ASX RELEASE

16 April 2024

NOVA MINERALS

Mineral Resource Estimate for US listing

Mineral Resource Estimate in accordance with SEC Regulation S-K 1300 reporting guidelines has been prepared to support the proposed US listing

Nova Minerals Limited (**Nova** or **Company**) (ASX:NVA FSE:QM3) is pleased to announce a major milestone has been reached with the completion of a S-K 1300 Mineral Resource Estimate and technical report prepared in accordance with Securities and Exchange Commission (**SEC**) Regulation S-K 1300 reporting guidelines (**S-K 1300 MRE**) for Nova's flagship Estelle Gold Project, located in the Tintina Gold Belt in Alaska, to support the proposed US listing. SK-1300 refers to the mineral resource and reporting standards adopted by the SEC.

The Company is providing this announcement to clarify and provide context to the S-K 1300 MRE, which is required by the SEC and reported in the publicly filed Form F-1 registration statement lodged today, relative to JORC standard reporting contained in its prior announcements (including the announcement of its Scoping Study).

The S-K 1300 Technical Report Summary produced by Roughstock Mining Services is attached to this announcement.

Please Note: The S-K 1300 MRE is not reported in accordance with the JORC Code. The Qualified Person for the S-K 1300 used the JORC Code compliant mineral resource estimate as the basis for the S-K 1300 MRE applying additional technical and economic restraints required by S-K 1300.

Highlights

- The S-K 1300 MRE prepared to support the US listing is based on the geological model used in the 2023 JORC Code compliant mineral resource estimate (ASX Announcement: 11 April 2023)
- The JORC compliant global mineral resource estimate of 9.9 Moz Au remains current (Table 1)
- Pit constrained S-K 1300 MRE (Table 2) compared to the JORC compliant scoping study gold in-pit resources (Table 3) increased by 76% due to updated economic and technical factors
- Measured and Indicated classified resources for the S-K 1300 MRE increased by 20% compared to the JORC compliant scoping study gold in-pit resources
- Both the S-K 1300 MRE and the JORC Code mineral resource estimate are based on drilling completed up to 31 March 2023 and do not include the additional drilling completed later in 2023

Nova CEO, Mr Christopher Gerteisen commented: "The completion of the S-K 1300 MRE and technical report marks a major milestone in support of our proposed US listing. All credit to our experienced Nova team and consultants who spent endless hours to get the job done.

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The increase in the pit constrained resource highlights the extreme sensitivity to a rising gold price and improved technical parameters. The present gold bull market and further efficiencies that are being investigated through our current PFS studies continues to provide additional potential upside for the Estelle Gold Project."

The S-K 1300 MRE was prepared by Mr Jonathon Abbott, who is a director of Matrix Resource Consulting Pty Ltd and a Member of the Australian Institute of Geoscientists. Mr. Abbott has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration to qualify as a Qualified Person in terms of S-K 1300 standards for resource estimation. Mr Abbott was also the Competent Person for the purposes of the Company's JORC Code compliant mineral resource estimate.

The Company's current JORC code compliant mineral resource estimate (Table 1) was used as the basis for the S-K 1300 MRE (Table 2). The S-K 1300 MRE guidelines comply with the JORC code, however they require the application of additional parameters (e.g. technical and economic factors) that establish reasonable prospects of economic extraction. The Estelle S-K 1300 MRE is reported within optimized pit shells generated from economic parameters that reflect a large-scale open pit operation and is comparable to the methodology used to determine the in-pit resources for gold production as reported in the Company's JORC compliant Scoping Study (ASX Announcement: 15 May 2023).

The variances are attributed to reporting a global MRE under JORC (9.9 Moz Au - Table 1) versus reporting an in-pit constrained MRE under S-K 1300 (5.2 Moz Au - Table 2) and in-pit resources in the Scoping Study (2.9 Moz Au - Table 3).

The current S-K 1300 MRE (Table 2) shows a significant increase of the total pit constrained resource compared to the Scoping Study pit constrained resource (Table 3). The Measured and Indicated classified resources for the S-K 1300 MRE relative the Scoping Study in-pit resources show a 20% increase of 0.45 Moz Au to 2.72 Moz Au.

The increases are largely due to an increase in the gold price used to generate the optimal pit shells from US$1,850 in the Scoping Study to US$2,000 and increasing the pit slope angles to 50 degrees, in the S-K 1300 MRE. The Company confirms that, other than as set out above, the assumptions in the S-K 1300 MRE in respect of the following matters (being those set out in ASX Listing Rule 5.8.1) are materially unchanged from the assumptions in the Scoping Study:

- Geology and geological interpretation;
- Sampling and sub-sampling techniques;
- Drilling techniques;
- The criteria used for classification, including drill and data spacing and distribution;
- Sample analysis methods;
- Estimation methodology;
- Cut-off grades; and
- Mining and metallurgical methods and parameters (other than the pit slope angles described above).

The JORC compliant global MRE of 9.9 Moz Au (Table 1) remains current. The S-K 1300 MRE is summarised below (Table 2), with the JORC compliant Scoping Study in-pit resource (Table 3) also provided for comparison.

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Table 1. JORC compliant global mineral resource estimate (ASX Announcement: 11 April 2023)

Deposit	Cutoff	Measured			Indicated			Measured & Indicated			Inferred			Total		
		Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz
RPM North	0.20	1.4	4.1	0.18	3.3	1.5	0.16	4.7	2.3	0.34	26	0.6	0.48	31	0.8	0.82
RPM South (Maiden)	0.20										31	0.4	0.42	31	0.4	0.42
Total RPM		1.4	4.1	0.18	3.3	1.5	0.16	4.7	2.3	0.34	57	0.5	0.90	62	0.6	1.24
Korbel Main	0.15				320	0.3	3.09	320	0.3	3.09	480	0.2	3.55	800	0.3	6.64
Cathedral (Maiden)	0.15										240	0.3	2.01	240	0.3	2.01
Total Korbel					320	0.3	3.09	320	0.3	3.09	720	0.2	5.56	1,040	0.3	8.65
Total Estelle Gold Project		1.4	4.1	0.18	323	0.3	3.25	325	0.3	3.43	777	0.3	6.46	1,102	0.3	9.89

Table 2. S-K 1300 pit-constrained Mineral Resource Estimate (ASX Announcement: 16 April 2024)

Deposit	Cutoff	Measured			Indicated			Measured & Indicated			Inferred			Total		
		Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz
RPM North	0.20	1.4	4.1	0.18	3	1.6	0.15	4.4	2.4	0.33	23	0.6	0.45	28	0.9	0.78
RPM South (Maiden)	0.20										23	0.5	0.35	23	0.5	0.35
Total RPM		1.4	4.1	0.18	3	1.6	0.15	4.4	2.4	0.33	46	0.5	0.80	51	0.7	1.13
Korbel Main	0.15				240	0.3	2.39	240	0.3	2.39	35	0.3	0.30	275	0.3	2.70
Cathedral (Maiden)	0.15										150	0.3	1.35	150	0.3	1.35
Total Korbel					240	0.3	2.39	240	0.3	2.39	185	0.3	1.65	425	0.3	4.05
Total Estelle Gold Project		1.4	4.1	0.18	243	0.3	2.54	244	0.3	2.72	231	0.3	2.45	476	0.3	5.17

Notes to Table 2:

1. A mineral resource is defined as a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity, that there are reasonable prospects for economic extraction.
2. The mineral resource applies a reasonable prospect of economic extraction with the following assumptions:
   - Gold price of US$2,000/oz
   - 5% royalty on recovered ounces
   - Pit slope angle of 50°
   - Mining cost of US$1.65/t
   - Processing cost for RPM US$9.80/t and Korbel US$5.23/t (inclusive of ore sorting for Korbel)
   - Combined processing recoveries of 88.20% for RPM and 75.94% for Korbel
   - General and Administrative Cost of US$1.30/t
   - Tonnages and grades are rounded to two significant figures and ounces are rounded to 1000 ounces, subject to rounding.

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Table 3. JORC compliant scoping study gold in-pit resources (ASX Announcement: 15 May 2023)

Deposit	Cutoff	Measured			Indicated			Measured & Indicated			Inferred			Total		
		Tonnes Mt	Grade Au g/t	**Au Moz**	Tonnes Mt	Grade Au g/t	**Au Moz**	Tonnes Mt	Grade Au g/t	**Au Moz**	Tonnes Mt	Grade Au g/t	**Au Moz**	Tonnes Mt	Grade Au g/t	**Au Moz**
RPM North	0.20	1.34	4.3	**0.18**	2.33	2.0	**0.15**	3.673	2.8	**0.34**	11.96	0.7	**0.25**	16	1.2	**0.59**
RPM South (Maiden)	0.20										12.32	0.6	**0.22**	12.32	0.6	**0.22**
Total RPM		1.343	4.3	**0.18**	2.33	2.0	**0.15**	3.673	2.8	**0.34**	24.28	0.6	**0.47**	28	0.9	**0.81**
Korbel Main	0.15				182.3	0.3	**1.93**	182.3	0.3	**1.93**	21.14	0.3	**0.18**	203.4	0.3	**2.12**
Cathedral (Maiden)	0.15															
Total Korbel					182.3	0.3	**1.93**	182.3	0.3	**1.93**	21.14	0.3	**0.18**	203	0.3	**2.12**
Total Estelle Gold Project		1.343	4.3	**0.18**	185	0.4	**2.09**	186	0.4	**2.27**	45.43	0.4	**0.66**	231	0.4	**2.93**

Notes to Table 3:

1. A mineral resource is defined as a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity, that there are reasonable prospects for economic extraction.
2. The mineral resource applies a reasonable prospect of economic extraction with the following assumptions:
   - Gold price of US$1,850/oz
   - 5% royalty on recovered ounces
   - Pit slope angle of 45°
   - Mining cost of US$1.65/t
   - Processing cost for RPM US$9.80/t and Korbel US$5.23/t (inclusive of ore sorting for Korbel)
   - Combined processing recoveries of 88.20% for RPM and 75.94% for Korbel
   - General and Administrative Cost of US$1.30/t
   - Tonnages and grades are rounded to two significant figures and ounces are rounded to 1000 ounces, subject to rounding.

A summary comparison of the percentage increases between Table 2 and Table 3 is set out below:

(All Moz Au)	Measured	Indicated	Measured & Indicated	Inferred	Total
Table 2: S-K 1300 MRE	0.18	2.54	2.72	2.45	5.17
Table 3: JORC Compliant Scoping Study	0.18	2.09	2.27	0.66	2.93
% Increase	Nil	21%	20%	271%	76%

As noted above, the only change in assumptions between the S-K 1300 MRE and the in-pit resources reported in the Scoping Study are the increase in the gold price used to generate the optimal pit shells from US$1,850 in the Scoping Study to US$2,000 and increasing the pit slope angles to 50 degrees in the S-K 1300 MRE.

Further discussion and analysis of the Estelle Gold Project is available through the interactive Vrify 3D animations, presentations, and videos, which are all available on the Company's website. www.novaminerals.com.au

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This announcement has been authorized for release by the Company's Executive Directors.

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Competent Person Statement

Mr Vannu Khounphakdee P.Geo., who is an independent consulting geologist of a number of mineral exploration and development companies, reviewed and approves the technical information in this release and is a member of the Australian Institute of Geoscientists (AIG), which is ROPO accepted for the purpose of reporting in accordance with ASX listing rules. Mr Vannu Khounphakdee has sufficient experience relevant to the gold deposits under evaluation to qualify as a Competent Person as defined in the 2012 edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Vannu Khounphakdee is also a Qualified Person as defined by S-K 1300 rules for mineral deposit disclosure. Mr Vannu Khounphakdee consents to the inclusion in the report of the matters based on information in the form and context in which it appears.

The Company's JORC-compliant MRE was reported in its ASX release titled "Estelle Global Gold MRE Increases to 9.9Moz Au" dated 11 April 2023. The Company's scoping study was reported in its ASX released titled "Robust Phase 2 Scoping Study for Estelle Gold Project" dated 15 May 2023. Nova Minerals confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements, and in the case of the exploration results, that all material assumptions and technical parameters underpinning the results in the relevant market announcement continue to apply and have not materially changed.

Forward-looking Statements and Disclaimers

This news release contains "forward-looking information" within the meaning of applicable securities laws. Generally, any statements that are not historical facts may contain forward-looking information, and forward looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget" "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or indicates that certain actions, events or results "may", "could", "would", "might" or "will be" taken, "occur" or "be achieved." Forward-looking information is based on certain factors and assumptions management believes to be reasonable at the time such statements are made, including but not limited to, continued exploration activities, Gold and other metal prices, the estimation of initial and sustaining capital requirements, the estimation of labor costs, the estimation of mineral reserves and resources, assumptions with respect to currency fluctuations, the timing and amount of future exploration and development expenditures, receipt of required regulatory approvals, the availability of necessary financing for the Project, permitting and such other assumptions and factors as set out herein. apparent inconsistencies in the figures shown in the MRE are due to rounding

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to: risks related to changes in Gold prices; sources and cost of power and water for the Project; the estimation of initial capital requirements; the lack of historical operations; the estimation of labor costs; general global markets and economic conditions; risks associated with exploration of mineral deposits; the estimation of initial targeted mineral resource tonnage and grade for the Project; risks associated with uninsurable risks arising during the course of exploration; risks

associated with currency fluctuations; environmental risks; competition faced in securing experienced personnel; access to adequate infrastructure to support exploration activities; risks associated with changes in the mining regulatory regime governing the Company and the Project; completion of the environmental assessment process; risks related to regulatory and permitting delays; risks related to potential conflicts of interest; the reliance on key personnel; financing, capitalization and liquidity risks including the risk that the financing necessary to fund continued exploration and development activities at the Project may not be available on satisfactory terms, or at all; the risk of potential dilution through the issuance of additional common shares of the Company; the risk of litigation.

Although the Company has attempted to identify important factors that cause results not to be as anticipated, estimated or intended, there can be no assurance that such forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. Forward looking information is made as of the date of this announcement and the Company does not undertake to update or revise any forward-looking information this is included herein, except in accordance with applicable securities laws.

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Initial Assessment Technical Report Summary

Estelle Gold Project

Alaska, USA

Prepared for Nova Minerals Limited

SK-1300 Initial Assessment Technical Summary Report

January 31, 2024

Prepared by:

Roughstock Mining Services

Nova Minerals Limited

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1. Executive Summary

Introduction

Nova Minerals Limited ("Nova Minerals or "Nova") commissioned Roughstock Mining Services to prepare an Initial Assessment Technical Report Summary (TRS) to assess the potential to develop a gold mining and processing operation at the Estelle Gold Project. Roughstock Mining Services personnel visited the project site in late November and early December 2023. The information provided in this report was supplied by Nova Minerals personnel and referenced consultants. The Estelle Gold Project is Nova's flagship project, located in the Tintina Gold Province, approximately 150km northwest of Anchorage, Alaska.

This report is preliminary in nature and includes Measured, Indicated and Inferred mineral resources in compliance with the United States Securities and Exchange Commission's (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300) and Item 601(b)(96) Technical Report Summary (TRS).

There is no certainty that the TRS will be realized. Costs presented in this report are in USD$ unless otherwise stated.

Property Description

The Estelle Gold Project contains multiple mining complexes across a 35km long mineralized corridor of over 20 identified gold prospects. The Project which comprises 513km^2 of Alaska State mining claims located on State of Alaska public lands is situated on the Estelle Gold Trend in Alaska's prolific Tintina Gold Belt, a province which hosts a 220 million ounce (Moz) documented gold endowment and some of the world's largest gold mines and discoveries including Victoria Gold's Eagle Mine and Kinross Gold Corporation's Fort Knox Gold Mine (Figure 1-1).

Located approximately 150km (93 miles) northwest of the major US city of Anchorage, Alaska the project is a year-round operation, near a large labor force and all essential services. The base site hosts a fully winterized 80-person camp, including an on-site sample processing facility and the 4,000-foot Whiskey Bravo airstrip, which can facilitate large capacity DC3 type aircraft. Access is currently available to the Project via a winter road and by air. The proposed West Susitna Access Road, which is situated on Alaska State land within the Matanuska-Susitna Borough and has considerable support from both the community and the State government, has progressed to the permitting stage. (Figure 1-2).

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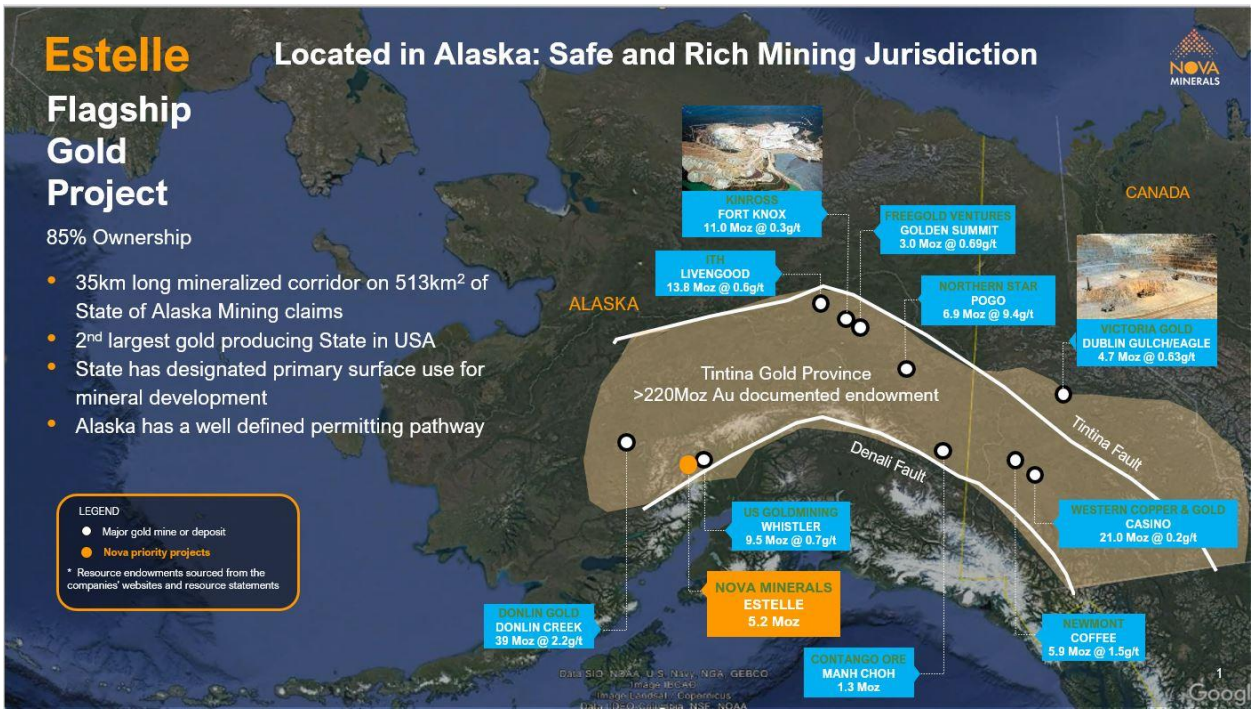

Figure 1-1: Estelle Gold Project location with proximate mines in detail

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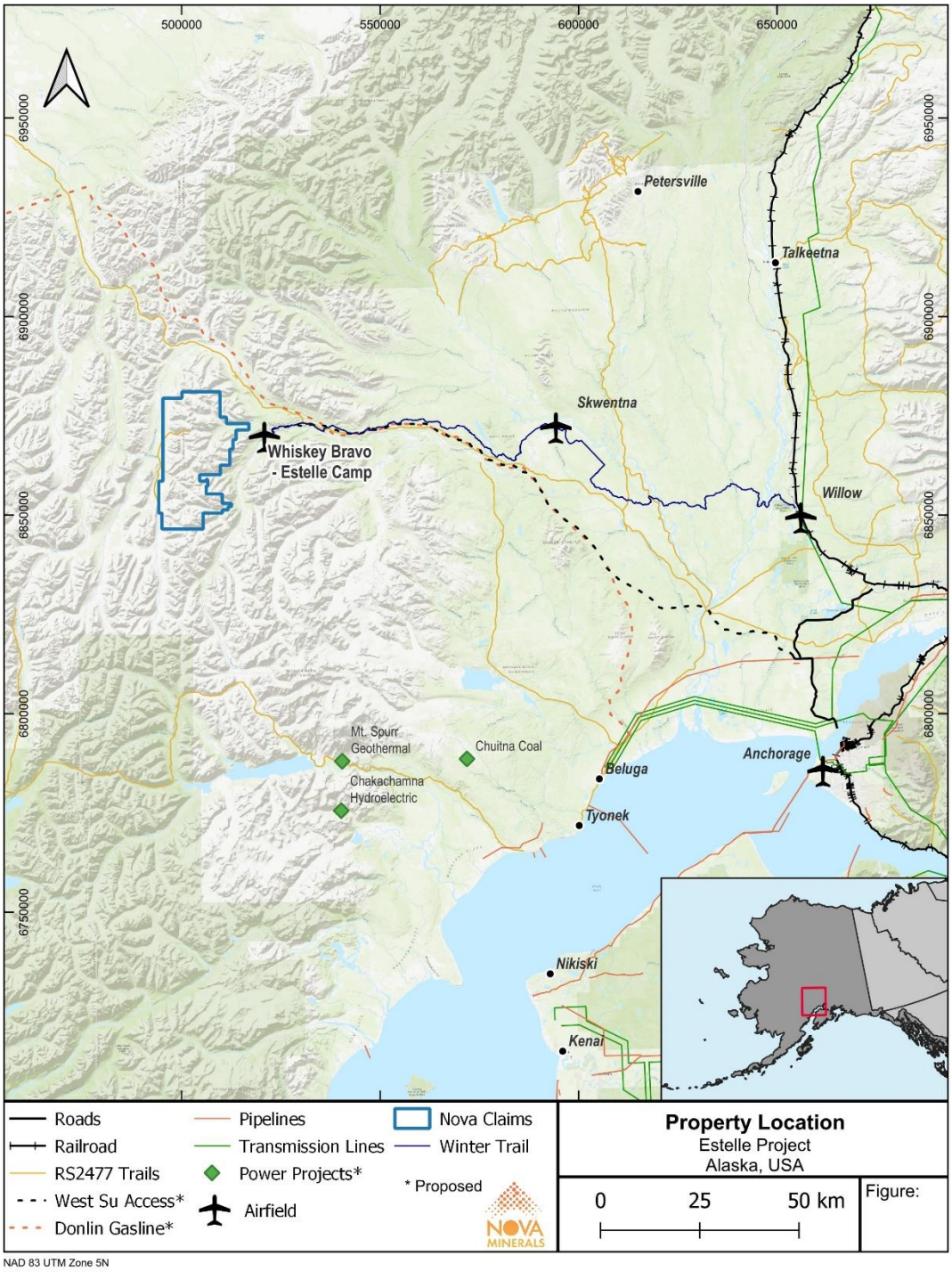

Figure 1-2: Location map of the Estelle Gold Project with infrastructure solutions shown

The resource estimate in this report is based on open pit mining techniques to establish reasonable boundaries and cut-off grades.

Property Ownership

The Estelle Gold Project is comprised of 513km^2 State of Alaska mining claims. The mining claims are wholly owned by AKCM (AUST) Pty Ltd. (an incorporated Joint venture (JV Company between Nova Minerals and AK Minerals Pty Ltd) via 100% ownership of Alaskan incorporate company AK Custom Mining LLC. AKCM (AUST) Pty Ltd is owned 85% by Nova Minerals, 15% by AK Minerals Pty Ltd. AK Minerals Pty Ltd holds a 2% NSR. Nova owns 85% of the project through the joint venture agreement. The Company is not aware of any other impediments that would prevent an exploration or mining activity.

Regional Geology & Mineralization

The rocks that comprise Western Canadian Cordillera and Alaska were accreted to the Ancient North American craton. These rocks originated as chains of allochthonous terranes, accreted to the North American Continent and transported northward along the set of right-lateral faults, including the Denali Fault to where they are presently located. (Waldien, T.S., et al. (2021)). The major terranes that make up the Western Canada Cordillera are shown in Figure 1-3. It has been interpreted that these accreted terranes were a series of intra-oceanic arcs, arc-related accretionary prisms, as well as flysch basins that range in age from Proterozoic to the Cenozoic. (Flagg, E.M., 2014).

This accretion period, active during the Jurassic to Cretaceous Periods, was followed by a cycle of plutonism (also in the Cretaceous), involving the emplacement of a series of multi-phase plutons, resulting in deformation and metamorphism of the overlying strata. Associated contact metamorphism caused the hornfelsed aureole around the intrusion. (Flagg, E., 2014)

The Kahiltna sedimentary basin overlying the property is composed of Late Jurassic to Early Cretaceous argillite, phyllite, lithic greywacke, conglomerate, chert, mudstone and limestone. (Flagg, E., 2014) The USGS defines flysch sediments as a series of thin beds which are comprised of alternating shallow and deep-water facies sedimentary environments, deposited in a geosyncline or foredeep preceding major orogenic events. (Eardley, A.J. and White (1947)).

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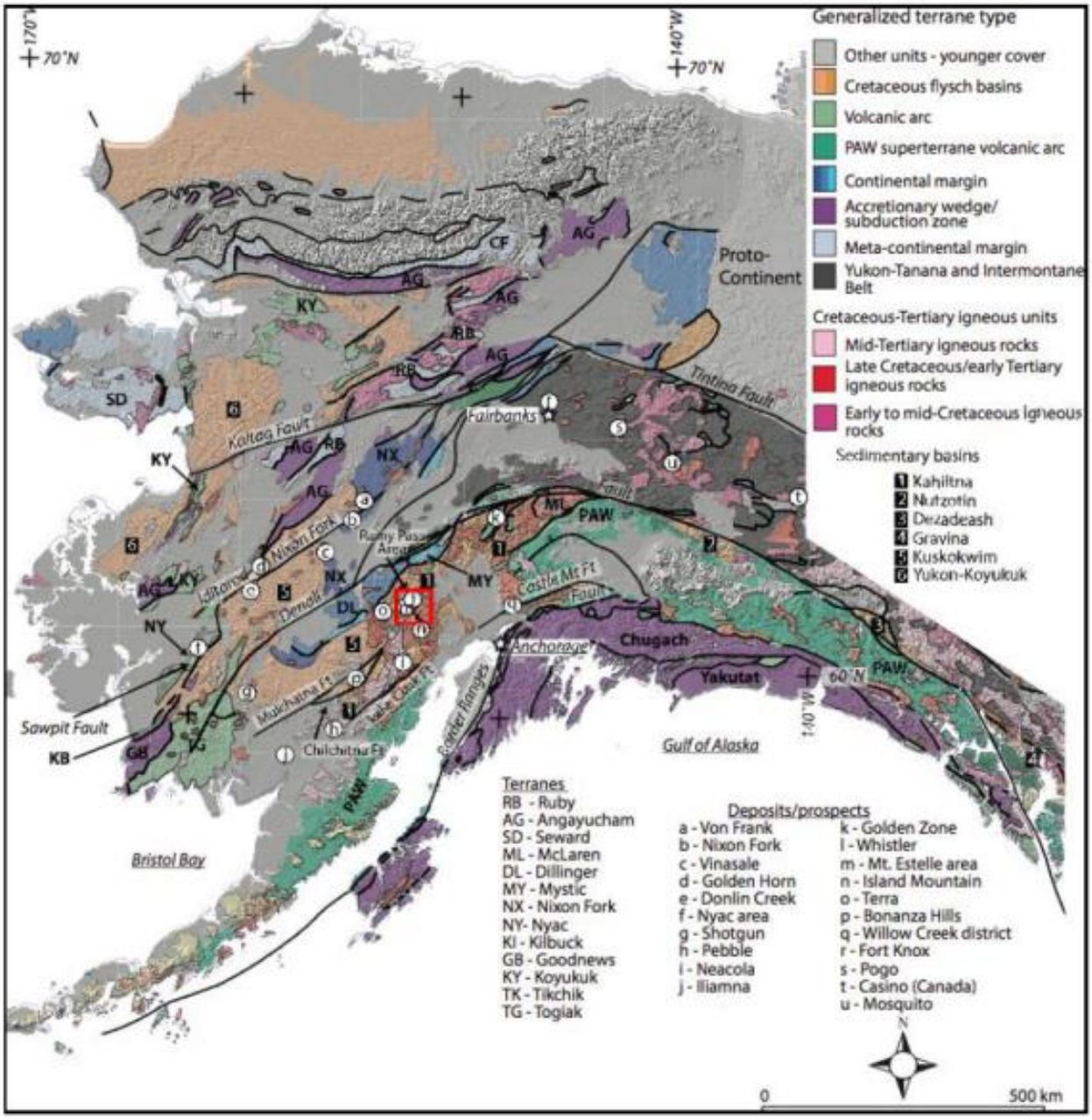

Figure 1-3: Regional Geologic Map of Alaska

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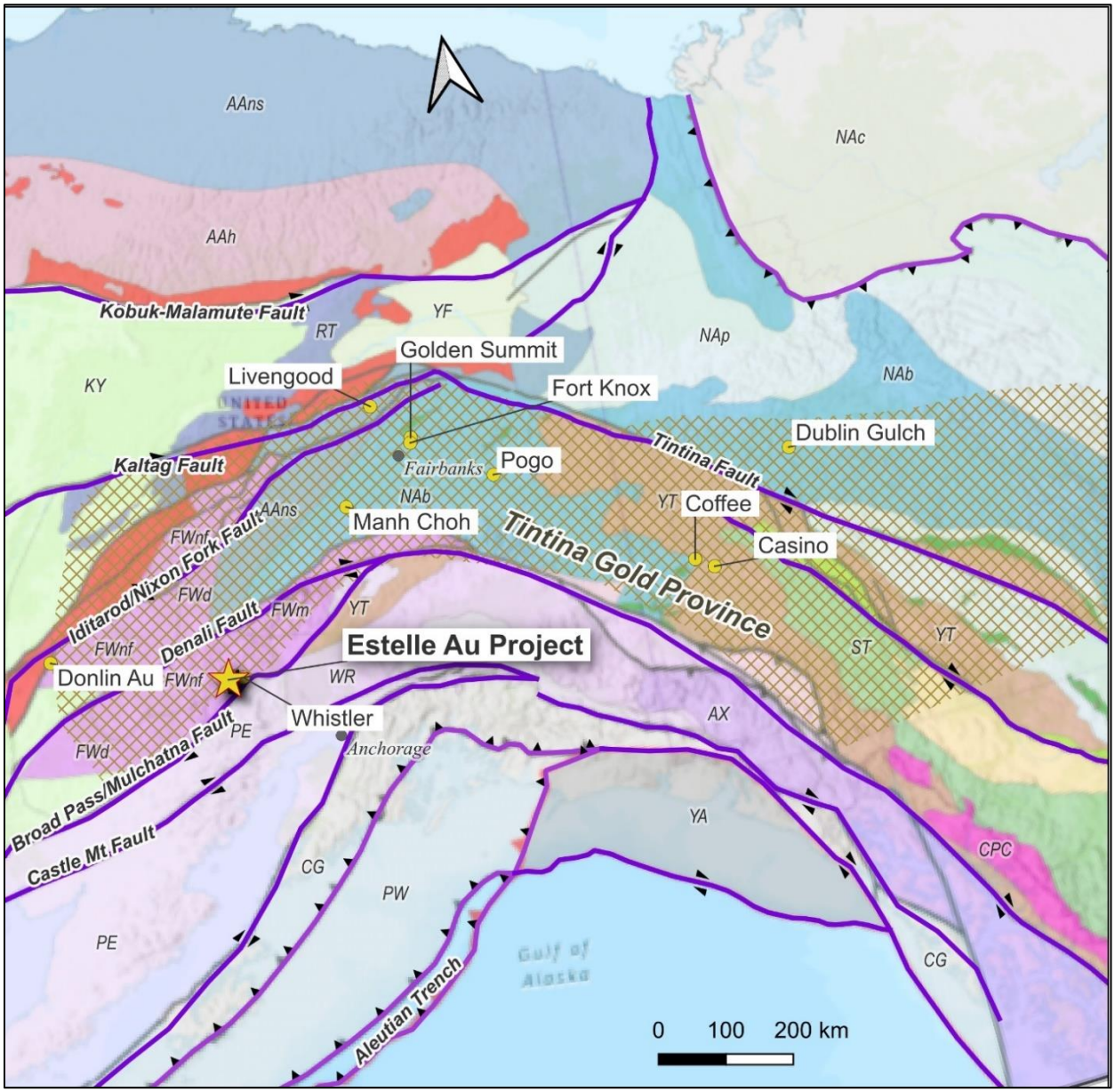

Figure 1-4: Regional Geologic Map of South-Western to South Central Alaska

Property Geology

The Estelle property is located in the southwestern extremity of the Tintina Gold Province, within the Dillinger sub-member of the Farewell Terrane which is comprised of Cambrian to Devonian deep-water basinal shales and sandstones (Figure 1-4).

Both the terrane and the Tintina Gold Province terminate on the Broad Pass/ Mulchatna Fault Zone, near the Estelle Gold Project southern property boundary. More generally, Figure. 1-5 shows Alaska and Yukon comprised of accreted terranes, with Ancient North American craton (NAc), in the northeast corner of the map.

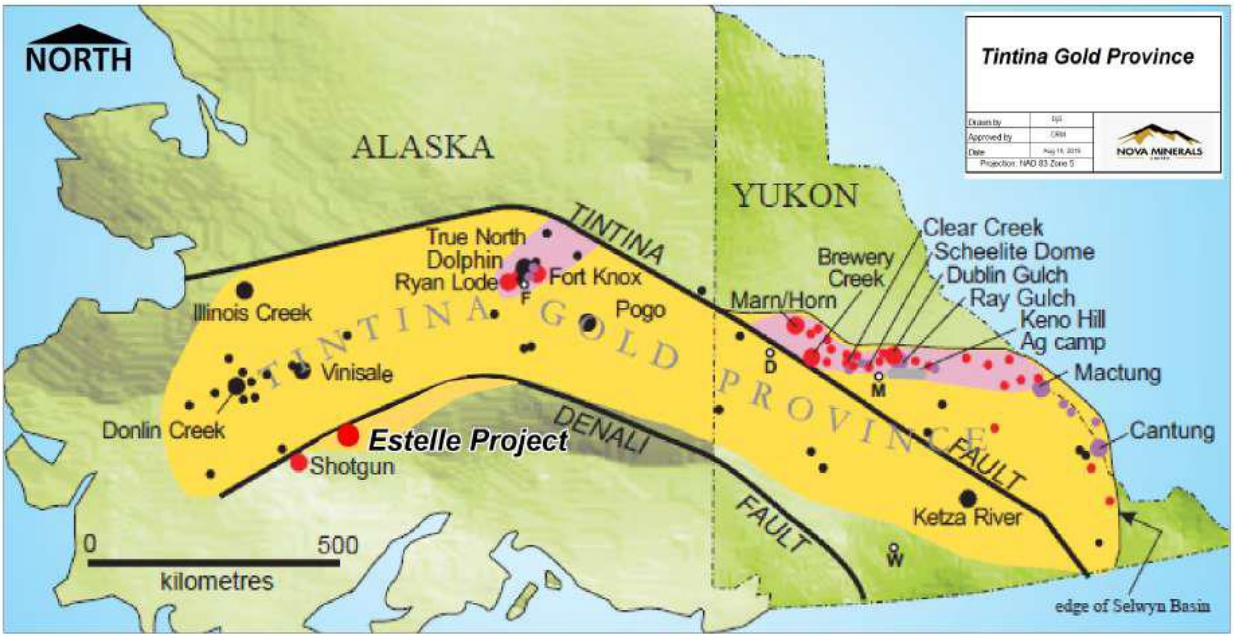

Figure 1-5: Depiction of the Tintina Gold Province which spans from the Yukon into Alaska

Within the Estelle Project property, lie the Mesozoic marine sedimentary rocks of the Kahiltna terrane. Regionally, these marine rocks were intruded by several plutons. The Mount Estelle pluton has been dated by Reed and Lanphere (1972) at 65 to 66 Ma. This pluton is compositionally zoned and is made up of a granite core transitioning to quartz monzonite, quartz monzodiorite, augite monzodiorite, diorite, and lamprophyric mafic and ultramafic rocks. (Millholland, 1995; Crowe and others, 1991; Crowe and Millholland, 1990a) The intrusion contains xenoliths of metasedimentary country rocks into which it was intruded. Tourmaline and beryl have been observed in, and adjacent to the pluton. The rock surrounding the Mt. Estelle pluton has undergone contact metamorphism and is locally hornfelsed. There is red staining which likely indicates disseminations of pyrite along fracture faces. Adjacent to the pluton, local sericite and clay alteration is also found.

The Estelle pluton is cut by several dikes which range in composition from aplite, gabbro, dacite, and lamprophyre. These structures are found in the felsic and intermediate phases of the pluton. Gold, associated with pyrrhotite, chalcopyrite, pentlandite and molybdenite also occurs in ultramafic rocks on the south side of the pluton. Mineralization is less common in the sedimentary rocks.

Anomalous gold, platinum-group elements, copper, chrome, nickel, and arsenic are reported from many of the composite plutons of the Yentna trend. (Reed and others, 1978; Reed and Nelson, 1980) Gold and platinum-group-element placers have been worked at several sites downstream from the plutons. (Cobb, 1972)

RPM lies within a plutonic complex intruding a Jurassic to Early Cretaceous flysch sequence. (Reed and Nelson, 1980) The intrusive complex consists of ultramafic to felsic plutons of Late Cretaceous/Early Tertiary age (69.7 Ma) and are centrally located in a region of arc-magmatic

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related gold deposits. Though mineralization at Estelle is generally restricted to the intrusive rocks, mineralization at RPM occurs in both intrusive and hornfels. (Millrock Resources Inc., 2014)

At RPM, roof pendants of hornfels occur overlying multiple intrusive units. Fingers of fine-grained aplite, monzonite and biotite-rich diorite cut the hornfels. All the lithologic units are in turn cut by stockwork and/or sheeted veins. Veins range in size and character from meter-wide quartz ± sulfide to millimeter-scale quartz-arsenopyrite veins and centimeter-scale quartz-tourmaline-sulfide veins. A granitic intrusive body, which underlies the hornfels and crops out in the southern part of the prospect area appears to be potentially related to mineralization (Millrock Resources Inc., 2014).

Data Verification

Field data is collected and compiled into Excel spreadsheets. Assay data CSV files are downloaded directly from the ALS Labs Webtrieve server or from emailed CSV files. Various software validation tools are used for checking for consistency between and within database tables which showed no significant issues.

