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NI 43-101 TECHNICAL REPORT ON THE LAIVA GOLD PROJECT, RAAHE, FINLAND

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1 Summary

1.1 Issuer and Purpose

This Technical Report (the "Technical Report") has been prepared by APEX Geoscience Ltd. ("APEX") and Minerals Industry Consulting, for Laiva Gold Inc. ("Laiva Gold" or the "Company") and Edgemont Gold Corp. ("Edgemont"). Laiva Gold is an Alberta, Canada, based private company that is focused on gold exploration and development in Finland, specifically, the Laiva Gold Project (the "Property"). Edgemont is a British Columbia, Canada, based company focused on gold exploration in Canada and Finland.

The Laiva Gold Project is a past producing open pit mining operation with a favourable geological, structural, and lithological setting situated in the Raahe-Haapajärvi gold district, near the Raahe-Ladoga suture, a crustal scale structure controlling several other mineral deposits in the area. A total of 89,405 ounces (oz) of gold have been produced to date from the Laiva Gold mine by previous operators.

This Report summarizes a National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects Mineral Resource estimation (MRE) for the Project (the "2025 Laiva Gold MRE") and provides a technical summary of the relevant location, tenure, geological, historical exploration, production, and processing information, and recommendations for future exploration programs. This Technical Report summarizes the technical information available up to the Effective Date of June 4th, 2025.

The Technical Report is prepared by Qualified Persons (QPs) in accordance with disclosure and reporting requirements set forth in the NI 43-101 Standards of Disclosure for Mineral Projects (effective May 9, 2016), Companion Policy 43-101CP Standards of Disclosure for Mineral Projects (effective February 25, 2016), Form 43-101F1 (effective June 30, 2011) of the British Columbia Securities Administrators, the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Mineral Exploration Best Practice Guidelines (November 23, 2018), the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 29, 2019) and the CIM Definition Standards (May 10, 2014).

1.2 Authors and Site Inspection

The authors of this Technical Report (the "Authors") are Mr. Michael B. Dufresne, M.Sc., P. Geol., P. Geo., of APEX, Mr. Gregory B. Sparks, P.Eng., of Minerals Industry Consulting, and Ms. Fallon T. Clarke, B.Sc., P.Geo., of APEX. The Authors are independent of the Company and Edgemont and are QPs as defined in NI 43-101.

Mr. Dufresne completed a site inspection of the Laiva Gold Project on March 15th and 16th, 2025. The site inspection comprised a tour of the Property, including inspection of the open pits, a tour of the on-site processing plant and laboratory, and review of historical drill core to verify the reported geology and mineralization.

Mr. Sparks has visited the Property on several occasions from March 15th to 16th, 2017, to August 27th to September 7th, 2021, with his most recent visit occurring from May 17th to July 3rd, 2025. The site visits comprised a tour of the Property, including review of historical drill core to verify reported geology and mineralization, and verification of drill collar locations. In addition, Mr. Sparks toured the mining operation office, processing plant, and analytical laboratory, all related infrastructure, and observed active mining and mineral processing to verify the mining methods, equipment, and infrastructure utilized in the production process.

Ms. Clarke did not visit the Property, as Mr. Dufresne and Mr. Spark's visits were deemed sufficient by the QPs.

1.3 Property Location, Description, and Access

The Laiva Gold Project is situated in the North Ostrobothnia region of Finland, along the Gulf of Bothnia coast. It lies approximately 20 kilometres (km) southeast of Raahe, 80 km southwest of Oulu, and 550 km north of Helsinki. The Property comprises 2 applications for exploration permits and 1 active mining permit covering a total of approximately 22.46 square kilometres (km^2).

On February 20, 2025, Edgemont entered into a non-binding letter of intent (the "LOI") with Laiva Gold, which contemplates the acquisition by Edgemont of all the issued and outstanding common shares of Laiva Gold from the shareholders of Laiva Gold (the "Transaction"). On June 4, 2025, Edgemont entered into a merger agreement (the "Definitive Agreement") with Laiva Gold and 2717194 Alberta Ltd. ("SubCo"), a newly incorporated subsidiary of Edgemont. Pursuant to the Definitive Agreement, Edgemont will acquire all the issued and outstanding common shares of Laiva Gold (the "Laiva Shares") in exchange for an equivalent number of common shares of Edgemont (the "Transaction"). The Transaction will constitute a reverse takeover transaction of Edgemont by Laiva Gold.

The Laiva Gold Project can be accessed by land from the town of Raahe, which is located along the E8 coastal highway, and can also be accessed by boat through the Gulf of Bothnia or by flying to Oulu, a city located 80 km northeast. From Raahe, the Laiva Gold Project can be accessed year-round by taking Road 88 until the intersection with a long gravel road (Mattilanperäntie Road) that leads to Laivalantie Road, which subsequently leads directly to the Property.

1.4 Geology and Mineralization

The Laiva Gold Project lies within the northern boundary of the Paleoproterozoic Western Finland Subprovince (WFS) within the Svecofennia Province, and south of the Raahe-Ladoga suture, a northwest-striking, first-order, crustal scale structure that separates the WFS and the Karelia province in the north. This structure is known to host two gold districts: the Savo district in the southeast and the Raahe-Haapajärvi district in the northwest. The Property is situated within the Raahe-Haapajärvi gold district. The deposits within these districts are hosted in secondary and tertiary fault and shear zones branching out from the tectonic block contact.

The Property comprises deformed Paleoproterozoic greywackes of the Vihanti Group and intercalations of mafic metavolcanic and metavolcanosedimentary lithologies of the Antinneva Formation. These mafic units have been collectively called Uralite Porphyrite by previous operators. Weakly foliated quartz diorite and granodiorite plutons intrude these supracrustal units. The mafic metavolcanic and the intermediate intrusives are the main host of mineralization. Late granitoids intrude all previously mentioned units throughout the Property. These granitoids are post-mineralization and occur as dikes, sills, and plutons. Dolerite dikes up to 10 metres (m) wide crosscut all units. Quaternary glacial till ranging between 3 and 15 m in thickness overlay the entire Property.

The Property has been subject to multiple events of regional and local deformation. Field observations indicate that 0.2 to 1 m wide, quartz vein-rich mylonitic shear zones developed in mafic metavolcanic lithologies and intermediate intrusives host mineralization in the Property. These planar zones are steeply dipping (75-85 degrees) to the southeast. The dominant east-west trend of the shear zones can also be locally modified and display variable strikes due to post-mineral deformation associated with northeast-

striking, strike-slip faults. The best-defined structure of these late faults is the Red Shear Zone, which is observed in both the North and the South pits. It is a typically barren, dextral strike-slip fault displaying both ductile and brittle deformation and with lateral displacements in the order of approximately 10 m. Meter-scale folding is observed in the hanging wall and footwall of the Red Shear Zone in the North Pit.

The alteration intensity in the mineralized shear zones is weak and comprise millimetre-sized sericite-pyrite vein selvages. Albite-epidote-pyrite selvages are rarely observed. Overall, the alteration assemblages seem to depend on the hosting lithology. Arsenopyrite is the most common sulphide, though pyrrhotite, chalcopyrite, scheelite, cubanite, marcasite, sphalerite, and hedleyite also occur. No visible gold has been observed. Gold occurs as tiny free gold inclusions within loellingite, quartz, and arsenopyrite, or rarely, as maldonite.

1.5 Historical Exploration

Historical exploration has been documented at the Laiva Gold Project for over four decades. These surficial exploration and drilling programs have been conducted by the Geological Survey of Finland ("GTK"), Outokumpu Oy (1981-1987), Endomines Oy (1999-2005), Nordic Mines Marknad AB ("Nordic"; 2005-2018), Firesteel Resources Inc. ("Firesteel Resources") and Nordic Gold Inc. (2018-2019), and Otso Gold Corp. ("Osto Gold"; 2019-2022). Historical exploration has consisted of geological mapping, boulder and till sampling, geophysical surveying, drilling, surface development, and mining.

A total of 167,520 m (excluding blastholes) has been drilled in the Property in 3,834 holes between 1981 and 2021. Drilling activities have included diamond and reverse circulation (RC) exploration drilling, resource development, and grade control drillholes. Historical drilling between 1981 and 2011 delineated a mineralized area in the central part of the mining permit and guided historical production. Notable intercepts from early drill programs include:

- 0.51 grams per tonne (g/t) gold (Au) over 40.20 m core length from 50.00 m depth in drillhole LAI25.
- 4.40 g/t Au over 30.30 m core length from 32.00 m depth in drillhole LAI23.
- 1.67 g/t Au over 34.00 m core length from 25.00 m depth in drillhole LAN758.
- 1.85 g/t Au over 13.50 m core length from 3.00 m depth in drillhole LAN702.
- 6.04 g/t Au over 5.00 m core length from 7.00 m depth and 0.78 g/t Au over 15.00 m core length from 31.00 m depth in drillhole LAN548.
- 3.38 g/t Au over 18.00 m core length from 133.00 m depth in drillhole LAN855.

Drilling conducted by Firesteel Resources and Otso Gold between 2018 and 2021 targeted mineralization between and surrounding the two open pits. Select results are listed as follows:

- 1.66 g/t Au over 4.00 m core length (3.11 m true width) from 118.15 m depth and 10.90 g/t Au over 2.00 m core length (1.55 m true width) from 139.20 m depth in drillhole 19LV0035.
- 1.58 g/t Au over 3.00 m core length (2.33 m true width) from 41.30 m depth and 1.99 g/t Au over 8.10 m core length (6.28 m true width) from 122.35 m depth in drillhole 19LV0067.
- 1.55 g/t Au over 16.66 m core length (true width unknown) from 103.75 m depth in drillhole LV21038.

Historical drilling at the Property has delineated two main bodies of mineralization, the North Pit with Eastern Extension in the north and the South Pit in the south. At the North Pit, mineralized shear zones can be traced over a strike length of up to 600 m, with the mineralized zone (including the Eastern Extension) occurring over an area of 1,300 m by 450 m. In the South Pit area, mineralization occurs over an area of 500 m by 400

m. Mineralization has been intercepted at depths of up to 250 m below surface and is open down dip, apart from the western part of the North Pit where mineralization is truncated by the granite pluton. In both the North and South Pits, the mineralized shear zones vary in width between <1 m to >10 m.

Historical metallurgical work conducted on mineralized material from the Laiva deposit indicates that gold is typically fine grained, free milling, and amenable to cyanide leach processing.

1.6 Recent Exploration

Laiva Gold and Edgemont have not conducted exploration at the Property to date.

1.7 Mineral Resource Estimate

Laiva Gold and Edgemont engaged APEX to conduct an independent review of the 2021 Laiva Gold Project Mineral Resource Estimate (the "2021 Laiva Gold MRE") prepared by John T. Boyd Company (Shoemaker and Sparks, 2021). There has been no further drilling at the Laiva Gold Project since the effective date of Shoemaker and Sparks (2021); therefore, the mineral resource outlined in this Technical Report is an audit of the Shoemaker and Sparks (2021) technical report, MRE, and accompanying data, that documents the review completed, and provides a current MRE based upon updated parameters and a new conceptual pit shell for reasonable prospects for eventual economic extraction (RPEEE) for the Laiva Gold deposit (the "2025 Laiva Gold MRE"). The current 2025 Laiva Gold MRE is presented in Table 1.1.

Table 1.1 Summary of the 2025 Laiva Gold Measured, Indicated, and Inferred Mineral Resources [(1-9)]

Cutoff Au (g/t)	Classification	Tonnes (kt)	Contained Au (koz)	Average Au (g/t)
Pit-Constrained Mineral Resource Estimate				
0.25	Measured	1,349	50	1.16
	Indicated	15,005	473	0.98
	M&I	16,354	523	1.00
	Inferred	11,978	396	1.03
Out-of-Pit Mineral Resource Estimate				
1.35	Inferred	406	31	2.38
Total Mineral Resource Estimate				
Combined	Measured	1,349	50	1.16
	Indicated	15,005	473	0.98
	M&I	16,354	523	1.00
	Inferred	12,384	427	1.07

Source: APEX (2025)

Notes:

1) Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
3) The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.

4) The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
5) Historical mined areas were removed from the block-modelled Mineral Resources.
6) Economic assumptions include an Au price of US$2,300/oz; 92 per cent (%) recovery and a processing cost of US$11.78/t for material ≥0.7 g/t Au; 80.0% recovery and a processing cost of US$10.22/t for material <0.7 g/t Au; a G&A cost of US$2.20/t; a selling cost of US$2.55/oz; and a 0.55% royalty.
7) The constraining pit optimization parameters include mining costs of US$2.73/t for mineralized material and US$1.90/t for waste material, and 53° pit slopes. Pit-constrained Mineral Resources are reported using an Au cutoff grade of 0.25 g/t.
8) Out-of-Pit Mineral Resources include blocks below the constraining pit shell that form continuous, potentially mineable shapes. A mining cost of US$75.00/t for mineralized material, along with the economic assumptions for material ≥0.7 g/t Au noted above, defines the underground (UG) resources. Out-of-Pit Mineral Resources are reported using an Au cutoff grade of 1.35 g/t.
9) Figures are rounded; totals may not sum exactly due to rounding.

The review was completed using Micromine commercial resource modelling and mine planning software (v.25.0), Resource Modelling Solutions Platform (RMSP; v.1.17.0), and Deswik CAD (v2024.1). No new geological modeling or drilling was conducted or considered. However, APEX completed a detailed assessment of the geological and resource model, statistical data, and estimation methodologies to evaluate the accuracy and reliability of the MRE. A new evaluation of RPEEE was completed, resulting in an updated Mineral Resource Estimate statement using revised gold price and mining cost assumptions.

Mr. Dufresne has reviewed the work by Shoemaker and Sparks (2021) and finds no significant issues with the drillhole database, or the workflow and methodology used to prepare the previous MRE. In the opinion of the QP, the MRE by Shoemaker and Sparks (2021) was completed in accordance with the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines," dated November 29, 2019, and the CIM "Definition Standards for Mineral Resources and Mineral Reserves," dated May 10, 2014. The MRE presented herein is considered current based upon the application of modern economic parameters to evaluate RPEEE. As a result, Mr. Dufresne accepts the updated Laiva Gold MRE (originally disclosed by Shoemaker and Sparks, 2021) and considers it current as of the date of this report (June 4, 2025) based upon the verification and updates completed by the QP.

1.8 Historical Mining, Mineral Processing, and Infrastructure

The Laiva Gold Project is a historical open-pit mining operation that consists of two open pits. A summary of historical mining and production at the Property is presented in Table 1.2.

Table 1.2 Laiva gold production between 2012 and 2022.

Time Period	Average Monthly Tonnes	Total Tonnes	Average Gold Head Grade (g/t)	Average Gold Recovery	Average Monthly Gold Production (Troy Ounces)	Total Gold Production (Troy Ounces)	Operator and Comments
February 2012 to February 2013 (13 months)	90,441	1,175,739	0.94	79.9%	2,194	28,521	Nordic: Initial low production due to longer than expected plant commissioning
March 2013 to June 2013 (4 months)	140,220	560,879	1.04	86.5%	4,062	16,250	Nordic: Steady state production.

Time Period	Average Monthly Tonnes	Total Tonnes	Average Gold Head Grade (g/t)	Average Gold Recovery	Average Monthly Gold Production (Troy Ounces)	Total Gold Production (Troy Ounces)	Operator and Comments
July 2013 to March 2014 (9 months)	137,414	1,236,730	0.72	81.5%	2,594	23,345	Nordic: Production from low-grade stockpile.
Total Nordic (26 months)	122,692	2,973,348	0.88	81.5%	2,950	68,116	-
November 2018 to March 2019 (5 months)	102,400	512,001	0.89	85.0%	2,500	12,502	Firesteel Resources and Nordic Gold Inc: Low production due operational stoppages. .
October 2021 to February 2022 (5 months)	108,168	540,839	0.84	74.5%	1,757	8,787	Otso Gold: Low production due to operational stoppages.
Total all operators (36 months)	111,839	4,026,189	0.85	81.2%	2,483	89,405	-

Source: APEX (2025)

Mineralized material produced from the Laiva Gold Project has historically been processed at the Laiva Gold Mine Process facilities (the "Laiva processing plant"), located within the Property. The Laiva processing plant was constructed in 2011 by Metso Minerals in conjunction with Outotec. Nordic Mines operated the plant from the commission date to the end of March 2014. The mill production rate during this period averaged approximately 210 metric tonnes per hour (mtph) verses the design rate of 250 mtph. The ground mineralized material particle size ranged from P_{80} 110 micrometer (µm) to 130 µm versus a design particle size of P80 75 µm.

The mineral processing plant is located approximately 1 km northeast from the South and North open pits on the Property site. The processing plant comprises a multi-stage crushing circuit, grinding mills, a 3 megawatt (Mw) installed power mill, flash flotation, gravity and regrind circuits, high grade and low grade carbon-in-leach (CIL) circuits, carbon stripping, and a gold room. Tailings are sent to either a high grade or low grade tailings storage facilities as warranted. The low grade dam is situated approximately 7.5 km from the plant where it is processed through a thickener.

A geochemical laboratory is situated within the Property, previously managed by an independent contractor (CRS Laboratories Oy). Geochemical samples were processed and analyzed using a pulverize and leach machine (PAL1000) with 52 steel pots and an Atomic Absorption (AA) spectrometer with a capacity of 8,000 samples per week. This laboratory has historically been used to process and analyze grade control samples.

Most of the power used to source the Laiva Gold Project operations is from a high-voltage grid in the area. It is located to the east of the Property and supplies 110 kilovolts (kV) of power. A secondary 20 kV power grid is available from the village of Mattilanperä.

1.9 Environmental and Permitting

All necessary permits are in place for the Laiva Gold Project mine, processing plant, and other operations; however, the existing environmental permit is under threat of withdrawal. The Company has appealed the threat and is working to remedy alleged violations committed by previous owners.

In the opinion of the Author, there does not appear to be any apparent significant legal, environmental, or political considerations that would have an adverse effect on the potential extraction and processing material from the Property besides the risks inherent to mineral exploration and development. Potential risk factors include changes in metal prices, increases in operating costs, fluctuations in labour costs and availability, availability of investment capital, infrastructure failures, changes in government regulations, community engagement and socio-economic community relations, civil disobedience and protest, permitting and legal challenges, and general environmental concerns. Environmental and social issues at the Property appear to be conducted to adequate standards with cooperation from local communities.

1.10 Economic Analysis

The Laiva Gold Project is currently on care and maintenance and is a former gold producing mining operation. There are no current estimates of Mineral Reserves on the Property.

The 2025 Laiva Gold MRE includes Inferred Mineral Resources. Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. In addition, NI 43-101 prohibits the disclosure of the results of an economic analysis that includes or is based on Inferred Mineral Resources. As a result, the Author has determined that it is not permitted to provide an economic analysis of the Property. As an alternative, information regarding taxation and historical production has been provided in Section 22.

1.11 Conclusions and Recommendations

Based upon a review of available information, historical and current exploration and production data, Mr. Dufresne and Mr. Spark's site inspections, and the 2025 Laiva Gold MRE, the Authors outline the Laiva Gold Project as a property of merit prospective for the discovery of additional gold mineralization. This contention is supported by knowledge of:

- The favourable geological setting of the Property and its position within the Raahe-Haapajärvi gold district.
- Historical surface sampling and drilling by previous operators that led to the delineation of the Laiva Gold deposit and historical mining from two open pits within the Property.
- The Laiva Gold MRE that is the subject of this Technical Report. This MRE is based on validation of the historical drilling and assay data, a review of the estimation domains, statistics, block model, and resource calculations.
- The Laiva Gold Project historical production, head grade, and metal recovery records from the on-site processing plant.

As a property of merit, a 2-phase work program is recommended to delineate additional gold mineralization at the Property to support MRE expansion and future production.

Phase 1 should focus on a step out exploration and grade control drilling plan to the immediate northeast and east of the North pit, between the north and south pits and to the southwest of the south pit. The Author recommends an RC drilling program of approximately 30,000 m to increase confidence in the mineralization model, inform future mining activities, and work towards expanding and upgrading the MRE and classification. The grade control drillholes should be completed at 8 by 6 m hole spacings with collars orientated perpendicular to the local structural trends at inclinations ranging from -45 to -50°. In addition, a LiDAR survey is recommended to generate an accurate topographic surface and elevation control. The estimated total cost to complete the Phase 1 program is USD$1,700,000, not including contingency funds or taxes (Table 1.3).

Phase 2 exploration is dependent on availability of funds and the results of Phase 1. Additional infill step out and exploration drilling should be completed at high-priority existing targets surrounding both pits. Phase 2 should include a Feasibility Study in advance of potential mining operations at the Laiva Gold Project. Phase 2 should also include re-commissioning of the processing plant prior to potential restart of the mining operations. The Company should investigate potential modifications to the existing processing plant in order to achieve maximum throughput. The estimated total cost to complete the Phase 2 program is USD$10,940,000, not including contingency funds or taxes (Table 1.3).

Table 1.3 Estimated budget for proposed exploration and future studies.

Phase	Item	Amount (USD$)
Phase 1	Cost for exploration and grade control RC drilling (30,000 m @ $52/m)	$1,560,000
	Analytical cost ($20 per sample)	$50,000
	LiDAR survey and processing	$20,000
	Data Compilation and additional Verification	$70,0000
	Sub-total:	$1,700,000
Phase 2	Cost for exploration and grade control RC drilling (30,000 m @ $52/m)	$1,560,000
	Analytical cost ($20 per sample)	$50,000
	All in cost for mineral processing investigations and re-commissioning of the processing plant	$9,080,000
	Updated MRE and Preliminary Feasibility Study	$250,000
	Sub-total:	$10,940,000
	Total:	$12,640,000

The estimated operating costs for potential production and process related programs are not included in Table 1.3 and are summarized in Section 21 of this Technical Report.

2 Introduction

2.1 Issuer and Purpose

This Technical Report (the "Technical Report") has been prepared by APEX Geoscience Ltd. ("APEX") and Minerals Industry Consulting, for Laiva Gold Inc. ("Laiva Gold" or the "Company") and Edgemont Gold Corp. ("Edgemont"). Laiva Gold is an Alberta, Canada, based private company that is focused on gold exploration and development in Finland, specifically, the Laiva Gold Project (the "Property"). Edgemont is a British Columbia, Canada, based company focused on gold exploration in Canada and Finland.

The Laiva Gold Project is a past producing open pit mining operation with a favourable geological, structural, and lithological setting situated in the Raahe-Haapajärvi gold district, near the Raahe-Ladoga suture, a crustal scale structure controlling several other mineral deposits. A total of 89,405 ounces (oz) of gold have been produced to date from the mine by previous operators (Laiva Gold Inc., 2023). The Property comprises two applications for exploration permits and an active mining permit covering a total of approximately 22.46 square kilometres (km^2). The Property is located approximately 20 kilometres (km) southeast of the town of Raahe, which is located approximately 550 km north of the capital city of Helsinki (Figure 2.1).

This Report summarizes a National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects Mineral Resource estimation (MRE) for the Project (the "2025 Laiva Gold MRE") and provides a technical summary of the relevant location, tenure, geological, historical exploration, production, and processing information, and recommendations for future exploration programs. This Technical Report summarizes the technical information available up to the Effective Date of June 4th, 2025.

The Technical Report is prepared by Qualified Persons (QPs) in accordance with disclosure and reporting requirements set forth in the NI 43-101 Standards of Disclosure for Mineral Projects (effective May 9, 2016), Companion Policy 43-101CP Standards of Disclosure for Mineral Projects (effective February 25, 2016), Form 43-101F1 (effective June 30, 2011) of the British Columbia Securities Administrators, the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Mineral Exploration Best Practice Guidelines (November 23, 2018), the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 29, 2019) and the CIM Definition Standards (May 10, 2014).

2.2 Authors and Site Inspection

The authors of this Technical Report (the "Authors") are Mr. Michael B. Dufresne, M.Sc., P. Geol., P. Geo., of APEX, Mr. Gregory B. Sparks, P.Eng., of Minerals Industry Consulting, and Ms. Fallon T. Clarke, B.Sc., P.Geo., of APEX. The Authors are independent of the Issuer and are QPs as defined in NI 43-101. NI 43-101 and CIM define a QP as "an individual who is an engineer or geoscientist with at least five years of experience in mineral exploration, mine development or operation, or mineral project assessment, or any combination of these; has experience relevant to the subject matter of the mineral project and the technical report; and is a member or licensee in good standing of a professional association." The QPs and the Report sections for which they are taking responsibility for are presented in Table 2.1.

Figure 2.1 General location of the Laiva Gold Project.



Table 2.1 Qualified Persons and division of responsibilities.

Qualified Person	Professional Designation	Position	Report Sections
Michael B. Dufresne	P.Geol., P.Geo.	Senior Consultant and Principal	1.1 to 1.3, 1.7, 1.11, 2 to 4, 11 to 12.2.1, 12.3 to 12.4 to 15, 23, 24, 25.1, 25.1.3, 25.2, 26
Gregory B. Sparks	P.Eng.	Senior Consultant and Principal	1.8 to 1.10, 12.2.2, 16 to 22, 25.1.4 to 25.1.6
Fallon T. Clarke	P.Geo.	Senior Geologist	1.4 to 1.6, 5 to 10, 25.1.1 to 25.1.2, 27

Mr. Dufresne is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta ("APEGA"; Member #: 48439), a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia ("EGBC"; Member #: 37074), the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists ("NAPEG"; Member #: L3378), the Association of Professional Engineers and Geoscientists of New Brunswick ("APEGNB"; Member #: F6534) and the Professional Geoscientists of Ontario ("PGO"; Member #: 3903), and has worked as a mineral exploration geologist for more than 40 years since his graduation from university. Mr. Dufresne has been involved in all aspects of mineral exploration and Mineral Resource estimations for precious and base metal mineral projects and deposits in Canada and globally.

Mr. Sparks is a Professional Engineer in the State of Colorado (Member #: 22310) and is a member in good standing with the Society for Mining, Metallurgy and Exploration ("SME"; Member #: 03042460) and the CIM (Member #: 97865). Mr. Sparks has worked as a mining engineer for more than 50 years and has been responsible for managing operating mines and process plants, directing resource and reserve estimates, detailed mine design for surface and underground mines, economic analysis of all aspects of mining projects, due diligence reviews and valuations of mineral projects.

Ms. Clarke is a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of Saskatchewan ("APEGS"; Member #: 27238) and has worked as a geologist for more than 12 years since her graduation from the University of Saskatchewan. Ms. Clarke has experience with exploration for precious and base metal deposits of various deposit types in North America and Australia, including orogenic gold mineralization.

Mr. Dufresne completed a site inspection of the Laiva Gold Project on March 15th and 16th, 2025. The site inspection comprised a tour of the Property, including inspection of the open pits, a tour of the on-site processing plant and laboratory, and review of historical drill core to verify the reported geology and mineralization.

Mr. Sparks has visited the Property on several occasions from March 15th to 16th, 2017, to August 27th to September 7th, 2021, with his most recent visit occurring from May 17th to July 3rd, 2025. The site visits comprised a tour of the Property, including review of historical drill core to verify reported geology and mineralization, and verification of drill collar locations. In addition, Mr. Sparks toured the mining operation office, processing plant, and analytical laboratory, all related infrastructure, and observed active mining and mineral processing to verify the mining methods, equipment, and infrastructure utilized in the production process.

Ms. Clarke did not visit the Property, as Mr. Dufresne and Mr. Spark's visits were deemed sufficient by the QPs.

2.3 Sources of Information

This Technical Report is a compilation of proprietary and public information as listed in the references section. Historical information and data including surface sampling data, drilling data, and assay analytical results were provided by Laiva Gold to the Authors as predominately excel and PDF electronic files.

A large portion of Section 6, the Laiva Gold Project history, has been sourced from information provided in previous technical and internal reports on the Property by Bektas (2019) and Shoemaker and Sparks (2018; 2021). In referencing work completed by previous explorers, the QPs have assessed that such historical work appears to have been completed in a manner consistent with normal exploration practices (at that time) and is suitable for use in this Technical Report.

The regional and detailed geological information is largely derived from journal papers and previous technical and internal reports in the area by Eilu et al. (2003), Shoemaker and Sparks (2021), Luukas et al. (2017), and Pratt (2010).

The Authors have reviewed all government and miscellaneous reports, and commercial laboratory analytical data and have deemed that these reports and information, to the best of their knowledge, are valid contributions. The Authors take ownership of the ideas and values as they pertain to the current technical report.

2.4 Units of Measure

With respect to units of measure, unless otherwise stated, this Technical Report uses:

1) Abbreviated shorthand consistent with the International System of Units (International Bureau of Weights and Measures, 2006);
2) Bulk weight is presented in both United States short tons (tons; 2,000 lbs or 907.2 kg) and metric tonnes (tonnes; 1,000 kg or 2,204.6 lbs.);
3) Geographic coordinates are projected in the Finnish National Mapping Coordinate System Zone 2 (KKJ2); and,
4) Currency in Canadian dollars (CDN$), unless otherwise specified (e.g., U.S. dollars, USD$; Euros, €).

3 Reliance on Other Experts

This Technical Report was prepared by the Authors on behalf of Laiva Gold and Edgemont. The Authors are not qualified to provide an opinion or comment on issues related to legal, political, environmental or tax matters relevant to the Technical Report, and have relied upon representatives and information provided by Laiva Gold and Edgemont. In particular, the Authors have relied upon:

- Background information on the ownership, claim names and status presented in Section 4.1 was provided to the Authors as a geospatial vector data file (shapefile) in an e-mail dated April 17th, 2025, from Percy Scholtz, Mining Manager at Laiva Gold. No title opinion was provided to the Authors to verify the land position; however, the Authors verified the mining exploration status and descriptions using the Geological Survey of Finland (GTK) digital database in April 2025.

- Information on surface rights in Section 4.1.2 was sourced from Finland National Land Information System (KTJ) land register extracts provided to the Authors by Percy Scholtz, Mining Manager at Laiva Gold via Dropbox on May 7, 2025:

    - Laiva Property, ID 678-412-88-5, KTJ registration document dated May 14, 2019.

    - Jokijärvi Property, ID 678-411-4-15, KTJ registration document dated March 24, 2016.

    - Ispinänneva Property, ID 678-414-2-64, KTJ registration document May 13, 2019.

- Details on the maintenance fee filing for the mining and exploration permits (in Section 4.1) were extracted from the Mining Act effective July 1st, 2011, issued by the Ministry of Economic Affairs and Employment of Finland.

4 Property Description and Location

4.1 Description and Location

The Laiva Gold Project is located in the region of North Ostrobothnia, Republic of Finland, along the coast of the Gulf of Bothnia, and approximately 20 km southeast of the town of Raahe, 80 km southwest of the city of Oulu, and 550 km north of Helsinki. The approximate coordinates of the centre of the Property are 2,528,500 m east and 7,160,999 m north (Finnish National Mapping Coordinate System Zone 2– KKJ2).

The Property comprises an advanced stage mining concession of 17.01 km^2 (1,701 ha) and two surrounding exploration projects of 5.45 km^2 (545 ha) (Figure 4.1).

4.1.1 Claim Status

In Finland, the Finnish Safety and Chemicals Agency (TUKES) is the mining authority responsible for granting mining permits. Currently, exploration and mining permits are governed by the Mining Act effective July 1st, 2011, issued by the Ministry of Economic Affairs and Employment of Finland.

The single mining concession is currently active/in effect ('voimassa' in Finnish) and covers 17.01 km^2 (1,701 ha) as of the Effective Date of this Technical Report. The two exploration permits are in application ('hakemus' in Finnish) and cover 5.45 km^2 (545 ha) as of the Effective Date of this Technical Report. Concession descriptions and status are presented in Table 4.1. All permits are registered under Laiva Gold Inc.'s Finnish subsidiary Laiva Gold Oy.

Table 4.1 Concession descriptions and status for the Laiva Gold Project (all registered under Laiva Gold Oy).

Permit Number	Type	Status	Area (km^2)	Registration date
7803	Mining	Active	17.01	April 15 2009
ML2013:0054-01	Exploration	Application	0.79	December 20 2023
ML2019:0035-01	Exploration	Application	4.66	December 20 2023

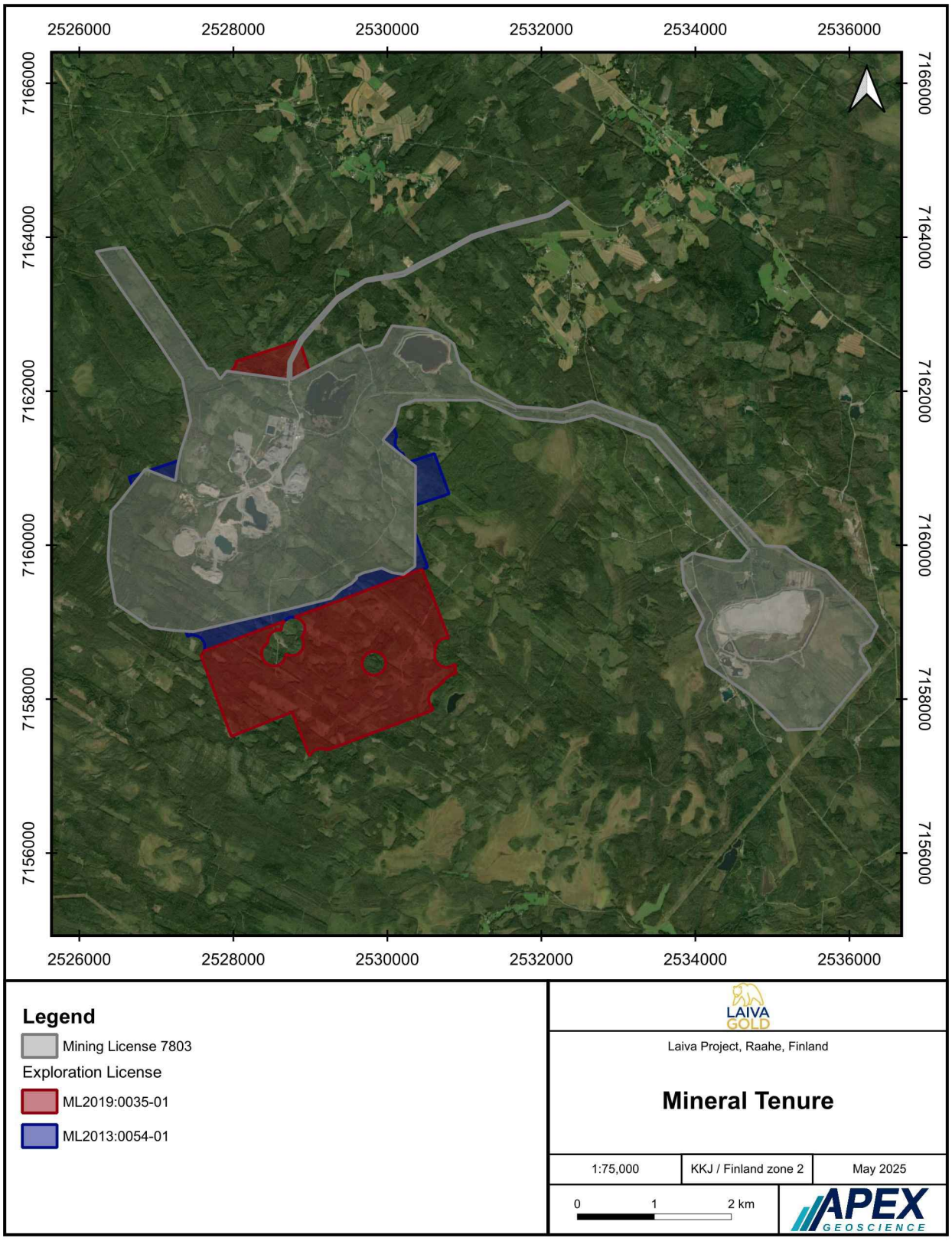
Source: APEX (2025)

Mining concessions are valid until further notice or may also be granted for a fixed term and may be extended for an additional 10 years at a time. The Project's mining concession was initially granted to Nordic on April 15th, 2009, and continues to be valid.

Exploration permits are granted for 4 years and can be extended for 3 years at a time to a maximum of 15 years. The exploration permit holder must submit an annual report to the mining authority detailing all exploration activities carried out and the results. Additionally, exploration fees must be paid to landowners. This fee is calculated as a rate per hectare and depends on the age of the exploration license:

- €20 per hectare per year for years 1 to 4.
- €30 per hectare per year for years 5 to 7.
- €40 per hectare per year for years 8 to 10.
- €50 per hectare per year for years 11 to 15.

Figure 4.1 Mineral tenure, Laiva Gold Project.



Permit holders must pay an 'excavation fee' of €50 per hectare per year to land owners. In addition, 0.15% of the calculated value of the exploited metal during the year must be paid as well (Ministry of Employment and the Economy of Finland, 2011).

4.1.2 Surface Rights

Laiva Gold holds 7.0212 km^2 (702.12 ha) of surface rights within the mining area, covering all mining infrastructure and pits (41.28% of the total 17.01 km^2 mining area). The Issuer does not own any land within the exploration permits. The remainder of surface rights within the Property belong to private landowners and forestry companies.

The mining concession permits the Company to conduct mining related activities, and the surface rights are considered sufficient for mining operations.

4.2 Royalties and Agreements

4.2.1 Previous Agreements

On November 2022, Pilar Gold Inc. acquired the Laiva Gold Project from Otso Gold Corp. for: 1) CDN$1,500,000 in cash; 2) 30,000,000 shares of Pilar Gold Inc. at a deemed price of CDN$1.00; 3) 2.5% royalty on future production; and 4)10,000,000 Pilar Gold Inc. warrants at CDN$1.50.

In 2023, Laiva Gold closed its business with Pilar Gold Inc. as a spin-off transaction, whereby Laiva Gold Inc. became the owner of Laiva Gold Oy, a Finnish subsidiary, completing the acquisition of 100% interest in the Laiva Gold Project for CDN$30,000,000 comprised of: 1) CDN$15,000,000 in cash, satisfied by a note payable to Pilar Gold Inc. with a 5.0% interest rate with repayment over a 3-year period; and 2) 30,000,000 shares of Laiva Gold Inc. at a deemed price of CDN$0.50 per share. The Pilar Gold Inc. agreement with Otso Gold included a 2.5% net smelter royalty (NSR) on future production, which is still valid.

4.2.2 Agreements between Laiva Gold and Edgemont

4.2.2.1 Letter of Intent

On February 20, 2025, Edgemont entered into a non-binding letter of intent (the "LOI") with Laiva Gold, which contemplates the acquisition by Edgemont of all the issued and outstanding common shares of Laiva Gold from the shareholders of Laiva Gold (the "Transaction"). Pursuant to the Transaction, Edgemont will issue such number of post-consolidation, as defined below, common shares in the capital of Edgemont, each a "Consideration Share" to the shareholders of Laiva Gold as is equal to the total number of shares of Laiva Gold outstanding immediately prior to the closing of the LOI Transaction.

In connection with the Transaction, Edgemont and Laiva Gold intend to conduct private placement offerings of: (a) subscription receipts of Edgemont, for aggregate gross proceeds of no less than CDN$7.5 million; and/or (b) convertible debentures of either Edgemont, Laiva Gold, or special purpose financing entities for aggregate gross proceeds of no less than CDN$7.5 million, all on terms as to be mutually agreed to by the parties. In addition, it is anticipated that prior to closing, the parties will organize a private placement of

securities of Laiva Gold for aggregate gross proceeds of up to CDN$7.5 million (Edgemont Gold Corp., 2025a).

Concurrent to the LOI, Edgemont advanced to Laiva Gold an unsecured loan in the principal amount of CDN$750,000 (the bridge loan) pursuant to a promissory note. The bridge loan bears simple interest at a rate of 5 per cent per annum and will mature and be repayable by Laiva Gold to Edgemont on the earlier of (a) the date that is six months after the date of the LOI; (b) the outside date (as such term will be defined in the definitive agreement); and (c) if no definitive agreement is entered into by the parties, upon the date of termination of the LOI (Edgemont Gold Corp., 2025a; 2025b).

On May 1, 2025, Edgemont and Laiva Gold reported that they have entered into a second amending agreement whereby the parties have agreed to extend the deadline for execution of a definitive agreement in respect of the transaction (Edgemont Gold Corp., 2025c).

4.2.2.2 Definitive Agreement

On June 4, 2025, Edgemont entered into a merger agreement (the "Definitive Agreement") with Laiva Gold and 2717194 Alberta Ltd. ("SubCo"), a newly incorporated subsidiary of Edgemont. Pursuant to the Definitive Agreement, Edgemont will acquire all the issued and outstanding common shares of Laiva Gold (the "Laiva Shares") in exchange for an equivalent number of common shares of Edgemont (the "Transaction"). The Transaction which will constitute a reverse takeover transaction of Edgemont by Laiva Gold and will be a "Fundamental Change" of the Company under Canadian Securities Exchange (CSE) Policy 8. Completion of the Transaction requires approval from the CSE and the Laiva Gold and Edgemont shareholders.

The Definitive Agreement structures the Transaction as a three-cornered amalgamation with Laiva Gold amalgamating with SubCo, with the amalgamated entity becoming a wholly owned subsidiary of Edgemont following the closing (the "Resulting Issuer"). Following the closing, the Resulting Issuer will continue the business of Laiva Gold as a company listed on the CSE as a Mining Issuer under the name "Laiva Gold Corporation" (the "Name Change") or such name as agreed by the parties.

Prior to the closing of the Transaction, Edgemont and Laiva Gold will complete two private placement offerings (together, the "Concurrent Financings"):

1) A private placement offering of units of Laiva Gold at a price of $0.80 per unit for aggregate gross proceeds of up to CDN$7.5 million (the "Laiva Private Placement") with each unit consisting of one Laiva Gold Share and one half of one Laiva Gold Share purchase warrant, with each whole warrant exercisable at a price of $1.20 per Laiva Gold Share for a period of 18 months from the date of issuance; and

2) A private placement offering of subscription receipts of Edgemont at a price per subscription receipt to be determined in the context of the market for aggregate gross proceeds of up to CDN$7.5 million (the "SR Financing"), with each subscription receipt expected to convert into one post-Consolidation Edgemont Share prior to the closing (Edgemont Gold Corp., 2025d).

The Definitive Agreement includes a number of conditions precedent to closing, including but not limited to, receipt of the requisite shareholder approvals from both Edgemont (approving the Transaction as a "Fundamental Change") and Laiva Gold (approving the Amalgamation), completion of the Concurrent Financings, completion of the Consolidation, the Name Change being effected, approvals of all regulatory bodies having jurisdiction in connection with the Transaction, approval of the CSE, including the satisfaction of its listing requirements, the settlement of certain outstanding liabilities of Laiva Gold, the receipt by Laiva Gold of certain environmental permits and the satisfaction of other closing conditions customary to the

transactions of this nature. There can be no assurance that the Transaction will be completed as proposed or at all. Following completion of the Transaction, Laiva will become a wholly-owned subsidiary of the Resulting Issuer.

The Definitive Agreement contains customary representations, warranties and covenants, including non-solicitation provisions. In addition, the Definitive Agreement provides that a termination fee of $500,000 is payable by Laiva should the Transaction be terminated in certain circumstances. In addition, in the event of termination of the Definitive Agreement, Laiva will repay to Edgemont the amount owing under the bridge loan advance by Edgemont to Laiva, as well as reimburse Edgemont for certain expenses and fees incurred in connection with the Transaction (Edgemont Gold Corp., 2025d).

4.3 Environmental Liabilities, Permitting and Significant Factors

The mining permit entitles the Issuer to conduct mining- and exploration-related activities within the mining concession. Exploration permits entitle the Issuer to conduct exploration activities required to locate and investigate the quality and extent of a deposit. As routine ministerial matters, the mining and exploration permit renewals pose no issues, provided the operations remain compliant.

All necessary permits are in place for the Laiva Gold Project mine, processing plant, and other operations; however, the existing environmental permit is under threat of withdrawal. The Company has appealed the threat and is working to remedy alleged violations committed by previous owners. The environmental permits applicable to the Laiva Gold Project are summarized below in Section 20.

In addition to the exploration and excavation fees, mining permit holders must compensate the land owners for any inconvenience or damage caused in an exploration area (e.g. removal of trees during for drill pad construction). The amount and type of compensation is to be arranged with the land owners and must be approved by the mining authority (Ministry of Employment and the Economy of Finland, 2011).

The area within the mining license is uninhabited and only limited commercial logging activity takes place in the surrounding areas.

The Authors are not aware of any environmental liabilities to which the Property is subject. There are no other significant factors or risks that the Authors are aware of that would affect access, title, or the ability to perform work on the Property.

5 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

5.1 Accessibility

The Laiva Gold Project can be accessed by land from the town of Raahe, North Ostrobothnia, located 20 km northwest of the Property. Raahe is located along the E8 coastal highway, about 580 km north of Helsinki, 80 km southwest of Oulu, and 200 km north of Kokkola. Raahe can also be accessed by boat through the Gulf of Bothnia. The closest airport to the Property is located at Oulu and it has direct flights to Helsinki.

From Raahe, the Property can be accessed year-round by travelling Road 88 until the intersection with Mattilanperäntie Road, a long gravel road that leads to Laivalantie Road, which subsequently leads directly to the Property. Alternatively, the Property can be reached via Road 88 to the village of Kopsa and then by turning onto Laivakankaantie Road. The exploration office and core library are located 6 km east of the mine and can be accessed using gravel roads from the mine.

All the roads around the Property were constructed by previous operators and work year-round. Temporary routes are required for new exploration sites.

5.2 Site Topography, Elevation and Vegetation

The Property lies within a middle boreal forest with a gentle topography dissected by shallow streams and peatlands. Elevation within the Project ranges between 30 m asl (above sea level) in the northwest and 100 m asl in the east. Vegetation is that of a classic middle boreal forest, including pine, spruce, and birch trees.

5.3 Climate

The region is characterized by a subarctic climate. Summers are mild with an average temperature of 16 degrees Celsius (°C) and winters are cold with an average temperature of -7°C, but may also reach extreme temperatures of -35°C. Precipitation is low and it varies between 40 millimetres (mm) and 100 mm of rain in the summer and between 5 centimetres (cm) and 25 cm of snow in the winter months. The ground is largely covered by snow for most of the winter, but it rarely exceeds more than 1 m of depth. Annual precipitation ranges have not historically affected the exploration and production operations.

5.4 Local Resources and Infrastructure

The Laiva Gold Project facilities comprise two open pit mines (North and South pits), a 6,000 metric tons per day (mtpd) gold processing mill and plant, and high-grade and low-grade Carbon-in-Leach (CIL) circuits. The North Pit measures 500 m by 280 m and is 60 m deep, and the South Pit is 320 m by 240 m and is 10 m deep.

The processing plant was manufactured by Metso Outotec and FLSmidth and Co. and was commissioned in 2010 to 2012 by Nordic. An autogenous grinding (AG) mill and a pebble mill, both manufactured by Metso Outotec, run in series to process a design rate of 6,000 metric tons of material daily. The plant was built within a large, heated building and can function year-round. Gold is recovered through gravity with centrifugal and spiral concentrators, and high-grade and low-grade CIL circuits.

Tailings infrastructure comprises a lined high-grade tailings pond of material being sent directly from the processing plant, and a low-grade tailings dam fed by a slurry pipeline located about 7 km east of the processing plant (Figures 5.1 and 5.2). The low-grade tailings are passed through a paste thickener before being deposited in the dam.

The Laiva Mine and process plant were fully permitted for operation and were fully operated for the period February 2012 through December 2013 and the process plant only continued to operate, processing low-grade stockpile material until March 2014. Since then, the operation was on active care and maintenance, until restarted in August 2018 (processing November 2018). The site was placed back to care and maintenance in April 2019. Under Otso Gold, mining at the Laiva Gold Project recommenced for a 5-month period between October 2021 and February 2022. The Property has been on care and maintenance since February 2022.

Figure 5.1 Site infrastructure and physiography at the Laiva Gold Project.



Source: Shoemaker and Sparks (2021)

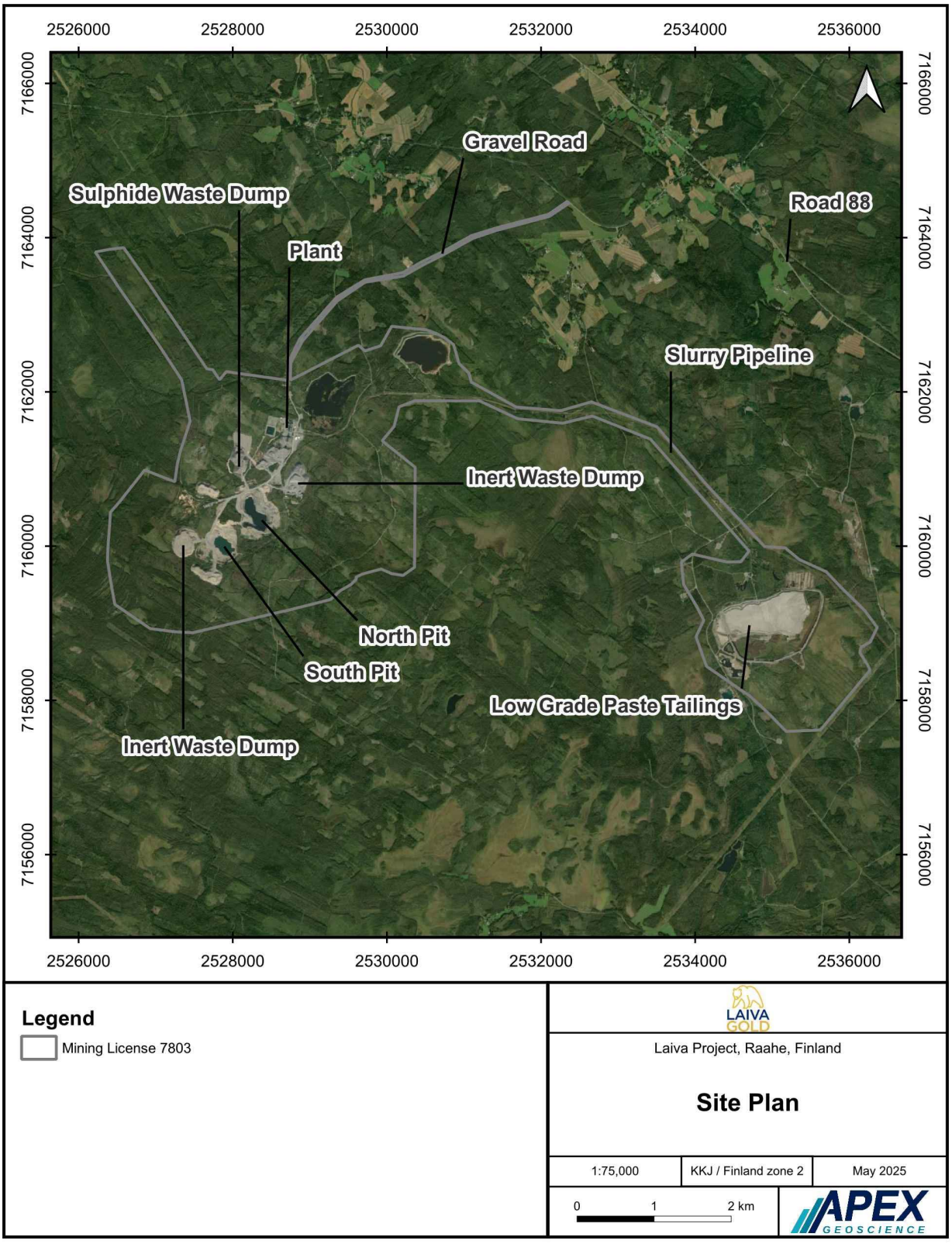
A geochemical laboratory is situated within the Property, previously managed by an independent contractor (CRS Laboratories Oy). Geochemical samples were processed and analyzed using a pulverize and leach machine (PAL1000) with 52 steel pots and an Atomic Absorption (AA) spectrometer with a capacity of 8,000 samples per week. This laboratory has historically been used to process and analyze grade control samples.

Most of the power used by the Project comes from a high-voltage grid in the area. It is located to the east of the Property and supplies 110 kV of power. A secondary 20 kV power grid is supplied from the village of Mattilanperä. A diesel storage and supply area are located within the Property.

The Property also features a purpose-built water reservoir that supplies the processing plant. This reservoir is fed by groundwater pumped from the pits and by waste water returned from the low-grade tailings dam. Excess reservoir water is discharged into the Gulf of Bothnia via an 18 km pipeline.

With the current infrastructure, approximately 130 workers are required to run all equipment and complete all tasks. The town of Raahe, North Ostrobothnia, hosts a population of approximately 20,000 people and could offer personnel for potential mining and processing operations.

Figure 5.2. Laiva Gold Project site plan.



During the site inspections, Mr. Dufresne and Mr. Sparks observed the Property access and infrastructure listed above. In the opinion of the QP's, access is sufficient for year-round operations, and all facilities and infrastructure required to continue exploration and mining operations are in place and appear to be in good working condition, with only minor repairs. Sources of power, water, and personnel are adequate for future exploration and mining activities.

6 History

6.1 Ownership

The Laiva Gold Project was discovered by an amateur prospector in 1980 through boulder sampling. Since its discovery, several companies have conducted exploration and mining activities at the Property, including Outokumpu Oy ("Outokumpu") from 1981 to 1986, Endomines Oy ("Endomines") from 1999 to 2005, and Nordic Mines Marknad AB ("Nordic") from 2005 to 2018. Firesteel Resources Inc. ("Firesteel Resources") acquired Nordic in early 2018 and subsequently changed their name to Nordic Gold Inc. In late 2019, Nordic Gold Inc. changed their name to Otso Gold Corporation ("Otso Gold"), which was later acquired by Pilar Gold Inc., a Canadian company that underwent restructuring process that resulted in Laiva Gold Inc. (through its Finnish subsidiary Laiva Gold Oy), the current owner of the Laiva Gold Project. A summary of historical ownership, exploration, and mining activities is provided in Table 6.1.

Table 6.1 Historical ownership, exploration and mining activities in the Laiva Gold Project.

Operator	Ownership Period	Activities	Gold Production
Outokumpu Oy	1981 - 1986	Boulder and till sampling Ground magnetic survey Ground gravity survey Induced Polarization profiles Diamond drilling	No gold production
Endomines Oy	1999 - 2005	Diamond Drilling	No gold production
Nordic Mines AB	2005 – 2018	Till sampling Ground Penetrating Radar profiles Surficial Mapping Diamond and RC drilling Grade control drilling Blasthole drilling Gold mining	2,119 kg between 2012 and 2014 in the North and South pits
Firesteel Resources Inc. Nordic Gold Inc.	2018 -2019	Ground magnetic survey RC drilling	389 kg in 5 months between 2018 and 2019
Otso Gold Corp.	2019 - 2022	Diamond drilling	273 kg in 5 months between 2021 and 2022 in the North and South pits

Source: APEX (2025)

6.2 Exploration and Development Work Conducted by Previous Owners

Historical exploration has been completed by several companies from 1981 to 2022, including: Outokumpu, Endomines, Nordic, Firesteel Resources, and Otso Gold. Historical exploration activities comprised geochemical sampling, geophysical surveying, drilling, as well as production and mining activities. An overview of historical bedrock sample geochemistry for gold is presented in Figure 6.1.

A total of 4,272 historical diamond and RC drillholes, totalling 177,009 m are contained in the Laiva Gold Project's drillhole database (Figures 6.2 to 6.4; Table 6.2). These drillholes were completed between 1981 to 2022 by several companies. Of these, 82,527 m were drilled for grade control and 93,579 m for exploration and resource definition. Historical drillholes with incomplete data (i.e., missing collar locations, collar IDs, missing assays, dates, etc.) were not included in Table 6.2 or in the Laiva Gold MRE summarized in Section 14.

The information in this section on the historical exploration and development work at the Property has been summarized from Shoemaker and Sparks (2021), Lehtonen (2006), Orduña (2016), and Pratt (2010). The author has reviewed these sources and consider them to contain all the relevant historical information regarding the Property. Based on the review of historical literature and data, the Author takes responsibility for the information herein.

6.2.1 Geological Survey of Finland

As part of their National Aerogeophysical Mapping Program, the Geological Survey of Finland ("GTK") acquired regional airborne magnetic, radiometric, and electromagnetic data between 1982 and 1983. These data are available for the entire Laiva Gold Project and guided historical exploration within the Property.

The GTK completed a low-altitude airborne survey between 1982 and 1983. The survey was conducted at a flight altitude of 30-40 m, and lines were oriented east-west and spaced at 200 m. This survey was regional and the 200 m spacing did not allow for detailed property scale interpretations. According to Lehtonen (2006), volcanic rocks are the main source of wider magnetic high areas.

The GTK completed regional boulder and till sampling that covered the Laiva Gold Project. The GTK collected 16 samples within the Property and all returned Au concentrations over 1 ppm to a maximum of 11.4 ppm Au (Figure 6.5).

6.2.2 Outokumpu Oy

Between 1980 and 1986, Outokumpu conducted boulder, channel, and till sampling, ground magnetic, Bouger gravity, and induced polarization geophysical surveys, drilling, and metallurgical testwork at the Property. Within the current North Pit area, two shallow excavations were made to obtain bedrock samples for metallurgical analysis. A total of 5,000 tons of material at a grade of 2.6 ppm were extracted. The results of this metallurgical testwork are unknown.

Figure 6.1 Overview of historical bedrock geochemistry (Au).

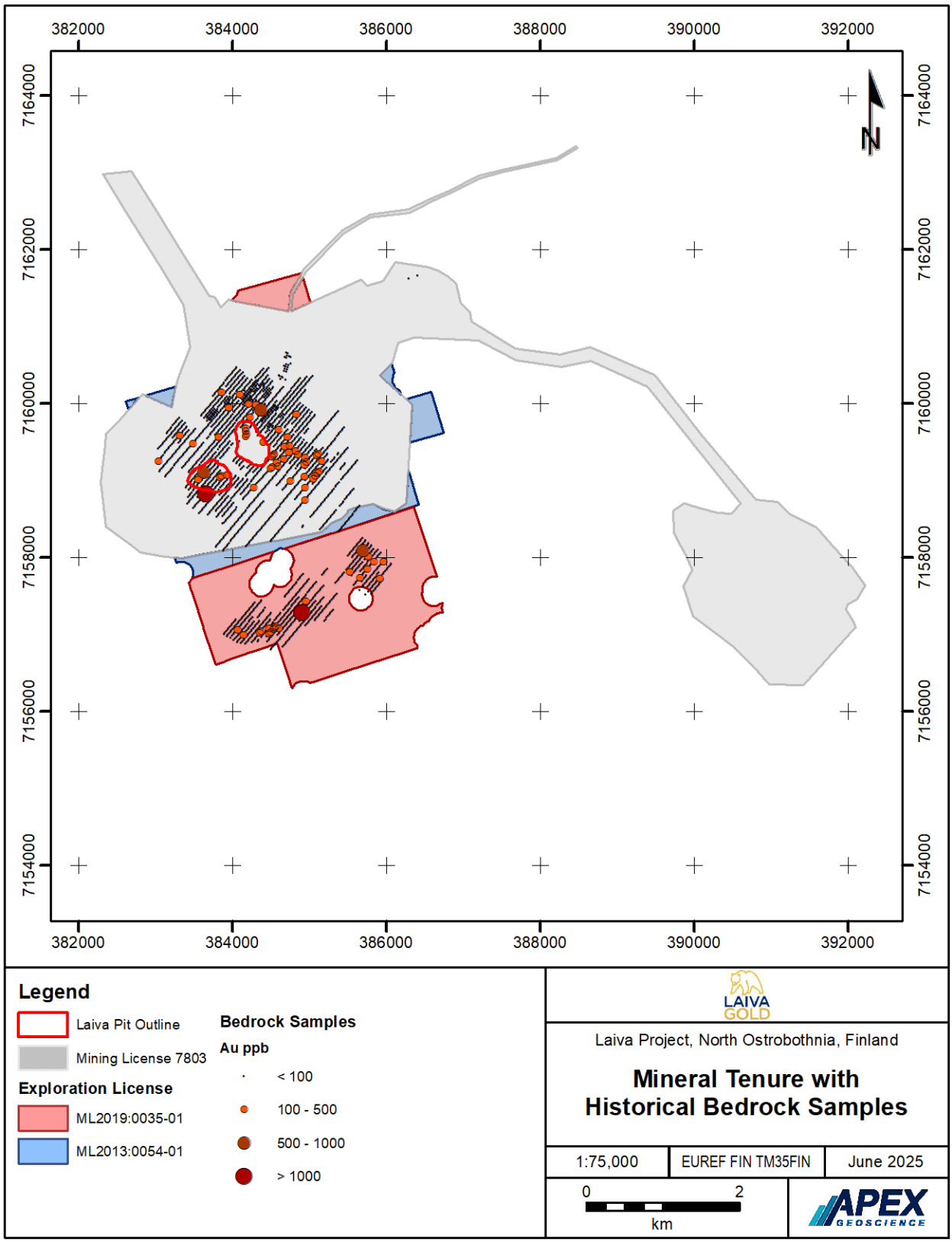


Figure 6.2 Historical exploration and geotechnical drillholes.

