	3,000
CR / permissions	-	-	2,450	-	-	3,850	-	-	6,300
Splitter, storage, equipment	-	-	2,000	-	-	3,000	-	-	5,000
Sum	-	-	**27,790**	-	-	**35,800**	-	-	**63,590**
Geophysics	**Unit**	**Rate**	**C$**	**Unit**	**Rate**	**C$**	**Unit**	**Rate**	**C$**
Re-processing historic	-	-	-	-	-	-	-	-	-
Interpretation	-	-	98,000	-	-	39,200	-	-	137,200
Ground Mag	-	1,400	-	-	1,400	-	-	-	-
Ground Gravity	-	4,200	-	-	4,200	-	-	-	-
Seismic	25 line km	19,600	490,000	10 line km	19,600	196,000	-	-	686,000
ADR	-	5,000	-	-	5,000	-	-	-	-
Contingency	-	-	-	-	-	-	-	-	-
Sum	-	-	**588,000**	-	-	**235,200**	-	-	**823,200**
Other			**C$**			**C$**			**C$**
Tectono-stratigraphic analysis	-	-	7,000	-	-	-	-	-	7,000
Data compilation & management	-	-	233,627	-	-	173,667	-	-	407,294
Fixed costs	-	-	99,085	-	-	77,231	-	-	176,316
Misc	-	-	-	-	-	-	-	-	-
Sum	-	-	**339,713**	-	-	**250,897**	-	-	**590,610**
Total			**1,312,503**			**1,151,897**			**2,464,400**

Phase 1 is projected to cost 53% of the budget (with Phase 2 to be 47%; see Table 26.2, below). Of the total two-phase budget, drilling will consist of 43% of the costs, with geophysics and other categories representing 33% and 24%, respectively.

Table 26.2 Stonepark Project – Expenditures by Exploration Method

Summary	Phase 1	Phase 2	Total	%
Drilling	384,790	665,800	1,050,590	43%
Geophysics	588,000	235,200	823,200	33%
Fixed & other	339,713	250,897	590,610	24%
Total	**1,312,503**	**1,151,897**	**2,464,400**	100%
%	53%	47%	100%	

27.0 References and Bibliography

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APPENDICES

APPENDIX A – QUALIFIED PERSON CERTIFICATION

Certificate of Qualified Person

I, **Dr John George Kelly of SLR Consulting Ltd, 7 Dundrum Business Park, Windy Arbour, Dublin, Ireland**, as the author of the technical report entitled: "NI43-101 Independent report on a base metal exploration project at Stonepark, Co. Limerick, Ireland" prepared for Group Eleven Resources Corp. and dated effective **20th November**, 2017 (the "**Technical Report**") do hereby certify that:

1. I am a *Technical Director* working at SLR Consulting Ltd., 7 Dundrum Business Park, Windy Arbour, Dublin.
2. I have received the following degrees:
   a. BSc (Hons) 2.1 Geology, Queens University of Belfast, United Kingdom, 1986
   b. Ph.D. Geology, National University of Ireland, Dublin, 1989.
3. I am a registered Professional Geologist (PGeo) with the Institute of Geologists of Ireland and a registered European Geologist (EurGeol) with the European Federation of Geologists. I have been practicing my profession continuously since 1991.
4. As a result of my experience and qualifications, I am a "Qualified Person" as defined in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). The majority of my career has focussed on base metal exploration in Ireland and abroad, with a particular focus on carbonate-hosted mineralisation. I have worked on, *inter alia,* the Lisheen, Silvermines, Ballinalack, Abbeytown and Crinkill deposits/prospects. In addition to near-mine exploration, I have worked on and project-managed exploration across the entire Irish lower Carboniferous for a wide variety of companies, from junior, to mid-tier, to major.
5. I have been directly involved with the project that is the subject of the Technical Report since 18th January 2017. The nature of my involvement has been to spend one day inspecting and interpreting the drill core from the property, and half a day to inspect the data derived from the drill core. I have written Sections 8-9, 23 and 25 and co-written Sections 1 and 26.
6. I performed a personal inspection of the project site on 28th February, 2017.
7. I am independent of Group Eleven Resources Corp. as described in Section 1.5 of NI 43-101.
8. I have read NI 43-101 and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
9. At the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Dublin, Ireland this 25th May, 2018.