Diamond drilling sampling is completed on sawing half HQ core. Sampling is based along lithological contacts and is sampled at 3.05 meter (10 ft.) intervals (run block to run block). Samples were sent to the ALS laboratory in Fairbanks, Alaska for pulverization to produce a 250 g sub-sample for Au analysis.

Whole HQ core is logged in a qualitative and quantitatively manner and recorded into a running Excel spreadsheet.

The following data was collected:

- Major units and samples follow lithological changes.
- Primary, secondary, and tertiary alteration types and intensity.
- Mineralization type (arsenopyrite, pyrite, and chalcopyrite), percentage mineralization, and texture Structures including veins, faults, and shears. Orientation recorded (alpha/beta).
- Prep or reject duplicates were collected every 1 in 20 samples.

Blank material was inserted 1 in 40 samples and consist of Pea Gravel obtained from Alaska Industrial Hardware. Certified Reference Material (CRM) was inserted 1 in 20 samples. Three different CRMs at three different grades levels were used. Prep or reject duplicates were collected every 1 in 20 samples. Acceptable levels of precision and accuracy were obtained.

Samples were sent to the ALS laboratory in Fairbanks for pulverization to produce a 250 g sub-sample for analysis. Sample prep consisted of ALS Prep 31 - Crush to 70% less than 2 mm, riffle split off 250 g, pulverize split to better than 85% passing 75 microns. Sample analysis consisted of ALS Au-ICP21 Fire Assay with 30 g sample charge using ICP-AES finish. Detection Limits range from 0.001 - 10 g/t Au. For samples exceeding the upper detection limit of 10 g/t Au the material was re-run using ALS method Au-GRA21. This Fire Assay technique utilizes a charge size of 30 g and a gravimetric finish. Detection Limits range from 0.05 -10,000 g/t Au.

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Metallurgy and Mineral Processing Testing

Metallurgical test work programs were conducted on samples from the Korbel and RPM deposits. Testing for comminution, flotation, leaching, gravity concentration was conducted by Bureau Veritas Commodities Canada Ltd. in Richmond, BC, Canada. Testing for ore sorting by XRT sorters was conducted by TOMRA Sorting Inc in Sydney, Australia.

The Korbel deposit is the most advanced deposit on the property and has had the full suite of tests conducted. Samples from RPM underwent flotation and comminution tests and some cyanidation test work. Due to the similarity of the deposit types, similar leach and flotation recoveries were used for both deposits.

Mineral Resources

Over 90,000m of diamond and RC drilling has been undertaken for all deposits in support of a S-K 1300 compliant mineral resource estimate (MRE) of 5.17 Moz Au across the Estelle Gold Project, of which 85% or 4.41 Moz Au is attributable to Nova Minerals. This MRE is based on drilling information available on the 31st of March 2023 and contains Measured, Indicated and Inferred categories. Resources were estimated for each deposit by Multiple Indicator Kriging (MIK) with block support adjustment reflecting large scale open pit mining Drilling undertaken after March 31, 2023, along with future targeted drilling programs, are planned to potentially upgrade both the size and confidence of the MRE. There have been no changes since the date of this MRE.

Table 1-1: Mineral Resource Estimate for Estelle Gold Project (January 31, 2024)

Deposit	Cut-off Grade	Measured			Indicated			Inferred			Total		
		Tonnes Mt	Grade Au g/t	**Au Moz**	Tonnes Mt	Grade Au g/t	**Au Moz**	Tonnes Mt	Grade Au g/t	**Au Moz**	Tonnes Mt	Grade Au g/t	**Au Moz**
RPM North	0.20	1.4	4.1	0.18	3.0	1.6	0.15	23	0.60	0.45	28	0.88	0.78
RPM South	0.20	-	-	-	-	-	-	23	0.47	0.35	23	0.47	0.35
Total RPM		**1.4**	**4.1**	**0.18**	**3.0**	**1.6**	**0.15**	**46**	**0.54**	**0.80**	**51**	**0.70**	**1.13**
Korbel Main	0.15	-	-	-	240	0.31	2.39	35	0.27	0.30	275	0.30	2.70
Cathedral	0.15	-	-	-	-	-	-	150	0.28	1.35	150	0.28	1.35
Total Korbel		**-**	**-**	**-**	**240**	**0.31**	**2.39**	**185**	**0.28**	**1.65**	**425**	**0.30**	**4.05**
Total Estelle Gold Project		**1.4**	**4.1**	**0.18**	**243**	**0.33**	**2.54**	**231**	**0.33**	**2.45**	**476**	**0.3**	**5.17**

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Table 1-2: Mineral Resource Estimate for Nova's 85% attributable interest in the Estelle Gold Project (January 31, 2024)

Deposit	Cut-off Grade	Measured			Indicated			Inferred			Total		
		Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz
RPM North	0.20	1.2	4.1	0.16	2.6	1.6	0.13	20	0.60	0.39	24	0.89	0.68
RPM South	0.20	-	-	-	-	-	-	20	0.47	0.30	20	0.47	0.30
Total RPM		**1.2**	**4.1**	**0.16**	**2.6**	**1.6**	**0.13**	**40**	**0.54**	**0.69**	**44**	**0.70**	**0.98**
Korbel Main	0.15	-	-	-	210	0.31	2.09	30	0.27	0.26	240	0.31	2.35
Cathedral	0.15	-	-	-	-	-	-	120	0.28	1.08	120	0.28	1.08
Total Korbel		**-**	**-**	**-**	**210**	**0.31**	**2.09**	**150**	**0.28**	**1.34**	**360**	**0.30**	**3.43**
Total Estelle Gold Project		**1.2**	**4.1**	**0.16**	**213**	**0.33**	**2.22**	**190**	**0.33**	**2.03**	**404**	**0.34**	**4.41**

Notes to Tables 1-1 and 1-2:

1. A Mineral Resource is defined as a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity, that there are reasonable prospects for economic extraction.
2. The mineral resource applies a reasonable prospect of economic extraction with the following assumptions:
   - Resources are constrained within optimized pit shells that reflect a conventional large-scale truck and shovel open pit operation with cost and revenue parameters as follows:
     - Gold price of US$2,000/oz
     - 5% royalty on recovered ounces
     - Pit slope angles of 50º
     - Mining cost of US$1.65/t
     - Processing cost for RPM US$9.80/t and for Korbel US$5.23/t (inclusive of ore sorting for Korbel).
     - Combined processing recoveries of 88.20% for RPM and 75.94%.
     - General and Administrative Cost of US$1.30/t
     - Tonnages and grades are rounded to two significant figures. Ounces are rounded to 1000 ounces. Rounding errors are apparent.

The $2,000/oz pit shell constraining the Korbel Main mineral resources extends over around 2.3 kilometers of strike with an average width of around 600 meters, and a maximum vertical depth below surface of approximately 430 meters.

The $2,000/oz pit shell constraining the Cathedral mineral resources extends over approximately 1.2 kilometers north-south by up to approximately 820 meters east-west, with a maximum vertical depth below surface of approximately 520 meters.

The RPM $2,000/oz resource pit shell encompasses the RPM North and South mineral resources. In the RPM North area, it covers an area around 840 meters east -west by 700 meters north-south and reaches a maximum vertical depth below topography of approximately 340 meters. In the RPM South area, it covers an area around 450 meters east-west by 480 meters north-south and reaches a maximum vertical depth below topography of approximately 250 meters.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resources will be converted into mineral reserves.

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Mine Design

Mining has been designed using a conventional truck and shovel approach. Open pit mine designs have been developed for the Korbel Main, Cathedral, RPM North and RPM South deposits at an initial assessment level. Pit designs are based on overall slope angles of 50 degrees.

Recovery Methods

The project flowsheet (Figure 1-6) and initial assessment level processing plant design is based on preliminary metallurgy and ore sorting tests in combination with economic considerations.

The process plant was designed using conventional processing unit operations with the addition of XRT ore sorting systems. Only resources originating from Korbel Main and Cathedral will be sorted, resources originating from the RPM deposits will bypass the sorters. The ore sorting test work performed to date was preliminary in nature in support of the flow sheet to determine the trade off on the gold recoveries. With the preliminary nature of the study, it is still yet to be determined if ore sorting will be included in the final flowsheet and future economic analysis. The product of the process will be doré bars.

Run-of-mine and run–of-stockpile resources will be hauled to the sorting facility where it will be crushed in a primary gyratory crusher before going through a sizing screen. The fines fraction head will be fed directly to the High-Pressure Grinding Rolls (HPGR), the mid-sized material will be fed to the XRT ore sorting system, and the oversize material will be crushed in a secondary cone crusher. The ore sorting system will separate the economical ore out from the waste, transporting it to an HPGR. The product of the HPGR will be sent to a closed circuit consisting of a ball mill and hydro cyclone cluster. The P80 overflow of 75µm will flow through the flotation circuit. The tailings from this process will be sent to the tailing's thickener. The concentrate will move on to the cyclone cluster and IsaMill for fine grinding to P80 of 22µm before finally moving on to the pre-leach thickener where the underflow will report to the leach and Carbon in Pulp (CIP) circuits.

The gold leached in the CIP circuit will be recovered by activated carbon and elution. From this elution circuit, the gold will be recovered by electrowinning cells in the gold room. The gold sludge will be dried, mixed with fluxes, and then smelted in a furnace to produce doré bars. Carbon will

be re-activated in a regeneration kiln before being re-used in the CIP circuit. The CIP tailings will be treated for cyanide in the cyanide destruction circuit before being pumped to the tailings thickener. The waste byproduct of the tailings thickener will be pumped to the tailings storage facility.

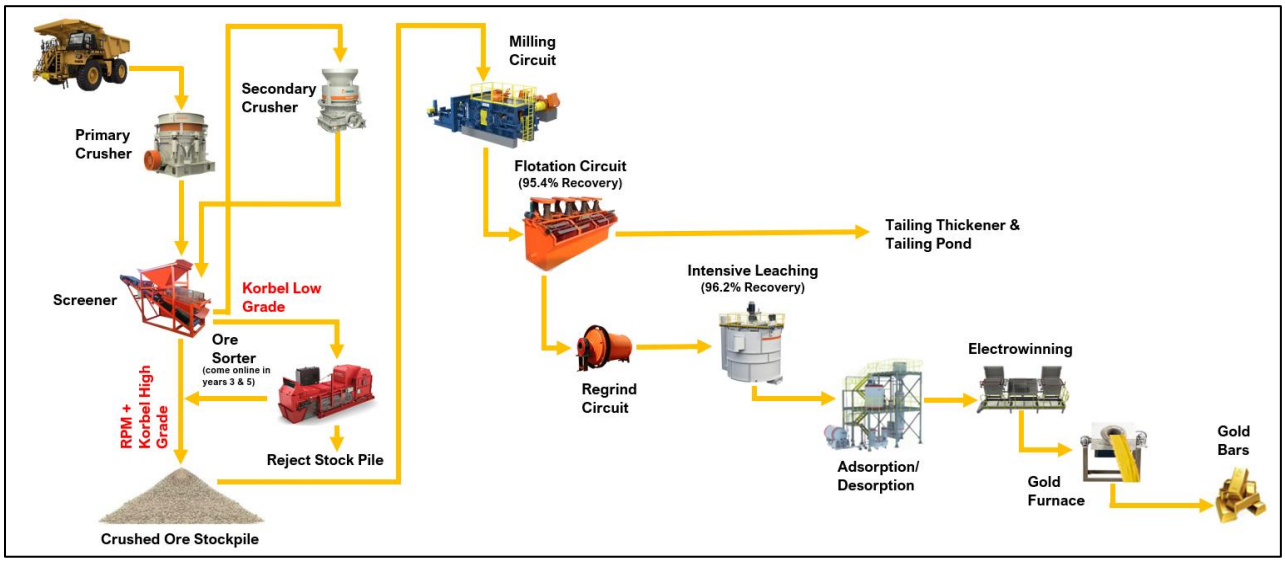

Figure 1-6: Simplified process flow sheet

Project Infrastructure

The project is located approximately 150km North-West of Anchorage and the report assumes a new access road (the proposed West Susitna Access Road) of approximately 146km leading to the project site will be constructed, with its usage primarily for transportation of construction materials, equipment, and ongoing operations supplies. Road construction is planned to be conducted by the Government of Alaska with access being provided on a toll basis. Money has been set aside for tolls for a government-upgraded road. The site can also be accessed by a winter road.

While the project currently has some infrastructure in place consisting of a fully winterized 80-person camp, an on-site sample processing facility and the 4,000-foot Whiskey Bravo airstrip, which can facilitate large capacity DC3 type aircraft, the following additional infrastructure will be required to support the project:

- Access road
- Single-lane haul road to RPM
- Power line and substation
- Overburden stripping and stockpiling
- Water management ponds and ditches
- Water treatment plant
- Pump station for Portage Creek diversion
- Tailings storage facility

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- Waste storage facilities
- Mine facilities including administration, maintenance shop, warehouse, mine dry, and miscellaneous facilities
- Processing facilities including process plant, assay laboratory, electrowinning and leaching plant
- All mine facilities and process facilities will be serviced with potable water, fire water, compressed air, power, diesel, communication, and sanitary systems

There is sufficient area to place all mine infrastructure, however the steep topography could pose some construction challenges.

Environmental Studies

Several baseline studies have already been initiated, and further field inventories and surveys will have to be completed within the project area, as well as environmental assessments as required by the permitting process.

It is likely that the project will require an Environmental Impact Assessment (EIA).

Studies characterizing archaeological potential areas, fish habitat, hydrology will need to be conducted.

The project will require several permits, approvals, and authorizations to initiate the construction phase of the project and Jade North consultants have been engaged to assist with navigating Alaska's Large Mine Permitting Process which sets out a clear path and government interdepartmental coordination.

Social and Community Impact

Nova is committed to creating a safe and environmentally responsible future mining operation that provides opportunities for all Alaskans. Nova has established strong and collaborative working relationships with the communities adjacent to our operations to ensure we have a meaningful impact on their culture, environment, and economic prosperity. Where possible, Nova does this by prioritising local procurement and employment and investing in community partnering initiatives consistent with our core values: Integrity, Respect and Openness.

Nova also takes its environmental responsibilities seriously and is committed to achieving excellence in environmental management through understanding the sensitivities of working within the region.

All works are governed by the Application for Permits to Mine in Alaska (APMA). There are strict provisions governing exploration and mining in Alaska, as well as legislation and a large number of supporting regulations.

Over the last 5 years Nova has spent in excess of USD$50M directly and indirectly into the local Alaskan economy, supported over 50 local Alaskan businesses, and through contractors employed 100's Alaskans from local communities.

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While Nova is currently in the exploration and development phase of our Estelle Gold Project, as the project moves into the construction and operation phases there will be an exponential increase in the number of local jobs and services required.

Capital and Operating Cost Estimates

No capital cost estimates are being presented in this Initial Assessment Technical Report Summary.

The operating cost estimates presented in this Initial Assessment Technical Report Summary are based on industry standards and comparison to similar mines operating in the region.

The operating cost estimates for this initial assessment were conducted in 2023 US dollars (USD) unless otherwise stated. All cost projections are referenced on a nominal 2023 US dollar basis.

The operating cost estimates are considered Initial Assessment estimates per S-K 1300 requirements and have an accuracy range of +/- 50%. Estimate accuracy ranges are projections based upon cost estimating methods and are not a guarantee of actual project costs.

Economic Analysis

No detailed economic analysis is being presented in this Initial Assessment. The investor is cautioned that only mineral resources are being presented in this Initial Assessment Technical Report Summary.

Conclusions and Recommendations

The QPs make the following conclusions regarding sampling, analysis, data verification, metallurgical test work and the resource estimate.

Sampling, Preparation, Analysis and Security Conclusions

In the opinion of the QP, sampling preparation, analysis, and security are consistent with industry standard practices. Review and analysis of the assay database and QAQC data shows the assay database is of sufficient quality for resource estimation.

Data Verification Conclusions

In the opinion of the QP, the resource database provided is of sufficient quality for resource estimation.

Metallurgical Test Work Conclusions

In the opinion of the QP, the recoveries used for the resource estimate are reasonable for this level of study based on the metallurgical testing to date.

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Resource Estimate Conclusions

In the opinion of the QP the resource estimates and resource classifications reported herein are a reasonable representation of the gold mineral resources for the Korbel Main, Cathedral, RPM North, and RPM South deposits and the TRS provides justification that the mineral resources have reasonable prospects of economic extraction.

Recommendations

The QP's make the following recommendations to support the project:

- Further investigation into particle sorting of RPM North and South deposits
- Metallurgical test program for RPM North and South deposits including leach, gravity concentration, and flotation tests
- Laboratory testing of fines to determine upgrading potential
- Infill drilling at all of the Estelle deposits

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2. Introduction

2.1 For Whom is this Report Prepared For

Nova Minerals (Nova) commissioned Roughstock Mining Services to prepare an Initial Assessment Technical Report for the Estelle Gold Project ("the project" or "the property") in compliance with the United States Securities and Exchange Commission's (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300) and Item 601(b)(96) Technical Report Summary.

2.2 Basis of Initial Assessment Report Summary

This Technical Report is an Initial Assessment prepared by Roughstock Mining Services for Nova Minerals. Nova Minerals is an Australian minerals exploration company currently listed on the Australian Stock Exchange (ASX:NVA), the OTC Markets (OTC:NVAAF) and the Frankfurt Stock Exchange (FRA:QM3).

The objectives of this Initial Assessment Technical Report are to:

- Provide an Initial Assessment of the economic potential of all or parts of the mineralization to support the disclosure of mineral resources.

This report contains Measured, Indicated and Inferred mineral resources. According to the S-K 1300 regulations, to reflect geological confidence, mineral resources are subdivided into the following categories based on increased geological confidence: Measured, Indicated and Inferred which are defined under S-K 1300 as:

Measured Resource:

"Measured Mineral Resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The level of geological certainty associated with a measured mineral resource is sufficient to allow a qualified person to apply modifying factors, as defined in this section, in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit. Because a measured mineral resource has a higher level of confidence than the level of confidence of either an indicated mineral resource or an inferred mineral resource, a measured mineral resource may be converted to a proven mineral reserve or to a probable mineral reserve."

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Indicated Resource:

"Indicated Mineral Resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an indicated mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Because an indicated mineral resource has a lower level of confidence than the level of confidence of a measured mineral resource, an indicated mineral resource may only be converted to a probable mineral reserve."

Inferred Resource:

"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. The level of geological uncertainty associated with an inferred mineral resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Because an inferred mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, an inferred mineral resource may not be considered when assessing the economic viability of a mining project, and may not be converted to a mineral reserve."

2.3 Sources of Information and Data

The sources of information include data and reports provided by Nova personnel as well as documents cited throughout the report and referenced in Section 24.

2.4 Units, Currency and Rounding

Metric units are used throughout the report unless specifically stated otherwise. Every effort has been made to clearly display the appropriate units being used throughout this technical report. Currency is expressed in United States dollars (US$, USD, or $) unless specifically stated otherwise. A table of common units and abbreviations used throughout this report is shown in **Error! Reference source not found.**.

Table 2-1: Common units and abbreviations

Symbol/Abbr.	Description	Symbol/Abbr.	Description
'	Minute (Plane Angle)	kWh/t	Kilowatt Hours Per Tonne
"	Second (Plane Angle) or Inches	L	Liter
°	Degree	L/min	Liters Per Minute
° C	Degrees Celsius	L/s	Liters Per Second
° F	Degrees Fahrenheit	LAN	Local Area Network
3D	Three-Dimensions	LG	Low Grade
A	Ampere	LG	Lerchs-Grossman
a	Annum (Year)	LMPP	Alaska Large Mine Permitting Process
AA	Atomic Absorption	LOM	Life of Mine
ac	Acre	m	Meter
ACOE	US Army of Engineers	M	Million
ADEC	Alaska Department of Environmental	m/min	Meters Per Minute
ADFG	Alaska Department of Fish and Game	m/s	Meters Per Second
ADNR	Alaska Department of Natural	m^2	Square Meter
ADR	Adsorption-Desorption-Recovery	m^3	Cubic Meter
AES	Atomic Emission Spectroscopy	m^3/h	Cubic Meters Per Hour
amsl	Above Mean Sea Level	m^3/s	Cubic Meters Per Second
ANFO	Ammonium Nitrate/Fuel Oil	Ma	Million Years
APDES	Alaska Polluant Discharge Elimination	mamsl/	Meters Above Mean Sea Level
APMA	Application for Permits to Mine in	MAP	Mean Annual Precipitation
ARD	Acid Rock Drainage	m.a.s.l./MASL	Meters Above Mean Sea Level
Au	Gold	mbgs	Meters Below Ground Surface
BD	Bulk Density	mbs	Meters Below Surface
bcm	Bank Cubic Meter	mbsl	Meters Below Sea Level
BLM	Bureau of Land Management	mg	Milligram
BTU	British Thermal Unit	mg/L	Milligrams Per Liter
CCA	Capital Cost Allowance	mi	Mile
CDP	Cyanide Detoxification Plant	mi/h	Miles Per Hour
CF	Cumulative Frequency	MIK	Multiple Indicator Kriging

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Symbol/Abbr.	Description	Symbol/Abbr.	Description
cfm	Cubic Feet Per Minute	min	Minute (Time)
CHP	Combined Heat and Power Plant	mL	Milliliter
CIP	Carbon-In-Pulp	Mm^3	Million Cubic Meters
CIM	Canadian Institute of Mining,	mo	Month
cm	Centimeter	Mpa	Megapascal
CM	Construction Management	MRE	Mineral Resource Estimate
cm^2	Square Centimeter	Mt	Million Metric Tonnes
cm3	Cubic Centimeter	MVA	Megavolt-Ampere
COG	Cut-Off Grades	MW	Megawatt
CSS	Close Side Setting	MWTP	Mine Water Treatment Plant
CV	Coefficient of Variation	NEPA	National Environmental Policy Act
d	Day	NG	Normal Grade
d/a	Days per Year (Annum)	NI 43-101	National Instrument 43-101
d/wk	Days per Week	Nm^3/h	Normal Cubic Meters Per Hour
DCS	Distributed Control System	NOAA	National Oceanic and Atmospheric
dmt	Dry Metric Ton	NPVS	NPV Scheduler
EA	Environmental Assessment	OP	Open Pit
EDA	Exploratory Data Analysis	OPMP	Office of Project Management and
EIS	Environmental Impact Statement	ORE	Ore Research and Exploration
EMR	Energy, Mines and Resources	OREAS	Ore Research & Exploration Assay
EP	Engineering and Procurement	OSA	Overall Slope Angles
EPA	Environmental Protection Agency	oz	Troy Ounces
EPCM	Engineering, Procurement and	P.Eng.	Professional Engineer
FEL	Front-End Loader	P.Geo.	Professional Geoscientist
FOB	Free on Board	Pa	Pascal
FONSI	Finding of No Significant Impact	PAG	Potentially Acid Generating
Ft	Foot	PEP	Project Execution Plan
ft^2	Square Foot	PFS	Preliminary Feasibility Study
ft^3	Cubic Foot	PLC	Programmable Logic Controller
ft^3/s	Cubic Feet Per Second	PLS	Pregnant Leach Solution

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Symbol/Abbr.	Description	Symbol/Abbr.	Description
FWS	US Fish and Wildlife Service	ppb	Parts Per Billion
G	Gram	ppm	Parts Per Million
G&A	General and Administrative	PSD	Prevention of Significant Deterioration
g/cm^3	Grams Per Cubic Meter	psi	Pounds Per Square Inch
g/L	Grams Per Liter	QA/QC	Quality Assurance/Quality Control
g/t	Grams Per Tonne	QMS	Quality Management System
Gal	Gallon (US)	QP	Qualified Person
GJ	Gigajoule	ROM	Run-Of-Mine
Gpa	Gigapascal	rpm	Revolutions Per Minute
Gpm	Gallons Per Minute (US)	s	Second (Time)
GW	Gigawatt	S.G.	Specific Gravity
H	Hour	SAC	Subsistence Advisory Council
h/a	Hours Per Year	Scfm	Standard Cubic Feet Per Minute
h/d	Hours Per Day	SG	Specific Gravity
h/wk	Hours Per Week	SHPO	State Historic Preservation Office
Ha	Hectare (10,000 m^2)	SVOL	Search Volume
HG	High Grade	t	Tonne (1,000 kg) (Metric Ton)
HMI	Human Machine Interface	t/a	Tonnes Per Year
Hp	Horsepower	t/d	Tonnes Per Day
HPGR	High-Pressure Grinding Rolls	t/h	Tonnes Per Hour
HPW	Highways and Public Works	tph	Tonnes Per Hour
HSE	Health, Safety and Environmental	ts/hm^3	Tonnes Seconds Per Hour Meter Cubed
HVAC	Heating, Ventilation, and Air	TSF	Tailings Storage Facility
ICMC	International Cyanide Management	TSS	Total Suspended Solids
ICP	Inductively Coupled Plasma	US	United States
ICP-MS	Inductively Coupled Plasma Mass	US$	Dollar (American)
In	Inch	V	Volt
in^2	Square Inch	w/w	Weight/Weight
in^3	Cubic Inch	WAD	Weak-Acid-Dissociable
IP	Internet Protocol	WBS	Work Breakdown Structure

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Symbol/Abbr.	Description	Symbol/Abbr.	Description
IRR	Internal Rate of Return	wk	Week
IRA	Inter-Ramp Angle	wmt	Wet Metric Ton
JORC	Joint Ore Reserves Committee	WRF	Waste Rock Facility
K	Kilo (Thousand)	WRSA	Waste Rock Storage Area
kg	Kilogram	WTP	Water Treatment Plant
kg/h	Kilograms Per Hour	µm	Microns
kg/m^2	Kilograms Per Square Meter	µm	Micrometer
kg/m^3	Kilograms Per Cubic Meter		
km	Kilometer		
km/h	Kilometers Per Hour		
km^2	Square Kilometer		
kPa	Kilopascal		
kt	Kilotonne		
kV	Kilovolt		
kVA	Kilovolt-Ampere		
kW	Kilowatt		
kWh	Kilowatt Hour		
kWh/a	Kilowatt Hours Per Year		

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3. Property Description

3.1 Location

The Estelle Gold Project (Figure 3-1) is situated within the Tintina gold belt in Alaska which is host to an estimated 220 Moz of gold resources. Surface drilling that has been completed to delineate the mineral resource estimate is located in Figures 3-3, 3-4, 3-5 and Table 3-1. The coordinate system used in the figures is UTM NAD83 Z5N. The project property lies approximately 150km northwest of Anchorage, Alaska. This city is a major population center, which provides essential services and a large labor force for the interior parts of Alaska. The Project is a year-round operation, with all essential services. The base camp site hosts a fully winterized 80-person camp, an on-site sample processing facility, and the 4,000-foot Whiskey Bravo airstrip, which can facilitate large capacity DC3 type aircraft. The project region is found in the Alaska Mountain Range with elevations ranging from 705m to 2,085m above sea level. The Alaska Range is a continuation of the Pacific Coast Mountains extending in an arc across the Northern Pacific.

The property is 85% held by Nova Minerals and comprises of 800 Alaska State mining claims covering 126,405 acres (513 km^2) located on the public lands of the State of Alaska. The project area hosts multiple deposits including Korbel Main, RPM North, RPM South and Cathedral, as well as numerous identified prospects including, blocks C, D, Isabella, Sweet Jenny, You Beauty, Shoeshine, Shadow, Train, Muddy Creek, Discovery, Trumpet, Stoney, T5, Tomahawk, Trundle, Rainy Day, West Wing, Stibium, Styx, Portage Pass, NK, Revelation and Wombat (Figure 3-2).

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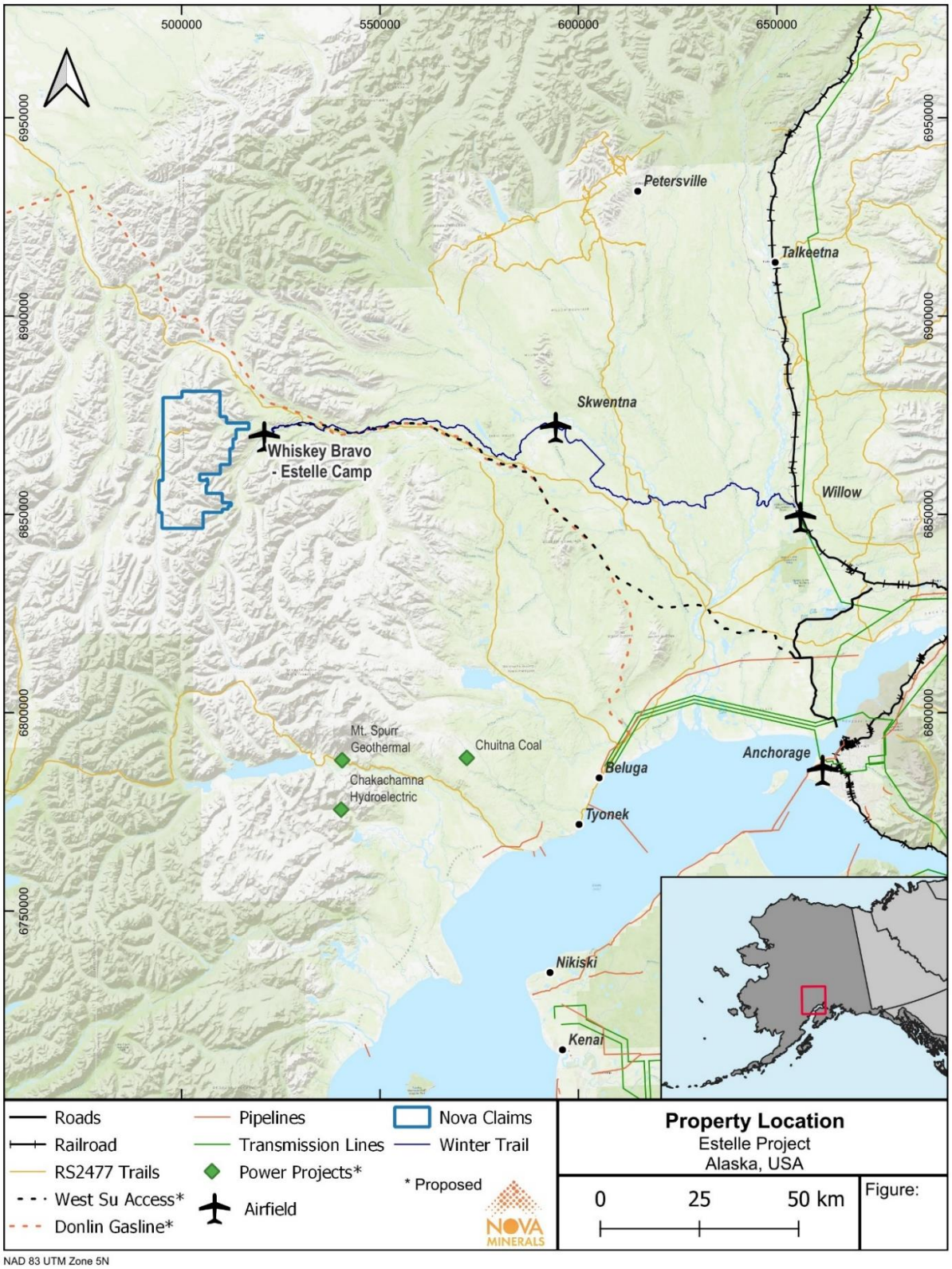

Figure 3-1: Location map of Estelle Gold Project Property

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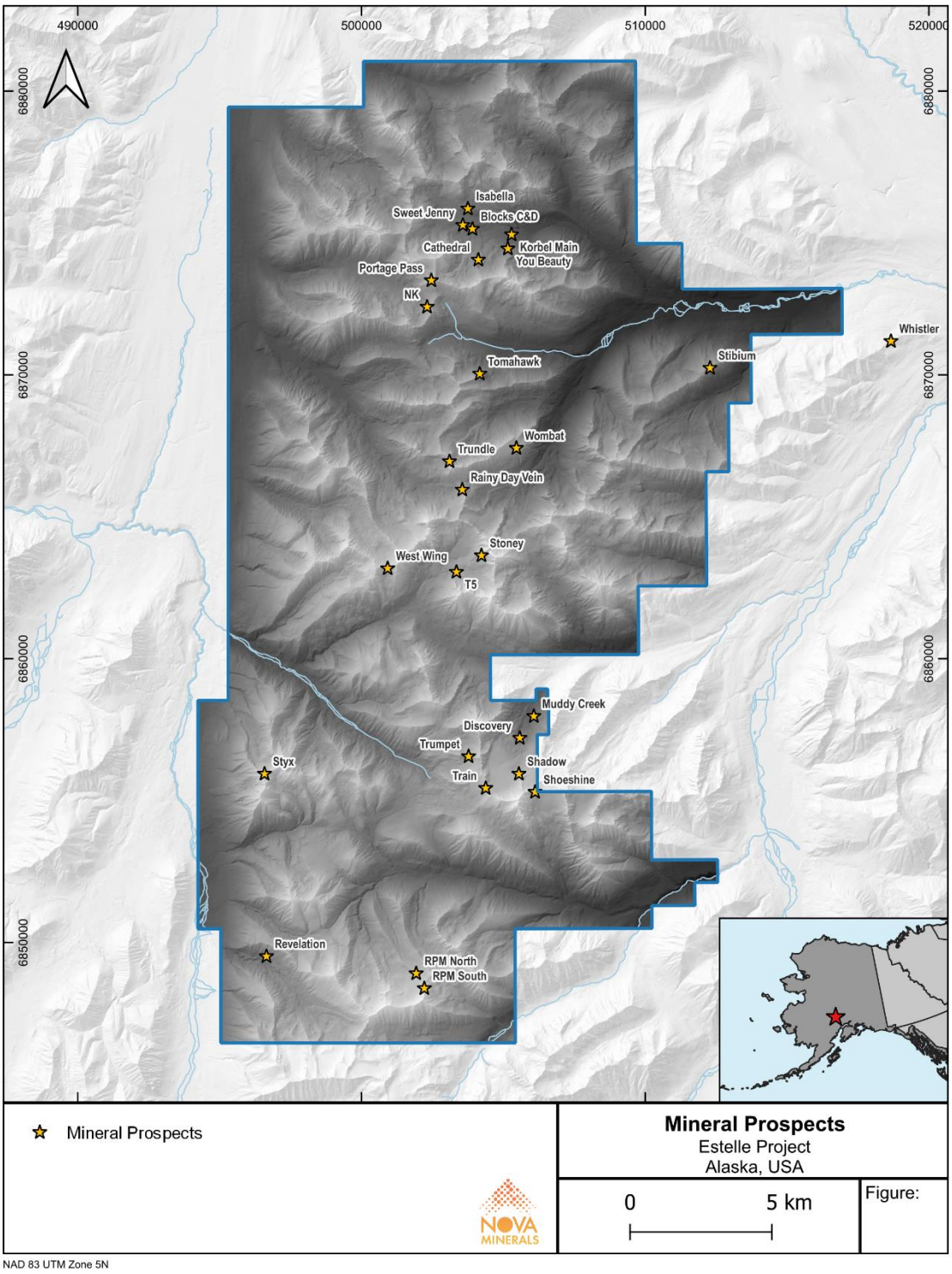

Figure 3-2: Estelle Gold Project property outline with current mineral prospect locations

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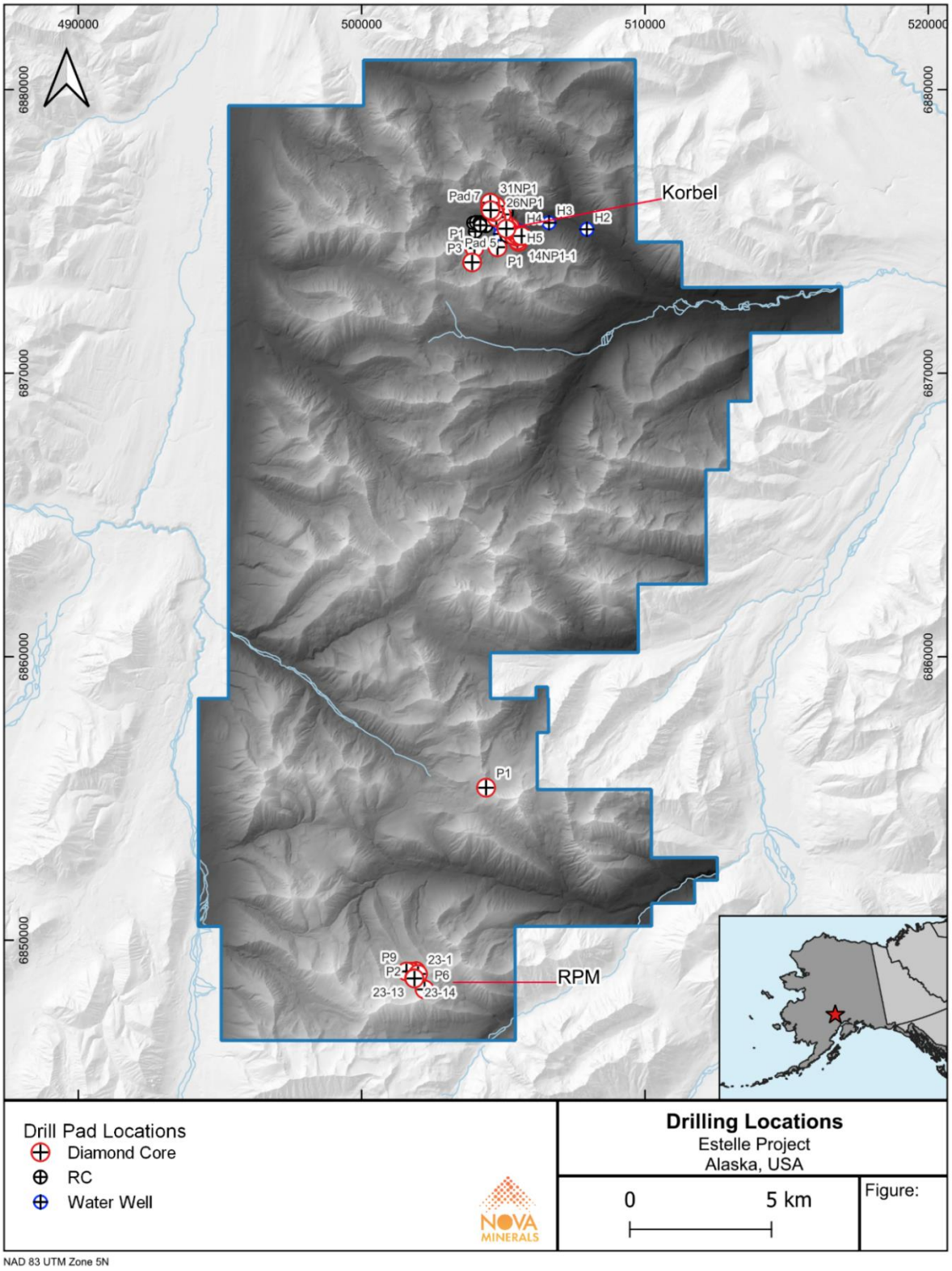

Figure 3-3: Location map of the Estelle Gold Project drill pads.