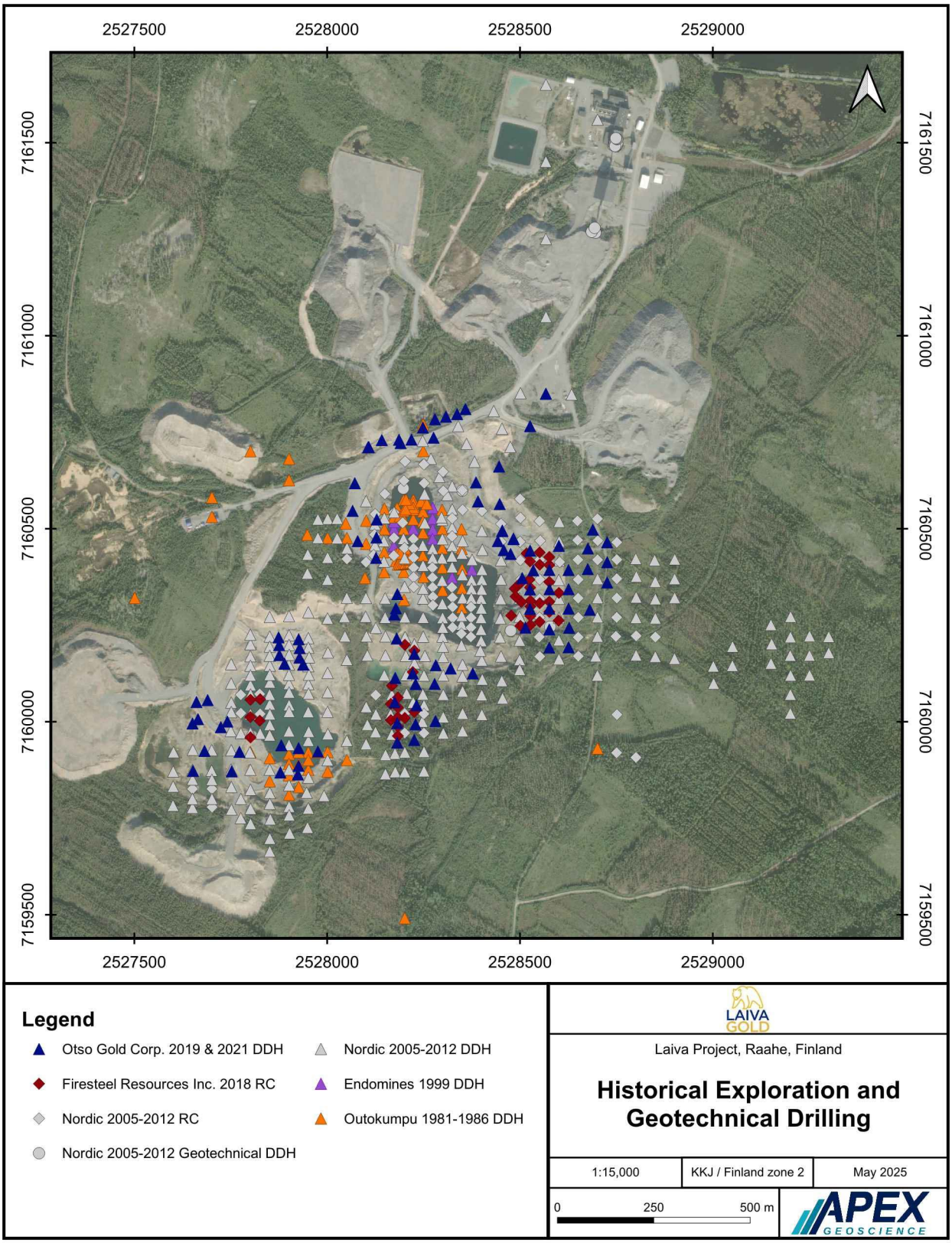


Figure 6.3 Historical grade control drillholes.

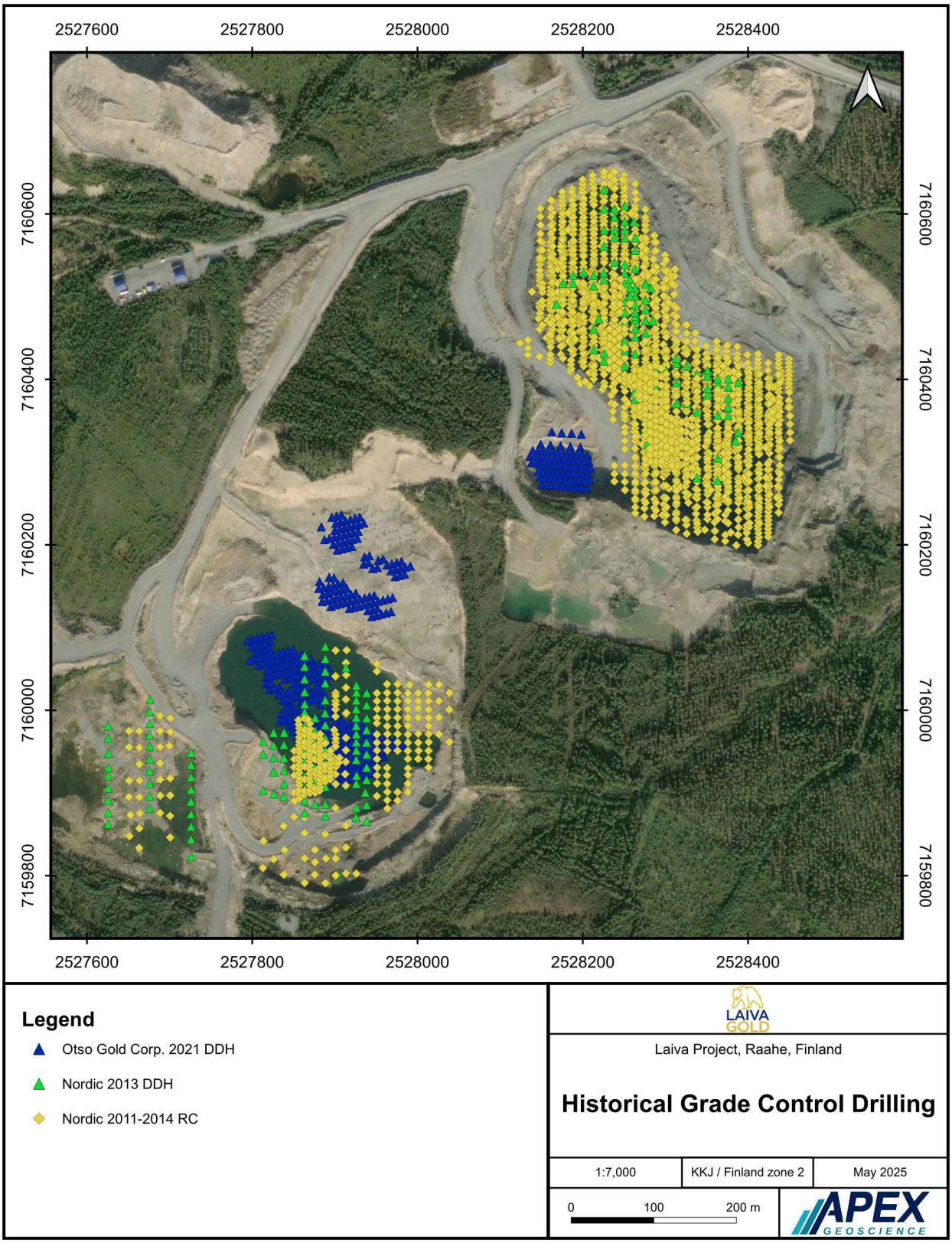


Figure 6.4 Historical blasthole locations.

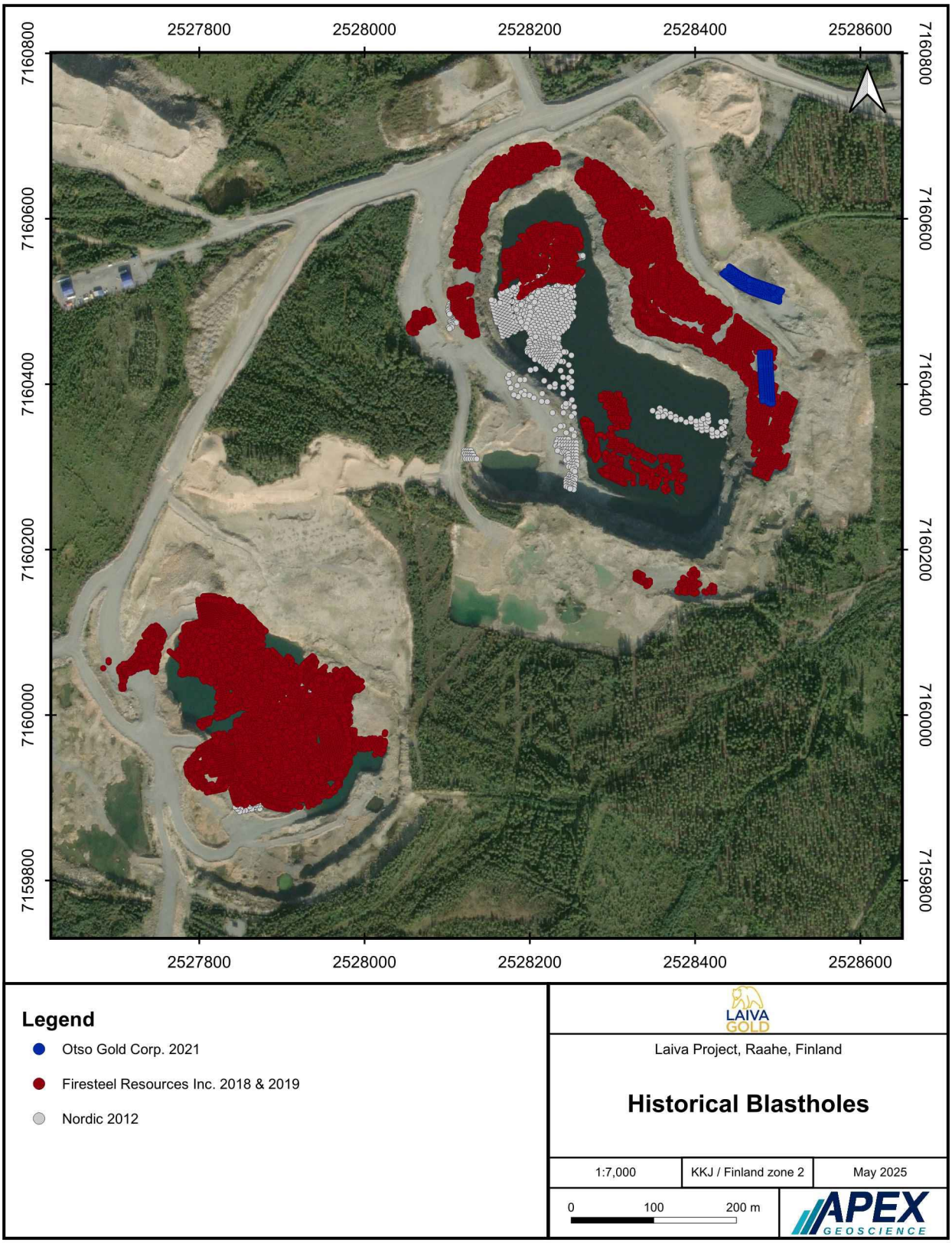


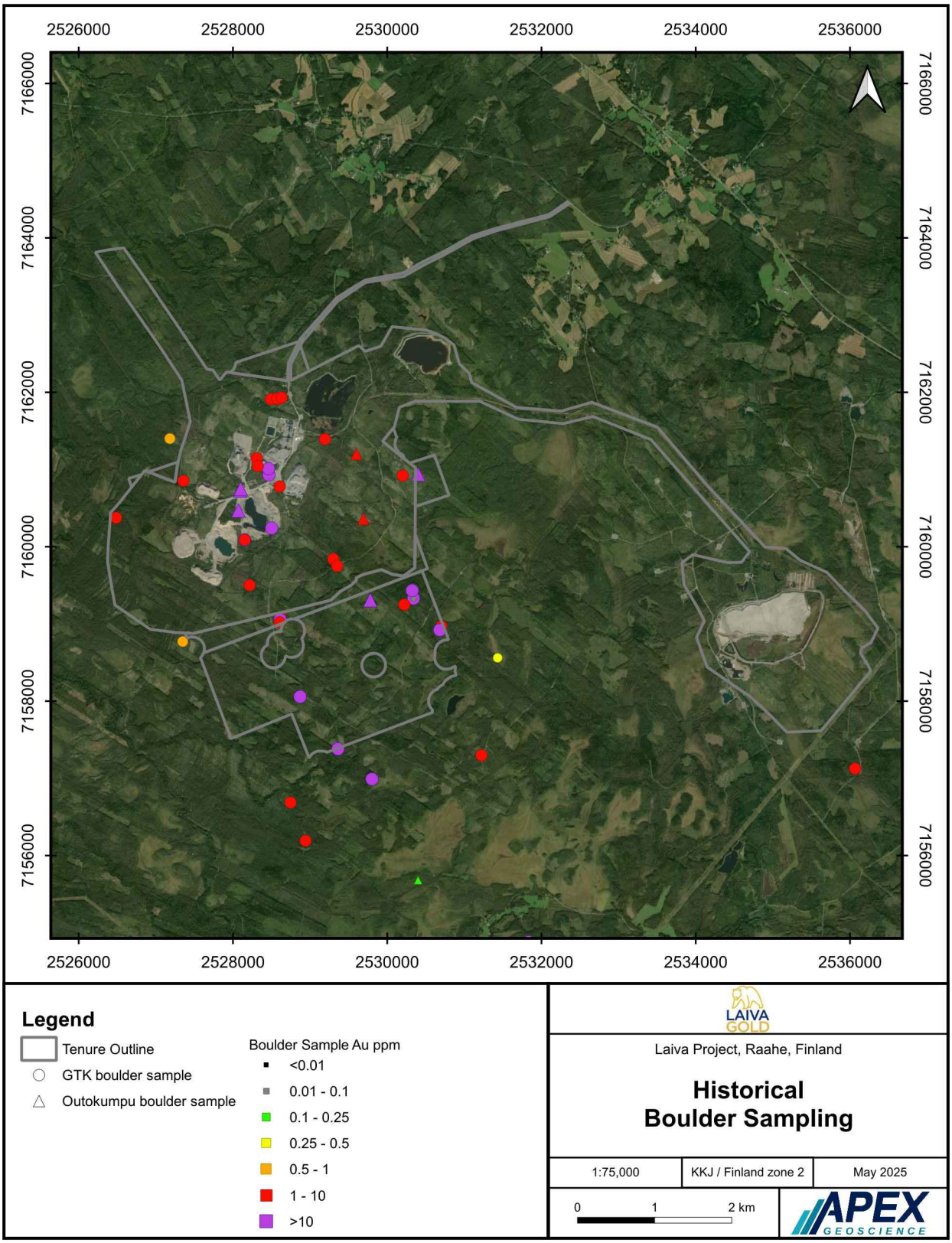
Table 6.2. Summary of historical drilling campaigns completed at the Laiva Gold Project.

Operator	Purpose	Period	Sequence	Type	No. of holes	Meterage (m)
Outokumpu	Exploration	1981 - 1986	LAI01 – LAI95	Core	95	6,926
Endomines	Exploration	1999	LAD1 – LAD12	Core	10	772
		Subtotal Pre 2005			**105**	**7,698**
Nordic	Exploration	2005 - 2011	LAN501 – LAN953	Core	208	42,526
				RC	93	13,495
		2010	1100001 - 1100040	Core	35	5,075
		2011	LAN11002 – LAN11044	Core	30	8,802
		2012	LAN12011 – LAN12053	Core	28	3,532
		Subtotal Nordic Exploration			**394**	**73,430**
	Geotechnical	2008	AGMILL1 – AGMILL11	Core	11	181
		2010	K200 – K206	Core	5	93
			LAG1 – LAG4	Core	4	607
			PMILL22 – PMILL24	Core	3	49
		Subtotal Nordic Geotechnical			**23**	**903**
	Grade Control	2011	5110001 - 5110572	RC	413	8,148
		2011	51188001 – 51199196	RC	220	4,836
		2012	51200003 - 51299434	RC	1,210	26,952
		2012	512000241 - 512010831	RC	49	1,057
		2012	512SA891- 512SA893E	RC	7	161
		2012	12S001 – 12S066	RC	47	1,122
		2013	13S012 – 13S364	RC	123	2,965
		2013	5130007 - 5131058	Core	99	2,841
				RC	722	16,869
		2013	LS1 – LS119	Core	104	4,086
		2014	RCN00001 – RCN00098	RC	86	2,125
		2014	RCS00001 – RCS00109	RC	89	1,941
		Subtotal Nordic Grade Control			**3,169**	**73,103**
	Blasthole	2012	7120001 – 7120036	-	25	142
		2012	71100001 - 71100237	-	218	1,597
		2012	71400001 - 71400280	-	203	2,031
		2012	BHS001 - BHS389	-	353	1,922
		2012	BLS00001 – BLS00355	-	355	3,109
		2012	BT1145 – BT5147	-	302	3,518
		2012	Soku 1 – Soku228	-	228	1,140
		Subtotal Nordic Blastholes			**1,684**	**13,459**
		Subtotal Nordic excluding blastholes			**3,586**	**147,436**
Firesteel Resources Inc.	Exploration	2018	10001 - 10050	RC	43	2,774
	Blasthole	2018	N001 – N0424	-	388	2,458

Operator	Purpose	Period	Sequence	Type	No. of holes	Meterage (m)
		2018	N180827-1 – N181223-99	-	3,339	21,538
		2018	BHS0400 – BHS2782	-	939	3,779
		2018	S180828-1 – S181227-GR9	-	5,187	30,182
		2018	SP2001-1 – SP2001-4108	-	100	1,057
		2019	NP0011-1 – NP0012-3206	-	562	3,339
		2019	NP0501-1 – NP0501-92	-	92	500
		2019	NP1003-1 – NP1003-99	-	188	1,396
		2019	NP4002-1 – NP4002-99	-	282	1,473
		2019	NP4201-1 – NP4201-99	-	205	1,638
		2019	NP4201-X139 – NP4201-X274	-	136	1,061
		2019	NP4503ME-1 – NP4503ME-99	-	197	1,107
		2019	NP4504-11 – NP4505-99	-	188	1,344
		2019	NP5003-1 – NP5006-99	-	943	4,821
		2019	SP2002-1 – SP3012-Y11	-	2,309	12,495
		Subtotal Firesteel Blastholes			**15,055**	**89,582**
		Subtotal Firesteel excluding blastholes			**43**	**2,774**
Otso Gold Corp.	Exploration	2019	19LV0001 – 19LV0091	Core	22	2,125
		2019	GC-2-01 – GC-2-04	Core	4	122
		2021	LV21001 – LV21111	Core	74	7,338
	Grade Control	2021	1643 - 7644	RC	261	5,481
		2021	N1040004 – N1040161	RC	81	1,842
		2021	S10251646 – S10507146	RC	96	2,101
	Blasthole	2021	P1 – Z99	-	155	775
		2021	NP4523-11 – NP4523-530	-	154	775
		2021	AA1 – AS2	-	60	300
		2021	CL1 – CT1	-	33	165
		Subtotal Otso Gold Blastholes			**402**	**2,015**
		Subtotal Otso Gold excluding blastholes			**538**	**19,009**
		Subtotal Post 2018			**581**	**21,783**
		Total Drilling at Laiva excluding blastholes			**4,272**	**176,917**

Source: Modified from Shoemaker and Sparks (2021)

Figure 6.5 Historical boulder sampling geochemistry (Au ppm).



6.2.2.1 Non-Drilling Activities

Outokumpu collected 976 till and 52 boulder samples at the Laiva Gold Project. The boulder samples were selectively collected as rock chips from mineralized boulders in surface. The samples were analyzed for gold, arsenic, copper, zinc, nickel, cobalt, lead, sulfur, chromium, and arsenic. Gold was analyzed by fire assay and atomic absorption. Other details regarding laboratory, sample preparation and analytical finishes are unknown. The boulder sample geochemical sample results for gold are presented in Figure 6.5.

A total of 41 channel samples from 16 sample locations were collected in a channel sampling program completed in 1985 (Figures 6.6 to 6.8). The channel lengths were between 1.65 and 18.3 m. Sample lengths ranged from 0.3 to 2.2 m, with an average length of 1.16 m and a median length of 1.0 m. Width, depth, and sampling procedures are unknown to the Author. Gold assay results ranged between 0.02 and 29.00 g/t Au with an average of 3.11 g/t Au and a median result of 1.63 g/t Au. All samples were collected over the pre-mined surface in the northern edge of the North Pit, perpendicular to mineralized shear zones.

Three ground magnetic geophysical surveys were completed at the Property by Outokumpu, with the grids summarized as follows:

- 3 km by 2 km survey area, comprised of a 50 m line spacing and 10 m station spacing.
- 1.5 km by 1.2 km survey area, comprised of a 10 m line and station spacing.
- 1.0 km by 0.9 km survey area, comprised of a 10 m line spacing and 5 m station spacing (Shoemaker and Sparks, 2021; Lehtonen, 2006).

Lineament analysis performed by SRK Consulting (2015) indicate multiple potential northeast structures subparallel to the Red Shear Zone and a series of north-northeast trending structures that truncate magnetic highs. The highest magnetic anomalies are located west of the Laiva pits and are caused by larger packages of volcanic rock (Lehtonen, 2006). Details about the processing of the magnetic data are unknown. The survey grid areas are presented in Figure 6.9.

Additional geophysical surveys conducted on behalf of Outokumpu include Bouger gravity and Induced Polarization (IP) surveys.

The ground Bouger gravity survey covered a 2.4 km^2 area with the Property, over the current North and South pit locations. Lines were oriented north-south at spacings of 50 m (Shoemaker and Sparks, 2021; Lehtonen, 2006). According to Lehtonen (2006), there is a weak correlation between positive residual gravity anomalies and magnetic highs. Shoemaker and Sparks (2021) reported a north trending positive residual gravity anomaly that may represent a dike or a structure unrelated to mineralization.

Regarding the IP geophysical survey, dipole-dipole array surveys were completed on north-south oriented lines. Lines were spaced at intervals of 25 m, 50 m, and 100 m, with 20 m station spacing (Shoemaker and Sparks, 2021; Lehtonen, 2006). The 25 m lines were located northwest of the pits (Figure 6.9). Overall, chargeability anomalies correlate with high magnetic anomalies. However, the line spacing of the survey over the current location of the open pits was 100 m; therefore, the resolution was not enough to draw conclusions about mineralization (Lehtonen, 2006).

Figure 6.6 Historical channel sample locations, Laiva Gold Project.

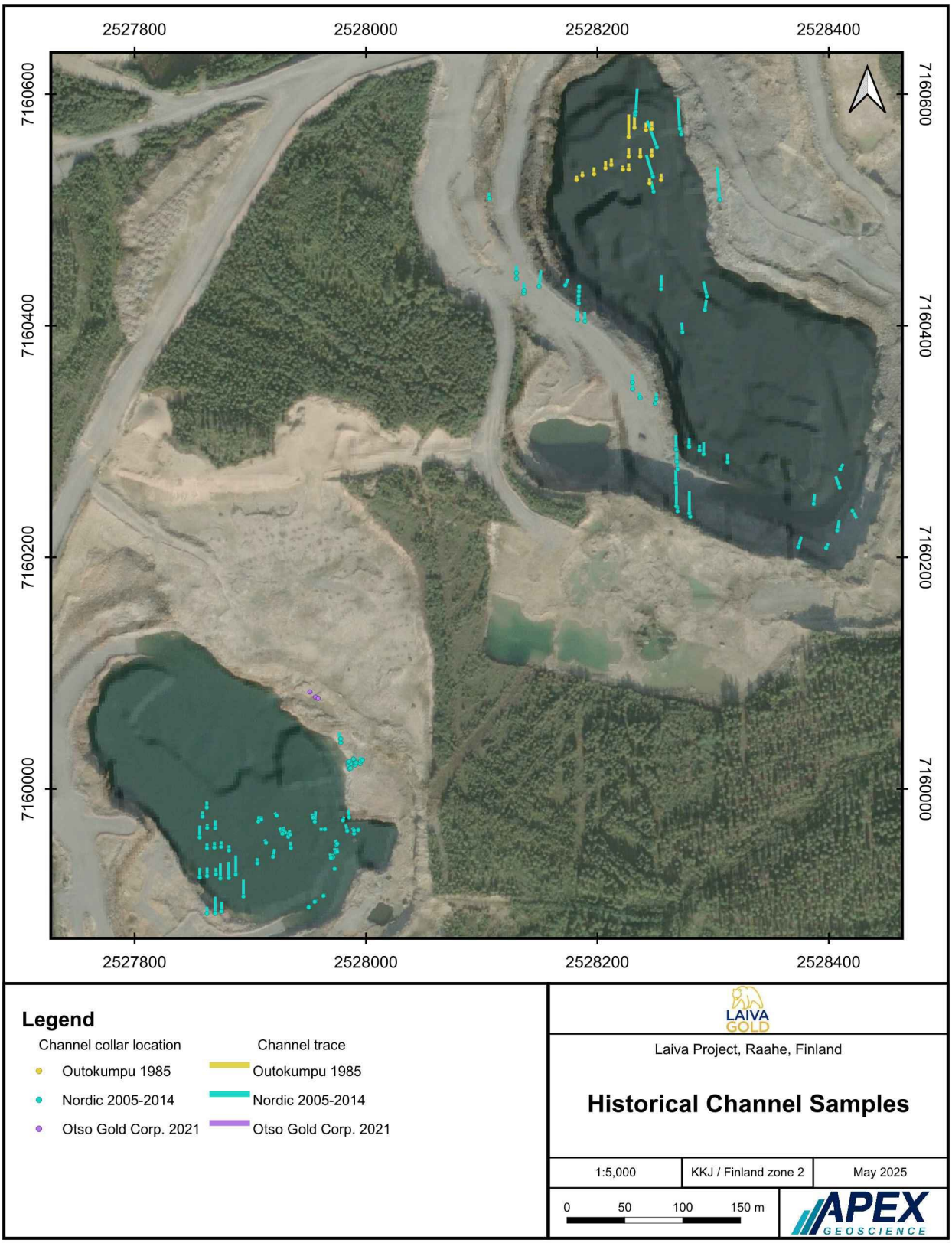


Figure 6.7 Historical channel sample results for gold (ppm) at the North Pit.

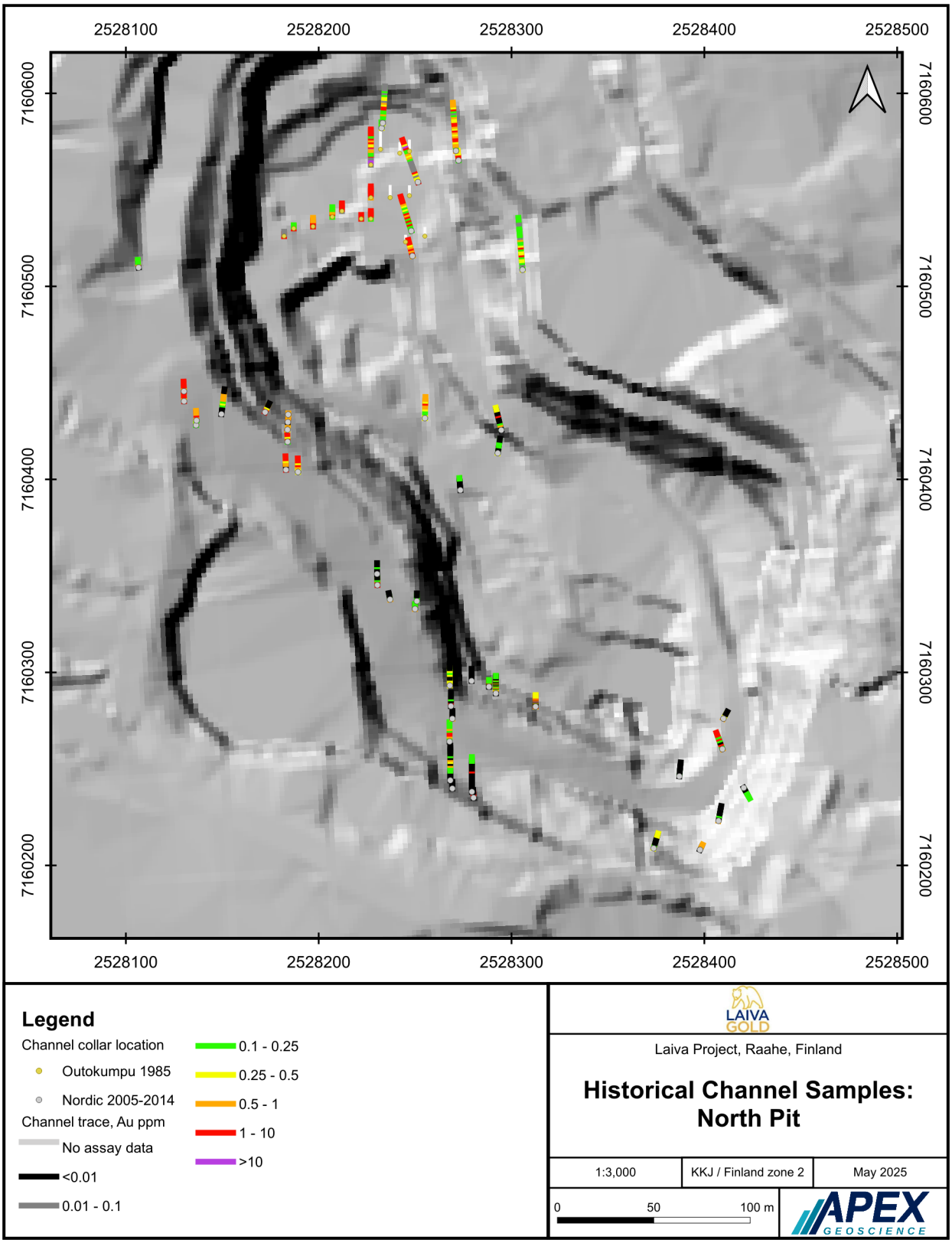


Figure 6.8 Historical channel sample results for gold (ppm) at the South Pit.

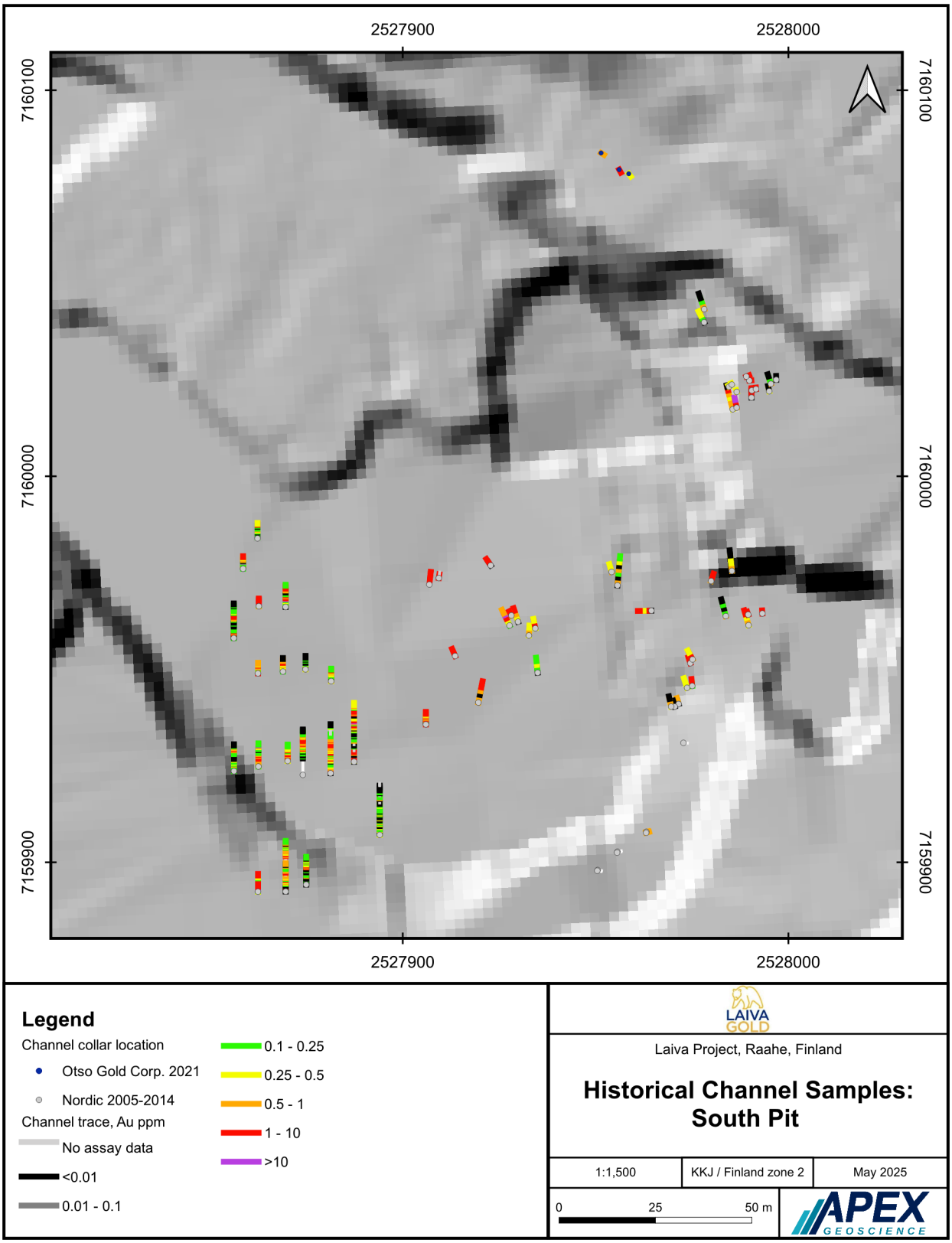
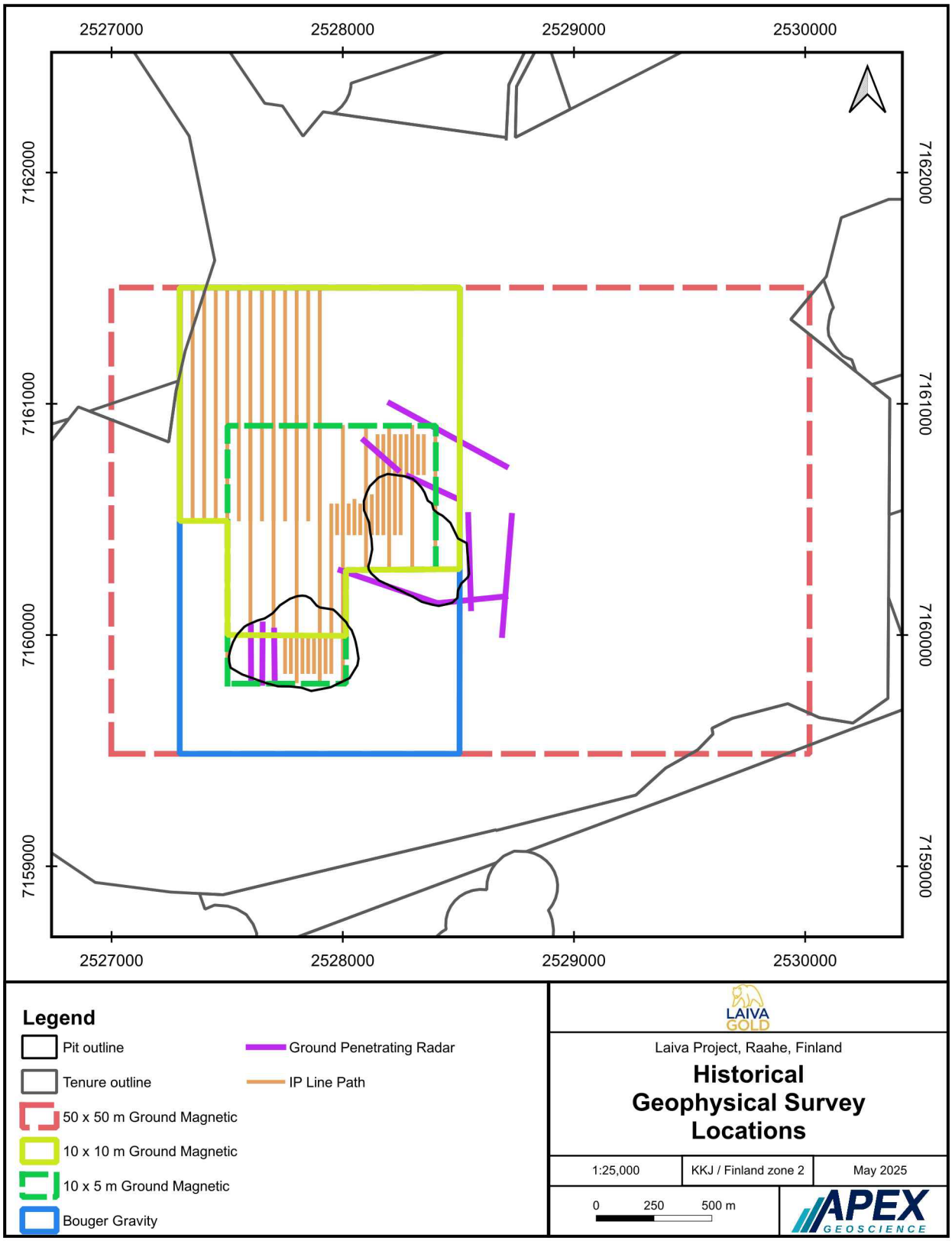


Figure 6.9 Historical geophysical survey grid locations.



6.2.2.2 Diamond drilling

Outokumpu completed 95 diamond drillholes for 6,926 m at the Property between 1981 and 1986 to test surficial gold anomalies at depth (Table 6.2). The drilling identified prospective areas measuring approximately 400 m by 400 m over the North Pit, and 250 m by 200 m over the South Pit (Figure 6.2). Collar, survey, and assay data is available for all holes drilled by Outokumpu. Samples were not taken continuously from top to end of hole and sample length varied between 0.45 m and 4 m. No information is available regarding quality assurance – quality control (QA-QC) procedures from the Outokumpu drill programs. Select results of the Outokumpu drilling are listed as follows:

- North Pit: LAI23 returned 30.30 m core length of 4.40 g/t Au from 32.00 m depth. High grade intervals included 4.35 m core length of 14.33 g/t Au from 40.30 m depth.
- North Pit: LAI25 returned 40.20 m core length of 0.51 g/t Au from 50.00 m depth.
- South Pit: LAI15 returned 6.30 m core length of 4.56 g/t Au from 206.90 m depth. High grade intervals included 1.35 m core length of 8.74 g/t Au from 206.90 m depth.
- South Pit: LAI16 returned 6.05 m core length of 125.18 g/t Au from 15.75 m depth. High grade intervals included 0.30 m core length of 370.00 g/t Au from 15.75 m depth.

Drill results are presented as core length results. True width of mineralization is unknown.

6.2.3 Endomines Oy

In 1999, Endomines completed 10 infill diamond drillholes totalling 772 m at the North Pit (Table 6.2 and Figure 6.2). Collar, survey, and assay data is available for all holes drilled by Endomines. Samples were taken continuously from top to end of hole and sample length remained constant at 1 m. No information is available regarding QA-QC procedures from the Endomines drill program. Select results of the Endomines drilling are listed as follows:

- LAD3 returned 11.50 m core length of 1.99 g/t Au from 17.50 m depth. High grade intervals included 2 m core length of 3.75 g/t Au from 17.50 m depth and 1 m core length of 5.90 g/t Au from 24.07 m depth.
- LAD2 returned 4.3 m core length of 3.32 g/t Au from 33.00 m depth. High grade intervals included 1 m core length of 10.50 g/t Au from 35.00 m depth.

Drill results are presented as core length results. True width of mineralization is unknown.

6.2.4 Nordic Mines Marknad AB/Nordic Mines Oy

6.2.4.1 Non-Drilling Activities

In 2016, Terravision Radar Ltd. completed a ground penetrating radar (GPR) survey on behalf of Nordic, with the purpose of testing the viability of GPR for mapping faults, targeting mineralization, and discriminating between granite and quartz diorite (Figure 6.9). A transmitter power of up to 20 megawatt (MW) and two antennas spaced at 6 m and 10 m were used to reach depths of 100 m and 200 m. GPR was used to determine the effectiveness of the survey method and resulted in eight profiles with a total length of 4 km. Three profiles were southeast-striking and five were north-south striking. These profiles show that although some lithological boundaries and known structures were identified, it was not possible to discriminate

between mineralized and barren areas within the Property. This campaign provided insight into the value of GPR as an exploration tool at the Property; however, the results were inconclusive.

In 2010, Specialized Geological Mapping Ltd., commissioned by Nordic, conducted a detailed geological mapping campaign in the North Pit to determine the controls on mineralization and make recommendations for further exploration. Maps at the scale of 1:50 and 1:100 from the North and South pits were produced, and twenty channel samples were collected and submitted for gold analysis by fire assay and with a multielement Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) analytical finish (Shoemaker and Sparks, 2018).

The main observations drawn from this campaign are summarized as follows:

- Mineralization is hosted within mylonite shear zones and strikes preferentially east-southeast and east-northeast. Occasional north-northeast trending quartz veins returned gold grades of up to 100 ppm.
- Drag folding has modified the mineralized zones and is caused by the dextral sense of motion of the Red Shear Zone.
- Some granitic pulses were syntectonic (Pratt, 2010).

Nordic conducted a channel sampling program over the North and South pits between 2005 and 2014 (Figures 6.6 to 6.8). A total of 1,101, shallow channel samples were collected with the objective of mapping and determining exposed gold-bearing structures. All channels collected between 2005 and 2012 (n=517) had lengths ranging between 0.40 and 27.00 m and a consistent sample length of 1.00 m, though a few samples had slightly lower or higher lengths. Channel samples collected in 2014 (n=584) were collected at 0.25 m lengths. Gold assay results ranged between 0.00 and 30.45 g/t Au with an average of 0.82 g/t Au and a median of 0.23 g/t Au.

6.2.4.2 Percussion Drilling

Nordic conducted a percussion drilling program to sample the base of till and bedrock and to follow up on anomalous areas identified from surficial till sampling over and around the North and South Pits. Vertical holes in grids of 200 m by 25 m, 100 m by 50 m, 50 m by 50 m, and 25 m by 25 m were drilled over the claim area, and a total of 2,716 samples were collected from the last meter of till and the first 2 m of bedrock. Gold, arsenic, copper, molybdenum, lead, zinc, and nickel were analyzed.

Out of the 2,716 samples, 2.43% (n=66 samples) returned between 0.1 and 0.5 ppm Au, 2 samples returned between 0.5 and 1 ppm Au, and 2 samples returned between 1.0 and 3.0 ppm Au. The remainder of samples graded below 0.1 ppm Au.

6.2.4.3 Exploration and Resource Development Drilling

Between 2005 and 2012, 301 exploration diamond drillholes and 93 exploration RC drillholes were completed by Nordic, for a total of 73,430 m (Table 6.2 and Figure 6.2). The purpose of these holes was exploration and resource definition. Most holes were drilled at a northerly azimuth and a ~45° dip, though some holes were oriented northwest.

Holes LAN501-510 were drilled with BQ drill bits (42 mm), and all other Nordic holes were drilled in an NQ2 size (50 mm) in runs of 3 m. Recovery, rock quality designation (RQD), and Rock Tunneling Quality Index (Q-value) were recorded. The core was logged, marked up for sampling, and photographed before being cut in

half with a core saw. Core recoveries were typically in the 95-100% range and no correlation between core recovery and gold grades were observed. The half core samples were collected in 1 m intervals regardless of lithological contacts or changes in alteration. Samples were only collected from visually mineralized intervals.

RC exploration holes were drilled at a diameter of 112 mm. A rig mounted riffle splitter split the chips with a ratio of 70:30 and samples were collected at 1 m intervals. Each sample was sieved and placed in a chip tray for logging. Labeled cloth bags were used to collect samples and stored on a pallet at the rig before transport to the logging facility. Chip logging included lithology, colour, grain-size, texture, alteration, and mineralization. Recovery during RC drilling was not routinely measured. No significant core loss in mineralized intervals has been reported.

Significant intercepts from the Nordic drilling campaign are summarized in Table 6.3.

Table 6.3. Selected gold intercepts from the Nordic exploration drilling campaign.

Hole ID	From (m)	To (m)	Interval* (m)	Grade Au (g/t)
LAN758	25.00	59.00	34.00	1.67
LAN702	3.00	16.50	13.50	1.85
LAN548	7.00	12.00	5.00	6.04
	31.00	46.00	15.00	0.78
LAN855	133.00	151.00	18.00	3.38
LAN857	118.00	130.00	12.00	3.19

Note*: Interval represents core length. True width of mineralization is unknown.
Source: APEX (2025)

6.2.4.4 Grade control drilling

Between 2011 and 2013, 2,994 RC holes and 202 diamond drillholes, totalling 69,037 m, were drilled for grade control over the North and South pits (Table 6.2 and Figure 6.3). The majority of the grade control holes were inclined at 45° and oriented north-south, with occasional holes having a northwest azimuth. The spacing between drillholes was 12.5 m by 6.5 m.

Grade control samples drilled in 2014 were part of a trial program under the supervision of SRK Consulting. These RC drillholes were completed in a grid of 6.25 m by 5 m over an area measuring 125 m by 50 m in the North Pit and 100 m by 50 m in the South Pit. The objective of this trial was to evaluate the optimum sample spacing for grade control and compare the assay results with blasthole data. A total of 175 holes (85 in the North Pit and 89 in the South Pit) were drilled for 4,066 m.

Grade control samples were prepared and analyzed at Nordic's onsite CRS laboratory as detailed in Section 11 of this Technical Report. No blanks and no Certified Reference Materials (CRMs) were inserted by Nordic, and Nordic relied completely on internal CRMs created by the onsite CRS Laboratory.

6.2.4.5 Blasthole drilling

In 2012, Nordic drilled 1,684 vertical blastholes as part of their development activities, for a total of 13,459 m. Of these holes, 5,139 m were drilled in the North Pit and 8,320 m in the South Pit, all in a grid of 4 by 4 m, with depths ranging from 5 to 15 m (Table 6.2 and Figure 6.4). Blasthole samples were analyzed at the onsite

CRS laboratory. Nordic's blasthole drilling data were not included in the Laiva Gold MRE summarized in Section 14 of this Technical Report.

6.2.5 Firesteel Resources Inc.

6.2.5.1 Non-Drilling Activities

Firesteel Resources completed a ground magnetic geophysical survey at the Property in 2018. A GSM-19 was set for a 15 second acquisition time and a GSM-19W mobile unit was set at 0.2 seconds. This survey was completed over the pits and surrounding areas with lines spaced at 50 m. The purpose of this survey was to contribute to structural interpretations and to discriminate between mineralized mafic metavolcanic lithologies and other low-grade and barren rocks. Total Magnetic Intensity (TMI), Reduced to the Pole (RTP), and First Vertical Derivative (1VD) images mainly show northeast-striking structures across the coverage area. The vertical integration of the horizontal gradients highlights the northeast strike of most structures as well as secondary crosscutting northwest structures (McNeill, 2018).

6.2.5.2 Exploration and Blasthole Drilling

During 2018, Firesteel Resources drilled 43 exploration RC drillholes for 2,774 m in the surrounding areas of the North and South pits (Table 6.2 and Figure 6.2). Samples were analyzed by multielement 4-acid ICP analysis in CRS Laboratories in Kempele, Finland, and by 30 g fire assay with AA finish in MSALABS Ltd (ISO 17025, 9001, 14001, and 45001) in Langley, British Columbia. Select gold grade results are shown in Table 6.4.

Table 6.4. Select gold intercepts from the Firesteel Resources exploration drilling campaign.

Hole ID	From (m)	To (m)	Interval* (m)	Grade Au (g/t)
10016	23.00	28.00	5.00	4.71
10034	82.00	93.00	11.00	3.25
10038	48.00	53.00	5.00	3.68
10049	59.00	62.00	3.00	3.90

Note*: Interval represents core length. True width of mineralization is unknown.
Source: APEX (2025)

During Firesteel Resources' ownership, 89,582 m in 15,055 vertical blastholes were drilled in a grid of 3 by 3 m to depths between 5 and 10 m around previously drilled and mined areas in the North and South pits (Figure 6.4). Collar, survey, assay and lithological data are available for a portion of these holes.

6.2.6 Otso Gold Corporation

6.2.6.1 Non-Drilling Activities

In 2021, Otso Gold collected a total of 3 channel samples from 3 sample locations (Figure 6.6). The channels had a consistent length of 0.9 m. Gold assay results ranged between 0.41 and 2.28 g/t Au with an average of 1.12 g/t Au and a median of 0.66 g/t Au. All samples were collected over the South Pit, perpendicular to the mineralized shear zones.

6.2.6.2 Exploration, Grade Control, and Blasthole Drilling

Otso Gold completed a diamond drill campaign in 2019 and another in 2021, for a total of 9,585 m in 100 diamond drillholes (Table 6.2; Figures 6.2 to 6.4). These holes were drilled in the surrounding areas of the North and South pits at an approximate spacing of 50 m. Samples were analyzed in by multielement 4-acid ICP analysis in CRS laboratories in Kempele, Finland, and by 30 g fire assay with AA finish in MSALABS Ltd (ISO 17025, 9001, 14001, and 45001) in Langley, British Columbia.

Significant intercepts from the Otso Gold drilling campaign are summarized in Table 6.5.

Table 6.5. Select gold intercepts from the Otso Gold drilling campaign.

Hole ID	From (m)	To (m)	Interval (m)	True Width (m)	Grade Au (g/t)
19LV0035	118.15	122.15	4.00	3.11	1.66
	139.20	141.20	2.00	1.55	10.90
19LV0058	27.15	29.15	2.00	1.55	5.37
19LV0066	96.00	99.00	3.00	2.33	2.06
	115.00	121.00	6.00	4.66	1.71
19LV0067	41.30	44.30	3.00	2.33	1.58
	122.35	130.45	8.10	6.28	1.99
19LV0068	35.70	37.70	2.00	1.55	7.56
19LV0081	48.05	53.05	5.00	3.88	1.76
	96.80	99.80	3.00	2.33	1.06
19LV0082	93.65	97.65	4.00	3.10	2.00
LV21038	103.75	120.41	16.66	-	1.55
	including		6.73	-	2.71
LV21041	14.73	18.4	3.67	-	3.60

Source: Pilar Gold Inc. (2023)

During Otso Gold's ownership, 9,424 m in 438 RC grade control holes were drilled in a grid of 8.5 by 6 m to a depth of 21 m around previously drilled and mined areas in the North and South pits (Figure 6.3). Collar, survey, assay and lithological data are available for a portion of these holes. Additionally, 2,015 m in 402 vertical blastholes were drilled in a grid of 3 by 3 m west of the North Pit and north of the South Pit (Figure 6.4).

6.3 Historical Mineral Resource and Reserve Estimates

This section summarizes historical Mineral Resource and Mineral Reserve Estimates for the Laiva Gold Project calculated by previous operators between 1984 and 2021. A number of the historical MREs presented in this section were calculated prior to the implementation of the standards set forth in NI 43-101 and CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) and CIM Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines (November 2019). The Author has reviewed the information in this section, as well as that within the cited references, and has determined that it is suitable for disclosure. The Author cautions that no current Mineral Reserves exist at the Property.

The Author has not done sufficient work to classify any of the historical estimates discussed in this section as current Mineral Resources or Mineral Reserves. The Author has referred to these estimates as "historical resources" and the reader is cautioned not to treat them, or any part of them, as current Mineral Resources or Mineral Reserves. The historical resources summarized below have been included in this Report to demonstrate the mineral potential of the Property, and to provide the reader with a complete history of the Property. These historical resource estimates were not completed by the current Issuer.

A current Mineral Resource Estimate prepared in accordance with NI 43-101 and CIM guidance for the Laiva Gold Project is presented below in Section 14 and supersedes the historical MREs summarized in this section.

6.3.1 Outokumpu Oy

Outokumpu produced two historical mineral resource estimates in 1984 and 1985, which were reported to the mining authority. The key assumptions, parameters, methods, and estimates are summarized in Table 6.6. Categories defined as 'Measured', 'Indicated' and 'Inferred' are used; however, the reporting code is unknown.

Table 6.6 Outokumpu historical mineral resource estimates (1984 and 1985).

Year	Type	Deposit	Category	Tons	Gold (g/t)	Contained Gold (oz)	Methodology
1984	Internal Unknown code	North Pit	Measured	-	-	-	In-house polygonal using a 2 g/t gold cutoff and minimum mineralized interval of 2 m.
			Indicated	413,000	4.30	57,103	
			Inferred	137,000	3.10	13,656	
		South Pit	Measured	-	-	-	
			Indicated	190,000	5.60	34,212	
			Inferred	-	-	-	
1985	Internal Unknown code	South Pit	Measured	-	-	-	In-house polygonal using a 3 g/t cutoff and minimum mineralized interval of 1 m.
			Indicated	52,100	9.20	15,412	
			Inferred	-	-	-	

Source: Modified from Shoemaker and Sparks (2021)

The Author is referring to the resources in Table 6.6 as "historical resources" and the reader is cautioned not to treat them, or any part of them, as a current resource. The Author has not done sufficient work to classify the historical estimates discussed in this section as current Mineral Reserves or Mineral Resources. The historical resources summarized above have been included to demonstrate the mineral potential of the Laiva Gold Project, and to provide the reader with a complete history of the Property.

6.3.2 Endomines Oy

In 2005, Endomines produced a mineral resource estimate, which was reported to the mining authority. The key assumptions, parameters, methods, and estimates are summarized in Table 6.7. Categories defined as 'Measured', 'Indicated' and 'Inferred' are used; however, the reporting code is unknown.

Table 6.7 Endomines historical mineral resource estimate.

Year	Type	Deposit	Category	Tons	Gold (g/t)	Contained Gold (oz)	Methodology
2005	Internal Unknown code	North Pit	Measured	-	-	-	Block model with a 10 x 3 x 10 m block size using a 2 g/t gold cutoff.
			Indicated	460,000	3.20	47,331	
			Inferred	250,000	3.00	24,116	
		South Pit	Measured	-	-	-	Block model with a 5 x 3 x 5 m block size using a 2 g/t gold cutoff.
			Indicated	290,000	4.10	38,232	
			Inferred	150,000	3.80	18,328	

Source: Modified from Shoemaker and Sparks (2021)

The Author is referring to the resources in Table 6.7 as "historical resources" and the reader is cautioned not to treat them, or any part of them, as a current resource. The Author has not done sufficient work to classify the historical estimates discussed in this section as current Mineral Reserves or Mineral Resources. The historical resources summarized above have been included to demonstrate the mineral potential of the Laiva Gold Project, and to provide the reader with a complete history of the Property.

6.3.3 Nordic Mines Marknad AB

Between 2008 and 2012, several historical mineral resource or reserve estimates were calculated by a number of independent consultants on behalf of Nordic (Table 6.8). These estimates were prepared in accordance with JORC (2008) and CIM (2005). 'Measured', 'Indicated', and 'Inferred' resource categories and 'Proven' and 'Probable' reserve categories were used as defined by the JORC 2008 and CIM 2005 best practice guidelines. In 2013 and 2015, additional historical resource and reserve estimates were prepared by independent consultants in accordance with JORC (2012). The key assumptions, parameters, methods, and estimates are summarized in Table 6.8.

Table 6.8. Historical resource and reserve estimates prepared on behalf of Nordic for the Laiva Gold Project.