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EurGeol Dr John G Kelly PGeo, MIMMM

Certificate of Qualified Person

I, **Paul Gordon, 7 Glendine Woods, Kilkenny** as the author of the technical report entitled: "NI 43-101 Independent Report on a Base Metal Exploration Project at Stonepark, County Limerick, Ireland" prepared for Group Eleven Resources Corp. and dated effective 20th November, 2017 (the "**Technical Report**") do hereby certify that:

10. I am a Principal Geologist working at SLR Consulting Ltd, 7 Dundrum Business Park, Windy Arbour D14 N2Y7, Dublin, Ireland.

11. I have received the following degrees:

    c. Bachelor of Science, National University of Ireland, Galway
    d. Master of Science, Lancaster University, UK

12. I am a Professional Geologist registered in Ireland with the Institute of Geologists of Ireland (PGeo) and in Europe with the European Federation of Geologists (EurGeol). I have been practicing my profession continuously from ***October 1995*** **to April 2002** and since **July 2006**.

13. As a result of my experience and qualifications, I am a "Qualified Person" as defined in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). I have worked for a significant portion of my career in the Irish base metals exploration sector. My experience has included work on the Navan (Tara Mines), Galmoy, Kilbricken, Keel & Harberton Bridge deposits/prospects in various roles, ranging from technician to country manager, as well as numerous other earlier stage projects across the country.

14. I have been directly involved with the project that is the subject of the Technical Report since ***17th February 2017***. The nature of my involvement has been to spend three days logging the drill core from the property, interpreting the results and incorporating them into a working conceptual model which will be used to guide future exploration. I have generated all of the figures for the report, as well as writing sections 2-7 & 10-14 and I have co-written Sections 1 and 26.. I have also edited and amended the entire document twice.

15. I performed a personal inspection of the project site on ***28th February 2017***.

16. I am independent of Group Eleven Resources Corp. as described in Section 1.5 of NI 43-101.

17. I have read NI 43-101 and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

18. At the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Dublin, Ireland this 25th May 2018.

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EurGeol Paul Gordon MSc PGeo

Certificate of Qualified Person

As a Qualified Person of this Technical Report covering the Property named as Stonepark, Ireland, I, **Dr Belinda van Lente** do hereby certify that:

1. I am a *Senior Resource Geologist* working at CSA Global (UK) Ltd, Suite 2, First Floor, Springfield House, Horsham, West Sussex, RH12 2RG, United Kingdom.

2. The Technical Report to which this certificate applies is titled "NI43-101 Independent report on a base metal exploration project at Stonepark, Co. Limerick, Ireland" prepared for Group Eleven Resources Corp. and is dated effective 25th May 2018.

3. I have received the following degrees:
   a. MSc Geology, Rand Afrikaans University, South Africa, 2001
   b. PhD Geology, University of Stellenbosch, South Africa, 2004.

4. I am a registered Professional Natural Scientist (Pr.Sci.Nat, 400119/10) in good standing of the South African Council for Natural Scientific Professions. I have been practicing my profession continuously since 2005.

5. I am familiar with NI 43-101 and, by reason of education, experience in evaluation of base metal deposits, and professional registration; I fulfil the requirements of a "Qualified Person" as defined in as defined in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). My experience includes over 13 years in the consulting and production environment.

6. I am responsible for the following sections of this Technical Report; Sections 1.1.1, 2.3, 12.1, 14, 25.1.1 and 26.1.

7. I visited the project that is the subject of this Technical Report on 11th April, 2018.

8. I am independent of the issuer as described in Section 1.5 of NI 43-101.

9. I have read NI 43-101 and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. At the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Horsham, United Kingdom this 25th May 2018

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Dr Belinda van Lente *Pr.Sci.Nat, MGSSA*

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