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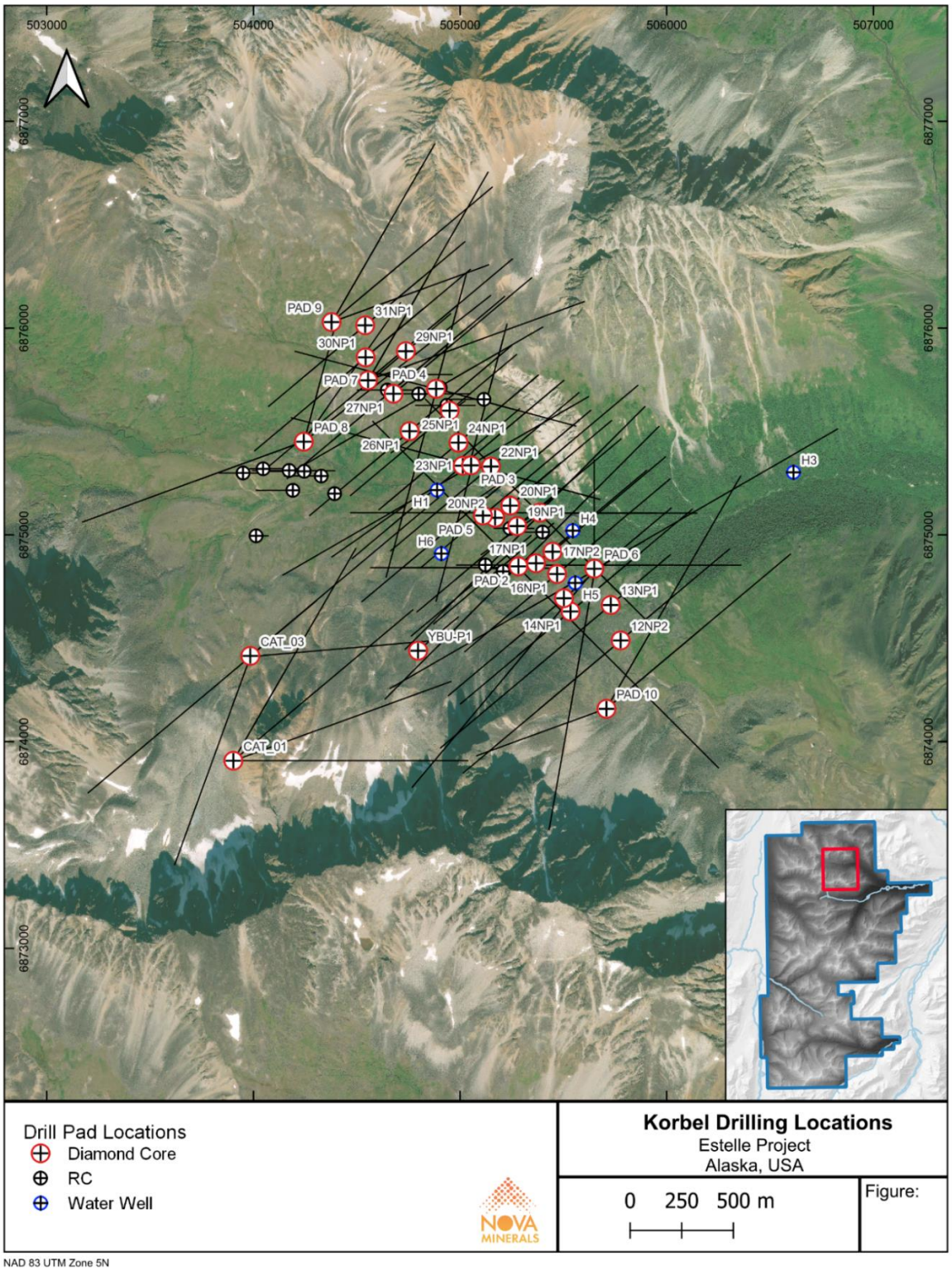

Figure 3-4: Location map of the Korbel drill pads. (Note: Drill hole traces show all drilling up to December 31, 2023)

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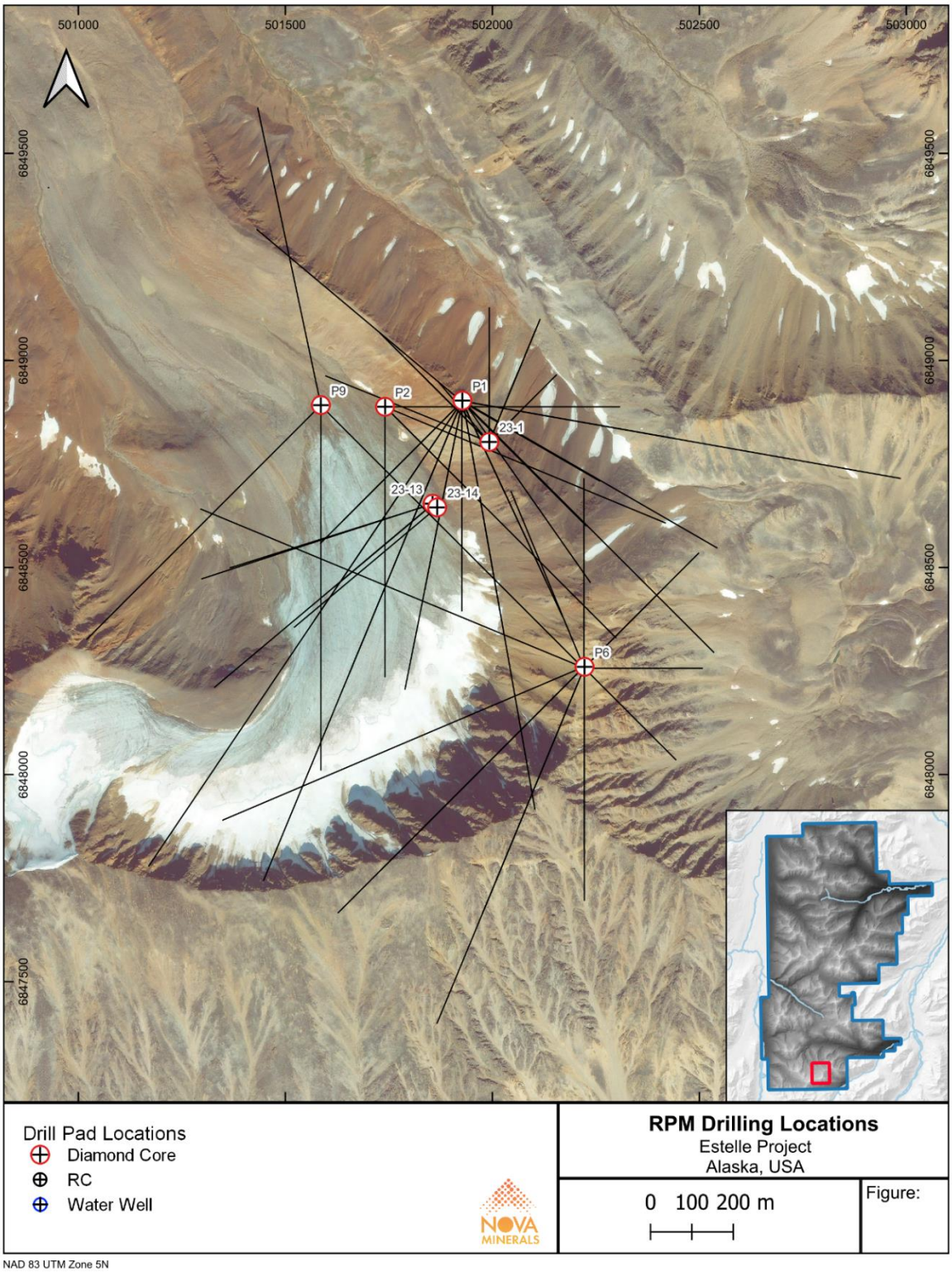

Figure 3-5: Location map of the RPM drill pads. (Note: Drill hole traces show all drilling up to December 31, 2023)

Table 3-1: Estelle Gold Project drill hole tables

Note: Drill holes RPM-038 to RPM-067 and TRN-001 to TRN-004 were drilled in 2023 and are not included in the mineral resource update in this report.

Hole ID	Pad ID	Hole Length, m	Azimuth	Inclination
KBDH-001	PAD 1	401	225	-45
KBDH-002	PAD 1	542	225	-70
KBDH-003	PAD 1	392	270	-45
KBDH-004	PAD 1	518	270	-70
KBDH-005	PAD 2	456	90	-45
KBDH-006	PAD 1	326	90	-45
KBDH-007	PAD 2	551	90	-70
KBDH-008	PAD 1	497	90	-70
KBDH-009	PAD 2	411	45	-45
KBDH-010	PAD 1	316	135	-45
KBDH-011	PAD 2	499	45	-70
KBDH-012	PAD 1	497	135	-70
KBDH-013	PAD 2	429	315	-45
KBDH-014	PAD 1	313	45	-45
KBDH-015	PAD 2	557	315	-70
KBDH-016	PAD 1	497	45	-70
KBDH-017	PAD 2	304	270	-45
KBDH-018	PAD 1	332	315	-45
KBDH-019	PAD 2	500	270	-70
KBDH-020	PAD 1	521	315	-70
KBDH-021	PAD 2	392	225	-45
KBDH-022	PAD 3	280	105	-45
KBDH-023	PAD 2	493	225	-70
KBDH-024	PAD 3	552	105	-70
KBDH-025	PAD 2	594	135	-45
KBDH-026	PAD 3	283	60	-45
KBDH-027	PAD 2	481	135	-70
KBDH-028	PAD 3	512	60	-70
KBDH-029	PAD 3	565	15	-70
KBDH-030	PAD 3	304	15	-45
KBDH-031	PAD 3	387	285	-45
KBDH-032	PAD 3	506	285	-70
KBDH-033	PAD 4	410	195	-45
KBDH-034	PAD 3	454	240	-45
KBDH-035	PAD 4	606	195	-70

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Hole ID	Pad ID	Hole Length, m	Azimuth	Inclination
KBDH-036	PAD 3	399	240	-70
KBDH-037	PAD 4	301	105	-45
KBDH-038	PAD 3	292	195	-45
KBDH-039	PAD 4	344	105	-70
KBDH-040	PAD 3	315	195	-70
KBDH-041	PAD 4	258	60	-45
KBDH-042	PAD 4	320	60	-70
KBDH-043	PAD 4	251	15	-45
KBDH-044	PAD 4	347	15	-70
KBDH-045	PAD 4	305	285	-45
KBDH-046	PAD 4	332	285	-70
KBDH-047	PAD 5	332	285	-70
KBDH-048	PAD 6	332	285	-70
KBDH-049	PAD 7	332	285	-70
KBDH-050	PAD 8	332	285	-70
KBDH-051	PAD 9	332	285	-70
KBDH-052	PAD 10	332	285	-70
KBDH-053	PAD 11	332	285	-70
KBDH-054	PAD 12	332	285	-70
KBDH-055	PAD 13	332	285	-70
KBDH-056	PAD 14	332	285	-70
KBDH-057	PAD 15	332	285	-70
KBDH-058	PAD 16	332	285	-70
KBDH-059	PAD 8	493	250	-45
KBDH-060	PAD 6	551	190	-45
KBDH-061	PAD 8	503	250	-70
KBDH-062	PAD 6	610	190	-70
KBDH-063	PAD 6	584	60	-45
KBDH-064	PAD 6	243	60	-70
KBDH-065	PAD 6	227	0	-45
KBDH-066	PAD 5	422	50	-45
KBDH-067	PAD 6	243	0	-70
KBDH-068	16NP1-1	251	230	-45
KBDH-069	PAD 5	479	50	-70
KBDH-070	16NP1-2	374	230	-70
KBDH-071	PAD 5	356	230	-70
KBDH-072	16NP1-4	310	50	-70
KBDH-073	20NP1-1	276	50	-45
KBDH-074	16NP1-3	307	50	-45

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Hole ID	Pad ID	Hole Length, m	Azimuth	Inclination
KBDH-075	17NP1-1	301	50	-45
KBDH-076	20NP1-2	350	50	-70
KBDH-077	19NP1-1	283	50	-45
KBDH-078	17NP1-2	247	50	-70
KBDH-079	PAD 7	480	70	-45
KBDH-080	19NP1-2	335	50	-70
KBDH-081	20NP2-1	369	50	-70
KBDH-082	18NP1-1	326	230	-45
KBDH-083	PAD 7	459	70	-70
KBDH-084	18NP1-1	387	230	-70
KBDH-085	PAD 7	393	50	-45
KBDH-086	17NP1-2	308	50	-45
KBDH-087	14NP1-1	300	230	-45
KBDH-088	PAD 7	514	50	-70
KBDH-089	14NP1-2	300	230	-70
KBDH-090	14NP1-3	329	50	-45
KBDH-091	PAD 7	501	30	-45
KBDH-092	14NP1-4	401	50	-70
KBDH-093	PAD 7	517	30	-70
KBDH-094	15NP1-3	291	50	-45
KBDH-095	15NP1-4	426	50	-70
KBDH-096	15NP1-1	315	230	-45
KBDH-097	PAD 10	559	30	-45
KBDH-098	15NP1-2	307	230	-70
KBDH-099	PAD 9	349	70	-45
KBDH-100	PAD 9	420	70	-70
KBDH-101	PAD 10	536	30	-70
KBDH-102	PAD 9	438	50	-45
KBDH-103	PAD 9	411	50	-70
KBDH-104	12NP2	297	50	-45
KBDH-105	PAD 9	430	30	-45
KBDH-106	12NP2	276	50	-70
KBDH-107	12NP2	429	230	-45
KBDH-108	PAD 9	460	30	-70
KBDH-109	13NP1	400	230	-70
KBDH-110	12NP2	462	230	-70
KBDH-111	13NP1	463	230	-45
KBDH-112	18NP2	325	230	-45
KBDH-113	21NP1	282	50	-45

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Hole ID	Pad ID	Hole Length, m	Azimuth	Inclination
KBDH-114	18NP2	338	230	-70
KBDH-115	21NP1	515	50	-70
KBDH-116	13NP1	337	50	-70
KBDH-117	19NP2	225	230	-45
KBDH-118	19NP2	250	230	-70
KBDH-119	PAD 10	526	50	-70
KBDH-120	19NP2	344	50	-70
KBDH-121	21NP1	340	230	-45
KBDH-122	21NP1	477	230	-70
KBDH-123	29NP1	395	230	-45
KBDH-124	PAD 10	501	50	-45
KBDH-125	28NP1	306	230	-45
KBDH-126	29NP1	347	230	-70
KBDH-127	28NP1	390	230	-70
KBDH-128	28NP1	285	50	-45
KBDH-129	PAD 10	289	250	-45
KBDH-130	28NP1	362	50	-70
KBDH-131	29NP1	255	50	-70
KBDH-132	30NP1	303	230	-45
KBDH-133	22NP1	273	230	-45
KBDH-134	30NP1	312	230	-70
KBDH-135	30NP1	285	50	-45
KBDH-136	22NP1	355	230	-70
KBDH-137	30NP1	322	50	-70
KBDH-138	22NP1	239	50	-45
KBDH-139	24NP1	218	50	-45
KBDH-140	22NP1	268	50	-70
KBDH-141	24NP1	450	50	-70
KBDH-142	23NP1	301	230	-45
KBDH-143	23NP1	400	230	-70
KBDH-144	24NP1	200	230	-45
KBDH-145	24NP1	450	230	-70
KBDH-146	23NP1	524	50	-70
KBDH-147	26NP1	575	50	-70
KBDH-148	23NP1	276	50	-45
KBDH-149	26NP1	270	50	-45
KBDH-150	31NP1	320	50	-70
KBDH-151	26NP1	309	230	-70
KBDH-152	31NP1-4	271	50	-45

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Hole ID	Pad ID	Hole Length, m	Azimuth	Inclination
KBDH-153B	26NP1	270	230	-45
KBDH-154	31NP1-2	337	230	-70
KBDH-155	31NP1-1	261	230	-45
KBDH-156	27-NP1	376	50	-45
KBDH-157	25NP1	377	50	-70
KBDH-158	27-NP1	340	50	-70
KBDH-159	25NP-1	306	230	-70
KBDH-160	25NP1	272	230	-45
KBMW-07BG	Site 4	37	0	-90
KBMW-08BG	Site 6	95	0	-90
KBMW-09BG	Site 1	104	0	-90
KBMW-10BG	Site 3	107	0	-90
KBMW-11BG	Site 6	168	0	-90
KBMW-12BS	Site 2	91	0	-90
OX-RC-001	RC Pads	37	0	-90
OX-RC-002	RC Pads	90	245	-70
OX-RC-003	RC Pads	75	270	-50
OX-RC-004	RC Pads	72	270	-50
OX-RC-005	RC Pads	66	90	-50
OX-RC-006	RC Pads	119	90	-50
OX-RC-007	RC Pads	53	270	-50
OX-RC-008	RC Pads	75	90	-50
OX-RC-009	RC Pads	67	270	-50
OX-RC-010	RC Pads	102	90	-50
OX-RC-011	RC Pads	91	270	-50
OX-RC-012	RC Pads	102	90	-50
OX-RC-013	RC Pads	64	270	-50
OX-RC-014	RC Pads	102	90	-50
OX-RC-015	RC Pads	58	270	-50
OX-RC-016	RC Pads	81	270	-50
OX-RC-017	RC Pads	70	90	-60
OX-RC-018	RC Pads	87	270	-75
OX-RC-019	RC Pads	25	90	-45
OX-RC-020	RC Pads	50	270	-45
OX-RC-021	RC Pads	50	90	-45
OX-RC-022	RC Pads	27	270	-45
OX-RC-023	RC Pads	76	90	-45
OX-RC-024	RC Pads	76	270	-45
OX-RC-025	RC Pads	69	90	-45

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Hole ID	Pad ID	Hole Length, m	Azimuth	Inclination
OX-RC-026	RC Pads	76	270	-45
OX-RC-027	RC Pads	61	90	-45
OX-RC-028	RC Pads	76	270	-45
OX-RC-029	RC Pads	14	90	-45
OX-RC-030	RC Pads	8	270	-45
OX-RC-031	RC Pads	76	270	-45
OX-RC-032	RC Pads	9	90	-45
RPM-001	RPM-P1	379	135	-70
RPM-002	RPM-P1	369	135	-45
RPM-003	RPM-P1	465	100	-70
RPM-004	RPM-P1	463	100	-45
RPM-005	RPM-P1	459	170	-70
RPM-006	RPM-P1	431	170	-45
RPM-007	RPM_P1	419	155	-80
RPM-008	RPM_P1	291	155	-60
RPM-009	RPM_P2	305	135	-70
RPM-010	RPM_P1	247	155	-45
RPM-011	RPM_P2	340	135	-45
RPM-012	RPM_P1	417	180	-80
RPM-013	RPM_06	197	0	-45
RPM-014	RPM_P2	281	180	-45
RPM-015	RPM_P1	309	180	-60
RPM-016	RPM_P2	278	180	-70
RPM-017	RPM_P2	244	90	-45
RPM-018	RPM_P1	178	180	-45
RPM-019	RPM_P6	362	225	-45
RPM-020	RPM_P1	386	202.5	-75
RPM-021	RPM_P2	316	112.5	-45
RPM-022	RPM_P1	433	202.5	-60
RPM-023	RPM_P6	423	225	-60
RPM-024	RPM_P9	380	180	-45
RPM-025	RPM_P1	540	202.5	-45
RPM-026	RPM_P6	401	202.5	-45
RPM-027	RPM_P9	345	225	-45
RPM-028	RPM_P6	393	202.5	-60
RPM-029	RPM_P6	407	247	-45
RPM-030	RPM_P1	364	191.25	-67
RPM-031	RPM_P9	316	348	-45
RPM-032	RPM_P6	243	180	-45

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Hole ID	Pad ID	Hole Length, m	Azimuth	Inclination
RPM-033	RPM_P1	337	191.25	-50
RPM-034	RPM_P6	268	180	-60
RPM-035	RPM_P1	327	145	-60
RPM-036	RPM_P1	389	214	-60
RPM-037	RPM-P1	584	214	-45
RPM-038	RPM_P6	198	337.5	-45
RPM-039	RPM_P6	169	45	-45
RPM-040	RPM_P6	228	45	-70
RPM-041	RPM_P6	123	90	-45
RPM-042	RPM_P6	432	292.5	-45
RPM-043	Pad 1	305	120	-45
RPM-044	RPM_P6	397	315	-45
RPM-045	Pad 1	209	225	-45
RPM-046	RPM_P6	191	135	-60
RPM-047	Pad 1	248	225	-60
RPM-048	Pad 23-13	384	230	-80
RPM-049	Pad 1	279	310	-45
RPM-050	Pad 23-1	139	0	-45
RPM-051	Pad 23-13	297	230	-45
RPM-052	Pad 23-1	160	0	-70
RPM-053	Pad 23-1	98	45	-45
RPM-054	Pad 23-13	191	230	-60
RPM-055	Pad 23-1	88	45	-70
RPM-056	Pad 23-1	160	315	-45
RPM-057	Pad 23-1	213	315	-70
RPM-058	Pad 23-13	253	252	-45
RPM-059	Pad 23-1	399	315	-80
RPM-060	Pad 23-13	313	252.5	-60
RPM-061	Pad 23-1	183	292	-45
RPM-062	Pad 23-1	125	22.5	-45
RPM-063	Pad 23-14	274	230	-60
RPM-064	Pad 23-1	230	22.5	-65
RPM-065	Pad 23-1	335	320	-80
RPM-067	Pad 23-1	10	192.5	-45
RPM-WW-01	WW Pad	107	0	-90
SE11-001	RC Pads	462	50	-75
SE12-001	RC Pads	138	235	-45
SE12-002	RC Pads	188	235	-45
SE12-003	RC Pads	188	235	-45

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Hole ID	Pad ID	Hole Length, m	Azimuth	Inclination
SE12-004	PAD 1	182	235	-52
SE12-008	RC Pads	182	120	-50
TRN-001	TRN-001	118	330	-65
TRN-002	TRN-001	92	330	-50
TRN-003	TRN-001	75	0	-65
TRN-004	TRN-001	304	150	-45
CTDD-001	CAT_01	510	30	-45
CTDD-002	CAT_03	514	50	-45
CTDD-003B	CAT_01	436	30	-70
CTDD-004	CAT_03	374	50	-70
CTDD-005	CAT_01	488	50	-45
CTDD-006	CAT_03	442	230	-45
CTDD-007	CAT_01	482	70	-45
CTDD-008	CAT_03	407	85	-45
CTDD-009	CAT_03	461	200	-45
CTDD-010	CAT_01	488	90	-45
YBDD-001B	YBU_P1	227	50	-70

4. Accessibility, Climate, Local Resources, Infrastructure and Physiography

4.1 Accessibility

Access is currently available to the project via a winter road and by air with the nearby Whiskey Bravo airstrip (approximately 15km east) having a 4,000 ft. compacted gravel runway; compliant for DC3-class aircraft. The airways are accessible from Anchorage to the Whiskey Bravo airstrip via Skwentna through aircrafts and helicopters.

Recently an independent economic study prepared for the Alaska Industrial Development and Export Authority (AIDEA), and fully supported by the Alaska State Governor, recommended the proposed West Susitna Access Road, which is situated on State land within the Matanuska-Susitna Borough and has considerable support from both the community and the State government to progress to the permitting stage.

AIDEA has submitted the CWA 404 permit application to the USACE for the West Susitna Access project, initiating the environmental review process through compliance with the National Environmental Policy Act. Field studies will begin in the summer of 2024 with further evaluation of cultural and historical sites, fish and wildlife habitat, engineering refinement, and alternative route analysis.

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This is a proposed new multi-season 146km long access road connecting the Port Mackenzie resources cargo port to the resource-rich area of Alaska where Nova's Estelle Gold Project is located. The road would open areas northwest of Anchorage and west of Wasilla, in the western parts of the Matanuska-Susitna Borough; where mineral exploration is underway and would link directly to the Estelle Gold District. This all-weather access could form a critical component of the project infrastructure as it will be used to provide equipment, fuel, and other supplies during construction and operations. Figure 3-1 highlights the location of airstrips, roads, and other infrastructure in the region.

For the full press release see below

https://www.aidea.org/Portals/0/PressReleases/3-21-2023%20West%20Susitna%20Access%20Project%20Announcement%20Press%20Release%20Final.pdf

4.2 Climate

The project area is located between the climatic regions of maritime and continental, characterized by mild summers and cold winters. The Bearing Sea assists in generating mild and temperate summer temperatures and higher precipitation during that time of the year. Generally, during the early parts of the year (January through May) precipitation is low, peaking in August at 76mm (See Figure 4-1 and 4-2). Annual precipitation ranges from 500 to 900mm. Average summer temperatures range between 5ºC and 30ºC, while winter temperatures range between -15ºC and -5ºC. Winter snow accumulation usually starts in October and by mid to late May the snow has adequately melted to allow for fieldwork. (usclimatedata, 2023). During the winter months, strong winds can prevail.

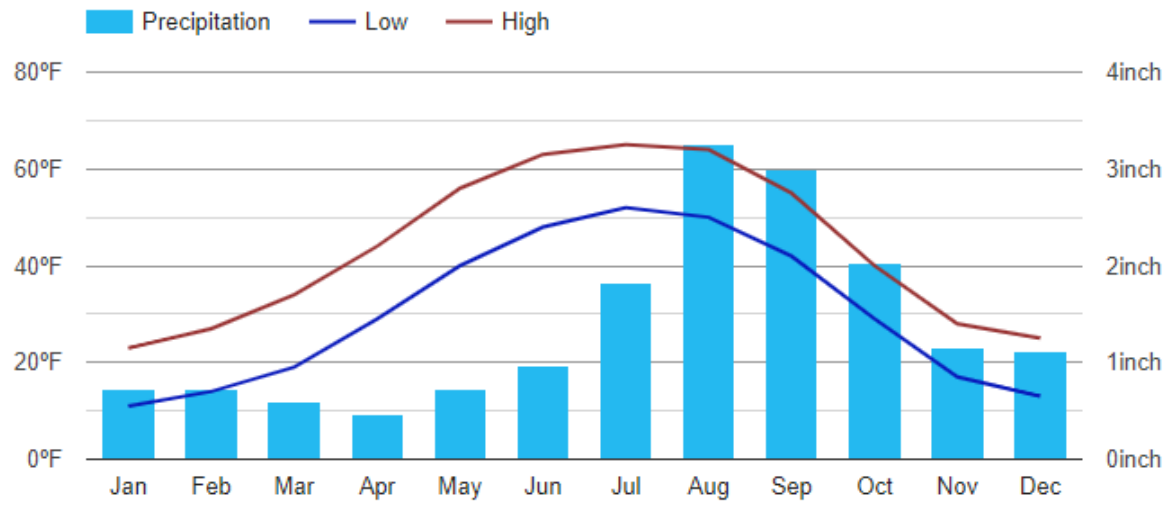

Figure 4-1: Anchorage Climate Graph (usclimatedata, 2023)

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Figure 4-2: Korbel drill site in summer

4.3 Local Infrastructure and Resources

Alaska is host to many large projects in their development stages, resulting in in-state expertise including miners and support staff being available.

The Estelle Gold Project is in a remote region of the State of Alaska. There are no accessible public power utilities and all current projects in the area primarily rely on diesel fuel to generate power. Therefore, the required fuel for Estelle at this time must be transported directly to the project area via snow road or by air, and stored on site. An established all-season 80 person fully winterised camp with all the required facilities, including a kitchen, amenities, an on-site prep lab, core shack, maintenance workshop and 4,000 ft. DC3 compliant airstrip are located close to the project site (Figure 4-3). These facilities are equipped with diesel generators, wooden floor tent and container structures, and wood-framed buildings.

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Figure 4-3: Aerial view looking north of the Whiskey Bravo airstrip and the Estelle 80-person winterized camp and facilities

4.4 Physiography of Property

The topography of the Estelle Gold Project region ranges from low hills to broad valleys occupied by meandering streams. (Figure 4-4). Vegetation in the forested region varies by soil type with the lower elevations comprised of willows, birches, alder, and balsam poplar trees alongside various shrubs. Vegetation is absent at higher elevations, with active glaciers having terminal and lateral moraines present. Permafrost is discontinuous throughout the project area. Travel by foot is suitable for most of the prospects listed.

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Figure 4-4: RPM terrain with two drill pads shown

5. History

Historical regional mapping of the southern Alaska Range was conducted by the United States Geological Survey ("USGS") in the early 1900's. Minor placer gold was noted, and the presence of granitic intrusive rocks were mapped in the vicinity of what is now known as the Estelle Pluton. The USGS revisited the area periodically from the 1969 through 2013 conducting stream sediment, pan-concentrate, and rock chip sampling.

Prospecting in the Mount Estelle area has been conducted by several private companies starting in the 1980's. From 1980 to 1985, many of the claims were held for their placer potential, and in 1982 AMAX staked at least four claims over the Lower Discovery showing at Mount Estelle. However, placer mining was hampered by the prevalence of large glacial boulders in the stream gravels.

Cominco explored the region in the late-1980's, and conducted surficial mapping and sampling as well as diamond-core drilling in the vicinity of the Train, Shoeshine, Shadow and Discovery Creek prospects. Hidefield Gold Plc. (Hidefield) and International Tower Hill Mines, Ltd. (ITH) explored the property in the early 2000's, and most recently Millrock Resources Inc. (Millrock) was active from 2008 to 2013. Cominco, ITH, and Hidefield primarily focused around the Shoeshine area mineral occurrences, whereas Millrock conducted a surface geochemical

survey from the northern portion of the current claim block north of Portage Creek to the southern portion south of Emerald Creek. Numerous occurrences were identified, and gold in soil anomalies occur throughout the entire claim block. Alaska Resource Data Files (ARDF) exist throughout the property as a result of this previous work. Table 5-1 briefly summarizes the exploration history of these prospects.

Table 5-1: History of exploration, Estelle Gold Project

Date	Company	Project Scope
Oxide Ridge (TL077); now: Korbel Main		
late 1980's	Cominco American Inc.	Mapping & chip sampling
2011	Millrock Resources Inc. on behalf of Teck America Inc.	Detailed chip sampling
2012	Millrock Resources Inc.on behalf of Teck America Inc	Diamond drilling
Oxide North (TL081); now: Korbel North		
2008	N/A	Mineralization initially discovered
2012	Millrock Resources, Inc. on behalf of Teck America Inc	Chip sampling; IP survey; soils geochem
Oxide Valley (TL080); now: Korbel		
2008	Millrock Resources, Inc. on behalf of Teck America Inc	Discovery of multiple Aspy and Cpy veins
2008-2014	Millrock Resources, Inc. on behalf of Teck America Inc	Geologic mapping and chip sampling
2010	Millrock Resources, Inc. on behalf of Teck America Inc	IP survey
2011 & 2012	Millrock Resources, Inc. on behalf of Teck America Inc	Drilling 4 additional holes
2012 & 2013	Millrock Resources, Inc. on behalf of Teck America Inc	Reconnaissance IP survey; close-spaced IP
Unnamed Placer Occurrence (TL052)		
1970	USGS	
1978	USGS	Pan concentrates with VG
1980	USGS	
1970's & 1980's	Various private companies	Results from reconnaissance not published
Unnamed (near Portage Creek)(TL063)		
1978	USGS	A sampling of float; veinlets of Aspy and py with Au.
1980's	Cominco American Inc.	Rock chip and silt sampling

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West Wing (TY042)		
2012	Millrock Resources Inc.	Geologic mapping; soil and rock sampling; drilling
2013	Millrock Resources Inc.	
Stoney, North Stoney, Trundle, Tomahawk, Kid (TY020)		
Late 1980's	Cominco	Reconnaissance and exploration
2007	International Tower Hill Mines	Reconnaissance and exploration
2008	Millrock Resources, Inc.	Reconnaissance and exploration
2014	Millrock Resources, Inc.	Soil and rock sampling identified gold
Unnamed (near Mt Estelle) (TY019); includes Train & Shoeshine		
2007	International Tower Hill Mines	
2008	Hidefield Gold, Plc.	
2008	Millrock Resources, Inc.	
Train (TY031)		
1970's to recent	Succession of companies	Limited sampling campaigns
2007	International Tower Hill Mines	
2008	Hidefield Gold, Plc.	Rock Sampling: Au, Ag, Cu, Pb values received.
2008	Millrock Resources, Inc.	Rock sampling w. multiple significant gold assays
Shoeshine (TY032)		
1970's to recent	Succession of companies	Limited sampling campaigns
2007	International Tower Hill Mines	A sampling of Veins; Au, Ag, Cu, and Pb values received.
2008	Millrock Resources, Inc.	Rock sampling w. multiple significant gold assays
2011	Millrock Resources, Inc.	Drilling; Au mineralization throughout the hole.

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Revelation (TY036)		
2008	Hidefield Gold, Plc.	Sampled Au mineralization over a 200m trend.
~2012	Millrock Resources, Inc.	Geochem sampling
RPM (TY043)		
1969	USGS	Stream sediment sampling
2010 - 2012	Millrock Resources, Inc.	Prospecting, soil, and rock sampling; drilled discovery hole at RPM North with significant Au values

5.1 Korbel

Space Highlights:
• Anomalous rock chip samples identified at Oxide Ridge
• Extensive soil geochemical anomaly identified throughout the valley
• IP Geophysical survey conducted
• Historical Holes SE11-001, SE12-002 and SE12-004 all returned broad internecions grading 0.44 to 1.14 g/t Au
• Nova recognized the significance of these early holes and scale of the potential IRGS deposits that could occur on the property

Mineralization in the vicinity of Korbel was first discovered at Oxide Ridge; now referred to by Nova as Cathedral. Chip sampling of oxidized granitic intrusive rocks hosting sheeted quartz veins and blebby arsenopyrite yielded anomalous gold values, which lead to broad reconnaissance in the Korbel valley. Similar mineralization was identified in outcrops across the valley to the north, which led field crews to conduct conventional soil sampling across the valley below. Korbel valley is one of the few places on the Estelle property were conventional soil sampling, as opposed to talus fines sampling can be conducted. The results from these soil samples led to the first IP survey conducted on the property in the fall of 2010. A chargeability anomaly located in the valley was the target of the first drillhole at Korbel in 2011 (SE11-001).

Drilling in 2012 intersected multiple mineralized zones. In three of the holes (SE12-002, 003, 004) the zones appear to occur along a rough northwest trend with veins exhibiting steep, near-vertical dips. Mineralized zones up to 100 meters wide were encountered along this trend which then had a drilled strike length of 740 meters. These holes were designed to follow up the Oxide (Korbel) discovery hole drilled in 2011. (see news release dated November 9, 2011 entitled " Millrock Intersects Intrusion-Related Gold System at Estelle Project, Alaska") Anomalous gold mineralization was intersected over wide zones in all holes drilled. The grade of mineralization, however, appears to increase to the southeast. Hole SE12-004, the southeastern-most hole drilled,

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intersected gold mineralization throughout the majority of the hole with a highlight intercept of 41.45 meters grading 1.14 grams gold per tonne.

A geological map of the Korbel deposit area depicts historical (2011/2012) cored drill holes shown in red (Figure 5-1).

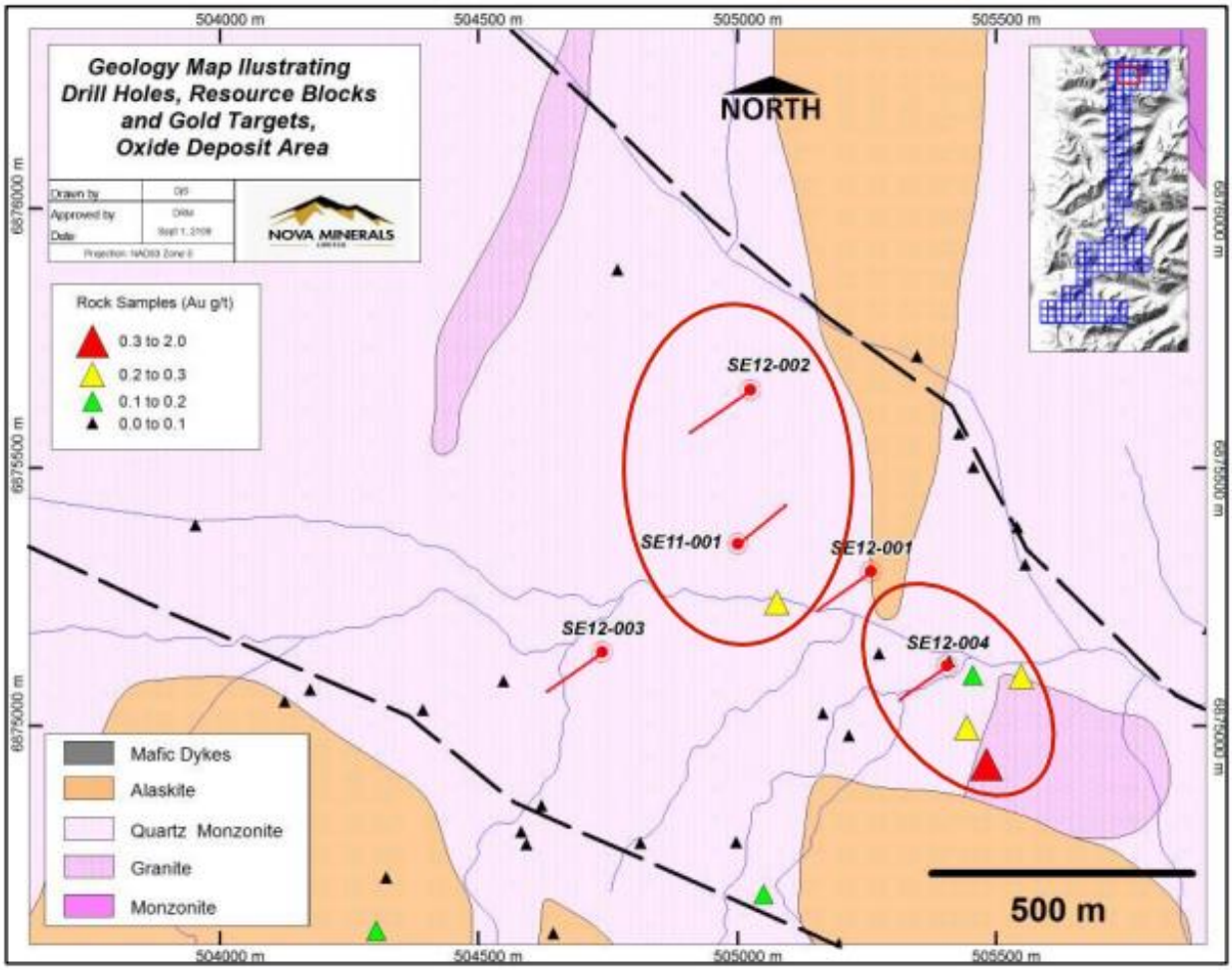

Figure 5-1: Early geologic map of Korbel

5.2 RPM

RPM was discovered in 2010 when the results from a 3.5km long soil survey returned anomalous gold values. Follow-up mapping and sampling in 2011 extended and refined this anomalous zone as well as defined a highly anomalous granitic intrusion with stockwork arsenopyrite bearing quartz veins near the contact with the Kahiltna hornfelsed sediments.