Date	Type	Deposit	Category	Million Tons	Gold (g/t)	Contained Gold (koz)	Methodology
2008	P. A. Dowd JORC (2008)	Primary Resource	Measured	2.94	2.12	200	Divided in two domains: North and South pits. 25 x 10 x 20 m blocks through ordinary kriging using a 0.8 g/t gold cutoff. Exclusive of granite waste rock.
			Indicated	7.53	2.36	571	
			Inferred	4.10	2.40	316	
		Additional Resource	Measured	-	-	-	Divided in two domains: North and South pits. 25 x 10 x 20 m blocks through ordinary kriging and only including mineralization between 0.5 and 0.8 g/t. Exclusive of granite waste rock.
			Indicated	5.27	0.63	107	
			Inferred	-	-	-	
2008 October 5th	CSA Global (UK) CIM (2005) - NI 43-101	Primary Resource	Measured	3.58	2.36	270	Ordinary kriging was used to calculate gold grades. A top cutoff of 30 g/t was applied, and the resource was estimated in constrained
			Indicated	8.50	2.13	580	
			Inferred	3.59	1.94	220	
			Measured	0.94	0.63	20	

Date	Type	Deposit	Category	Million Tons	Gold (g/t)	Contained Gold (koz)	Methodology
		Additional Resource	Indicated	3.57	0.62	71	blocks with cutoffs of 0.5, 0.8, and 1 g/t that were combined into a composite model. The resource is reported for block gold grades over 0.5 g/t.
			Inferred	-	-	-	
2009 March 30th	CSA Global (UK) CIM (2005) - NI 43-101	Primary Resource	Measured	4.89	2.33	366	Ordinary kriging was used to calculate gold grades. A top cutoff of 30 g/t was applied, and the resource was estimated in constrained blocks with cutoffs of 0.5, 0.8, and 1 g/t that were combined into a composite model. The resource is reported for block gold grades over 0.5 g/t.
			Indicated	9.50	2.15	657	
			Inferred	4.17	2.00	268	
		Additional Resource	Measured	1.18	0.63	24	
			Indicated	3.99	0.63	81	
			Inferred	-	-	-	
2011 July 11th	CSA Global (UK) JORC (2008)	Primary Resource	Measured	4.88	2.32	364	Ordinary kriging was used to calculate gold grades. A top cutoff of 30 g/t was applied, and the resource was estimated in constrained blocks with cutoffs of 0.5, 0.8, and 1 g/t that were combined into a composite model. The resource is reported for block gold grades over 0.5 g/t.
			Indicated	9.88	2.14	680	
			Inferred	3.62	1.81	211	
		Additional Resource	Measured	1.18	0.62	24	
			Indicated	4.14	0.62	83	
			Inferred	-	-	-	
		Global Reserve Estimate	Proven	5.76	1.83	339	Whittle Pit Optimization using a gold price of $535/oz, a mining recovery of 90%, and mining dilution of 10%.
			Probable	7.15	1.86	427	
2012 May 8th	CSA Global (UK) JORC (2008)	Primary Resource	Measured	5.85	2.06	388	Ordinary kriging was used to calculate gold grades and Uniform Conditioning and Local Uniform Conditioning was applied to calculate recoverable resource and produce SMU blocks. A top cutoff of 30 g/t was applied and the resource was estimated in constrained blocks with a 0.8 g/t cutoff that was combined into a composite model. The resource is reported for block gold grades over 0.5 g/t.
			Indicated	14.17	2.03	925	
			Inferred	2.14	2.07	142	
		Additional Resource	Measured	2.04	0.64	42	
			Indicated	5.35	0.64	110	
			Inferred	-	-	-	
		Global Reserve Estimate	Proven	7.30	1.56	366	Whittle Pit Optimization using a gold price of $750/oz, a mining recovery of 90%, and mining dilution of 10%.
			Probable	9.58	1.63	502	

Date	Type	Deposit	Category	Million Tons	Gold (g/t)	Contained Gold (koz)	Methodology
2012 May 8th	CSA Global (UK) JORC (2008)	Primary Resource	Measured	5.21	2.08	349	Ordinary kriging was used to calculate gold grades and Uniform Conditioning and Local Uniform Conditioning was applied to calculate recoverable resource and produce SMU blocks. A top cutoff of 30 g/t was applied and the resource was estimated in constrained blocks with a 0.8 g/t cutoff that was combined into a composite model. The resource is reported for block gold grades over 0.5 g/t. Gold grade was updated using after mine topography.
			Indicated	14.02	2.03	915	
			Inferred	2.14	2.07	142	
		Additional Resource	Measured	1.83	0.64	38	
			Indicated	5.30	0.64	109	
			Inferred	-	-	-	
		Global Reserve Estimate	Proven	6.41	1.57	324	Whittle Pit Optimization using a gold price of $750/oz, a mining recovery of 90%, and mining dilution of 10%.
			Probable	8.78	1.60	452	
2013 November 1st	SRK Consulting (UK) JORC (2012)	Global Resource Estimate	Measured	-	-	-	A 0.6 g/t cutoff was used and constrained to a 0.3 g/t Leapfrog shell. 20 x 20 x 10 m blocks through ordinary kriging, subdivided into 10 x 5 x 10 m blocks using Localized Uniform Conditioning. Composits of over 30 g/t were restricted to a 10 m sphere of influence. A Whittle Pit Shell was used with a gold price of US$1,750/oz.
			Indicated	15.42	1.49	739	
			Inferred	3.15	2.28	231	
2015 January 1st	SRK Consulting (UK) JORC (2012)	Global Resource Estimate	Measured	-	-	-	A 0.6 g/t cutoff was used and constrained to a 0.3 g/t Leapfrog shell. Blocks through ordinary kriging, subdivided into 4 x 4 x 5 m blocks using Localized Uniform Conditioning. Composites of over 30 g/t were restricted to a 10 m sphere of influence. A Whittle Pit Shell was used with a gold price of US$1,510/oz.
			Indicated	15.97	1.52	780	
			Inferred	3.22	2.08	215	
		Global Reserve Estimate	Proven	-	-	-	Cutoff of 0.6 g/t and an assumed gold price of US$1,184/oz.
			Probable	9.37	1.19	360	
2016 May	SRK Consulting		Measured	-	-	-	A 0.3 g/t cutoff was used and constrained to a 0.3 g/t
			Indicated	24.32	1.13	885	

Date	Type	Deposit	Category	Million Tons	Gold (g/t)	Contained Gold (koz)	Methodology
	(UK) and Dr. John Arthur JORC (2012)	Global Resource Estimate	Inferred	4.37	1.64	231	Leapfrog shell. Blocks through ordinary kriging, subdivided into 4 x 4 x 5 m blocks using Localized Uniform Conditioning. Composites of over 30 g/t were restricted to a 10 m sphere of influence. A Whittle Pit Shell was used with a gold price of US$1,400/oz.

Source: Modified from Shoemaker and Sparks (2021)

The Author is referring to the resources in Table 6.8 as "historical resources" and "historical reserves" and the reader is cautioned not to treat them, or any part of them, as a current resource or reserve. The Author has not done sufficient work to classify the historical estimates discussed in this section as current Mineral Reserves or Mineral Resources. The historical resources summarized above have been included to demonstrate the mineral potential of the Laiva Gold Project, and to provide the reader with a complete history of the Property.

6.3.4 Firesteel Resources Inc.

On August 9, 2017, Firesteel Resources reported a historical MRE for the Property (Table 6.9). This MRE was supported by a technical report titled "NI 43-101 Technical Report Mineral Resource Estimate Laiva Gold Mine Project, Raahe, Finland", prepared for Firesteel Resources by Tunningley et al. (2017), with an effective date of August 9, 2017.

Boyd completed a pit constrained mineral resource estimate for Firesteel Resources. In this historical estimate, a total of 398 diamond drillholes (62,908 m) and 3,129 RC drillholes (82,596 m) were included, all drilled between 2005 and 2014, for a total of 145,504 m. Fire assayed samples and samples analyzed through cyanide leach were all included. Unsampled intervals were assigned a value of 0.0 g/t Au. Total assayed sample length was 119,547 m.

Four domains were stablished in this estimation based on similar structural trends and proximity to the Red Shear Zone (Shoemaker and Sparks, 2018).

Table 6.9 Firesteel Resources 2017 Laiva Gold Project historical mineral resource estimate.

Year	Type	Deposit	Category	Tons	Gold (g/t)	Contained Gold (oz)	Methodology
2017 August 9th	John T. Boyd Company CIM (2014) – NI 43-101	Global Resource Estimate	Measured	355,000	1.132	13,000	9 x 9 x 9 m blocks subdivided to 3 x 3 x 3 m. A 0.4 g/t gold cutoff was used for open pit and 1.886 g/t for underground. Estimated using data from 2005 – 2014 diamond and RC exploration and grade control holes.
			Indicated	3,442,000	1.248	138,000	
			Measured & Indicated	3,797,000	1.237	151,000	
			Inferred	9,030,000	1.531	445,000	

							Clipped to after mine topography. Used the geological model produced by SRK in 2005. A Whittle Pit Shell was used.

Source: Modified from Shoemaker and Sparks (2021)

The Author is referring to this resource as a "historical resource" and the reader is cautioned not to treat it, or any part of it, as a current resource. The Author has not done sufficient work to classify the historical estimate discussed in this section as current Mineral Reserves or Mineral Resources. The historical resources summarized below have been included to demonstrate the mineral potential of the Laiva Gold Project, and to provide the reader with a complete history of the Property.

6.3.5 Nordic Gold Inc.

On September 18, 2019, Nordic Gold Inc. reported a historical MRE for the Property, including the low-grade stockpile and sulphidic rock dump. This MRE was supported by a technical report titled "Technical Report on Laiva; NI 43-101 Resource Update" prepared for Nordic Gold Inc. by Coffey Geotechnics Ltd (Bektas, 2019). This historical mineral resource is not disclosed herein.

6.3.6 Otso Gold Corporation

6.3.6.1 Historical Mineral Resource

In November 2021, Otso Gold reported a historical MRE for the Property (Table 6.10). This MRE was supported by a technical report titled "NI 43-101 Technical Report Feasibility Study Laiva Gold Project" prepared for Otso Gold by John T. Boyd Company (Shoemaker and Sparks, 2021), with an effective date of October 4, 2021. This historical resource was not completed on behalf of the current Issuer. The Author is referring to this resource as a "historical resource" and the reader is cautioned not to treat it, or any part of it, as a current resource. The Author has not done sufficient work to classify the historical estimate discussed in this section as current Mineral Reserves or Mineral Resources. The historical resources summarized below have been included to demonstrate the mineral potential of the Laiva Gold Project, and to provide the reader with a complete history of the Property. A current MRE for the Laiva Gold Project is presented in Section 14 and is an audit of the Shoemaker and Sparks (2021) technical report and historical MRE.

Table 6.10. Otso Gold Corp. historical resource estimate from the Laiva Gold Project.

Date	Type	Deposit	Category	Gold Cutoff (g/t)	Tons	Gold (g/t)	Contained Gold (oz)	Methodology
2021 Oct 4th	John T. Boyd Company CIM (2014) – NI 43-101	Open Pit High-grade	Measured	0.700	654,000	1.930	40,600	5 x 5 x 5 m blocks subdivided to 2.5 x 2.5 x 2.5 m. A 0.323 g/t gold cutoff was used for open pit and 1.886 g/t for underground. Estimated using data from 2005 – 2021 diamond and RC exploration and grade control holes, as we ll as channel samples. Clipped to after mine topography. Used the geological model produced by SRK in 2005. A Whittle Pit Shell was used at a gold price of US$1,600/oz.
			Indicated	0.700	6,573,000	1.655	349,700	
			Measured & Indicated	0.700	7,227,000	1.680	390,300	
			Inferred	0.700	4,670,000	1.746	262,200	
		Open Pit Low-grade	Measured	0.323	531,000	0.487	8,300	
			Indicated	0.323	6,247,000	0.488	98,000	
			Measured & Indicated	0.323	6,778,000	0.488	106,300	
			Inferred	0.323	4,012,000	0.488	62,900	
		Total Open Pit	Measured	0.323	1,185,000	1.283	48,900	
			Indicated	0.323	12,820,000	1.086	447,700	
			Measured & Indicated	0.323	14,005,000	1.103	496,600	
			Inferred	0.323	8,682,000	1.165	325,100	
		Under-ground	Measured	1.886	-	-	-	
			Indicated	1.886	26,000	3.072	2,600	
			Measured & Indicated	1.886	26,000	3.072	2,600	
			Inferred	1.886	303,000	3.067	29,900	
		Total Open Pit and Under-ground	Measured	0.323	1,185,000	1.283	48,900	
			Indicated	0.323	12,846,000	1.090	450,300	
			Measured & Indicated	0.323	14,031,000	1.107	499,200	
			Inferred	0.323	8,985,000	1.229	355,000	

Source: Modified from Shoemaker and Sparks (2021)

6.3.6.2 Historical Mineral Reserve

In November 2021, Otso Gold reported a historical mineral reserve estimate with an effective date of September 29, 2021, for the Property (Table 6.11). This MRE was supported by a technical report titled "NI 43-101 Technical Report Feasibility Study Laiva Gold Project" prepared for Otso Gold by John T. Boyd Company (Shoemaker and Sparks, 2021), with an effective date of October 4, 2021. This historical reserve was not completed on behalf of the current Issuer.

Table 6.11. Otso Gold 2021 historical reserve estimate from the Laiva Gold Project.

Mining Method	Reserve	Cutoff	Tonnes	Au (g/t)	Au Troy oz
Open Pit – High Grade	Probable	0.700	4,780,000	1.622	249,300
Open Pit – High Grade	Proven	0.700	678,000	1.853	40,400
Open Pit – High Grade	Proven + Probable	0.700	5,458,000	1.651	289,700
Open Pit – Low Grade	Probable	0.323	4,488,000	0.468	67,500
Open Pit – Low Grade	Proven	0.323	547,000	0.466	8,200
Open Pit – Low Grade	Proven + Probable	0.323	5,035,000	0.468	75,700
Total Open Pit	Probable	0.323	9,268,000	1.063	316,800
Total Open Pit	Proven	0.323	1,225,000	1.234	48,600
Total Open Pit	Proven + Probable	0.323	10,493,000	1.083	365,400

Source: Modified from Shoemaker and Sparks (2021)

The historical mineral reserve estimate was constrained to the North and South pits and was completed under the following assumptions:

- Total mineral reserves reported at a cutoff grade of 0.323 g/t Au.
- Gold price of US$1,600/oz and US$2.55/oz selling costs.
- 82% metallurgical recovery for high-grade material (> 0.700 g/t Au) and 80% metallurgical recovery for low-grade material (0.230 to 0.700 g/t Au).
- The cutoff grade covers processing costs of US$11.78 per tonne for high-grade material and US$10.22 per tonne for low-grade material, and administrative costs of $2.20 per tonne.
- Mineralized material has been diluted by 5% with a 10% of the undiluted gold grade.

The Author is referring to this reserve as a “historical reserve” and the reader is cautioned not to treat it, or any part of it, as a current mineral reserve. The Author has not done sufficient work to classify the historical reserve estimate discussed in this section as current mineral reserves. The historical mineral reserve summarized below have been included to demonstrate the mineral potential of the Laiva Gold Project, and to provide the reader with a complete history of the Property. No current mineral reserve estimate exists for the Property.

6.4 Historical Production

Nordic commenced gold production on the Laiva Gold Project in January 2012 and mining continued until December 2013. However, the mill continued to process low-grade stockpile material until March 2014. Throughout the operating period, plant availability averaged approximately 80%.

Mining was focused in two open pits, termed “North Pit” and “South Pit”. The North Pit measures approximately 500 m by 280 m and is 60 m deep, and the South Pit is approximately 320 m by 240 m and is 10 m deep. Shallow excavation has occurred immediately west of the South Pit.

During the 2012 to 2014 mining period, 2,119 kg of gold were produced from 2.9 million tons of processed material at an average head grade of 0.88 g/t and a gold recovery between 79% and 87%. In total, 7.7 million tons of barren material was mined. Of those, 2.3 million tons of sulphide-rich waste was produced with a strip ratio of 2.8:1, waste tonnes to mineralized material tons.

In November 2018, Nordic Gold Inc. restarted production operations after refurbishing the mill. However, production did not run for long due to operational problems with the plant and insufficient production rates due to excessive dilution during the mining process. Mining continued from November 2018 to March 2019, and a total of 389 kg of gold were produced from 512,000 tons of material at an average head grade of 0.89 g/t and an average recovery of 85.0%%. Mining was conducted utilizing 9 m bench height, where mineralized and waste material were blasted together, which resulted in dilution of the mineralized material being fed to the mill.

Under Otso Gold, mining recommenced for a 5-month period between October 2021 and February 2022. Mining ceased due to maintenance problems with the processing plant and dilution issues. In total, 273 kg of gold were produced from 541,000 tons of material at an average head grade of 0.84 g/t and an average recovery of 74.5%.

An overview of historical mining and production at the Property is provided in Table 6.12.

Table 6.12 Laiva gold production betwen 2012 and 2022.

Time Period	Average Monthly Tonnes	Total Tonnes	Average Gold Head Grade (g/t)	Average Gold Recovery	Average Monthly Gold Production (Troy Ounces)	Total Gold Production (Troy Ounces)	Operator and Comments
February 2012 to February 2013 (13 months)	90,441	1,175,739	0.94	79.9%	2,194	28,521	Nordic: Initial low production due to longer than expected plant commissioning
March 2013 to June 2013 (4 months)	140,220	560,879	1.04	86.5%	4,062	16,250	Nordic: Steady state production.
July 2013 to March 2014 (9 months)	137,414	1,236,730	0.72	81.5%	2,594	23,345	Nordic: Production from low-grade stockpile.
Total Nordic (26 months)	122,692	2,973,348	0.88	81.5%	2,950	68,116	-
November 2018 to March 2019 (5 months)	102,400	512,001	0.89	85.0%	2,500	12,502	Firesteel Resources and Nordic Gold Inc: Low production due operational stoppages. .
October 2021 to February 2022 (5 months)	108,168	540,839	0.84	74.5%	1,757	8,787	Otso Gold: Low production due to operational stoppages.
Total all operators (36 months)	111,839	4,026,189	0.85	81.2%	2,483	89,405	-

Source: APEX (2025)

7 Geological Setting and Mineralization

7.1 Regional Geology

The geology of Finland comprises the Archean-Paleoproterozoic Fennoscandian Shield, which in Finland is subdivided in four tectonic provinces. The (1) Lapland-Kola province consists of Archean tonalitic-trondhjemitic-granodioritic (TTG) gneisses and Paleoproterozoic metasedimentary and metaigneous rocks outcropping in the northeast corner of the country. In the northwest of Finland there is an Archean TTG basement and overlying metavolcanic and metasedimentary rocks of the (2) Norrbotten province and a similar rock package outcropping in the central part of the country that belong to the (3) Karelia province. The (4) Svecofennia province is the southernmost tectonic block, and it hosts the Laiva Gold deposit (Hölttä et al., 2020; Luukas et al., 2017).

The Paleoproterozoic Svecofennia province is a complex mobile orogenic belt that resulted from the accretion of the Western and Southern Finland subprovinces to the Archean basement approximately 1900 Ma (Hölttä et al., 2020; Luukas et al., 2017). The limit between these subprovinces is marked by a sharp metamorphic grade change and by an east-west striking shear zone (Hölttä et al., 2020). The Western Finland Subprovince (WFS) hosts the Laiva Gold deposit, and its major component are syn- and post-kinematic granitoids from the Central Finland Granitoid Complex (Figure 7.1). Older metasedimentary rocks (deposition at approximately 1950-1880 Ma) surround the granitoids. Metamorphic grades are commonly in the upper amphibolite to granulite facies, but occasionally, greenschist facies rocks are found. The rock units from the WFS reflect microcontinent accretion, continental extension, continental collision, orogenic collapse, and stabilization between 1900 and 1800 Ma (Hölttä et al., 2020; Luukas et al., 2017).

The Laiva Gold deposit is located within the Savo Belt in the northern boundary of the WFS. The Savo Belt comprises metamorphosed island arc mafic-ultramafic volcanic and volcanosedimentary rocks and it extends to the Raahe-Ladoga suture. This suture is a northwest-striking, first-order, crustal scale structure that separates the WFS and the Karelia province in the north (Figure 7.1).

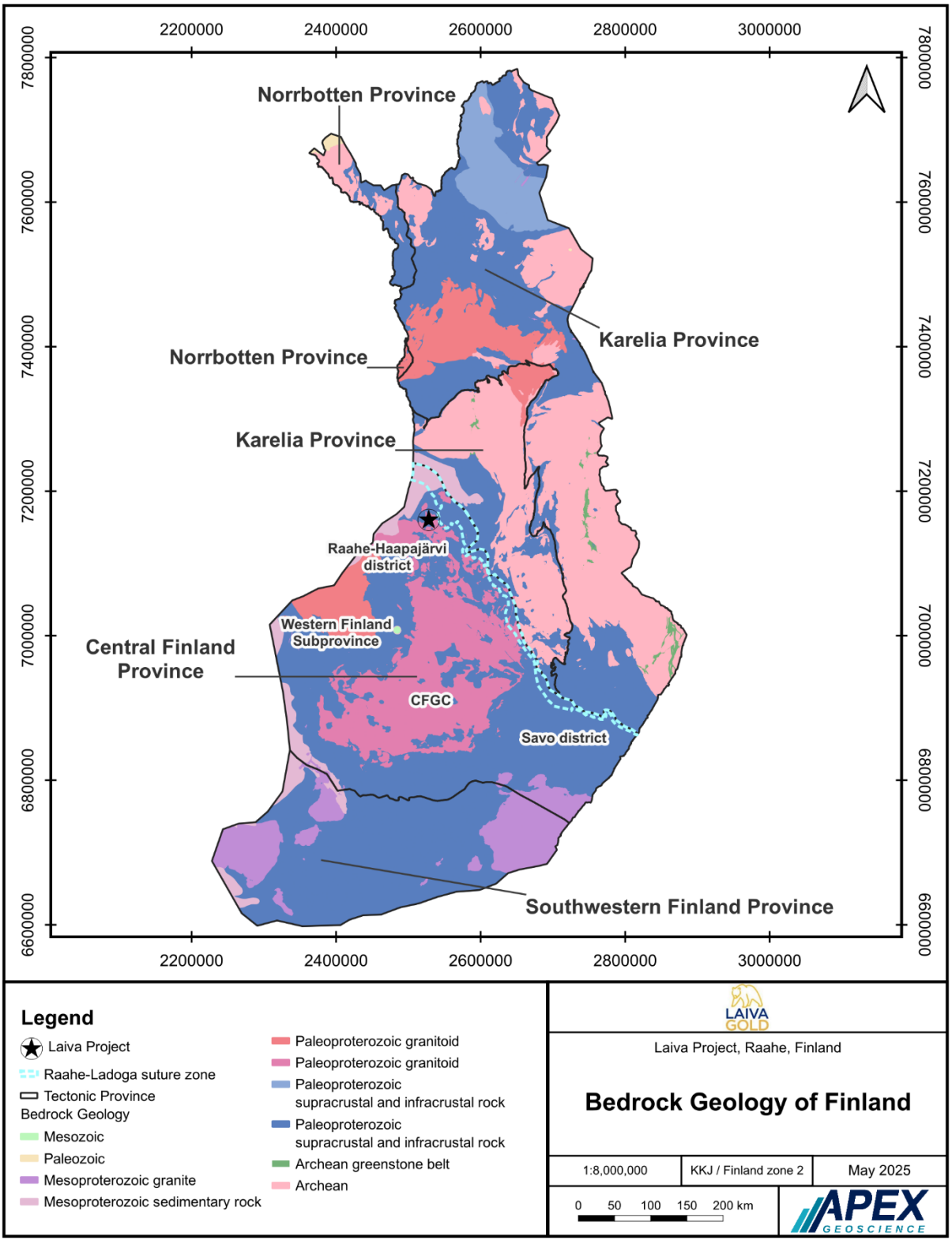
There are two gold districts along the Raahe-Ladoga suture: the Raahe-Haapajärvi district in the northwest, where the Laiva Gold deposit is located, and the Savo district in the southeast (Figure 7.1). The deposits within these districts are hosted in secondary and tertiary fault and shear zones branching out from the tectonic block contact (Eilu et al., 2003). The Raahe-Haapajärvi district comprises mafic metavolcanic and clastic metasedimentary rocks intruded by intermediate intrusives.

7.2 Property Geology

The Property Geology information is derived from pit wall mapping in the North and South pits, and from historical drill core logs, as described by Eilu et al. (2003), Pratt, (2010), and Shoemaker and Sparks (2021), and references therein. The Author has reviewed these sources and considers them to contain all the relevant geological information regarding the Property. Based on the review of the available literature and data, the Author takes responsibility for the information herein.

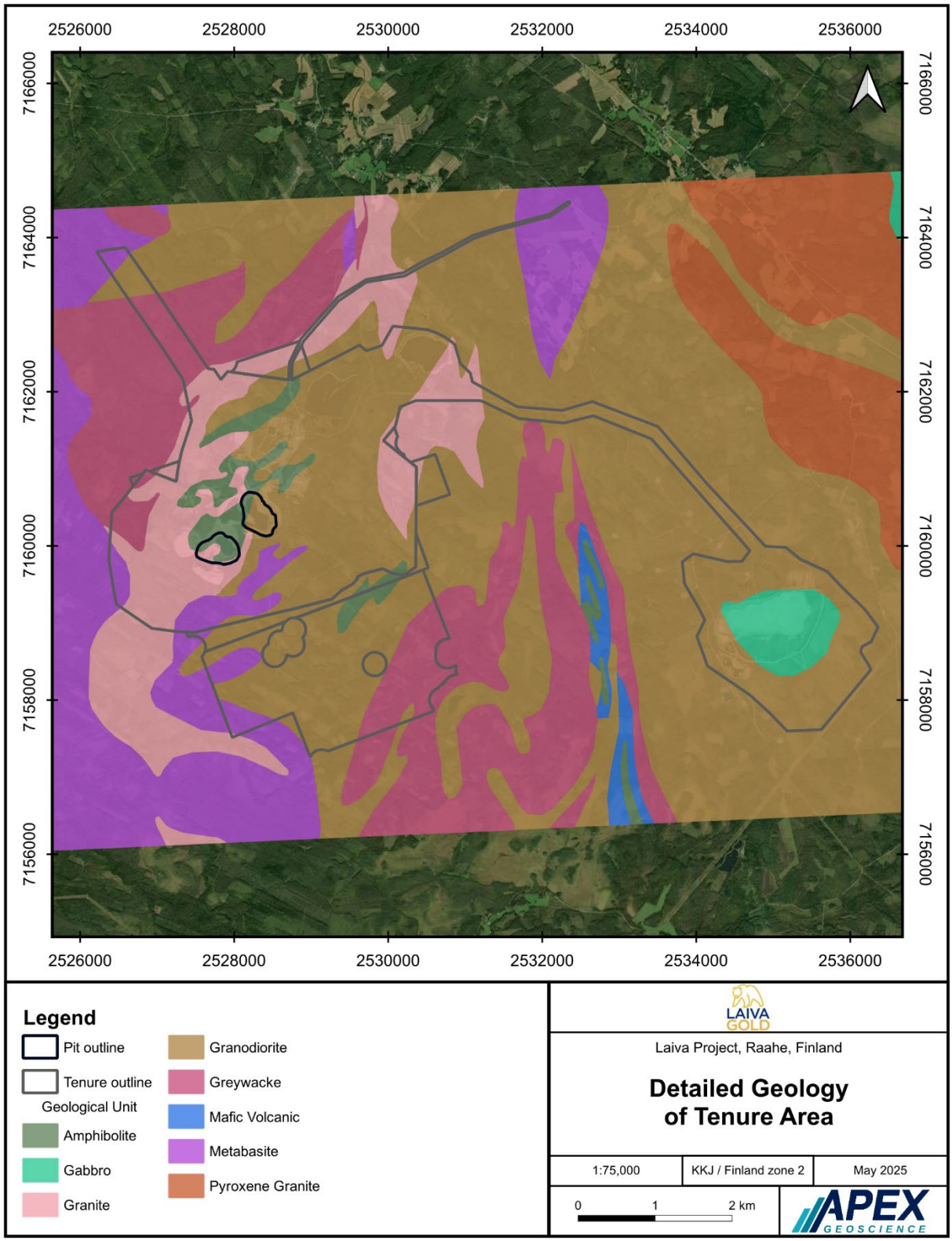
The Laiva Gold Project comprises deformed Paleoproterozoic greywackes of the Vihanti Group and intercalations of mafic metavolcanic and metavolcanosedimentary lithologies of the Antinneva Formation in the western and southern portions of the Property (Figure 7.2). These mafic units have been collectively called Uralite Porphyrite by previous operators. Texturally, they are massive, fine-grained, equigranular, and with a weakly developed foliation associated to the regional scale deformation.

Figure 7.1 Bedrock geology of Finland.



Source: APEX (2025) after Holtta et al. (2018)

Figure 7.2. Detailed geology of the Laiva Gold Project.



Source: APEX (2025) after Orudna (2016)

Foliated quartz diorite and granodiorite plutons intrude these supracrustal units and occupy the central and eastern part of the Property. These intermediate rocks are typically massive, medium-grained, and equigranular to porphyritic, and where they intrude, the mafic units occur as lenses rather than massive and irregular bodies. The mafic metavolcanic and the intermediate intrusives are the main host of mineralization (Shoemaker and Sparks, 2021; Pratt, 2010).

Late granitoids intrude all previously mentioned units throughout the Property. These granitoids are post-mineralization and occur as dikes, sills, and plutons. The dikes and sills are typically 1-4 m wide and occur sub-parallel or perpendicular to the contacts between the larger granitic plutons and the metavolcanic units, particularly in the western part of the Project area. In the South Pit area, a swarm of granite dikes is observed and the main hosting lithologies are broken up and invaded (Figure 7.3). Pre-mineral granitic pegmatite dikes (< 2 m thick) are also observed.

Dolerite dikes up to 10m wide crosscut all units. Quaternary glacial till between 3 and 15 m of thickness overlay the entire Property.

7.3 Structure

The Property has been subject to multiple events of deformation. The regional penetrative foliation is very weakly developed and generally hard to recognize in the field. This regional foliation dips gently to the south and is generally observed in the metamafic volcanic units and along the contacts of the more rigid intrusives.

Field observations indicate that 0.2 – 1 m wide, quartz-rich mylonitic shear zones host mineralization in the Property. These planar zones are steeply dipping (75-85°) to the southeast. The dominant east-west trend of the shear zones can also be locally modified and display variable strikes due to late deformation associated with northeast-striking, strike-slip faults (Figures 7.3 and 7.4).

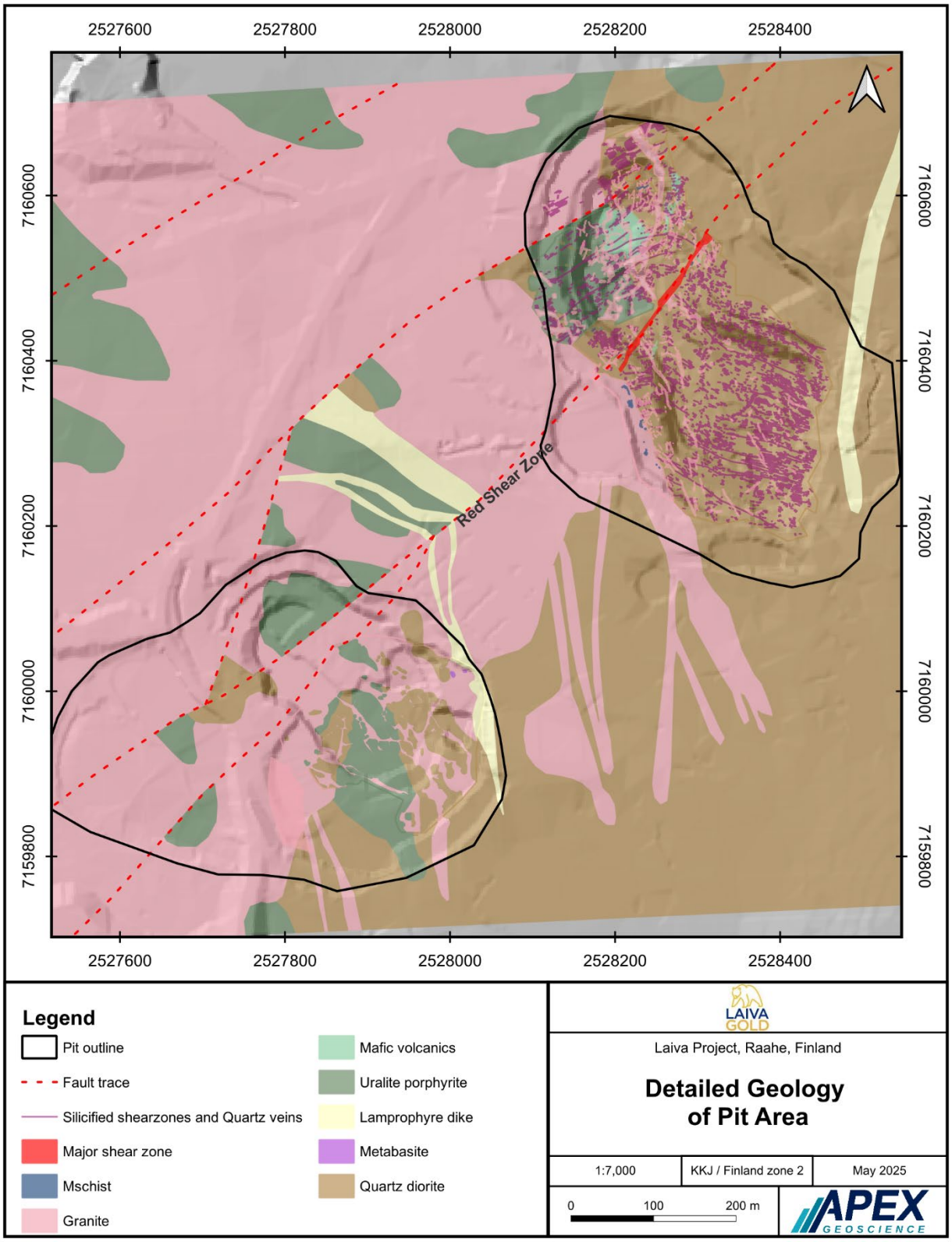
The post-mineral northeast strike-slip faults dip steeply southeast and are late with respect to the granitic intrusions. The best-defined structure of these late faults is the Red Shear Zone, which is observed in both the north and the south pits. It is a dextral strike-slip fault displaying both ductile and brittle deformation and with lateral displacements in the order of ~10 m. Meter-scale folding is observed in the hanging wall and footwall of the Red Shear Zone in the North Pit (Figure 7.5). Late brittle deformation along the Red Shear Zone is observed in the North Pit as monomict tectonic breccias with a carbonate matrix and hematite staining. Similar hematite staining on faults is observed in the South Pit, but the exact relationship in the latter has not been studied in detail. It is expected that the trend of mineralization is also modified as observed in the North Pit.

The Red Shear Zone is typically barren, with occasional low grades in drill intercepts. These grades are interpreted to come from mineralized clasts within the tectonic breccias.

Other north-northeast striking, sub-vertical, reverse faults have been observed in the eastern part of the North Pit, displaying displacement in the order of 1-2 m. These faults have only been mapped during grade control and have not been recognized in drill core. Details and the extent of influence of these reverse faults in the offset of mineralization are unclear and should continue to be monitored and mapped. Shallow dipping reverse faults with cm-scale displacements have also been identified in the east part of the North Pit but their exact relationship with other faults and the overall structural history is not clear.

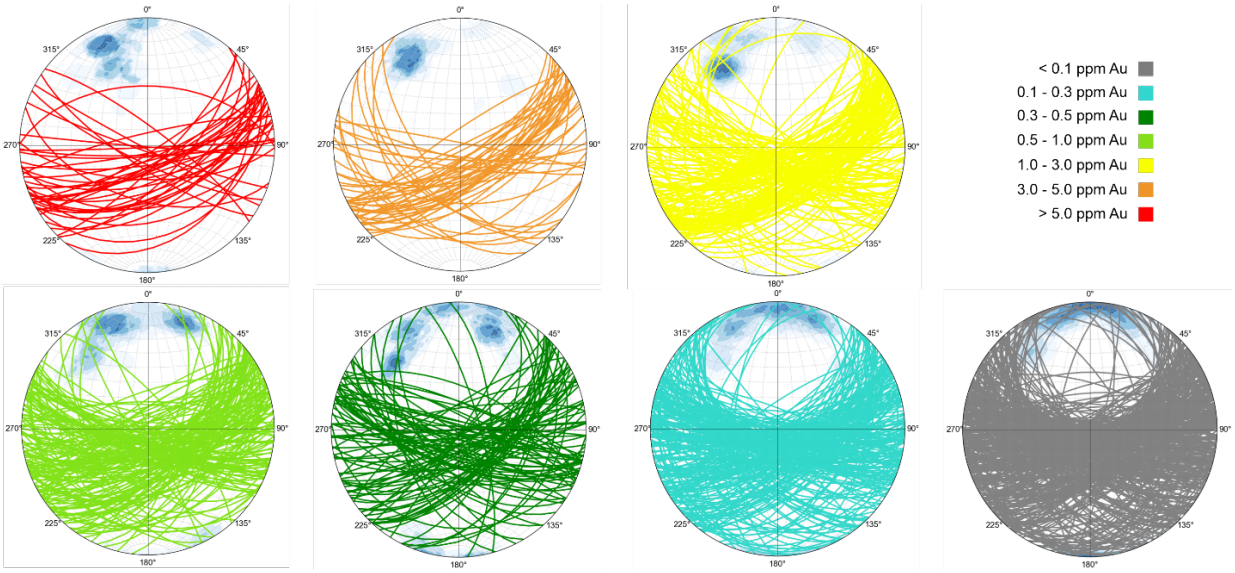
The orientation of the mineralized shear zones seems to be dependent on the proximity to the Red Shear Zone. West of this structure, the shear zones strike east-northeast and dip steeply to the south-southeast. East of the Red Shear Zone, the shear zones strike east-southeast and dip steeply to the west-southwest, transitioning to an easterly strike and southerly steep dip further to the east (Pratt, 2010).

Figure 7.3. Detailed geology of the North and South pits.



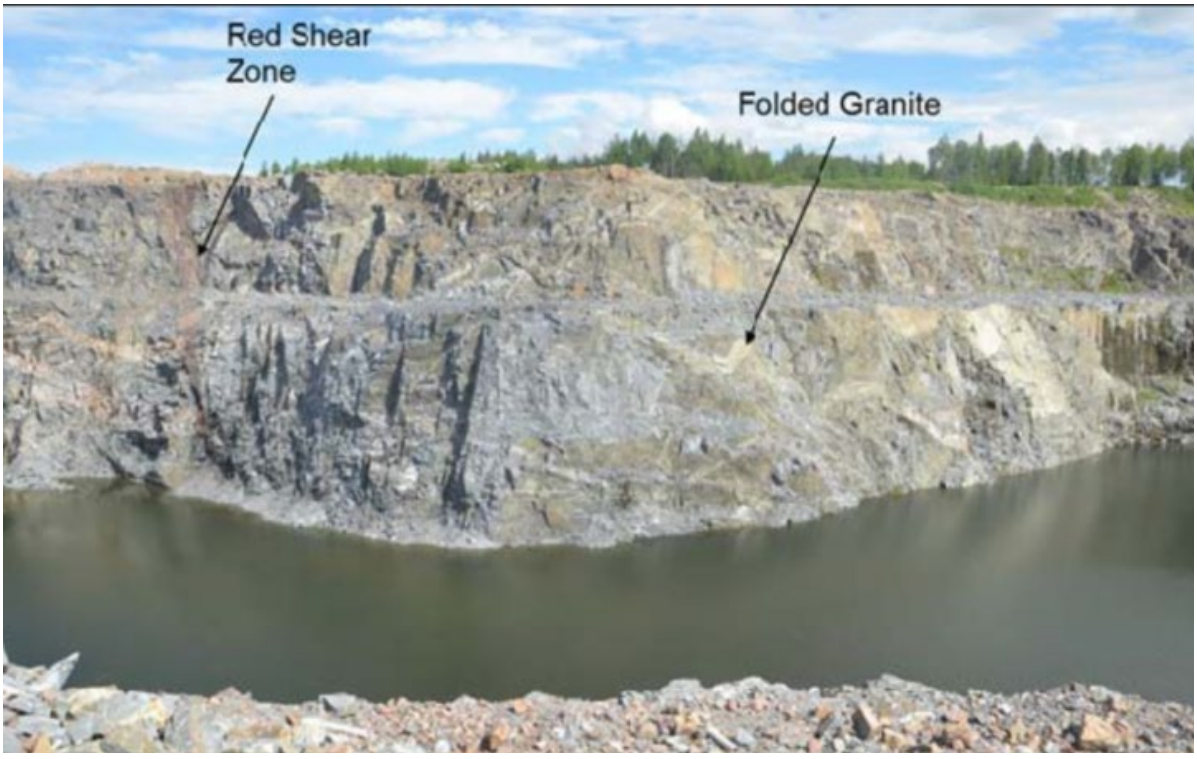
Source: APEX (2025) after Nordic Mines Oy

Figure 7.4. Stereonet showing quartz vein planes classified by gold grades.



Source: APEX (2025)

Figure 7.5. Picture of the North Pit showing the Red Shear Zone and hanging wall.



Source: Shoemaker and Sparks (2021)

Previous mapping and reports have provided a basis to understand the overall structural history of the Property. However, a systematic and detail examination of outcrops and drillcore structural logging would

contribute to building a structural framework with deformation stage sequences that would shed more light into the more prospective structures and how other late structures have modified the orientations of any regional penetrative and shear fabrics.

Oriented drill core data are available for diverse structures. Higher grade intervals correlate with an average strike of 65° and a southeast dip of 70°. A second set of veins, generally lower grade, is observed at an average strike of 107° and a southwest dip of 75° (Figure 7.4).

7.4 Mineralization

Mineralization is hosted within sheeted quartz-sulphide vein arrays up to 1 m wide in subparallel mylonite shear zones developed in metavolcanic lithologies and quartz diorites. There seems to be an increased vein density in mineralized shear zones developed in metavolcanic lithologies compared to shear zones developed in the quartz diorite. Increasing vein density in the metavolcanic rocks correlates with increasing gold grades. Within the mineralized shear zones, vein density varies between 1 and 29 veins per meter.

Mineralization occurs in two main bodies, the North Pit with Eastern Extension in the north and the South Pit in the south (Figure 7.6). At the North Pit, mineralized shear zones can be traced over a strike length of up to 600 m, with the mineralized zone (including the Eastern Extension) occurring over an area of 1,300 m by 450 m. In the South Pit area, mineralization occurs over an area of 500 m by 400 m. Mineralization has been intercepted at depths of up to 250 m below surface and is open down dip, apart from the western part of the North Pit where mineralization is truncated by the granite pluton. In both the North and South Pits, the mineralized shear zones vary in width between <1 m to >10 m (Shoemaker and Sparks, 2021).

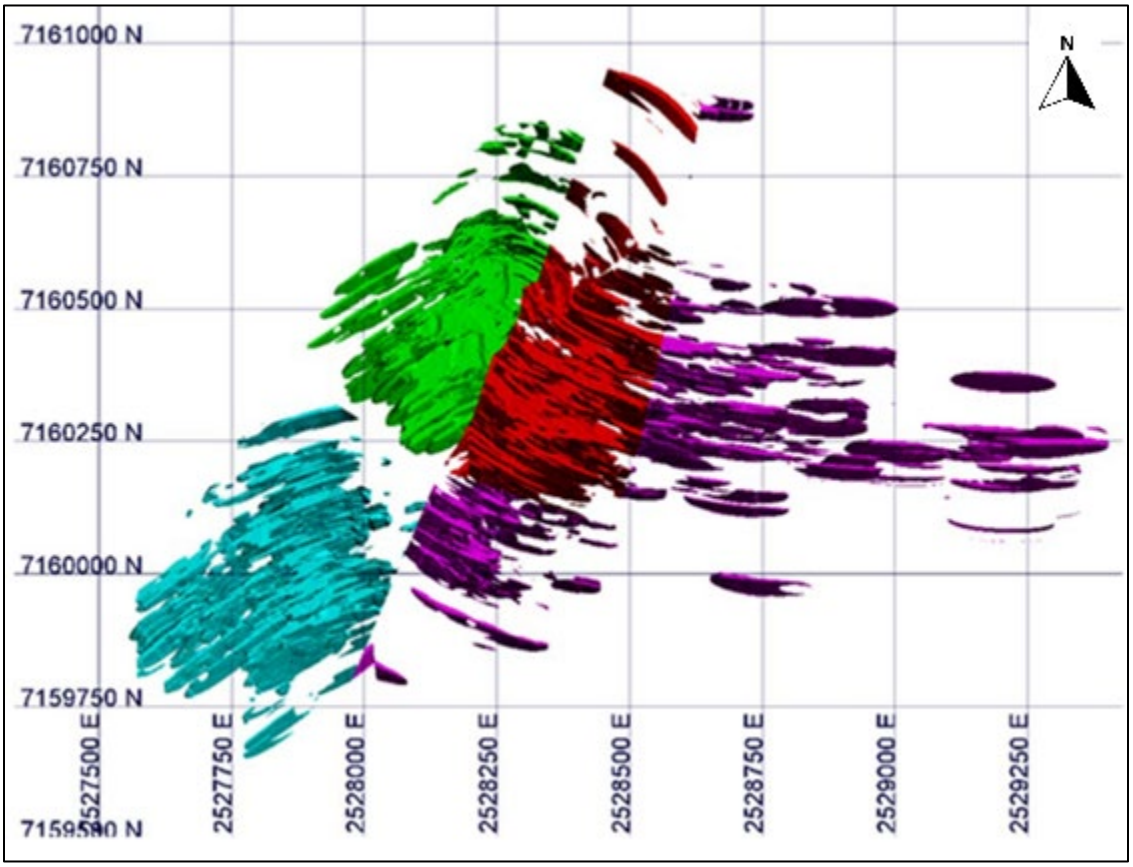
Arsenopyrite is the most common sulphide, though pyrrhotite, chalcopyrite, scheelite, cubanite, marcasite, sphalerite, and hedleyite also occur. No visible gold has been observed, and gold occurs as tiny free inclusions within loellingite, quartz, and arsenopyrite, or rarely, as maldonite. Gold correlates positively with arsenic, bismuth, and telluride.

While the shear zones are continuous along strike and dip, gold grades vary, with grades > 1 ppm occurring locally. Higher grades of > 5 ppm may occur but are dispersed throughout the mineralized zones. A multi-scale approach, integrating district to microscopic scale descriptions is required to further understand the geometry and controls on gold mineralization. This may lead to better defining and exploring high grade mineralization shoots within the deposit.

The alteration intensity in the mineralized shear zones is weak and comprise mm-sized sericite-pyrite vein selvages. Albite-epidote-pyrite selvages are rarely observed. Chlorite replacing mafic phenocrysts also occurs proximally to mineralized zones. Overall, the alteration assemblages seem to depend on the hosting lithology.

Mineralization is locally offset by late faults and crosscut by granite and dolerite intrusions (Figure 7.4). Of major influence, the Red Shear Zone has caused fault drag folding and dextral offset of mineralization. Minor, cm-scale offsets are also observed by other north-northeast striking, sub-vertical, reverse faults.

Figure 7.6 Plan view of the mineralized shear zones forming the Laiva Gold deposit.



Source: modified from Shoemaker and Sparks (2021)
Coordinate system: Finnish National Mapping Coordinate System Zone 2 (KKJ2)

8 Deposit Types

The primary deposit type of interest at the Laiva Gold Project is orogenic gold mineralization. Orogenic gold deposits form during subduction or collision in late stages of orogenesis in compressional and transpressional regimes from near neutral and CO_2-rich fluids produced by devolatilization of supracrustal rock sequences during metamorphism and/or slab devolatilization. The metamorphic conversion of gold-enriched pyrite to pyrrhotite frees gold and sulfur that gets transported in the produced orogenic fluids (Goldfarb and Groves, 2015; Goldfarb and Pitcairn, 2023; Groves et al., 2018; Groves, Santosh and Zhang, 2020; Groves, Santosh, Deng, et al., 2020). At the province scale, orogenic gold deposits are commonly located in second-order structures close to crustal scale faults and shear zones, which act as regional-scale pathways for the mineralization-forming orogenic fluids produced at depth. Within these second-order structures, the larger orogenic gold deposits are commonly formed where deviations of the mean trend of the structure are observed (Groves et al., 2018).

The chemistry of the fluids is largely consistent and thus, the mineralogy and alteration assemblages are largely similar, with sericite, ankerite, chlorite, tourmaline, and hematite as some of the most common alteration minerals. Mineralization occurs in complex quartz tension vein arrays in mylonitic shear zones, sheeted veins, and disseminated bodies. Proximal igneous intrusions may occur and when present, they are pre-mineralization and represent rheologically favourable lithologies for the development of mineralization-bearing structures. Orogenic gold deposits are also preferentially located in greenschist-facies domains. This is due to little fluid being produced above temperatures of about 550°, and it is confirmed by the lower number of deposits at mid-amphibolite conditions or higher (Goldfarb and Groves, 2015; Groves, Santosh, Deng, et al., 2020).

In addition to the control of second-order structures at the regional scale, at the camp scale, folding, refolding, and lithological contrasts will control mineralized material deposition. Late brittle overprinting may also occur (Groves et al., 2018).

At the Laiva Gold Project, many of these characteristics are evident. Gold mineralization is hosted within sheeted veins in shear zones within greenschist facies metavolcanic rocks and intermediate intrusions in a Proterozoic greenstone belt.

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9 Exploration

Laiva Gold and Edgemont have yet to conduct exploration at the Property. All relevant historical exploration data has been discussed in Section 6 of this Technical Report.

10 Drilling

Laiva Gold and Edgemont have yet to conduct drilling at the Property.

The compiled drillhole database used in the Laiva Gold MRE contains 3,728 drillholes totaling 159,941.8 m completed at the Property between 2005 and 2021 (Table 10.1 and Figure 10.1). For the purposes of the Laiva Gold MRE, exploration and grade control drillholes from Nordic, Firesteel Resources, and Otso Gold were considered, and are summarized in this section.

Table 10.1. Historical drillholes used in the current Laiva Gold MRE.

Operator	Purpose	Type	Year	Number of holes	Total meters
Nordic	Exploration	Diamond	2005 - 2012	325	61,040.0
		RC	2007 - 2008	92	13,319.7
	Grade Control	Diamond	2013	201	6,836.0
		RC	2011 - 2014	2,963	66,118.3
Firesteel Resources	Exploration	RC	2018	47	3,044.0
Otso Gold	Exploration	Diamond	2019, 2021	100	9,583.8
			Total	3,728	159,941.8

Source: APEX (2025)

APEX personnel completed verification of the Laiva Gold Project drilling data, under the direct supervision of the Author, during the calculation of the MRE. The drilling data used in the Laiva Gold MRE has been deemed adequate and acceptable by the Author for use herein.

The historical drilling discussed in this section encompassed a combination of infill drilling, grade control drilling and exploration drilling. Historical drilling has defined gold mineralization at the Laiva Gold Project over an area that measures approximately 1,000 by 850 m, and to a maximum depth of 225 m below surface. Historical exploration and grade control drillhole locations and results for gold are presented in Figures 10.2 to 10.4.

The following sections contain a summary of the specific procedures and standards maintained by each operator in the historical drilling campaigns.

Figure 10.1 Overview of drillholes utilized in the 2025 Laiva Gold MRE.

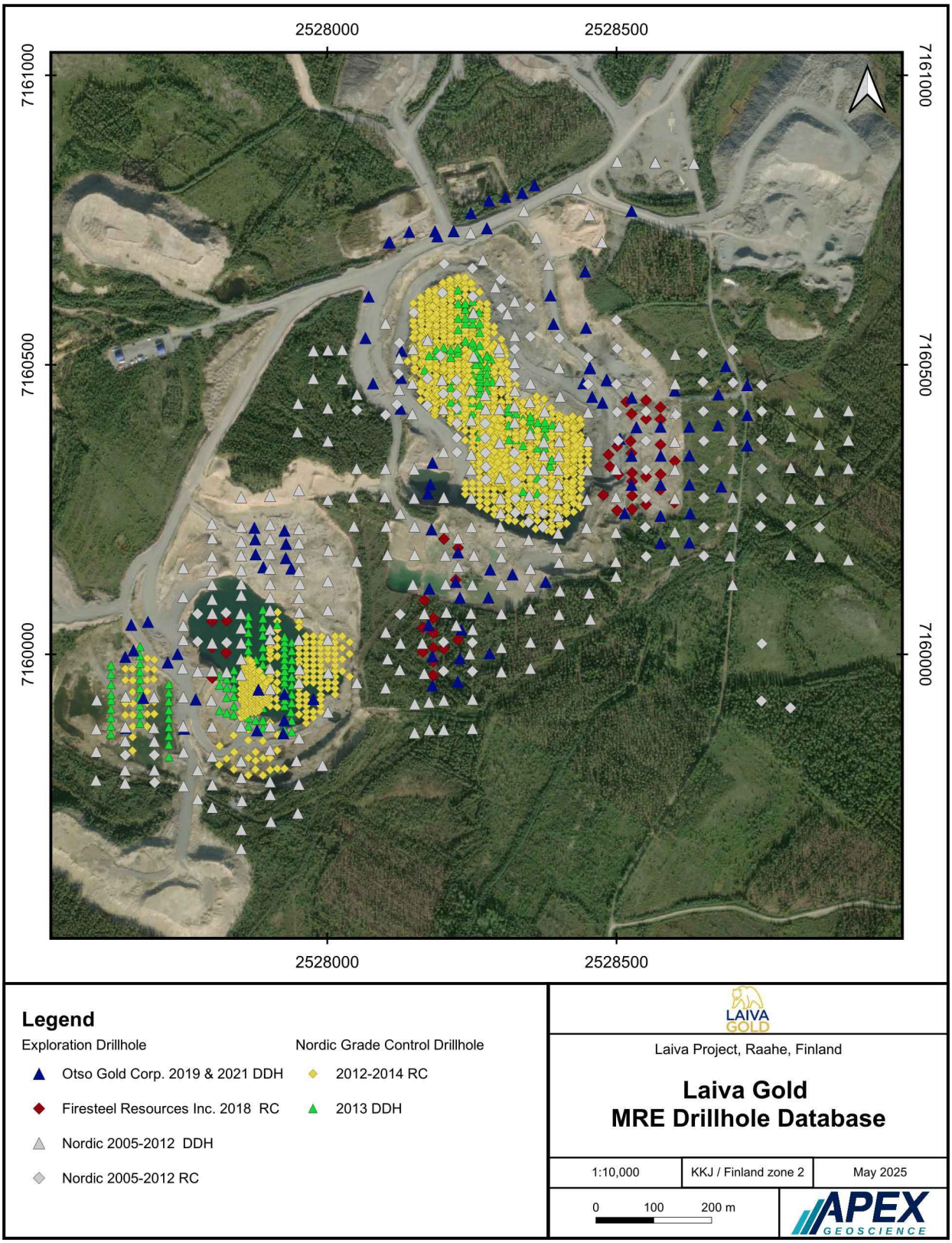


Figure 10.2 Historical exploration and grade control drilling results (Au ppm), looking northwest.

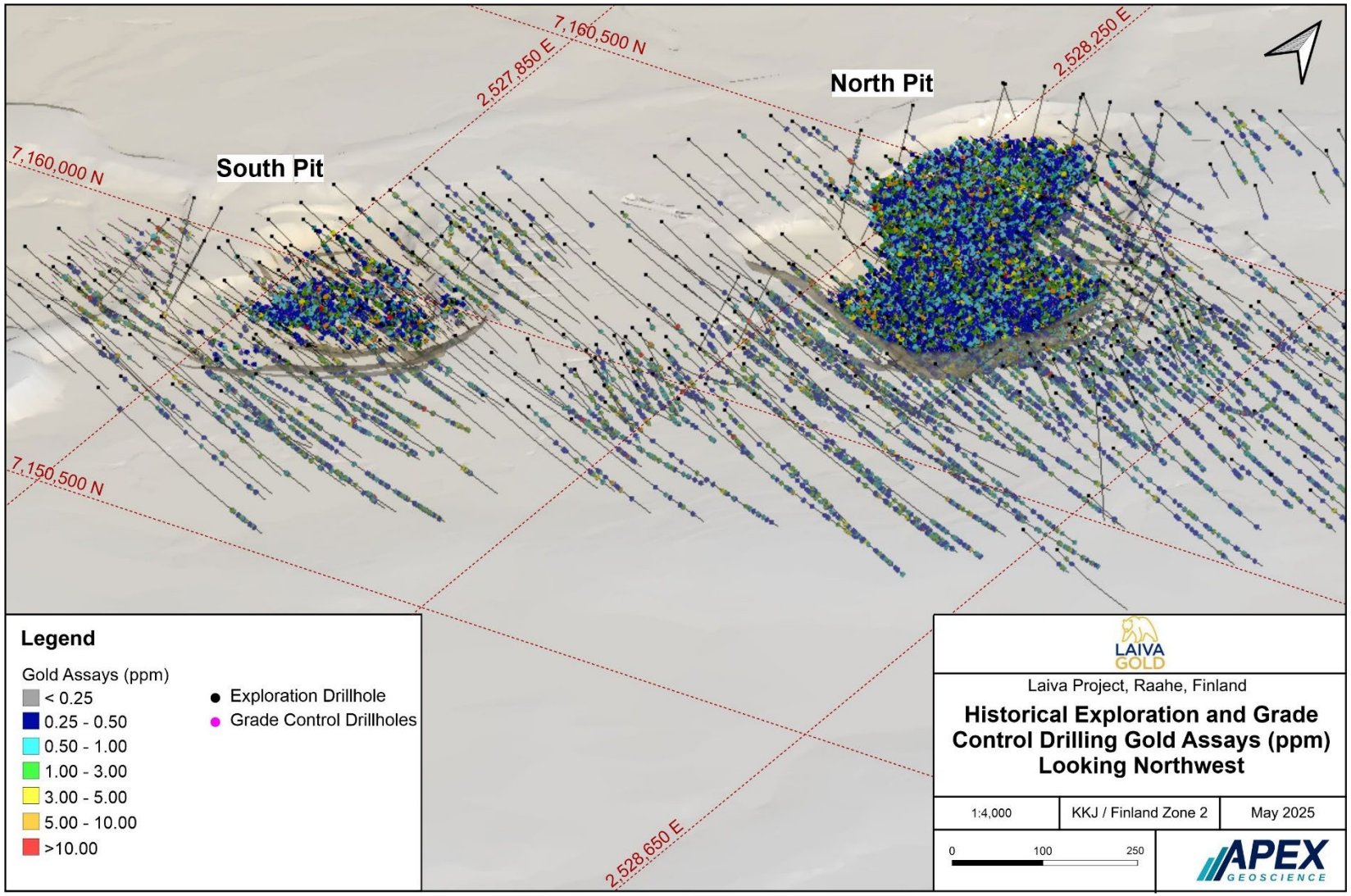


Figure 10.3 Cross section of North Pit showing historical exploration and grade control drilling results (Au ppm).

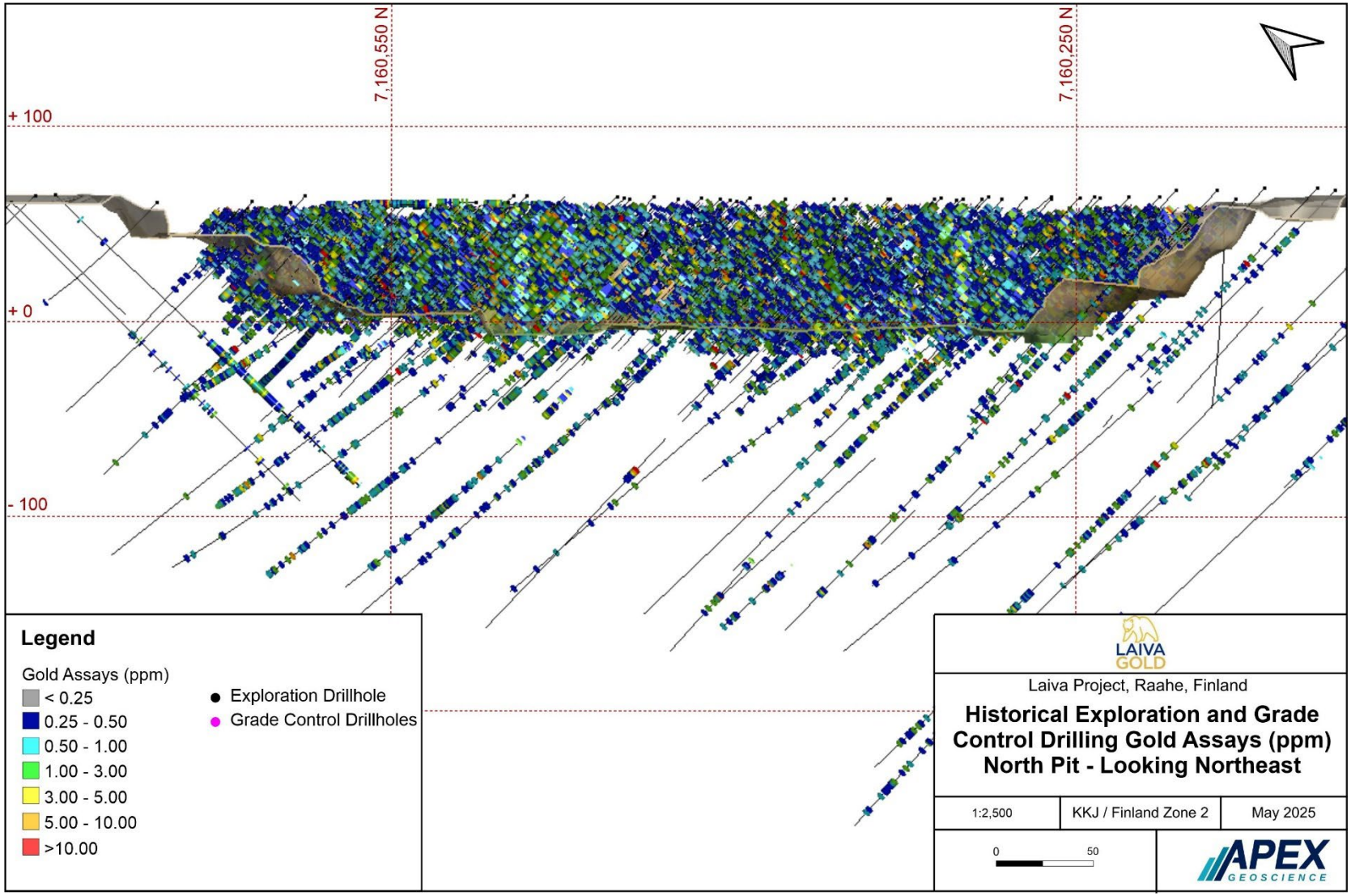
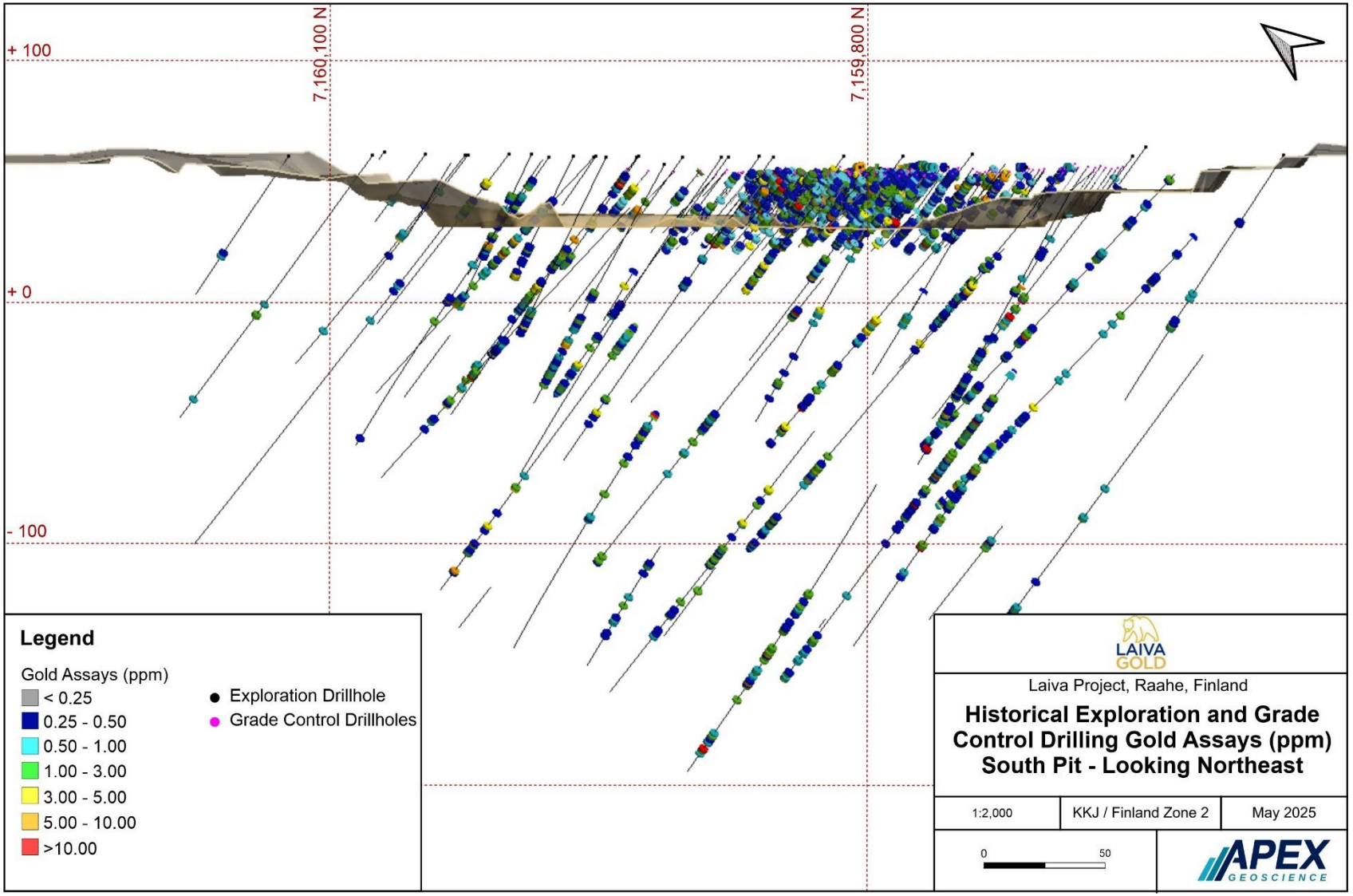


Figure 10.4 Cross section of South Pit showing historical exploration and grade control drilling results (Au ppm).



10.1 Diamond Drilling

10.1.1 Nordic Historical Drilling (2005 to 2014)

Nordic completed over 500 diamond drillholes between 2005 and 2013 for exploration and grade control purposes (Table 10.1). Exploration holes were drilled at hole spacings of 30 by 30 m in the old surface of the North pit, and 50 by 50 m around the North and South pits. The Nordic diamond drilling assisted in the delineation of gold mineralization over the North Pit and provided information and data to further refine the geological model of the deposit. Overall, out of the 52,403 samples obtained by Nordic, 121 samples (0.23%) returned > 10 ppm Au, 754 samples (1.44%) returned gold grades between 3 ppm and 10 ppm, 2,343 samples (4.47%) returned between 1 ppm and 3 ppm Au, and 6,085 samples (11.61%) returned between 0.3 ppm and 1 ppm Au.

Exploration collar locations were determined using a GPS and surveyed using a Virtual Reference Station (VRS) GPS upon completion of each drillhole. Downhole deviation survey measurements of exploration drillholes were recorded using a Reflex tool after the hole was shut down at 3 to 5 m intervals.

Planned grade control collars were located in the pit by surveyors using a differential GPS following completion of the hole. Downhole deviation surveys were rarely conducted on grade control drillholes; results of surveyed holes indicate minor deviation due to the relatively short downhole depths of the grade control holes.

Holes LAN501-510 were drilled using BQ drill bits (42 mm) and all other Nordic holes were drilled in an NQ2 size (50 mm). Run lengths were typically 3 m. The drill core was largely unoriented. The core was transported to the core shack in core boxes, with boxes numbered and drill blocks labeled. After hole completion, every collar was cemented with a plug and a labeled PVC pipe.

All holes were drilled at azimuths ranging between 355° and 5°, and dips ranging between 40° and 45°. Diamond drillhole depths ranged from 46.8 to 333.2 m, and averaged 145.0 m.

Prior to logging, the geologist conducted RQD and recovery calculations. Core recoveries were typically greater than 95%, with no bias observed between core recovery and gold grade. Geological logging of the diamond core comprised lithology, colour, grain-size, texture, alteration, mineralization, structure, and quartz vein density, and all intervals greater than 20 cm were split into a new interval. The core was logged, marked up for sampling, and photographed before being cut in half with a core saw. The remaining half core was stacked in a covered and locked storage facility owned by Nordic. Half core samples were collected consistently every meter in most holes, irrespective of lithological, alteration, or mineralization changes. Samples were typically collected only in and around visually mineralized intervals.

All samples were held in custody of the project geologist and then stored in locked sheds until shipment by courier to the laboratory was completed. Upon delivery, the laboratory would confirm reception by sending a report detailing the number of samples and sample IDs. Sample preparation and analysis for exploration holes were carried out by independent laboratories: Eurofins Labtium Oy: T025 - EN ISO/IEC 17025, Finnish Accreditation Service (FINAS), and ALS in Sweden (ISO/IEC 17025, SWEDAC Ackreditering). Exploration samples were analyzed for gold by 50 g fire assay and other metals by four-acid digest, and with an Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) or Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES) analytical finish. Multielement analyses included silver (Ag), arsenic (As), cobalt (Co), copper (Cu), iron (Fe), nickel (Ni), lead (Pb), sulfur (S), and zinc (Zn). ALS pulverizing targeted 85% passing 75 µm. No details are available for Labtium Oy pulverizing target.

Grade control samples were prepared and analyzed at the Laiva Gold Project onsite laboratory that was managed by an independent contractor (CRS Laboratories Oy). Grade control samples were analyzed by four-acids for As and Cu by ICP-AES, and for gold by cyanide leaching (CN leach) with an Atomic Absorption (AA) finish. Gold analysis was completed using a pulverize and leach machine (PAL1000) with 52 steel pots filled with 500 g of sample split each, 2.6 kg of grinding media, and 500 ml of water, 7.5 g of sodium cyanide, LeachWELL, and sodium hydroxide.

Nordic did not insert blind and independent pulp blanks, coarse blanks, or certified reference materials (CRMs) in their diamond core or RC chip sample stream. Nordic relied on the QA-QC procedures conducted internally by each analytical laboratory

10.1.2 Otso Gold Historical Drilling (2019 to 2021)

Otso completed 100 diamond drillholes for a total of 9,585 m between 2019 and 2021 (Table 10.1). The holes were completed for exploration purposes east of the North Pit, and in the area between the North and the South pits.

For these holes, collar locations were determined using a GPS and surveyed using a VRS GPS upon completion of each drillhole. Downhole deviation survey measurements were taken using a Reflex gyroscope at 4 m intervals in the 2019 campaign and at 3 m and 5 m intervals in the 2021 program. Drillholes completed by Otso Gold were oriented using Reflex ACT equipment.

Most holes were drilled at azimuths ranging between 354° and 15° and dips ranging between 40° and 55°. Depths ranged from 14.45 to 227.70 m, and averaged 95.85 m. Overall, out of the 7,085 samples obtained by Otso Gold, 23 samples (0.32%) returned > 10 ppm Au, 85 samples (1.20%) returned gold grades between 3 ppm and 10 ppm, 230 samples (3.25%) returned between 1 ppm and 3 ppm Au, and 653 samples (9.22%) returned between 0.3 ppm and 1 ppm Au. It is important to note that drilling took place outside of the known pit areas and was used to confirm Nordic historical drilling intercepts.

Geological logging comprised lithology, colour, grain-size, texture, alteration, mineralization, structure, and quartz vein density, and all intervals greater than 20 cm were split into a new interval. The core was logged, marked up for sampling, and photographed before being cut in half with a core saw. Half core samples length was determined by lithology and mineralization, with sample lengths ranging from 0.15 to 6.80 m and averaging 0.94 m. Samples were typically collected only in and around visually mineralized intervals, and there are gaps in sampling, generally at the top and bottom of the drillhole.

All samples were held in custody of the project geologist and then stored in locked sheds until shipment by private trucking company to the laboratory was completed. A manifest detailing the sample numbers accompanied the shipment for laboratory verification. Otso Gold core samples were prepared and analyzed at an independent CRS laboratory located in Kempele, Finland. Gold was analyzed via CN leach and AA; no multielement analyses were conducted. Additionally, every 10th sample submitted to CRS for CN leach analysis was submitted to MSALABS Ltd. in Langley, British Columbia for verification and comparison between fire assay and CN leach gold grades.

10.2 Reverse Circulation Drilling

10.2.1 Nordic Historical Drilling (2005 to 2014)

Over 3,000 Nordic RC drillholes were drilled for exploration and grade control purposes from 2007 to 2014 (Table 10.1). Most of the holes were drilled at inclinations of -45° with a northerly azimuth. Some of the exploration holes were oriented northwest. The nominal spacing for exploration drillholes was 50 by 50 m, reducing to 25 by 25 m drillhole spacing in specific areas of the North and South pits. RC exploration holes were drilled by a contractor named Järvsö Borr at a diameter of 112 mm.

Most of the RC grade control drillholes were completed at a 45° dip, while some were vertical. Depths ranged from 11 to 37 m and averaged 23 m. Grade control drilling was conducted at spacings of 12.5 by 10 m in the North and South pits. RC grade control drillholes were completed by several contractors at a diameter of 127 mm.

In 2014, Nordic completed a RC grade control program to evaluate the optimal sample spacing for grade control. Drillholes were completed at 6.25 by 5 m intervals in designated sections of the North and South Pits. A total of 2,121 m were drilled in 85 holes in the North Pit and 1,941 m in 89 holes in the South Pit. This campaign provided valuable insights, highlighting the need for a more optimized grade control spacing to accurately capture gold grade variability within the deposit.

Exploration collar locations were determined using a GPS with downhole surveys conducted using a Virtual Reference Station (VRS) GPS upon completion of each drillhole. Downhole deviation survey measurements of exploration drillholes were recorded using a Reflex tool after the hole was shut down at 3 to 5 m intervals.

Planned grade control collars were located in the pit by surveyors using a differential GPS following completion of the hole. Downhole deviation surveys were rarely conducted on grade control drillholes; results of surveyed holes indicate minor deviation due to the relatively short downhole depths of the grade control holes.

A rig mounted riffle splitter split the chips with a ratio of 70:30, and samples were collected at 1 m intervals. Each sample was sieved and placed in a chip tray for logging. Geological logging comprised lithology, colour, grain-size, texture, alteration, mineralization, structure, and quartz vein density. Grade control RC samples were taken consistently at 1 m intervals in most holes.

Labeled cloth bags were used to collect samples and stored on a pallet at the rig before transporting them to the logging facility. All samples were held in custody of the project geologist and then stored in locked sheds until shipment by courier to the laboratory was completed. Upon delivery, the laboratory would confirm reception by sending a report detailing the number of samples and sample IDs.

Sample preparation and analysis for exploration holes were carried out by independent laboratories: Eurofins Labtium Oy: T025 - EN ISO/IEC 17025, FINAS, and ALS in Sweden (ISO/IEC 17025, SWEDAC Ackreditering). Exploration samples were analyzed for gold by 50 g fire assay and other metals by four-acid digest, and with an ICP-AES or ICP-OES analytical finish. Multielement analyses included Ag, As, Co, Cu, Fe, Ni, Pb, S, and Zn. ALS pulverizing targeted 85% passing 75 µm.

Grade control samples were prepared and analyzed at the Laiva Gold Project onsite laboratory that was managed by independent CRS Laboratories Oy. Grade control samples were analyzed by four-acids for As and Cu by ICP-AES, and for gold by CN leach with an AA finish. Gold analysis was completed using a pulverize and leach machine (PAL1000) with 52 steel pots filled with 500 g of sample split each, 2.6 kg of grinding media, and 500 ml of water, 7.5 g of sodium cyanide, LeachWELL, and sodium hydroxide.

Nordic did not insert blind and independent pulp blanks, coarse blanks, or CRMs in their diamond core or RC chip sample stream. Nordic relied on the QA-QC procedures conducted internally by each analytical laboratory.

10.2.2 Firesteel Resources Historical Drilling (2018 to 2019)

Firesteel Resources drilled 47 RC exploration holes for a total of 3,004 m in 2018 in the surrounding areas of the North and South pits (Table 10.1).

The exploration drillholes were sampled consistently every 1 m. Sampling did not cover the entire length of the holes with most sampling gaps occurring at the top and bottom of the drillhole. Labeled cloth bags were used to collect samples and stored on a pallet at the rig before being transported to the logging facility. Recovery during RC drilling was not routinely measured. Geological logging comprised lithology, colour, grain-size, texture, alteration, mineralization, structure, and quartz vein density.

The chain of custody mirrored Nordic's protocol, with the exception that samples were transported in sealed containers by a private trucking company. A manifest detailing the sample numbers accompanied the shipment for laboratory verification. The RC samples were prepared and analyzed for gold at an independent CRS laboratory located in Kempele, Finland. Gold was analyzed via CN leach and AA; no multielement analyses were conducted.

Firesteel Resources inserted CRMs, blanks, and duplicates into the sample stream to verify the overall analytical precision and accuracy of assay results. See Section 11.3.2 for a summary of the QA-QC performance.

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11 Sample Preparation, Analyses and Security

This section summarizes the sampling preparation, analyses, security, and QA-QC protocols and procedures employed at the Laiva Gold Project by Nordic between 2005 and 2014, Firesteel Resources between 2018 to 2019, and by Otso Gold from 2019 to 2021. A portion of the information in this section regarding the sampling preparation, analyses, security, and QA-QC protocols and procedures has been sourced from Bektas (2019) and Shoemaker and Sparks (2018; 2021). Based on the review of the available literature and data, the Author takes responsibility for the information herein.

11.1 Sample Collection, Preparation and Security

11.1.1 Nordic Historical Drilling (2005 to 2014)

11.1.1.1 Diamond Drillcore Samples

Diamond drill core (core) was transported to the core shack having been put in boxes by the drillers, with boxes numbered and drill blocks labeled. Once at the core shack, core boxes were put up on benches and checked for order. Recovery, rock quality designation (RQD), and Rock Tunneling Quality Index (Q-value) were recorded. Specific gravity measurements were calculated by weighing core samples in air and then in water. The rocks at Laiva are competent and non-porous and no wax was used to cover the rock. The specific gravity samples were selected to represent all rock types and mineralization styles in 1 m intervals in a number of different holes. A total of 5,772 specific gravity measurements were taken.

Geological logging comprised lithology, colour, grain-size, texture, alteration, mineralization, structure, and quartz vein density, and all intervals greater than 20 cm were split into a new interval. Logging was conducted in a digital database and hard copies of the logs do not exist. The core was logged, marked up for sampling, and photographed before being cut in half with a core saw. The remaining half core was stacked in a covered and locked storage facility owned by Nordic.

Half core samples were collected consistently every meter in most holes, irrespective of lithological, alteration, or mineralization changes (Figure 11.1 and Table 11.1). Samples were typically collected only in and around visually mineralized intervals.

All samples were held in custody of the project geologist and then stored in locked sheds until shipment by courier to the laboratory was completed. Upon delivery, the laboratory would confirm reception by sending a report detailing the number of samples and sample IDs.

11.1.1.2 Reverse Circulation Drill Samples

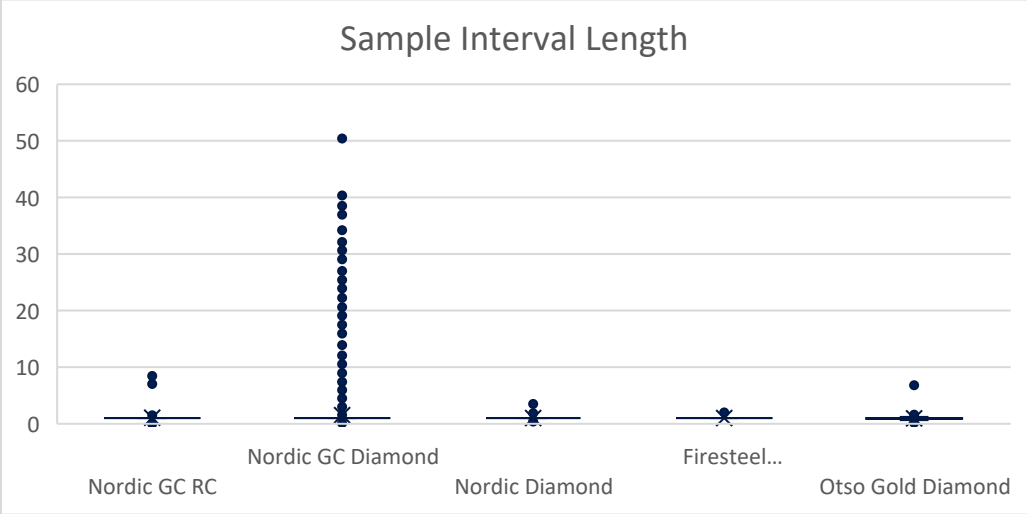
A rig mounted riffle splitter split the chips with a ratio of 70:30, and samples were collected at 1 m intervals. Each sample was sieved and placed in a chip tray for logging. Geological logging recorded lithology, colour, grain-size, texture, alteration, mineralization, structure, and quartz vein density data.

Grade control RC samples were taken consistently at 1 m intervals in most holes, with exceptions listed as follows:

- Only one sample was collected from RC grade control holes 71400001 to 71400280. The sample covered the entire hole (top to end of hole). The shortest sample length in these holes was 7.02 m and the longest was 9.29 m, averaging at 8.35 m.
- Holes BLS00001 to BLS00355 were sampled every 2.5 m.

Labeled cloth bags were used to collect samples and stored on a pallet at the rig before transporting them to the logging facility. All samples were held in custody of the project geologist and then stored in locked sheds until shipment by courier to the laboratory was completed. Upon delivery, the laboratory would confirm reception by sending a report detailing the number of samples and sample IDs.

Figure 11.1. Drill sample length (meters) distribution by operator.



Source: APEX (2025)

Table 11.1. Drill sample length (meters) statistical information by operator.

	Nordic GC RC	Nordic GC Diamond	Nordic Diamond	Firesteel Resources RC	Otso Gold Diamond
Q1	1.00	1.00	1.00	1.00	0.86
Minimum	0.3	0.10	0.40	1.00	0.15
Median	1.00	1.00	1.00	1.00	0.94
Mean	1.06	1.52	1.00	1.00	0.94
Maximum	9.29	50.40	4.85	2.00	6.80
Q3	1.00	1.00	1.00	1.00	1.00
Total samples	50,043	3,797	51,703	1,772	7,086

Source: APEX (2025)

11.1.2 Firesteel Resources Historical Drilling (2018 to 2019)

11.1.2.1 Reverse Circulation Drill Samples

Firesteel Resource exploration RC holes were sampled consistently every 1 m (Figure 11.1). Sampling did not cover the entire length of the holes with most sampling gaps occurring at the top and bottom of the drillhole. Labeled cloth bags were used to collect samples and stored on a pallet at the rig before being transported to the logging facility. Recovery during RC drilling was not routinely measured. No significant core loss in mineralized intervals has been reported.

The chain of custody mirrored Nordic's protocol, with the exception that samples were transported in sealed containers by a private trucking company. A manifest detailing the sample numbers accompanied the shipment for laboratory verification.

11.1.3 Otso Gold Historical Drilling (2019 to 2021)

11.1.3.1 Diamond Drillcore Samples

Diamond drill core (core) was transported to the core shack having been put in boxes by the drillers, with boxes numbered and drill blocks labeled. Once at the core shack, core boxes were put up on benches and checked for order. Recovery, RQD, and Rock Tunneling Quality Index (Q-value) were recorded. Specific gravity measurements were calculated by weighing core samples in air and then in water. The rocks at Laiva are competent and non-porous and no wax was used to cover the rock. No specific gravity samples were taken.

Geological logging comprised lithology, colour, grain-size, texture, alteration, mineralization, structure, and quartz vein density, and all intervals greater than 20 cm were split into a new interval. Logging was conducted in a digital database and hard copies of the logs do not exist. The core was logged, marked up for sampling, and photographed before being cut in half with a core saw. The remaining half core was stacked in a covered and locked storage facility.

Half core samples length was determined by lithology and mineralization (Figure 11.1). The sample lengths ranged from 0.15 to 6.80 m and averaged 0.94 m. Samples were typically collected only in and around visually mineralized intervals, and there are gaps in sampling, generally at the top and bottom of the drillhole.

The chain of custody mirrored Nordic's protocol, with the exception that samples were transported in sealed containers by a private trucking company. A manifest detailing the sample numbers accompanied the shipment for laboratory verification.

11.2 Analytical Procedures

A summary of the laboratories and analytical methods used by previous operators at the Laiva Gold Project is presented in Table 11.2.

Table 11.2. Laboratories and analytical procedures utilized by previous operators.

Laboratory	Certification	Samples	Year	Analytical Code	Analytical Method	Description
Eurofins Labtium Oy	T025 - EN ISO/IEC 17025, Finnish Accreditation Service (FINAS)	Nordic exploration and resource development diamond and RC drillholes	2005-2012	510P	Aqua regia digest with ICP-OES finish	Ag, As, Co, Cu, Fe, Ni, Pb, S, and Zn
				705P	50 g fire assay with ICP-OES finish	Au
ALS Chemex	ISO/IEC 17025, SWEDAC Ackreditering	Nordic exploration and resource development diamond and RC drillholes	2005 - 2012	ME-ICP61	Four-acid digest with ICP-AES finish	Ag, As, Co, Cu, Fe, Ni, Pb, S, and Zn
				Au-ICP22	50 g fire assay with ICP-AES finish	Au Range: 0.001 – 10 ppm
CRS - Onsite	-	Nordic grade control	2012 - 2014	PALO-AAS	CN leach with AA finish	Au Lower detection limit: 0.05 ppm
CRS - Kempele	T342 - EN ISO/IEC 17025, Finnish Accreditation Service (FINAS)	Firesteel Resources and Otso Gold exploration and grade control drillholes	2018 - 2021	PAL1000	CN leach with AA finish	Au Lower detection limit: 0.05 ppm

Source: APEX (2025)

11.2.1 Nordic Historical Drilling (2005 to 2014)

11.2.1.1 Exploration and Resource Development Drillholes

The analytical methods used by Nordic are summarized in Table 11.2. Sample preparation and analysis for exploration holes were carried out by Eurofins Labtium Oy: T025 - EN ISO/IEC 17025, FINAS, and ALS in Sweden (ISO/IEC 17025, SWEDAC Ackreditering). All laboratories are independent of Nordic, Laiva Gold, Edgemont, and the Authors of this Technical Report.

Samples were dried, jaw crushed, split in a riffle splitter, and pulverized. Exploration samples were analyzed for gold by 50 g fire assay and other metals by four-acid digest, and with an ICP-AES or ICP-OES analytical finish. Multielement analyses included Ag, As, Co, Cu, Fe, Ni, Pb, S, and Zn. ALS pulverizing targeted 85% passing 75 µm. No details are available for Labtium Oy pulverizing target.

No independent blanks or CRMs were inserted by Nordic. Nordic relied on the QA-QC procedures conducted by the laboratories (see Section 11.3.1).

11.2.1.2 Grade Control Drillholes

Grade control samples were prepared and analyzed at the Laiva Gold Project onsite laboratory (Table 11.2). This facility was managed by an independent contractor (CRS Laboratories Oy). A company vehicle was used to transport samples to CRS for preparation and analysis. Grade control samples were dried at 105°C and a 500 g sub-sample was collected using a mat roll and channel cutting. Crushing and pulverizing to >80% passing 75 µm grain size were conducted and the samples were analyzed by four-acids for As and Cu by ICP-AES, and for gold by cyanide leaching (CN leach) with an AA finish. Gold analysis was completed using a pulverize and leach machine (PAL1000) with 52 steel pots filled with 500 g of sample split each, 2.6 kg of grinding media, and 500 ml of water, 7.5 g of sodium cyanide, LeachWELL, and sodium hydroxide. Pulverizing and leaching happened simultaneously for 2.5 hours at 60 rpm and the resulting solution was analyzed by AA. The steel pots were then washed, and the grinding media was discarded and replaced for the following samples.

CRS is independent of Nordic, Laiva Gold, Edgemont, and the Authors of this Technical Report.

11.2.2 Firesteel Resources Historical Drilling (2018 to 2019)

Firesteel Resources RC samples were prepared and analyzed for gold at an independent CRS laboratory located in Kempele, Finland (Table 11.2). The same analytical procedures as those described for Nordic's grade control samples in Section 11.2.1.2 were followed. Gold was analyzed via CN leach and AA; no multielement analyses were conducted.

CRS is independent of Firesteel Resources, Laiva Gold, Edgemont, and the Authors of this Technical Report.

11.2.3 Otso Gold Historical Drilling (2019 to 2021)

Otso Gold core samples were prepared and analyzed for gold at an independent CRS laboratory located in Kempele, Finland. The same analytical procedures as those described for Nordic's grade control samples in Section 11.2.1.2 were followed (see Table 11.2). Gold was analyzed via CN leach and AA; no multielement analyses were conducted. CRS is independent of Otso Gold, Laiva Gold, Edgemont, and the Authors of this Technical Report.

Additionally, every 10th sample submitted to CRS for CN leach analysis was submitted to MSALABS Ltd. (ISO 17025, 9001, 14001, and 45001) in Langley, British Columbia for verification and comparison between fire assay and CN leach gold grades. MSALABS Ltd. is independent of Otso Gold, Laiva Gold, Edgemont, and the Authors of this Technical Report.

11.3 Quality Assurance – Quality Control

11.3.1 Nordic Historical Drilling (2005 to 2021)

11.3.1.1 Standards (Certified Reference Materials)

Nordic did not insert blind and independent pulp blanks, coarse blanks, or CRMs in their diamond core or RC chip sample stream. Nordic relied on the QA-QC procedures conducted internally by each analytical laboratory (Table 11.2). The following sub-sections summarize QA-QC protocols and performance at Labtium, ALS, and CRS.

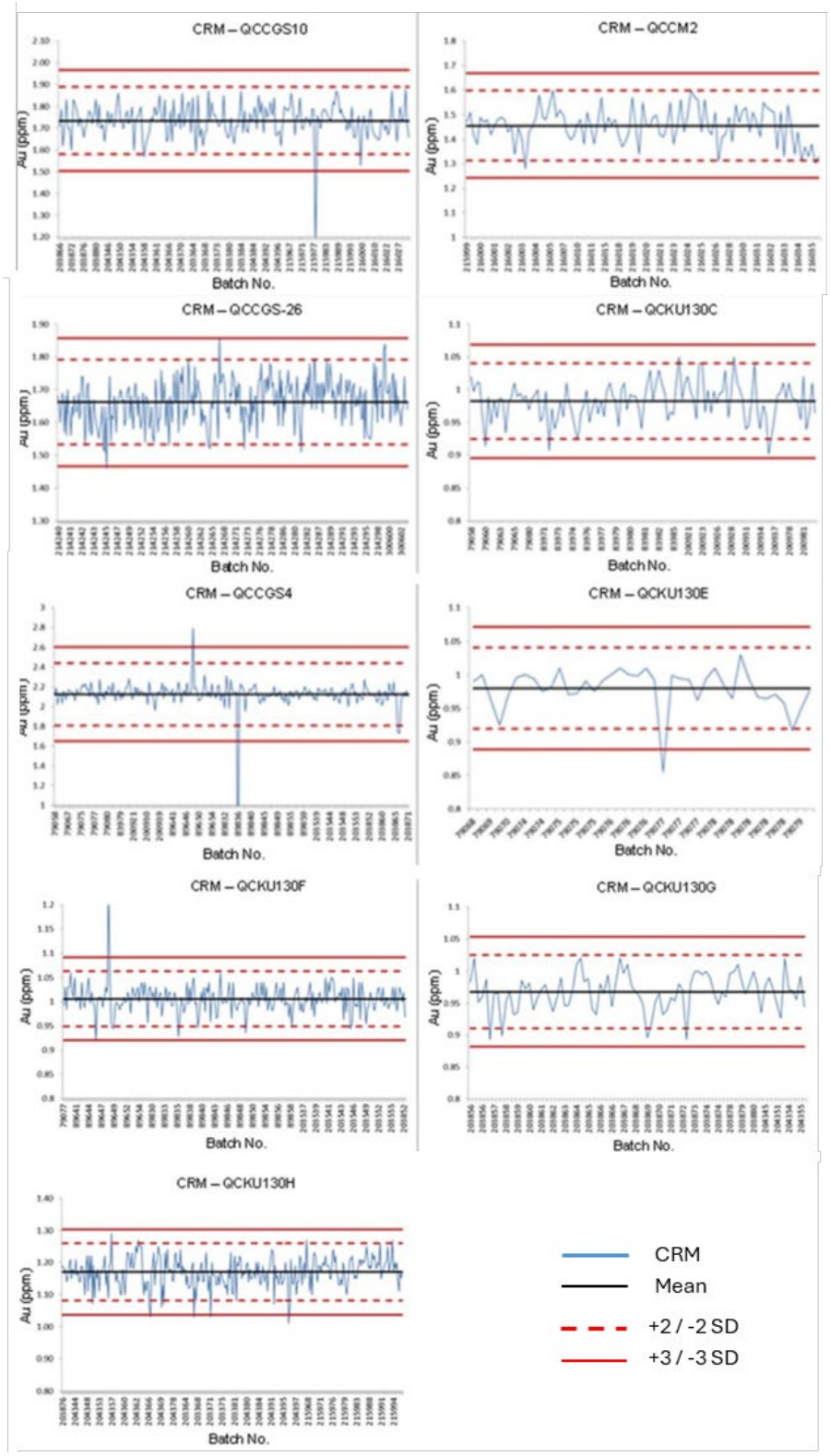
Labtium

Labtium utilized nine different CRMs during the course of Nordic's drilling programs to verify the overall analytical precision and accuracy of assay results. Standard samples comprise pulverized and homogenized materials that have been suitably tested, normally by means of a multi-lab, round-robin analysis, to establish an accepted (certified) value for the standard. Statistical analysis is undertaken to define and support the "acceptable range" (i.e., variance), by which subsequent analyses of the material may be judged. Generally, this involves examination of assay results relative to inter-lab standard deviation (SD), resulting from round-robin testing data for each standard, whereby individual assay results may be examined relative to 2SD and 3SD ranges. Standards were within "pass" tolerance if the assay value falls within 3SD of the certified value.

Results of the Labtium CRM assays indicate a high level of precision and no significant bias. The majority of the CRM results fall within ±2 standard deviations from the mean (Figure 11.2). However, out of a total of 1,713 CRM assays, 0.6% (n=11) returned values outside of ±3 standard deviations from the mean, indicative of either sample misnumbering, contamination, or analytical error. Where a CRM falls outside of ±3 standard deviations from the mean, it is recommended that the entire batch be re-assayed and the CRM value reassessed, to ensure that the assays for the batch are not over- or under-stated. The limited number of CRM failures in the Labtium dataset is not of material concern to the mineral resource estimate. The results of the standard analyses show no significant issues and in the opinion of the Author, these results are acceptable for use in this Technical Report.

Overall, the range of mean gold grade in the CRM used by Labtium is quite small, ranging from mean values of between 0.98 and 2.12 g/t gold. Whilst this approximately reflects the average grades observed at the Property, it would be beneficial in the future to analyze some CRM at a higher grade of between 5 to 10 g/t gold to assess the laboratory performance on samples that closely match the higher-grade mineralized intervals at the Laiva Gold Project.

Figure 11.2. Labtium CRM performance, Nordic historical drilling.



Source: Shoemaker and Sparks (2021)

ALS

ALS utilized 27 different CRMs during the course of Nordic's drilling programs to verify the overall analytical precision and accuracy of assay results. A total of 1,128 gold CRMs, with mean gold grades between 0.04 and 14.9 g/t Au, were analysed. The CRM mean gold grades are considered by the QP to be representative of the gold grades observed at the Property.

The certified mean and standard deviation were only available to the QP for 11 of the 27 CRM analyzed by ALS, equating to 655 CRM samples. Of these, 3.5% (n=23) of the CRM samples returned greater than ±2 standard deviations from the mean, and 1% (n=7) returned greater than ±3 standard deviations from the mean. This is indicative of a high degree of accuracy and precision in the results obtained from ALS. Assay results for CRM OXP50, PGMS13 and ST252 display a weak negative bias to results when compared with the certified mean assay value, as shown in Figure 11.3. The results are typically well within ±2 standard deviations from the mean and there is no material concern.

Of the 473 CRM samples without a certified mean and standard deviation, 1.1% (n=5) of the samples returned greater than ±3 standard deviations from the mean and 1.4% (n=7) of the samples returned greater than ±2 standard deviations from the mean. This is indicative of a high degree of precision in the results obtained from ALS.

The limited number of CRM failures in the ALS dataset is not of material concern to the mineral resource estimate. The results of the standard analyses show no significant issues and in the opinion of the Author, these results are acceptable for use in this Technical Report.

CRS

Between 2011 and 2013, CRS created their own internal, hybrid CRMs which were prepared by mixing barren sand with CRMs sourced from Geostats International Pty (Geostats) and Rocklabs. The CRMs from Rocklabs and Geostats had fire assay and aqua regia certified mean values of 24.88 g/t Au and 48.53 g/t Au, respectively. CRS created their hybrid CRMs by adding 10 g of CRM to 490 g of barren sand to create standard materials with approximate grades of 0.50 and 0.97 g/t Au.

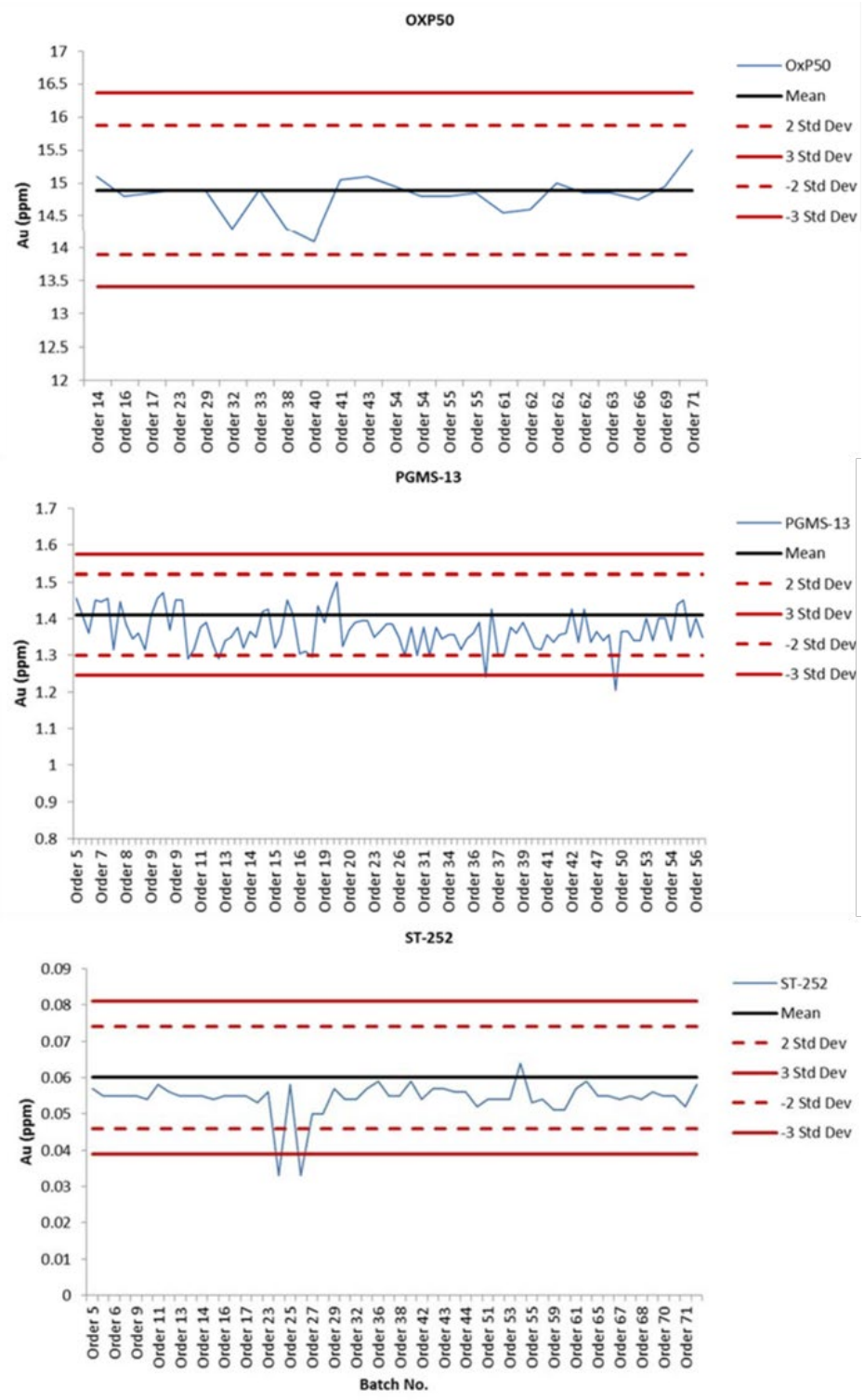
The size fraction(s) of the barren sand and the source of the barren sand is not known to the authors. The QP considers the practice of producing an internal standard from diluting a commercially available CRM to be improper, as the method of homogenization and size fraction(s) of the barren sand is unknown. Further, a standard deviation for the hybrid CRM is not given and the estimated mean value was derived from a basic formula rather than analysis of the material. In addition, the original CRM selected were only certified for analysis by 50 g fire assay or aqua regia digest, not cyanide leach tests.

Results from the analyses of both hybrid CRM show inconsistent results, which is most likely due to inadequate homogenization of the CRM sample by CRS and intended analysis by fire assay or aqua regia.

For the hybrid CRM derived from the Rocklabs material and using the standard deviation of the CRS analytical results, 24% of the CRM samples were within ±1 standard deviation, 93% were within ±2 standard deviation and 98% were within ±3 standard deviation, as shown in Figure 11.4.

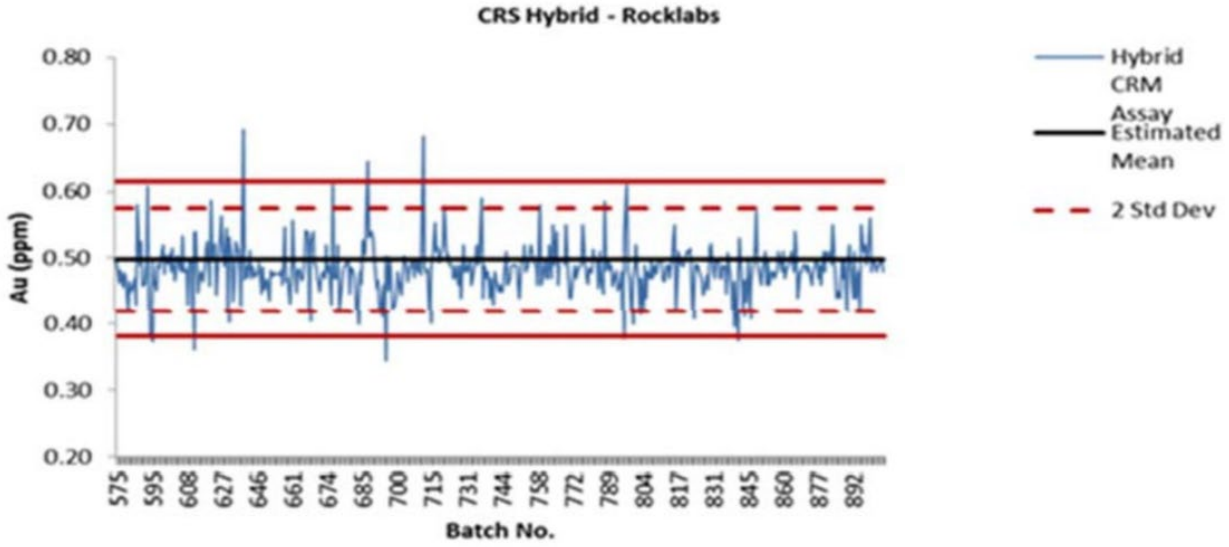
For the hybrid CRM derived from the Geostats material and using the standard deviation of the CRS analytical results, 61% of the CRM samples were within ±1 standard deviation, 93% were within ±2 standard deviation and 99% were within ±3 standard deviation, as shown in Figure 11.5.

Figure 11.3. ALS CRM performance, Nordic historical drilling.



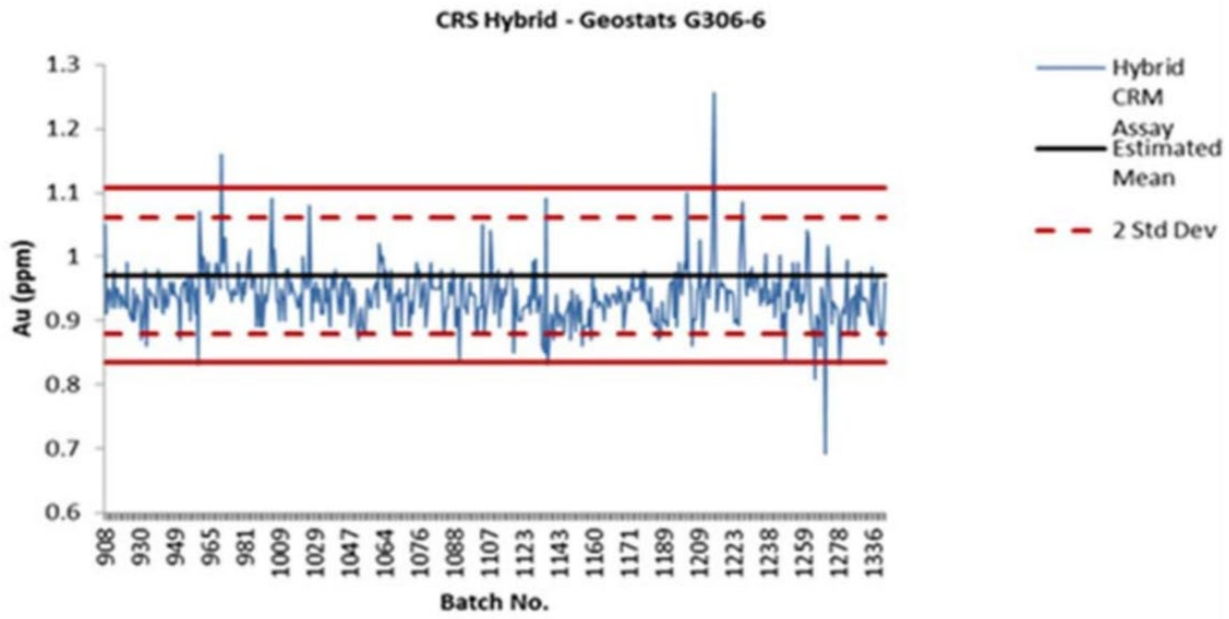
Source: Shoemaker and Sparks (2021)

Figure 11.4. Rocklabs derived CRS hybrid CRM results.



Source: Shoemaker and Sparks (2021)

Figure 11.5. Geostats derived CRS hybrid CRM results.



Source: Shoemaker and Sparks (2021)

11.3.1.2 Duplicates

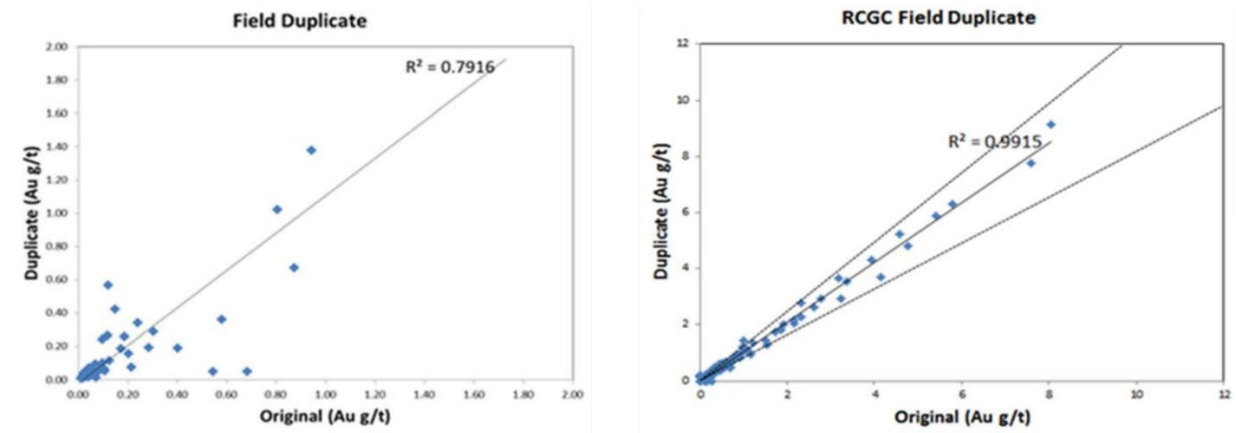
Field duplicate samples were collected by Nordic to assess the repeatability of individual analytical values.

Nordic conducted field duplicate analysis of 56 half cut drill core samples from their exploration drilling program. Results show a moderate correlation with a R^2 value of 0.7916, shown in Figure 11.6. However, the average grade of the field duplicate samples is 0.19 g/t Au and only two samples assayed greater than 1 g/t

Au. In the opinion of the QP, the limited data and very low, sub-economic grade of field duplicate samples are not considered meaningful for determination of gold grade repeatability, nor are the data representative of mineralization at the Property. Further analysis of gold grade variability and grain size distribution is warranted.

During the 2014 RC grade control trial program, 213 field duplicate samples were collected by Nordic and sent to CRS for analysis. Results demonstrate excellent repeatability, with a R2 value of 0.9915, as shown in Figure 11.6.

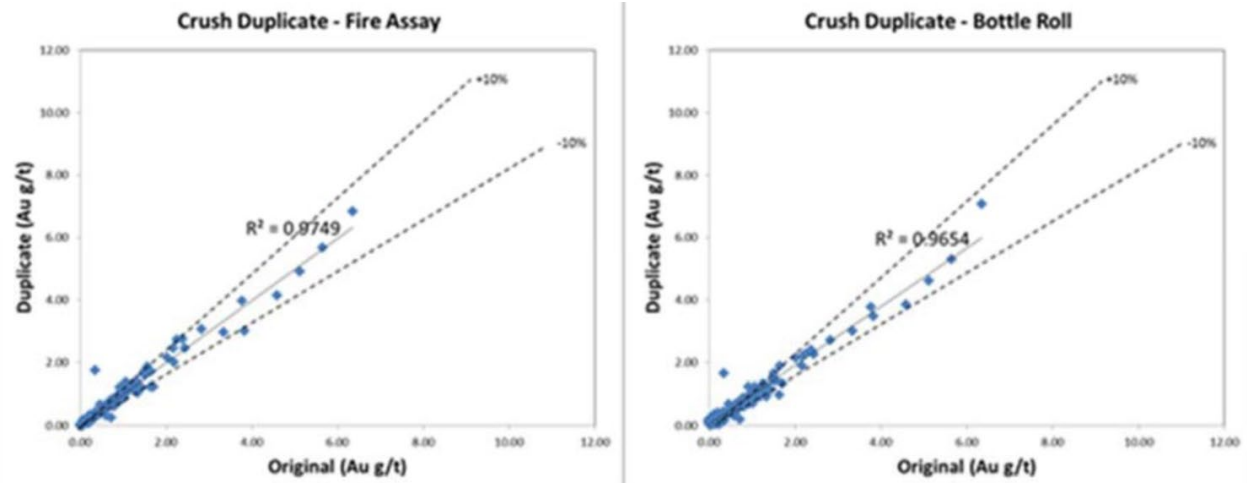
Figure 11.6. Field duplicate results in exploration holes (left) and in the 2014 RC grade control trial program (right) during Nordic ownership.



Source: Shoemaker and Sparks (2021)

Additionally, Nordic conducted a re-assay program of 523 crush reject samples. Samples were analysed by both fire assay and bottle roll cyanide leach at Labtium. Results from the fire assay and bottle roll duplicate samples demonstrate excellent repeatability with R2 values of 0.9749 and 0.9654, respectively, as shown in Figure 11.7.

Figure 11.7. Crush reject duplicate results during Nordic ownership.



Source: Shoemaker and Sparks (2021)

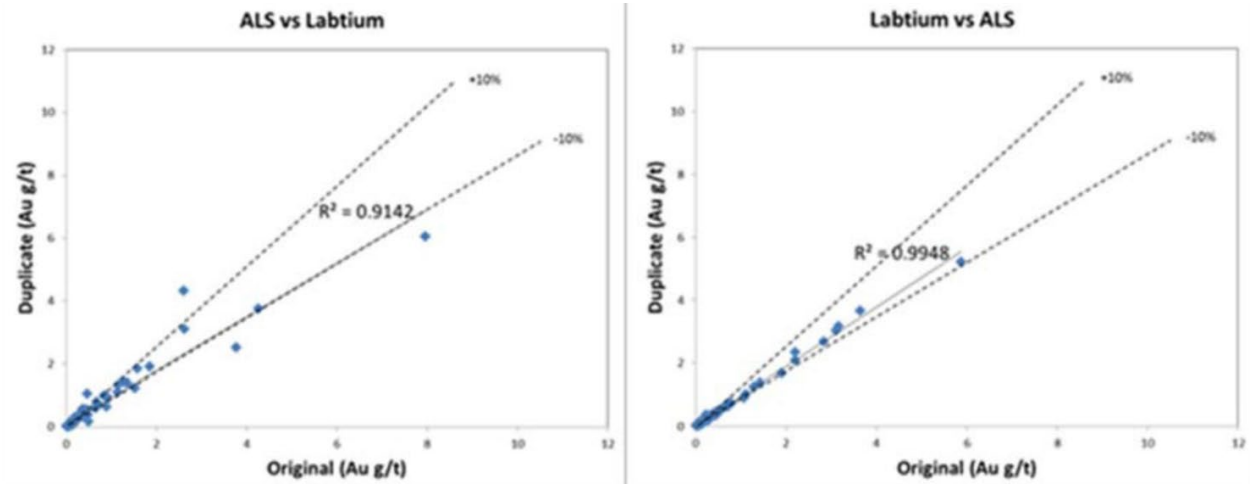
11.3.1.3 Umpire Checks

Nordic completed umpire checks during their drill programs at the Laiva Gold Project. Umpire check assays are utilized to evaluate the accuracy of the laboratories. A total of 103 pulp rejects originally assayed at ALS were re-analysed at Labtium, and 110 samples originally assayed at Labtium were re-analysed at ALS. In both instances, the pulp samples were analyzed by 50 g fire assay.

The check assays conducted by Labtium on ALS original assays show a strong correlation, with all samples returning within 10% of the original gold grade reported by ALS (Figure 11.8).

The check assays conducted by ALS on Labtium original assays show a strong correlation in the lower range of gold grades (up to 2 g/t Au). Samples exceeding 2 g/t Au show a weaker correlation, though this range has a limited number of samples.

Figure 11.8. Check assay results during Nordic ownership.



Source: Shoemaker and Sparks (2021)

11.3.2 Firesteel Resources Historical Drilling (2018 to 2019)

11.3.2.1 Standards (Certified Reference Materials)

Firesteel Resources inserted CRMs into the sample stream to verify the overall analytical precision and accuracy of assay results. Four standards were used during the 2018 RC drilling program at the Property.The CRMs were purchased from Geostats Pty in O'Connor, Western Australia, a commercial supplier of CRMs. The certified value and tolerance intervals of each standard used in Firesteel Resource's 2018 RC drilling program at the Laiva Gold Project are presented in Table 11.3. The CRMs were certified for analysis via 50 g fire assay; however, were analysed using CN leach at CRS.

A total of 17 standard samples (0.96% of total RC samples) were submitted to CRS along with RC samples from 8 holes drilled during the 2018 RC exploration drill campaign. No blank pulps were inserted.

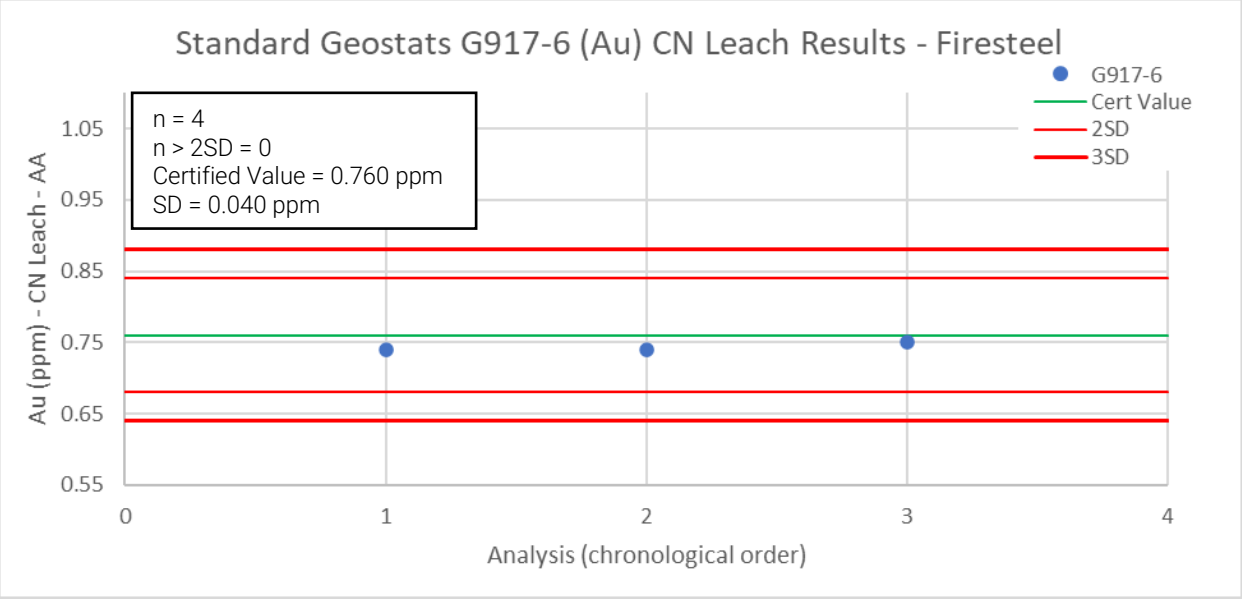
Table 11.3. 2018 RC drill program Geostats CRM description.

Reference Material	Certified Au Value (ppm) 50 g Fire Assay	Standard Deviation (ppm)	Description	Total Number of Analyses
G917-6	0.76	0.04	Cut - off mine mineralized material low sulphide	165
G307-4	1.40	0.06	Low sulphide diorite	106
G901-5	1.65	0.07	Sulphide mineralized material - Eastern Goldfields	205
G913-9	4.91	0.17	Low sulphide mine mineralized material	180

Source: APEX (2025)

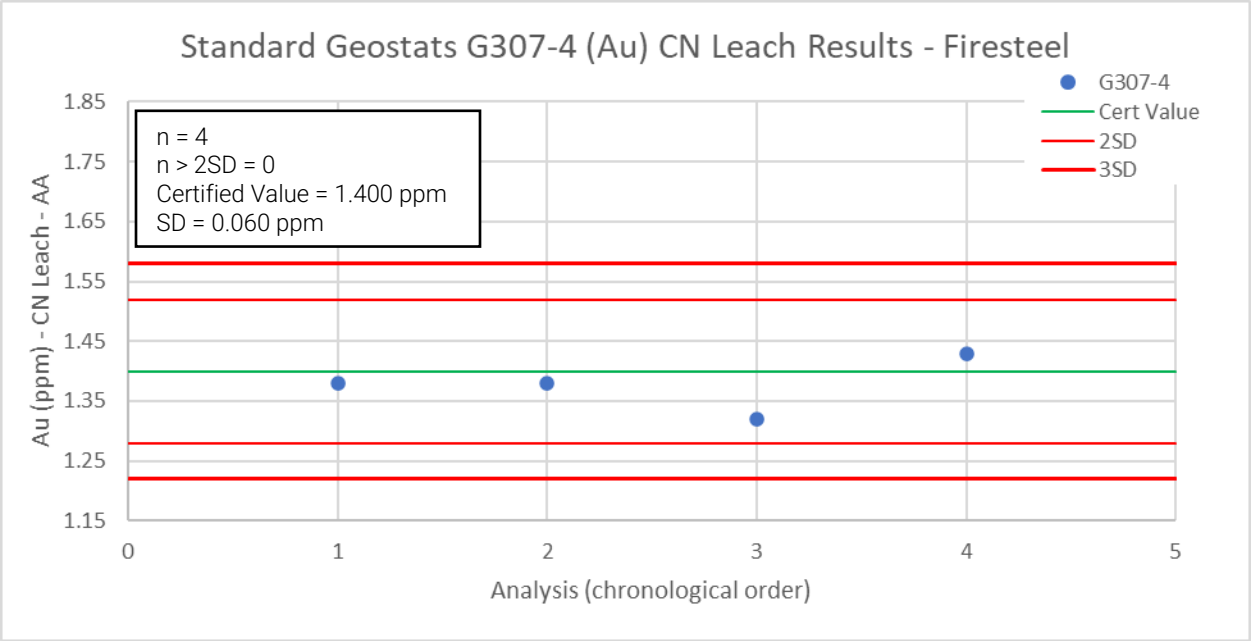
A total of three G917-6, four G307-4, five G901-5, and five G913-9 CRMs were analyzed, with all results within the 2SD error tolerance (Figures 11.9 to 11.12). Though all results are within the tolerance, the low quantity of inserted CRMs does not allow for proper validation. In addition, the Company should ensure that any CRMs used are certified for the same analytical method employed for sample analysis.