The single 2012 drill hole at RPM targeted this intrusive and undercut sheeted quartz veins and stockworks exposed at surface. The hole encountered significant gold mineralization with an

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intercept of 2.07 g/t Au over 21.94 meters within a 102.11-meter interval averaging 1.04 grams per tonne gold from 26.52 to 128.63 meters with mineralization remaining open in all directions.

In 2017 Nova recognized the significance of the Estelle Gold property and acquired the mineral rights to it.

See Section 7 Exploration for the more recent history of the project.

6. Geological Setting, Mineralization and Deposit

6.1 Geological Setting

Alaska is composed of a series of accreted allochthonous terranes separated by large strike slip faults. These terranes were translated large distances to their present location along the margin of the Pacific plate during oblique convergence throughout the Phanerozoic, finally accumulating in Alaska. Of geologic significance to the mineralization of the Estelle property are the Wrangellia terrane and Kahiltna basin. Wrangellia is composed of late-Paleozoic to mid-Mesozoic marine sedimentary rocks, volcanic rocks, and intrusive rocks associated with an ancient island arc system. The Kahiltna basin represents a displaced and slivered suture zone between Wrangellia and the paleo-North American margin and is composed dominantly of flysch, sandstone, shale, and limestone that range in age from middle Jurassic to late Cretaceous. The rocks of the Kahiltna terrane were deposited on the flanks of Wrangellia, and as Wrangellia accreted to/subducted beneath the North American margin in the latest-Cretaceous, this flysch basin was deformed, thickened, and intruded by the late-Cretaceous igneous rocks of the Estelle Plutonic suite (70.1 - 66.7 Ma).

Within the property, lie the Mesozoic marine sedimentary rocks of the Kahiltna terrane. Regionally, these marine rocks were intruded by several plutons. The Estelle pluton is compositionally zoned and is made up of a granite core transitioning to quartz monzonite, quartz monzodiorite, augite monzodiorite, diorite, and lamprophyric mafic and ultramafic rocks. These generalized geologic contacts are represented on Figure 6-1 below.

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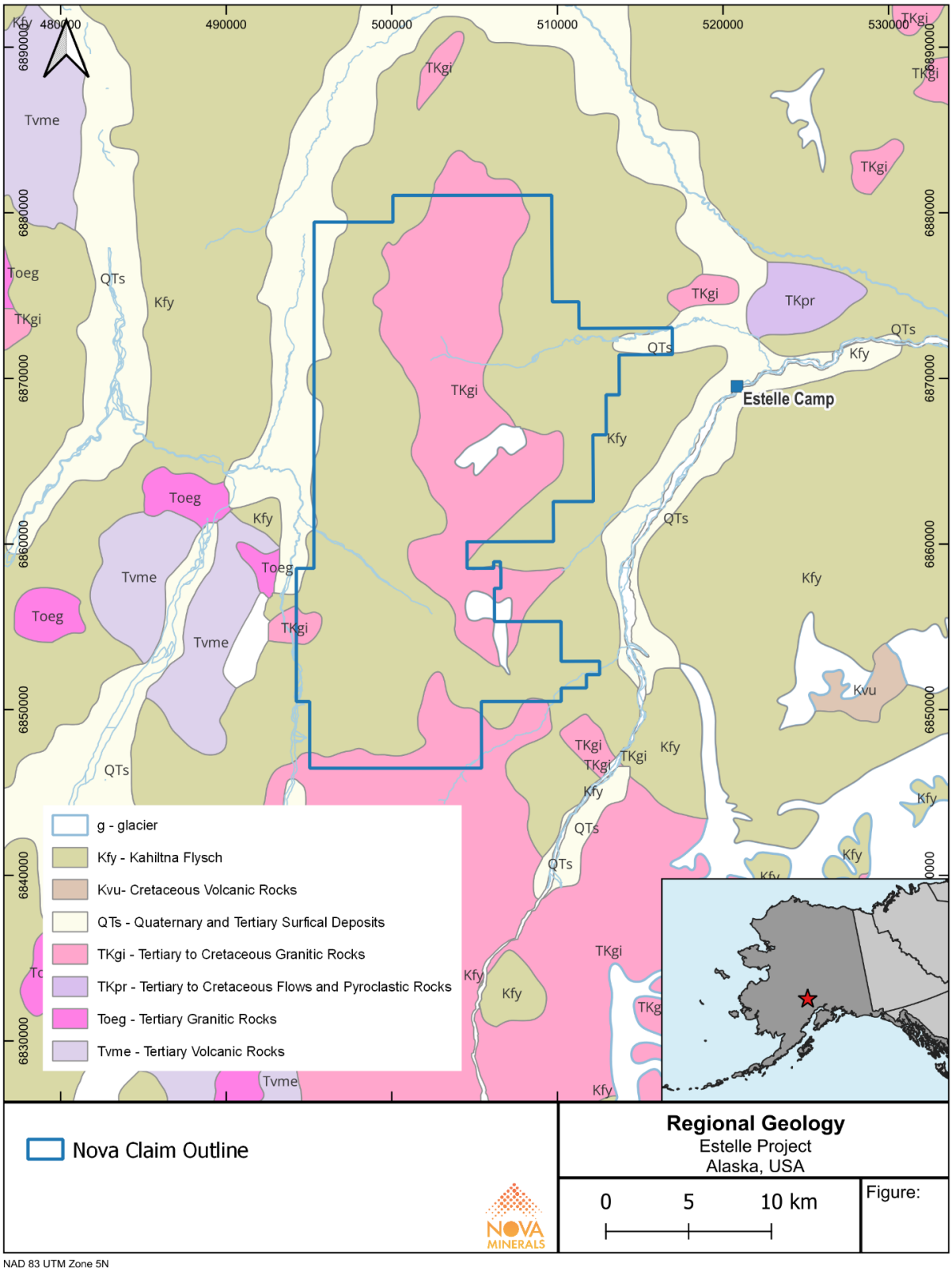

Figure 6-1: Regional Geology of the Estelle Gold Project

The stratigraphic column from the adjacent Whistler Project shown below in Figure 6-2 is representative of the stratigraphy found at the Estelle Gold Project.

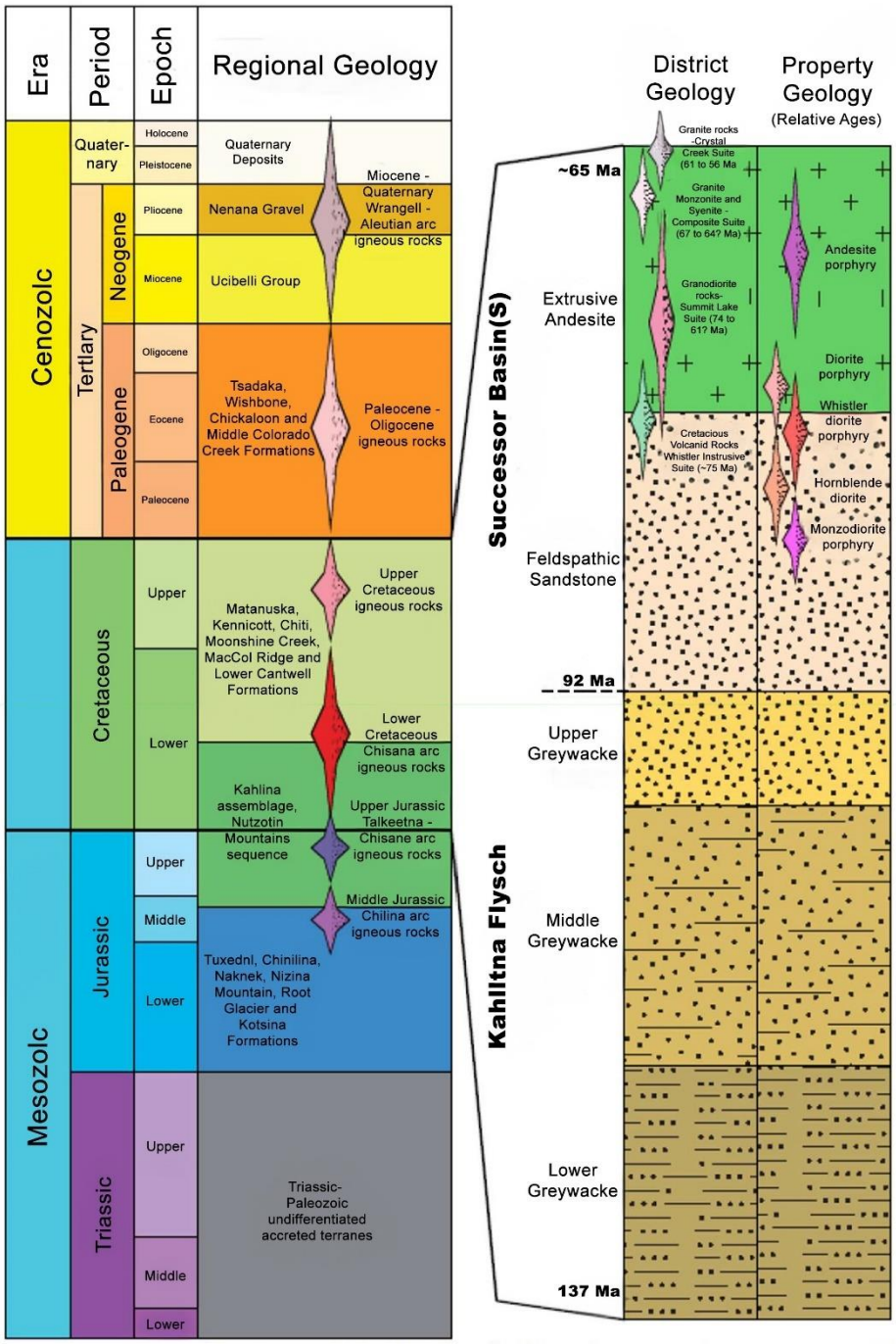

Figure 6-2: Stratigraphic column (SK 1300 Technical Summary Report - Whistler Project Alaska, 2022)

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7. Exploration

Exploration prior to 2018 has been described in Section 5.

7.1 2018 Exploration

7.1.1 Surface Exploration

Nova acquired 173 claims at the Estelle project in 2017, and added 4 additional claims in 2018. Nova compiled and reviewed historical data including reports, public announcements, ARDF files, and drill logs prior to conducting their initial field reconnaissance of the project.

Mapping was conducted by Pacific Rim Geological Consulting of Fairbanks Alaska which showed higher gold values are associated with bismuth, telluride, and arsenopyrite mineral phases and that this mineralogy is hosted by sheeted quartz veins containing narrow alteration assemblages. (Figure 7-1) These findings show a correlation with the intrusion-related gold system (IRGS) deposit model. Upon completion of a first pass of geological mapping, Tom Bundtzen of Pacific Rim identified two high-quality targets which were named Oxide North and South (now called Korbel Main). These targets showed envelopes of hydrothermal alteration.

Chip samples were taken by Mr. Bundtzen and returned moderate grades around 1 g/t Au with mineralization consisting of arsenopyrite, pyrite, pyrrhotite, chalcopyrite and tetrahedrite.

A comparison of sheeted quartz veins found at the Estelle Gold Project (Figure 7-1) to Dublin Gulch, Yukon and Fort Knox, Alaska (Figure 7-2) show similar mineralization style.

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Figure 7-1: Estelle Gold property quartz veins

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Figure 7-2: Dublin Gulch, Yukon and Fort Knox, Alaska quartz veins Goldfarb et. al., 2007

7.1.2 Drilling

The 2018 field season was primarily focused on surface reconnaissance, but Nova did mobilize a reverse-circulation (RC) rig to site and drilled 126 meters of to test along strike north and south of the discovery hole SE11-001 (387m at 0.40 g/t Au). Overburden conditions and late season weather prohibited further work this season.

7.2 2019 Exploration

7.2.1 Surface Exploration

A limited surface sampling program was conducted in 2019 to evaluate the RPM and Shoeshine prospects. 160 claims were acquired widening the central trend from Korbel to Muddy Creek.

7.2.2 Geophysics

Approximately 8 km of induced-polarization (IP) surveys were conducted over Korbel in 2019. These are shown in Figure 7-3 below centered around drillholes OX-RC-08 and OX-RC-09 and Resource Block B centered around drillholes OX-RC-17 and OX-RC-18. Note the drillholes targeted these IP anomalies. A ground magnetics survey was also conducted (Figure 7-4).

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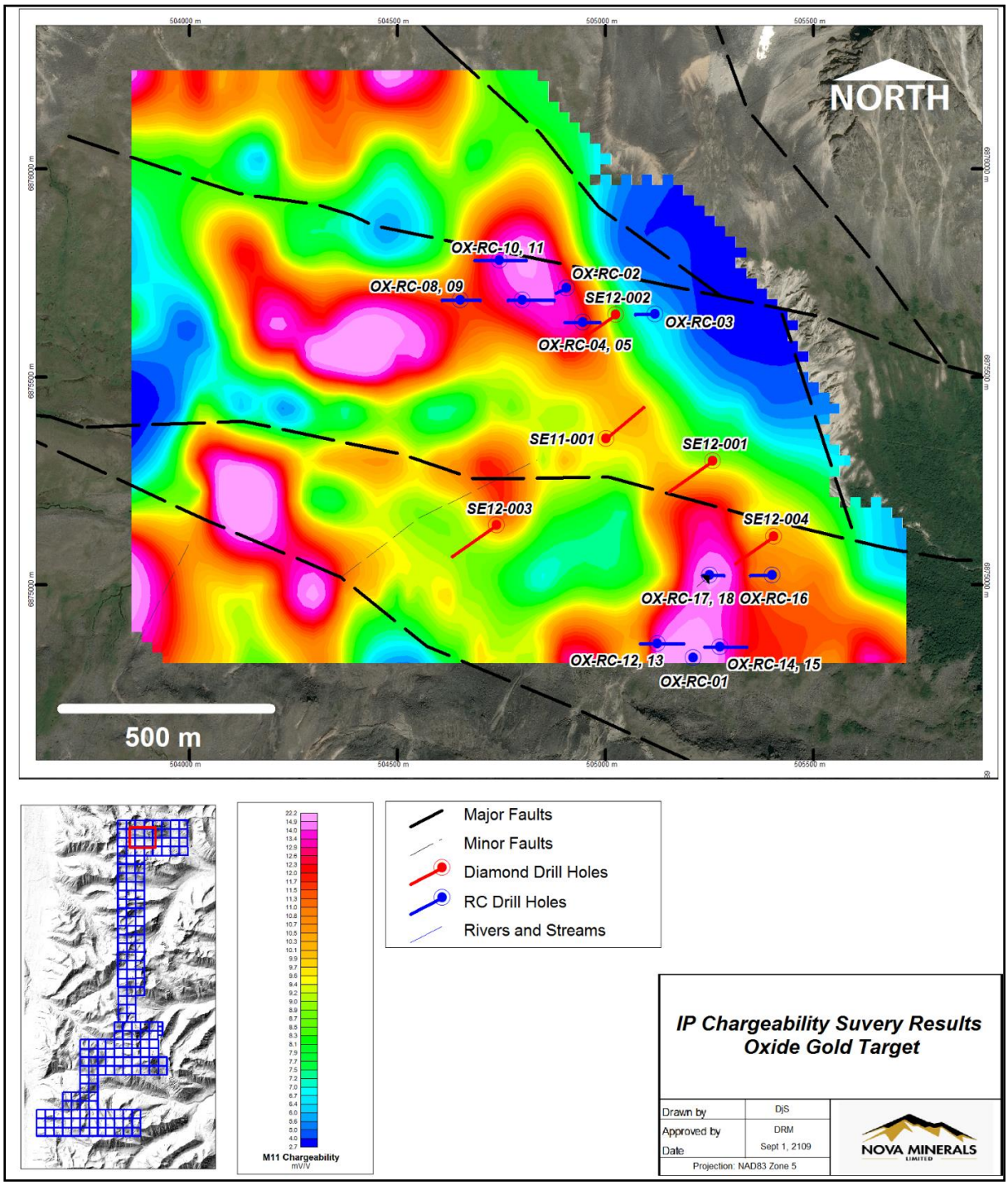

Figure 7-3: IP Chargeability Results

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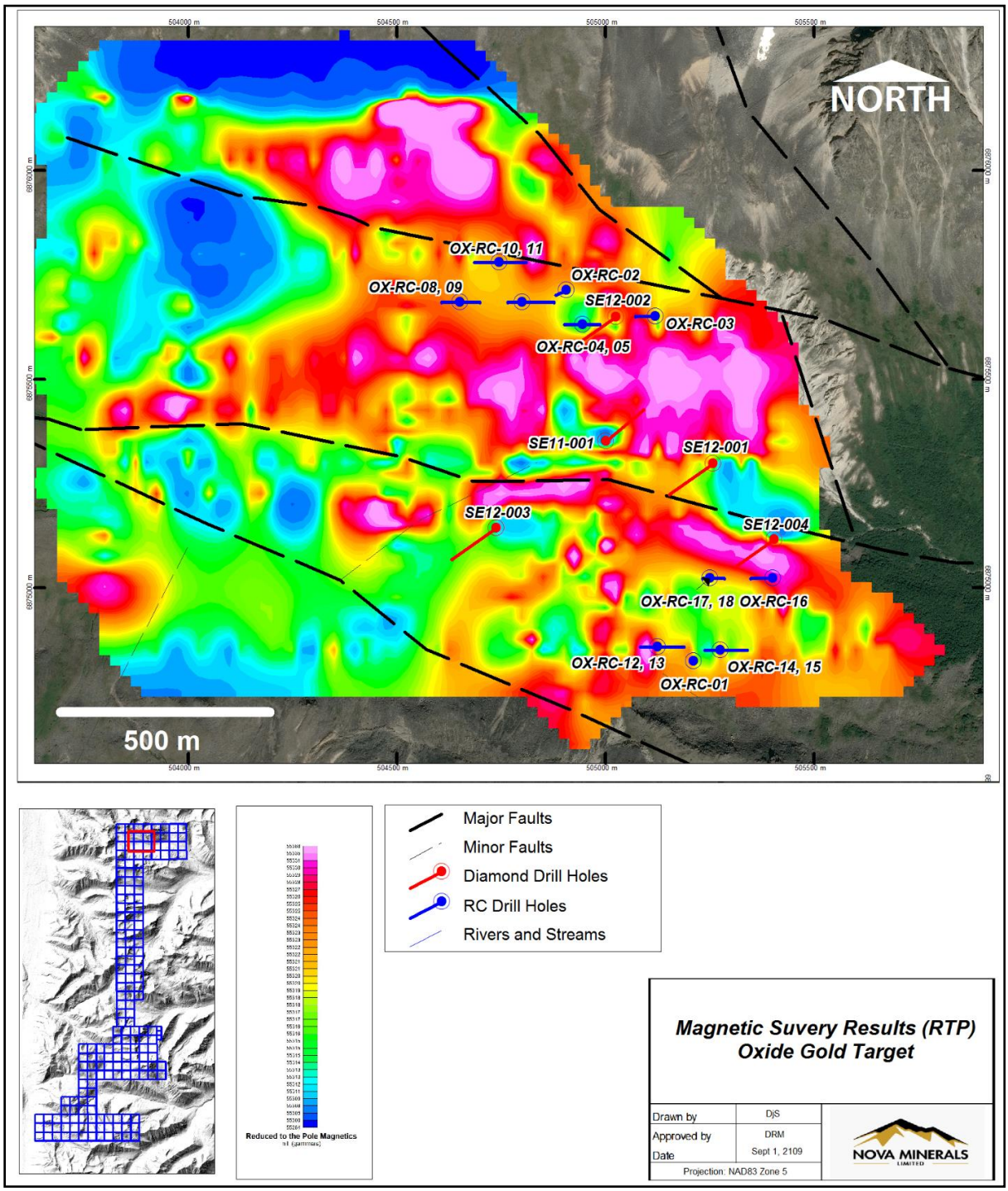

Figure 7-4: Magnetic Survey Results (RTP)

Nova also hired RDF Consulting Ltd., to conduct 3D magnetic inversions on the public domain Styx River airborne magnetic survey.

7.2.3 Drilling

A total of 32 holes and 2,105 meters of drilling was completed at Korbel in 2019. These holes were completed with an RC rig using NQ drill rods. Highlights include:

- OX-RC-016 - 70m @ 1.2 g/t Au
- OX-RC-017 – 61m @ 0.5 g/t Au

7.3 2020 Exploration

7.3.1 Surface Exploration

A total of 48 rock samples were collected focusing on mineralization identified at Cathedral and RPM with a few samples collected at Train. Highlights from rock samples collected at the Cathedral target returned gold grades of 114.0 g/t, 98.3 g/t, 37.1 g/t, 24.5 g/t, 19.6 g/t and 11.05 g/t. Highlights from rock samples collected at RPM included gold grades of 291.0 g/t, 103.0 g/t, 9.3 g/t, 8.9 g/t, 8.8 g/t, and 5.0 g/t. The 291 g/t sample was collected at the location of RPM North. Multi-gram values were also returned from Train rock samples. 161 additional adjacent claims were acquired.

7.3.2 Drilling

Drilling at Korbel was the primary focus of the 2020 field season. 64 holes and 27,004 meters were drilled with diamond-core LF70 drilling rigs operated by Ruen Drilling. Highlights include:

- KBDH-012 – 429m @ 0.6 g/t Au from 3m
    - Including 101m @ 1.3 g/t Au, 82m @ 1.5 g/t Au, and 30m @ 2.4 g/t Au
- KBDH-024 – 549m @ 0.3 g/t Au from 3m
    - Including 97m @ 0.8 g/t Au, 15m @ 2.3g/t Au, and 3m @ 8.2 g/t Au

7.4 2021 Exploration

7.4.1 Surface Exploration

A total of 54 rock samples were collected, including representative chip samples, representative outcrop samples, high grade outcrop samples, and occasional talus samples. A total of 81 talus fines samples were also collected in the vicinity of various prospects. Notable high-grade mineralization was sampled throughout the property from Korbel to RPM. Gold highlights from rock samples include 48.4 g/t Au near Stoney, 30.4 g/t near Train, 26.9 g/t near Korbel, 25.2 g/t at Train, 21.6 g/t at Train, and 12.5 g/t between Korbel and Portage Pass. The polymetallic system at Stoney was visited and samples returned anomalous silver and copper in addition to gold. Impressive gold in soil anomalies were discovered over a 1km traverse at Shoeshine. Relatively anomalous talus fines gold values were also returned from the northern cirques at Korbel. 196 additional claims were acquired along the western margin of the existing claim block.

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7.4.2 Drilling

Nova focused the majority of their field season on Korbel, drilling 81 holes and 29,074 meters.

Korbel highlights include:

- KBDH-072 – 308m @ 0.7 g/t Au from surface
    - Including 113m @ 1.0 g/t Au, 49m @ 1.5 g/t Au, and 21m @ 2.5 g/t Au
- KBDH-081 – 277m @ 0.5 g/t Au from surface
    - Including 94m @ 1.0 g/t Au, 30 m @ 1.9 g/t Au, and 9m @ 4.4 g/t Au

Nova also drilled the first six holes at RPM totaling 2,567 meters.

RPM highlights include:

- RPM-005 – 400m @ 3.5 g/t Au from surface
    - Including 287m @ 4.8 g/t Au, 132m @ 10.1 g/t Au, and 86m @ 14.1 g/t Au

7.5 2022 Exploration

7.5.1 Surface Exploration

163 rock samples and 184 soil samples were collected across the claim block in 2022. Samples were collected at several prospects including Discovery, Muddy Creek, Mount Estelle, Train, Trumpet, RPM, and Revelation. High-grade gold values were encountered at Discovery and Muddy Creek with gold values including 43.6 g/t, 15.9 g/t, and 5.8 g/t in rock samples. Numerous multi-gram gold in soils were returned over 1km in strike length at Muddy Creek, revealing one of the more impressive soil anomalies on the claim block. Rock samples around Mount Estelle returned gold values of 38.2 g/t, 25.9 g/t, and 7.0 g/t in addition to numerous ~1 g/t samples. The initial discovery at Trumpet was made just north of Train with rock samples returning gold values of 32.8 g/t, 16.6 g/t, 16.0 g/t, 13.6 g/t, and 12.7 g/t. Train was sampled in more detail with rock samples returning values of 80.2 g/t, 17.9 g/t, 17.7 g/t, 16.6 g/t, and 10.4 g/t in addition to numerous multi-gram samples. Follow-up sampling at Revelation revealed a continuous gold in soil anomaly over 300 meters. Recommendations were made to advance reconnaissance scale mapping and sampling at Stoney, and to develop the initial drilling campaign at Train and Trumpet.

7.5.2 Drilling

RPM was the primary focus of the 2022 drilling campaign. 31 holes and 10,719 meters were drilled. Drilling occurred at RPM North, RPM South, and in the valley below RPM. Drilling highlights at RPM North from 2022 included:

- RPM-008 – 260m @ 3.6 g/t Au from 11m
    - Including 140m @ 6.5 g/t Au, 87m @ 10.1 g/t Au, and 56m @ 15.0 g/t Au
- RPM-015 – 258m @ 5.1 g/t Au from surface

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    - Including 161m @ 8.1 g/t Au, 117m @ 11.1 g/t Au, and 45m @ 25.3 g/t Au
- RPM-022 – 193m @ 3.9 g/t Au from 4m
    - Including 67m @ 10.4 g/t Au, 43m @ 15.8 g/t Au, and 34m @ 19.4 g/t Au

Drilling highlights at RPM South from 2022 included:

- RPM-023 – 333m @ 0.9 g/t Au from 8m
    - Including 116m @ 0.9 g/t Au, 94m @ 1.0 g/t Au, and 15m @ 2.3 g/t Au
- RPM-028 – 352m @ 0.3 g/t Au from 8m
    - Including 131m @ 0.6 g/t Au, 52m @ 0.7 g/t Au, and 13m @ 1.4 g/ Au

10,289 meters were drilled at Korbel including 4,603 meters at Cathedral. Highlights at Cathedral include:

- CTDD-001 – 354m @ 0.3 g/t Au from 104m
    - Including 11m @ 1.1 g/t
- CTDD-003B – 269m @ 0.4 g/t Au from 168m
    - Including 70m @ 0.6 g/t Au, and 3m @ 2.7 g/t Au

7.6 2023 Exploration

7.6.1 Surface Exploration

Extensive surface exploration mapping and sampling programs were conducted in 2023. A total 447 rock samples, 678 soil samples, and 21 stream sediment samples were collected throughout the property. New discoveries were made at what are now called the Styx and Stibium prospects which are anomalous in both gold and antimony. A new gold anomaly was also discovered at Wombat, which is also anomalous in silver and copper. Previously known prospects were further refined with more detailed mapping and sampling. A recently exposed nunatak between Train and Trumpet was discovered to host gold-bearing quartz arsenopyrite veins with grades up to 132.5 g/t. A project high value of 1,290 g/t Au was collected in the vicinity of Shoeshine from an arsenopyrite vein. Numerous large quartz veins up to 4m thick were discovered in the vicinity of Trundle. Additional sampling was conducted near Stoney, and several new mineralized sulfide veins grading 5 g/t Au were discovered.

7.6.2 Geophysics

In 2023, a drone operator was contracted to fly aero-magnetics over the mineralization encountered at Trundle. The results of this survey are currently being processed by a geophysicist, but preliminary review have shown strong magnetic contrast coincident with mineralized quartz veins encountered at surface. Further processing is anticipated to reveal several deeper structures not encountered at surface.

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7.6.3 Drilling

The focus of the 2023 drilling season was entirely at RPM. 6,632 meters were drilled over 29 holes at RPM North, RPM South, and at RPM Valley in the valley below.

Highlights from RPM North in 2023 include:

- RPM-056 – 98m @ 3.4 g/t Au from 48m
  - Including 38m @ 7.5 g/t Au and 27m @ 10.4 g/t Au
- RPM-057 – 120m @ 5.0 g/t Au from 93m
  - Including 79m @ 7.4 g/t Au and 63m @ 9.0 g/t Au
- RPM-062 – 74m @ 2.5 g/t Au from 83m
  - Including 13m @ 6.2 g/t Au and 6m @ 11.5 g/t Au

Highlights from RPM South in 2023 include:

- RPM-042 – 23m @ 1.1 g/t Au from 14m
  - Including 10m @ 1.7 g/t and 6m @ 1.9 g/t

Table 7-1: Summary of drilling completed by year on the Estelle Gold Project deposits

Year	RPM (North, South & Valley)		Train		Korbel Main		Cathedral		Total	
	No. of Holes	Length (m)	No. of Holes	Length (m)	No. of Holes	Length (m)	No. of Holes	Length (m)	No. of Holes	Length (m)
Pre-2019	1	182	-	-	5	1,159	1	283	7	1,624
2019	-	-	-	-	32	2,105	-	-	32	2,105
2020	-	-	-	-	64	27,004	-	-	64	27,004
2021	6	2,567	-	-	81	29,074	-	-	87	31,641
2022	31	10,719	-	-	21	5,686	10	4,603	62	21,008
2023	29	6,632	6	589	-	-	-	-	35	7,221
Total	67	20,100	6	589	203	65,028	11	4,886	287	90,603

Note: Table 7-3 summarizes the drilling undertaken up to December 31, 2023. The Estelle Gold Project mineral resource was defined using data from 2019 through to the 2022 drill programs only. Data from the 2023 drill program will be used for an updated MRE at a later date.

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Figure 7-5: Estelle Gold Project core logging

8. Sample Preparation, Analyses, and Security

From 2018-2021 Nova Minerals' samples were submitted for crushing and pulverization to the ALS Global facility in Fairbanks, Alaska. From 2022 onwards Nova Minerals established an on-site certified independent contractor operated prep lab following the same protocol as ALS for crushing and splitting to obtain a ~250g representative sub sample which is submitted for pulverization to the ALS Global facility in Fairbanks, Alaska. The prepared samples from the ALS facility in Alaska were sent to the ALS Laboratory in Reno, Nevada or Vancouver, British Columbia for analysis.

8.1 Sub-Sampling Techniques and Sample Preparation

HQ core is sampled at breaks in lithology, alteration, or mineralization with maximum intervals of 10 feet (3.05m) if there is no observable geologic change between samples. Samples are cut in half with half being send to processing and half being archived in the core box it came from in the core library on location (Figure 8-1). The non-archived sample is crushed and homogenized with 250 grams pulps bagged on site and sent to the ALS lab in Fairbanks for analysis with the remaining pulp bagged and archived on location. Standard reference materials (SRM) and duplicates are inserted every 20 samples. Blanks are inserted every forty samples. Blanks, duplicates, and SRM data are compared to known values (or prior samples in the case of the duplicate) to evaluate lab

quality control. If any samples are “out of control” the laboratory is notified and the samples between the questionable QC data is re-run to verify results.

Figure 8-1: Splitting drill core at the Estelle Gold Project

The entire sample is crushed to a minimum of 75% passing 2 mm. The crushed sample was riffle split to obtain a 250-gram subsample. The subsample is pulverised to at least 85% passing 75 microns.

The prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica, and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead. The bead is digested in 0.5mL dilute nitric acid in the microwave oven. 0.5 mL concentrated hydrochloric acid is then added, and the bead is further digested in the microwave at a lower power setting. The digested solution cooled, diluted to a total volume of 10mL with de-mineralized water, and analyzed by inductively coupled plasma.

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Table 8-1: Details of sample preparation and analytical methods

Procedure	ALS Global (2018-2022)
Crushing	>75% passing 2 mm
Pulverizing	250 grams to 85% passing 75 microns
Gold Assay	30-gram fire assay with inductively coupled plasma finish and 0.001 g/t gold lower detection limit

8.2 Sample Security

A secure chain of custody protocol has been established with the site geologist securing samples with evidence tape and placing in a secure shipping container at site until loaded on to aircraft and shipped to the ALS lab in Fairbanks.

The samples are packed and stored in a secure shipping container on site until loaded and shipped to ALS. Samples are sent out of camp via Andrews Airways. From Andrews Airways, the samples are shipped via courier by road to ALS Global in Fairbanks, Alaska.

Samples are packed into security sealed tamper evident sealed boxes and include a sample submittal form. A chain of custody procedure was strictly followed during transportation.

8.3 Reviews or Audits

Yukuskokon Professional Services (Yukuskokon) personnel are responsible for following the sample preparation, analysis and security protocols. Yukuskokon Qualified Persons review and audit the processes on an ongoing basis.

8.4 Sample Preparation, Analysis and Security Conclusions and Recommendations

The QP ~~concludes~~ is of the opinion that the sample preparation, analysis, and security are of sufficient quantity and quality for resource estimation

9. Data Verification

9.1 Quality of Assay Data and Laboratory Tests

Samples are tested for gold using ALS Fire Assay Au-ICP21 technique. This technique has a lower detection limit of 0.001 g/t with an upper detection limit of 10 g/t. If samples have grades in excess of 10 g/t then Au-AA25 is used to determine the over detect limit. Au-AA25 has a detection limit of 0.01 g/t and an upper limit of 100 g/t. Three different types of SRM are inserted each 20 samples. Duplicates of the reject are taken each 20 samples. One blank is inserted each 40 samples. Data is

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plotted and evaluated to see if the samples plot within accepted tolerance. If any "out of control" samples are noted, the laboratory is notified and samples are re-assayed.

Qualitica Consulting Inc. analyzed the analytical quality control data produced by Nova Minerals in the 2018 to 2022 drilling programs.

Nova Minerals provided the external analytical control data containing the assay results for the quality control samples. All data were provided in Microsoft Excel spreadsheets. Qualitica aggregated the assay results of the external analytical control samples for further analysis.

9.1.1 Blank Material Results

Barren coarse material ("a blank") is submitted with samples for crushing and pulverizing to determine if there has been contamination or sample cross-contamination in preparation. Elevated values for blanks may also indicate sources of contamination in the fire assay procedure (contaminated reagents or crucibles) or sample solution carry-over during instrumental finish.

A blank is inserted for 1 in 40 samples. The blank material consists of coarse marble material obtained from the local hardware store.

A Nova blank sample is determined to have failed when the gold reports above 0.01 g/t, which is equivalent to ten times the detection limit at 0.001 g/t.

A total of 599 blanks were submitted to ALS Global. Eighteen failures were identified. Ninety-seven percent of blank material assayed less than the limit of 0.01 g/t gold and are considered acceptable (Figure 9-1)

No further action is required. There is no evidence of systematic gold contamination at ALS Global.

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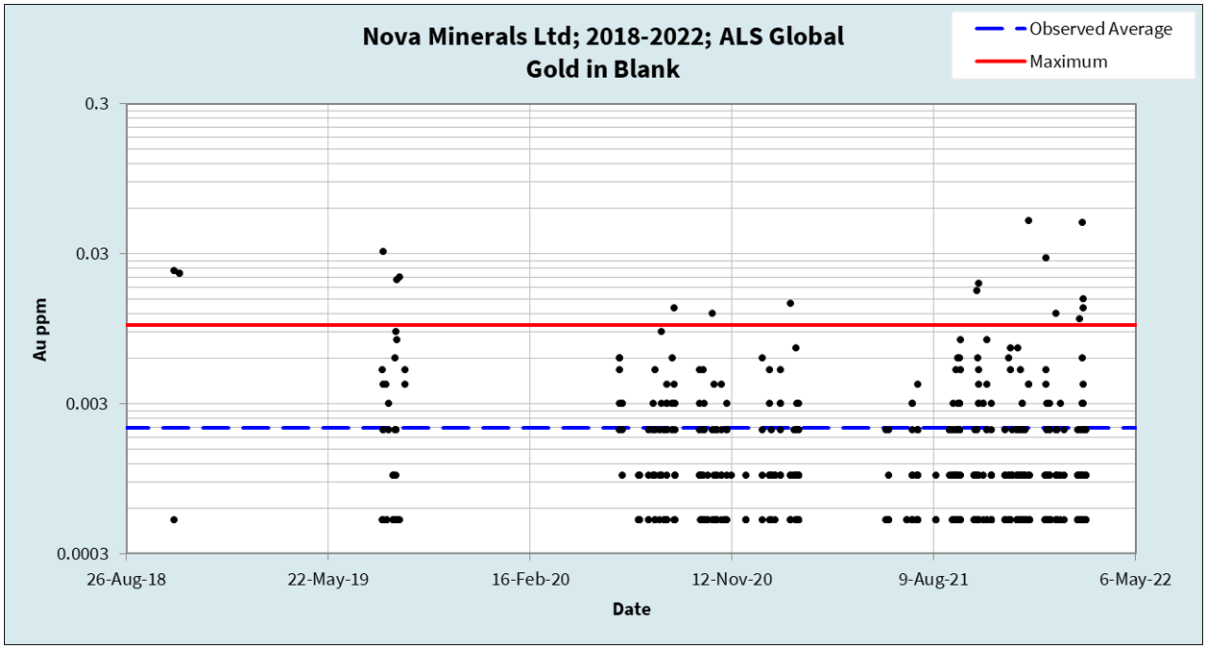

Figure 9-1: Control chart of Gold in Blank, ALS Global

9.1.2 Reference Material Results

Certified reference materials are inserted into sample batches to assess bias and overall laboratory performance.