Figure 11.9. Geostats G917-6 gold results, Firesteel Resources 2018 RC drilling program.



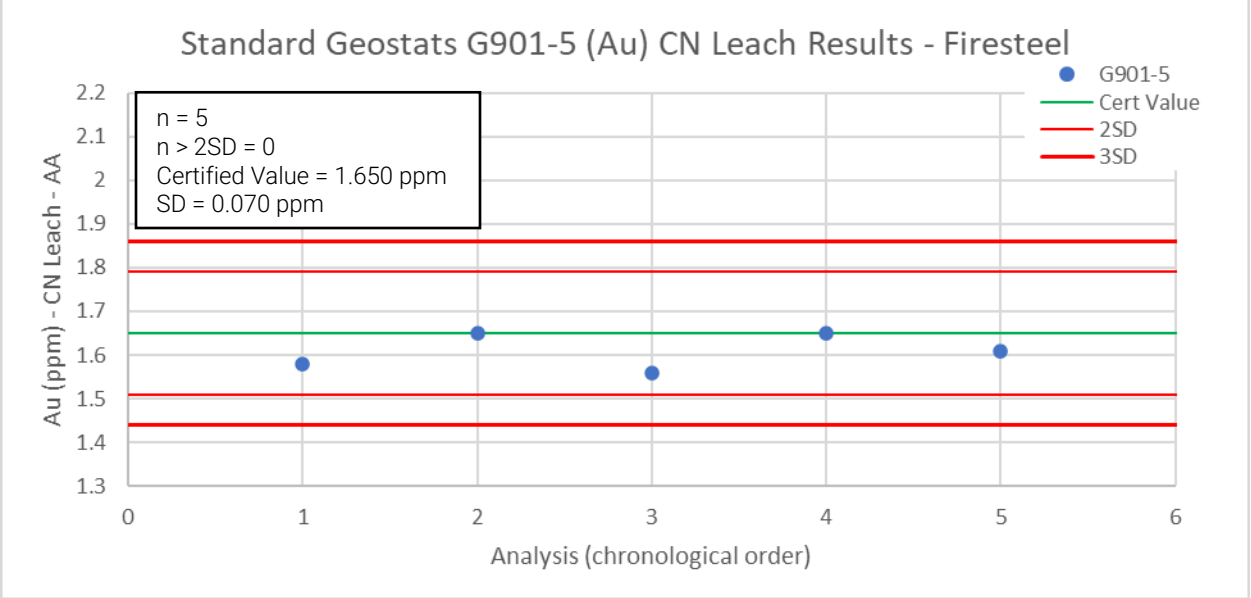
Source: APEX (2025)

Figure 11.10. Geostats G307-4 gold results, Firesteel Resources 2018 RC drilling program.



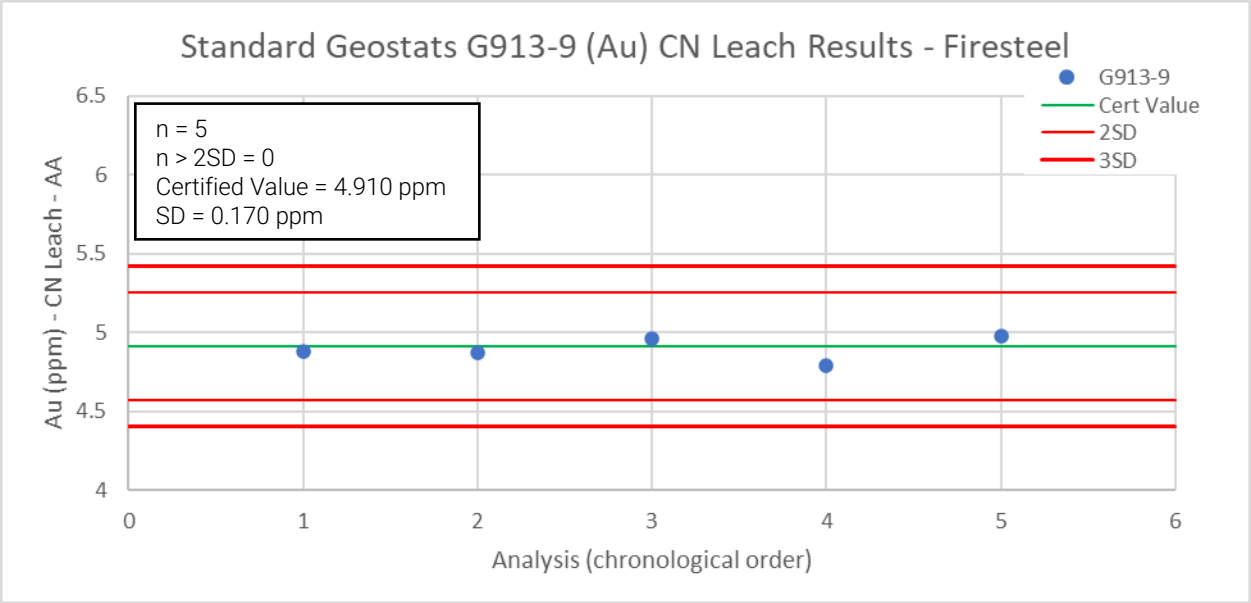
Source: APEX (2025)

Figure 11.11. Geostats G901-5 gold results, Firesteel Resources 2018 RC drilling program.



Source: APEX (2025)

Figure 11.12. Geostats G913-9 gold results, Firesteel Resources 2018 RC drilling program.



Source: APEX (2025)

11.3.2.2 Coarse Blanks

Blank samples were inserted into the sample stream to check for potential contamination during the sample preparation and analytical procedures. A coarse blank is composed of material coarse enough to require crushing and pulverisation to repeat the same processes and equipment used in preparing the core samples. The primary purpose of a coarse blank sample is to check for possible inter-sample contamination due to poor between-sample equipment cleaning procedures and/or any general lack of cleanliness that could lead to sample contamination during sample preparation.

The source of the coarse blank material used by Firesteel Resources is unknown to the Author. The weight and the gold content of the coarse blank material is also unknown. A total of 13 coarse blank samples (0.51% of total RC samples) were submitted to CRS along with RC samples from 9 holes drilled during the 2018 RC exploration drill campaign. All coarse blank analyses returned values below the detection limit.

11.3.2.3 Duplicates

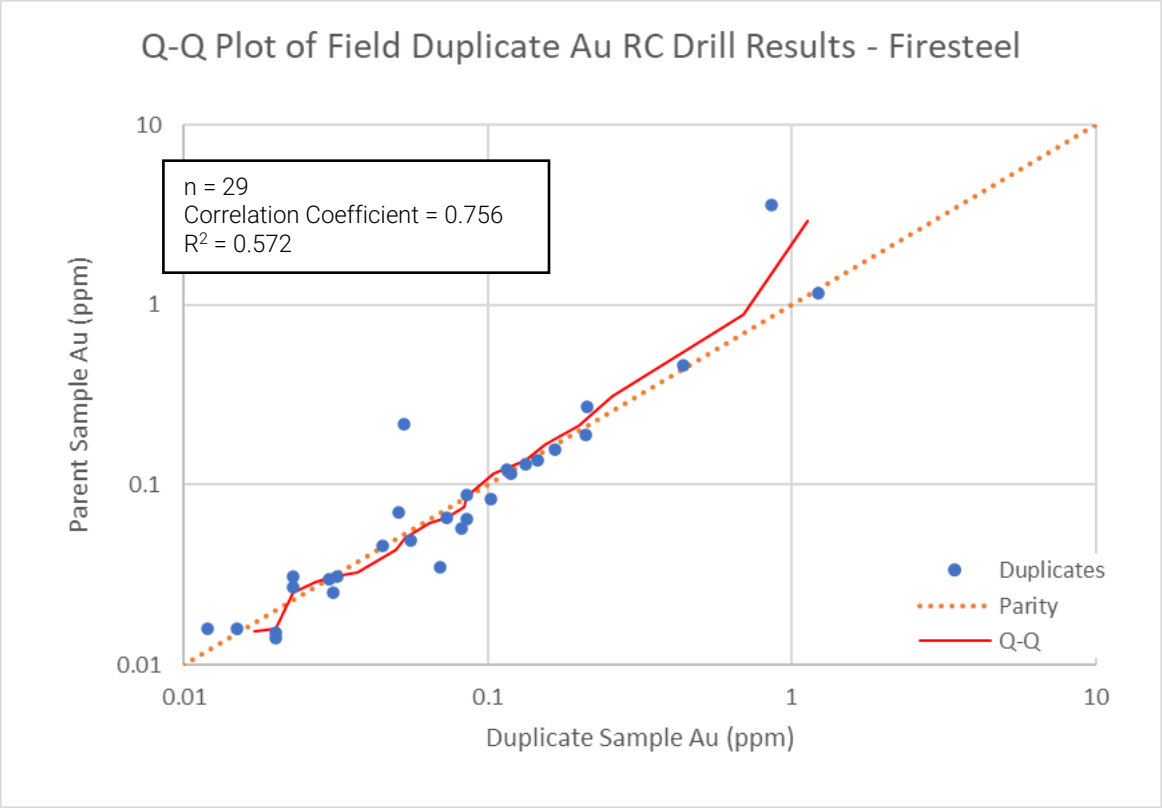
Duplicate samples were collected by Firesteel Resources to assess the repeatability of individual analytical values.

A total of 29 field duplicate samples (1.69% of total RC samples) were submitted to CRS along with RC samples collected during the 2018 RC exploration drill campaign. Duplicate gold assay results were compared to their parent samples. In general, the parent and duplicate assay results display reasonable correlation (Figure 11.13). The correlation coefficient for parent-duplicate analyses is 0.756.

There is not a significant difference in the low grade and higher-grade variability, and there is no significant bias in the duplicate results between the parent and duplicate samples. Though visible gold has not been reported in the geological logs, no high-grade sample duplicates (> 2 ppm Au), where nuggety gold would be

expected, have been analyzed. A metallic screen fire assay campaign is recommended for higher grade samples to determine in coarse free gold is present within the deposit.

Figure 11.13. Q-Q plot of Firesteel Resources 2018 RC field duplicate gold results.



Source: APEX (2025)

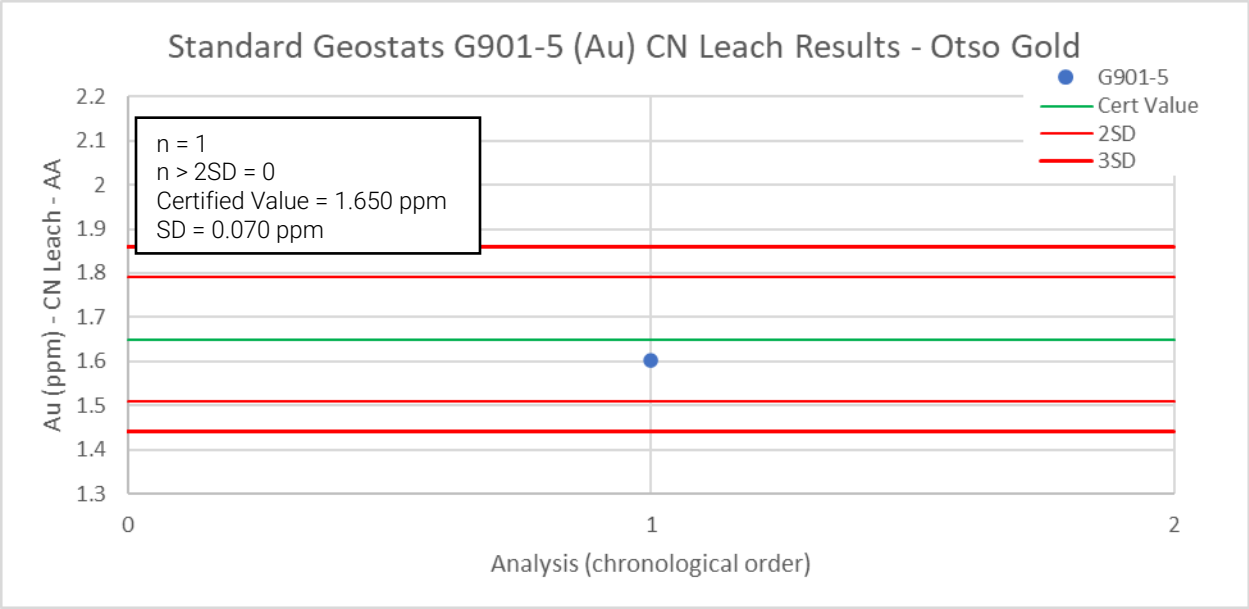
11.3.3 Otso Gold Historical Drilling (2019 to 2021)

11.3.3.1 Standards (Certified Reference Materials)

CRMs were inserted into the sample stream by Otso Gold to verify the overall analytical precision and accuracy of assay results. A total of 3 samples of 2 different non-blank CRMs (G901-5 and G913-9) were randomly inserted into the sample stream of three RC grade control drillholes in 2021. No QA-QC data was provided to the Authors for the diamond drilling program. CRMs were purchased from Geostats Pty in O'Connor, Western Australia, a commercial supplier of CRMs. The certified value and tolerance intervals of each standard used in Otso Gold's 2021 RC drilling program at the Laiva Gold Project are presented above in Table 11.3.

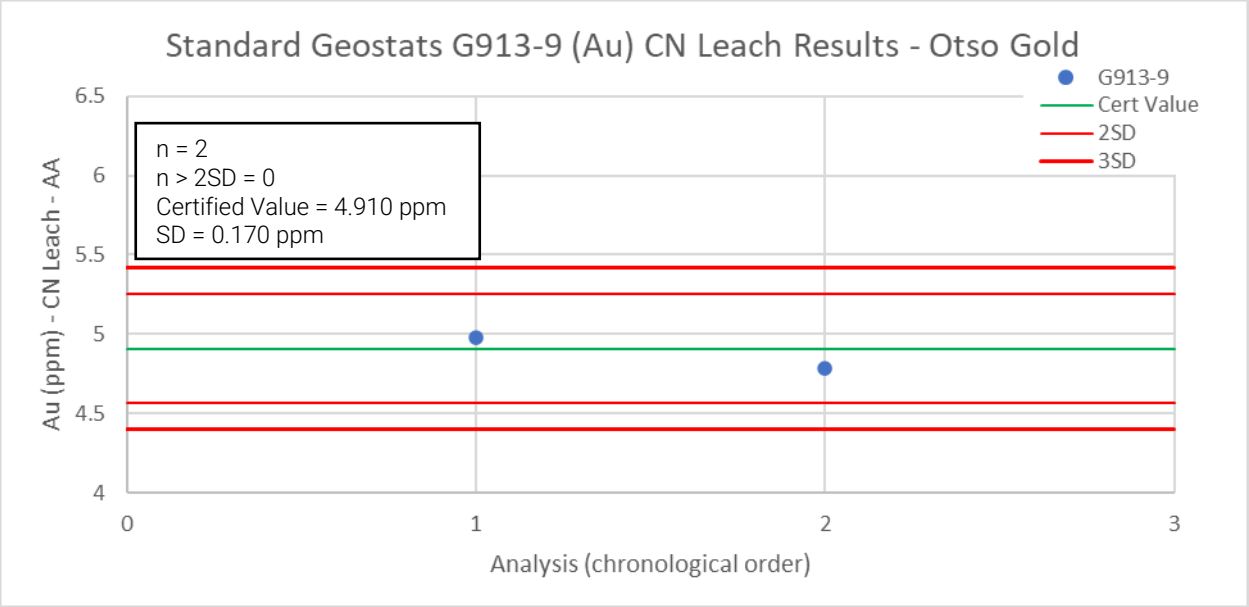
The CRMs were certified for analysis via 50 g fire assay; however, were analysed using CN leach at CRS. No blank pulps were inserted. A total of one G901-5 and two G913-9 CRMs were analyzed in the program. All results returned within the 2 standard deviation (SD) error tolerance (Figures 11.14 and 11.15). Though all results are within the tolerance, the low quantity of inserted CRMs does not allow for proper validation. In addition, the Company should ensure that any CRMs used are certified for the same analytical method employed for sample analysis.

Figure 11.14. Geostats G901-5 gold results, Otso Gold 2021 RC grade control drilling program.



Source: APEX (2025)

Figure 11.15. Geostats G913-9 gold results, Otso Gold 2021 RC grade control drilling program.



Source: APEX (2025)

11.3.3.2 Coarse Blanks

The source of the coarse blank material used by Otso Gold is unknown to the Author. The weight and the gold content of the coarse blank material is also unknown. A total of 3 coarse blank samples were inserted in the sample stream of 3 holes drilled during the 2021 RC grade control drill campaign. All coarse blank

analyses returned values below the detection limit. No QA-QC data was provided to the Authors for the diamond drilling program.

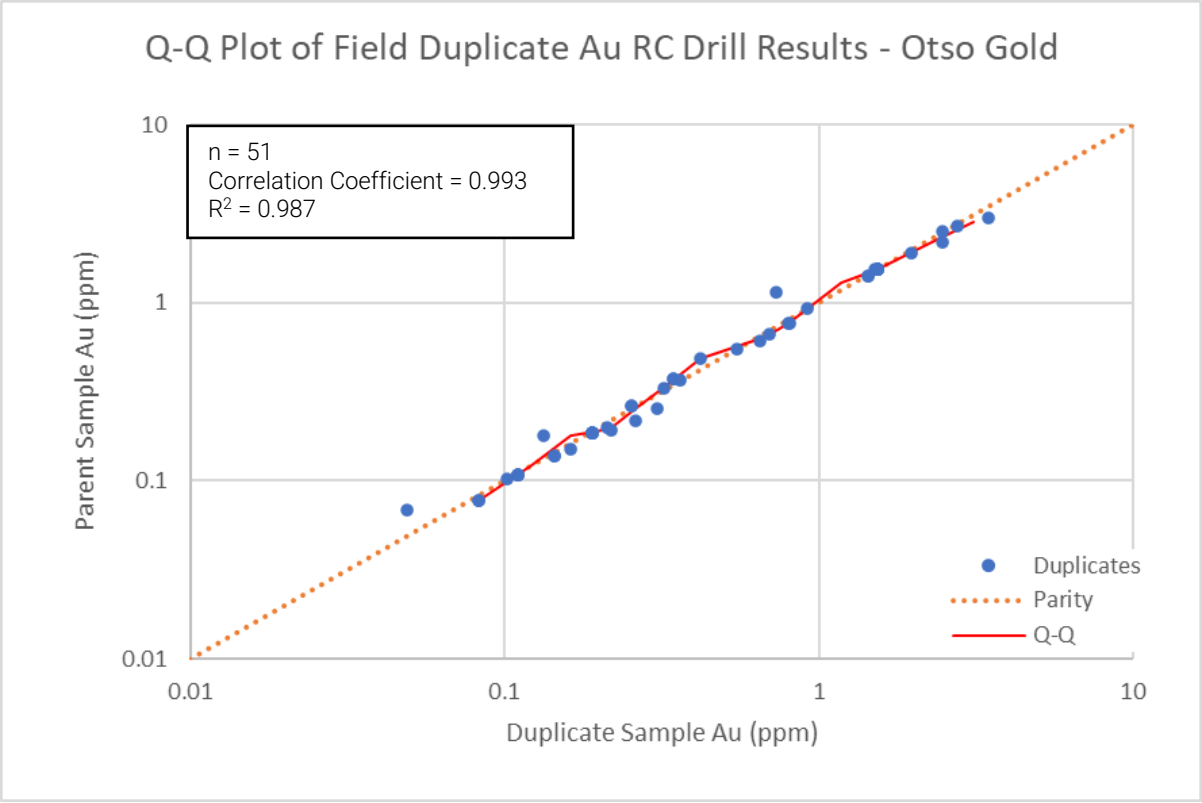
11.3.3.3 Duplicate

Duplicate samples were collected by Otso Gold to assess the repeatability of individual analytical values.

A total of 51 field duplicate samples were submitted to CRS along with RC samples collected during the 2021 RC grade control drill campaign. No QA-QC data was provided to the Authors for the diamond drilling program. Duplicate gold assay results were compared to their parent samples. In general, the parent and duplicate assay results display good correlation (Figure 11.16). The correlation coefficient for parent-duplicate analyses is 0.987.

There is not a significant difference in the low grade and higher-grade variability, and there is no significant bias in the duplicate results between the parent and duplicate samples. Though visible gold has not been reported in the geological logs, no high grade sample duplicates (> 2 ppm Au), where nuggety gold would be expected, have been analyzed. A metallic screen fire assay campaign would provide further insight into the proportion and location of coarse gold within the deposit.

Figure 11.16. Q-Q plot of Otso Gold 2021 RC field duplicate gold results.



Source: APEX (2025)

11.4 Adequacy of Sample Collection, Preparation, Security and Analytical Procedures

In the opinion of the Author of this Report, there were no issues with respect to the sample collection methodology, sample security, sample preparation or sample analyses in any of the exploration programs completed at the Property from 2005 to 2021. Additionally, the Author considers the results of the QA-QC analyses for the historical drilling at the Laiva Gold Project acceptable for use in this Report; however, several areas of concern were identified during review of the QA-QC data as summarized below.

The QA-QC program implemented by previous operators of Nordic has some deficiencies in that blind, external blanks and CRM were not added to the sample stream, and sample batches of variable sizes were dispatched. Further, the selection, frequency, and location within a batch of samples for, laboratory blanks, CRM and pulp duplicate samples were determined by the laboratory and not Nordic. The result is that duplicate samples were not routinely taken of mineralized samples and blank samples were not inserted following suspected elevated gold mineralized samples. In addition, the field duplicate samples selected from half cut drill core were of a very low grade (average 0.19 g/t gold from 52 samples) and therefore the results are of limited use in characterizing the mineralization.

Regarding the Firesteel Resources and Otso Gold CRM analyses, although the results are acceptable, the Author notes that the CRMs utilized were certified for 50 g fire assay, not the CN leach method that they were analysed with. The Company should ensure that any CRMs used are certified for the same analytical method employed for sample analysis. In addition, a large portion of the standards utilized in these sample programs consisted of sample populations ranging from 1 to 5 samples which reduces the reliability of the data analysis. To address these issues, the Author recommends standardizing and reducing the number of different CRMs inserted into the sample stream, as well as reviewing calibration procedures, and increasing sample populations to improve statistical robustness of the data.

Overall, data related to the use of control samples during historical sampling programs is limited and no QA-QC data was available for Otso Gold's diamond drilling programs. The following recommendations are proposed for future exploration at the Laiva Gold Project to enhance the accuracy and reliability of future QA-QC procedures.

For each 40-sample batch of drill core or RC chips, it is recommended to include the following control samples:

- 4 CRM samples (10%), with one being a blank pulp.
- 1 Coarse blank (~2.5%).
- 1 Field duplicate (~2.5%).

Adding operator-inserted field duplicates is recommended at a rate of 1 per 40-sample batch. In core sampling, field duplicates help evaluate the nugget effect, while in RC sampling, they assess both the homogeneity of the sampling procedure and the nugget effect. Both approaches assist in detecting carry-over contamination during the initial stage of laboratory sample preparation.

Coarse blanks should be inserted after the sample believed to have the highest potential for mineralization to test for carry-over contamination during the initial stage of laboratory sample preparation.

Standardizing the CRM selection and utilizing fewer high-quality CRMs to improve continuity and increase sample populations ensures a more accurate trend analysis.

12 Data Verification

12.1 Data Verification Procedures

The Laiva Gold Project has been a site of numerous exploration programs since the 1980's. As such, a portion of the geological data on the Property has been developed and some of the data and information related to the geology and mineralization at the Property is historical in nature and was collected prior to the adoption of NI 43-101.

APEX, under the direct supervision of the QP, conducted data verification on the following historical information and data:

- Historical IP and magnetic geophysical surveys, including the review and examination of geophysical reports in comparison to digital imagery provided by the Company. No discrepancies were identified.
- Boulder and till geochemical sampling, including the verification of the database in comparison to publicly available data records downloaded from the GTK website. No discrepancies were identified.
- Historical drillhole data, including assay analytical results, laboratory certificates, downhole survey data, and collar locations.

Data verification of historical drilling data included compiling all digital drilling data from previous operators into Excel spreadsheets. The compilation included collar coordinates, downhole survey information, geological interval data, and assay data. APEX personnel, under the supervision of the QP, completed data analysis on the drilling data using the Micromine database verification tools. Error output files from the database processing included errors related to collar, assay, and survey data. A few minor errors were corrected in the database during this process and a few drillholes were removed from the database due to missing information. Laboratory certificates were provided for the Otso 2021 drilling program and no discrepancies, neither differences in values nor omissions, were observed.

Overall, the database is considered to be accurate and acceptable for resource estimation and mining given the current data at hand.

12.2 Qualified Person Site Inspections

12.2.1 Site Inspection March 2025

Mr. Michael B. Dufresne, M.Sc., P. Geol., P. Geo., President of APEX and a Qualified Person, completed a site inspection of the Laiva Gold Project on behalf of the Company and Edgemont on March 15th and 16th, 2025. The site inspection comprised a tour of the Property, including inspection of the open pits, a tour of the on-site processing plant and laboratory, and review of historical drill core to verify the reported geology and mineralization.

Observations from Mr. Dufresne's site visits verify the reported geology and mineralization in historical drill core. Rock types, alteration, and mineralization observed while touring the Property are consistent with the reported geology and historical exploration results. In addition, Mr. Dufresne verified the mining infrastructure utilized in historical production. The mining infrastructure observed is consistent with reported historical production.

12.2.2 Previous Site Inspections

Mr. Sparks has visited the Property on several occasions on behalf of previous operators from March 15th to 16th, 2017, to August 27th to September 7th, 2021, with his most recent visit occurring from May 17th to July 3rd, 2025. Mr. Sparks' most recent site inspection was on behalf of the Company and Edgemont. The site visits comprised a tour of the Property, including review of historical drill core to verify reported geology and mineralization, and verification of drill collar locations. In addition, Mr. Sparks toured the mining operation office, processing plant, and analytical laboratory, all related infrastructure, and observed active mining and mineral processing to verify the mining methods, equipment, and infrastructure utilized in the production process.

12.3 Validation Limitations

The largest validation limitation for historical surface sampling is the lack of original data including but not limited to assay certificates. However, based on the Property inspections, verification sampling, and data review, the Author has no reason to doubt the reported geology, exploration, and historical production results.

12.4 Adequacy of the Data

The Author has reviewed the adequacy of the exploration and mining information and the Property's physical, visual, and geological characteristics. No significant issues or inconsistencies were discovered that would call into question the validity of the data. In the opinion of the Author, the Property data is adequate and suitable for use in this Report, including the MRE in Section 14.

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13 Mineral Processing and Metallurgical Testing

The Issuer has yet to conduct mineral processing and/or metallurgical testing at the Laiva Gold Project.

Mineralized material produced from the Laiva Gold Project has historically been processed at the Laiva Gold Mine Process facilities (the "Laiva processing plant"), located within the Property. The Laiva processing plant was constructed in 2011 by Metso Minerals in conjunction with Outotec. Nordic Mines operated the plant from the commission date to the end of March 2014. The mill production rate during this period averaged approximately 210 mtph verses the design rate of 250 mtph. The ground mineralized material particle size ranged from P_{80} 110 µm to 130 µm versus a design particle size of P80 75 µm.

Nordic Gold completed a mill refurbishment in October 2018 and operated the plant for four months to March 2019. In late September 2021, Otso Gold restarted the Laiva processing plant and operated the plant until February 2022.

The mineral processing plant is located approximately 1 km northeast from the South and North open pits on the Property site. The processing plant comprises a multi- stage crushing circuit, grinding mills, a 3 Mw installed power mill, flash flotation, gravity and regrind circuits, high grade and low grade carbon-in-leach (CIL) circuits, carbon stripping, and a gold room. Tailings are sent to either a high grade or low grade tailings storage facilities as warranted. The low grade dam is situated approximately 7.5 km from the plant where it is processed through a thickener (Otso Gold, 2021).

A summary of historical production at the Laiva Gold Project is provided in Table 13.1.

Table 13.1 Historical production summary, Laiva Gold Project.

Time Period	Average Monthly Tonnes	Total Tonnes	Average Gold Head Grade (g/t)	Average Gold Recovery	Average Monthly Gold Production (Troy Ounces)	Total Gold Production (Troy Ounces)	Operator and Comments
February 2012 to February 2013 (13 months)	90,441	1,175,739	0.94	79.9%	2,194	28,521	Nordic: Initial low production due to longer than expected plant commissioning.
March 2013 to June 2013 (4 months)	140,220	560,879	1.04	86.5%	4,062	16,250	Nordic: Steady state production.
July 2013 to March 2014 (9 months)	137,414	1,236,730	0.72	81.5%	2,594	23,345	Nordic: Production from low-grade stockpile.
Total Nordic (26 months)	122,692	2,973,348	0.88	81.5%	2,950	68,116	-
November 2018 to March	102,400	512,001	0.89	85.0%	2,500	12,502	Firesteel Resources and Nordic Gold Inc: Low production

Time Period	Average Monthly Tonnes	Total Tonnes	Average Gold Head Grade (g/t)	Average Gold Recovery	Average Monthly Gold Production (Troy Ounces)	Total Gold Production (Troy Ounces)	Operator and Comments
2019 (5 months)							due operational stoppages.
October 2021 to February 2022 (5 months)	108,168	540,839	0.84	74.5%	1,757	8,787	Otso Gold: Low production due to operational stoppages.
Total all operators (36 months)	111,839	4,026,189	0.85	81.2%	2,483	89,405	-

Source: APEX (2025)

13.1 Otso Gold Historical Mineral Processing and Metallurgical Testing

All relevant historical mineral processing and metallurgical testing data and information for the Laiva Gold Project is discussed below, as sourced from Shoemaker and Sparks (2021). Based on the review of the available literature and data, the Author takes responsibility for the information herein.

13.1.1 Historical Otso Gold Comminution Test Work

Large bulk samples were collected by Otso Gold project geologists for gold comminution testwork. Samples were collected for the two primary rock types, quartz diorite and mafic volcanics. Together, these two rock types make up approximately 90% of the current resource. The testwork included:

- Rod mill bond work index.
- Ball mill work index.
- JK drop test.

Based on the results of an evaluation of the 2021 comminution testwork and all available historical operating information, the calculated mill circuit maximum production rate is 2.0 mtpy with a target mill final product particle size of P_{80} 100 µm.

The calculated power draws for the two primary mineralized material types at key production rate increments are:

1.5 MTPY Throughput

- P_{80}=100 µm for 8,000 hours at 187.5 mtph.
- Power draw metavolcanic rock type (MV) per JK drop test 12.3 kW/mt or 2,306 kW required in AG Mill.

- Power draw for quartz diorite rock type (QD) per JK drop test 11.4 kW/mt or 2,137 kW required in AG Mill.

1.75 MTPY Throughput

- P_{80}=100 µm for 8,000 hours at 218.75 mtph.
- Power for MV per JK drop test 12.3 kW/mt or 2,690 Kw required in AG Mill.
- Power draw for QD per JK drop test 11.4 kW/mt or 2,493 Kw required in AG Mill.

2.0 MTPY Throughput

- P_{80}=100 µm for 8,000 hours at 250.0 mtph.
- Power for MV per JK drop test 12.3 kW/mt or 3,074 Kw required in AG Mill.
- Power draw for QD per JK drop test 11.4 kW/mt or 2,849 Kw required in AG Mill.

The historical production rates for the approximate 14-month operating period were:

- Primary grind particle size of P80 110 - 130 µm at 210 tonnes per hour.
- The calculated Bond Rod Mill Work Index was 20.5 kWh/tonne.
- The mill was typically operated at 210-240 mtph with an AG mill power draw 2,650- 2,988 kW and with a Pebble Mill power of 2,826-2,975 kW.
- Total available average power 5,476 kw to 5,963 kw between the two mills.

The results of the 2021 work index test work are as follows:

- Sample MV Bond Rod Mill Work Index: 13.41 kWh/tonne.
- Sample MV Bond Ball Mill Work Index: 14.92 kWh/tonne.
- Sample QD Bond Rod Mill Work Index: 14.88 kWh/tonne.
- Sample QD Bond Ball Mill Work Index: 17.23 kWh/tonne.

Previous power draw calculations were based upon back calculations to an operating WI of 18.1 kilowatt-hour per tonne (kWh/tonne).

13.1.2 Historical Otso Gold Metallurgical Test Work 2021

A laboratory scale metallurgical test program was completed to evaluate the Laiva Gold Project treatment flow sheet utilized in the existing treatment plant. The test program was completed by Resource Development Inc. (RDi) located in Wheat Ridge, Colorado.

The RDi test program included evaluation of the plant unit operations utilizing a quartz diorite composite sample with a gold grade similar to the estimated gold grade for the plant feed. The test program included the testing of flash flotation at P_{80} 1.5 mm and gravity concentration followed by tailings cyanidation at P_{80} 75 µm and P_{80} 105 µm.

The primary purpose of the test program was to develop process design criteria for minor, but important revisions to the existing treatment plant.

13.1.2.1 Sample Description

The primary mineralized material zone rock type is quartz diorite. It was also determined that the gold bearing mineral components of the second largest rock type, metavolcanic, are similar to those found in quartz diorite. A quartz diorite composite sample was selected for the metallurgical test work designed to evaluate the plant flow sheet.

Composites were selected to ensure that the samples would be representative of the quartz diorite zones of the mineralized zones. Individual drillhole sample splits were blended to produce the composite samples. The individual drillhole samples that had been crushed to a particle size of approximately P_{80} 1.5 mm were thoroughly blended from reject splits remaining from samples submitted for assay. The entire remaining quantity of the P_{80} 1.5 mm reject from each selected drill hole sample were shipped to RDi for compositing.

13.1.2.2 Head Analyses

Duplicate splits of the quartz diorite were analyzed for determination of sample variability. Analysis of the two splits included:

- Fire assay for gold and silver
- Multi-element ICP
- Sulfur speciation

A single split of the quartz diorite composite was then submitted for mineralogical analyses that included:

- X-Ray Fluorescense (XRF) and X-Ray Diffraction (XRD).
- Optical mineralogy.

13.1.2.3 Chemical Analysis

A summary of the results from the chemical analytical procedures for the two splits are presented in Table 13.2.

Table 13.2. Head analyses of quartz diorite average grade composite sample.

Element	Quartz Diorite Average Grade Split A	Quartz Diorite Average Grade Split B
Au (g/t)	1.678 Original / 1.678 Duplicate	1.515 Original / 1.517 Duplicate
Ag (g/t)	0.4 Original / 0.2 Duplicate	0.5 Original / Duplicate
Sulphide S (%)	0.03	0.03
Sulfate S (%)	0.02	0.03
Total S (%)	0.05	0.06
Al (%)	6.78	6.64
Ca (%)	3.62	3.64
Fe (%)	4.95	5.11
K (%)	1.95	1.97
Mg (%)	2.53	2.57
Na (%)	2.11	2.11

Element	Quartz Diorite Average Grade Split A	Quartz Diorite Average Grade Split B
P (%)	0.25	0.25
Ti (%)	0.29	0.30
As (ppm)	573	640
Ba (ppm)	375	378
Be (ppm)	< 2	<2
Bi (ppm)	< 2	< 2
Cd (ppm)	6	6
Co (ppm)	22	23
Cr (ppm)	204	193
Cu (ppm)	60	62
Hg (ppm)	0.77	0.69
La (ppm)	11	12
Li (ppm)	56	58
Mn (ppm)	629	639
Mo (ppm)	2	< 1
Ni (ppm)	18	18
Pb (ppm)	13	< 10
Sb (ppm)	< 2	< 2
Sc (ppm)	19	20
Se (ppm)	< 5	< 5
Sn (ppm)	< 10	< 10
Sr (ppm)	308	311
Ta (ppm)	< 10	< 10
Te (ppm)	10	10
Tl (ppm)	< 10	< 10
U (ppm)	< 10	<10
V (ppm)	143	145
W (ppm)	86	112
Zn (ppm)	67	55

Source: Shoemaker and Sparks (2021)

The results indicate that:

- Both samples had gold head grades similar to the average grade of the high-grade portion of the reserve.
- The gold grades of the two samples varied by about 10% which confirms the previously reported variability of gold grade within a given rock type.
- The silver grades of the two samples varied considerably but are considered to be insignificant since silver grades are so low.
- The sulphide sulfur contents of the two samples were low indicating that the majority of minerals that make up the flotation and gravity concentrates are not sulphides, however, the test work results

and previous operations, confirm that the gold can be concentrated by flotation and gravity concentration.

13.1.2.4 Design Criteria Test Results

Initial testing of the process flow sheet was completed generally on the average grade quartz diorite composite sample. Two separate runs were completed with seven kg charges. The test procedure consisted of completing flash flotation at P_{80} 1.5 mm to collect approximately 2% of the starting mass into the flotation concentrate for both tests. This was followed by grinding flotation tails to two target particle sizes of P_{80} 100 µm and P_{80} 75 µm.

The ground flotation tails were then subjected to gravity concentration to recover approximately 4% of the starting mass into the gravity concentrate. Duplicate splits from the gravity concentration tailings were then cyanide leached to determine gold extraction (Figure 13.1). The flotation and gravity concentrates were submitted for assay analysis, including XRF/XRD.

The overall results for the float/gravity/cyanidation test program are presented in Table 13.3. The XRD results for flotation and gravity concentrates are presented in Table 13.4.

Table 13.3. Summary of process recovery results for quartz diorite average grade composite.

Sample	Overall Au Recovery (%)	Calculated Head Grade (Au g/mt)	Flotation Concentrate			Gravity Concentrate			Tail Leach	
			Recovery (%)		Grade (Au g/mt)	Recovery (%)		Grade (Au g/mt)	Average Au Extraction (%)	Acerage Residue Grade (Au g/mt)
			Weight	Au		Weight	Au			
P_{80} 100 µm	91.5	1.82	2.3	33.6	25.99	4.2	25.1	10.85	79.4	0.17
P_{80} 75 µm	92.7	2.01	2.0	41.7	42.59	3.7	21.1	11.32	80.2	0.16

Source: Shoemaker and Sparks (2021)

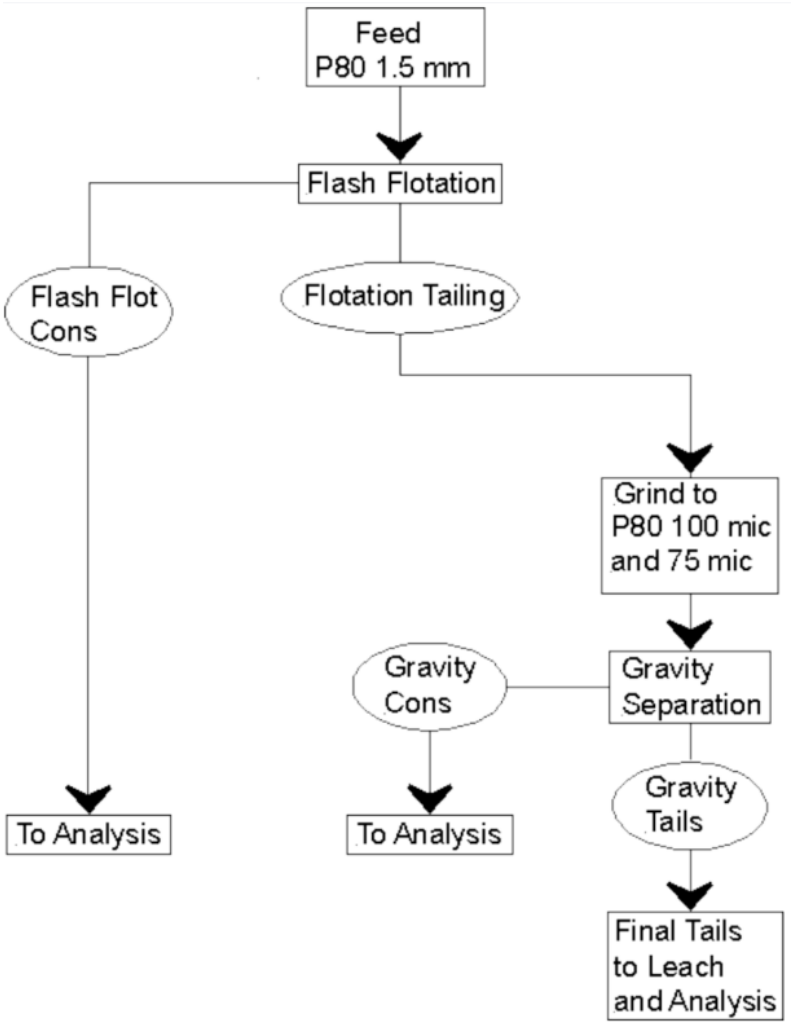
It should be noted that the overall gold recoveries in Table 13.3 are presented only for generation of concentrates and do not include leaching of the concentrates. Therefore, the estimated plant recoveries would include a 0.97 recovery factor for the leaching of the concentrates, which results in estimated overall recovery for the 100 µm sample of 89.7% and 90.8% for the 75 µm samples respectively.

The primary conclusions from these results are listed as follows:

- The 100 µm and 75 µm particle size samples both responded well to flotation concentration, gravity concentration and cyanidation of the concentrate tailings producing tailings grades that are essentially the same for both particle sizes.
- The calculated overall recovery for the 75 micron particle size samples was slightly higher than for the 100 micron sample, however, the 10% higher calculated head grade for the 75 micron sample indicates there could be a small difference in the mineralogy of the two samples or small differences in test work procedures.
- The slightly higher overall gold recovery in the 75 micron sample is not sufficient to modify the primary mill particle grind size from 100 microns.

- The planned next phase of metallurgical test work will include coarser particle sizes including 120 and 150 microns.
- Approximately 60% of the contained gold was recovered into a float/gravity concentrate representing approximately 6% of the weight of the feed for both samples.
- The flotation concentrate contained a higher percentage of the contained gold than the gravity concentrate for both samples.
- Both samples were floated at the same particle size of P_{80} = 1.5 mm; therefore, the higher gold flotation recovery in the 75 µm sample is likely due to differences in the laboratory flotation procedures. Exactly duplicating laboratory flash flotation is difficult, primarily because of the short flotation time period and the many flotation variables.

Figure 13.1. Plant simulation test program flow sheet.



Source: Shoemaker and Sparks (2021)

Table 13.4. Summary of XRD results for flotation and gravity concentrates.

	Weight (%)			
Mineral	Float Concentrate Test 1	Float Concentrate Test 2	Float Concentrate Test 3	Float Concentrate Test 4
Plagioclase	31	27	17	18
Clinoamphibole	35	42	64	66
Mica/Illite	12	17	10	7
Quartz	9	5	< 5	< 5
K-Feldspar	8	< 5	-	-
Chlorite	< 3	5	-	-
Arsenopyrite	< 3	< 2	< 1	-
Ilmenite	-	-	< 2	< 2
Apatite	-	-	< 2	-
Unidentified	< 5	< 5	< 5	< 5

Source: Shoemaker and Sparks (2021)

13.1.2.5 Flash Flotation and Gravity Test Results

Two flotation/gravity tests were completed to compare gravity concentration and subsequent concentrate tailings, followed by cyanidation at two particle sizes of P_{80} 75 and 100 µm. Both samples were floated at a particle size of approximately P_{80} 1.5 mm.

The target concentrate quantities were 2% of the feed for flotation and 4% of the feed for gravity concentration for a total concentrate quantity equal to approximately 6% of the feed. These concentration quantities were targeted to match the proposed plant restart concentrate production quantities for flash flotation and gravity concentration. A concentrate production rate equal to 6% of the total plant feed at 158 mtph results in concentrate production of approximately 9.5 mtph. A 158 mtph feed rate in the plant relates to an annual production rate of 1.5 M tonnes per year.

Test One: 1.5 mm/100 µm

A 1.0 kg split of the 1.5 mm quartz diorite composite sample was floated in a laboratory scale Denver 3.2-liter (L) float cell for two minutes with air addition.

Flotation reagent additions were:

- PAX at 14 g/mt of mineralized material.
- 3418A at 14 g/mt of mineralized material.
- AF65 at 6 g/mt of mineralized material.

The flotation tailings were ground in a standard laboratory scale rod mill for 32 minutes. The ground flotation tailings were then fed to a Diester laboratory scale shaking table to recover the gravity concentrate. Results are summarized in Table 13.5.

Table 13.5. Float 1.5 mm/Gravity 100 µm.

Product	Weight (%)	Au (g/t)	Ag (g/t)	Sulphide (%)	As (%)	Au (%) Dist.
Feed calculated	100	1.8	0.2	-	-	100.0
Float concentrate	2.3	26.0	5.9	1.2	1.27	33.6
Gravity concentrate	4.2	10.9	1.8	0.2	0.45	25.1
Tails	93.4	0.8	-	-	-	41.3
Combined concentrate calculated	6.5	16.2	3.3	0.6	0.70	58.7

Source: Shoemaker and Sparks (2021)

Test Two: 1.5 mm/75 µm

A 1.0 kg split of the 1.5 mm quartz diorite composite sample was floated in a laboratory scale Denver 3.2 L float cell for two minutes with air addition.

Flotation reagent additions were:

- PAX at 13 g/mt of mineralized material.
- 3418A at 13 g/mt of mineralized material.
- AF65 at 5 g/mt of mineralized material.

The flotation tailings were ground in a standard laboratory scale rod mill for 44 minutes. The ground flotation tailings were then fed to a laboratory scale Diester shaking table to recover the gravity concentrate. Results are summarized in Table 13.6.

Table 13.6. Float 1.5 mm/Gravity 75 µm.

Product	Weight (%)	Au (g/t)	Ag (g/t)	Sulphide (%)	As (%)	Au (%) Dist.
Feed calculated	100	2.0	0.3	-	-	100
Float concentrate	2.0	42.6	12.9	1.7	1.64	41.7
Gravity concentrate	3.7	11.3	1.9	0.2	0.39	21.1
Tails	94.3	0.8	-	-	-	37.3
Combined concentrate calculated	5.7	22.3	5.8	0.7	0.82	62.8

Source: Shoemaker and Sparks (2021)

The primary conclusions from these test results are:

- Approximately 60% of the contained gold was recovered into a float/gravity concentrate that represented approximately 6% of the weight of the feed.

- The difference in the flotation recoveries for the two splits of the sample confirms the variability of the mineralogy of the mineralized body for a given rock type.

13.1.2.6 Flotation/Gravity Tailings Cyanidation Results

Duplicate splits of the 100 µm and the 75 µm flotation/gravity concentrate tailings samples were cyanide leached in bottle rolls for 96 hours.

The cyanide leach conditions were:

- 40% solids.
- Cyanide solution concentration of 1.0 g/L.
- pH target of 11.0 by lime addition.

100 µm Concentrate Tailings Sample

A summary of the results of the cyanide bottle duplicate tests of the 100 µm concentrate tailings sample are presented in Table 13.7.

Table 13.7. 100 µm concentrate tailings sample results.

Sample	Au Extraction (%)	Calculated Head Au (g/t)	Final Tail Au Assay (g/t)	Cyanide Consumption (kg/t) as NaCN	Lime Added (kg/t) as $Ca(OH)_2$
Duplicate 1	77.5	0.82	0.19	0.122	2.104
Duplicate 2	81.2	0.78	0.15	0.182	2.234

Source: Shoemaker and Sparks (2021)

75 µm Concentrate Tailings Sample

A summary of the results of the cyanide bottle duplicate tests of the 75 µm concentrate tailings sample are presented in Table 13.8.

Table 13.8. 75 µm concentrate tailings sample results.

Sample	Au Extraction (%)	Calculated Head Au (g/t)	Final Tail Au Assay (g/t)	Cyanide Consumption (kg/t) as NaCN	Lime Added (kg/t) as $Ca(OH)_2$
Duplicate 1	80.9	0.79	0.15	0.182	2.234
Duplicate 2	79.5	0.80	0.16	0.122	2.264

Source: Shoemaker and Sparks (2021)

The primary conclusions from these results are:

- The final gold extractions for all four samples were essentially the same at approximately 80%.
- Low tailings grades were achieved for all four samples at approximately 0.15 g/t Au.
- The cyanide consumptions for all four samples were in the low range.

The cyanide leach kinetics for the four final tailings bottle roll tests are present in Table 13.9.

Table 13.9. Cyanide leach kinetics for the four final tailings bottle roll tests.

Au Extraction (%)	100 µm Duplicate 1	100 µm Duplicate 2	75 µm Duplicate 1	75 µm Duplicate 2
6 hours	67.2	72.3	73.8	72.8
24 hours	75.6	79.2	80.7	77.6
48 hours	76.8	78.6	80.1	78.7
72 hours	78.0	81.7	81.4	78.2
96 hours	77.5	81.2	80.9	79.5

Source: Shoemaker and Sparks (2021)

13.1.2.7 Mineralogical Analyses Results

The results of the mineralogical analyses for the quartz diorite metallurgical composite are presented below.

The mineralogical analysis was completed by DCM Science Laboratory located in Wheat Ridge, Colorado. Analysis consisted of microscopic evaluation of a prepared thin section of a split of the quartz diorite composite sample.

The mineralogical analysis indicate that the major mineralogy comprises amphibole (25%), plagioclase (25%), quartz (20%), biotite (10%), muscovite/sericite (4%), and sphene (1%). Trace mineralogy comprises apatite, chlorite, zircon, epidote, pyrite, marcasite, chalcopyrite, calcite, pyrrhotite, and gold.

In thin section this material represents granitic rock fragments primarily composed of hard silicates. Dark green to light brown hornblende is the primary mineral and occurs as subhedral to euhedral prisms up to 500 µm in size.

The amphibole is commonly associated with euhedral books of biotite/muscovite, anhedral grains of sphene and small grains of zircon. Some of the amphibole shows light chloritization along cleavage planes and grain boundaries.

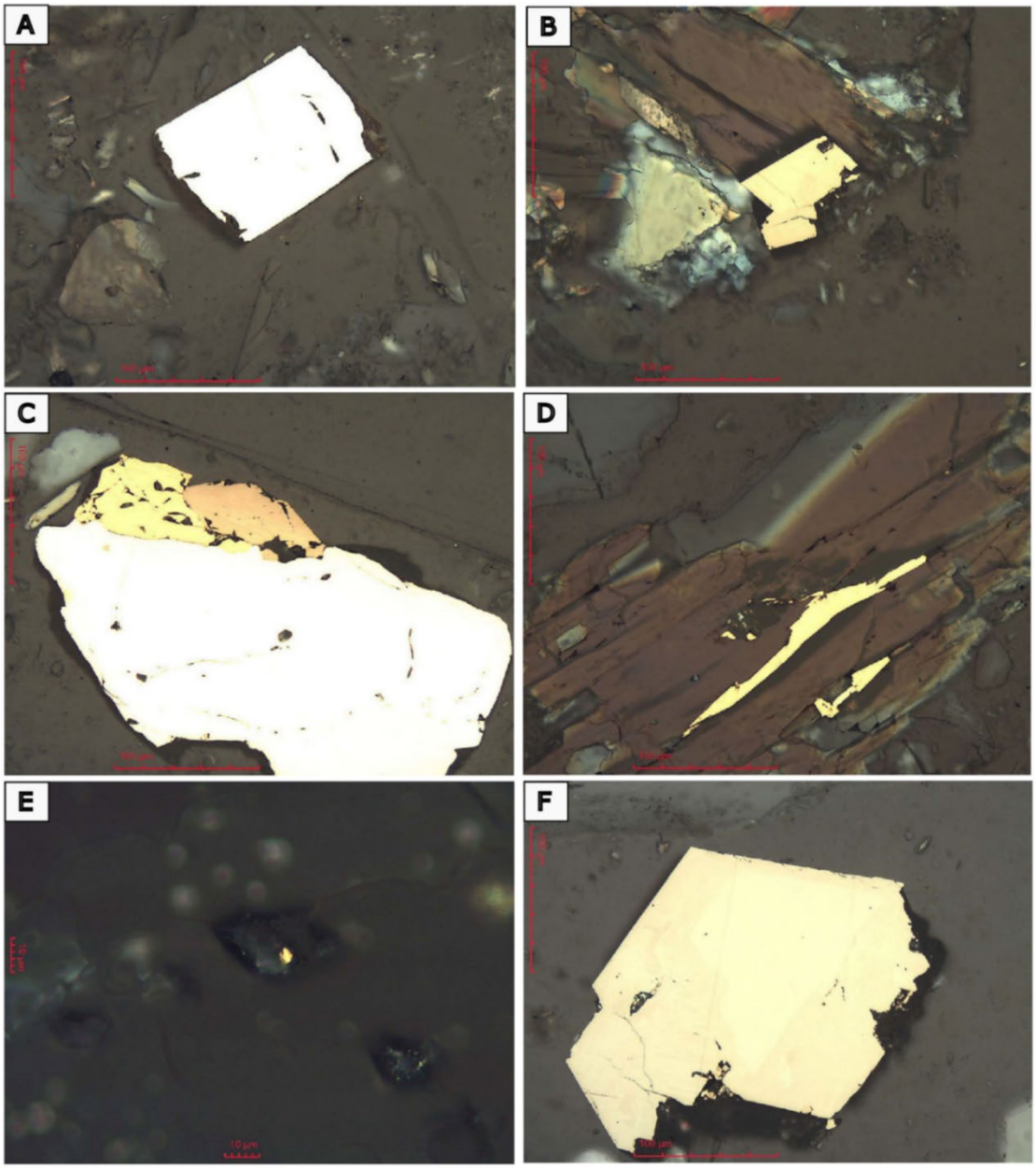
Plagioclase with a bulk composition of albite/oligoclase is the dominant feldspar and occurs as subhedral to euhedral grains with a size variation of 50 µm to approximately 450 µm. Many grains show light to moderate sericitization. The plagioclase is often associated with anomalous blue colored grains of epidote and occasional inclusions of secondary calcite. Late-stage grid twinned microcline is present in significant amounts and occurs as interstitial anhedral grains up to 200 µm in size. The potassium feldspar shows no weathering and is water clear.

Quartz is well represented and occurs as mosaic aggregates and large liberated fragments that appear to have originated from vein quartz. Quartz grain size varies greatly from 2 µm to over 1 mm. Larger grains commonly carry small inclusions of sulphides.

Collectively sulphide mineralogy accounts for approximately 1% of the sample's mass and is represented by several types. Arsenopyrite is the dominant type and occurs as anhedral to euhedral rhomb shaped grains that vary in size from 1 µm to 200 µm. Pyrite is present in slightly lesser amounts and generally occurs as

anhedral grains up to 200 µm in size. Larger grains commonly carry small inclusions/attachments of marcasite, chalcopyrite and rare pyrrhotite. Chalcopyrite and pyrrhotite also occur as inclusions in some silicates with a grain size up to 75 µm. Although a small population of pyrite shows minor oxidation, the sulphides are generally alteration free. An extensive search under high magnification identified one grain of gold. The gold occurs as a minute, rounded grain in coarse quartz with a grain size measurement of approximately 4 µm. Examples of the most pertinent mineralogical components of the quartz diorite sample are shown in the following micrographs in Figure 13.2.

Figure 13.2. Sample No. Laiva Quartz Diorite Avg. (A) Cubic pyrlte at 200X. (B) Rhomb shaped arsenopyrite with amphibole and quartz at 200X. (C) Pyrite in contact with chalcopyrite and phyrrotite at 200X. (D) Chalcopyrite along cleavage planes in amphibole at 200X. (E) Free gold inclusion in quartz crystal at 500X. (F) Subhedral crystal of arsenopyrite at 200X. All pictures under reflected light.



Source: Modified from Shoemaker and Sparks (2021)

A summary of the XRD and XRF analyses of the single split is presented in Table 13.10 and 13.11.

Table 13.10. Summary of XRD results for quartz diorite average grade composite.

Mineral	Formula	Weight (%)
Plagioclase	$(Na,Ca)Al(Si,Al)_3O_8$	37
Clinoamphibole	$(Na,K)(Ca,Na)_2)(Mg,Fe,Al,)_5\,(Si,Al)_8O_{22}(OH,F)_2$	30
Quartz	SiO_2	12
K-Feldspar	$KAlSi_2O_8$	10
Mica/Illite	$(K,Na,Ca)(Al,Mg,Fe)_2(Si,Al)_4O_{10}(OH,F)_2$	8
Unidentified	-	< 5

Source: Shoemaker and Sparks (2021)

Table 13.11. XRF results for quartz diorite average grade composite.

Element	Weight (%)
Na_2O	3.12
MgO	4.29
Al_2O_3	13.1
SiO_2	59.5
P_2O_5	0.18
S	0.06
Cl	< 0.02
K_2O	2.49
CaO	6.09
TiO_2	0.48
MnO	0.10
Fe_2O_3	6.80
BaO	0.04
Element	**ppm**
As	423
U	< 10
Th	< 10
Nb	< 10
Co	< 10

Cr	204
Cu	56
Sn	< 20
Mo	< 10
Ni	13
Pb	< 10
Sr	334
V	146
W	67
Zn	47
Zr	86
Rb	77
Y	18

Source: Shoemaker and Sparks (2021)

The XRF and XRD analyses of the quartz diorite sample confirm the mineralogical composition as compared to mineralogical speciation completed during field sample logging of individual drill samples and the optical mineralogical analysis of the metallurgical composite quartz diorite sample utilized for the RDi metallurgical test program.

13.2 Endomines Historical Mineral Processing and Metallurgical Testing

A preliminary metallurgical test program was completed utilizing a high-grade gold Laiva Gold Project sample from Endomines. The preliminary test program was completed at the Technical Research Centre of Finland Mineral Processing facilities in October and November 1997.

Gold grade in the sample tested was 7.7 g/t. Arsenic and copper content were 0.26 weight % (wt%) and 0.02 wt% respectively. The main sulphides contained in the samples were arsenopyrite, pyrrhotite, chalcopyrite, and loellingite.

Gold was observed to occur as inclusions within arsenopyrite and loellingite. The largest gold grains ranged from 30 – 400 µm but the majority were less 10 µm. Minor gold occurred in silicates.

The mineralized material was found to be amenable to direct cyanidation with a gold extraction of 85% at a P_{80} = 75 µm after 24 hours of cyanide leaching in a stirred reactor. The reported cyanide and lime consumptions were both in the low range with a cyanide consumption of 0.5 kg/t and lime consumption of 1.3 kg/t.

Work Index determined by Mergan ball mill grinding was 15.3 kWh/h at a grind size of P_{80} = 60 µm.

Standard bulk flotation tests were completed on the high-grade sample. The sample was found to be amenable to flotation with a gold recovery of 85.4% into a concentrate that represented 3.2% of the mass of the feed sample.

13.3 Nordic Historical Mineral Processing and Metallurgical Testing

Pilot scale test work on bulk samples collected by Nordic was conducted in October and November 2007 at GTK/Mineral Processing, Outokumpu. The main objective of the test work was to define design criteria for AG milling and methods for processing mineralization by gravity concentration followed by cyanide leaching, and possibly flotation.

Pilot plant test work was performed at GTK's pilot plant in Outokumpu between 12 October and 16 November 2007. The pilot plant operation consisted of the following process stages:

- Crushing and homogenization of the samples
- Two-stage AG milling
- Gravity separation
- Fine flotation
- Thickening the produced process products for further leaching tests
- Bench-scale cyanide leach tests on selected products of the pilot plant
- Gravity separation
- Fine flotation
- Thickening the produced process products for further leaching tests
- Bench-scale cyanide leaching tests on selected products of the pilot plant

13.3.1 Bulk Samples

Three bulk samples were collected by Nordic in 2007 for the pilot scale test work. The samples were all located in Domain 2 in the North Pit and were collected from blasted rock in the base of the pit. Sample descriptions are given in Table 13.12.

Table 13.12. Nordic's bulk sample descriptions.

Sample ID	Host Rock	Weight (tonnes)	Head Grade			
			Au (g/t)	As (%)	Cu (%)	S (%)
Type A	Metavolcanic	110	1.37	0.046	0.016	0.215
Type B	Quartz Diorite – Sulphide Poor	300	2.69	0.022	0.018	0.113
Type D	Quartz Diorite – Sulphide Rich	340	1.17	0.054	0.009	0.183

Source: Shoemaker and Sparks (2021)

It should be noted that Types B and D were described as sulphide poor and sulphide rich, respectively; however, the analytical results do not indicate a significant variance in sulphur content between the two samples. There are no detailed descriptions of the samples; therefore, it is not possible to comment on how the distinction was made between sulphide rich and sulphide poor mineralization types.

13.3.2 Pilot Scale Test Work Results

Results from the pilot scale tests showed that the mineralization could be ground autogenously to the desired fineness P_{80} 75 to 85 µm with an energy consumption of 17 kWh/t to 20 kWh/t. In the tests with Type A mineralization, energy consumption to grind to P_{80} 88 µm was 16.9 kWh/t. In the tests with Type B mineralization, the respective figures were P80 76 µm at 19.7 kWh/t. The majority of the grinding tests were run on Type D mineralization, which averaged P_{80} 87 µm with energy consumption of 19.0 kWh/t.

The principal flow sheet developed for gravity concentration included a Falcon C400 centrifugal separator rougher followed by an LG7 spiral cleaner. The spiral concentrate was a final product and taken out of the circuit, and Falcon tails and spiral tails were combined and further reported to a 150-liter flash flotation cell. From flash flotation, the concentrate was taken out as a final product, and the flash flotation tails reported to the primary classifying cyclone. The cyclone underflow reported into a pebble mill and the overflow reported to fine flotation as gravity tails. Thus, the gravity circuit concentrate, or "high-grade concentrate", consisted of spiral concentrate and flash flotation concentrate.

The final step in the metallurgical test program included evaluation of the cyanide leachability of the high-grade and low-grade samples produced during flotation and gravity concentration testing.

As the high-grade concentrate contained the majority of the recoverable gold, it was vital to achieve maximum gold recovery from it. Two process options were investigated:

- Intensive cyanidation followed by solid liquid separation and Counter Current Decantation (CCD) wash, with direct electrowinning of the gold from the filtrate.
- Intensive CIL cyanidation followed by elution of the loaded carbon and electrowinning.

After a series of pilot bench scale electrowinning tests, it was determined that the very high copper concentrations in the pregnant liquor affected cell performance and the first option was rejected as impractical. The studies were therefore concentrated on the second option.

The final test work focused on re-grinding particle size, oxygen uptake rate, cyanide concentration, mixing and impeller selection, preg-robbing considerations, and pulp density, which were carried out on the high-grade concentrate. The final results from high-grade leach tests are presented in Table 13.13.

Depending on the leach time, gold recovery from 95% to 97% was achieved from the high-grade concentrate. Low grade leach on gravity and flash float tails, confirming test work in December 2008, indicted that a 12 hour (h) reaction time was required and that gold extraction would be in the range 0.5 to 0.6 g/t. Total cyanide consumption was again 0.4 kg/t and lime consumption 0.5 kg/t.

Table 13.14 presents the results of the final low-grade leach tests; after 16-24 h of leaching the residue assay showed a gold grade of 0.15 g/t as it in the beginning of the leach had been 0.73 g/t.

Table 13.13. Extraction data concentrate leach 25% and 40% solids kinetics.

Test ID	Assay Head Au (g/t)	Calculated Head Au (g/t)	Residue Au (g/t)	Extraction Au (%)	NaCN (kg/t)	Lime (kg/t)	O_2 g/m^3	pH	Pulp Density (%w/w)	Precondition (hours)	Leach Time (h)
YR 39	122	112	4.90	95.6	5.2	1.1	21	11.0	25	4	12
YR 40	122	101	5.66	94.4	5.2	1.0	22	11.0	40	4	12
YR 41	122	116	4.37	96.2	7.1	1.2	20	11.1	25	4	24
YR 42	122	104	4.25	95.9	5.9	1.0	22	11.0	40	4	24
YR 43	122	112	3.54	96.8	9.2	1.1	22	11.1	25	4	36
YR 44	122	102	3.63	96.5	8.2	1.1	21	11.2	40	4	36
YR 45	122	116	3.42	97.0	9.6	1.3	33	11.2	25	4	48
YR 46	122	108	3.42	96.8	8.7	1.0	22	11.0	40	4	48

Source: Shoemaker and Sparks (2021)

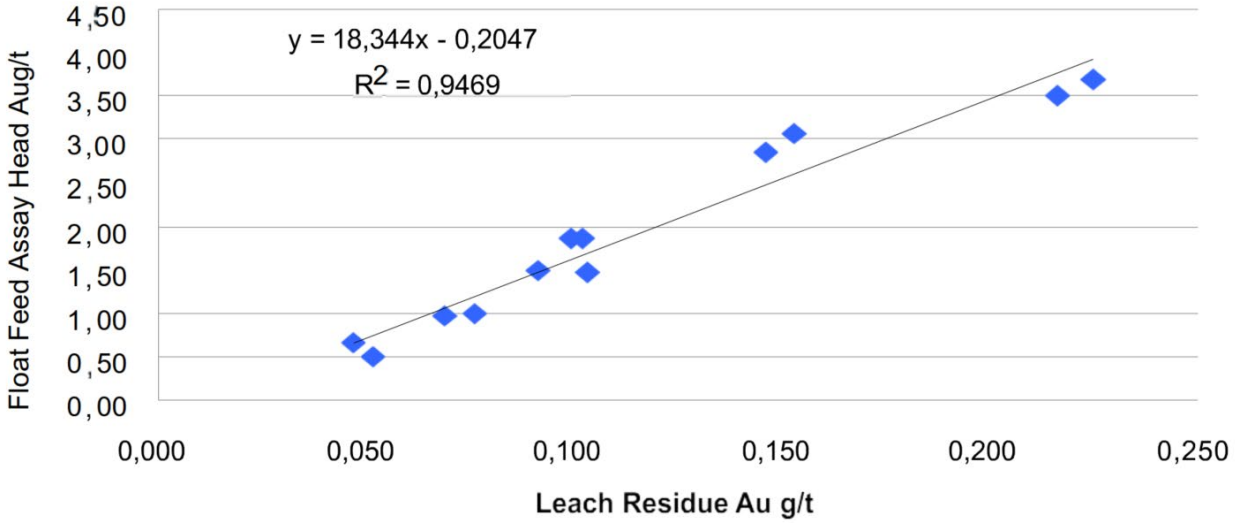
Table 13.14. Results of the final low-grade leach tests.

Test No.	Unit	37	38	39	40	41	42	43	44	Average
Leach Time	h	16	16	16	16	24	24	24	24	-
Liquid Phase	mg/g	814.0	815.0	807.0	809.0	813.0	815.0	806.30	807.0	810.8
Volume	g/t	542.8	543.6	537.7	539.2	542.1	542.9	537.1	538.0	540.4
Solids Mass	-	0.66	0.66	0.72	0.72	0.66	0.66	0.72	0.72	0.69
Head Assay	g/t	0.17	0.17	0.14	0.14	0.14	0.14	0.16	0.16	0.15
Residue Assay	µg/ml	0.39	0.43	0.40	0.39	0.36	0.37	0.38	0.37	0.39
Solution Assay	µg	309.3	350.5	322.8	315.5	292.7	307.6	306.3	298.6	312.1
Gold in solution	µg	89.6	89.7	75.3	75.5	73.2	73.3	85.9	86.1	81.1
Gold in residue	-	-	-	-	-	-	-	-	-	-
Total Gold	µg	398.9	440.1	398.1	391.0	365.9	374.8	392.2	384.7	393.2
Extracted Gold	g/t	0.57	0.64	0.60	0.59	0.54	0.56	0.57	0.56	0.58
Calculated Head	g/t	0.73	0.81	0.74	0.73	0.67	0.69	0.73	0.72	0.73
Calculated Head/Assay Head	g/t	1.11	1.12	1.03	1.01	1.02	1.05	1.01	0.99	0.73

Source: Shoemaker and Sparks (2021)

Specially selected samples were taken covering a target head grade range of 0.5 g/t to 3.5 g/t by approximately 0.5 g/t intervals. Flotation after ball mill grinding and leaching of the flotation tails was carried out. Figure 13.3 below shows the leach tails versus flotation feed grade dependency.

Figure 13.3. Leach residue vs Float Feed Assay Head



Source: Shoemaker and Sparks (2021)

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14 Mineral Resource Estimates

Laiva Gold and Edgemont engaged APEX to conduct an independent review of the 2021 Laiva Gold Project Mineral Resource Estimate (the "2021 Laiva Gold MRE") prepared by John T. Boyd Company (Shoemaker and Sparks, 2021). The following section summarizes the 2021 Laiva Gold MRE for the Laiva Gold Project in Finland. No new geological modeling or drilling has been conducted or considered. However, APEX completed a detailed assessment of the geological and resource model, statistical data, and estimation methodologies to evaluate the accuracy and reliability of the MRE. A new evaluation of reasonable prospects for eventual economic extraction ("RPEEE") was completed, resulting in an updated Mineral Resource Estimate statement (the "2025 Laiva Gold MRE") using revised gold price and mining cost assumptions.

Michael B. Dufresne, M.Sc., P.Geol., P.Geo. is responsible for the following section, which reviews the current MRE for the Laiva Gold Project. Mr. Dufresne was assisted by, and directly supervised, Mr. Warren E. Black, M.Sc., P.Geo., Senior Consultant: Mineral Resources & Geostatistics. Both Mr. Dufresne and Mr. Black are with APEX.

Mr. Dufresne's review found no significant issues with the drillhole database, or the workflow and methodology used by Shoemaker and Sparks (2021). In Mr. Dufresne's opinion, the 2021 Laiva Gold MRE was completed in accordance with the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 29, 2019) and the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 10, 2014). Accordingly, Mr. Dufresne accepts responsibility for the Shoemaker and Sparks (2021) mineral resource block model and with the application of recent economic parameters and a new conceptual pit shell leading to updated RPEEE and MRE, considers the MRE current ("2025 Laiva Gold MRE") and suitable for use as of the Effective Date of this Report (June 4, 2025).

14.1 Review of the 2021 Laiva Gold Project Mineral Resource Estimate

The review was completed using Micromine commercial resource modelling and mine planning software (v.25.0), Resource Modelling Solutions Platform (RMSP; v.1.17.0), and Deswik CAD (v2024.1). The review included investigations of the drillhole database, estimation domains, statistics, block model, and resource calculations.

Laiva Gold provided APEX with the drillhole database, estimation domains, geological model, and the block model used in the 2021 Laiva Gold MRE by Shoemaker and Sparks (2021). The following sections describe the QP's methodology and conclusions from the review of the 2021 Laiva Gold MRE.

14.1.1 Review of Drilling Database

The 2021 Laiva Gold MRE did not consider drilling prior to 2001 or blasthole data due to concerns over reliability. The specific limitation of this data is not discussed. The database used in the current MRE included the exploration data comprised of 625 drillholes and channels representing a combined drilling and channel length of 87,253.00 m. The drilling methods included 425 diamond drillholes (DH), 139 reverse circulation (RC) drillholes, as well as 61 channels (CH). In addition, the 2021 Laiva Gold MRE incorporated grade control drilling, comprising 201 diamond drillholes totaling 6,836.0 m and 2,963 RC holes totaling 66,118.30 m. The grade control holes ranged from 10 to 60 m in length, with most falling within the 20 to 30 m range.

For the purpose of reviewing in situ material, APEX considered only the exploration dataset (625 drillholes and channels) for two main reasons. First, the block model contains minimal estimated values in areas covered by grade control data, as the majority of these blocks have already been mined and are flagged as

'air' with a gold value of zero. Second, the grade control data influence is minimal on the blocks with material gold values, with only 17.9% of blocks within each domains search strategy, representing just 14.5% of the contained metal. Because the "air" blocks are assigned a gold value of zero in the block model, validation cannot be performed in areas where grade control drilling has the most influence. Excluding the grade control data ensures that summary statistics and validation are focused on the exploration dataset, which is the primary input for estimating in situ resources.

Additionally, the drillhole data comprises interval data for assays, lithology, structures, and survey information. No assay records with zero or missing interval lengths were identified. The review of the provided drillhole database indicates that the data is generally well-organized, with minor issues such as duplicate collars and missing azimuth/dip values, which were addressed during validation.

APEX personnel, under the direct supervision of the QP, reviewed the provided data and found no significant issues with the data. There has been no new drilling at the Laiva Gold Project since the 2021 MRE. Mr. Dufresne takes responsibility for the drillhole database and deems that the database used to calculate the 2021 Laiva Gold MRE is well validated and suitable for the mineral resource estimation.

14.1.2 Review of Estimation Domains

APEX reviewed the estimation domains used to constrain the 2021 Laiva Gold MRE block model. The purpose was to establish if the Laiva Gold Project's estimation domains adequately constrain mineralization and reasonably represent the volume and tonnes of mineralized material. Moreover, APEX personnel evaluated the geological data available in the drillhole database and evaluated its relationship versus the constructed estimation domains.

Estimation domains appear to be constructed using implicit modelling and constrain the identified mineralization in the drillholes. Four domains were defined, separated by major faults, with a consistent structural orientation applied within each. APEX imported these domains into Micromine for review, visualizing them in plan and section views. The grade estimation domain descriptions are presented in Table 14.1 and illustrated in Figures 11.1 and 11.2.

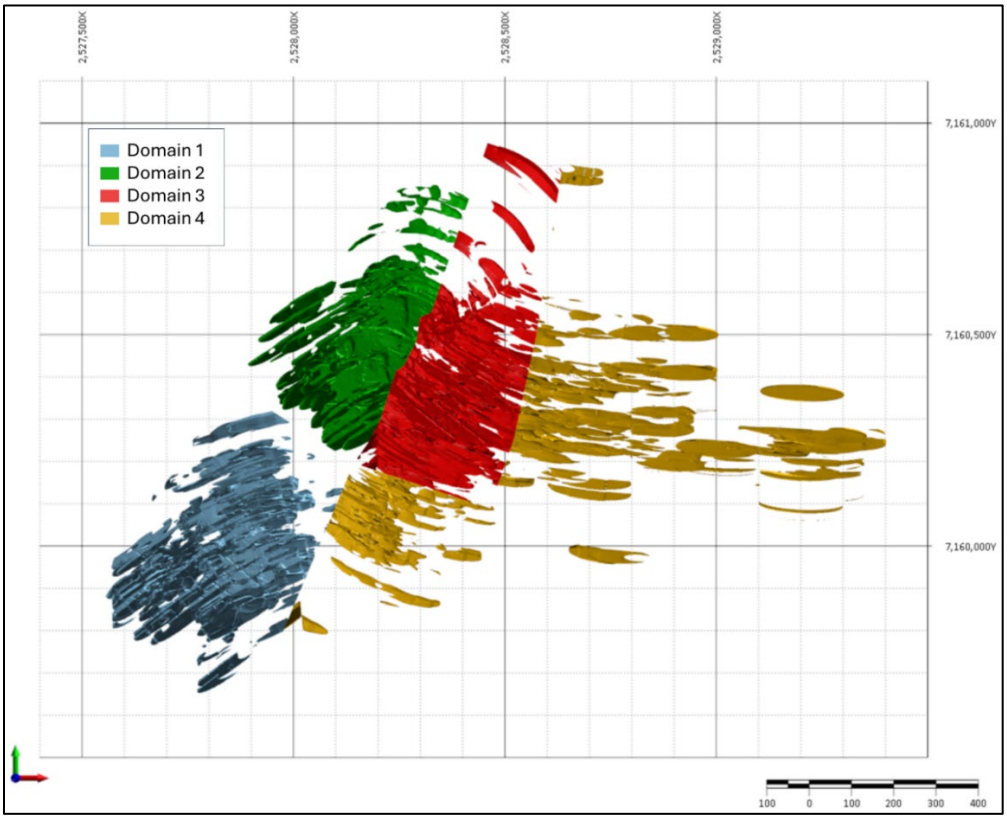
Table 14.1 Grade estimation domain descriptions.

Grade Estimation Domains	Description
Domain 1	Mineralization oriented at an average strike of 76 degrees and -80 degree dip southeast. Located predominantly in the South Pit area west of the Red Shear zone
Domain 2	Mineralization oriented at an average strike of 72 degrees and -80 degree dip southeast. Located in the North Pit area and west of the Red Shear zone.
Domain 3	Mineralization oriented at an average strike of 115 degrees and -80 degree dip south. Located in the North Pit area and west of the Red Shear zone.
Domain 4	Mineralization oriented at an average strike of 95 degrees and -80 degree dip southwest. Located in the North and South Pit areas and east of the Red Shear zone.

Source: modified from Shoemaker and Sparks (2021)

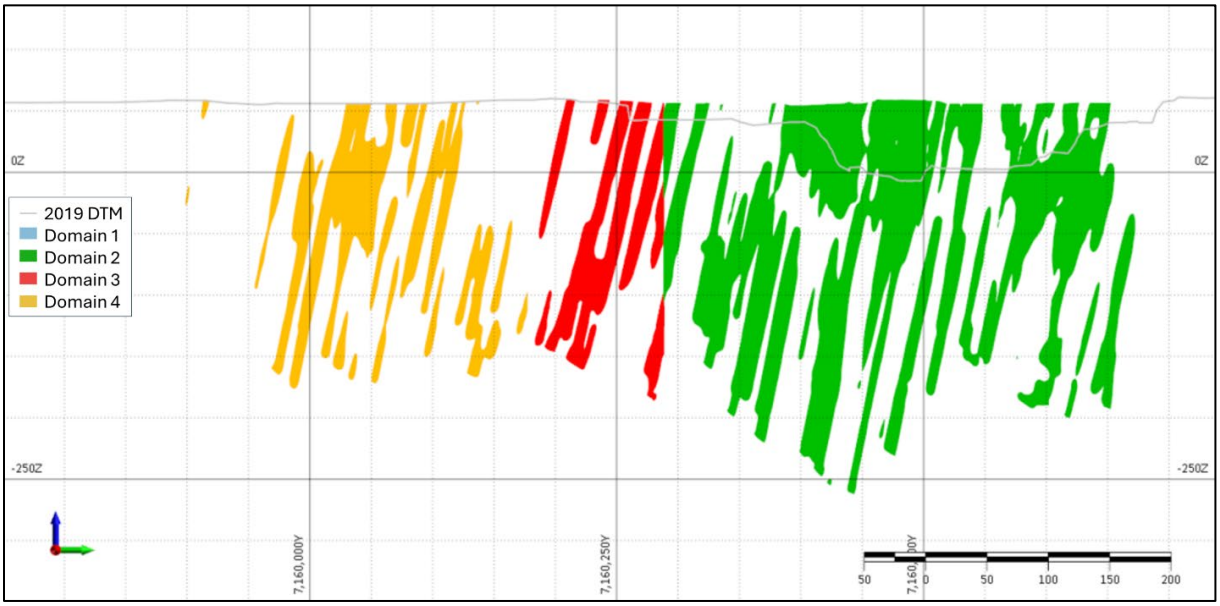
Although each domain was modeled with an independent structural framework, all share a fixed, near-vertical dip orientation. This simplification limits the ability to capture local grade trends. As such, future MREs should construct estimation domains that better capture local geological controls to more accurately reflect the deposit's shear zone and sheeted-vein mineralization.

Figure 14.1 Plan view of Shoemaker and Sparks (2021) pre-mining estimation domains.



Source: Shoemaker and Sparks (2021)

Figure 14.2 Cross-section of the Shoemaker and Sparks (2021) pre-mining estimation domains along 2,528,200 mE, looking west.



Source: Shoemaker and Sparks (2021)

Despite the noted limitations, the domains are considered acceptable for the current resource estimation. They reasonably encapsulate the mineralization observed in the existing drillhole dataset and adequately represent the volume of mineralized material at the Laiva Gold Project. The domains are suitable for interim resource statements and to support future exploration.

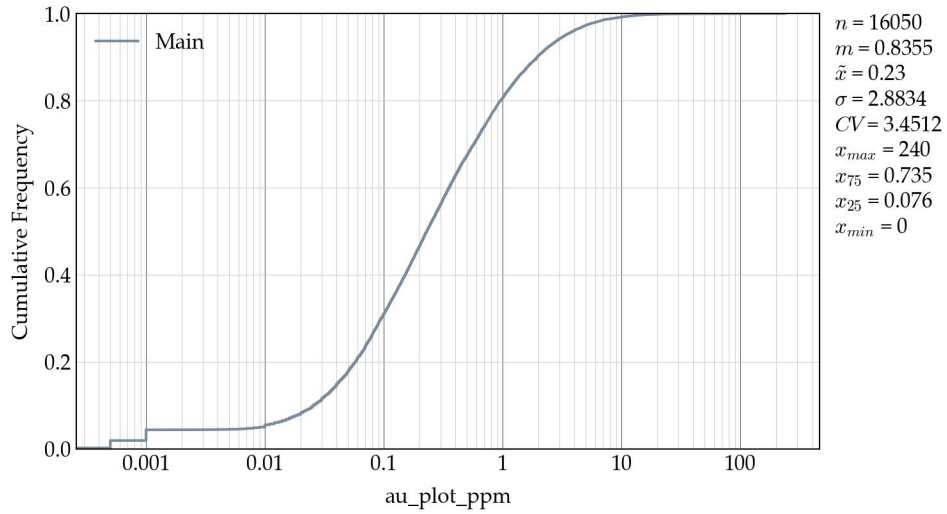
14.1.3 Review of MRE Assumptions, Parameters, Methodologies, and Block Model

A critical aspect of mineral resource estimation is ensuring that the appropriate tonnes and grades are reported at the designated cut-off grade. This requires a thorough review of the key assumptions, input parameters, and methodologies used to interpolate grades and define reporting criteria. The following section outlines the evaluation of these components to assess whether the estimation approach is technically sound, consistent with industry best practices, and suitable for the deposit style and data quality.

14.1.3.1 Compositing, Capping and Representative Distribution

To assess the suitability of the assay data utilized in the 2021 Laiva Gold MRE, the raw gold assay values within the estimation domains were examined. The distribution was reviewed for statistical outliers that could unduly influence the estimation. A total of 16,050 sample intervals with centroids within the estimation domains, totaling 17,001.59 m, were included in the MRE review (Figure 14.3). The cumulative frequency distribution of raw assay sample lengths are presented in Figure 14.4.

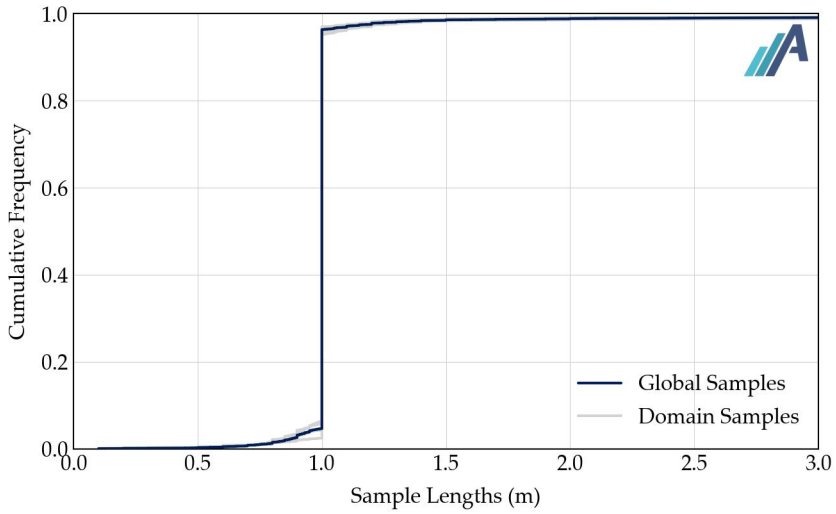
Figure 14.3 Cumulative frequency distribution of the raw gold assays contained within the estimation domains.



Source: APEX (2025)

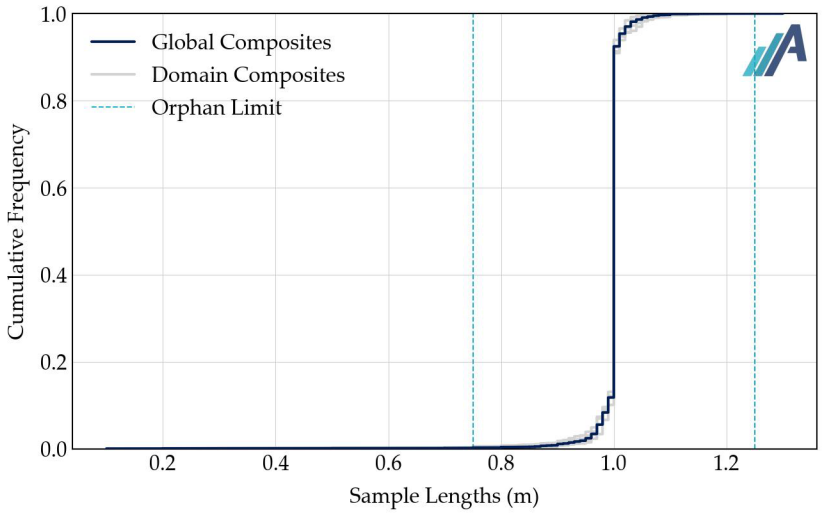
APEX generated independent composites to validate the capping methodology applied in the 2021 Laiva Gold MRE and the associated block model by Shoemaker and Sparks (2021). The 2021 Laiva Gold MRE used 1 m composite lengths, which APEX deemed appropriate given that 96.4% of the 16,050 raw sample intervals are 1 m or shorter. APEX's composites were constructed using a balanced compositing approach to maintain consistent sample support across intervals (Figure 14.5).

Figure 14.4. Cumulative frequency distribution of raw assay sample lengths.



Source: APEX (2025)

Figure 14.5 Cumulative frequency distribution of APEX composites lengths.



Source: APEX (2025)

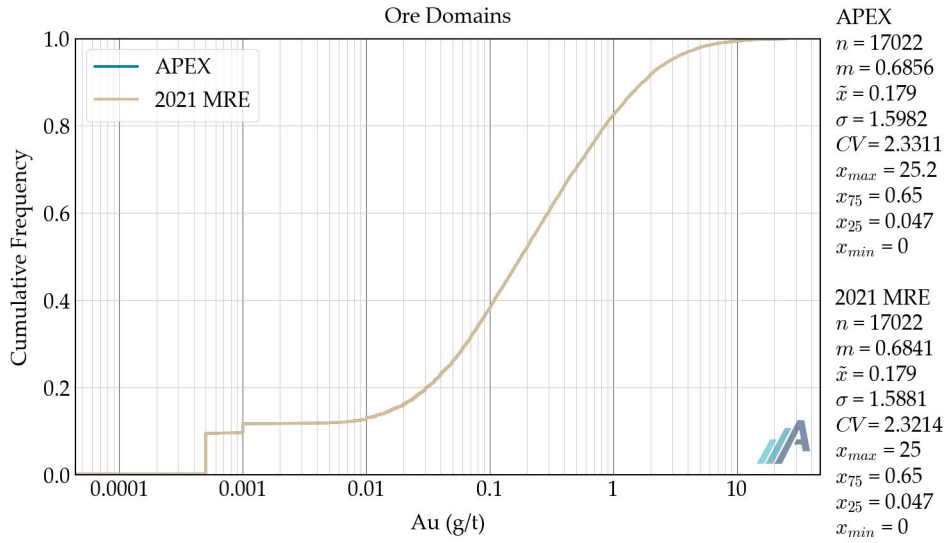
Capping thresholds were selected based on log-probability plots of composites and visual inspections of high-grade tails. These thresholds generally align with those used in the 2021 Laiva Gold MRE, which applied 25 g/t Au for Domains 1, 2, and 3, and 10 g/t Au for Domain 4. The only difference observed was in domain 4, where APEX applied a capping level of 14 g/t compared to 10 g/t used in the 2021 Laiva Gold MRE (Table 14.2). Despite this difference, the impact on the overall composite distribution was negligible, as shown in the cumulative frequency plot comparing APEX's capped composites capped used the two sets of values (Figure 14.6). These results confirm the validity and consistency of the 2021 domain-specific capping strategy and its alignment with APEX's approach.

Table 14.2. APEX's per-domain capping levels.

Domains	2021 Laiva Gold MRE Cap Level	APEX Cap Level	N Comps in Domain	N Comps Capped
Domain 1	25	25	3476	10
Domain 2	25	25.2	4314	1
Domain 3	25	25	6693	5
Domain 4	10	14	2539	3

Source: APEX (2025)

Figure 14.6 Cumulative frequency distribution of APEX's gold composites with APEX capping and 2021 Laiva Gold MRE capping.



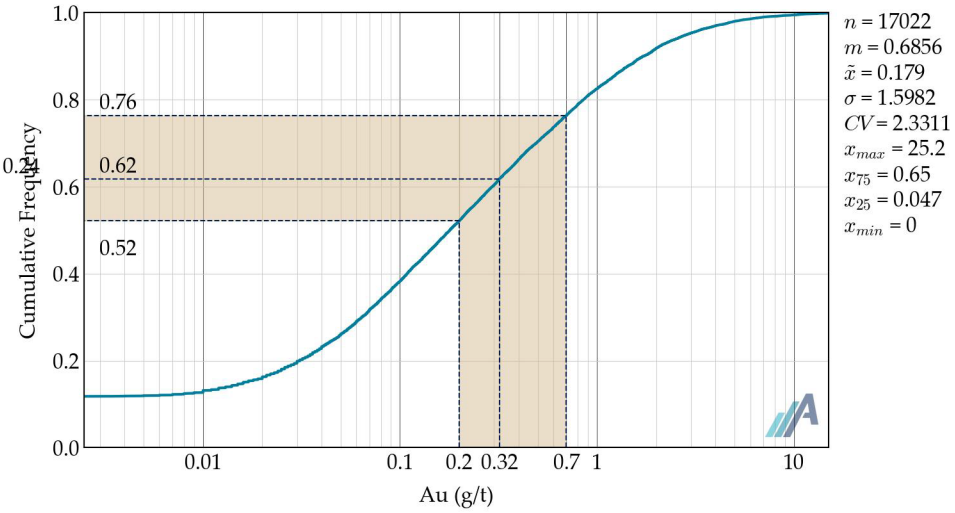
Note: Distribution considers declustering weights and capping.
Source: APEX (2025)

There is no indication that declustering was applied in the 2021 Laiva Gold MRE. However, APEX considers declustering essential to mitigate the effects of spatial data clustering, which can bias the global statistics. Clustering often results in overrepresentation of certain zones, particularly high-grade areas, due to preferential sampling, which can inflate the global mean if not properly accounted for.

The distribution of flagged composites within the mineralized material domains was analyzed to evaluate internal dilution and sensitivity to reporting cutoffs (Figure 14.7). At the selected cutoff of 0.32 g/t Au, approximately 62% of the composites fall below this threshold, indicating that a significant portion of material captured within the mineralized material domains may not meet the reporting criteria. Specifically, 52% of the distribution is below 0.2 g/t Au. This suggests that internal dilution is present at a notable level.

The presence of this internal dilution may affect the ability to deliver selective mining units and reduce the effectiveness of early-stage pit designs. Although smoothing from kriging or inverse distance methods can contribute to grade dilution, the underlying issue stems from how the mineralized material domains are defined and populated. Should the RPEEE cutoff grade increase due to changes in market conditions or cost assumptions, the impact of internal dilution will become more pronounced.

Figure 14.7 Cumulative distribution of flagged composites within the mineralized material domains, assessing sensitivity to potential reporting cutoffs.



Note: Distribution considers declustering weights and capping.
Source: APEX (2025)

14.1.3.2 Variography

The variography definition defined in the 2021 Laiva Gold MRE was conducted separately for each estimation domain using composited assay data (Table 14.3). Experimental variograms were generated in the principal directions of continuity. The variogram models informed the orientation and range parameters used in kriging, with anisotropy aligned to the interpreted geological controls for each domain. Based on APEX's review, the nugget effect appears to be overestimated and the covariance contribution from the secondary structure likely understated, given the observed continuity of mineralization. However, this is not considered material to the overall resource estimate.

Table 14.3 2021 Laiva Gold MRE Variogram Parameters.

Domain	Rotation Angles			C0	Variogram Structures					
	Azi	Dip	Plunge		Structure	Type	CC	Ranges (m)		
								Major	Semi-Major	Vertical
1	76	0	-80	0.5	1	Spherical	0.406	12.315	14.737	2.438
					2	Spherical	0.095	72.298	38.804	5.407
2	72	0	-80	0.4	1	Spherical	0.507	8.864	10.831	2.082
					2	Spherical	0.093	31.591	72.034	4.754
3	115	0	-80	0.4	1	Spherical	0.512	13.644	7.609	1.725
					2	Spherical	0.088	50.645	45.145	4.338
4	95	0	-80	0.4	1	Spherical	0.526	12.353	7.138	2.022
					2	Spherical	0.074	39.053	45.372	4.220

Abbreviations: C0 - nugget effect; C1 - covariance contribution of the first structure; C2 - covariance contribution of the second structure; Vert - vertical; sph - spherical variogram; exp - exponential variogram.
Note: The sill and covariance contributions are standardized to 1.
Source: APEX (2025)

14.1.3.3 Block Model

According to the 2021 Laiva Gold MRE documentation, four block models were generated: (1) hard-capped, (2) uncapped, (3) hybrid-capped, and (4) threshold-capped. The hard-capped model was selected for validation, as it was the one referenced in the 2021 Laiva Gold MRE technical report (Shoemaker and Sparks, 2021).

The 2021 Laiva Gold MRE block model contained coordinates, block dimensions, domain, geology, density, gold and arsenic estimated values, topography, and a class column. In the class column, APEX assumed values of 1, 2, and 3 correspond to Measured, Indicated, and Inferred resources, respectively, while class value 5 was interpreted as unclassified material.

The block model used to calculate the reported 2021 Laiva Gold MRE resource statement was 2.5 m by 2.5 m by 2.5 m. Only blocks with centroids located within the defined estimation domains were assigned grades. No partial block percentages were applied; each block was classified as either 100% mineralized material or waste. Previously mined material was properly excluded from the estimate, and the current topography—reflecting post-mining conditions—was accurately incorporated into the model to ensure that no mined material was included in the reported mineral resource statement.

14.1.3.4 Grade Estimation Methodology Review

The 2021 Laiva Gold MRE used Ordinary Kriging to interpolate gold grades into the three-dimensional block model. Estimation was performed using Maptek Vulcan software within the four estimation domains. Search ellipsoids for grade interpolation were defined using variogram models tailored to each domain. Three successive estimation passes were used, each expanding the search range and relaxing data density requirements (Table 14.4 and Table 14.5).

Table 14.4 Estimation search parameters for 2021 Laiva Gold MRE.

Estimation Pass	Direction	Search Ranges (m)			
		Domain 1	Domain 2	Domain 3	Domain 4
Pass 1, 2, and 3	Major	72.3	31.6	50.6	39.1
	Semi-Major	38.8	72.0	45.1	45.4
	Minor	5.4	4.8	4.3	4.2

Source: APEX (2025)

Table 14.5 Summary of search restriction parameters for 2021 Laiva Gold MRE.

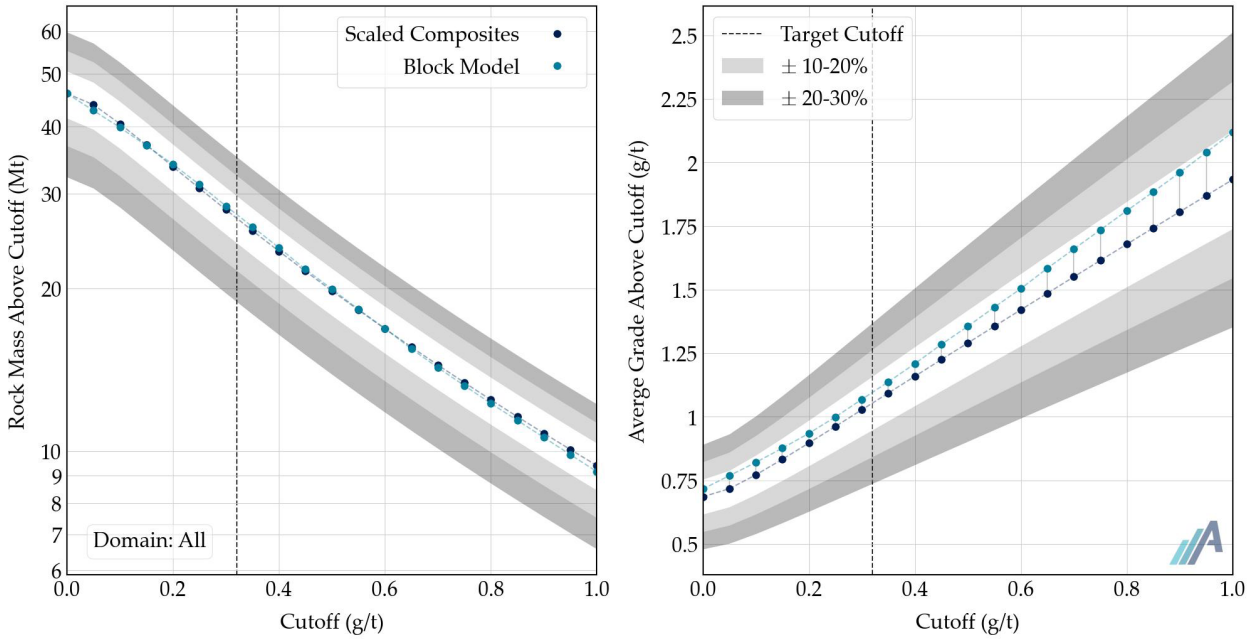
Estimation Pass	Minimum Composites	Maximum Composites	Maximum Composites per DH	Max Distance to Nearest Neighbor (m)			
				Domain 1	Domain 2	Domain 3	Domain 4
Pass 1	8	10	2	14.5	6.3	10.1	7.8
Pass 2	4	10	2	43.4	19.0	30.4	23.5
Pass 3	2	10	2	-	-	-	-

Source: APEX (2025)

14.1.3.5 Statistical Validation

APEX evaluated the target distribution derived from the scaled composite dataset and compared it against the 2021 Laiva Gold MRE block model across a range of grade cutoffs. The scaled composite target distribution was calculated using declustering weights and includes only data from within the domains. As shown in Figure 14.8, the block model reproduces the expected distribution of rock mass (tonnes) and average grade above cutoff reasonably well.

Figure 14.8 Comparison of the target distribution using the 2021 Laiva Gold MRE composites and the 2021 Laiva Gold MRE block model at various cutoffs.



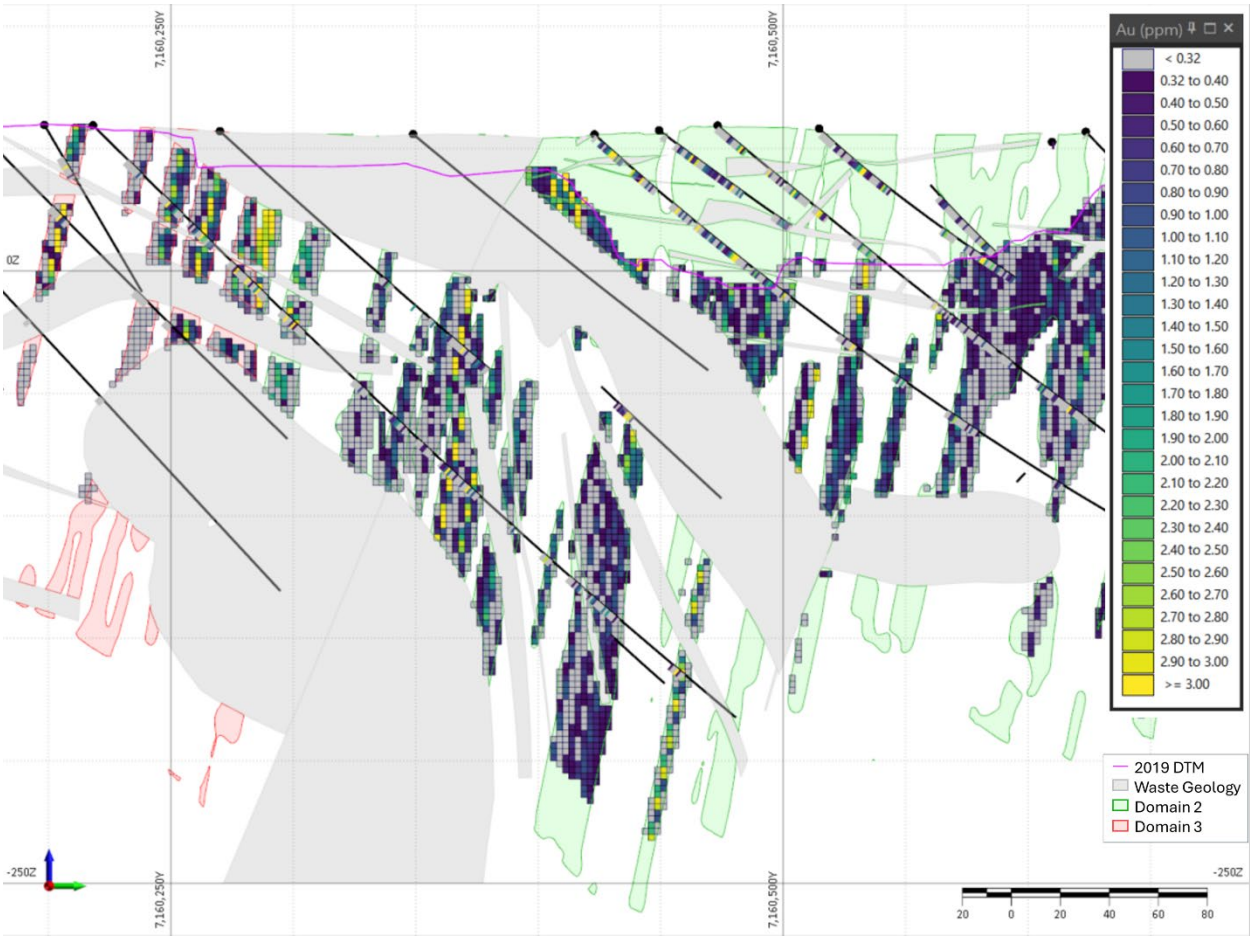
Note: Blue points are the 2021 Laiva Gold MRE block model; black points are scaled APEX composites using APEX's capping methodology.

Source: APEX (2025)

14.1.3.6 Visual Validation

Overall, the block model compares well with the composites (Figure 14.9). Some local over- and under-estimation has been observed. Due to the limited amount of conditioning data available for grade estimation in those areas, this result is expected.

Figure 14.9 Cross-section of the Shoemaker and Sparks (2021) pre-mining estimation domains, block model, and geology with APEX composites along 2,528,200 mE, looking west.



Source: APEX (2025)

14.1.3.7 MRE Table Reproduction

As part of the validation process, APEX reproduced the reported Mineral Resource Estimate (MRE) table by Shoemaker and Sparks (2021) using the provided block model and the resource-constraining RPEEE open-pit shell. The reproduction closely matched the original tonnage and grade figures, confirming that the block model and pit shell were applied consistently and that the reported MRE aligns with the underlying data and assumptions.

14.1.4 Conclusions

APEX has made the following conclusions during the independent review of the 2021 Laiva Gold MRE:

- The drillhole database is generally well-organized, with minor issues such as duplicate collars and missing azimuth/dip values, which were addressed during validation.

- The geological and estimation domain modeling is sufficient for interim mineral resource estimation purposes. However, APEX notes that the domain construction appears to be interpretive, and internal dilution within domains remains a concern, particularly for mine planning and scheduling.
- A composite length of 1 m is appropriate given a block size of 2.5 m by 2.5 m by 2.5 m; however, it is on the smaller side. Estimation of SMU blocks larger than this should consider composite sizes at least 50% the size of the nominal block size.
- Capping levels applied by APEX align with those used in the 2021 Laiva Gold MRE, with the exception of Domain 4, where APEX applied a cap of 14 g/t Au versus 10 g/t in the 2021 Laiva Gold MRE. This discrepancy had minimal impact on the overall distribution.
- There is no indication that declustering was applied in the 2021 Laiva Gold MRE. APEX considers declustering essential for mitigating clustering bias. When cell declustering was applied, the average grade across mineralized material domains decreased by 9.6%, from 0.76 g/t to 0.69 g/t.
- Internal dilution is significant. At a 0.32 g/t Au cutoff, approximately 62% of composites fall below the threshold, suggesting that much of the material captured within the mineralized material domains may not be economic. Future MREs should construct estimation domains that better capture local geological controls to more accurately reflect the deposit's complex shear-style mineralization.
- Kriging parameters in the 2021 Laiva Gold MRE were appropriately restrictive to control smoothing. APEX calculated the anticipated grade distribution at the SMU scale and confirmed that the correct amount of grade and tonnes are reported at the selected cutoff, indicating that the estimation parameters are suitable for resource reporting.

14.2 Mineral Resource Reporting

The following section discusses an examination of the 'reasonable prospects for eventual economic extraction' of the Laiva Gold Project MRE. The Laiva Gold Project MRE's statements are also provided below. The resource estimates are stated in accordance with the CSA NI 43-101 rules for disclosure and were estimated in accordance with the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019, and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10, 2014. The effective dates for the resources are provided below.

14.2.1 Evaluation of Reasonable Prospects for Eventual Economic Extraction (RPEEE)

The economic and gold recovery assumptions used for open pit optimization and underground cut-off grade determination are shown in Table 14.6 and compared to those from the 2021 Laiva Gold MRE. The 2021 assumptions were based on feasibility study inputs for metallurgical and economic parameters developed at that time. APEX has reviewed the updated assumptions and considers the costs and parameters reasonable. Gold prices have fluctuated since the effective date of the 2021 MRE and have been updated to reflect current levels. APEX accepts the mining assumptions, parameters, and revised gold prices presented in Table 14.6. New constraining open pit shells were generated using Deswik CAD based on the updated gold prices.

Table 14.6 Review of 2021 Laiva Gold MRE and 2025 APEX RPEEE Parameters.

Item	Unit / Method	APEX 2025	2021 Laiva Gold MRE
OP Mineralized Material Mining Cost	US$/tonne mineralized material	$2.73	$2.73
OP Waste Mining Cost	US$/tonne Waste	$1.90	$1.90
UG Mining Cost	US$/tonne mined	$75	$75
G&A Cost	US$/tonne mineralized material	$2.20	$2.20
Process Cost High Grade Material	US$/tonne mineralized material	$11.78	$11.78
High Grade Material Cutoff	g/t	>= 0.7	>= 0.7
Recovery High Grade Material	%	92%	92%
Process Cost Low Grade Material	US$/tonne mineralized material	$10.22	$10.22
Recovery Low Grade Material	%	80%	80%
Low Grade Material Cutoff	g/t	< 0.7	< 0.7
Gold Price	$US per Troy Ounce	$2,300	$1,600
Selling Cost	$US per Troy Ounce	$2.55	$2.55
Land Tenure Royalty	%	0.55	0.55

Source: APEX (2025)

14.2.2 Classification Definitions

The 2025 Laiva Gold MRE discussed in this Technical Report is classified following guidelines established by the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019, and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 14, 2014.

A measured mineral resource is that part of a mineral resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of modifying factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A measured mineral resource has a higher level of confidence than that applying to either an indicated mineral resource or an inferred mineral resource. It may be converted to a proven mineral reserve or to a probable mineral reserve.

An indicated mineral resource is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An indicated mineral resource has a lower level of confidence than that applying to a measured mineral resource and may only be converted to a probable mineral reserve.

An inferred mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An inferred mineral resource has a lower level of confidence than that applying to an indicated mineral resource and must not be converted to a mineral reserve. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

14.2.2.1 2021 Classification

The classification criteria for Measured, Indicated, and Inferred resources in the 2021 Laiva Gold MRE are tied to the estimation passes outlined above in Table 14.4 and Table 14.5. Pass 1 corresponds to Measured, pass 2 to Indicated, and pass 3 to Inferred resources. This approach reflects increasing confidence with closer drill spacing and greater data density. Most blocks classified as Measured are in mined-out areas, with only a small number near the current topography retaining Measured status based on the inclusion of grade control drilling in the 2021 Laiva Gold MRE. As such, the extent of Measured material in the in-situ resource is limited. Mr. Dufresne considers the classification criteria reasonable and accepts their application in the 2025 Laiva Gold MRE.

14.2.3 Mineral Resource Statement

The current 2025 Laiva Gold MRE is reported in accordance with the Canadian Securities Administrators' NI 43-101 rules for disclosure and has been estimated using the CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 29, 2019, and CIM “Definition Standards for Mineral Resources and Mineral Reserves” dated May 10, 2014. The effective date of the Mineral Resource is June 4, 2025.

As discussed above, Mr. Dufresne has completed a review of the Laiva Gold Project’s MRE with respect to its specific estimation parameters and assumptions, as well as the effect of the (current) reasonable prospects for eventual economic extraction. As a result of this review, the Mr. Dufresne and the Authors of this Technical Report accept the 2025 Laiva Gold MRE presented below in Table 14.7 as current.

Table 14.7 Summary of the 2025 Laiva Measured, Indicated, and Inferred Mineral Resources. (1-9)

Cutoff Au (g/t)	Classification	Tonnes (kt)	Contained Au (koz)	Average Au (g/t)
Pit-Constrained Mineral Resource Estimate				
0.25	Measured	1,349	50	1.16
	Indicated	15,005	473	0.98
	M&I	16,354	523	1.00
	Inferred	11,978	396	1.03
Out-of-Pit Mineral Resource Estimate				
1.35	Inferred	406	31	2.38
Total Mineral Resource Estimate				
Combined	Measured	1,349	50	1.16
	Indicated	15,005	473	0.98
	M&I	16,354	523	1.00
	Inferred	12,384	427	1.07

Source: APEX (2025)

Notes:

1) Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
3) The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.
4) The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
5) Historical mined areas were removed from the block-modelled Mineral Resources.
6) Economic assumptions include an Au price of US$2,300/oz; 92% recovery and a processing cost of US$11.78/t for material ≥0.7 g/t Au; 80.0% recovery and a processing cost of US$10.22/t for material <0.7 g/t Au; a G&A cost of US$2.20/t; a selling cost of US$2.55/oz; and a 0.55% royalty.
7) The constraining pit optimization parameters include mining costs of US$2.73/t for mineralized material and US$1.90/t for waste material, and 53° pit slopes. Pit-constrained Mineral Resources are reported using an Au cutoff grade of 0.25 g/t.
8) Out-of-Pit Mineral Resources include blocks below the constraining pit shell that form continuous, potentially mineable shapes. A mining cost of US$75.00/t for mineralized material, along with the economic assumptions for material ≥0.7 g/t Au noted above, defines the underground (UG) resources. Out-of-Pit Mineral Resources are reported using an Au cutoff grade of 1.35 g/t.
9) Figures are rounded; totals may not sum exactly due to rounding.

14.3 Risks and Uncertainties

The drillhole database is generally well-organized and suitable for Mineral Resource Estimation. Minor issues, such as duplicate collars and missing azimuth/dip values, were identified but addressed in the 2025 Laiva Gold MRE. All drilling completed before 2001 was excluded, as it was considered non-compliant with NI 43-101 standards; however, documentation detailing the specific reasons for non-compliance is limited. Future MRE studies should review and more thoroughly document the historical drillhole data to assess whether portions of it could be validated and incorporated, either to support estimation domain delineation or to contribute directly to the resource estimation.

Although each domain in the current model was constructed using an independent structural framework, all share a fixed, near-vertical dip orientation. This simplification introduces risk by limiting the model's ability to reflect local grade variability and structural complexity. In shear-hosted gold systems like Laiva, mineralization is often controlled by subtle changes in orientation, intensity, and continuity of shear zones and associated veining. Failure to account for these local controls can lead to inaccuracies in grade distribution, resource classification, and ultimately mine planning. Future MREs should consider constructing estimation domains that incorporate variable orientations and better reflect observed geological features to reduce uncertainty and improve confidence in resource estimation.

While the 2025 Laiva Gold MRE appears to have managed over-smoothing effects, a notable amount of internal dilution remains within the mineralized material domains. This dilution increases uncertainty in grade estimation and may limit the precision of the resource model. Although this risk is less critical for interim MRE statements, it becomes more significant when used for detailed mine planning. Future MRE studies should aim to reduce internal dilution by constructing more refined estimation domains that better reflect geological controls. Enhancing domain definition will help reduce reliance on restrictive kriging parameters and improve the reliability of resource estimates for economic evaluation and mine design.

While the variogram models used in the 2025 Laiva Gold MRE are reasonably similar to independently calculated models and are considered suitable for resource estimation, some uncertainty remains regarding the accuracy of the nugget effect and structure contributions. An overestimated nugget and understated secondary structure may underrepresent spatial continuity, potentially affecting grade interpolation and local estimation confidence. Although not material for the current MRE, refining variogram models with additional data and improved structural interpretation would reduce uncertainty in future updates, particularly where local accuracy is critical for mine planning.

In the 2025 Laiva Gold MRE, mined-out blocks were assigned a value of zero and flagged as "air," which prevented the use of grade control data for validation. This limited the ability to evaluate estimation performance in areas with dense drilling, and to assess how data spacing influences model accuracy (i.e., the information effect). For future MREs, estimating mined-out blocks using exploration data and then comparing results to available grade control data could provide a valuable validation approach, helping to better quantify estimation performance, inform confidence levels, and support refinement of modelling parameters.

The 2025 Laiva Gold MRE used a digital topographic surface from 2020. Internal production reports indicate that a total of 275,070 tonnes of mineralized material were removed from an unspecified location in the pits and 3,674 ounces of gold were produced between October 5th and December 31st, 2021. Though gold production has also been reported in January and February 2022, the reports also indicate that no material was blasted out of the pits during these months. The last reported blast date is December 8th, 2021. No mining has occurred since. No accurate topographic survey exists as of the Effective Date of this Technical Report to address potential depletion of the MRE. A current topographic survey is required prior to the calculation of future MREs.

The Authors are not aware of any other significant material risks to the 2025 Laiva Gold MRE other than the inherent risks to mineral exploration and development in general. The Authors of this report are not aware of any specific environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that might materially affect the results of this resource estimate, and there appear to be no obvious impediments to developing the MRE at the Lavia Gold Project.

15 Mineral Reserve Estimates

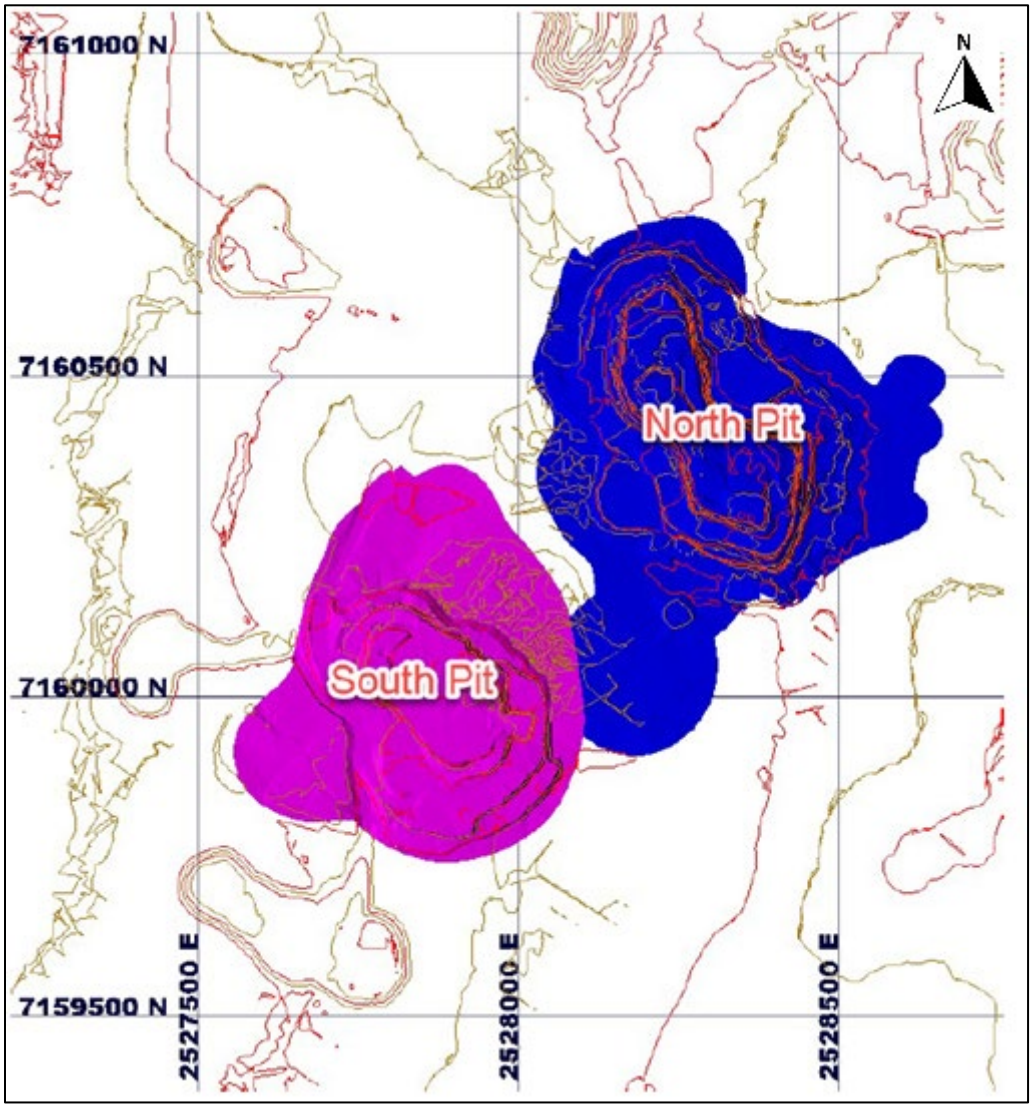
No Mineral Reserve estimates have been defined at the Laiva Gold Project. A current CIM compliant Mineral Resource estimate for the Property is detailed above in Section 14.

16 Mining Methods

16.1 Introduction

The Laiva Gold Project is composed of a single project with two historical mining areas: the previously developed South Pit area in the southwestern portion of the project; and the previously developed North Pit area in the northern portion of the project (Figure 16.1).

Figure 16.1 Historical mining areas, Laiva Gold Project.