Reference materials are submitted with samples for assay to identify:

a) if there were assay problems with specific sample batches; and

b) if long-term biases exist in the overall dataset. The definition of a quality control failure is when:

a) Assays for a reference material are outside ± three standard deviations of the certified value.

The definition of a quality control outlier is when:

a) Assays for a reference material has a 'Z' score greater than 5, where Z = (Measured – Expected)/Tolerance.

The reference materials in use are commercially prepared by Ore Research and Exploration Pty (OREAS) in Australia. There were four reference materials in use during the period, they are OREAS 60d, OREAS 501c, OREAS 503c, OREAS 503d, and OREAS 506. The accepted values and standard deviations were taken from the certificates available at www.oreas.ca.

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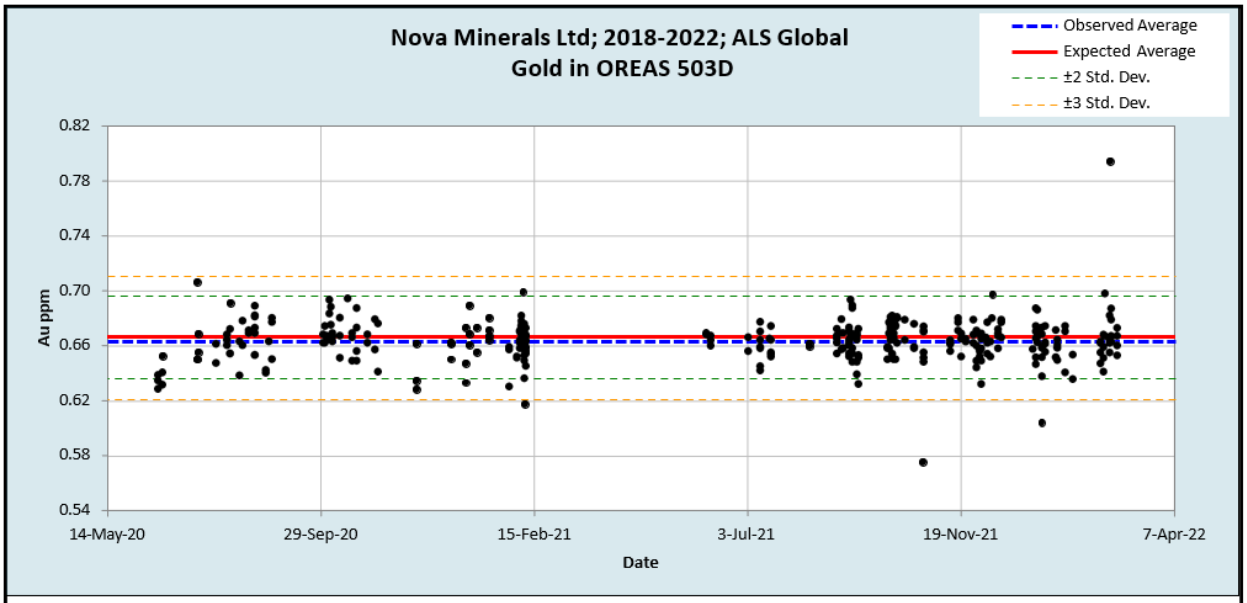
The five reference materials were analyzed 1,061 times in regular sequence with samples.

Summary statistics for gold are included in Table 9-1. Both outliers and failures are excluded to assess the overall laboratory performance for accuracy. Control charts for gold are included in Figure 9-2.



Summary Statistics

Expected Values	
Mean	0.666
Standard Deviation	0.015
2 x RSD	4.50%

Observed Values	
Number of Samples	336
Mean	0.663
Standard Deviation	0.016
2 x RSD	4.82%
Falls Within 3 SD of Certified Mean	99%
Falls Within 2 SD of Certified Mean	95%
Falls Within 1 SD of Certified Mean	79%

Figure 9-2: Reference material - Control chart

The average observed values reported for each reference material is calculated and compared to the Expected value. The calculated Percent of Expected value should range between 98 to 102%.

The Percent of Expected values for gold in all four reference materials fall within 99% to 102% and demonstrate acceptable accuracy with respect to the accepted values.

Eight quality control outliers and nine quality control failure remain for gold. A total of 17 failures out of 1,060 insertions for a failure rate of 1.6%. Mis-labels have been identified and corrected. It

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is not clear if some failures were sent for repeat assay or corrections made. The results are acceptable, and no further action is required.

Table 9-1: Summary reference material statistics for Gold

RM	N	Outliers Excluded	Failures Excluded	Au g/t		Observed Au g/t		Percent of Expected
				Expected	Std. Dev.	Average	Std. Dev.	
OREAS 60d	347	1	2	2.47	0.079	2.52	0.057	102%
OREAS 503c	23	-	-	0.698	0.015	0.696	0.013	100%
OREAS 503d	332	2	2	0.666	0.015	0.664	0.013	100%
OREAS 506	186	2	5	0.364	0.010	0.362	0.007	99%
OREAS 501c	155	3	-	0.221	0.007	0.223	0.005	101%
Total	1043						Weighted Average	101%

9.1.3 Pulp Duplicates

The assays for pulp duplicates provide an estimate of the reproducibility related to the uncertainties inherent in the analytical method and the homogeneity of the pulps. The precision or relative percent difference calculated for the pulp duplicates indicates whether pulverizing specifications should be changed and/or whether alternative methods, such as screen metallics for gold, should be considered.

Precision, by definition, is about ±100% at 10 times the detection limit. Assays close to the detection limit are not included in calculations of precision and this is applied to all the discussions of precision in this report.

Commercial laboratories routinely assay a second aliquot of the sample pulp, usually for one in ten samples. The data are used by the laboratory for their internal quality control monitoring.

The pulp duplicate charts are included in Figures 9-3 and 9-4.

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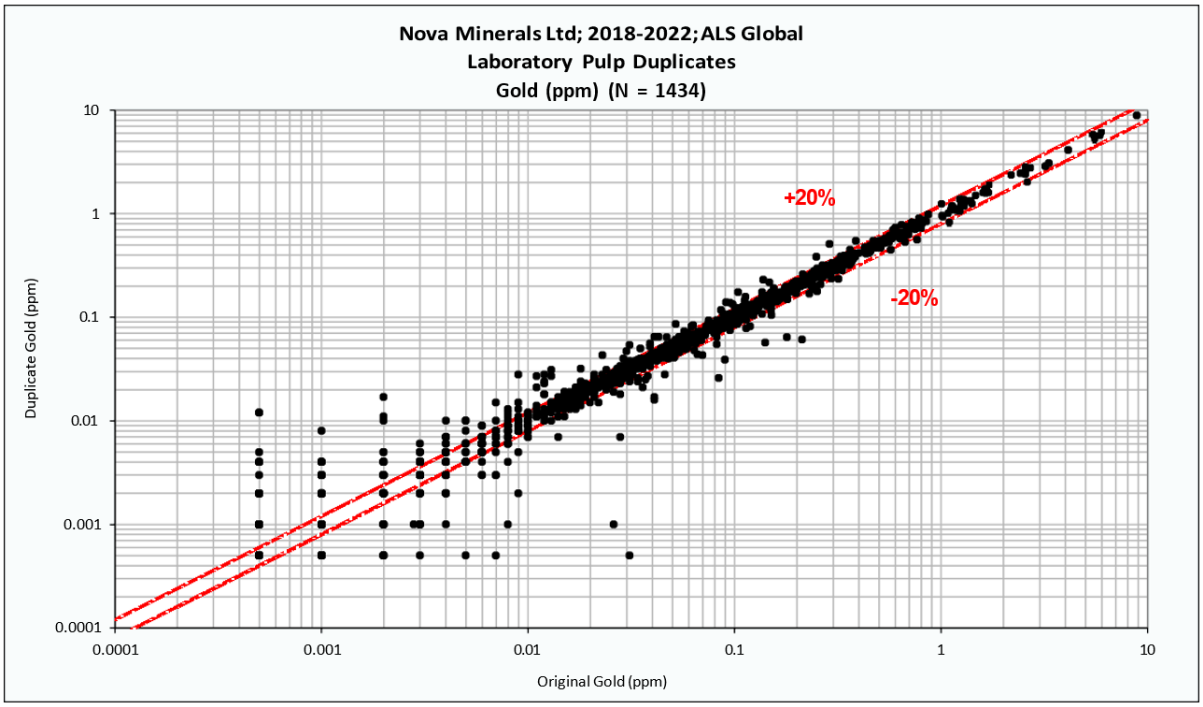

Figure 9-3: Pulp duplicates – Scatter Plot

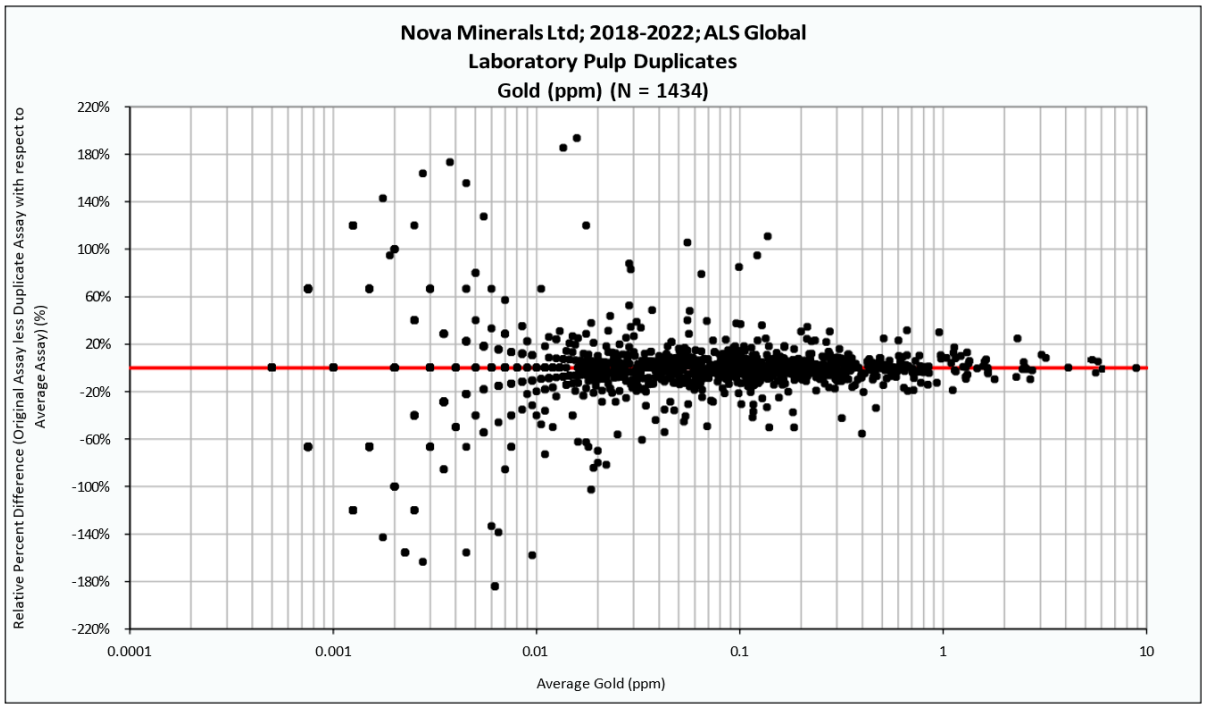

Figure 9-4: Pulp duplicates - Relative Percent Difference

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9.1.3.1 Gold

A total of 1,434 pulp duplicates were analyzed for gold by fire assay with ICP finish. A total of 939 duplicate pairs out of 1,434 reported above 0.01 g/t gold for fire assay with ICP finish (Table 9-2).

The pulp duplicates for gold fire assay with ICP finish have 88% of the duplicate pairs reporting within ±25%. Precision for the pulp duplicates is as expected for the analytical method and ore type.

Table 9-2: Summary of Pulp Duplicate results for Gold

			% of Sample Pairs (>10x d.l.) Reporting within			
Analyte	**# of Pairs**	**# of Pairs above 10x d.l.**	**±5%**	**±10%**	**±20%**	**±50%**
Au-ICP21	1,434	939	44%	71%	88%	97%

9.1.4 Check Assays

Check assays are recommended where the same pulp that was assayed originally is submitted to a different laboratory for the same analytical procedures primarily to augment the assessment of bias based on the reference materials and in-house control samples submitted to the original laboratory.

A total of 42 pulps were selected. The samples originally analyzed at ALS Global were submitted to SGS Minerals in Vancouver, B.C. The SGS method GE-FAI30V5 was used, it is comparable to the original method by ALS, ICP21(Table 9-3) (Figures 9-5 and 9-6).

Table 9-3: Summary of Check Assay results for Gold

				% of Sample Pairs (>10x d.l.) Reporting within			
Analyte	**# of Pairs**	**# of Pairs above 10x d.l.**	**Average RPD**	**±5%**	**±10%**	**±25%**	**±50%**
Au	42	42	-2.7%	43%	69%	86%	90%

Eighty-six percent of the check assay results for gold are within ± 25% of the two sets of laboratory results; this is acceptable agreement. The number of cases where ALS is higher than SGS and vice versa are about the same, 48% and 52% respectively. The average RPD for gold between ALS and SGS is -2.7%, this indicates that on average the SGS results are higher than ALS results by about 3%. With the results around 0.1 to 0.2 g/t the differences are in the second and third decimal places.

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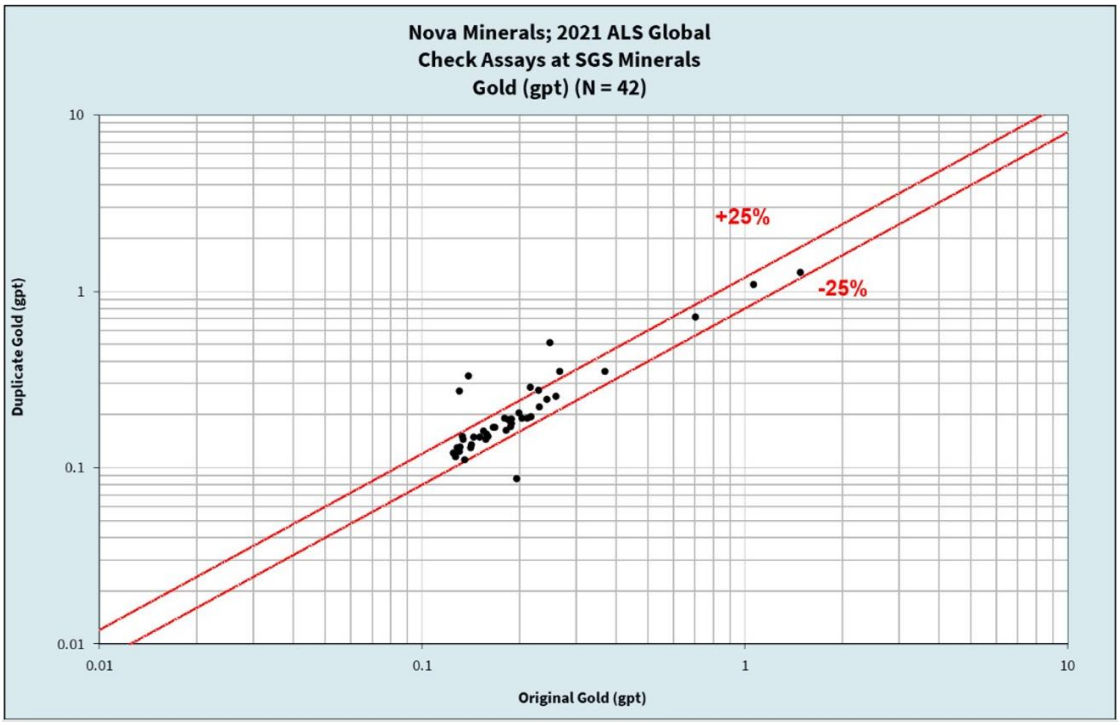

Figure 9-5: Check Assays – Scatter Plot

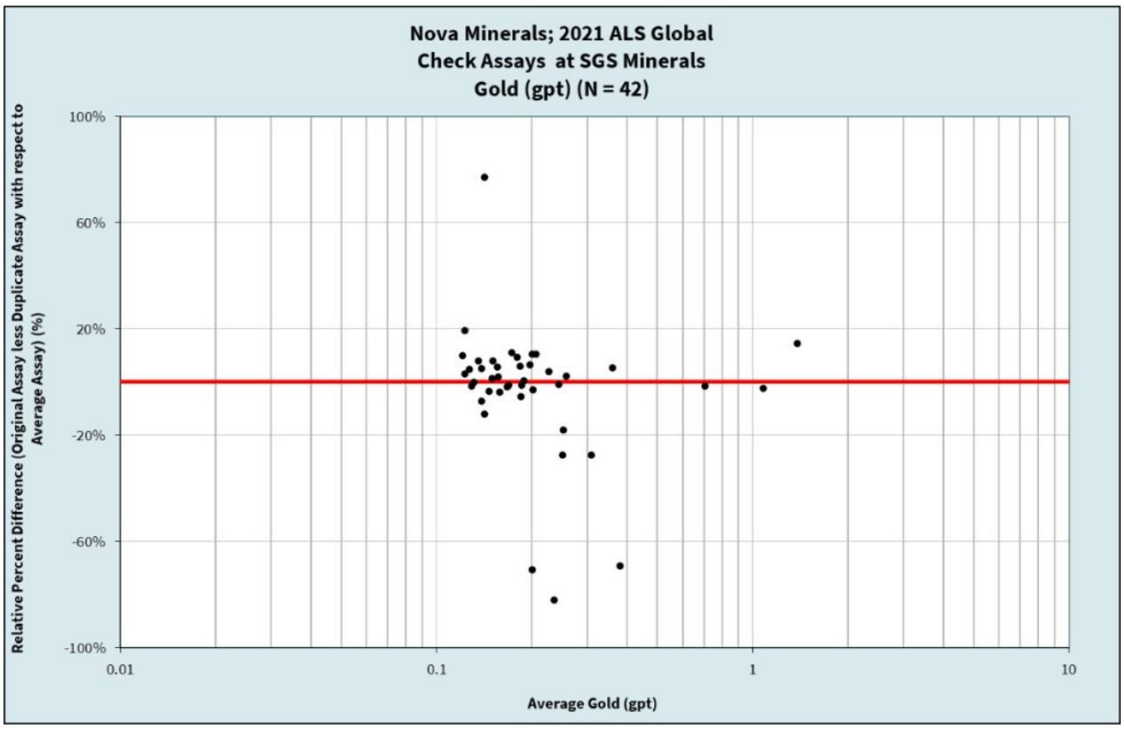

Figure 9-6: Check Assays - Relative Percent Difference

The charts were plotted to assess the performance of the laboratory. In the opinion of the Qualified Persons, the laboratory performance and quality of assay data is are adequate to support mineral resource estimation.

9.2 Verification of Sampling and Assaying

Assay data intercepts are compiled and calculated by a Qualified Person and then verified by corporate management prior to the release to the public.

9.3 Location of Data Points

All maps and locations are in UTM grid (NAD83 Z5N) and have been measured by a digital Trimble GNSS system with a lateral accuracy of <30cm and a vertical accuracy of <50cm.

9.4 Data Spacing and Distribution

Drill holes have been spaced in a radial pattern such that all dimensions of the resource model are tested. Future geo-stats will be run on the data to determine if addition infill drilling will be required to confirm continuity.

9.5 Orientation of Data in Relation to Geological Structure

The relationship between the drilling orientation and the orientation of key mineralised structures is confirmed by drill hole data driven ongoing detailed structural analysis by OTS structural consultants.

9.6 Data Verification Conclusions and Recommendations

The QP concludes that the resource database provided is of sufficient quality for resource estimation.

9.7 Statement of Adequacy of Data

The QP is of the opinion that the data provided and used in the resource estimate for the Estelle project deposits is adequate for mineral resource estimation. There are no additional limitations to the exploration database for use in resource modeling.

10. Mineral Processing and Metallurgical Testing

10.1 Introduction

Nova Minerals has conducted an extensive testing program representing different gold grades from their Estelle gold deposits namely the Korbel and RPM deposits, in Alaska. The general scope of the test work consisted of sample preparation, head characterization, gravity concentration

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sulphide flotation and regrinding of concentrates followed by cyanidation. The testing was conducted by Bureau Veritas Commodities Canada Ltd. in Richmond, BC, Canada. Ore sorting was carried out by Tomra Sorting Inc, Sydney NSW Australia.

10.2 Korbel Mineral Processing and Metallurgical Testing

Two composite samples representing different gold grades of the Korbel B Zone in the Estelle Gold Project were formulated from ½ split core samples for this test program. In addition, a master composite representing the Korbel B Zone was also prepared for testing.

The objective of the study test work was to test the amenability of the Korbel B Zone ore to conventional process options for gold recovery.

The metallurgical test work undertaken consisted of ore characterisation and sample preparation, head sample characterization, gravity concentration, sulphide flotation and regrinding of concentrates and cyanidation. In addition, column leaching testing was also conducted to evaluate the heap leach potential of test samples but was a very limited in scope and proved inconclusive. Heap leach potential remains for the project and further detailed test work programs have been initiated through engagement with METS Engineering out of Perth, Australia to guide these studies. Mineralogical studies were conducted on select samples including the master composite, leach tails and the gravity concentrate. The testing was conducted by Bureau Veritas Commodities Canada Ltd. in Richmond, BC, Canada and a report submitted to Nova Minerals.

10.2.1 Metallurgical Samples

The samples used for metallurgical testing were collected from Estelle's Korbel B zone and shipped to the BV Minerals Metallurgical Division.

The metallurgical test program was conducted on the LG composite, HG composite and the master composite (composed of a 50:50 combination of LG composite and HG composite) from the Korbel B orebody.

As shown in **Error! Reference source not found.**, a total of thirty-two ½ split core samples, weighing about 350 kg, were received at BV Minerals Metallurgical Division on January 11th, 2021. The ½ split core samples were sorted into two composites, high-grade composite (HG composite) and low-grade composite (LG composite), for metallurgical testing.

After compositing, each composite was stage crushed to 3.51 cm (1.5"), homogenized, and representative sub-samples were obtained for the Abrasion Index and the Bond Rod Mill Index and Bond Ball Mill Work Index test. The sample was finally crushed to 3.35 mm (6 Tyler™ mesh) homogenized and rotary split into 2 kg test charges for bench-scale testing and head assays.

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One test charge from each test composite was pulverized to P_{90} 75µm for head assays, including Au, Ag, S, and C species and for ICP analysis. One kg of the final bulk gravity test charge was assayed for gold using the screened metallics protocol. A master composite was also prepared by blending the LG composite and the HG composite at a 50:50 ratio for testing.

Table 10-1: Composite sample list

Count	Hole-id	From	To	Sample	Wt. (kg)	Hole-id	From	To	Sample	Wt. (kg)
1	KBDH-001	32.92	35.97	A0390718	9.9	KBDH-001	17.68	20.73	A0390712	10.8
2	KBDH-001	176.17	179.22	A0390774	10.4	KBDH-001	45.11	48.16	A0390722	11.2
3	KBDH-001	203.61	206.65	A0390786	10.8	KBDH-001	93.88	96.93	A0390743	10.9
4	KBDH-001	319.43	322.48	A0390829	10.3	KBDH-001	151.79	154.84	A0390766	11.3
5	KBDH-005	29.57	32.61	A0393011	10.8	KBDH-004	283.16	286.21	A0391117	10.2
6	KBDH-005	52.88	56.08	A0393019	12.4	KBDH-004	298.40	301.45	A0391122	11.0
7	KBDH-005	78.33	81.38	A0393029	11.7	KBDH-004	301.45	304.50	A0391123	11.0
8	KBDH-005	96.62	99.67	A0393037	10.9	KBDH-004	505.66	508.71	A0391200	11.6
9	KBDH-009	223.16	226.19	A0393417	9.8	KBDH-013	319.13	322.17	A0393797	10.3
10	KBDH-009	112.79	114.16	A0393372	4.8	KBDH-013	346.56	349.61	A0393807	10.8
11	KBDH-009	147.46	150.49	A0393385	11.2	KBDH-013	377.04	380.09	A0393818	12.3
12	KBDH-009	185.16	188.19	A0393399	10.8	KBDH-013	386.18	389.23	A0393822	11.4
13	KBDH-012	133.50	136.55	A0391682	11.6	KBDH-019	30.18	33.22	A0394171	13.2
14	KBDH-012	170.38	173.43	A0391695	10.6	KBDH-019	115.52	118.57	A0394203	10.4
15	KBDH-012	274.02	277.06	A0391734	11.6	KBDH-019	170.38	173.43	A0394223	11.8
16	KBDH-012	322.78	325.83	A0391752	11.5	KBDH-019	197.82	200.86	A0394233	12.1
				Total	**169.1**					**180.3**

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10.2.2 Grinding and Screening Procedures

Primary grinding was performed in dedicated stainless-steel laboratory rod mills using 2 kg test charges at 65% solids pulp density. Test grinds were conducted to determine the time required to achieve reliable target grind size distributions.

Particle size distributions were measured using a Rotap™ vibrator, equipped with 20 cm (8”) diameter test sieves stacked in ascending mesh sizes. The sample was initially wet screened at 37µm (400 Tyler™ mesh). The oversize fraction was then dry screened through the stacked sieves. Finally, each fraction was collected and weighed to calculate the individual and cumulative percentages passing.

Regrinding of the flotation concentrate was conducted in a 1.5-L laboratory batch IsaMill, and size analysis on the reground sample was done using Malvern Mastersizer 3000 Particle Size Analyzer.

10.2.3 Metallurgical Test Procedures and Results

10.2.3.1 Head Characterization

As the primary value of interest, the gold assays were done by standard fire-assay procedure on multiple splits and metallics screen analysis.

The head assay results are shown in Table 10-2. The average gold grade obtained from the fire assay was 0.504 and 0.636 g/t for LG and HG composites, respectively. The individual gold assays on various splits taken from the same test composite varied slightly from 0.399 to 0.544 g/t for LG composite and from 0.556 to 0.728 g/t for HG composite, indicating the presence of coarse gold but not in a significant amount. The silver contents in the test composites were 1 ppm. The sulphur contents were approximately 0.12% and mainly presented as sulphide sulphur. In general, carbon content was <0.15%, and organic carbon was below the assay detection limit of 0.02%, indicating that preg-robbing might not be anticipated to occur during cyanidation.

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Table 10-2: Head Assay Results

Analyte	Unit	LG composite	HG composite	LDL	Method
Au	g/t	0.544	0.623	0.005	FA
Au	g/t	0.500	0.728	0.005	FA
Au	g/t	0.493	0.556	0.005	FA
Au	g/t	0.590	-	0.005	FA
Au	g/t	0.399	-	0.005	FA
Au	g/t	0.500	-	0.005	FA
Au average	**g/t**	**0.504**	**0.636**		
Ag	g/t	1	1	1	MA401
TOT/C	%	0.12	0.14	0.02	TC000
C/ORG	%	<0.02	<0.02	0.02	TC005
C/GRA	%	<0.02	<0.02	0.02	TC005
CO2	%	0.45	0.51	0.08	TC006
TOT/S	%	0.12	0.13	0.02	TC000
S/S-	%	<0.05	0.09	0.05	TC008
SO_4	%	0.22	0.14	0.05	TC008
Te	ppm	<1.5	<1.5	1.5	MA270

The metallics screen analysis showed poor gold deportment on the +200-mesh fraction, with similar gold grades in the +200-mesh fraction and -200 mesh fraction further confirming the above statement regarding the presence of coarse gold. Table 10-3 shows the summary of the analysis.

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Table 10-3: Summary of Analysis

Sample ID	Screen	Weight	Au	Distribution (%)	
	Tyler mesh	(g)	(g/t)	Au	Wt.
Master composite	+200	29.7	0.810	4.8	3.0
	-200	969.8	0.514	100.0	97.0
Calculated head	**Total**	**999.5**	**0.522**	**104.8**	**100.0**
Measured head			**0.570**		

10.2.3.2 Comminution Test work and Results

The comminution test was conducted following the standard Abrasion Index and Bond Rod and Ball Mill Index test procedures.

Standard Bond comminution tests were conducted on the LG and HG test composites to determine Abrasion Index (A_i) for grinding mill consumables calculations, as well as Bond Ball Mill Work Index (BBWi) and Bond Rod Mill Work Index (BRWi) for grinding specific energy calculations. Both composites were moderately abrasive with an average of 0.4003. BBWi tests were conducted at a closing screen sizing of 106 µm and indicated a medium-hard material. The test work results are summarized in Table 10-4. No significant difference was observed between the hardness of the two composites.

Table 10-4: Comminution Test Results

Composite id	Ai (Abrasion index)	BRWi (kWh/tonne)	BBWi (kWh/tonne)
HG composite	0.4017	12.2	14.6
LG composite	0.3990	12.1	14.8
Average	**0.4003**	**12.2**	**14.7**

10.2.3.3 Diagnostic Leach Test Report

A five-stage diagnostic leach test was conducted on the master composite. This test demonstrated that direct cyanide soluble gold was 66.8% while gold associated with sulphide minerals was 15.2%.

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Gold that was associated with carbonaceous minerals and calcite/pyrrhotite/dolomite was 3.3% and 13.6% respectively. Insoluble gold or gold that is associated with pregnant robbing and refractory minerals was 1%. A summary can be seen in Table 10-5.

Table 10-5: Diagnostic leach results

Summary	Gold Distribution (%)
Stage 1 – Cyanide Soluble	66.8
Stage 2 – Primarily associated with carbonaceous minerals	3.3
Stage 3 – Primarily associated with calcite/dolomite/pyrrhotite minerals	13.6
Stage 4 – Primarily associated with base metal sulphides (Labile sulphides)	5.0
Stage 5 – Primarily associated with majority sulphides (Py, AsPy and marcasite)	10.2
Residue – Insoluble or associated with preg-robbing and other refractory minerals	1.1
Total	**100.0**

10.2.3.4 Ore Sorting Method and Results

The amenability of the rock samples to sorting was conducted by the TOMRA Sorting Inc. facility in Sydney. The test program assessed the heterogeneity of the deposit based on the gold grade of the selected rock samples. The tests were run in a four-stage XRT sorting configuration at different scanner sensitivity settings to produce the highest concentrate grade with the least mass pull in the first stage. With each additional stage, the conditions were adjusted to be less selective, increasing recovery however decreasing the concentrate grade. Ore Sorting will be critical for what is a low grade ore to produce a feed grade for a CIL plant and a tailings that may be subjected to heap leaching based on future test work.

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Sorting was evaluated using the Dual Energy X-Ray Transmission (DEXRT) sensor technology on approximately 200 rock samples. A total of 588kg of rock samples with particle sizes ranging from 10 to 80mm (~ ½ to 3 inches) were sorted at TOMRA in April 2021. 20% of the mill feed was assumed to be fines by-pass (i.e.- 10mm) containing 25% gold.

XRT conditions in the first stage were set up to be highly selective to produce the highest-grade concentrate with the least mass pull. Gold, Arsenic, and Tellurium results from the four-stage XRT sorting test are summarized in Table 10-6. The sorter results indicated that up to 82% of the gold could be recovered at 25.7% sorter accept at a cumulative gold grade of 2.13ppm, whereas 74.3% of the material was rejected as waste. The ore sorting work is very promising but needs further test work and trade off studies to establish grade recovery relationships and mass yield.

Table 10-6: Four stage XRF results

Sorted fraction	Cum. weight (%)	Gold		Arsenic		Tellurium	
		Cum. rec. (%)	Cum. grade (ppm)	Cum. rec. (%)	Cum. grade (ppm)	Cum. rec. (%)	Cum. grade (ppm)
Stage 1 product	4.0	36	6.06	37	8890	42	5.60
Stage 2 product	14.6	74	3.42	60	3938	74	2.70
Stage 3 product	25.7	82	2.13	69	2583	83	1.70
Stage 4 product	**46.5**	**90**	**1.30**	**80**	**1665**	**90**	**1.03**
Stage 4 waste	100	100	0.67	100	967	100	0.53

It is critical to consider the generated fines during circuit design as they represent a significant portion of the gold at the mineral sorting stage. The results obtained from the sorting test work might require further refinement and validation to match the mine head grade if the cut-off gold grade is altered.

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10.2.3.5 Gravity Concentration Test Work Procedure

A total of three different gravity procedures were performed in this test work.

10.2.3.5.1 Single Pass gravity concentration

Sighter tests or scoping gravity concentration tests were carried out on 2 kg test charges on both LG and HG composites at two grind sizes targeting P_{80} of 105 and 200 µm (tests G1-G4).

The gravity separation was performed in two stages. Rougher gravity separation was conducted using a 7.6 cm (3”) laboratory Knelson gravity centrifugal concentrator. The samples were ground to target sizes in a laboratory stainless steel rod mill at 65% solids. The ground material was then re-pulped to a pulp density of about 20% solids and subjected to a single pass through the gravity concentrator operated at one psi fluidization water pressure and 120 “G” force. The resulting primary gravity concentrate was further upgraded by hand panning to simulate cleaning. The entire cleaned concentrate was assayed for gold by standard fire assay procedures to extinction, while the gravity rougher and cleaner tailing were assayed separately for metallurgical balances.

Additionally, a large-scale gravity test (test G5) was performed on a 34 kg blend of LG and HG composite, and the resulting gravity rougher concentrate was subjected to intensive leach without any upgrading, and the gravity rougher tailing was subjected to bulk sulphide flotation.

10.2.3.5.2 Extended gravity Recoverable Gold (E-GRG)

Extended gravity recoverable gold (EGRG) test was conducted on 20 kg of the master composite to determine the sample’s amenability to gravity concentration. The EGRG test was carried out in three stages (targeting particle size of 80% passing 2000 µm 250 µm, and 75 µm) in a 7.62 cm (3”) Knelson centrifugal concentrator. The concentrate collected from each stage was screened, and each fraction was weighed and assayed to extinction for gold content for metallurgical balance.

Upon completing the EGRG test, test data was forwarded to FLSmidth/Knelson for evaluation and scale-up analysis.

10.2.3.5.3 GAT Test

The GAT test (Gravity Amenability Test) was performed in six stages on 4kg of master composite ground to P_{80} of 75µm. The main aim is to determine the presence of gravity recoverable sulphur. The test flowchart is illustrated in Figure 10-1, and the resulting test products were assayed for gold for metallurgical balance.

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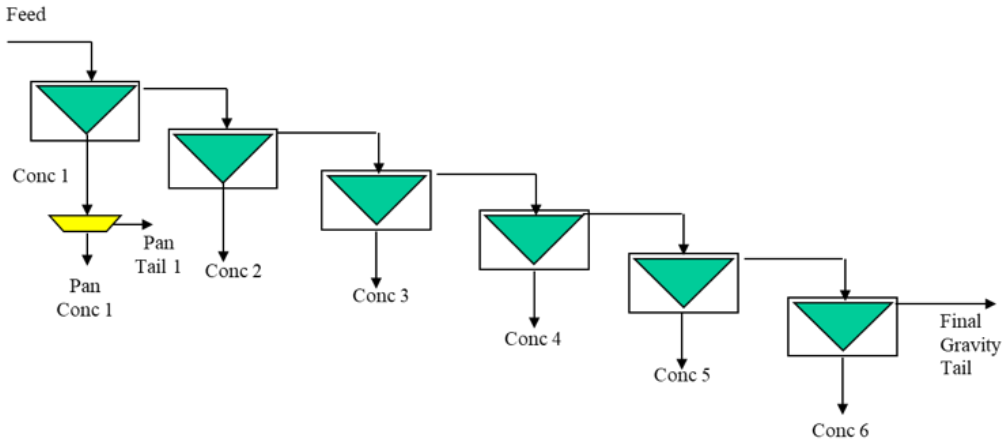

Figure 10-1: GAT test flowchart

10.2.3.6 Gravity Concentration Test Results Discussion

Gravity concentration tests were conducted on the LG, HG, and master composite samples to determine their amenability to gravity gold separation. The LG and HG composite samples were ground to a target P_{80} 105 µm while the target P_{80} of the master composite was 75 µm for the GAT test and 1072 to 77 µm for the EGRG (Extended Gravity Recoverable Gold) tests.

The sighter tests and the EGRG test achieved encouraging results. EGRG test results had a recovery 73.8% whilst the LG and HG samples recovery from the Nelson concentrator was 71.0% and 70.5% respectively. Typically, the GAT Pan or total GAT stage 1 tests should be similar to the EGRG result. In the master composite sample, the GAT pan was 22% and the Stage 1 GAT total was 58%, below the recovery indicated in the EGRG test. The calculated head grade of the GAT at 0.52g/t was also lower than the calculated head grade of the EGRG (0.65g/t).

According to the FLSmidth report the GAT indicated either abundance of free gold or a very high hold carrier or a combination of both. However, metallics analysis at the 200 - mesh screen showed poor gold deportment on the + 200 mesh fraction, and the gold grade in the + 200 mesh fraction not much higher than the - 200 mesh fraction provided conflicting information.

In addition, no coarse gold particles were observed in the Knelson gravity cleaner concentrate under the microscope. Instead, the Knelson concentrate appeared to be high-grade fine gold particles carried in sulphide minerals instead of coarse gold particles, resulting in poor GRG (Gravity Recoverable Gold) recovery in the plant. This observation agrees with the QEMSCAN findings that the sulphide contents increased from around 0.47% to 20.2%, and most of the gold in the master composite was associated with sulphides. As a result, FLSmidth/Knelson advised dropping the gravity concentration from the process flow circuit.

Results from the gravity tests are summarized in Table 10-7.

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Table 10-7: Summary of gravity concentration test results

Composite ID	Test no.	Test charge	Measured head grade	Calculated head grade	P_{80} size	Gravity rougher concentrate		
		Kg	g/t Au	g/t Au	µm	Mass (%)	Grade (g/t Au)	Recovery Au (%)
LG composite	G1	2	0.504	0.388	105	3.0	9.3	71.0
	G4	2	0.504	0.437	200	3.5	9.9	78.8
HG composite	G2	2	0.636	0.660	105	3.2	14.4	70.5
	G3	2	0.636	0.582	200	3.2	13.8	76.7
Master composite	G5	34	0.558	0.557	75	0.5	68.9	61.3
	EGRG-1	20	0.570	0.647	1072 o 77	1.2	38.7	73.8
	GAT-1	4	0.570	0.523	75	1.5	20.8	58.4

10.2.3.7 Flotation Test Work and Results

Bulk sulphide flotation tests were conducted on ground whole-ore and gravity tailings. Potassium amyl xanthate (PAX) and Cytec A208 at a dosage of 120 g/t and 3 0g/t, respectively, were added in four stages as mineral collectors. Copper sulphate as $CuSO_4.5H_2O$ was added at 150 g/t as the mineral activator, and MIBC utilised as the frothing agent at 23 g/t. Resulting, rougher flotation and concentrate samples were subjected to an intensive leach or assayed directly for metallurgical balance as required.