Source: modified from Shoemaker and Sparks (2021)
Note: Coordinate system is Finnish Coordinate System EUREF FIN TM35FIN

Standard mining technology was utilized to create an open pit at each of the two mining areas. The South Pit has approximate dimensions of 620 m south to north by 540 m east to west and a maximum depth of 200 m below nominal pit rim elevation. The South is composed of three mining phases. The North Pit has

approximate dimensions of 840 m south to north by 600 m east to west and a maximum depth of 170 m below current ground level. The North Pit is composed of four mining phases.

The Company will engage a mine contractor to conduct future mining activities at the Property, including site preparation, haul road construction and maintenance, mineralized material and bulk waste drilling and blasting, excavation and haulage of mineralized material and waste, management of waste dumps, oversize breakage, and pit dewatering. The mine contractor will provide all mining equipment. The contractor is expected to provide operator training, supervision, mine consumables, and maintenance facilities for contractor's operations. Mine maintenance personnel will be supplied by the contractor for the contractor's fleet. The Company plans to provide mine technical services including blast design, blasthole layout, mineralized material grade control, mine planning, and blasthole sampling. Orica will provide explosives storage on-site. Explosives, blasting agents, fuel and other consumables will be provided by established suppliers.

16.2 Mine Operations

16.2.1 Mining Activities will be Self-Performed by Current Owner

It is contemplated that all future mining operations will be conducted by the current owner utilizing mining equipment secured on a capital lease to own basis. All mining activities including definition drilling, blast hole drilling, blasting, loading, hauling, grade control, and road and dump maintenance will be conducted by the current owner.

16.2.2 Production Drilling and Blasting

Given the sheeted vein style of the mineralization within the deposit, strict attention to details for drilling and blasting procedures are critical for the minimization of mining dilution. Mineralized material and nearby waste are planned to be mined on 5 m sub-benches to minimize inherent dilution at the hanging and foot wall contacts of a dipping mineralized zone (± 80 degrees). Mineralized zones are planned to be defined by closely spaced definition drilling discussed below. The resource block model should be updated based on definition drilling to tightly define suitable zones for extraction of mineralized material. Three dimensional coordinates for the mineralized zone outlines should be derived from the model and should be surveyed to define the projected mineralized zones on each bench for drilling by company crews. A buffer of near-mineral waste amounting to approximately 15% should be included within the area defined for "mineralized zone" drilling to provide for imprecision in mineralized zone definition resulting from the foregoing procedure. The proposed blasting and mining process is described in the following text.

Bulk hanging wall waste will first be blasted and removed. The mineralized zone will then be drilled and blasted with the free face oriented parallel to the strike of the mineralized zone.

Hanging wall waste will be blasted and mucked prior to blasting the mineralized zone. Mineralized zone blast patterns and delay periods will be laid out by the Issuer engineers as necessary to minimize mineralized material and waste mixing, to minimize heave, while at the same time achieving good fragmentation.

It is strongly recommended that blasthole drilling be drilled in the plane of the dip of the mineralized zone, determined on average to be -80 degrees from the horizontal in order to minimize blasting of triangles of waste on the hanging wall and footwall of the mineralized zone.

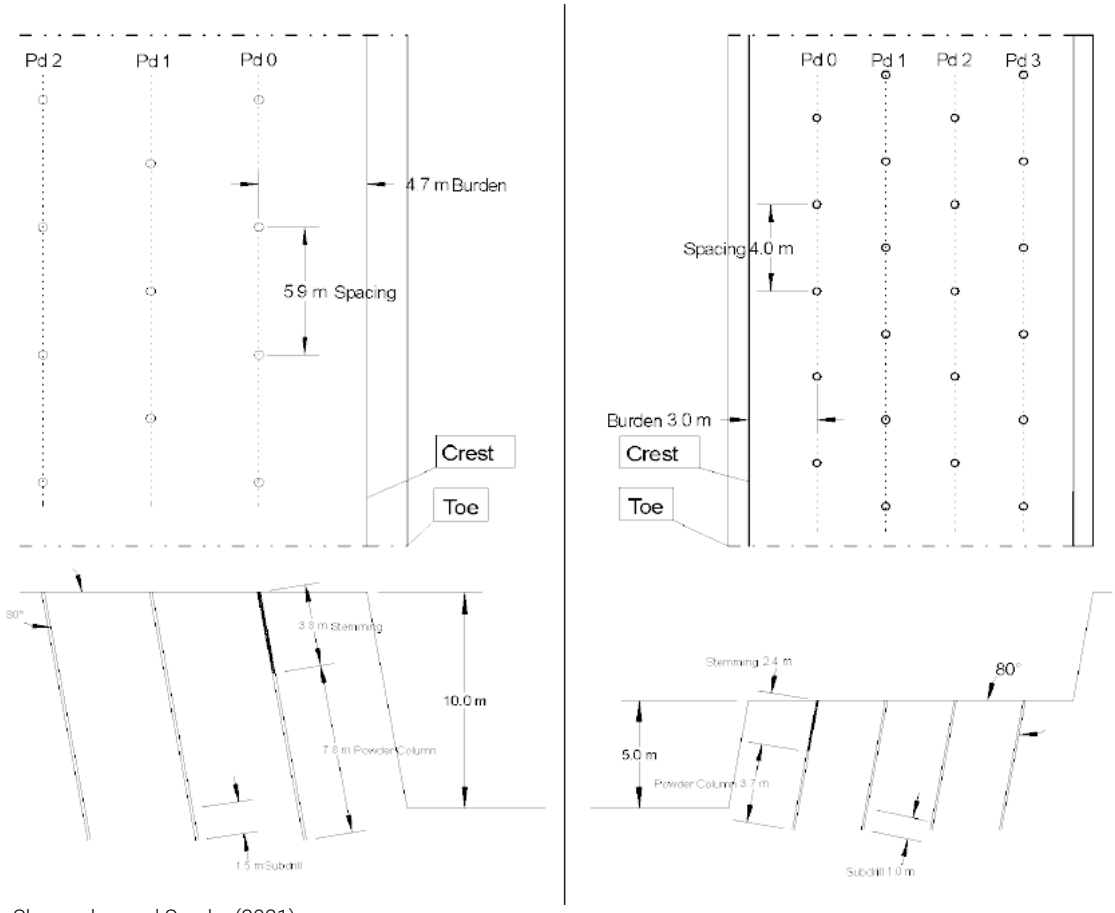
While blast round design is somewhat variable depending on multiple factors, in keeping with long-standing and well-established relationships, BOYD proposed initial parameters shown in Table 16.1and illustrated in Figure 16.2. These parameters will need to be adjusted based on actual operating experience to achieve optimum results.

Table 16.1. Proposed blasting design parameters.

Key Assumptions	Measure
Sub-bench height for mineralized material and near mineralized material	5 m
Full bench height for bulk waste only	10 m
Bench face batter angle	80 degrees
Mineralized material and near mineralized material blasthole diameter	89 mm
Bulk waste blasthole diameter	127 mm
Bottom prime only	Y
Initial Parameter Calculations	
Mineralized Material and Near Mineralized Material	
Bench height	5 m
Indicated burden	3 m
Indicated spacing	4 m
Indicated subdrilling	1 m
Indicated stemming	2.4 m
Hole length	6.1 m
Charge length	3.7 m
Loading density	6.84 kg/m
Powder factor	0.41 kg/m^3
Bulk Waste	
Bench height	10 m
Indicated burden	4.7 m
Indicated spacing	5.9 m
Indicated subdrilling	1.5 m
Indicated stemming	3.8 m
Hole length	11.6 m
Charge length	7.8 m
Loading density	13.93 kg/m
Powder factor	0.39 0.41 kg/m^3

Source: modified from Shoemaker and Sparks (2021)

Figure 16.2 Proposed blasting schematic showing the bulk waste blasting plan on the left (127 mm blastholes) and the mineralized material blasting plan on the right (89 mm blastholes).



Source: Shoemaker and Sparks (2021)

16.2.3 Grade Control

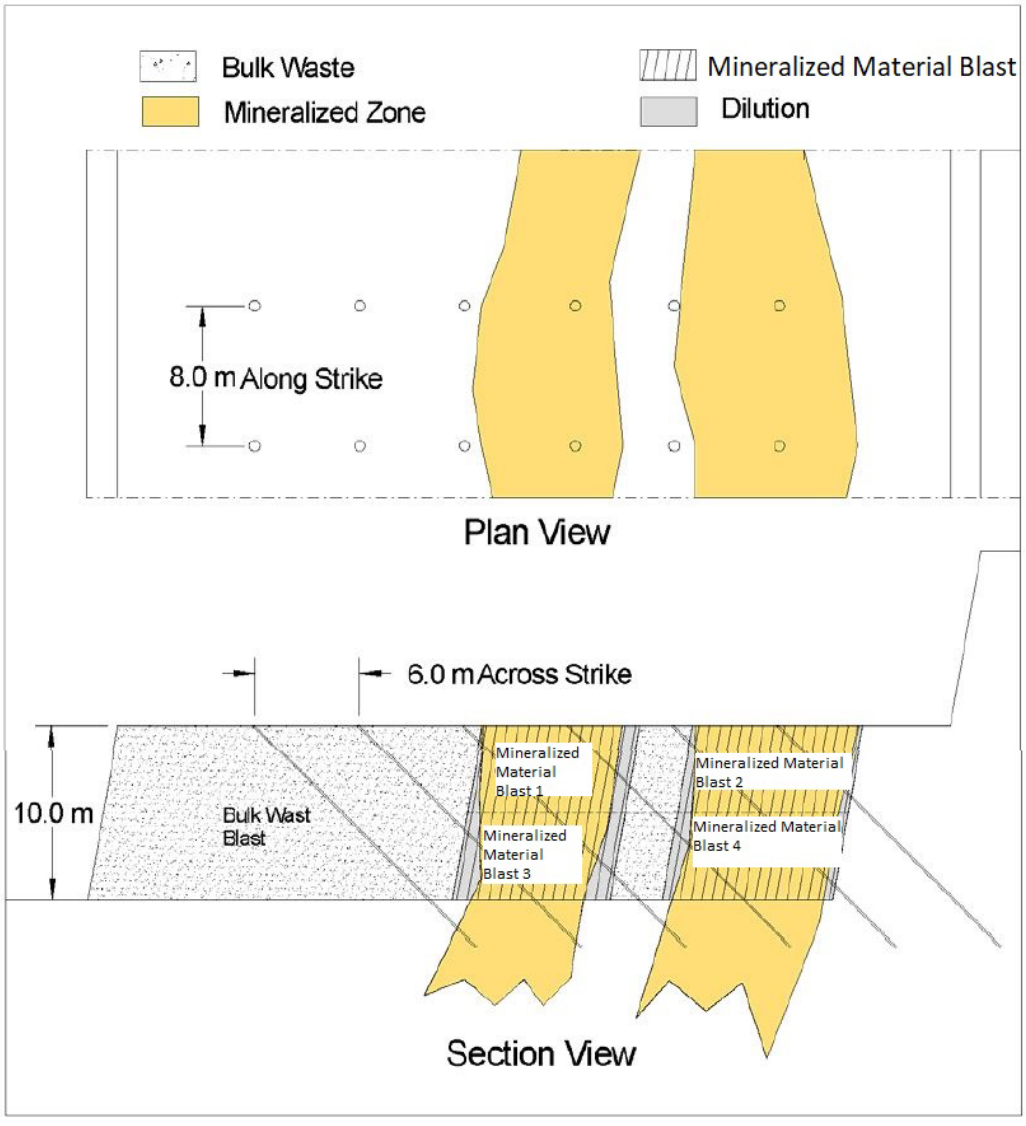
All reasonable measures to minimize mining dilution are critical to the success of future mining at the Laiva Gold Project. Resource development drilling, as indicated in previous sections, is adequate in the QP's opinion for production of the resource estimate set forth in Section 14. The steeply dipping sheeted vein swarm style of mineralization in mineralized zones; however, requires higher definition for effective future mining with minimal mining dilution.

16.2.3.1 Grade Control Drilling

Accordingly, the QP's recommend that all future definition/grade control drilling programs should be conducted as follows to achieve the appropriate spatial resolution of mineralized zones. In areas of indicated mineralized zones based on the geologic model, RC holes should be drilled from the hanging wall side of the mineralized zone with an azimuth normal to strike of the mineralized zone at a dip of nominal 45 degrees. Fences of holes should be spaced 8 m apart along strike, with spacing of 6 m across strike. Hole depth is intended to cover two sub-benches in depth.

Holes should be sampled from collar to end of hole (EOH) on one-meter intervals using a rig mounted rotary or riffle splitter. Samples should be assayed using the onsite PAL 1000 CN soluble leach analysis. Results from the assays will then be modelled onsite to identify a potentially minable zone for accurate blasting layout to separately drill, blast, and muck identified mineralized material and waste zones, as shown in Figure 16.3.

Figure 16.3. Definition drilling schematic.



Source: Shoemaker and Sparks (2021)

16.2.3.2 Grade Control Direction at the Face

In addition to definition drilling and detailed mapping of mineralized zone/waste interface, the Company should monitor any future mineralized material loading activities at the face. The mineralized material loading should be supervised by appropriately trained grade control geologists or technicians and should be restricted to day shift.

Following each blast of mineralized material, the resulting muck pile should be visually inspected and marked out with marking paint to differentiate probable high grade, low grade and waste rock characteristics. Duties should include regular visual inspection of the muck pile to ensure the character of material loaded is consistent with the mineralized zone. The grade control geologist/technician should also direct haul truck dispatch to the appropriate stockpile location on the ROM pad by communicating with each departing truck via sign board or radio contact with the driver. Stockpiles on the ROM pad should be clearly marked with signage to ensure dispatched loads are dumped in the appropriate location.

16.3 General Comments

It should be clearly understood that the Company is responsible for directing future mining activities at the Laiva Gold Project, including:

- Mine Design
- Production Sequencing
- Definition/Grade Control Drilling
- Detailed Mapping
- Mineralized Material and Waste Blasting Design
- Grade Control at the Face
- Truck Dispatch When Hauling Mineralized Material
- Regular Survey of Excavated Volumes
- Reconciliation of Resource Estimates to Actual Material Mined

Previous operators were unsuccessful in large measure due to too much reliance on the mining contractor for the tasks enumerated above, hence the current mine owner plans to self-perform all mining related activities as noted above.

17 Recovery Methods

Mineralized material produced from the Laiva Gold Project has historically been processed at the Laiva Gold Mine Process facilities (the "Laiva processing plant"), located within the Property. The Laiva processing plant was constructed in 2011 by Metso Minerals in conjunction with Outotec for a reported €233 million constructed cost. Nordic Mines operated the plant from the commission date to the end of March 2014. Nordic Gold completed a mill refurbishment in October 2018 and operated the plant for four months to March 2019. In late September 2021, Otso Gold restarted the Laiva processing plant and operated the plant until February 2022.

Previous operators experienced issues related to equipment operation and flow sheet design.

17.1 Existing Processing Plant and Facilities

17.1.1 Existing Flow Sheet

The mineral processing plant is located approximately 1 km northeast from the South and North open pits on the Laiva Gold Project site. The processing plant comprises a single stage crushing circuit, grinding mills, a 3 Mw installed power mill, flash flotation, gravity and regrind circuits, high grade and low grade carbon-in-leach (CIL) circuits, carbon stripping, and a gold room. Spent mud is sent to either a high grade or low grade dam. The low grade dam is situated approximately 7.5 km from the plant where it is processed through a thickener (Otso Gold, 2021).

The historical design throughput rate is 250 tonnes per hour (6,000 tonnes per day / 2 million tonnes per year). The processing flow sheet schematic for the existing Laiva Gold processing plant is illustrated in Figure 17.1.

17.1.2 Existing Plant Layout and Major Equipment

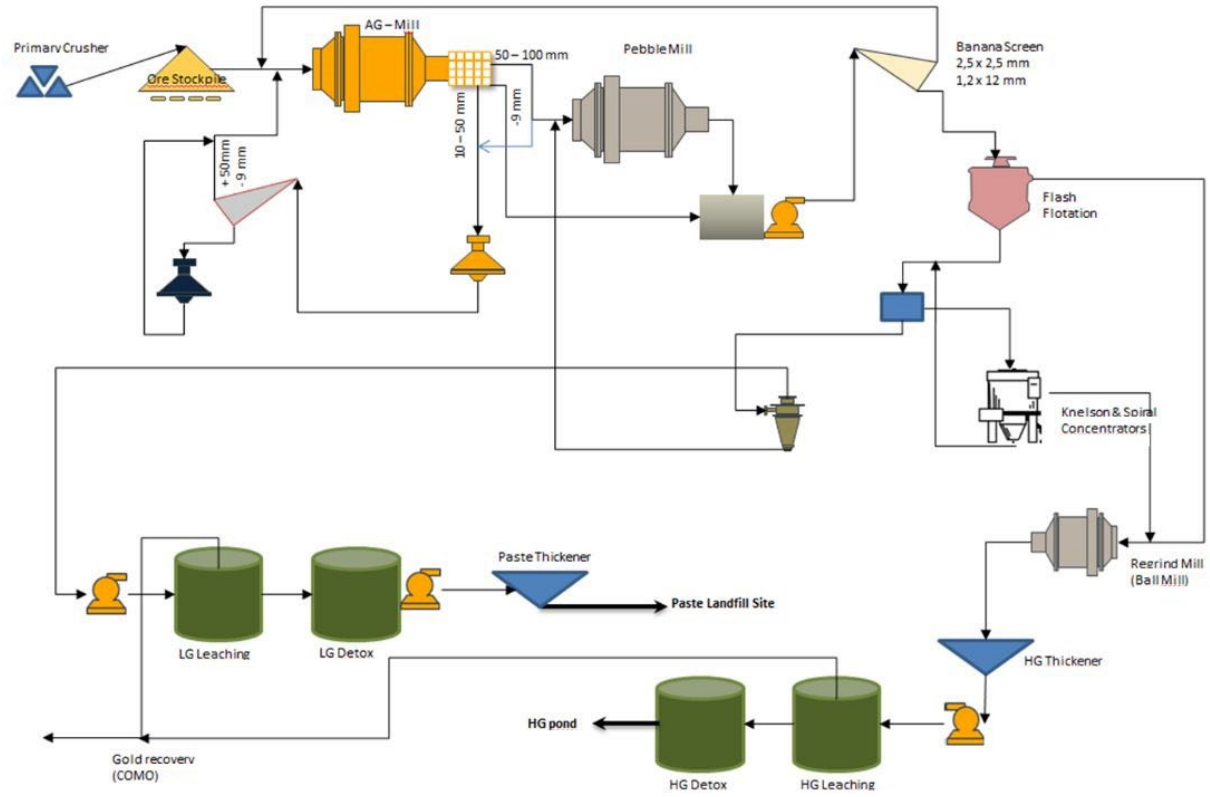
The existing plant layout is shown in Figure 17.2. A list of key equipment quantity and general specifications utilized in former periods of operation are presented in Table 17.1.

17.2 Plan Operations as Currently Configured with Minor Modifications

17.2.1 Run of Mine (ROM) Stockpile and Crusher Feed

Mineralized material from active pits should be transported to a ROM stockpile area to be stacked in accordance with estimated grade and rock type to accommodate optimized blending of plant feed. Stockpiled mineralized material in appropriate proportionate blend will be delivered to the primary feed hopper after segregation of oversize. The QP recommends a Caterpillar 966K or equivalent to segregate oversize, perform blending, and supply the primary feed hopper.

Figure 17.1 Laiva Gold current processing plant flow schematic.



Source: Laiva Gold (2025)

Figure 17.2 Site plan layout.

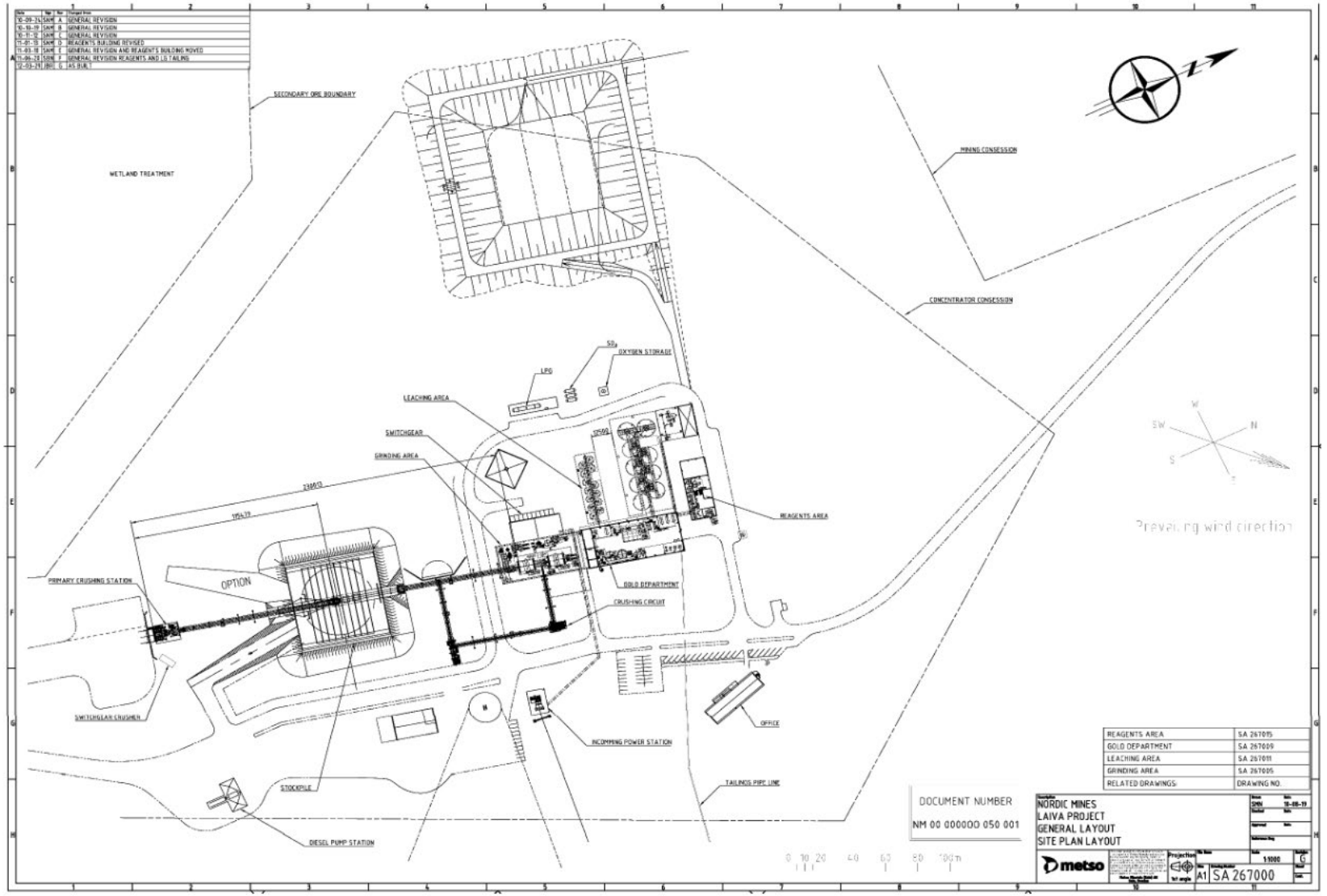


Table 17.1 Equipment list.

metso	Customer:	**Equipment List** Nordic Mines Oy Laiva Gold Project	Project No: SAL00017 A Date: **2010-04-29** Rev: **2 A**		
Qty.	**Description**	**Equipment**	**Specification**	**Installed Power (kW)**	**Remarks**
	Primary Crushing				
1	Feed Hopper	Crusher Feed Hopper			
	Dust suppression	Feed Hopper Dust Spray			
1	Feeder	Vibrating feeder	Metso VF661-2V	22.0	
1	Chute	Feeder Discharge Chute			
1	Chute	Feeder Underpan			
1	Rock Breaker		Liebein, Sandvik or equal. Chisel from Atlas Copco or similar	22.8	
1	Crusher	Jaw Crusher	Metso C160	250.0	
1	Chute	Crusher Discharge Chute			
1	Feeder	Vibrating feeder	Metso VMOU 30/16-5075	15.0	
1	Chute	Feeder Discharge Chute			
1	Conveyor	Belt Conveyor	Metso NB SC 1200 mm x 123 m	132.0	
1	Chute	Conveyor Discharge Chute			
1	Dust extraction	Dust extraction		18.5	
	Stockpile				
1	Tunnel	Corrugated Steel Tunnel	Lenght approx. 75 m, BxH=5,9x6,55, t=7mm		
1	Feeder	Vibrating feeder	Metso VMOU 25/10-5060/B	11.0	Speed control
1	Chute		Metso Standard		Mild steel with wearplate
1	Feeder	Vibrating feeder	Metso VMOU 25/10-5060/B	11.0	Speed control
1	Chute		Metso Standard		Mild steel with wearplate
1	Feeder	Vibrating feeder	Metso VMOU 25/10-5060/B	11.0	Speed control
1	Chute		Metso Standard		Mild steel with wearplate
1	Feeder	Vibrating feeder	Metso VMOU 25/10-5060/B	11.0	Speed control
1	Chute		Metso Standard		Mild steel with wearplate
1	Conveyor	Belt Conveyor	Metso NB SC 1200 mm x 113 m	60.0	
1	Chute	Conveyor Discharge Chute			
1	Dust extraction	Dust extraction		7.5	

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Equipment List

Customer: Nordic Mines Oy

Project: Laiva Gold Project

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
	Grinding				
1	Chute	Mill Feed Chute	Upper part		
1	Chute	Mill Feed Chute			Purchaser Supply
1	Mill			3000.0	Purchaser Supply
1	Screen	Trommel Screen			Purchaser Supply
1	Chute	Mill Discharge Chute	Underflow from Trommel screen		Mild steel with wearplate
1	Splitter		Pebble splitter		Mild steel with wearplate
1	Chute	Mill Feed Chute			Purchaser Supply
1	Mill			3000.0	Purchaser Supply
1	Chute	Mill Discharge Chute			Purchaser Supply
1	Chute	Mill Discharge Chute	Lower part		
1	Distribution box				Mild steel rubber lined with automatic dart valves
1	Pump Box		8 m3		Mild steel rubber lined
1	Pump Box		8 m3		Mild steel rubber lined
1	Pump		Metso, XR300 FNR-S C5HC	425.0	Speed control, ABB motor or equal

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Customer:
Project:

Equipment List

Nordic Mines Oy

Laiva Gold Project

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
1	Pump		Metso, XR300 FNR-S C5HC	425.0	Speed control, ABB motor or equal
1	Screen	Two deck screen	Metso, MF 3,0 x 8,5 Multi Flow. Fitted with one deck.	110.0	
1	Pump Box		8m3		Mild steel rubber lined
1	Pump		Metso, VASA HD 7010-200	45.0	Speed control, WEG motor
1	Distribution box				Mild steel rubber lined with automatic dart valves
1	Centrifuge	Knelson centrifuge	Knelson CVD64 -040	150.0	
	Spiral concentrator	Spirals	Multotec or equal, - Spiral bank, containing 6 off triple start spiral assemblies.		
1	Pump Box				Mild steel rubber lined
1	Pump		Metso, VASA HD 507-150	110.0	Speed control, WEG motor
1	Flotation	Flot. RCS	Metso, Unit Cell RCS 30	110.0	WEG motor
1	Distribution box				Mild steel rubber lined with automatic dart valves
1	Pump Box		8 m3		Mild steel rubber lined
1	Pump Box		8 m3		Mild steel rubber lined
1	Pump		Metso, XR300 FNR-S C5HC	355.0	Speed control, ABB motor or equal
1	Pump		Metso, XR300 FNR-S C5HC	355.0	Speed control, ABB motor or equal
1	Cyclone battery		Multotec or equal, 14 unit array. 350 mm cyclones. 9 in operation. 3 stand-by. 2 blanked off position.		
1	Pump Box				
1	Pump		Metso, VASA HD 7010-200	160.0	Speed control, WEG motor
1	Pump		Metso, VASA HD 7010-200	160.0	Speed control, WEG motor
1	Cyclone battery		Multotec or equal, 34 unit array. 100mm diameter cyclones. 28 operating. 6 stand-by.		
1	Distribution box				Mild steel rubber lined
1	Pump Box				
1	Pump		Metso, VASA HD 7010-200	37.0	Speed control, WEG motor
1	Pump		Metso, VASA HD 7010-200	37.0	Speed control, WEG motor

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Equipment List

Customer: Nordic Mines Oy

Project: Laiva Gold Project

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
	Pebble Crushing				
1	Conveyor	Belt Conveyor	Metso NB SC 650 mm x 30 m	15.0	
1	Chute	Chute 2-way	Metso Standard		Mild steel with wearplate
1	Bin		Metso Standard, approx 30m3		Mild steel with wear rails
1	Feeder	Vibrating feeder	Metso VMO 20/8-4027	4.6	Speed control, 2x2.3 kW motors
1	Chute	Feeder Dischrge Chute			
1	Chute	Feed Chute	Metso Standard		Mild steel with wearplate
1	Crusher	Cone Crusher	Metso HP200 std medium, incl. Feed and disch chutes and Subframes, Basic automation	132.0	
1	Chute	Crusher Discharge Chute			
1	Dust Extraction	Dust Extraction		7.5	
1	Conveyor	Belt Conveyor	Metso NB SC 650 mm x 60 m	15.0	
1	Chute	Screen Feed Chute			
1	Screen	Double Deck Screen	Metso KS2 PP 5000/1600, incl.dust capsulation	15.0	
1	Chute	Screen Underpan			
1	Chute	Screen discharge Chute			
	Chute	Chute 2-way	Metso Standard		Mild steel with wearplate
1	Bin		Metso Standard, approx 18m3		Mild steel
1	Feeder	Vibrating feeder	Metso VMO 20/8-4027	4.6	Speed control, 2x2.3 kW motors
1	Chute	Feeder Discharge Chute			
1	Chute	Feed Chute	Metso Standard		Mild steel with wearplate
1	Crusher	Cone Crusher	Metso HP100 std medium, incl. Feed and disch chutes and Subframes, Basic automation	90.0	
1	Chute	Crusher Discharge Chute			
1	Dust Extraction	Dust Extraction		7.5	
1	Conveyor	Belt Conveyor	Metso NB SC 650 mm x 39 m	15.0	
1	Chute	Chute 2-way	Metso Standard	1.0	Mild steel with wearplate
1	Ball Feeder				Mild steel
1	Chute	Mill Feed Chute			Mild Steel - partly rubberlined
1	Mill		Metso, SRR Ball Mill 1,8 x 4,0m	160.0	WEG motor
1	Chute	Mill Discharge Chute			Mild Steel - partly rubberlined

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Equipment List

Customer: Nordic Mines Oy

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
1	Distribution box				Mild steel rubber lined with automatic dart valves
1	Pump Box		1 m3		Mild steel rubber lined
1	Pump Box		1 m3		Mild steel rubber lined
1	Pump		Metso, HR75 FNR-S C4HC	7.5	Speed control, WEG motor
1	Pump		Metso, HR75 FNR-S C4HC	7.5	Speed control, WEG motor
1	Cyclone battery		Multotec or equal, 165mm cyclone. 1 operating. 1 stand-by.		
1	Pump Box		1,5 m3		Mild steel
1	Pump		Metso, HR75 FNR-S C4	3.0	Speed control, WEG motor
1	Pump		Metso, HR75 FNR-S C4	3.0	Speed control, WEG motor
1	Pump	Spillage Pump	Metso, VS80 L150 O3A	22.0	Speed control, WEG motor
1	Pump	Spillage Pump	Metso, VS80 L150 O3A	22.0	Speed control, WEG motor

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Equipment List

Customer: Nordic Mines Oy

Project: Laiva Gold Project

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
	Low Grade Leach				
1	Screen	Single deck screen	Metso, KS H1P 5000/2500 Linear Motion Single Deck Dewatering Screen	30.0	2 x 15kW
1	Bin				Mild steel
1	Sampler		Metso Dual Sampler. Primary Rotary Sampler 350/400 and Secondary Sampler.	1.0	
1	Tank		907 m3		Mild steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	75.0	CIL Low Grade, speed control
1	Tank		907 m3		Mild steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	75.0	CIL Low Grade, speed control
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	11.0	CIL Low Grade
1	Tank		907 m3		Mild steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	75.0	CIL Low Grade, speed control
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	11.0	CIL Low Grade
1	Tank		907 m3		Mild steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	75.0	CIL Low Grade, speed control
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	11.0	CIL Low Grade
1	Tank		907 m3		Mild steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	75.0	CIL Low Grade, speed control
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	11.0	CIL Low Grade
1	Tank		907 m3		Mild steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	75.0	CIL Low Grade, speed control
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	11.0	CIL Low Grade
1	Screen	Single deck screen	Metso, KS H1P 5000/2500 Linear Motion Single Deck Dewatering Screen	30.0	2 x 15kW
1	Collection box				Mild steel
1	Bin				Mild steel
1	Sampler		Metso Dual Sampler. Primary Rotary Sampler 350/400 and Secondary Sampler.	1.0	

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Equipment List

Customer: Nordic Mines Oy

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
1	Pump Box		1,5 m3		Mild steel
1	Pump		Metso, VASA HD 7010-200	45.0	Speed control, WEG motor
1	Pump		Metso, VASA HD 7010-200	45.0	Speed control, WEG motor
1	Pump		Metso, VSHM75 L120 W9	5.5	Fully recessed, WEG motor
1	Screen	Single deck screen	Metso, KS H1E 4000/1200 Linear Motion Single Deck Dewatering Screen	11.0	2 x 5,5 kW
1	Bin				Mild steel
1	Vacuum/Pressure tank		For 6 ton carbon - supply by Como		
1	Pump Box		1,5 m3		Mild steel, was 3495
1	Pump		Metso, HR150 FNR-S C4	18.5	was 3500, WEG motor
1	Pump	Spillage Pump	Metso, VS50 L150 O5	5.5	Speed control, WEG motor
1	Tank		1020 m3		Mild steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	355.0	Detox Low Grade, speed control
1	Tank		1020 m3		Mild steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	355.0	Detox Low Grade, speed control

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Customer:
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Equipment List
Nordic Mines Oy
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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
	High Grade Leaching				
1	Screen	Single deck screen	Metso, KS H1P 2000/1000 Linear Motion Single Deck Dewatering Screen	7.5	2 x 3,74 kW
1	Bin				Mild steel
1	Sampler		Metso Rotary Sampler 80/100	1.0	
1	Thickener		Metso, SFL 30-7. Diameter 7m. Volume: approx. 100m3	2.6	2,2 + 0,37kW
1	Pump Box		1 m3		Mild steel
1	Pump		Metso, HR50 FNR-S O4	3.0	Speed control, WEG motor
1	Pump		Metso, HR50 FNR-S O4	5.5	Speed control, WEG motor
1	Pump		Metso, HR50 FNR-S O4	5.5	Speed control, WEG motor
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	15.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade

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Customer: Nordic Mines Oy

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Screen	Sieve Bend	Multotec or equal. Sieve Bend, 975 mm wide x 800 mm arc length at 45 deg. 700µm continuous slots.		
1	Screen	Single deck screen	Metso, KS H1P 2000/1000 Linear Motion Single Deck Dewatering Screen	7.5	2 x 3,74 kW
1	Collection box				Stainless steel
1	Bin				Stainless steel
1	Sampler		Metso Rotary Sampler 80/100	1.0	
1	Pump Box		1,5 m3		Stainless steel
1	Pump		Metso, HR50 FNR-S O4	3.0	Speed control, WEG motor
1	Pump		Metso, HR50 FNR-S O4	3.0	Speed control, WEG motor
1	Pump		Metso, VSHM75 L120 W9	5.5	Fully recessed, WEG motor
1	Screen	Sieve Bend	Multotec or equal. Sieve Bend, 975 mm wide x 800 mm arc length at 45 deg. 700µm continuous slots.		
1	Screen	Single deck screen	Metso, KS H1P 2000/1000 Linear Motion Single Deck Dewatering Screen	7.5	2 x 3,74 kW
1	Bin				
1	Vacuum/Pressure tank		For 6 ton carbon - supply by Como		
1	Pump Box		1,5 m3		Stainless steel
1	Pump		Metso, HR75 LNR-S C4	4.0	WEG motor
1	Pump	Spillage Pump	Metso, VS50 L150 O5	5.5	WEG motor
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	55.0	Detox High Grade
1	Tank		67 m3		Stainless steel
1	Agitator		Ekato, Lightnin or equal	55.0	Detox High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	55.0	Detox High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	55.0	Detox High Grade

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
	High Grade Leaching				
1	Screen	Single deck screen	Metso, KS H1P 2000/1000 Linear Motion Single Deck Dewatering Screen	7.5	2 x 3,74 kW
1	Bin				Mild steel
1	Sampler		Metso Rotary Sampler 80/100	1.0	
1	Thickener		Metso, SFL 30-7. Diameter 7m. Volume: approx. 100m3	2.6	2,2 + 0,37kW
1	Pump Box		1 m3		Mild steel
1	Pump		Metso, HR50 FNR-S O4	3.0	Speed control, WEG motor
1	Pump		Metso, HR50 FNR-S O4	5.5	Speed control, WEG motor
1	Pump		Metso, HR50 FNR-S O4	5.5	Speed control, WEG motor
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	15.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Tank		67 m3		Stainless steel, Purchaser Supply
1	Agitator		Ekato, Lightnin or equal	11.0	CIL High Grade
1	Screen	Interstage screen	Kemix or equal (Pumping unit)	3.0	CIL High Grade
1	Screen	Sieve Bend	Multotec or equal. Sieve Bend, 975 mm wide x 800 mm arc length at 45 deg. 700µm continuous slots.		
1	Screen	Single deck screen	Metso, KS H1P 2000/1000 Linear Motion Single Deck Dewatering Screen	7.5	2 x 3,74 kW
1	Collection box				Stainless steel
1	Bin				Stainless steel
1	Sampler		Metso Rotary Sampler 80/100	1.0	
1	Pump Box		1,5 m3		Stainless steel
1	Pump		Metso, HR50 FNR-S O4	3.0	Speed control, WEG motor
1	Pump		Metso, HR50 FNR-S O4	3.0	Speed control, WEG motor
1	Pump		Metso, VSHM75 L120 W9	5.5	Fully recessed, WEG motor

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
	HCL Storage and Distribution				
1	Tank		5 m3		Glassfiber reinforced plastic or similar
1	Pump		Metso, HR50 FNR-S O4	3.0	Speed control, WEG motor
1	Pump	Spillage Pump		1.0	
	Elution, Carbon Regeneration, Electrowinning				
1	Elution System		6 ton pressure stripping plant	400.0	Supplied by Como
1	Carbon Regeneration System		300 kg/hr carbon regeneration kiln		Supplied by Como
1	Electrowinning System				Supplied by Como
1	Gold Room		barring furnace, sludge recovery, and anncillaries		Supplied by Como
1	Pump	Sump Pump	Metso, VS50 L120 O4	7.5	WEG motor
1	Screen		Metso, KS H1E 2000/600	4.5	
1	Scrubber		Regeneration kiln exhaust scrubber	7.0	
1	Pump	Sump Pump	Metso, VS50 L120 O4	7.5	WEG motor
1	Pump	Sump Pump	Metso, VS50 L120 O4	7.5	WEG motor
1	Scrubber		Electrowinning cell scrubber	7.0	
	Caustic Mixing and Distribution				
1	Tank	Heated tank	6 m3		Stainless steel
1	Heater			3.0	
1	Pump		Metso, HR50 FNR-S O4	3.0	WEG motor
1	Pump		Metso, HR50 FNR-S O4	3.0	WEG motor
1	Pump		Metso, HR50 FNR-S O4	3.0	WEG motor
1	Pump	Spillage Pump		1.0	
	Cyanide Mixing and Distribution				
1	Tank		28 m3		Stainless steel
1	Agitator			4.0	
1	Pump		Metso, HR50 FNR-S O4	3.0	WEG motor
1	Tank		30 m3		Stainless steel
1	Pump		Metso, HR50 FNR-S O4	3.0	WEG motor

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
1	Pump		Metso, HR50 FNR-S O4	3.0	WEG motor
1	Pump	Spillage Pump		1.0	

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
	Propane Distribution				
1	Propane Distribution System		LPG Rental package	50.0	Purchaser Supply 40 + 10 kW
	CuSO4 Mixing and Distribution				
1	Tank		12 m3		Stainless steel
1	Agitator			2.5	
1	Tank		5 m3		Stainless steel
1	Pump		Metso, HR50 FNR-S O4	3.0	Speed control, WEG motor
1	Pump		Metso, HR50 FNR-S O4	3.0	WEG motor
1	Pump	Spillage Pump		1.0	
	SO2 Distribution				
1	SO2 System		SO2 Rental Package	2.0	Purchaser Supply
	Lime Mixing and Distribution				
1	Lime Slaking System		45 m3 silo, screw feeders, mixing tank, agitator	2.0	
1	Tank		75 m3		
1	Agitator			5.0	
1	Pump		Metso, HR75 FNR-S C4	7.5	WEG motor
1	Pump		Metso, HR75 FNR-S C4	7.5	WEG motor
1	Pump	Spillage Pump		1.0	
	Lead Nitrate Distribution				
1	Bin				
1	Feeder	Screw feeder/conveyor		0.4	
	PAX Mixing and Distribution				
1	Tank		4 m3	0.4	Stainless steel
1	Agitator			0.4	
1	Tank		7 m3	0.4	Stainless steel
1	Pump		Metso, HR50 FNR-S O4	3.0	WEG motor
1	Pump	Spillage Pump		1.0	

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
	Dow 250 Mixing and Distribution				
1	Pump		Metso, HR50 FNR-S O4	3.0	WEG motor
1	Tank		7 m3	0.4	Stainless steel
1	Pump		Metso, HR50 FNR-S O4	3.0	WEG motor
1	Pump	Spillage Pump		1.0	
	Oxygen Distribution				
1	Oxygen System		Oxygen Rental Package	2.0	Purchaser Supply

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
	Low Grade Tailings				
1	Pump	Spillage Pump	Metso, VS50 L150 O5	5.5	WEG motor
1	Pump Box		20 m3		
1	Pump		Metso, VASA HD507-150	132.0	Speed control, WEG motor
1	Pump		Metso, VASA HD507-150	132.0	Speed control, WEG motor
1	Pump		Metso, VASA HD507-150	132.0	Speed control, WEG motor
1	Pump		Metso, VASA HD507-150	132.0	Speed control, WEG motor
1	Pump		Metso, VASA HD507-150	132.0	Speed control, WEG motor
1	Pump		Metso, VASA HD507-150	132.0	Speed control, WEG motor
	High Grade Tailings				
1	Pump		Metso, HR75 FNR-S C4	11.0	Speed control, WEG motor
1	Pump		Metso, HR75 FNR-S C4	11.0	Speed control, WEG motor
1	Pump Box		1m3		
1	Pump		Metso, HR50 FNR-S O4	3.0	Sized according to feasibility study. WEG motor
1	Thickener				Purchaser Supply
1	Pump	Pump	Metso, MM150, FHC-S 03	30.0	Speed control. Sized according to feasibility study. WEG motor
1	Pump	Pump	Metso, MM150, FHC-S 03	30.0	Speed control. Sized according to feasibility study. WEG motor
1	Pump	Pump	Metso, MM150, FHC-S 03	11.0	Speed control. Sized according to feasibility study. WEG motor
1	Pump	Pump	Metso, MM150, FHC-S 03	11.0	Speed control. Sized according to feasibility study. WEG motor
1	Pump	Gland water Pump			Speed control. Sized according to feasibility study. WEG motor
1	Pump	Return water Pump	Metso, MM200 EHC-S C5	18.5	Speed control. Sized according to feasibility study. WEG motor
1	Pump	Return water Pump	Metso, MM200 EHC-S C5	18.5	Speed control. Sized according to feasibility study. WEG motor

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
	Water Distribution				
1	Tank				
1	Pump		Metso, MM200 EHC-D C5	55.0	WEG motor
1	Pump		Metso, MM200 EHC-D C5	55.0	WEG motor
1	Pump		Metso, MM200 EHC-D C5	55.0	WEG motor
1	Pump		Metso, MM200 EHC-D C5	55.0	WEG motor
1	Pump		Metso, MM200 EHC-D C5	55.0	Sized according to feasibility study. WEG motor
1	Pump		Metso, MM200 EHC-D C5	55.0	Sized according to feasibility study. WEG motor
1	Pump			15.0	
1	Pump			15.0	
1	Vacuum/Pressure tank				
1	Pump			15.0	
1	Pump			15.0	
1	Vacuum/Pressure tank				
1	Pump			15.0	
1	Pump			15.0	
1	Vacuum/Pressure tank				
	Air System				
1	Air Compressor		Atlas Copco, or equal, oil free and water cooled	75.0	Instrumental air and plant air,
1	Air Compressor		Atlas Copco, or equal, oil free and water cooled	75.0	Instrumental air and plant air,
1	Air Receiver		5 m3		
1	Air Drier		Drier		
1	Air Receiver		2 m3		
1	Air Drier		Drier		
1	Air Receiver		2 m3		
1	Air Blower		Aerzen, Kaeser or equal, - 6500 m3/h blower air	355.0	LG Detox aeration air,
1	Air Blower		Aerzen, Kaeser or equal, - 6500 m3/h blower air	355.0	LG Detox aeration air,
1	Air Blower		Aerzen, Kaeser or equal, - 6500 m3/h blower air	355.0	LG Leach aeration air,
1	Air Blower		Aerzen, Kaeser or equal, - 6500 m3/h blower air	355.0	LG Detox/Leach aeration air, standby
1	Air Blower		Aerzen, Kaeser or equal, - 4250 m3/h air blower	132.0	HG Detox aeration air,

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Qty.	Description	Equipment	Specification	Installed Power (kW)	Remarks
1	Air Blower		Aerzen, Kaeser or equal, - 4250 m3/h air blower	132.0	HG Detox aeration air, Standby
1	Air Blower		Aerzen, Kaeser or equal, - 900 m3/h blower air	45.0	Flotation air,
1	Air Blower		Aerzen, Kaeser or equal, - 900 m3/h blower air	45.0	Flotation air - stand by
	General				
	Piping and valves		Process, water, air piping, hand valves		Appendix No. 11
	Steel		Structural steel, platework, platforms, staircases.		Appendix No. 11
	Power Supply				
	Electrical and Automation System		Transformers, MCC, Control system, instrumentation.		Appendix No. 7
	CN Monitoring				
3	Cyanide monitoring system				For 6 streams

17.2.2 Primary Crusher and Feed Arrangement

The primary feed hopper with a capacity of approximately 80 cubic meters, having grizzly bars spaced at nominally 1 m X 1 m, feeds directly onto a Metso VF661-2V vibrating feeder. This unit feeds directly into a Nordberg/Metso C160 jaw crusher.

The jaw crusher typically has a closed side setting of 200 mm. This unit has the capacity to deliver approximately 800 mtph at a closed side setting of 200 mm, which is more than ample for feed to the process plant.

Crusher discharge is via a chute to a Metso variable speed VMOU 25/10-5060/B vibrating feeder for belt loading.

The current owner plans to install a Metso HP 400 cone crusher preceded by a vibrating screen to send approximately 10 – 15% oversize to the AG mill to serve as grinding media, with the remainder being fed to the cone crusher to further reduce particle size for feed to the AG mill to enhance throughput capacity to approximately 6,000 mtpd.

17.2.3 Stacker Conveyor System

Primary crushed mineralized material is currently delivered by a 1,200 mm wide inclined conveyor to a single point discharge under a covered semi-live stockpile with an estimated live capacity of 7,500 to 10,000 metric tonnes.

The current owner plans to install a moveable belt tripper discharge to the crushed mineralized material stockpile to distribute the crushed mineralized material over each of the feed ports to minimize segregation by particle size.

17.2.4 AG Mill Feed System

Beneath the stockpile are four discreet feed ports spaced at approximately 15 meters apart. Each feed port is equipped with a Metso VMOU 25/10-5060/B vibrating feeder independently controlled, which feeds onto a single belt in the tunnel beneath the stockpile for delivery to the primary autogenous grinding mill.

17.2.5 Primary Autogenous Grinding Mill

A mechanical scale on the mill feed conveyor controls the feeders under the stockpile to the Outotec Autogenous Mill (AG). The installed power is 3,000 Kw. The inside diameter of the AG-Mill is 6.5 m and the inside length is 8.5 m.

Water is added to the AG-Mill in order to reach 65 weight-% solids in the finest (-8 mm) discharge stream.

A double drum trommel screen after the AG -Mill separates the discharge into three sized products: fines (< 8 mm), chips (8 – 50 mm), and pebbles (50 – 150 mm).

The fines material, together with the discharge from the Pebble Mill, report to the classification sieve or can be diverted directly to the Pebble Mill feed if required.

The two largest product sizes of the AG-Mill can circulate back to the AG-Mill for regrind if needed through the Pebble Crusher System. Usually the coarsest material (pebbles) from the AG are used as grinding media in the Pebble Mill when pebbles are needed, and the power intake of the Pebble Mill enables it. The excess pebbles and chips (8-150 mm) are transported to the pebble crush system as required by conveyor belt.

17.2.6 Pebble Crusher System

To increase the mill throughput, two cone crushers in series re-crush the excess critical size (8-150 mm) from the AG-Mill discharge material. The feed to the cone crushers is designed to be 87 tonnes per hour (35% of AG Mill feed). The critical size is re-crushed down to 20 mm before being returned back to primary milling.

The conveyor belt under the primary crusher transports the crushed product to a double deck screen (40 and 9 mm), on top of the secondary cone crusher. The screen separates three products:

1. Fines: < 9 mm
2. Mid-size: 9 – 40 mm
3. Oversize: > 40 mm

Mid-size product is crushed in the secondary cone crusher, whereas fines (-9 mm) and oversize material (> 40 mm) are bypassed.

If the primary cone crusher cannot be used, the secondary cone crusher still can operate if the oversized material, which is too large for the secondary crusher to handle, is screened off.

17.2.7 Secondary Grinding Pebble Mill

Underflows from the primary cyclone cluster are ground in closed circuit in the Pebble Mill. The grinding media are 50-150 mm size pebbles from the AG-Mill. The power draw from the Pebble Mill is controlled by the pebble material flow from the AG-Mill. The installed power is 3,000 kW. The inside diameter of the Pebble Mill is 6.5 m and the inside length is 8.5 m.

17.2.8 Classification

Fines discharged from the AG-mill and Pebble Mill are pumped to a two-deck classifying sieve with 3 mm opening on the upper deck and no screen included on the bottom deck. Material > 3 mm reports back to the AG-Mill and < 1.5 mm material is pumped to the primary classifying cyclone and on to Flash Flotation and gravity separator circuits.

A cyclone battery, total of 12 units, is used to classify particles ready for low grade leaching. The cyclone underflow with the coarse particles reports back to the pebble mill for regrind. The cyclone overflow is the feed to the low grade leaching circuit. The targeted particle size of cyclone overflow currently is P_{80} ~100 µm.

17.2.9 Flash Flotation and Gravity Circuits

From the sieve, the undersized flows by gravity to a sump and is pumped to the flash flotation circuit. The Flash Flotation unit (Metso Unit Cell RCS 30) produces high grade concentrate of gold-bearing sulphide

minerals including arsenopyrite and pyrite. Copper sulphate ($CuSO_4$) is added to activate arsenopyrite and PAX (Potassium Amyl Xanthate) and Aerophine 3418A are used as collectors. The produced concentrate is directed to the concentrate regrind circuit for onward direction to the high grade CIL circuit.

The tailings from flash flotation are circulated back to the primary cyclone cluster for reclassification. Underflow from the primary cyclone cluster is returned to the Pebble Mill for further grinding.

Overflow from the primary cyclone bank is forwarded to gravity concentration. The gravity concentration circuit feed is split by a cyclone circuit with cyclone underflow fed to the spirals (6 ea Multotec triple starts) circuit and the cyclone overflow fed to the Knelson concentrator (Knelson CVD64-D40).

The target split particle size for the gravity concentration circuit is 105 µm. The particle size fed to the spiral circuit is approximately P_{80} = 68 µm. The particle size fed to the Knelson concentrator is approximately P_{80} = 150 µm.

The two gravity concentrates are directed to the concentrate regrind circuit for additional grinding before subsequent high grade CIL. The target particle size for the high grade concentrate regrind circuit is P_{80} = 45 µm.

17.2.10 Leaching

The cyanide leach facility incorporates standard Carbon in Leach methodology. The average nominal annual mill throughput of 197 metric tonnes per hour (mtph) was utilized for mass balance purposes. It has been assumed that the plant will operate 8,000 hours per year (assuming 90% overall availability). The feed to the cyanidation plant is comprised of two streams, including concentrate from the gravity circuits and flash flotation to high grade CIL and the tailings from each to low grade CIL.

Design of the low grade leach circuit, carbon adsorption, elution, and gold recovery circuit, with respect to retention time and gold production, is based on a nominal throughput of 187 mtph containing 0.434 g/t Au, 0.004 % As, and 0.022% S.

Design of the high grade leach circuit capacity, carbon adsorption, elution, and gold recovery circuit, as well as retention time, gold production, etc., is based on a nominal throughput of 10 tph containing 51.4 g/t Au, 22.7 g/t Ag, 1.2% As, and 5.9% S.

The upgrade concentrate regrind circuit will have the capacity to produce up to 13 mtph at P_{80} = 45 µm product. The increased high grade grinding capacity will ensure that all gravity and flotation concentrates will be reground and report to the high grade leach circuit. During previous operations, the undersized regrind mill resulted in a portion of the concentrates reporting to the low-grade leaching circuit, thereby substantially lowering overall gold recovery.

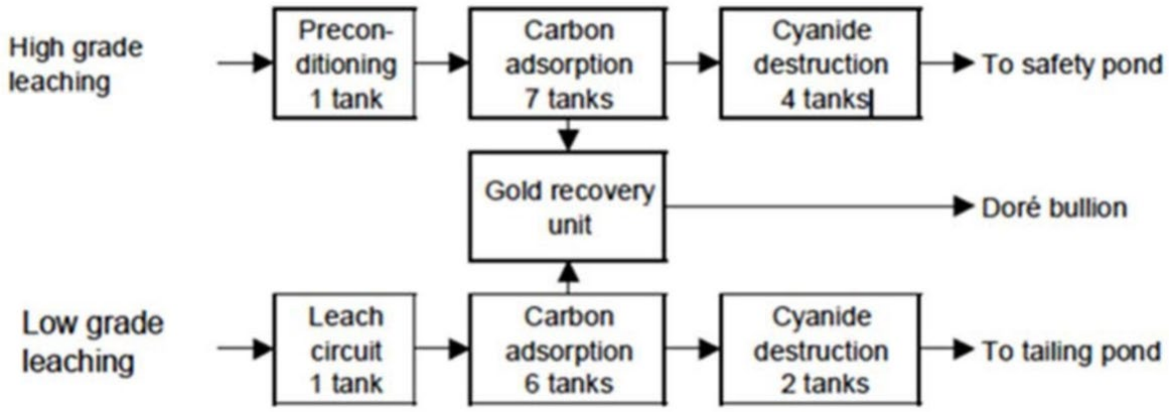
The assumptions made for the initial plant modification upon potential restart are based on the results of a pilot scale test made by GTK in Finland; “Pilot Plant on Laivakangas Ores” dated 12 Feb 2008.

Pumps, piping, screens, cyclones, thickener, and other items which required sizing and designing depend on actual pulp flow variations, and are based on an instantaneous flow rate corresponding to an annual throughput of nominal 2 million metric tonnes per year (mtpy). Reagent dosing systems and the cyanide detoxification system are also designed for higher pulp flow rate.

Mass flows for the leach circuit with increased high grade circuit throughput will be completed as the plant unit operations are optimized following potential restart.

A simplified block diagram of the process flow is presented in Figure 17.3.

Figure 17.3. Block diagram for process flow.



Source: Shoemaker and Sparks (2021)

17.2.10.1 CIL Circuits

Leaching of gold and silver from previous processing is carried out by means of CIL. The CIL process is based on dissolution of gold and silver in an aerated pulp containing cyanide, followed by adsorption of the dissolved Au and Ag values on coarse granules of activated carbon.

The pulp flow is divided into two streams: (1) a high grade leach feed that consists of concentrates from flash flotation and gravity concentration and (2) a low grade leach feed that consists of cyclone overflow from the grinding circuit, as well as flash flotation and gravity concentration tails. The principal reasons for separating the pulp into separate streams is to direct tailings high in arsenic (arsenopyrite – higher gold content and sulphur) into special lined cells and to maximize Au recovery in the high-grade circuit. Tailings from the low-µgrade circuit which are relatively low in reactive sulphides are then deposited into an unlined tailings storage facility (TSF) as a free-draining paste. In addition, due to design operating parameters, the low grade CIL circuit is less effective in recovery of Au from arsenopyrite.

Since the high-grade material has shown significant CN consumption characteristics during leach tests, it is likely that installation of a CN recovery system will be cost beneficial in the future, though neither the cost nor the benefits are included in this Technical Report. A pre-conditioning tank will however be included as a first stage where lead nitrate and oxygen are added. In the low grade circuit, the first tank is designed as a pure leach tank with no carbon included. The following six tanks are traditional CIL tanks.

The feed will be first pumped to the trash screens, one for each stream, at an approximate pulp density of 1.4 mt/m^3. The trash screen will remove any coarse material that may settle in the tanks or block the interstage screens in the CIL tanks.

Two vibrating horizontal trash screens, provided with water sprays, as in the current circuit are mounted in parallel over the leach tank and have polyurethane decks with an aperture of 600 µm. The trash screens oversize is conducted from the screen directly to a bin for disposal. The trash screen undersize moves through the leach feed automatic sampler to the first tank in the leaching circuit.

The leach circuit is comprised of seven stirred tanks in series (eight tanks in the case of the high-grade leach circuit). The pulp moves through the leach by gravity via downcomers and interstage launders. Bypass provisions are installed for each individual stage.

Cyanide is added to the first two CIL stages as a 20% solution weight per volume (w/v). Air is sparged into each leach tank to maintain the dissolved oxygen content above 6 mg/l. Lower oxygen content, if experienced, will slow the overall leaching rate, resulting in solid gold losses. Pure oxygen is used on the high-grade circuit since oxygen uptake rate tests made by GTK indicate that the addition of air is not sufficient for oxygen requirements for effective dissolution of gold.

Slaked lime is added as 20% slurry (w/v) to the circuit from a main ring in order to maintain the pH at 10-10.5. The lime addition rate is strictly controlled by online measurement of pH by means of electrodes to avoid generation of hydrogen cyanide gas (HCN). The acid constant for hydrogen cyanide, the pKa-value, is about 9.2. At pH 9.2, cyanide in the solution occurs as cyanide ions and hydrogen cyanide at a ratio of 50-50. At pH < 9.2, the acid form (HCN) dominates and is released from the solution to the atmosphere as a poisonous gas. A strict control of the pH-value ensures that most of the added cyanide will remain in solution.

The leach and CIL tanks are located outdoors. Leach tanks are contained within containment basins designed to hold a minimum one tank volume to prevent any leakage to the environment.

The adsorption is carried out as a multistage counter current process to obtain high gold and silver solution loading at high recoveries. The coarse granules of carbon are retained by interstage screens that are submersed in the pulp.

The stainless steel wedge wire screens have an aperture of about 0.7 mm which allows the pulp to pass through but retains the carbon. Carbon is harvested and transferred upstream through the adsorption circuit, counter-current to the slurry flow by airlifts. The airlifts are operated in a sequence mode to minimize the effect of back mixing on the adsorption profile and to maintain an even distribution of the total carbon inventory over the entire circuit.

Reactivated and new carbon is added to the last CIL tank in order to restore and maintain the total required level of carbon.

In the low-grade circuit, loaded carbon is harvested from the first CIL tank by gravity flow and pumped to the loaded carbon screen. The loaded carbon is washed on the screen by water sprays and the carbon flows by gravity to the elution column. The loaded carbon screen U/F is returned to the first CIL tank. A level probe switches off the loaded carbon pump when the column is fully loaded as well as the loaded carbon screen after a short delay.

In the high-grade circuit, the loaded carbon flows by gravity along with slurry to the loaded carbon screen. The slurry (undersize flow) is pumped back to the CIL tank and the loaded carbon (oversize flow) is washed into a carbon flush tank. The tank is pressurized by the main water system, and the carbon is hydraulically transferred to the elution plant.

The barren slurry from the last adsorption tank is screened on a horizontal vibrating carbon safety screen to detect and collect any carbon losses. The polyurethane deck has an aperture of 600 µm. The screen oversize flows by gravity directly into a bin for disposal. The screen undersize is discharged through a final residue sampler to the CIL tailings sump to be pumped to the cyanide detoxification circuit.

To optimize the usage of cyanide and reduce the costs, an automatic control system is installed. The automated control system was not utilized during previous operations, thereby contributing to less efficient operation and higher costs.

The cyanide control system utilizes semi-continuous potentiometric cyanide analysis which makes it possible to analyze the free cyanide levels in the leach solutions without any interference from metal-complexed cyanide, which is not available for cyanidation. The continuous data for free cyanide is used to automatically control the dosage of NaCN solution.

17.2.10.2 Cyanide Detoxification

Tailings from each CIL circuit are treated separately. Each stream reports to its own Detox Plant and subsequently to its own tailings storage facility.

Cyanide ions in the discharged pulp are decomposed by the INCO SO2/air process. The process is well proven and is able to achieve the targeted level of < 10 milligram (mg) CN total per liter (L) solution in the discharge.

The cyanide detoxification is accomplished in two reactors in series, providing three hours residence time on a continuous basis. The reactors are located outdoors to mitigate environmental issues.

17.2.10.3 Loaded Carbon Processing

Pressure Zadra Elution

Loaded carbon is transferred to the acid column over a period of time as required. The carbon is allowed to drain off excess water until the column is filled with loaded carbon. Once full, the drain valve is shut and a mixture of raw water and hydrochloric acid (to a concentration of 3% HCl) is pumped up through the column before discharging to the low grade detox tank.

When the appropriate volume of diluted acid is pumped through the column (normally one bed volume approximately 7 m^3), the carbon is then flushed with four bed volumes (28 m^3) of raw water to remove residual acid and to increase pH. The rinse solution is also sent to the detox tank.

Once the acid washing and rinsing is completed, the column is then pressurized and the carbon moved to the elution column. The elution column is then drained of excess water. Finally, the elution column is pressurized, put in a closed loop with the eluate tank, heater, a heat exchanger, and electrowinning cells.

Gold is stripped from carbon by high-temperature, low-cyanide concentration and high pH eluate solution and eluted into eluate solution that circulates through the carbon bed. Loaded gold solution then circulates to electrowinning cells where gold is transferred onto steel cathodes and precipitated into the bottom of the cell.

A caustic/cyanide solution is pumped from the eluate tank, heated up to around 90ºC by the reclaim heat exchanger (recovering heat from the solution exiting the elution column by a plate and frame heat exchanger) and then the solution is heated up to 140ºC in a direct fired heater. The eluted solution is kept under pressure to keep it in a liquid state, hence the term Pressure Zadra.

The hot pressurized solution is then pumped through the elution column via screens at the base. This change in temperature and pH of the eluate solution causes the gold and silver to re-enter solution as a cyanide complex. This is an equilibrium reaction. At low temperatures and cyanide concentrations gold will migrate from solution onto the carbon, but at elevated temperatures and cyanide concentration the process is reversed. The solution then exits the column at the top, again via tube screens and flows through the other

side of the reclaim heat exchanger mentioned earlier and then into a flash pot to allow any entrained steam to vent to the atmosphere.

The gold and silver bearing solution then flows to the electrowinning cells (two operating in parallel), where the precious metals are plated onto cathodes. The solution is then transferred back to the eluate tank, thus completing the circuit.

Once the requisite time has elapsed (design 12 hours, but will depend upon metal loading on the carbon, i.e., gold, silver, copper, etc.), the solution exiting the column should be quite low in metal content (approximately 5 ppm or less) and the circuit will then be switched off. The elution column is de-pressurized with fresh water and the now eluted, barren carbon is transferred to the regeneration kiln feed hopper to be regenerated and used again in leaching. A dewatering screen is mounted above the feed hopper to remove excess water.

Carbon Regeneration

Once the feed hopper is full, the kiln can be started. Carbon is fed into the kiln at the prescribed rate (250 kg/hr) via a screen feeder which will also act to moderately dewater the carbon further. Water is needed in the kiln to create a reducing atmosphere, hence if the carbon has been allowed to stand for some time, it should be re-wetted before being fed to the kiln.

Carbon will be heated to 750ºC in the regeneration kiln, which is a horizontal, rotary, indirectly fired furnace. This removes volatiles (e.g. diesel, oils, grease, and flotation reagents) and regenerates the surfaces of the carbon to return the carbon to near new adsorption capability. It is very important that the carbon is washed thoroughly with clean water prior to regeneration.

Any soluble material can permanently cement onto the carbon if it is not adequately washed. This is true for silica which under certain conditions will dissolve into the eluate, and if it is not removed from the carbon, will revert to silica completely destroying the carbon.

Once regenerated, the carbon emits from the end of the kiln, and passes over a carbon sizing screen into the quench vessel where it is cooled. Once the batch is complete, the quench vessel is closed and pressurized, transferring the carbon hydraulically to the appropriate tank. Water from the above mentioned dewatering screens reports to the carbon safety screen.

17.2.10.4 Electrowinning and Smelting

Gold is electro-won onto steel wool cathodes in the electrowinning cells and further precipitated onto the bottom of the cell by direct current. Gold from the screens and precipitated as sludge is removed and placed into trays. The gold sludge material is then oxidized in the calcine oven.

Once calcination is complete, the iron is oxidized to iron oxides, which are taken up in the slag during the smelting process. This occurs when calcined gold/silver product is mixed with fluxes borax, silica, etc., and are placed in the barring furnace and heated to approximately 1200ºC.

When the contents of the barring furnace are fully molten the contents should have separated into two phases: metal, and slag. The molten contents are then poured into molds, the heavier metal (doré) remains in the bottom of the molds and the slag flows over the lip.

Finally, when the doré is solidified, the molds are emptied and gold/silver bars are easily parted from remaining slag by chipping. Doré bars are then drill-sampled, stamped, and placed in the safe for delivery to the buyer. Residual slag should be crushed and returned to the high grade regrind circuit for reprocessing.

17.3 Plant Throughput Summary

From February 2012 to February 2022, a total of 4,026,189 tonnes of material extracted from the Laiva Gold Project was processed at the Laiva processing plant producing a total of 89,405 ounces of gold. A summary of historical production is provided in Table 17.2.

Table 17.2 Laiva processing plant historical throughput summary.

	Nordic (2012 to 2014 – 26 months)	Firesteel Resources (2018 to 2019 – 5 months)	Otso Gold (2021 to 2022 – 5 months)
Average Monthly Tonnes	122,692	102,400	108,168
Total Tonnes	2,973,348	512,001	540,839
Au grade (g/t)	0.88	0.89	0.84
Au recovery (%)	81.5	85.0	74.5
Average Monthly Production (Troy Ounces)	2,950	2,500	1,757
Total Gold Production (Troy Ounces)	68,116	12,502	8,787

Source: APEX (2025)

18 Project Infrastructure

Project infrastructure in this instance can generally be construed to include site access, power supply, water supply, waste dumps, TSF facilities, and site drainage. As an existing project including mine, mill, and infrastructure which was in production as recently as February 2022, all infrastructure is in place and remains in a near-new state.

18.1 Logistics and Access

The Laiva Gold Project site is located approximately 25 km by road from the port city of Raahe, Finland. Much of the distance from Raahe is on paved two-lane road suitable for heavy transport of equipment and materials. The last 10 km is improved all-weather gravel road, also suitable for heavy transport of equipment and materials. Logging is prevalent in the area and log trucks frequently transit the roads used for site access to the Project.

Raahe has a small port which can receive bulk freight and heavy equipment. In the alternative, the City of Oulu, located approximately 90 km north of Raahe along the major north south highway along the west coast of Finland has a much more substantial port. Both ports generally remain open throughout the winter months.

Raahe, a town of approximately 25,000 has vendors for many routine operating supplies and services, because located nearby is a large steel mill as well as several other heavy industrial installations. Oulu, a city of approximately 200,000 is the largest city and industrial hub in the north of Finland. All supplies, services, and equipment essential to mining and processing are available in Oulu.

18.2 Electrical Power

Ample grid power is available to the site. An overhead line supplies 3-phase power at 120 kv ,50 hz to a 20,000 kva substation located on site. Grid service is generally highly reliable notwithstanding moderately harsh winter weather in the north of Finland. No significant onsite standby generation capacity is present at Laiva.

18.3 Water Supply

Water is plentiful in northern Finland. Process makeup water not otherwise available from the freshwater collection and treatment system from tailings water recycle, pit pumping, and site run-off is expected to be sufficient to provide process water. Typical past consumption has been about 35,000 m^3 per month. Historical operating conditions indicate that purchased makeup water is not expected to be required except in periods of exceptional drought, which are rare in this region. Otso refurbished and recommissioned the process water dam in July 2021 (Otso Gold, 2021).

Treated potable water is available to be purchased from the local municipality via pipeline to the Laiva site. Historical site domestic water consumption is estimated at nominally 1,500 m^3/year.

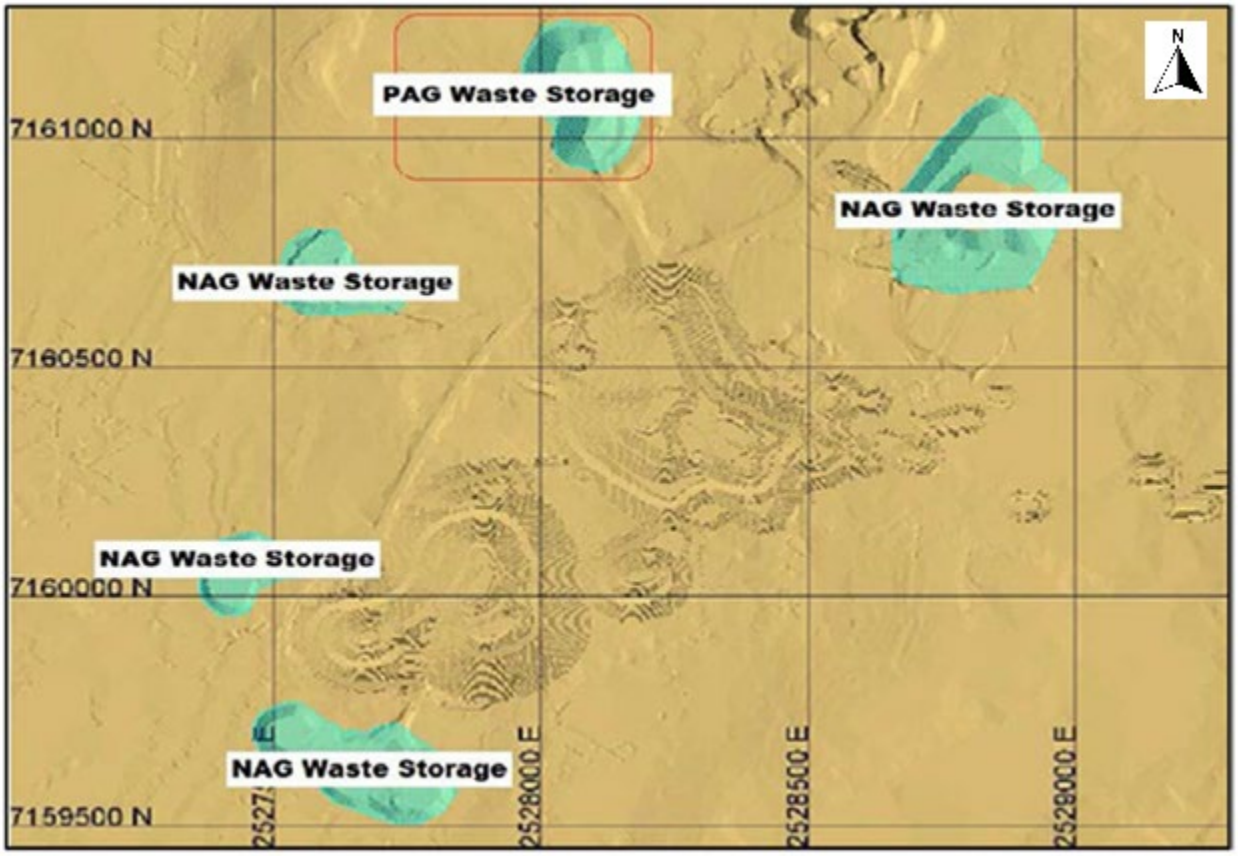
18.4 Waste Dumps

Mining waste is divided into potentially acid generating waste (PAG) and benign, nonacid generating waste (NAG). The waste rock is differentiated based on sulphide content, with waste containing higher levels of sulphide material reporting to the PAG dump area and waste with lower content reporting to the NAG waste storage area.

The PAG waste must be deposited on impermeable underliner of high-density polyethylene (HDPE) or locally available processed peat. The underliner is placed on a prepared surface of crushed gravel topped with sand and protected from above by a layer of sand overlain by crushed gravel. Drainage water from the PAG waste is collected and pumped to a collection pond where it is mixed with other site drainage before being pumped to the sea.

No special preparation is required for the NAG waste stockpiles. The locations of waste storage at the Property are illustrated in Figure 18.1.

Figure 18.1 Waste storage areas.



Source: modified from Shoemaker and Sparks (2021)
Note: Coordinate system is Finnish Coordinate System EUREF FIN TM35FIN, Zone 2.

18.5 Tailings Storage Facilities

Similar to the mine waste dumps, the tailings storage facilities (TSF) are divided between high sulphide and low sulphide TSFs. High sulphide tailings from the high grade leach circuit are delivered to HDPE lined cells. Tailings from the high grade CIL circuit also contain elevated levels of arsenic resulting from the concentrated presence of arsenopyrite.

18.5.1 High Grade TSF

Following exit from the high grade CIL circuit, the tailings pass through the Inco air/SO_2 for cyanide destruction, before being pumped to the isolation cell. Each cell has a nominal capacity of 117,000 dry metric tons of high grade tailings. A second cell was completed shortly before shutdown of operations by the previous operator. The remaining life of high grade tailings cell #2 (already constructed) is estimated at approximately 30 months at planned operating levels.

18.5.2 Low Grade TSF

The relatively benign low grade tailings which accounted for the bulk of the historical tailings disposal (240 tph low grade vs 10 tph high grade) are pumped via a 7.39 km pipeline to a dewatering plant before being deposited as paste at approximately 55% solids. The elevation gain from the mill to the paste plant is approximately 60 meters. Low grade tailings are pumped at approximately 35% solids through a 300 mm steel pipeline. Pumping over the entire distance is accomplished by three Metso VASA HD507-150 pumps arranged in series for a total input of 396 kW. The pumping system has 100% online spare redundancy, which can be instantly activated with automatic valves via a "Y" arrangement (Figure 18.2).

Figure 18.2. Paste tailings system.



Source: Shoemaker and Sparks (2021)

The steel pipeline is a less than ideal system due to abrasion wear and higher C factor than HDPE. In addition, the interior surface of the steel pipeline has accumulated a build-up of scale thought to have resulted from

sulfur reducing bacteria (Paterson and Cooke, 2014). Firesteel Resources, a previous operator, planned to remove much of the accumulated scale by scraping the inside of the pipeline with a descaling pig service provided by an outside contractor prior to restart of operations. However, that work was never completed.

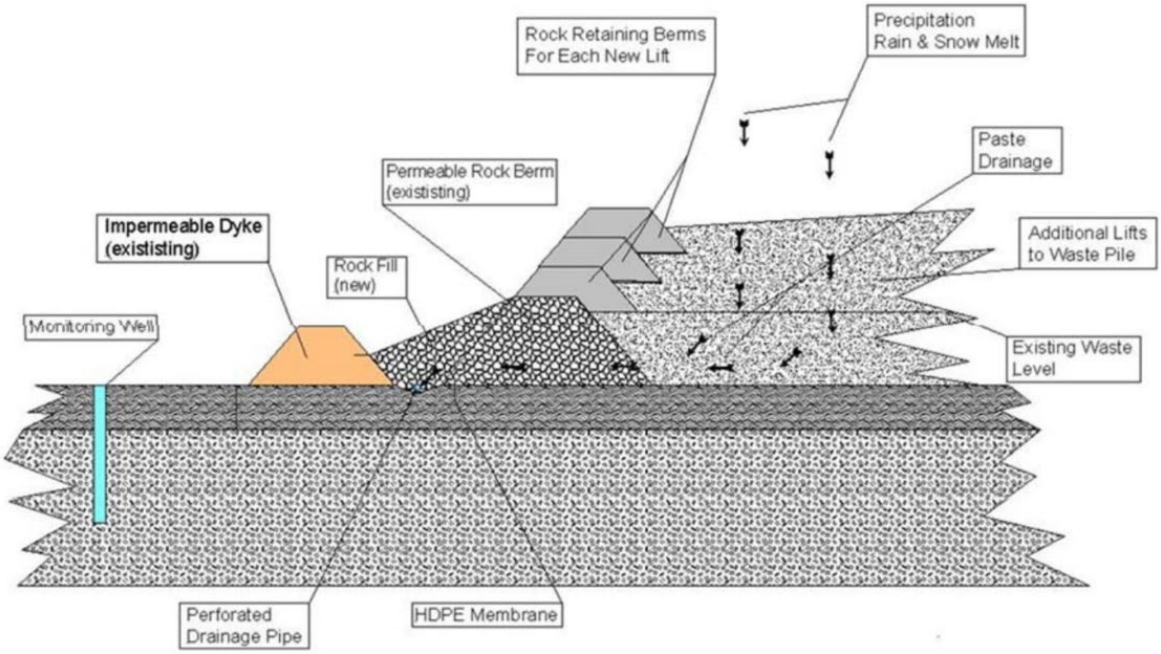
Potential operations can recommence without descaling, in order to empirically determine operating parameters absent pipeline descaling in order to determine best future alternatives. The QP does not disagree with this strategy, although believes it constitutes some potential risk to achievement of performance parameters modelled.

The dewatering system located near the paste repository consists of a 35 m diameter Outotec High Compression Supa Flow conventional thickener with appropriate flocculent feed system and underflow pump to deliver paste to the repository. While thickener underflow was calculated by Outotec to be approximately 70% solids by weight, the centrifugal style underflow pump proved, not surprisingly, to be incapable of handling such a high percentage of solids. This was somewhat fortuitous, as the flocculent used, as well as the floc feed system were only able to deliver approximately 55% solids to the underflow for paste deposition.

The low grade paste repository was initially based on the notion that with 70% solids, the paste would not require containment. At 55% solids actually achieved, containment proved to be required. Previous operators sought to prevent spread of the thinner than expected paste by erecting a permeable rock berm to contain the spread of the paste. A short distance behind the permeable rock berm, the previous operator erected an impermeable earthen dike to direct free draining water rendered from the paste as it drained to a large collection pond that also collects the thickener overflow from the paste plant.

While perhaps unintended by the previous operator, the remaining structures form the foundation for a system based on a sound, well proven method for effectively managing free draining paste tailings. The following generalized schematic shown on Figure 18.3 provides the paste containment concept developed by the previous operator.

Figure 18.3. Past confinement conceptual diagram.



Source: Shoemaker and Sparks (2021)

As the design grind for the low grade tailings is relatively course (P_{80} approximately 100 µm), and the pulp is virtually free from slimes, the paste product has been demonstrated to be free-draining, thereby eliminating development of a hydrostatic head requiring containment.

Rather, the paste deposited at ± 55% solids simply needs confinement as it dewaters discharging through the permeable rock berm. Similarly rain and snowmelt move through the deposited paste and through the permeable berm and are directed to the containment pond.

The low grade TSF impoundment structure will be raised prior to any potential mining operation restart.

18.6 Site Drainage

All site drainage, including site run-off, run-off from PAG waste, mine dewatering, paste thickener overflow, and drainage from deposited paste has historically been collected and pumped to a temporary storage basin with a maximum capacity of approximately 700,000 cubic meters. Excess combined clear water effluent from the storage basin not recycled as process water was pumped through a 17.42 km pipeline to an offshore submerged discharge point. Maximum discharge rate with existing pumps and pipeline was approximately 240 m^3 per hour (1,056 US gallons per minute).

19 Market Studies

19.1 Market Studies

As of the Effective Date of his Report, the Laiva Gold Project is a past producing mine with a historical established market for the sale of mineralized material. Gold mineralized material is expected to be delivered for sale to a recognized refinery for further processing. Gold mineralized material is freely traded at prices that are widely known, so prospects for sale of any production are virtually assured.

19.2 Contracts

19.2.1 Mine Development and Operations

Future mine development and operational activities at the Property, including drilling, maintenance, and security, are planned to be conducted by the current owner of the project.

19.2.2 Refining Contract

Discussions regarding a refining contract have not yet commenced as of the Effective Date of this Technical Report.

20 Environmental Studies, Permitting, and Social or Community Impact

The Laiva Mine and process plant were fully permitted for operation and were fully operated for the period February 2012 through December 2013 and the process plant only continued to operate, processing low-grade stockpile material until March 2014. Since then, the operation was on active care and maintenance, until restarted in August 2018 (processing November 2018). The site was placed back to care and maintenance in April 2019. Under Otso Gold, mining recommenced for a 5-month period between October 2021 and February 2022 and has been on care and maintenance since. All environmental permits are active and have legal validity. No permit requirements existing at this stage.

20.1 Environmental Studies Completed

In 2018, several studies on the low-grade TSF area structures were completed on behalf of the previous owner. These studies included stability assessment for the existing walls, tailings quality assessment, and danger risk assessment. Based on the information received from these studies, the low-grade TSF area structures were reassessed by Geobotnia and Knight Piesold in 2021. The 2021 studies included new design for perimeter dams, tailings deposition model, and detailed discharge plan for the first 12 months of production with attendant raises of the impoundment structure planned prior to production re-start. Designs have been conditionally approved by applicable regulatory authorities for future operation.

Additional studies have been completed regarding closure technique of HG1 pond (2018), LOM extensions of PAF storage including acid drainage management (2019), and waste rock geochemical analysis as part of the mine waste management program (2021).

20.2 Permitting

All necessary permits are in place for the Laiva Gold Project mine, processing plant, and other operations; however, the existing environmental permit is under threat of withdrawal. The Company has appealed the threat and is working to remedy alleged violations committed by previous owners. Permit compliance has been evaluated annually by related authorities. All permits are issued permanently until further notice. A summary of environmental permits is provided in Table 20.1

Table 20.1. Environmental Permits

Description	Applicant	Authority	Date of Submission	Current Status	Date of Approval	Reference
Environmental and water resources management permit. This permit controls pollution of soil, air, and waterways.	Nordic Mines AB	Regional State Administrative Agency of Northern Finland	November 15, 2007	Granted	November 24, 2009	Permit decision number 84/09/2 Psy-2009-y-160

Description	Applicant	Authority	Date of Submission	Current Status	Date of Approval	Reference
Permit to change waste rock areas bottom layers structure from plastic	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	May 24, 2010	Granted	October 29, 2010	Permit decision number 100/10/1 PSAVI/196/04.08/2010
Permit to change construction of low-grade TSF area	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	November 15, 2013	Granted	June 1, 2016	Permit decision number 76/2016/1 PSAVI/126/04.08/2013
Application to take foreign origin concentrates into the process	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	June 8, 2016	Granted	May 11, 2017	Permit decision number 33/2017/1 PSAVI/1539/2016
Permit decision to approve detailed studies relating low-grade and high-grade TSF areas	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	July 31, 2018	Granted	June 13, 2019	Permit decision number 08/2019 PSAVI/3048/2018
Permit for building process water pipeline under Pattijoki river and Haapajoki river	Nordic Mines AB	Regional State Administrative Agency of Northern Finland	March 5, 2009	Granted	November 24, 2009	Permit decision number 85/09/2 Psy-2009-y-27
Permit for building wastewater discharge pipeline under Horskonjoki river, Haapajoki river, and Huljunlahti canal, and to bottom of Perameri and Kuljunlahti	Nordic Mines AB	Regional State Administrative Agency of Northern Finland	March 5, 2009	Granted	November 24, 2009	Permit decision number 85/09/2 Psy-2009-y-28
Energy efficiency plan of Laiva Mine for operation	Nordic Mines Oy	Regional State Administrative Agency of	January 18, 2011	Granted	June 12, 2012	Permit decision number 80/12/1 PSAVI/10/04.08/2011

Description	Applicant	Authority	Date of Submission	Current Status	Date of Approval	Reference
		Northern Finland				
Permit to build dam around Vaarainjarvi sedimentation pond	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	January 13, 2011	Granted	December 5, 2011	Permit decision number 75/11/2 PSAVI/5/04.09/2011
Mine waste management plan	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	April 29, 2011	Granted	June 30, 2014	Permit decision number 65/2014/1 PSAVI/74/04.08/2011
Environmental permit of Nordic Mines Oy waste water discharge pipeline outlet place and permit for commissioning the construction work	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	July 13, 2011	Granted	June 12, 2012	Permit decision number 51/12/1 PSAVI/98/04.08/2011
Permit to pump discharge water to the sea on quality-based limitation	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	April 24, 2013	Granted	January 7, 2016	Permit decision number 4/2016/1 PSAVI/34/04.08/2013
Waste water discharge pipeline under Horskonjoki river and Haapajoki river, and permit for commissioning the construction work	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	December 14, 2011	Granted	February 23, 2012	Permit decision number 15/12/2 PSAVI/70/04.09/2011
Laiva Mine rehabilitation and closure plan	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	December 28, 2011	Granted	June 30, 2014	Permit decision number 66/2014/1 PSAVI/110/04.08/2011

Description	Applicant	Authority	Date of Submission	Current Status	Date of Approval	Reference
Environmental permit of Laiva Mine fule station	Nordic Mines Oy	Regional State Administrative Agency of Northern Finland	February 27, 2012	Granted	March 25, 2014	Permit decision number 25/2013/1 PSAVI/23/04.08/2012

Source: Shoemaker and Sparks (2021)

20.3 Environmental Monitoring Requirements Under Mining Permit

Environmental monitoring has been performed in accordance with the requirements during historical mine production. These monitoring programs were approved in 2018 with no change. The Company will be seeking minor adjustments to the current monitoring program during its permit revision process; however, continuation of the current monitoring program is completely satisfactory. Monitoring includes internal water quality monitoring, monitoring of discharge water quality, monitoring of surrounding creeks and rivers, groundwater monitoring, dust and air quality monitoring, monitoring for noise and vibration, monitoring of mine waste (waste rock and tailings), biological monitoring including sediment load, and monitoring of discharge to the sea including fishery impacts.

During both operational and care and maintenance periods, site environmental monitoring was completed based on separate monitoring programs for each requirement. Monitoring data is annually reported to regulatory authorities by an external consultant.

Monitoring requirements include monitoring of environment related structures (e.g., pipelines and pumpstations) and dam safety monitoring. Monitoring performance is annually reported to relevant regulatory authorities by the then current operator. Table 20.2 lists the monitoring approvals in place. The Author notes that Table 20.2 is subject to the pending proposed minor permit revisions, as mentioned above.

Table 20.2 Environmental monitoring approvals.

Description	Authority	Current Status	Date of Approval	Reference	Current Date	Comment
Approval of Laiva Mine environmental monitoring program.	Nordic Mines Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	27/09/2011	Granted	09/11/2011	POPELY/100/07.00/2010
Approval of Laiva Mine environmental monitoring program (lightened).	Nordic Mines Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	16/05/2014	Granted	22/07/2014	POPELY/100/07.00/2010
Approval of Laiva Mine environmental monitoring program for "care and maintenance" period.	Nordic Mines Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	01/04/2016	Granted	01/06/2016	POPELY/2663/2015
Approval for Laiva Mine environmental monitoring program.	Nordic Gold Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	01/06/2018	Granted	14/08/2018	POPELY/2663/2015
Approval for Laiva Mine environmental monitoring for care and maintenance period.	Nordic Gold Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	15/03/2019	Granted	21/03/2019	POPELY/2663/2015
Approval for Laiva Mine environmental monitoring program.	Otso Gold Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	09/09/2021	Pending		
Approval for Laiva Mine biological monitoring.	Nordic Gold Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	17/04/2018	Granted	26/06/2018	POPELY/2663/2015
Approval of Biological monitoring.	Otso Gold Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	25/08/2021	Pending		
Approval of mutual coastal monitoring at Raahe sea areas.	Nordic Mines Oy, SSAB Oy, Raahen vesi Oy, Raahen Voima Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	27/10/2016	Granted	01/02/2017	POPELY/2462/2016, LAPELY 1459/5723-2016
Approval of monitoring program for internal water quality.	Otso Gold Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	25/08/2021	Pending		
Approval of operational monitoring.	Nordic Gold Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	29/1/2018	Granted	14/3/2018	POPELY/2663/2015
Approval of operational monitoring.	Otso Gold Oy	Centre for Economic Development, Transport and the Environment of North Ostrobothnia	25/8/2021	Pending		

Source: Shoemaker and Sparks (2021)

20.4 Social and Community Impacts

All mining activities are located within the mine lease area. The area has existing and a valid "town plan" in place approvals. The closest communities are located over 5 km away from the mine site. Due to current major forestry activities in the surrounding area, dust from future exploration and mining activities is limited to mine site areas, thereby having no impact on forestry designated zones or local communities (verified by continuous monitoring under previous and current operator).

Excess site water, net of process recycle is discharged via pipeline to Bothnia Sea, as described in Section 18 above. The water quality for necessary discharge to the sea is also monitored monthly. Given the quality of the water discharged to the sea from operations to date, no issues from future operations can be

reasonably predicted. The relatively minor adjustments to the process circuit discussed previously may actually reduce volume of discharge and attendant water quality.

20.5 Closure Plan and Cost

The content requirements for the Laiva Gold Project closure plan are described in the Mine Waste Act 190/2013; and the requirements to update the documents are stated in the permit decisions no 65/2014/1 PSAVI/74/04.08/2011 and no 66/2014/1 PSAVI/110/04.08/2011. By the Act 190/2013, the closure costs will be evaluated during the update process. The updates are due by 31 December of each year.

The closure costs are to be determined at a future date once a potential ultimate minable resource is determined, and the costs can be accurately estimated.

As of 2021, the closure cost bond in place is 4,290,950 € including existing mine waste areas (PAF 2.50 €/m^2, clean waste rock 1€/m^2, LG tailings 1.70 €/m^2 and HG tailings 50 €/m^2), post closure monitoring (0.5 M€) and tax (24%) (Shoemaker and Sparks, 2021). These will be updated based on further information as it becomes available. Disturbed areas and attendant costs for closure are reviewed in January of each year and will be updated as required.

21 Capital and Operating Costs

21.1 Capital Cost Estimate

Estimated pre-production Capex costs total approximately USD$9,076,360. This estimate includes the costs associated with the environmental bond, security deposit for power, pre-stripping costs, laboratory re-start costs, repairs and maintenance to the processing plant and tailings facilities, pit dewatering, recruiting, miscellaneous consultants' costs, and pre-production corporate costs.

21.2 Operating Costs

Estimated potential operating costs for the first year of operation are summarized in Table 21.2.

Table 21.1 Operating Costs Summary

Cost Item	2025/2026[1] (USD$/t)
Mining	$18.94
Processing	$11.35
Infrastructure	$0.50
Indirects	$0.21
Technical Services	$0.48
Safety	$0.20
Environmental	$0.58
General and Administrative (G&A)	$1.78
Total	**$34.04**

Notes: Costs are estimated. The Laiva Gold Project is currently on care and maintenance.

22 Economic Analysis

22.1 Introduction

The Laiva Gold Project is currently on care and maintenance and is a former gold producing mining operation. There are no current estimates of Mineral Reserves on the Property.

The 2025 Laiva Gold MRE includes Inferred Resources. Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. In addition, NI 43-101 prohibits the disclosure of the results of an economic analysis that includes or is based on Inferred Mineral Resources. As a result, the Author has determined that it is not permitted to provide an economic analysis of the Laiva Gold Project.

Information regarding taxation has been provided in this Section 22. Historical production on the Property is summarized in Section 6 of this Technical Report.

22.2 Taxes

Taxation in Canada and Finland is often complex and varies from one jurisdiction to the other. There are numerous calculations and allowances, all of which are outside the scope of this report. However, taxes are all levied in the normal course of business. The Company is subject to the taxing jurisdictions of Finland and Canada. The Company states that all taxes assessed have been paid or will be paid when due, aside from any protests or other tax relief available under law.

23 Adjacent Properties

There are no relevant adjacent properties proximal to the Laiva Gold Project. All surrounding exploration permits are expired.

24 Other Relevant Data and Information

The Authors are not aware of any other relevant information with respect to the Property as of the Effective Date of this Technical Report.

25 Interpretation and Conclusions

25.1 Results and Interpretations

The Laiva Gold Project is a past producing open pit mining operation with a favourable geological, structural, and lithological setting situated in the Raahe-Haapajärvi gold district, near the Raahe-Ladoga suture, a crustal scale structure controlling several other mineral deposits in the area. A total of 89,405 oz of gold have been produced to date from the mine by previous operators. The Property includes the Laiva Gold historical mining operation, mill and processing plant, and associated infrastructure.

25.1.1 Geology and Mineralization

The Property comprises deformed Paleoproterozoic greywackes of the Vihanti Group and intercalations of mafic metavolcanic and metavolcanosedimentary lithologies of the Antinneva Formation. These mafic units have been collectively called Uralite Porphyrite by previous operators. Weakly foliated quartz diorite and granodiorite plutons intrude these supracrustal units. The mafic metavolcanic and the intermediate intrusives are the main host of mineralization. Late granitoids intrude all previously mentioned units throughout the Property. These granitoids are post-mineralization and occur as dikes, sills, and plutons. Dolerite dikes up to 10 m wide crosscut all units. Quaternary glacial till ranging between 3 and 15 m in thickness overlay the entire Property.

The Property has been subject to multiple events of regional and local deformation. Field observations indicate that 0.2 to 1 m wide, quartz vein-rich mylonitic shear zones developed in mafic metavolcanic lithologies and intermediate intrusives host mineralization in the Property. These planar zones are steeply dipping (75-85 degrees) to the southeast. The dominant east-west trend of the shear zones can also be locally modified and display variable strikes due to post-mineral deformation associated with northeast-striking, strike-slip faults. The best-defined structure of these late faults is the Red Shear Zone, which is observed in both the North and the South pits. It is a typically barren, dextral strike-slip fault displaying both ductile and brittle deformation and with lateral displacements in the order of approximately 10 m. Meter-scale folding is observed in the hanging wall and footwall of the Red Shear Zone in the North Pit.

The alteration intensity in the mineralized shear zones is weak and comprise millimetre-sized sericite-pyrite vein selvages. Albite-epidote-pyrite selvages are rarely observed. Overall, the alteration assemblages seem to depend on the hosting lithology. Arsenopyrite is the most common sulphide, though pyrrhotite, chalcopyrite, scheelite, cubanite, marcasite, sphalerite, and hedleyite also occur. No visible gold has been observed. Gold occurs as tiny free gold inclusions within loellingite, quartz, and arsenopyrite, or rarely, as maldonite.

25.1.2 Historical Exploration

Historical exploration has been documented at the Laiva Gold Project for over four decades. These surficial exploration and drilling programs have been conducted by the Geological Survey of Finland, Outokumpu Oy (1981-1987), Endomines Oy (1999-2005), Nordic Mines Marknad AB (2005-2018), Firesteel Resources Inc. and Nordic Gold Inc. (2018-2019), and Otso Gold Corp. (2019-2022). Historical exploration has consisted of geological mapping, boulder, till, and channel sampling, geophysical surveying, drilling, surface development, and mining.

A total of 167,520 m (excluding blastholes) has been drilled in the Property in 3,834 holes between 1981 and 2021. Drilling activities have included diamond and RC exploration drilling, resource development, and grade control drillholes. Historical drilling between 1981 and 2011 delineated a mineralized area in the central part of the mining permit and guided historical production. Notable intercepts from early drill programs include:

- 0.51 (g/t Au over 40.20 m core length from 50.00 m depth in drillhole LAI25.
- 4.40 g/t Au over 30.30 m core length from 32.00 m depth in drillhole LAI23.
- 1.67 g/t Au over 34.00 m core length from 25.00 m depth in drillhole LAN758.
- 1.85 g/t Au over 13.50 m core length from 3.00 m depth in drillhole LAN702.
- 6.04 g/t Au over 5.00 m core length from 7.00 m depth and 0.78 g/t Au over 15.00 m core length from 31.00 m depth in drillhole LAN548.
- 3.38 g/t Au over 18.00 m core length from 133.00 m depth in drillhole LAN855.

Drilling conducted by Firesteel Resources and Otso Gold between 2018 and 2021 targeted mineralization between and surrounding the two open pits. Select results are listed as follows:

- 1.66 g/t Au over 4.00 m core length (3.11 m true width) from 118.15 m depth and 10.90 g/t Au over 2.00 m core length (1.55 m true width) from 139.20 m depth in drillhole 19LV0035.
- 1.58 g/t Au over 3.00 m core length (2.33 m true width) from 41.30 m depth and 1.99 g/t Au over 8.10 m core length (6.28 m true width) from 122.35 m depth in drillhole 19LV0067.
- 1.55 g/t Au over 16.66 m core length (true width unknown) from 103.75 m depth in drillhole LV21038.

Historical drilling at the Property has delineated two main bodies of mineralization, the North Pit with Eastern Extension in the north and the South Pit in the south. At the North Pit, mineralized shear zones can be traced over a strike length of up to 600 m, with the mineralized zone (including the Eastern Extension) occurring over an area of 1,300 m by 450 m. In the South Pit area, mineralization occurs over an area of 500 m by 400 m. Mineralization has been intercepted at depths of up to 250 m below surface and is open down dip, apart from the western part of the North Pit where mineralization is truncated by the granite pluton. In both the North and South Pits, the mineralized shear zones vary in width between <1 m to >10 m.

Historical metallurgical work conducted on mineralized material from the Laiva Gold deposit indicates that gold is typically fine grained, free milling, and amenable to cyanide leach processing.

25.1.3 Recent Exploration

Laiva Gold and Edgemont have not conducted exploration at the Property to date.

25.1.4 Mineral Resource Estimate

Laiva Gold and Edgemont engaged APEX to conduct an independent review of the 2021 Laiva Gold Project Mineral Resource Estimate (the "2021 Laiva Gold MRE") prepared by John T. Boyd Company (Shoemaker and Sparks, 2021). There has been no further drilling at the Laiva Gold Project since the effective date of Shoemaker and Sparks (2021); therefore, the mineral resource outlined in this Technical Report is an audit of the Shoemaker and Sparks (2021) technical report and MRE, and provides a current MRE based upon updated economic parameters and a new conceptual pit shell for reasonable prospects for eventual economic extraction (RPEEE) for the Laiva Gold deposit (the "2025 Laiva Gold MRE"). The current 2025 Laiva Gold MRE is presented in in Table 25.1.

The review was completed using Micromine commercial resource modelling and mine planning software (v.25.0), Resource Modelling Solutions Platform (RMSP; v.1.17.0), and Deswik CAD (v2024.1). The review included investigations of the drillhole database, estimation domains, statistics, block model, and resource calculations.

Table 25.1 Summary of the 2025 Laiva Gold Measured, Indicated, and Inferred Mineral Resources (1-9)

Cutoff Au (g/t)	Classification	Tonnes (kt)	Contained Au (koz)	Average Au (g/t)
Pit-Constrained Mineral Resource Estimate				
0.25	Measured	1,349	50	1.16
	Indicated	15,005	473	0.98
	M&I	16,354	523	1.00
	Inferred	11,978	396	1.03
Out-of-Pit Mineral Resource Estimate				
1.35	Inferred	406	31	2.38
Total Mineral Resource Estimate				
Combined	Measured	1,349	50	1.16
	Indicated	15,005	473	0.98
	M&I	16,354	523	1.00
	Inferred	12,384	427	1.07

Source: APEX (2025)

Notes:

1) Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
3) The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.
4) The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
5) Historical mined areas were removed from the block-modelled Mineral Resources.
6) Economic assumptions include an Au price of US$2,300/oz; 92 per cent (%) recovery and a processing cost of US$11.78/t for material ≥0.7 g/t Au; 80.0% recovery and a processing cost of US$10.22/t for material <0.7 g/t Au; a G&A cost of US$2.20/t; a selling cost of US$2.55/oz; and a 0.55% royalty.
7) The constraining pit optimization parameters include mining costs of US$2.73/t for mineralized material and US$1.90/t for waste material, and 53° pit slopes. Pit-constrained Mineral Resources are reported using an Au cutoff grade of 0.25 g/t.
8) Out-of-Pit Mineral Resources include blocks below the constraining pit shell that form continuous, potentially mineable shapes. A mining cost of US$75.00/t for mineralized material, along with the economic assumptions for material ≥0.7 g/t Au noted above, defines the underground (UG) resources. Out-of-Pit Mineral Resources are reported using an Au cutoff grade of 1.35 g/t.
9) Figures are rounded; totals may not sum exactly due to rounding.

Mr. Dufresne has reviewed the work by Shoemaker and Sparks (2021) and finds no significant issues with the drillhole database, or the workflow and methodology used to prepare the previous MRE. In the opinion of the QP, the MRE by Shoemaker and Sparks (2021) is completed in accordance with the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines," dated November 29, 2019, and the CIM "Definition Standards for Mineral Resources and Mineral Reserves," dated May 10, 2014. The MRE presented herein is considered current based upon the application of modern economic parameters to evaluate RPEEE.

As a result, Mr. Dufresne accepts the updated Laiva Gold MRE (originally disclosed by Shoemaker and Sparks, 2021) and considers it current as of the date of this report (June 4, 2025) based upon the verification and updates completed by the QP.

25.1.5 Historical Mining, Mineral Processing, and Infrastructure

The Laiva Gold Project is a historical open-pit mining operation that consists of two open pits. A summary of historical mining and production at the Property is presented in Table 25.2.

Table 25.2 Laiva gold production between 2012 and 2022.

Time Period	Average Monthly Tonnes	Total Tonnes	Average Gold Head Grade (g/t)	Average Gold Recovery	Average Monthly Gold Production (Troy Ounces)	Total Gold Production (Troy Ounces)	Operator and Comments
February 2012 to February 2013 (13 months)	90,441	1,175,739	0.94	79.9%	2,194	28,521	Nordic: Initial low production due to longer than expected plant commissioning
March 2013 to June 2013 (4 months)	140,220	560,879	1.04	86.5%	4,062	16,250	Nordic: Steady state production.
July 2013 to March 2014 (9 months)	137,414	1,236,730	0.72	81.5%	2,594	23,345	Nordic: Production from low-grade stockpile.
Total Nordic (26 months)	122,692	2,973,348	0.88	81.5%	2,950	68,116	-
November 2018 to March 2019 (5 months)	102,400	512,001	0.89	85.0%	2,500	12,502	Firesteel Resources and Nordic Gold Inc: Low production due operational stoppages. .
October 2021 to February 2022 (5 months)	108,168	540,839	0.84	74.5%	1,757	8,787	Otso Gold: Low production due to operational stoppages.
Total all operators (36 months)	111,839	4,026,189	0.85	81.2%	2,483	89,405	-

Source: APEX (2025)

Mineralized material produced from the Laiva Gold Project has historically been processed at the Laiva processing plant, located within the Property. The Laiva processing plant was constructed in 2011 by Metso Minerals in conjunction with Outotec. Nordic Mines operated the plant from the commission date to the end of March 2014. The mill production rate during this period averaged approximately 210 mtph verses the

design rate of 250 mtph. The ground mineralized material particle size ranged from P_{80} 110 µm to 130 µm versus a design particle size of P80 75 µm.

The mineral processing plant is located approximately 1 km northeast from the South and North open pits on the Property site. The processing plant comprises a multi-stage crushing circuit, grinding mills, a 3 Mw installed power mill, flash flotation, gravity and regrind circuits, high grade and low grade carbon-in-leach (CIL) circuits, carbon stripping, and a gold room. Tailings are sent to either a high grade or low grade tailings storage facilities as warranted. The low grade dam is situated approximately 7.5 km from the plant where it is processed through a thickener.

A geochemical laboratory is situated within the Property, previously managed by an independent contractor (CRS Laboratories Oy). Geochemical samples were processed and analyzed using a pulverize and leach machine (PAL1000) with 52 steel pots and an AA spectrometer with a capacity of 8,000 samples per week. This laboratory has historically been used to process and analyze grade control samples.

Most of the power used by the Project comes from a high-voltage grid in the area. It is located to the east of the Property and supplies 110 kV of power. A secondary 20 kV power grid is supplied from the village of Mattilanperä.

25.1.6 Environmental and Permitting

All necessary permits are in place for the Laiva Gold Project mine, processing plant, and other operations; however, the existing environmental permit is under threat of withdrawal. The Company has appealed the threat and is working to remedy alleged violations committed by previous owners.

In the opinion of the Author, there does not appear to be any apparent significant legal, environmental, or political considerations that would have an adverse effect on the potential extraction and processing material from the Property besides the risks inherent to mineral exploration and development. Potential risk factors include changes in metal prices, increases in operating costs, fluctuations in labour costs and availability, availability of investment capital, infrastructure failures, changes in government regulations, community engagement and socio-economic community relations, civil disobedience and protest, permitting and legal challenges, and general environmental concerns. However, environmental and social issues at the Property appear to be conducted to adequate standards with cooperation from local communities.

25.1.7 Economic Analysis

The Laiva Gold Project is currently on care and maintenance and is a former gold producing mining operation. There are no current estimates of Mineral Reserves on the Property.

The 2025 Laiva Gold MRE includes Inferred Mineral Resources. Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. In addition, NI 43-101 prohibits the disclosure of the results of an economic analysis that includes or is based on Inferred Mineral Resources. As a result, the Authors have determined that it is not permitted to provide an economic analysis of the Property. As an alternative, information regarding taxation and historical production has been provided in Section 22.

25.2 Conclusions

Based upon a review of available information, historical and current exploration and production data, Mr. Dufresne and Mr. Spark's site inspections, and the 2025 Laiva Gold MRE, the Authors outline Laiva Gold Project as a property of merit prospective for the discovery of additional gold mineralization. This contention is supported by knowledge of:

- The favourable geological setting of the Property and its position within the Raahe-Haapajärvi gold district.
- Historical surface sampling and drilling by previous operators that led to historical mining from two open pits within the Property.
- The Laiva Gold MRE that is the subject of this Technical Report. This MRE is based on validation of the historical drilling and assay data, a review of the estimation domains, statistics, block model, and resource calculations.
- The Laiva Gold Project historical and production, head grade, and metal recovery records from the on-site processing plant.

25.3 Risks and Uncertainties

Regarding the 2025 Laiva Gold MRE, although each domain in the current model was constructed using an independent structural framework, all share a fixed, near-vertical dip orientation. This simplification introduces risk by limiting the model's ability to reflect local grade variability and structural complexity. In shear-hosted gold systems like Laiva, mineralization is often controlled by subtle changes in orientation, intensity, and continuity of shear zones and associated veining. Failure to account for these local controls can lead to inaccuracies in grade distribution, resource classification, and ultimately mine planning. Future MREs should consider constructing estimation domains that incorporate variable orientations and better reflect observed geological features to reduce uncertainty and improve confidence in resource estimation.

While the 2025 Laiva Gold MRE appears to have managed over-smoothing effects, a notable amount of internal dilution remains within the mineralized material domains. This dilution increases uncertainty in grade estimation and may limit the precision of the resource model. Although this risk is less critical for interim MRE statements, it becomes more significant when used for detailed mine planning. Future MRE studies should aim to reduce internal dilution by constructing more refined estimation domains that better reflect geological controls. Enhancing domain definition will help reduce reliance on restrictive kriging parameters and improve the reliability of resource estimates for economic evaluation and mine design.

While the variogram models used in the 2025 Laiva Gold MRE are reasonably similar to independently calculated models and are considered suitable for resource estimation, some uncertainty remains regarding the accuracy of the nugget effect and structure contributions. An overestimated nugget and understated secondary structure may underrepresent spatial continuity, potentially affecting grade interpolation and local estimation confidence. Although not material for the current MRE, refining variogram models with additional data and improved structural interpretation would reduce uncertainty in future updates, particularly where local accuracy is critical for mine planning.

In the 2025 Laiva Gold MRE, mined-out blocks were assigned a value of zero and flagged as "air," which prevented the use of grade control data for validation. This limited the ability to evaluate estimation performance in areas with dense drilling, and to assess how data spacing influences model accuracy (i.e., the information effect). For future MREs, estimating mined-out blocks using exploration data and then comparing results to available grade control data could provide a valuable validation approach, helping to

better quantify estimation performance, inform confidence levels, and support refinement of modelling parameters.

The 2025 Laiva Gold MRE used a digital topographic surface from 2020. Internal production reports indicate that a total of 275,070 tonnes of mineralized material were removed from an unspecified location in the pits and 3,674 ounces of gold were produced between October 5th and December 31st, 2021. Though gold production has also been reported in January and February 2022, the reports also indicate that no material was blasted out of the pits during these months. The last reported blast date is December 8th, 2021. No mining has occurred since. No accurate topographic survey exists as of the Effective Date of this Technical Report to address potential additional depletion of the current MRE. A current topographic survey is required prior to the calculation of future MREs.

The Authors are not aware of any other significant material risks to the 2025 Laiva Gold MRE and Laiva Gold Project other than the inherent risks to mineral exploration and development in general. The Authors of this report are not aware of any specific environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that might materially affect the results of this resource estimate, and there appear to be no obvious impediments to developing the MRE at the Lavia Gold Project.

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26 Recommendations

As a property of merit, a 2-phase work program is recommended to delineate additional gold mineralization at the Property to support MRE expansion and future production.

Phase 1 should focus on a step out grade control and exploration drilling plan to the immediate northeast and east of the North pit, between the north and south pits and to the southwest of the south pit. The Author recommends an RC drilling program of approximately 30,000 m to increase confidence in the mineralization model, inform future mining activities, and work towards upgrading the MRE size and classification. The grade control drillholes should be completed at 8 by 6 m hole spacings with collars orientated perpendicular to the structural trend at inclinations ranging from -45 to -50°. In addition, a LiDAR survey is recommended to generate an accurate topographic surface and elevation control. The estimated total cost to complete the Phase 1 program is USD$1,700,000 not including contingency funds or taxes (Table 26.1).

Phase 2 exploration is dependent on availability of funds and the results of Phase 1. Additional step out grade control and exploration drilling should be completed at high-priority existing targets surrounding both pits. Phase 2 should include an updated Feasibility Study in advance of potential mining operations at the Laiva Gold Project. Phase 2 should include re-commissioning of the processing plant prior to potential mining operations. The Company should investigate potential modifications to the existing processing plant in order to achieve maximum throughput. The estimated total cost to complete the Phase 2 program is USD$10,940,000, not including contingency funds or taxes (Table 26.1).

Table 26.1 Estimated budget for proposed exploration and future studies.

Phase	Item	Amount (USD$)
Phase 1	Cost for exploration and grade control RC drilling (30,000 m @ $52/m)	$1,560,000
	Analytical cost ($20 per sample)	$50,000
	LiDAR survey and processing	$20,000
	Data Compilation and additional Data Verification	$70,000
	Sub-total:	$1,700,000
Phase 2	Cost for exploration and grade control RC drilling (30,000 m @ $52/m)	$1,560,000
	Analytical cost ($20 per sample)	$50,000
	All in cost for mineral processing investigations and re-commissioning of the processing plant	$9,080,000
	Updated MRE and Feasibility Study	$250,000
	Sub-total:	$10,940,000
	Total:	$12,640,000

The estimated operating costs for potential production and process related programs are not included in Table 26.1 and are summarized in Section 21 of this Technical Report.

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28 Certificate of Authors

28.1 Michael B. Dufresne Certificate of Author

I, Michael B. Dufresne, M.Sc., P.Geo., P.Geol., do hereby certify that:

1) I am a President and a Principal of APEX Geoscience Ltd. ("APEX"), with a business address of 100, 11450 – 160 St. NW, Edmonton, Alberta, Canada.
2) I am the Author and am responsible for Sections 1.1 to 1.3, 1.7, 1.11, 2 to 4, 11 to 12.2.1, 12.3 to 12.4 to 15, 23, 24, 25.1, 25.1.3, 25.2, 26 of this Technical Report entitled: "NI 43-101 Technical Report on the Laiva Gold Project, Raahe, Finland", with an Effective Date of June 4, 2025 (the "Technical Report").
3) I have a B.Sc. Degree in Geology from the University of North Carolina at Wilmington in 1983 and a M.Sc. Degree in Economic Geology from the University of Alberta in 1987. I have worked as a geologist for more than 40 years since my graduation from university and have been involved in all aspects of mineral exploration and mineral resource estimations for precious and base metal projects and deposits in Canada and internationally.
4) I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists ("APEGA") of Alberta since 1989 and a Professional Geoscientist with the Association of Professional Engineers and Geoscientists ("EGBC") of British Columbia since 2012. I am a 'Qualified Person' in relation to the subject matter of this Technical Report.
5) I visited the Laiva Gold Project that is the subject of this Technical Report on March 15 and 16, 2025. I have conducted a review of the Laiva Gold Project data.
6) I am independent of Laiva Gold Inc. and Edgemont Gold Corp., as defined by Section 1.5 of National Instrument 43-101. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Company. I am not aware of any other information or circumstance that could interfere with my judgment regarding the preparation of the Technical Report.
7) I have not had previous involvement with the Laiva Gold Property, that is the subject of this Technical Report.
8) I have read and understand National Instrument 43-101 and Form 43-101 F1 and the Report has been prepared in compliance with the instrument.
9) 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 and Signed this 25th day of July, 2025 in Edmonton, Alberta, Canada

"Signed and Sealed"

Signature of Qualified Person
Michael B. Dufresne, M.Sc., P.Geo., P.Geol. (APEGA #48439; EGBC #37074)

28.2 Gregory B. Sparks Certificate of Author

I, Gregory B. Sparks, P.Eng., do hereby certify that:

1. I am the Principal of GBS PE Minerals Industry Consulting LLP, with offices at 27 Pebble Dr, Durango, Colorado 81301, telephone +1 (970) 403-3176, e-mail greg@gbspe.onmicrosoft.com

2. This certificate applies to the aforementioned Technical Report.

3. I hold the following academic qualifications: B.Sc. Mining Engineering, University of Missouri at Rolla (formerly Missouri School of Mines) 1973.

4. I am a Registered Professional Engineer in the State of Colorado, registration #22310. I am also a member in good standing with the following technical associations:

- SME – Professional Legion of Honor Member #03042460.

- CIM – Member # 97865.

5. I have worked as a mining engineer in the minerals industry continuously for 52 years.

6. I have read NI 43-101 and Form 43-101f1. By reason of education, experience, and professional registration, I fulfill the requirements of a Qualified Person as defined in NI 43-101.

I have worked as a mining engineer for more than 52 years, including without limitation, 6 years as Manager Mining and Exploration for Tenneco Oil Company – Minerals Division, 4 years as Vice President Mining for Standard Metals Corp., 8 years as Development Group Vice President for Echo Bay Mines Ltd, 21 years as an independent mining consultant, and 8.25 years as Managing Director – Metals for the John T. Boyd Company, and as Principal of GBS PE Minerals Industry Consulting LLP to date. During the course of my career, I have been responsible for managing operating mines and process plants, directing resource and reserve estimates, detailed mine design for surface and underground mines, economic analysis of all aspects of mining projects, and due diligence reviews and valuations of mineral projects in 37 countries. My commodity experience includes gold, silver, copper, lead, zinc, manganese, nickel, uranium/thorium, talc, borate minerals, salt, and limestone.

7. I have read this Technical Report and believe it conforms in content and format with the requirements of form NI 43-101f1.

8. I have visited the Laiva Gold Project site on multiple occasions from 15 – 16 March 2017 with the most recent being the period from 17 May – 3 July 2025.

9. With the exception of being a co-author of an NI 43-101 TECHNICAL REPORT MINERAL RESOURCE ESTIMATE LAIVA GOLD MINE PROJECT with an Effective Date of 9 August 2017 and a co-author of an NI 43-101 TECHNICAL REPORT PRELIMINARY ECONOMIC ASSESSMENT LAIVA GOLD MINE PROJECT with an Effective Date of 6 April 2018 as an independent consultant to Fire Steel Resources Inc., a co-author of an NI 43-101 TECHNICAL REPORT FEASIBILITY STUDY LAIVA PROJECT, with and Effective Date of 4 October 2021 for OTSO Gold Corp a predecessor in interest to the current owners, I have no prior association with the Laiva Project, which is the subject of this Technical Report.

10. I am independent of Laiva Gold Inc and its parent companies. and subsidiaries. I hold no beneficial interest in any of the foregoing.

11. I am a co-author of sections pertaining to mining and processing elements of this report. I have collaborated with my co-author on all relevant other sections of this Technical Report.

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

Report dated this 25th day of July, 2025 with an effective date of 4 June 2025.

Dated and Signed this 25th day of July, 2025 in Durango, Colorado, USA.

"Signed and Sealed"

Signature of Qualified Person

28.3 Fallon T. Clarke Certificate of Author

I, Fallon T. Clarke, B.Sc., P.Geo., do hereby certify that:

1) I am a Senior Geologist of APEX Geoscience Ltd. ("APEX"), with a business address of 100, 11450 – 160 St. NW, Edmonton, Alberta, Canada.
2) I am the Author and am responsible for Sections 1.4 to 1.6, 5 to 10, 25.1.1 to 25.1.2, 27 of this Technical Report entitled: "NI 43-101 Technical Report on the Laiva Gold Project, Raahe, Finland", with an Effective Date of June 4, 2025 (the "Technical Report").
3) I graduated with a B.Sc. Degree in Geology from the University of Saskatchewan in 2010. I have worked as a geologist for more than 12 years since my graduation from university and have experience with exploration for orogenic gold deposits throughout North America and Australia.
4) I am a Professional Geologist (P.Geo.) registered with the Association of Professional Engineers and Geoscientists of Saskatchewan (Member # 27238) and I am a 'Qualified Person' in relation to the subject matter of this Technical Report.
5) I have not visited the Laiva Gold Project that is the subject of this Technical Report. I have conducted a review of the Laiva Gold Project data.
6) I am independent of Laiva Gold Inc. and Edgemont Gold Corp., as defined by Section 1.5 of National Instrument 43-101. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Company. I am not aware of any other information or circumstance that could interfere with my judgment regarding the preparation of the Technical Report.
7) I have not had previous involvement with the Laiva Gold Property, that is the subject of this Technical Report.
8) I have read and understand National Instrument 43-101 and Form 43-101 F1 and the Report has been prepared in compliance with the instrument.
9) 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 and Signed this 25th day of July, 2025 in Edmonton, Alberta, Canada

"Signed and Sealed"

Signature of Qualified Person
Fallon Clarke B.Sc., P.Geo. (APEGS #27238)