Based on the mineralogical observation that most of the gold in the master composite is associated with sulphide minerals, flotation was selected as a process alternative. Scoping sulphide flotation with or without gravity pre-concentration was tested on the master composite at a target grind P_{80} 75 µm. The responses of the test samples to the flotation process are summarized in Table 10-8.

Results showed that the test samples responded well to bulk sulphide flotation with or without gravity pre-concentration. Flotation of ground whole-ore could recover 95.4% gold into a sulphide concentrate representing 5.1% feed mass, grading ~8 g/t Au, resulting in 0.02 g/t Au and <0.02% Sulphur flotation tailings for disposal. Flotation of gravity scalped tails could recover over 92% of fine gold left in gravity tailings.

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Table 10-8: Summary of flotation test at P80 of 75 µm

Test no.	Sample	Product grade (g/t Au)			Gold recovery	
		Feed	Flotation concentrate	Rougher tails	Mass (%)	Flotation concentrate (Au %)
F1	Whole-ore Master comp. (Rougher 1-3)	0.45	8.36	0.03	5.1	95.4
F2	EGRG tailings from Master comp.	0.12	1.29	0.01	8.90	92.0
F3	G5 tailings from Master comp.	0.22	2.72	0.02	7.40	92.3

As illustrated in Figure 10-2, gold in gravity tailings floated rapidly, and gold and sulphur floated simultaneously. Most of the gold remaining in the gravity tails reported to the first rougher concentrate. It is anticipated that the whole-ore sample would have similar flotation kinetics.

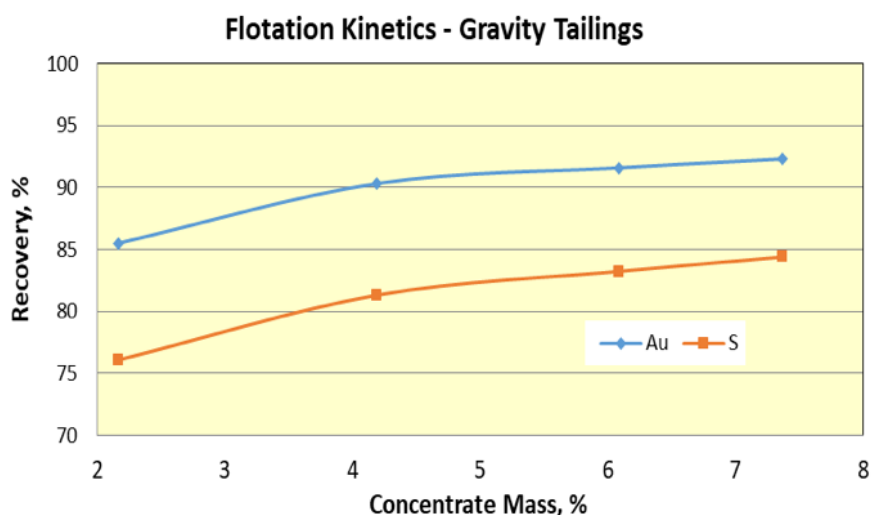

Figure 10-2: Flotation kinetics

Further flotation study on the master composite should be conducted to optimize the process, including optimal primary grind size, reagent type, dosages, and regrind size.

10.2.3.8 Cyanide Leaching Test Work Procedure

As an alternative process to flotation, cyanidation using bottle roll tests of ground whole-ore and concentrate generated from gravity and flotation processes along with the tailings were tested. As the primary process variables, various grind sizes, cyanide strength, pulp pH, residence time, d.O_2 level, and lead nitrate addition were evaluated. In addition, Carbon-In-Leach (CIL) procedure was also tested.

The baseline leach tests were initially performed on LG and HG composites at 40 wt.% solids in 1 g/L NaCN for 72 hours. Both standard leach and CIL procedures were tested at a target P_{80} 75 µm grind. Two finer P_{80} sizes, targeting 53 and 38 µm, were further tested on LG and HG composites to evaluate the effect of grind size on gold extraction. Based on the leaching kinetics from the baseline leach tests, the leach residence time was reduced from 72 hours to 48 hours.

The leach process was further optimized on whole-ore master composite and gravity tailings by shortening leach residence to 48 hours, testing higher pulp pH's, with lead nitrate addition in the mill and with air/oxygen injection. All leach test conditions are presented in **Error! Reference source not found.**.

Table 10-9: Cyanide leach conditions

Sample ID	Test no.	Grind P_{80} (µm)	Residence time (hr)	$Pb(NO_3)_2$ in mill (g/t)	Pulp density (%)	pH	Aeration with O_2: dO_2 (ppm)	NaCN g/L
Half Core High Grade (HG comp)	C-1	74	72	n/a	40	10.5-11.0	n/a	1.0
	C-3	56	48	n/a	40	10.5-11.0	n/a	1.0
	C-4	39	48	n/a	40	10.5-11.0	n/a	1.0
	CIL-1	80	72	n/a	40	10.5-11.0	n/a	1.0
Half Core Low Grade (LG comp)	C-2	80	72	n/a	40	10.5-11.0	n/a	1.0
	C-5	57	48	n/a	40	10.5-11.0	n/a	1.0
	C-6	42	48	n/a	40	10.5-11.0	n/a	1.0
	CIL-2	78	72	n/a	40	10.5-11.0	n/a	1.0

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Sample ID	Test no.	Grind P_{80} (µm)	Residence time (hr)	$Pb(NO_3)_2$ in mill (g/t)	Pulp density (%)	pH	Aeration with O_2: dO_2 (ppm)	NaCN g/L
Master composite	C7	74	48	150	40	10.5-11.0	25-30	1.0
	C8	53	48	150	40	10.5-11.0	25-30	1.0
	C9	37	48	150	40	10.5-11.0	25-30	1.0
	C10	37	48	150	40	12.3-12.4	15-20	2.0
EGRG Tailings from Master composite	CEGRG-T1	77	48	n/a	40	10.5-11.0	With Air	1.0
	CEGRG-T2	77	48	n/a	40	10.5-11.0	20-25	1.0

Before adding sodium cyanide, the alkalinity was adjusted with hydrated lime to achieve a target pH. The pH and cyanide levels were maintained throughout the entire test. Intermediate solution samples were taken at 2, 6, 24, 30, 48, 54, and 72 hours and assayed for leach kinetics. The leach tests were terminated after 48 or 72 hours with filtration of leachate solution. The solid residues were displacement-washed with a cyanide solution, followed by two hot water rinses. All test products, including solution and the final residue, were analysed for gold content for metallurgical balance.

In addition to the standard leach, an intensive leach procedure was tested on flotation and gravity concentrate with/without regrinding. The intensive leach tests were carried out for 24 hours at a 13-25% pulp density in 20g/L NaCN solution with LeachAid addition. Timed solution samples were removed at 2, 4, 7, and 24 hours and assayed for leach kinetics.

10.2.3.9 Cyanide Leaching Test Results

The results for the tests are discussed below for the whole ore cyanidation, gravity tailings leach (EGRG gravity tailings) and the intensive leach tests of gravity and flotation concentrates.

10.2.3.9.1 Whole-Ore Cyanidation

Three different grind sizes ranging from 75µm to 38µm were tested on LG and HG composites and the master composite to evaluate the effect of grind size on gold recovery. The test conditions

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and results are summarized in **Error! Reference source not found.** while gold leach kinetics and gold recoveries achieved at different grind sizes are plotted in **Error! Reference source not found.** and **Error! Reference source not found.**, respectively.

Results showed that the test samples were sensitive to grind sizes in the range of P_{80} 75 to 37 µm. In the size range tested, the finer grind benefited gold recovery but not significantly. Gold extraction from the baseline test conditions ranged from 68.6% to 78.8% on the LG composite and from 76.4% to 79.6% on the HG composite. Gold extraction improved to 71-73% on the master composite following aggressive leach conditions of 150g/t lead nitrate in the mill and with d.O_2 maintained at 25-30ppm with oxygen injection.

It was observed that at a 37 µm grind size, increasing pulp pH from 10.5 to 12.3 and NaCN concentration from 1 to 2 g/L resulted in a 5% increase in gold extraction and a significant drop in cyanide consumption. Residual gold concentration varied from 0.120 to 0.227 g/t Au. In size range tested, finer grinds resulted in higher gold recovery and lower residual gold grades. Cyanide consumption from the grind-recovery tests averaged 1.18 kg/t at a NaCN concentration of 1.0 g/L and a pulp pH of 10.5-11. Less than 0.4 kg/t hydrated lime was required to maintain a slurry pH >10.5 in the leach circuit.

The CIL leach procedure (tests CIL1 and 2) at a target P_{80} grind of 75µm demonstrated that CIL did not benefit gold recovery.

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Table 10-10: Summary of whole ore cyanidation test results

Sample ID	Test no.	Grind P_{80} (µm)	Residence Time (hr)	$Pb(NO_3)_2$ in mill (g/t)	Pulp density(%)	pH	Aeration with O_2: dO_2 (ppm)	NaCN g/L	Measured head Au (g/t)	Calculated head Au (g/t)	Recovery Au (%)	ResidueAu (g/t)	Consumption (kg/t)	
													NaCN	Lime
HG composite	C-1	74	72	n/a	40	10.5-11.0	n/a	1.0	0.636	0.619	68.6	0.195	1.27	0.36
	C-3	56	48	n/a	40	10.5-11.0	n/a	1.0	0.636	0.648	73.1	0.175	0.98	0.30
	C-4	39	48	n/a	40	10.5-11.0	n/a	1.0	0.636	0.810	78.8	0.172	1.04	0.28
	CIL-1	80	72	n/a	40	10.5-11.0	n/a	1.0	0.636	0.499	61.7	0.191	1.57	0.34
LG composite	C-2	80	72	n/a	40	10.5-11.0	n/a	1.0	0.504	0.491	76.4	0.116	1.26	0.38
	C-5	57	48	n/a	40	10.5-11.0	n/a	1.0	0.504	0.482	79.6	0.099	1.00	0.28
	C-6	42	48	n/a	40	10.5-11.0	n/a	1.0	0.504	0.465	78.9	0.098	1.01	0.26
	CIL-2	78	72	n/a	40	10.5-11.0	n/a	1.0	0.504	0.360	63.1	0.133	1.50	0.38
Master composite	C7	74	48	150	40	10.5-11.0	25-30	1.0	0.570	0.783	71.0	0.227	1.14	0.26
	C8	53	48	150	40	10.5-11.0	25-30	1.0	0.570	0.617	72.9	0.167	1.10	0.26
	C9	37	48	150	40	10.5-11.0	25-30	1.0	0.570	0.592	73.2	0.159	1.11	0.36
	C10	37	48	150	40	12.3-12.4	15-20	2.0	0.570	0.542	77.9	0.120	0.47	3.40

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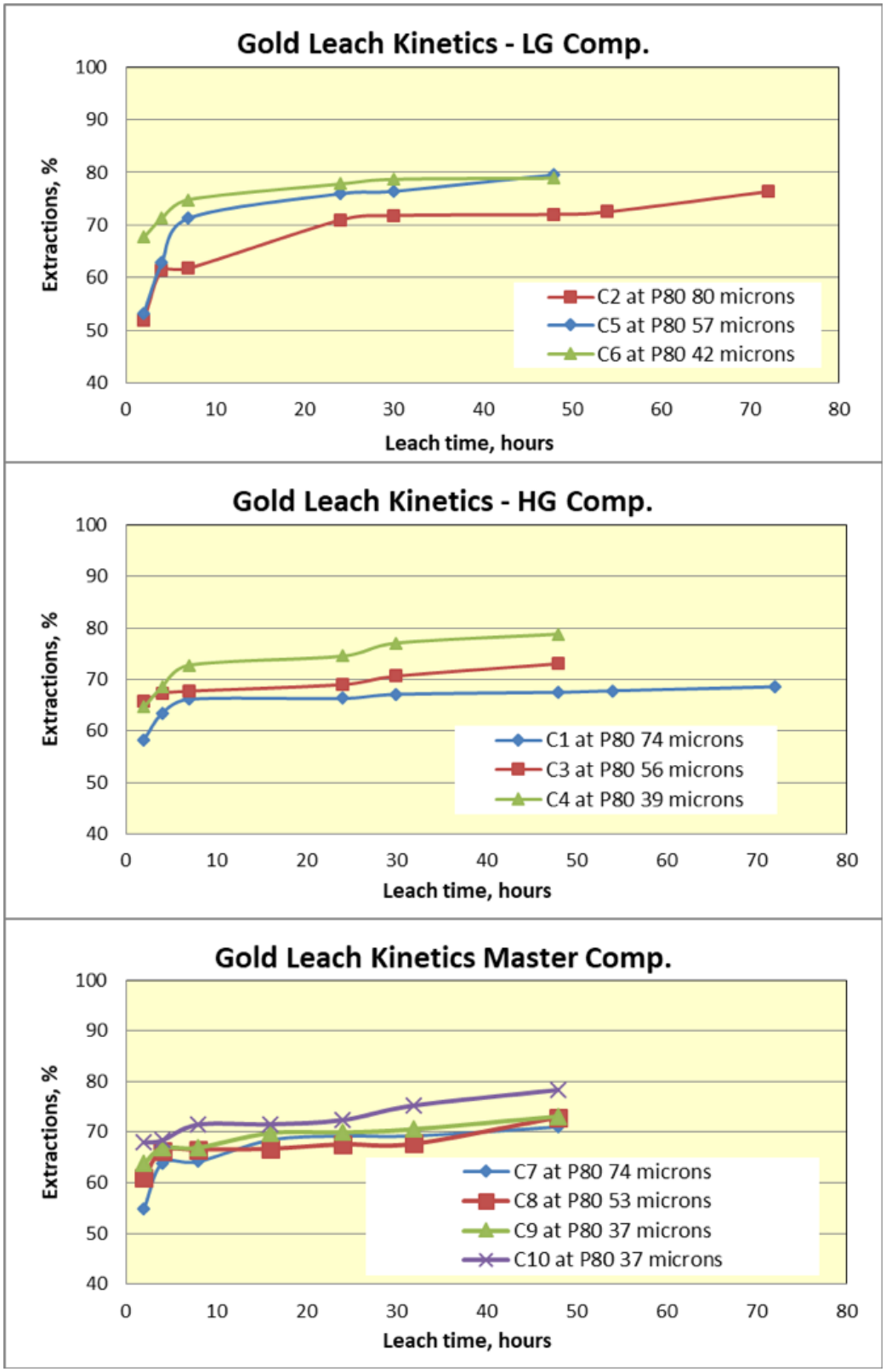

Figure 10-3: Gold leach kinetics at select grinds

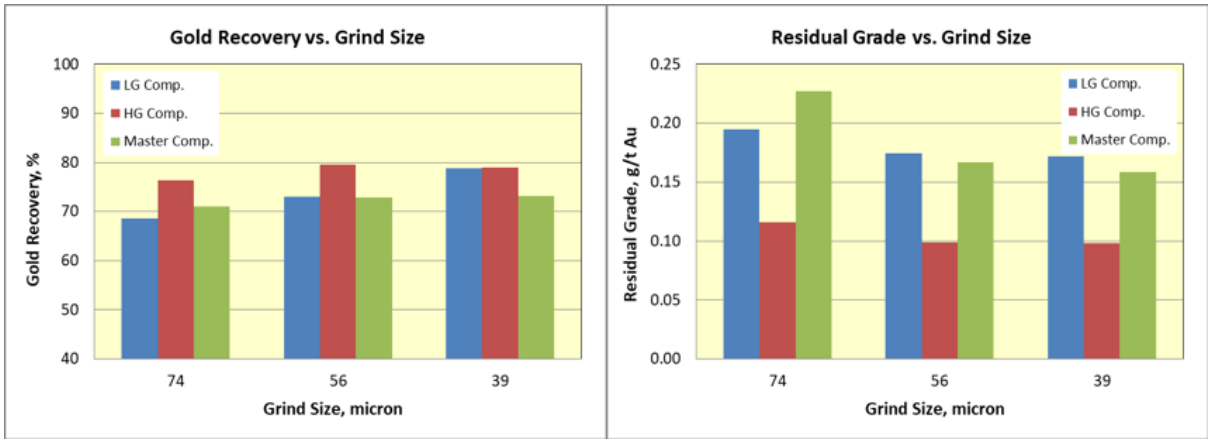

Figure 10-4: Gold recovery and residual grade at various grind sizes

10.2.3.9.2 Gravity Tails Leach Test

Two leach tests were conducted on the EGRG gravity tailings. Test conditions and results are summarized in **Error! Reference source not found.**, and leach kinetics are presented in **Error! Reference source not found.**.

Table 10-11: Leach results on gravity tailings

Sample id	Test no.	P_{80} (µm)	Pulp density (%)	pH	Aeration	NaCN (g/L)	Meas. head Au (g/t)	Calc. Head Au (g/t)	Recovery Au (%)	Residue Au (g/t)	Consumption (kg/t)	
											NaCN	Lime
EGRG tailings from Master composite	CEGRG-T1	77	40	10.5-11.0	Air	1.0	0.150	0.149	79.9	0.030	1.00	0.20
	CEGRG-T2	77	40	10.5-11.0	O_2	1.0	0.150	0.151	80.1	0.030	1.02	0.20

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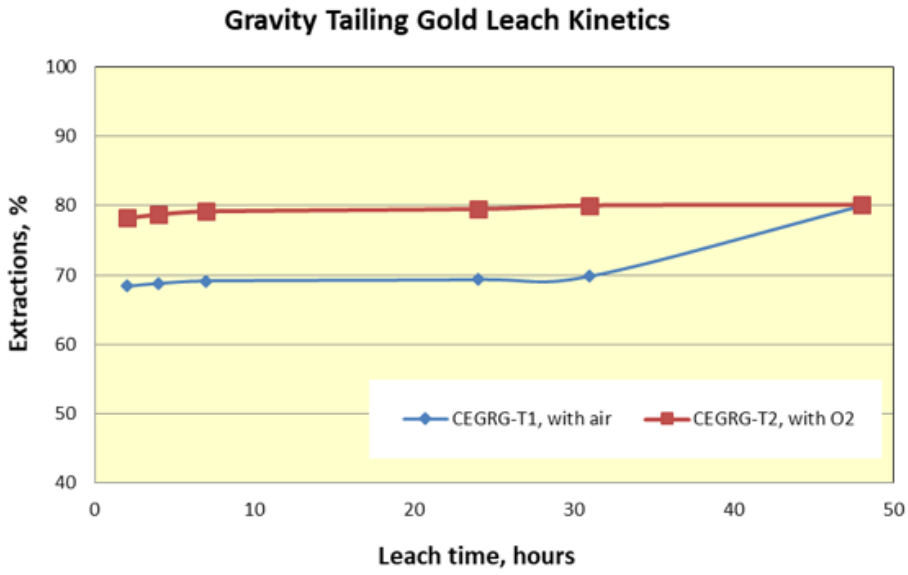

Figure 10-5: Leach kinetics for gravity tailings

As noted in **Error! Reference source not found.**, similar gold recovery of ~80% was achieved with aeration and oxygen injection. Leach kinetics, as shown in **Error! Reference source not found.**, indicated that gold leached rapidly in the first 2 hours and then slowed down afterward. Oxygen benefited the initial gold dissolution.

10.2.3.9.3 Concentrate Intensive Leach

Intensive cyanide leach evaluation was conducted on flotation and gravity concentrate samples generated from the master composites. The intensive leach test conditions and results are summarized in **Error! Reference source not found.**, and leach kinetics are plotted in **Error! Reference source not found.**.

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Table 10-12: Intensive leach test results on concentrates

Sample id	Test no.	Regrinding	P_{80} (µm)	Pulp density (%)	pH	NaCN	Leach aid	Calculated head	Recovery	Residue	Consumption (kg/t)	
											NaCN	Lime
F1 Ro concentrate (1-3) from whole-ore master comp	CF1	Yes	22	14	>11	20.0	1.0	8.36	92.5	0.628	44.85	0.44
F2 Ro concentrate from EGRG tailings	CF-2	Yes	23	13	>11	20.0	1.0	2.45	93.3	0.164	41.54	0.46
CG5 Gravity concentrate from whole-ore master comp	CG5 concentrate	n/a	~80	25	>11	20.0	1.0	68.93	68.5	21.7	25.18	0.18

These tests demonstrated that gravity concentrate responded to the cyanidation process similar to that of whole ore at a similar grind of 75 µm. The lower intensive leach recovery from gravity concentrates further supported the fact that the EGRG results are void in using them to predict gravity recovery. Thus, gravity concentration was removed from the process flowsheet.

Regrinding of flotation concentrate before cyanidation improved both gold recovery and leach kinetics significantly. Gold recovery of ~93% can be expected by intensive leach of P_{80} 22-23 µm reground flotation concentrate. The unoptimized cyanide leach reagent consumptions were 43.19 kg/t of concentrate tonnage, equating to 2.07 kg/t mill feed. The cyanide consumption averaged 43.19 kg/t flotation rougher concentrate is high but is unoptimized, and the intensive leach tailings could be thickened or filtered and re-utilize the thickener overflow and/or the filtrate free cyanide bearing water back in the process, but this will need more testing and engineering in subsequent phases of work.

Leach kinetics as seen in **Error! Reference source not found.** demonstrated that cyanide soluble gold leached rapidly in the first 4 hours. Overall, gold recovery of over 88% Au can be expected

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from the combined flotation and cyanidation process at a float grind P_{80} 75 µm and leach grind of 22 µm. Optimum grind/regrind will ultimately be determined by economics, including grinding costs, expected metal prices, and other engineering factors.

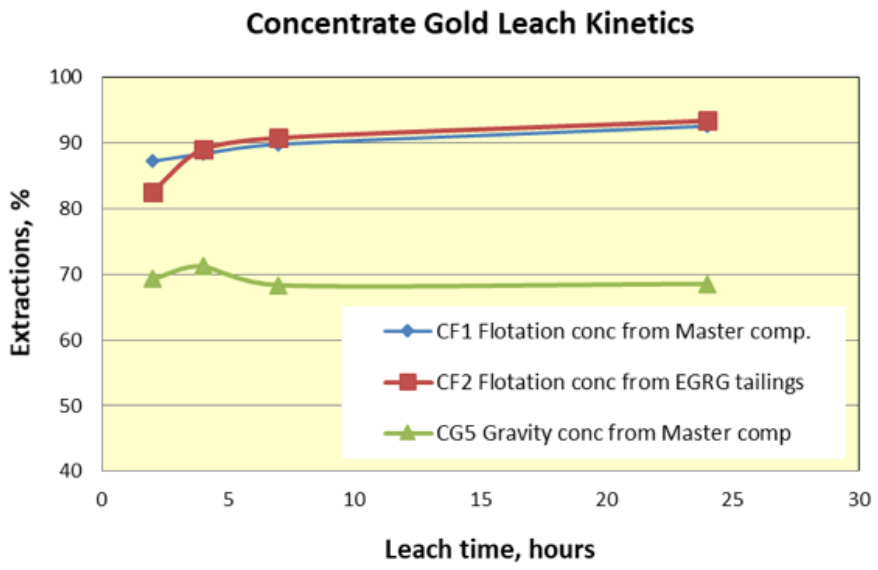

Figure 10-6: Concentrate leach kinetics

10.2.3.10 Mineralogical Examination

The master composite feed sample, HG composite leach tail, and tailings from intensive leach of gravity concentrate (CG5) produced from the Master Composite were examined using QEMSCAN (Quantitative Evaluation of Minerals by Scanning Electron) Bulk Mineral Analysis (BMA) to identify and quantify the mineralogical characteristics of the test samples.

In addition, a QEMSCAN Trace Mineral Search (TMS) protocol was also performed on the master composite and leach tailings of HG composite to assess their gold deportment mineralogy on an unsized basis. The present gold bearing minerals, gold deportment by free gold or gold-bearing minerals, grain sizes along with gold liberation and associations with sulphide and non-sulphide minerals were of particular interest.

Polished block sections were prepared from P_{80} 75µm ground Master composite and as-produced samples and leach tailings and were systematically scanned using QEMSCAN/MLA. The mineral composition is shown in **Error! Reference source not found.**.

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Table 10-13: Main mineral composition

Minerals	Mineral Composition (wt. %)		
	Master Composite 75µm P_{80}	HG Composite leach tailings	CG5 Gravity concentrate leach residue
Chalcopyrite	0.05	0.06	0.97
Galena/FeNi(Co)-Sulpharsenide	<0.01	<0.01	0.06
Sphalerite	0.01	0.01	0.03
Pyrite	0.11	0.07	2.06
Arsenopyrite	0.31	0.53	17.09
Total Sulphide Minerals	0.47	0.66	20.21
Lollingite	0.03	0.04	1.30
Iron Metal	0.35	0.55	1.99
Geothite/limenite	0.09	0.06	0.36
Quartz	26.58	27.83	23.65
Plagioclase Feldspar	36.62	32.71	27.86
K-Feldspars	20.72	20.64	13.43
Biotite/Phlogopite	7.93	7.36	2.56
Muscovite	1.78	3.63	0.91
Chlorite	3.25	3.52	1.78
Calcite	0.76	1.11	0.55
Amphibole	0.73	1.12	1.27
Apatite	0.37	0.41	1.63
Sphene/Rutile/Anatase	0.18	0.21	0.44
Zircon	0.02	0.06	1.58
Others	0.13	0.08	0.49
Total Non-Sulphide Minerals	99.52	99.34	79.79
Total	100.00	100.00	100.00

Note -

- Calcite includes trace amounts of Ankerite, Dolomite and Fluorite
- Others includes trace amounts of Barite, Ca-Sulphate, Corundum
- Chalcopyrite includes trace amounts of Acanthite/Argentite

10.2.3.10.1 Master composite

The master composite contained 0.47% sulphide minerals consisting of arsenopyrite and pyrite which were mainly liberated from the gangue at P_{80} 75 µm. Silicates together with small amounts of iron oxides and carbonates form largely the non-sulphide gangue.

The master composite assayed 0.2% arsenic with arsenopyrite being the main carrier containing 87.9% of the arsenic. Most of the visible gold in the master composite was in the form of native gold and electrum (Au, Ag). The gold in the master composite was fine grained. Gold grain sizes in the master composite ranges from 0.5 to 5 µm with approximately 99% finer than 5 µm.

At a grind size of P_{80} 75 µm approximately 6.5% of the gold was liberated. The unliberated gold was associated with arsenopyrite in binary or multiphase forms. This may be favourable to sulphide flotation to recover the gold. The gold locking characteristics indicate that nearly half of the unliberated gold presented as exposed surfaces in the form of adhesions to other minerals. The combined liberated gold and gold adhesions make up 47.2% of total composite gold. The liberated gold and gold adhesions tend to be recovered by normal cyanidation. The locked gold, without adhesions may become the source of gold losses during the normal cyanidation process.

10.2.3.10.2 CG5 Conc Residue of Master Composite

The high-density sulphide minerals increased significantly after gravity concentration, while the silicates with low density decreased. The residue contained about 20.2% sulphide by weight with pyrite and arsenopyrite accounting for 95% of this weight indicating it was liberated from the gangue. Chalcopyrite made up the difference.

10.2.3.10.3 High Grade Composite Leached Tails

The high-grade composite leach tails assayed at 0.2 g/t. A total of 51 gold grains were examined using the QEMSCAN TMS in this sample.

Like the master composite all the gold in the leached tails occurred as native gold or electrum. Some traces of the tellurium mineral Calaverite ($AuTe_2$), was found. 95% of the total gold occurrences were smaller than 2 µm. Particle size data indicated that half of the gold in the tails was greater than 30 µm indicating that this coarser gold was likely locked in with coarser sulphide or non-sulphide minerals.

Based on observed occurrences the leached tails at P_{80} 57 µm, unliberated gold was mainly associated with arsenopyrite in multiphase or binary form. Approximately 40% of the gold was present as exposed surfaces, creating the opportunity to improve gold recovery through an optimised leach process. Locked gold again was associated with arsenopyrite.

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10.3 RPM Mineral Processing and Metallurgical Test

This section involves the review of raw data for the RPM orebody metallurgical test work program as provided by Nova Minerals to METS Engineering, Perth, WA, Australia and based on test work that was carried out by Bureau Veritas (BV) Commodities Canada Ltd. in Richmond, BC, Canada. There was no written laboratory report available. Assumptions have been made that standard test procedures as applied to the Korbel orebody by BV was applied to the RPM orebody. The samples used for metallurgical testing were collected from Estelle's RPM orebody and shipped to the BV Minerals Metallurgical Division.

The metallurgical test program was conducted on an average grade sample representative of the orebody with an above average grade and a below average grade composites used in flotation and cyanidation test work. At the time of writing this report there is no sample preparation information or head characterisation including head assays available for the composites. Tests conducted included the comminution test work, gravity test work with an emphasis on flotation test work including batch and kinetic flotation tests with cyanidation on the select concentrates. Cyanidation tests were conducted on the average grade composite.

10.3.1 Metallurgical Test Procedures and Results for RPM

It is assumed that all grinding and screening procedures that were applied to the Korbel B ore samples body (Section **Error! Reference source not found.**) were performed on the RPM samples as required.

10.3.1.1 Comminution Test Work and Results

The comminution test was conducted following the standard Abrasion Index and Bond Rod and Ball Mill Index test procedures. A total of 20 specimens were cut from randomly selected core samples using the Twin Pendulum Bond Crusher test protocol to determine the Crusher Work Index.

Standard Bond Comminution tests were conducted on the average grade composite sample to determine Crusher Work Index (CWi) for net power requirements for crushing, Abrasion Index (A_i) for grinding mill consumables calculations, as well as Bond Ball Mill Work Index (BBWi) and Bond Rod Mill Work Index (BRWi) for grinding specific energy calculations. BBWi tests were conducted at a closing screen sizing of 106 µm and indicated a medium-hard material.

The RPM ore indicated CWi value of 7.8V kWhr/tonne on the average grade sample. The test results are shown in **Error! Reference source not found.**.

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Table 10-14: Comminution test results on average composite

Cwi (Crusher Work Index)	Ai (Abrasion index)	BRWi (kWh/tonne)	BBWi i (kWh/tonne)
7.8	0.2718	16.4	12.7

The abrasive index for the RPM was 0.2718 indicating below average Abrasive Index compared with the results from the Korbel HG and LG composite samples (average) of 0.4003. This indicates that the RPM orebody is less abrasive than the samples from the Korbel Zone B. The BRWi for the RPM ore was higher than Korbel but the BBWi was lower.

10.3.1.2 Gravity Concentration Test Work

The gravity test program (Table 10-15) was conducted on the average composite sample using a lab scale Knelson Concentrator at 20% solids with 80% passing 150 µm (1psi and 120 G). The same operating conditions for the Korbel HG, LG, and master composite samples.

From the analysis of the raw data, it appears that this program was originally designed to be performed at three grind sizes using the Nelson Concentrator, namely P_{80} 150 µm, P_{80} 105 µm and P_{80} 75 µm on the average composite sample. Only the largest grind size was performed. This is unfortunate as the results can't be compared directly to the Korbel gravity test work at the same size (P_{80} 105 µm).

Table 10-15: Gravity test work on average composite

Test no.	P_{80} size	Gravity rougher concentrate		
	µm	Mass (%)	Grade (g/t Au)	Recovery Au (%)
Ave Composite	150	2.8	19.7	49.5

The recovery of 49.5% for the average composite is not desirable and much lower than that achieved in the Korbel samples which average ~71%.

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The results did not necessarily indicate that coarser grind sizes are responsible for poorer concentrate results. As can be seen in the Korbel results from **Error! Reference source not found.** the recovery from the Korbel samples included larger grind sizes than the one test performed on the RPM sample. The results may indicate that the RPM orebody may be less suitable for gravity separation, however with only one test being conducted, no mineralogy work performed on the concentrate or tails, and an incomplete test program doesn't allow for any conducive, reasonable discussion or conclusion to be drawn. Hence the consideration of further gravity test work under proposal still has validity.

10.3.1.3 Flotation Test Work Results

Based on the Korbel Zone B test work responding well to bulk sulphide flotation the objective of the flotation tests on the RPM samples was to optimise the process. Kinetic flotation tests at various grind sizes of P_{80} 150 µm, P_{80} 105µm, P_{80} 75 µm and P_{80} 60 µm were conducted on the average grade sample (measured head grade 1.33 g/t) to determine the optimum flotation method. Each test involved four rougher floats and one scavenger float and a 2 kg sample.

Potassium Amyl Xanthate (PAX) and Cytec A208 at a dosage of 100 g/t and 35 g/t respectively were added in the four stages. MIBC utilised as a frothing agent at 23 g/t but no copper sulphate $CuSO_4.5H_2O$ was used as a mineral collector in these flotation tests unlike the Korbel test work. A duplicate test was conducted on the P_{80} 75 µm sample as this was deemed to be the optimal grind. Copper sulphate was not utilised after the flotation optimal grind was determined.

Flotation tests were performed on both below average grade composite samples and above average grade composite samples. These samples have measured head grades of 0.64 g/t and 5.591 g/t respectively. Both composite samples underwent kinetic leach flotation tests and batch flotation tests to make concentrate for regrinding in an IsaMill for intensive cyanidation test work at regrinds of P_{80} 15 µm.

Error! Reference source not found. shows a summary of the flotation tests.

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Table 10-16: Summary of flotation tests

Test no.	Sample	Target p80 size (µm)	Reagents g/t			Type of Flotation Test
			PAX	A208	MIBC	
F1	Avg comp	150	100	35	23	Flotation Kinetic test
F2	Avg comp	105	100	35	23	Flotation Kinetic test
F3A	Avg comp	75	100	35	23	Flotation Kinetic test
F3B	Avg comp	75	100	35	23	Flotation Kinetic test
F4	Avg comp	60	100	35	26	Flotation Kinetic test
F5	Above avg comp	75	100	35	0	Rougher kinetic flotation test
F6	Above avg Comp	75	100	35	0	Batch flotation test to produce conc for leach test
F7	Below avg grade	75	100	35	0	Rougher Kinetic flotation test
F8	Below avg grade	75	100	35	0	Batch flotation test to produce conc for leach test

Results for the Flotation Kinetics tests can be seen in **Error! Reference source not found.** with Leach Kinetics shown in **Error! Reference source not found.**. Flotation Results for test F6 and F8 are in in **Error! Reference source not found.**.

The results indicate recoveries increased with a decrease in the grind size. 82.9% of the gold was recovered at the higher actual grind of P_{80} 186 µm increasing to 92.3% at P_{80} 60 µm. The results of test 3A at P_{80} 75 µm including the mass pull were similar to the lowest grind size and hence a duplicate sample was warranted. The cost to grind smaller to 60 µm for such a small increase in recovery required further investigation. The duplicate sample (3B) confirmed the results that grinding finer than 75 µm added no benefit to the tests and resulted in the optimisation of the grind size. The ranges in mass pull (14.6-15.1%) also support this conclusion.

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Table 10-17: Summary of flotation results

Test no.	Target p80 size (µm)	Actual p80 size (µm)	Product grade (g/t Au)				Gold recovery		
			Feed	Rougher conc 1	Total conc	Tails	Rougher Conc 1	Total Conc	Mass (%)
F1	150	186	1.22	29.09	8.87	0.24	65.3	82.9	11.4
F2	105	100	1.18	28.65	8.90	0.17	75.1	86.9	11.5
F3A	75	72	1.19	20.41	7.15	0.12	82.6	91.5	15.2
F3B	75	72	1.12	22.60	6.91	0.13	81.7	90.3	14.6
F4	60	60	1.31	28.19	8.03	0.12	83.8	92.3	15.1
F5	75	78	5.84	158.0	49.11	0.38	81.8	94.2	11.2
F7	75	77	0.82	31.22	7.21	0.07	83.8	92.3	10.5

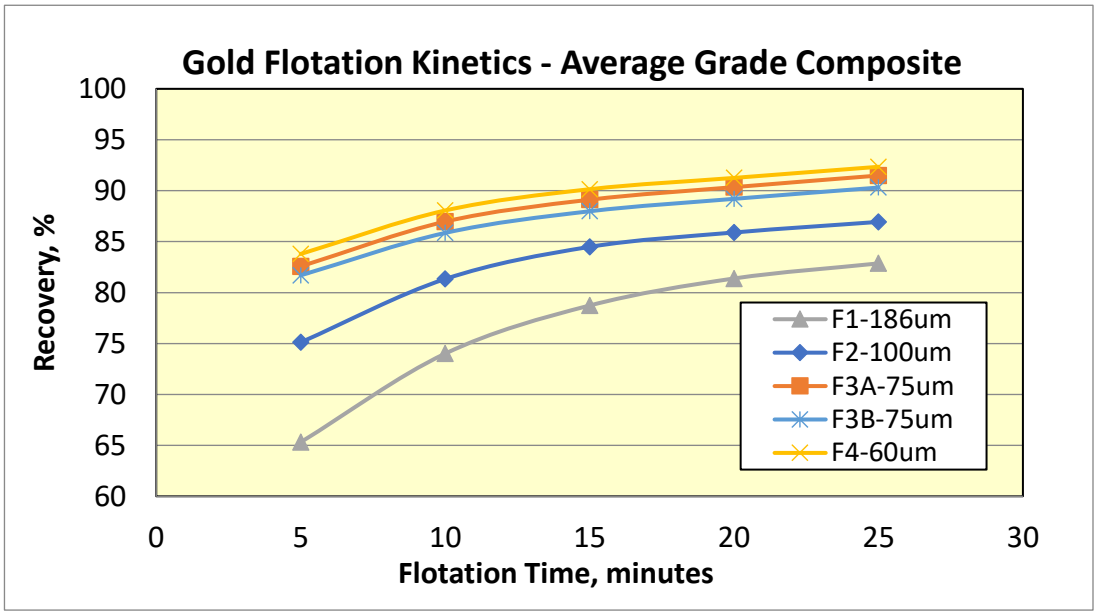

Figure 10-7: Concentrate leach kinetics average grade composite

The results for the flotation kinetics on tests F5 (above grade composite sample) with a calculated feed grade of 5.84 g/t at the selected conditions gave an excellent recovery of 94.5%. The below average grade sample (F7 calculated feed grade of 0.82 g/t) gave a recovery of 92.3% These high recoveries of gold in the concentrate at this grind sizes (P_{80} 75 µm) give confidence in the lab optimisation of the flotation tests with respect to the RPM orebody and to proceed to cyanidation.

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10.3.1.4 Cyanidation Procedure and Test Work

10.3.1.4.1 Cyanidation on the Average Grade Composite Results

A 72-hour leach was performed on the average grade composite sample (measured head grade 1.33 g/t) as per the method in Section **Error! Reference source not found.**.

The result for this test is shown in **Error! Reference source not found.** and Table 10-18.

The recovery of 79.3% was approximately 8% higher for the RPM average grade sample than for the leach tests performed on the Korbel ore body at similar grind sizes and leach times.

Table 10-18: Cyanidation results for average grade composite

Test No	Sample	P_{80} (µm)	Pulp density (%)	pH	NaCN (g/L)	Calculated head	Recovery	Residue Au (g/t)	Consumption (kg/t)	
									NaCN	Lime
C1	Average comp	74	40	10.5-11	1.0	1.47	79.3	0.31	1.25	1.08

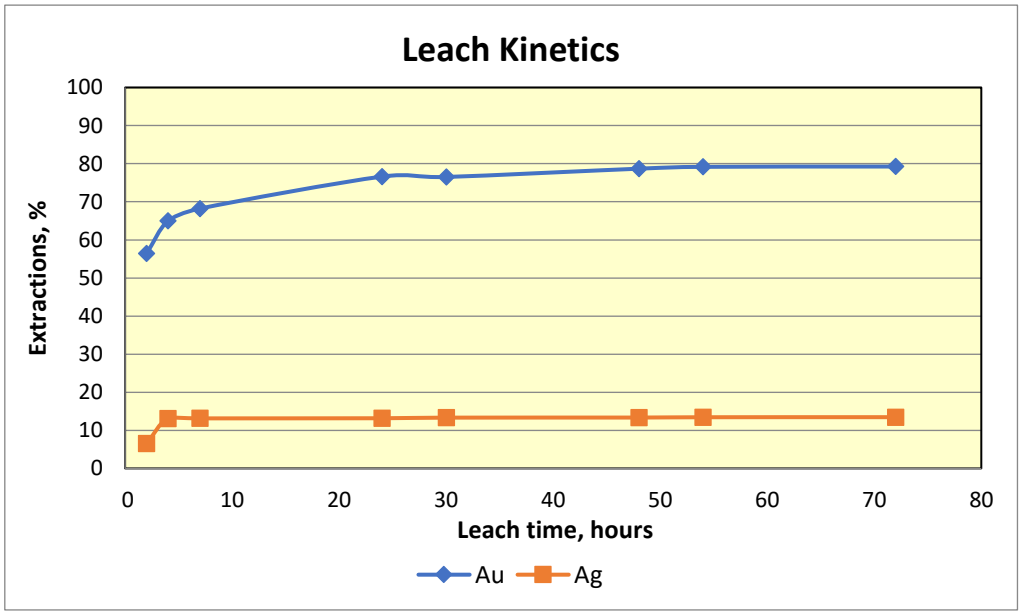

Figure 10-8: Leach kinetics for average grade sample

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10.3.1.4.2 Intensive Leach Testing

Intensive leach tests were performed on average grade composite (BFC1), above average grade composite (FC6 measured head grade 5.59 g/t) and below average grade composite (FC8 measured head grade 0.64 g/t). These samples underwent flotation at P_{80} 75 µm followed by regrinding of the concentrate to 15 µm and then cyanidation. The results are shown in **Error! Reference source not found.** and **Error! Reference source not found.**.

Table 10-19: Intensive cyanidation test results on concentrate regrind sample

Sample	Flotation					Cyanidation							Overall Recovery
	Flotation Test No	P80	Feed Grade	Conc Grade	Recovery	Leach Test No	Regrind P80	NaCN	Consumption (kg/t)		Residue	Recovery	
		µm	Au(g/t)	Au(g/t)	Au (%)		µm	g/l	NaCN	NAOH	Au(g/t)	Au (%)	
Average grade comp	BF1	73	1.34	8.67	92.4	BCF3	16	20	17.87	1.00	0.32	96.2	88.9
Above average grade comp	FC6	74	4.41	39.73	93.1	FC6	13	20	26.41	2.50	1.66	95.8	89.2
Below average grade comp	FC8	75	0.70	5.89	91.1	FC*	13	20	16.30	1.72	0.39	93.4	85.1
Average Response		**74**	**2.15**	**18.10**	**92.2**		**14**	**20**	**20.19**	**1.74**	**0.79**	**95.1**	**87.7**

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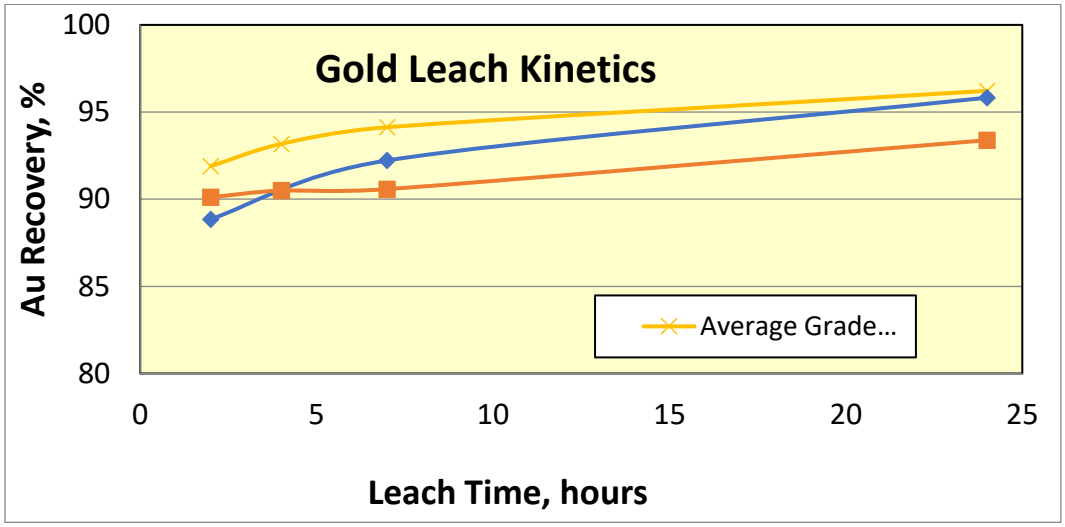

Figure 10-9: Intensive leach test kinetics

The intensive leach tests reported recoveries were 85-89%. Regrinding using an IsaMill to P_{80} 15µm achieved a 6-10% increase in recovery after flotation with the intensive cyanidation when compared to the 72-hour leaching on the average composite sample. The Korbel orebody samples results were higher in the intensive leaching for both the regrind master composite and the regrind rougher concentrate from the EGRG test work. Recovery of these samples were 92.5% and 93.3% at regrind of P_{80} 22µm respectively. No mineralogy studies were carried out on the RPM intensive leach test samples.

10.4 Metallurgical Test Work Conclusion and Recommendations

In the opinion of the QP, the recoveries used for the resource estimate are reasonable for this level of study based on the metallurgical testing to date.

Test work has been carried out on both the Korbel Zone B orebody and the RPM orebody.

The test program for the Korbel Zone B ore consisted of three samples, two composites (LG and HG) and a master composite. The ore was amenable to whole ore bulk flotation. Gold responded well to bulk flotation with excellent recovery of 96% achievable on ground whole ore. Cyanide leaching of P_{80} 22-23 µm reground flotation concentrate achieved encouraging 92-93% gold extraction from two different concentrate grades. The test work on this ore body hinted that recovery of high 80% might be expected following flotation and regrinding with cyanidation process at a grind of 75 µm. These results were indicated in the testing of RPM.

Beneficiation of the Korbel B Zone samples by cyanide leaching will recover up to 78% followed by aggressive leaching conditions including using lead nitrate (150 g/t) leaching with NaCN

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(2.0g/l) and a high pH (~12.3) with oxygen injection. The use of activated carbons had no benefits on leaching. Further metallurgical testing is required to optimise and improve cyanidation including amount of reagent usage.

Gravity scalping did not produce a coarse high gold concentrate and low-grade tailings and the cyanidation of the gravity concentrate produced results similar to the whole ore samples. The use of gravity separation is under review and more test work needs to be done using the Knelson concentrator on samples with different grind sizes.

The initial Korbel column leaching testing conducted to evaluate the heap leach potential of test samples proved to be non-beneficial for the operation, the potential for heap leaching is currently being revisited with plans to conduct column tests for heap leach at smaller crush sizers using HGPR crushing.

In addition, the efficacy of using heavy liquid separation (DMS) on the -1mm fines that bypass the XRT ore sorter and tertiary crushed XRT accepts at -10mm is also recommended.

In relation to the RPM orebody, the unavailability of a report meant that only raw data was available to be reviewed including assessing test work and sample preparation procedures.

The program focused on flotation test work, and cyanidation aimed at further investigating recommendations made in the Korbel testing program. An optimum flotation was determined at P_{80} 75 µm and achieved good recovery of gold in the concentrates. Concentrates were made using a higher-grade composite (FC6 measured head grade 5.59 g/t) and below average grade composite (FC8 measured head grade 0.64 g/t) which was then used for the intensive cyanidation test work. The regrind size was 15 microns. The recoveries for the three samples averaged 87.7%. These tests need more optimisation and were conducted at finer grind sizes than the Korbel Orebody for lower recovery. Mineralogy studies were not carried out, but it is likely, based on other reports to be associated with either fine grained high grade locked in gold, gold telluride or gold associated with sulphides. The control of sample selection for mineralogy examination to ensure the most appropriate samples are analysed and, in some cases, easily identified in the context of the metallurgical testing program needs to be reviewed.

Future investigation on the Estelle deposit is planned and this will consider improving and optimising the cyanidation process, ore sorting, the use of a Nelson concentrator on the finer size range (<1mm) including gravity separation test work involving a reflux or up-current classifier. These classifiers can separate fine particles in a fluidised bed. Due to the high cost of grinding, Hydrofloat coarse particle flotation test work should be considered. This allows the flotation of particles of coarser sizes than conventional flotation cells, resulting in economic and profitable benefit to projects and improvement in environmental sustainability outcomes.

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10.5 Review of Recovery and OPEX Estimate for Cut-Off Calculation

Nova Minerals provided Table 10-20 for the cut-off grade parameters used to calculate minerals resources.

Table 10-20: Resource pit shell cut-off grade parameters

Gold Price		$2,000/ oz	
		Korbel Main and Cathedral	**RPM North and South**
Wall angles Mining cost per tonne mined		50º $1.65/t	50º $1.65/t
Processing	Sorter recovery	86.10%	-
	Processing recovery **Overall recovery**	88.20% **75.94%**	88.20% **88.20%**
Processing costs per tonne processed	Sorter Process G&A **Subtotal**	$0.73/t $4.50/t $1.30/t **$6.53/t**	- $9.80/t $1.30/t **$11.10/t**
Royalty (applied to recover ounces)		5%	5%

10.5.1 Recovery

Table 10-20 mentions an ore sorting recovery of on average of 86.10%. By considering the Tomra ore sorting report and the test work performed the ore sorter on the Korbel orebody at a feed grade of 0.67 g/t achieved a high-grade concentrate and the potential for high grade recovery. The test work showed that a high-grade low mass (6.06 g/t) gold concentrate was produced in a single run that resulted in a nine-fold increase in gold grade while the fourth run demonstrated a 90% cumulative gold recovery with a 53% mass rejection (1.30 g/t concentrate). Hence the assumption of 86.10% used in pit optimisation is reasonable. The most optimal sensitivity for the ore sorter output is hard to determine until further test work and optimization is conducted including testing on the by-pass fines on a larger bulk sample under consideration by Nova Minerals. This will allow optimisation of the equilibrium between mass pull into the ore sorter concentrate and recovery, along with the handling of fines from the crushing circuit.

Error! Reference source not found. shows the process design parameters that were used for process and mine design process. These parameters were also applied to the RPM orebody. The metallurgical test work indicated an optimum flotation at P_{80} 75 µm grind achieving good recovery of gold in the concentrates for both the Korbel and RPM orebodies.

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Table 10-21: Parameters used in mine design study

Parameter	Unit	Value
Bond Ball Mill Work Index	kWh/t	14.7
Abrasion Index	-	0.4003
Flotation Grind P_{80}	µm	75
PAX dosage	g/t	120
Cytec A208 Dosage	g/t	30
$CuSO_4 5H_2O$	g/t	150
MIBC	g/t	23
CIP/CIL Leach Regrind Feed $_{P80}$	µm	22
Flotation Recovery	%	95.4
Leach Recovery	%	92.5
Overall Recovery	%	88.25
Primary crusher fines <12.5mm)	%	21.2
Average Sorter Mass Pull – Korbel ore only	%	44.6
Average Sorter Recovery – including fines by-pass	%	86.1

The recovery is reasonable with optimisation of the regrinding and cyanidation ongoing. The flotation recovery of 95.4% and leach recovery of 92.4 % were achieved using the master composite sample from the Korbel Zone B orebody. The leaching involved an intensive leach of the regrind (P_{80} 22µm) flotation concentrate to achieve this result with high cyanide usage. These recoveries can be expected based on the test work but the optimisation including

grinding/regrinding will be determined by economics including gold prices, power costs and other engineering factors.

Overall Recovery for Korbel was obtained by multiplying the ore sorter recovery by the processing recovery (grinding, flotation and subsequent regrind and leaching). When performing this calculation in Table 10-20 the assumption is that all or the ore passing through the ore sorters entered the grinding circuit and the fines from the crusher undersize screens went to the fine ore stockpile.

10.5.2 Processing Cost Estimate

Review of the costs has only been done at a high level.

Operating costs by convention include the operation and maintenance of processing facilities including all gold recovery activities to produce gold doré. It covers process plant, labor, consumables including grinding media and reagents, maintenance, power requirements and tailings disposal.

The study appears to be based on reasonable estimates and assumptions that would be associated with an initial assessment of resources (+/-50%). With ongoing test work and refinements to processing, mining and exploration activities as the project moves forward, the OPEX and capital costs will be under constant review.

10.6 QP Statement

The QP is of the opinion that the mineral processing and metallurgical testing used in the mineral resource estimate for the Estelle Gold Project is adequate for mineral resource estimation

QP further recommends that:

- Continue on the path with additional ore sorting test work
- Revisit column leach test work for heap leaching
- Continue on the path with additional flotation variability test work
- Continue on the path with additional cyanidation variability test work
- Revisit gravitational separation test work
- Investigate other alternate process routes utilising advancements in technology
- Continue with Korbel and RPM ore characterisation test work

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11. Mineral Resource Estimates

11.1 Introduction

Nova commissioned Matrix Resource Consultants Pty Ltd (Matrix) to estimate mineral resources for the Estelle Gold Project. The estimates are based on drilling information provided by Nova, representing drilling information available on the 31st of March 2023 and are reported and classified in accordance with the standards and definitions of S-K 1300.

Nova supplied the drill hole data informing the estimates as comma delimited ASCII files containing collar, survey, analytical and geological logging information for drilling in each deposit area. The supplied analytical information includes caliper density measurements performed by Nova field staff on diamond drill core. Nova also supplied gold assay results for rock chip samples in the Cathedral area, and Digital Terrain Models (DTM) in three-dimensional triangulation DXF format.

The drilling information is described in the relevant sections of this TRS. Matrix used the sampling data on an as-supplied basis with the exception of adjusting selected drill hole collar elevations to match surface topography and modifying several anomalous down-hole survey entries. Relative to the mineralization scale and drill spacing these modifications are comparatively minor and, in Matrix's opinion, do not significantly impact confidence in the estimates.

For each mineralized domain dataset 14 indicator thresholds were defined from the composite gold grades using a consistent set of percentiles.

Matrix's experience indicates that the variance adjustments applied to the estimates can be reasonably expected to provide appropriate estimates of potential mining outcomes at the assumed mining selectivity without the application of additional mining dilution or mining recovery factors.

Mineral resources are constrained within optimal pit shells generated by Matrix from the MIK estimates utilizing cost and revenue parameters provided by Nova.

Micromine software was used for data compilation, domain wire-framing, and coding of composite values, and GS3M was used for resource estimation. The resulting estimates were imported into Micromine pit optimization and resource reporting.

Model validation included visual comparison of the model estimates with informing data.

Except where specified, all figures and coordinate references in this report reflect North American Datum of 1983 (NAD 83), Zone 25 North coordinates and except where specified all units are metric.

The work reported in this section was undertaken by Jonathon Abbott, who is a director of Matrix and a Member of the Australian Institute of Geoscientists. Mr. Abbott has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration to qualify as a Qualified Person in terms of S-K 1300 standards for resource estimation. Mr. Abbott has not visited the Estelle Project. While undertaking this study, Mr. Abbott worked closely with Nova

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geologists and the mineralization interpretations and estimates are consistent with their understanding of each deposit's mineralization and the informing data.

11.2 Korbel Main Resource Modelling

11.2.1 Compilation of Informing Data

The Korbel Main resource estimates are based on drilling information available on the 31st of March 2023.

Error! Reference source not found.1-1 shows hole traces relative to the outcrop of the Korbel Main mineralized domains and twenty-meter contours of the DTM, excluding several peripheral holes of no relevance to resource modelling. This figure demonstrates that the Korbel Main drilling tests the main mineralized zone at along strike spacings of generally around 100 to 150 meters with sets of fan holes of varying orientations and drill holes inclined towards the northeast and southwest from drill pads. The combined, variably oriented drilling dataset approximates northeast/southwest trending drilling traverses. The drill hole spacing is highly variable, with the common fan drilling commonly giving closely spaced, clusters of drilling proximal to drill pads, and notably broader spacing away from the pads, including at depth.

Down-hole lengths of assayed samples from Korbel Main drilling range from around 0.5 to 41 feet, inclusive of seven samples of longer than 30 feet in length. Assayed drilling is dominated by samples of 10 feet (3.048 meters) in length which provide around 90% of assayed drilling, with longer samples providing only around 2%.

Korbel Main drill hole collar coordinates are designated as being surveyed by Trimble R1 or CHC LT500 GNSS survey tools, or less commonly hand-held GPS units. In Matrix's experience, although hand-held GPS/GNSS measurements provide reasonably accurate plan view coordinates, they commonly give less precise elevation definition. Elevations of Korbel Main drill collar coordinates specified as representing hand GPS/GNSS surveys were assigned from the DTM, which in Matrix's experience is a common, industry standard approach for GPS/GNSS collar surveys.

All Trimble R1 collar surveys and around 14% of CHC LT500 collar surveys plot significantly below the supplied DTM. To provide a consistent basis for resource modelling, collar elevations of all Trimble R1 surveys and the CHC LT500 surveys which differ from the DTM by more than five meters were adjusted to match the DTM.

Several anomalous down-hole survey entries were modified for use in resource modelling giving smoother hole traces.

11.2.2 Modeling Domains

Modelling of the Korbel Main deposit includes a main, northwest trending, sub-vertical mineralized domain and two subsidiary mineralized domains designated as Block C and Block D respectively.

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The Main zone domain trends northwest over around 2.6 kilometers with an average width of around 370 meters. The Block C and D domains have extents of around 140 by 180 and 400 by 370 meters respectively.

For the main mineralized domain, interpreted domain boundaries were digitized on sections aligned with drilling traverses with snapping to drill hole traces where appropriate, then wire-framed into a three dimensional solid. The Block C and Block D and domains were defined by vertically projected plan-view polygons. To ensure consistent coding of composites and model blocks the wire-framed domains extend from a constant elevation well above topography to below the base of drilling. The domains are extrapolated along strike to around 120 meters from drilling.

The modelling included a surface representing the base of unmineralized which averages around seven meters depth. The lack of a regular drilling grid at shallow depths hinders locally precise interpretation of this surface. A triangulation representing the base of overburden was constructed from a set of strings generated at topography for each nominal drill traverse and projected traverses beyond drilling extents which were lowered by seven meters, and then adjusted locally to match drill hole logging.

Error! Reference source not found.1-1 shows a plan view of the Korbel Main mineralized domain outcrop relative to drill hole traces. **Error! Reference source not found.** shows example sections of the modelling domains trimmed below the DTM relative to hole traces colored by composite gold grades within 60 meters either side of the section line.

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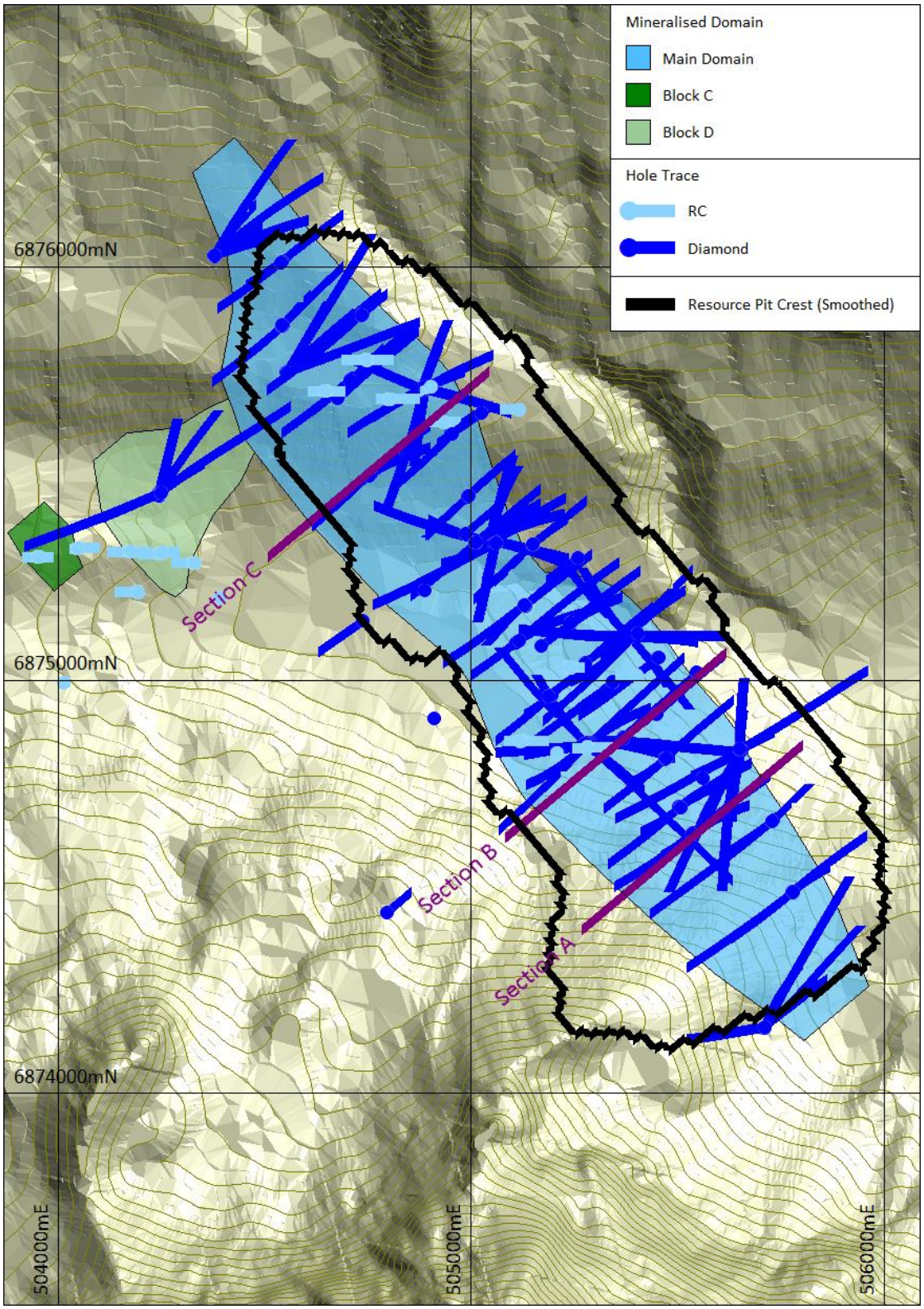

Figure 11-1: Korbel Main mineralized domain outcrop and drill hole traces

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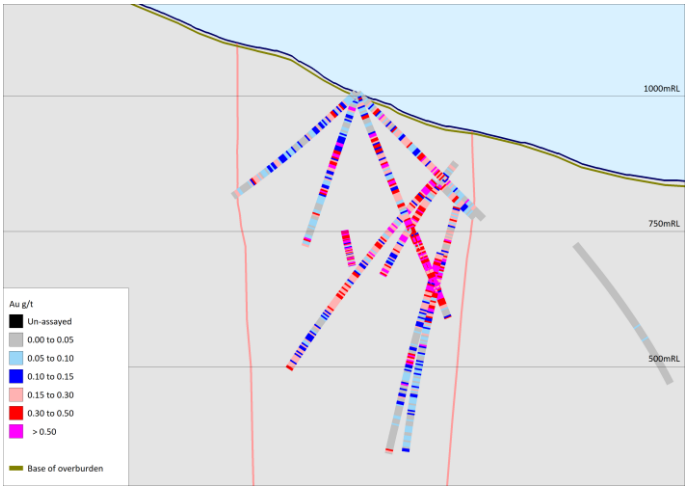
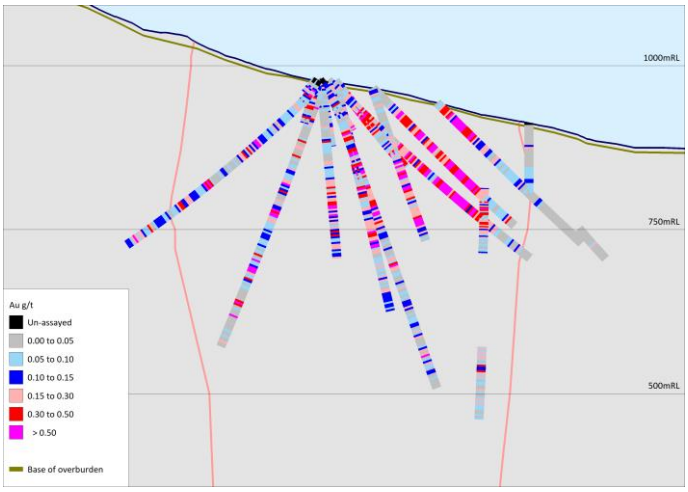
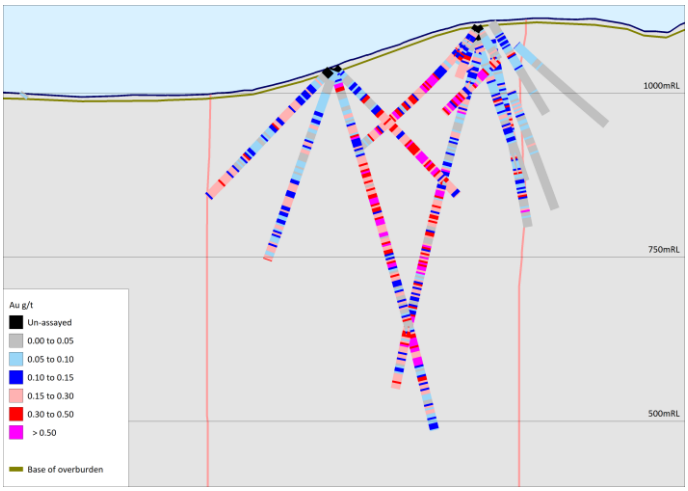
Section A	
Section B	
Section C	
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Figure 11-2: Korbel Main modelling domains and drill hole trace section views

11.2.3 Composite Estimation Dataset

The Korbel Main estimates are based on 3.048 meter (10 foot) down-hole composited gold assay grades from RC diamond drilling coded by the mineralized domain wire-frames. This composite length represents the common sample length. Composites flagged as lying within the generally barren overburden were excluded giving an estimation dataset compromising 20,126 composites with gold grades ranging from 0.001 to 14.1 g/t and averaging 0.19 g/t.

Error! Reference source not found. presents summary statistics for the dataset by mineralized domain. Notable features shown by this table include the following:

- At 0.03 g/t the mean gold grade for background domain composites is notably lower than for the mineralized domains, demonstrating that the domaining has effectively assigned most mineralized composites into the mineralized domains.
- Coefficients of variation are moderately high reflecting the highly variable nature of the gold grades and demonstrating that MIK is an appropriate estimation technique.

Table 11-1: Korbel Main composite estimation dataset statistics

(Au g/t)	Background	Main Domain	Block D Domain	Block C Domain
Number	1,792	17,357	882	95
Mean	**0.03**	**0.21**	**0.08**	**0.13**
Variance	0.00	0.15	0.01	0.02
Coefficient of variation	**1.74**	**1.80**	**1.31**	**1.18**
Minimum	0.00	0.00	0.00	0.00
1st Quartile	0.01	0.06	0.02	0.02
Median	0.02	0.12	0.05	0.08
3rd Quartile	0.03	0.24	0.09	0.17
Maximum	1.14	14.1	1.04	0.71

11.2.4 Bulk Density Measurements

Table 11-211-2 summarizes Korbel Main density measurements by modeling domain. Figure 11-3 shows a histogram of density measurements and a scatter plot comparing density measurements with gold assay grades for measurements from the mineralized domain below the base of overburden. This table and figure demonstrate that the density measurements show comparatively little variability and no notable association with gold grade.

Table 11-2: Korbel Main density measurements

Zone		Number	Density (t/bcm)		
			Minimum	Average	Maximum
Background rock		48	2.10	2.60	2.85
Mineralized domain overburden		3	2.65	2.67	2.69
Mineralized domains below overburden	Full set	1,293	2.02	2.66	3.21
	Excluding outliers	1,289	2.24	2.66	2.97

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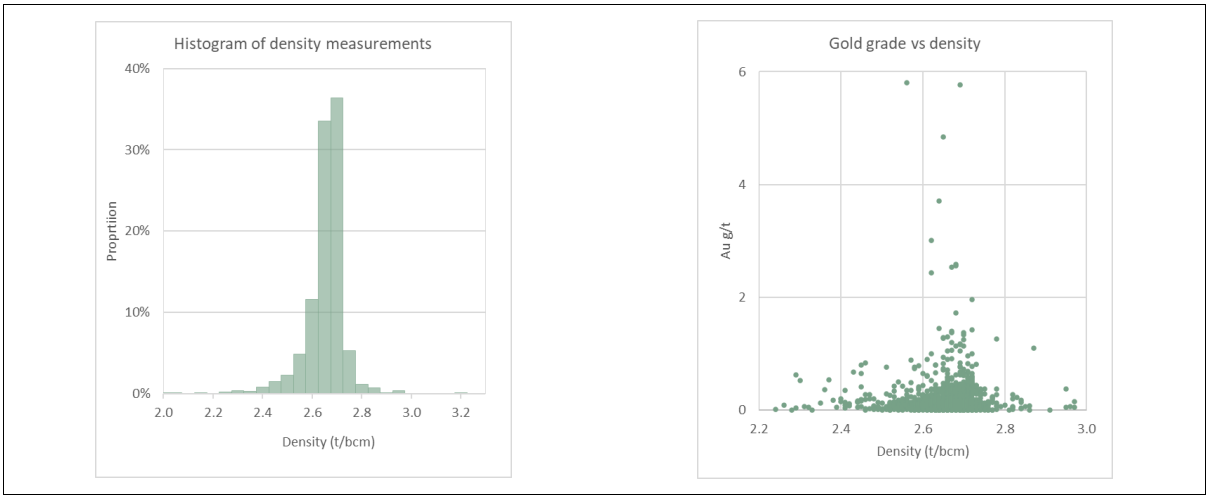

Figure 11-3: Korbel Main density measurements

11.2.5 Estimation Parameters

Modelling grid and block model framework

Korbel mineralized domain interpretation and resource modelling utilized a local grid rotated 40º from NAD83 aligning drilling traverses and mineralization trends with local grid axes. The block model was back-rotated to NAD83 coordinates.

The Korbel modelling utilized 50 by 50 by 10 meter panels, which cover the full extents of the estimation dataset and are aligned with the mineralization trends and the general drilling grid. These dimensions were selected on the basis of sample spacing in central portions of the deposit. Informed panels are constrained by a long sectional polygon digitized around 120 meters below the base of drilling.

Indicator thresholds and class grades for MIK modelling

Error! Reference source not found.11-3 lists the indicator thresholds and class mean grades used for the Korbel modelling with the upper bin median shown in brackets.

All bin grades were selected from the bin mean grade, with the exception of the upper bin grades which were selected on a case-by-case basis. For the Block C and Block D domains, the upper bin median was selected, and for the main domain, the upper bin grade was selected from the upper bin mean excluding composites of greater than 5 g/t, giving a grade of 2.275 g/t. This approach reduces the impact of small numbers of extreme gold grades on estimated resources and in Matrix's experience is appropriate for MIK modelling of highly variable mineralization such as the Korbel Main deposit.

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Table 11-3: Korbel Main indicator thresholds and class mean grades

Percentile	Main (Au g/t)		Block D (Au g/t)		Block C (Au g/t)	
	Threshold	Mean	Threshold	Mean	Threshold	Mean
10%	0.025	0.014	0.010	0.006	0.007	0.004
20%	0.044	0.035	0.019	0.015	0.017	0.011
30%	0.065	0.055	0.027	0.023	0.030	0.023
40%	0.088	0.076	0.038	0.033	0.061	0.049
50%	0.117	0.102	0.047	0.042	0.075	0.069
60%	0.154	0.134	0.059	0.053	0.111	0.096
70%	0.206	0.178	0.076	0.068	0.127	0.121
75%	0.242	0.223	0.088	0.082	0.167	0.155
80%	0.290	0.265	0.102	0.095	0.202	0.194
85%	0.356	0.320	0.123	0.114	0.233	0.224
90%	0.466	0.406	0.155	0.137	0.278	0.261
95%	0.684	0.561	0.218	0.186	0.534	0.377
97%	0.906	0.777	0.298	0.255	0.601	0.583
99%	1.480	1.122	0.493	0.403	0.657	0.655
100%	14.097	2.777 (2.035)	1.042	0.699 (0.657)	0.713	0.713 (0.713)

Variogram models

Variogram models used for the Korbel Main MIK modelling (**Error! Reference source not found.**) were modelled from the main mineralized domain composites. In addition to indicator variograms modelled at each threshold, modelled variograms include a variogram of composite gold grades for determination of variance adjustment factors. Spatial continuity observed in the variograms is consistent with geological interpretation and trends shown by composite gold grades, showing strongest continuity within a sub vertical dipping plane trending around 5º from the modelling grid Y axis.

Table 11-4: Korbel Main variogram models

Rotation relative to modelling grid: Z-5º, Y+90º							
Percentile	Nug.	First Structure Exponential		Second Structure Spherical		Third Structure Spherical	
		Sill	Range (x,y,z)	Sill	Range (x,y,z)	Sill	Range (x,y,z)
10%	0.17	0.58	32,34,16	0.09	60,60,37	0.16	620,290,150
20%	0.16	0.52	31,39,19	0.09	38,66,36	0.23	600,350,140
30%	0.16	0.48	30,45,20	0.09	41,58,40	0.27	780,400,149
40%	0.17	0.45	26,48,20	0.09	47,54,40	0.29	915,400,149
50%	0.18	0.42	27,48,21	0.10	58,52,52	0.30	920,400,124
60%	0.19	0.42	31,62,22	0.08	62,50,44	0.31	930,420,124
70%	0.21	0.42	30,58,21	0.08	52,62,41	0.29	925,440,114
75%	0.23	0.43	33,58,17	0.09	76,90,39	0.25	930,495,124
80%	0.25	0.43	39,50,16	0.10	88,90,24	0.22	1000,495,124
85%	0.26	0.46	34,46,15	0.09	96,52,23	0.19	1000,445,114
90%	0.28	0.49	31,43,15	0.09	94,48,21	0.14	1000,250,110
95%	0.30	0.54	33,41,14	0.08	115,48,26	0.08	1000,195,105
97%	0.33	0.53	32,41,10	0.08	95,84,22	0.06	990,160,86
99%	0.36	0.54	30,39,10	0.08	43,88,22	0.02	135,150,86
Au g/t	0.23	0.56	6.0,7.0,4.0	0.07	115,64,43	0.14	990,200,116

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Search criteria

The five progressively relaxed search passes informing the Korbel Main resource estimates (**Error! Reference source not found.**) represent a compromise between providing reasonably robust local estimates and estimating a reasonably large proportion of the potentially mineralized volumes. The search criteria used for modelling were selected to inform a reasonably large proportion of the mineralized domains with some drill coverage while allowing blocks to be estimated by reasonably close data where possible.

Search pass 5 is particularly broad relative to apparent grade continuity, and estimates informed by this search are of low confidence. All search pass 5 estimates, which represent a small proportion of mineral resources are classified as Inferred and uncertainty over the reliability of these estimates does not affect general confidence in estimated resources.

Table 11-5: Korbel Main estimation search passes

Search Pass	Radii (m) (East, North, Vertical)	Minimum Data	Minimum Octants	Maximum Data
1	60,60,25	16	4	48
2	120,120,50	16	4	48
3	120,120,50	8	2	48
4	240,240,50	8	2	48
5	360,360,75	8	2	48

Variance adjustment

The Korbel Main MIK estimates include a variance adjustment to give estimates of recoverable resources at gold cut off grades. The variance adjustments were applied using the direct lognormal method and panel to block and information effect factors of 0.121 and 0.647 respectively for a total adjustment of 0.078.The variance adjustment factors, were estimated on the basis of the gold grade variogram model in Table 11-4 and mining selectivity of 10 by 10 by 5 meters (cross strike, strike, vertical) with RC grade control sampling on a 10 by 20 by 3.05 meter pattern.

Bulk density assignment

The Korbel Main estimates include a density of 2.65 t/bcm for all material on the basis of the average of the available measurements.

11.2.6 Classification of the Estimates

In Matrix's opinion, the available information does not define Korbel Main mineralization with sufficient confidence for estimation of Measured resources.

The Korbel Main estimates were primarily classified as Indicated and Inferred by estimation search pass and a set of cross-sectional polygons outlining the extents of approximately 100 meter and closer spaced drilling including more some more broadly sampled areas to give a consistent distribution. Mineralized domain panels within the classification polygons informed by search passes 1 and 2 are classified as Indicated, and all other estimates are assigned to the Inferred category. To give a consistent distribution of model categories comparatively few panels initially classified as Inferred within areas of generally Indicated estimates were re-classified as Indicated, and rare isolated search pass 1 and 2 panels, within zones of Inferred panels, generally at depth were re-classified as Inferred.

The classification approach classifies estimates for mineralization tested by drilling spaced at around 100 meters, including more some more broadly sampled areas to give a consistent distribution as Indicated. Estimates for more broadly sampled mineralization, extrapolated up to around 120 meters from general drilling areas are classified as Inferred.

11.2.7 Plots of the Model Estimates

Error! Reference source not found. presents an example cross-section plot of the Korbel Main model estimates within the resource pit shell at 0.15 g/t cut off relative to the modelling domains and drill hole traces within 60 meters of the section line colored by composited gold grade. In this plot the model panels are scaled by the estimated recoverable proportion above 0.15 g/t cut off and colored by grade above cut-off. For presentation purposes the mineralized domains are truncated below the topography.

Error! Reference source not found. shows instances where model blocks appear to be un-correlated to the mineralized intercepts in the neighboring drill holes. This reflects the way the resource model blocks have been presented. The model blocks plotted are only those that contain an estimated resource above cut off and the proportion above cut off has been used to scale the dimension of the model block for presentation purposes. The scaling occurs about the model block centroid co-ordinate and therefore introduces the apparent mismatch between data and the resource model blocks.

Error! Reference source not found. demonstrates that although, as expected the model estimates are more smoothed than composite grades, they reflect trends shown by composite grades.

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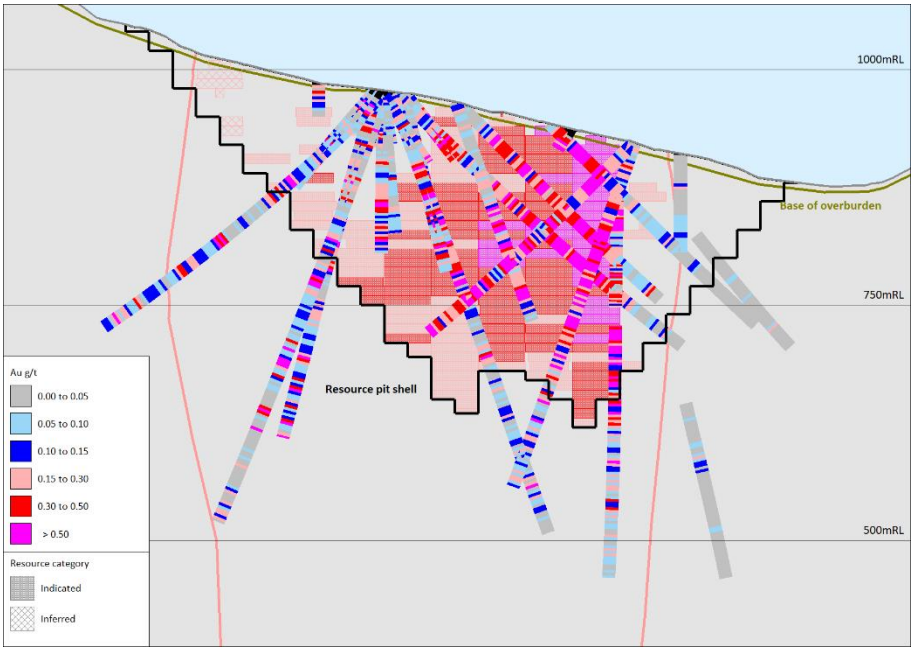

Section B: Section line shown in **Error! Reference source not found.**

Figure 11-4: Korbel Main model estimates

11.3 Cathedral Resource Modelling

11.3.1 Compilation of Informing Data

The Cathedral resource estimates are based on drilling information available on the 31st of March 2023. **Error! Reference source not found.** shows hole traces relative to the plan view extents of the Cathedral mineralized domain and ten-meter DTM contours.

The Cathedral drilling comprises fans of variably spaced and oriented holes collared from two drill pads around 500 meters apart. The southern and northern drill pads are designated as “Pad 1” and “Pad 3” respectively. A single pre-Nova drill hole is collared around midway between these pads. Along strike spacing between drill hole mineralized intervals averages around 120 meters.

Collar coordinates for Nova’s Cathedral drill holes which represent hand-held GPS/GNSS measurements generally plot well below the DTM.

To provide a consistent basis for resource modelling, all drill hole collar elevations were adjusted to match the DTM. For use in resource modelling, two anomalous down-hole survey azimuth entries were modified giving a smoother hole trace.

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Down-hole lengths of assayed sample intervals in the compiled database range from around 0.1 to 40 feet, inclusive of two samples from pre-Nova drilling of greater than 20 feet in length. The assayed drilling is dominated by samples of 10 feet (3.048 meters) in length which provide around 85% of assayed drilling, with longer samples providing only around 5% of the combined data.

11.3.2 Modelling Domains

Cathedral MIK modelling incorporates two mineralized domains interpreted by Matrix, which capture continuous zones of composited drill sample gold assays of generally greater than 0.10 g/t. The domains, which trend north-south and dip towards the west at around 83° are designated as the West and East Domain respectively.

Mineralized domain boundaries were digitized on east-west sections with snapping to drill hole traces where appropriate, then wire framed into three dimensional solids. To ensure consistent coding of composites and model blocks the wire-framed domains extend from a constant elevation well above topography to below the base of drilling. The domains are extrapolated along strike to around 120 meters from drilling.

West Domain, which contributes the majority of estimated resources is interpreted over around 780 meters of strike with horizontal widths ranging from around 200 to 480 meters and averaging around 340 meters.

East Domain, which captures comparatively lower average drill hole gold grades trends over around 420 meters of strike with horizontal widths ranging from around 40 to 180 meters and averaging around 110 meters.

Error! Reference source not found. shows a plan view of the mineralized domain outcrop relative to drill hole traces and **Error! Reference source not found.** presents example sections of the mineralized domains relative to drill hole traces and rock chip samples colored by gold grade. These sections show the modelling domains and topography at the section lines, and drill hole traces within 50 meters either side of the section line with the mineralized domain wire-frames trimmed below the DTM. The plots in **Error! Reference source not found.** demonstrate that rock chip assays include significantly mineralized gold grades, supporting the interpretation that mineralization extends to surface. Nova report that geological observations show altered and mineralized rocks at surface and provide additional support to this interpretation.

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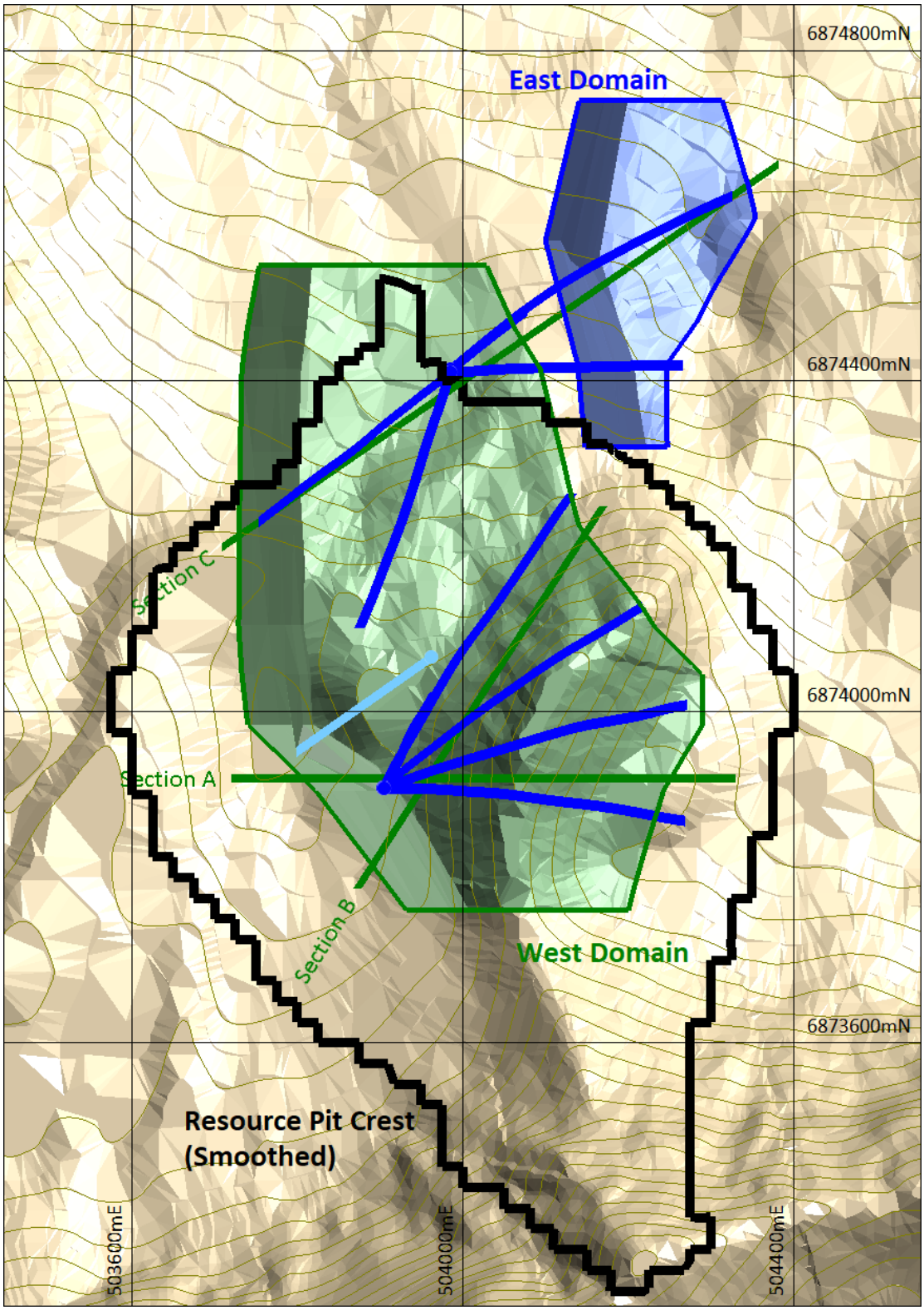

Figure 11-5: Cathedral mineralized domain outcrop and drill hole traces

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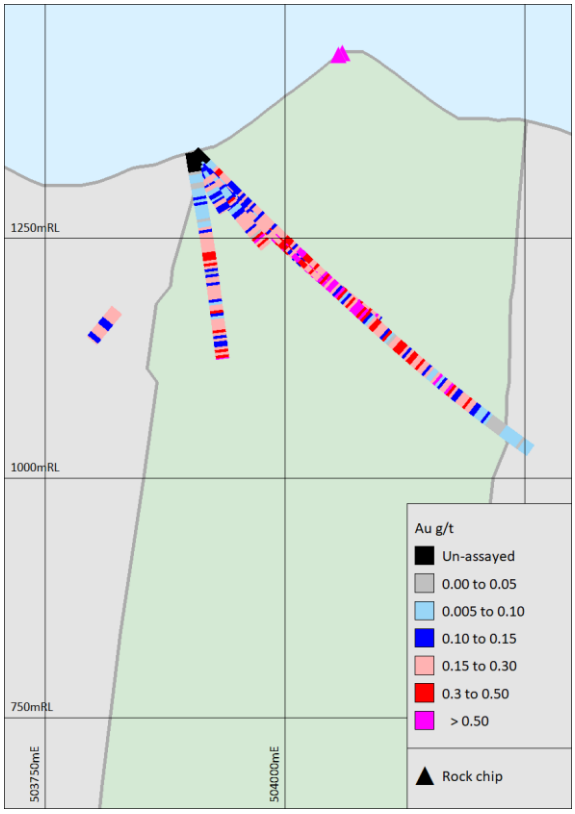

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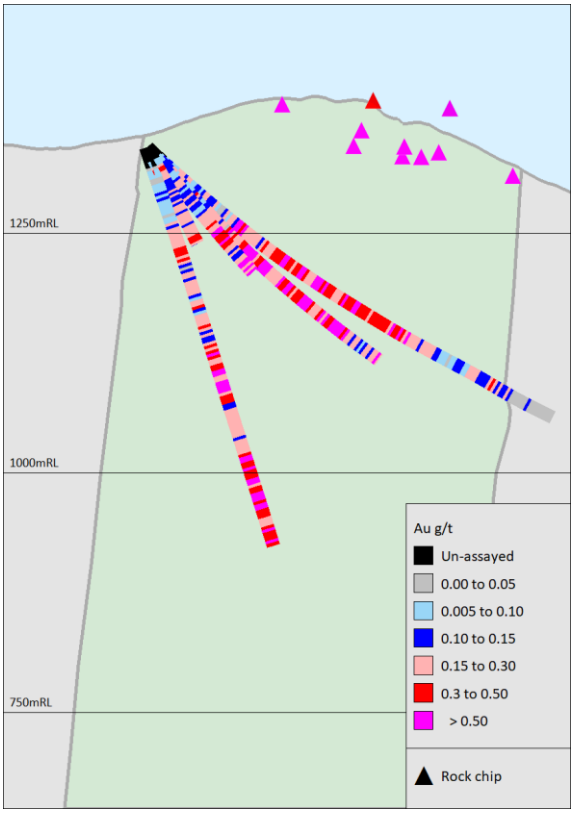

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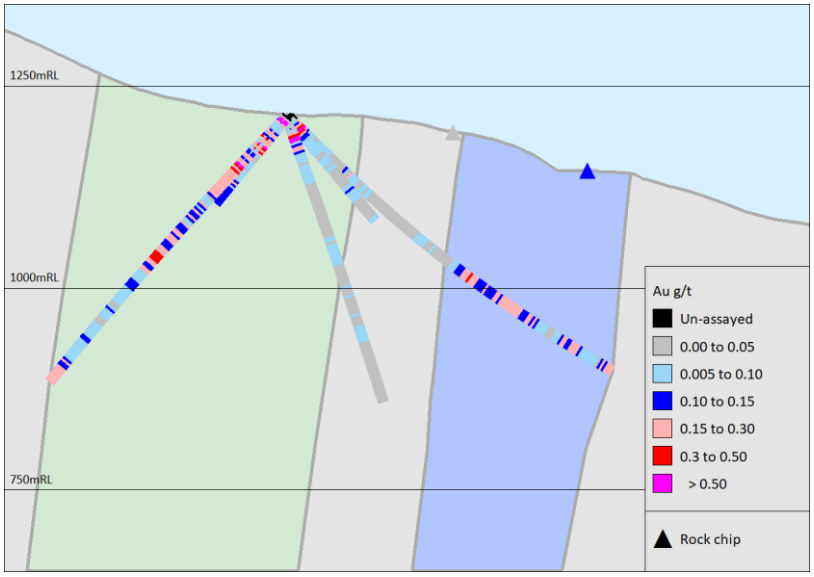

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Figure 11-6: Cathedral modelling domains and drill hole trace section views

11.3.3 Composite Estimation Dataset

The Cathedral estimates are based on 3.048 meter (10 foot) down-hole composited gold assay grades from diamond drilling within the mineralized domain wire-frames. The selected composite length represents the common sample length. Comparatively rare un-assayed intervals were assigned gold grades of zero.

Error! Reference source not found.-6 presents summary statistics for the Cathedral estimation dataset subdivided by mineralized domain. This table shows that with a mean gold grade of 0.13 g/t, and maximum value of 0.31 g/t, the tenor of gold grades for East Domain is notably lower than for West Domain.

Table 11-6: Cathedral composite estimation dataset statistics

(Au g/t)	West Domain	East Domain	All
Number	1,247	98	1,345
Mean	**0.220**	**0.134**	**0.214**
Variance	0.044	0.004	0.041
Coefficient of variation	**0.951**	**0.460**	**0.952**
Minimum	0.000	0.023	0.000
1st Quartile	0.089	0.083	0.089
Median	0.164	0.129	0.159
3rd Quartile	0.278	0.170	0.268
Maximum	2.720	0.309	2.720

11.3.4 Bulk Density Measurements

Error! Reference source not found.11-7 summarizes Cathedral density measurements by modeling domain and **Error! Reference source not found.** shows a histogram of density measurements and a scatter plot comparing density measurements with gold assay grades. This table and figure demonstrate that the density measurements show comparatively little variability and no notable association with gold grade.

Table 11-7: Cathedral density measurements

Zone		Number	Density (t/bcm)		
			Minimum	Average	Maximum
Background		17	2.59	2.66	2.72
Mineralized Domain	West	80	2.51	2.64	2.72
	East	8	2.64	2.66	2.67
	Combined	**88**	**2.51**	**2.65**	**2.72**
Total		**105**	**2.51**	**2.65**	**2.72**

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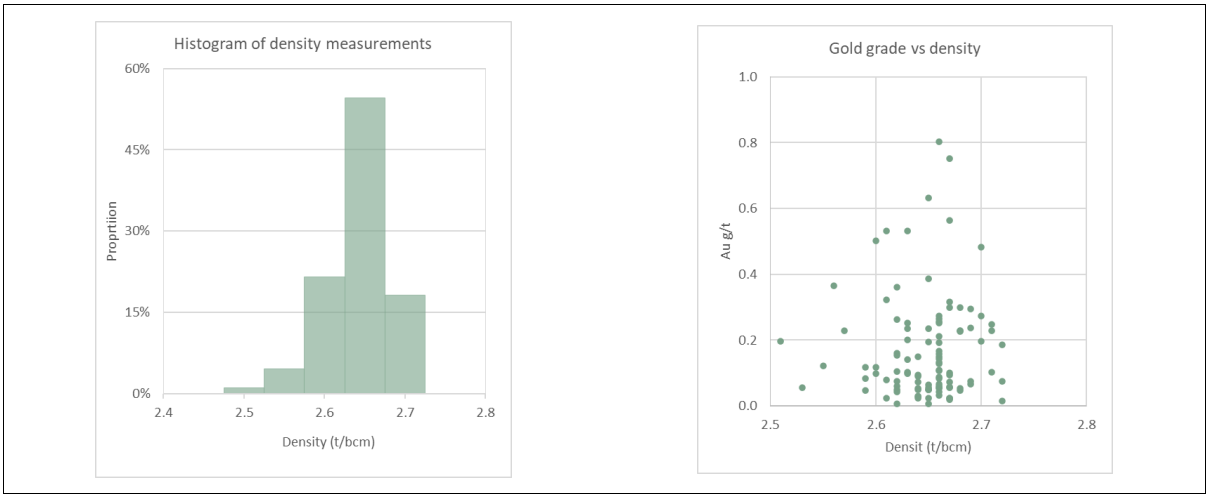

Figure 11-7: Cathedral density measurements

11.3.5 Estimation Parameters

Modelling grid and block model framework

Cathedral MIK modelling utilized 50 by 100 by 40-meter (East, North, Vertical) panels, which cover the full extents of the estimation dataset. These dimensions were selected on the basis of sample spacing in central portions of the deposit.

Indicator thresholds and class grades for MIK modelling

Error! Reference source not found.-8 lists the indicator thresholds and class mean grades for each Cathedral modeling domain, with the upper bin median shown in brackets.

All bin grades used for MIK modelling were selected from bin mean grades, with the exception of the West Domain upper bin which was selected from the bin median grade. This approach reduces the impact of small numbers of extreme gold grades on estimated resources and in Matrix's experience is appropriate for MIK modelling of highly variable mineralization such as the Cathedral deposit.

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Table 11-8: Cathedral indicator thresholds and class mean grades

Percentile	West Domain (Au g/t)		East Domain (Au g/t)	
	Threshold	Mean	Threshold	Mean
10%	0.052	0.033	0.059	0.048
20%	0.079	0.064	0.077	0.070
30%	0.102	0.090	0.087	0.083
40%	0.134	0.118	0.105	0.096
50%	0.164	0.148	0.129	0.118
60%	0.199	0.182	0.144	0.138
70%	0.247	0.223	0.162	0.152
75%	0.278	0.264	0.170	0.168
80%	0.316	0.297	0.185	0.178
85%	0.377	0.343	0.196	0.192
90%	0.465	0.418	0.205	0.201
95%	0.592	0.523	0.239	0.228
97%	0.682	0.628	0.275	0.266
99%	0.874	0.762	0.291	0.290
100%	2.720	1.352 (1.07)	0.309	0.309 (0.309)

Variogram models

The available Cathedral drilling does not represent a systematic, regular grid and provides too few regularly gridded composites for reliable variogram modelling.

Variogram models used for Cathedral MIK modelling were derived from those used for modelling of the Korbel Main deposit rotated to reflect interpreted Cathedral mineralization trends. This approach reflects the comparatively early stage of assessment of Cathedral and the broad spaced drilling available for this deposit. The spatial continuity reflected by the variogram models is consistent with geological interpretation and the steeply west dipping trends shown by composite gold grades.

Search criteria

The three progressively relaxed search passes adopted for the Cathedral modelling (**Error! Reference source not found.**11-9) were selected to inform a reasonably large proportion of the mineralized domains with some drill coverage while allowing blocks to be estimated by reasonably close data where possible.

Table 11-9: Cathedral estimation search passes

Search Pass	Radii (m) (East, North, Vertical)	Minimum Data	Minimum Octants	Maximum Data
1	50,180,180	12	4	48
2	100,360,360	12	4	48
3	100,360,360	6	2	48

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Variance adjustment

The Cathedral MIK estimates include a variance adjustment to give estimates of recoverable resources at gold cut off grades. The variance adjustments were applied using the direct lognormal method and panel to block and information effect factors of 0.121 and 0.647 respectively for a total adjustment of 0.078.The variance adjustment factors, were estimated on the basis of the gold grade variogram model and mining selectivity of 10 by 10 by 5 meters (cross strike, strike, vertical) with RC grade control sampling on a 10 by 20 by 3.05 meter pattern.

Bulk density assignment

The Cathedral estimates include a density of 2.65 t/bcm for all material on the basis of the average of the available measurements for the deposit.

11.3.6 Classification of the Estimates

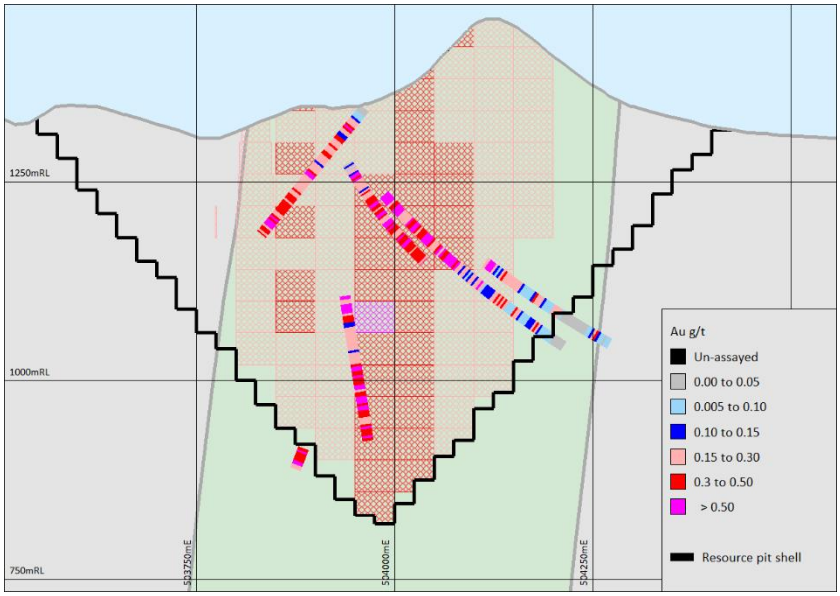
In Matrix's opinion, the available broadly and irregularly spaced drilling does not define Cathedral mineralization with sufficient confidence for estimation of Measured or Indicated resources. All resources estimated for the deposit are classified as Inferred.

11.3.7 Plots of Model Estimates

Error! Reference source not found. presents an example cross-section plot of the Cathedral model estimates within the resource pit shell at 0.15 g/t cut off relative to modelling domains and drill hole traces within 75 meters of the section line colored by composited gold grade. In this plot the model panels are scaled by the estimated recoverable proportion above the nominated cut off and colored by grade above cut-off. For presentation purposes the mineralized domains are truncated below the topography.

Error! Reference source not found. shows instances where model blocks appear to be un-correlated to the mineralized intercepts in the neighboring drill holes. This reflects the way the resource model blocks have been presented. The model blocks plotted are only those that contain an estimated resource above cut off and the proportion above cut off has been used to scale the dimension of the model block for presentation purposes. The scaling occurs about the model block centroid co-ordinate and therefore introduces the apparent mismatch between data and the resource model blocks.

Error! Reference source not found. demonstrates that although, as expected the model estimates are more smoothed than composite grades, they reflect trends shown by composite grades.



6,874,050 mN

Figure 11-8: Cathedral model estimates

11.4 RPM Resource Modelling

11.4.1 Compilation of Informing Data

The RPM resource estimates are based on drilling information available on the 31st of March 2023. **Error! Reference source not found.** shows drill traces colored by composited gold grade relative to mineralized domain outcrop, 20-meter DTM meter contours and the resource pit crest.

Error! Reference source not found. demonstrates that RPM North drilling comprises variably oriented fans of holes drilled from three drill pads with between 3 and 21 holes drilled from each pad. This configuration provides variably spaced drilling, with the 21 holes from the easternmost drill pad giving closely spaced, clustered sampling of less than 20 meters spacing in a zone of high gold grades increasing to around 120 meters and broader spaced sampling in peripheral areas including the southern modelling domain. RPM North drilling includes steeply dipping and easterly inclined drill holes which intersect interpreted mineralization trends at high angles.

Error! Reference source not found. demonstrates that RPM South drilling comprises a fan of eight variably oriented drill holes collared from one drill pad giving drill spacings broadening from closely spaced proximal the drill pad to 120 meters and broader in peripheral areas.

Down-hole lengths of assayed RPM drill samples range from around 0.1 to 18 samples of 10 feet (3.048 meters) in length providing around 83% of assayed drilling and longer samples providing only around 4%.

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RPM drill collars coordinates were surveyed by Trimble R1 or CHC LT500 GNSS survey tools, or hand-held GPS units. With the exception of collar coordinates for two drill holes with CHC LT500 and hand-held GPS surveys respectively, the supplied coordinates plot around 12 meters below the DTM. To provide a consistent basis for resource modelling, Matrix lowered the supplied DTM by 12 meters, and reduced the elevations of two drill holes which match the original DTM by 12 meters.

For use in resource modelling, one down-hole survey entry was modified for this hole giving a smoother hole trace.

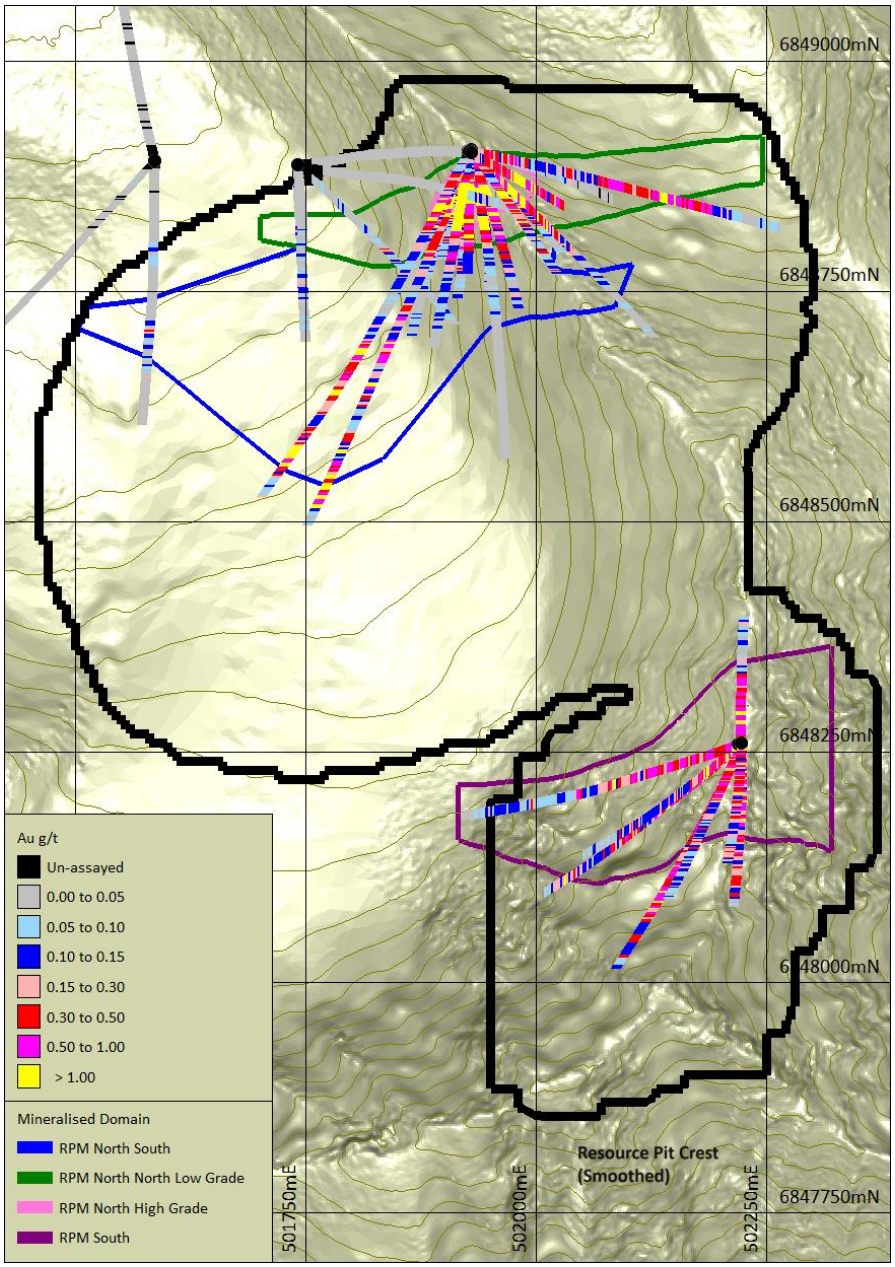

Figure 11-9: RPM mineralized domain outcrop and drill hole traces

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11.4.2 Modelling Domains

Modelling of the RPM North and South deposits incorporated mineralized domains interpreted by Matrix which capture composites with gold grades of generally greater than 0.1 g/t and delineate zones within which the tenor and spatial trends of mineralization are similar. Available information suggests the mineralization shows no significant surficial weathering or oxidation and the modelling did not include surfaces representing oxidation, weathering or overburden.

To ensure consistent coding of composites and model blocks the wire-framed domains extend between constant elevations well above topography and well below the base of drilling respectively. The domains are extrapolated along strike to around 120 meters from drilling.

Error! Reference source not found. shows drill traces colored by composited gold grade relative to mineralized domain outcrop and **Error! Reference source not found.** presents example sections of the modelling domains relative to hole traces colored by composite gold grades. The sections in **Error! Reference source not found.** show the domains and topography at the section lines, and drill hole traces within 30 meters either side of the section line with the mineralized domain wire-frames were trimmed below topography.

RPM North

RPM North modelling utilized three, subvertical east-west trending mineralized domains comprising a southern domain of comparatively lower gold grades, and a northern domain with an internal core of notably higher composite gold grades.

The northern domain is interpreted over around 550 meters of strike with an average width of around 75 meters, encompassing the high-grade core domain which comprises an ovoid shaped zone around 130 by 60 meters in plan extending to around 250 meters depth. The southern domain trends over around 600 meters of strike averaging approximately 120 meters thick.

A significant proportion of RPM North drilling intersects interpreted mineralization trends at high-angles with some drill holes appearing to locally pass in and out of mineralized domains, creating difficulties in domain interpretation.

The North Low Grade and High Grade domains were constructed from polygons digitized at 10-meter spaced plan views which were projected vertically over the ten meters represented by each polygon to create closed three-dimensional solids.

For the south mineralized domain, interpreted domain boundaries were digitized on southwest-northeast trending sections aligned with the general drilling traverses with snapping to drill hole traces where appropriate, then wire-framed into three dimensional solid.

RPM South

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RPM South modeling included an east-west trending steeply southerly dipping to vertical mineralized domain interpreted over around 360 meters of strike with an average width of around 170 meters. Interpreted domain boundaries were digitized on southwest-northeast trending sections aligned with the general drilling traverses with snapping to drill hole traces where appropriate, then wire-framed into three dimensional solid.

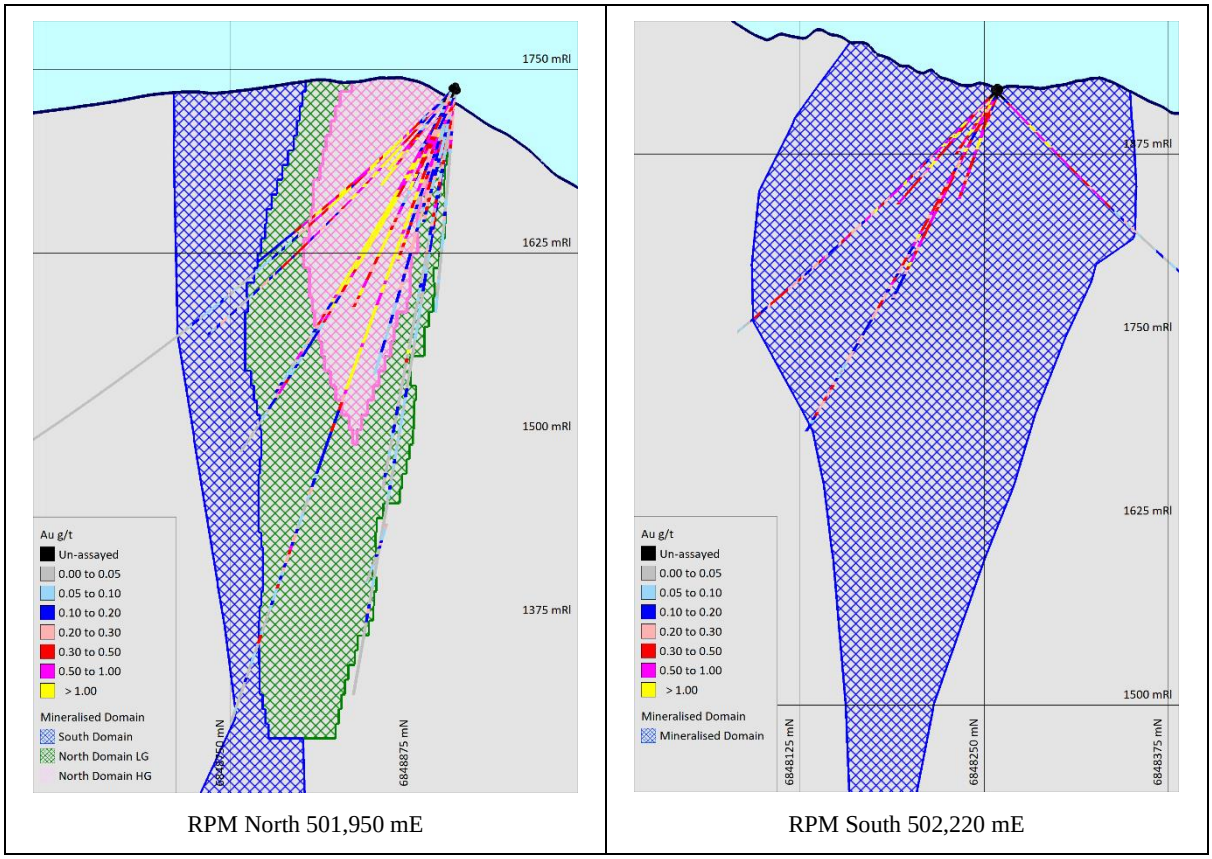

Figure 11-10: RPM modelling domains and drill hole trace section views

11.4.3 Composite Estimation Dataset

The RPM MIK modelling utilized 3.048 meter (10 foot) down-hole composited gold assay grades from diamond drilling coded by the mineralized domain wire-frames. This composite length represents the common sample length. Un-assayed intervals were assigned gold grades of zero.

The RPM North estimation dataset comprises 3,336 composites with gold grades ranging from 0.0004 to 79.15 g/t and averaging 0.82 g/t. The RPM South dataset comprises 870 composites with gold grades ranging from 0.003 to 6.26 g/t and averaging 0.40 g/t.

Error! Reference source not found.0 presents summary statistics for the dataset by mineralized domain. Notable features shown by this table include the following:

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- At 0.02 and 0.06 g/t respectively the mean gold grade for RPM North and RPM South background domain composites is notably lower than for the mineralized domains, demonstrating that the domaining has effectively assigned most mineralized composites into the mineralized domains.

- At 2.68 g/t, the average grade of the North High-Grade domain is notably higher than the other mineralized domains.

- Coefficients of variation are moderately high to high for the mineralized domain composites reflecting the variable nature of the gold grades and demonstrating that MIK is an appropriate estimation technique.

Table 11-10: RPM composite estimation dataset statistics

(Au g/t)	RPM North				RPM South	
	Background	South	North Low Grade	North High Grade	Background	Mineralized Domain
Number	872	546	1,023	895	49	821
Mean	**0.02**	**0.27**	**0.17**	**2.68**	**0.06**	**0.42**
Variance	0.00	0.38	0.04	56.0	0.00	0.22
Coefficient of variation	**1.22**	**2.28**	**1.12**	**2.79**	**0.78**	**1.13**
Minimum	0.00	0.00	0.00	0.01	0.00	0.02
1st Quartile	0.00	0.04	0.06	0.22	0.03	0.16
Median	0.01	0.08	0.11	0.46	0.04	0.30
3rd Quartile	0.02	0.22	0.21	1.33	0.06	0.51
Maximum	0.19	5.49	1.97	79.15	0.24	6.26

11.4.4 Bulk Density Measurements

Error! Reference source not found.1-11 summarizes RPM density measurements by modeling domain and **Error! Reference source not found.** shows a histogram of density measurements and a scatter plot comparing density measurements with gold assay grades for mineralized domain density, which, for presentation clarity is truncated at 6.0 g/t excluding two high gold grade samples. **Error! Reference source not found.**-11 and **Error! Reference source not found.** figure exclude four outlier measurements of less than 2.2 or greater than 2.9 t/bcm and demonstrate that mineralized domain density measurements show comparatively little variability and no notable association with gold grade.

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Table 11-11: RPM density measurements

Zone	Modelling Domain		Number	Density (t/bcm) Minimum	Average	Maximum
North	Background		75	2.48	2.73	2.85
	Mineralized Domains	South	39	2.58	2.68	2.78
		North Low Grade	64	2.34	2.68	2.80
		North High Grade	63	2.36	2.66	2.76
		Subtotal	**166**	**2.34**	**2.68**	**2.80**
South	Background		4	2.64	2.70	2.74
	Mineralized Domains		**60**	**2.50**	**2.67**	**2.83**
Combined	Background		79	2.48	2.73	2.85
	Mineralized domains		**226**	**2.34**	**2.67**	**2.80**
	Total		305	2.34	2.69	2.85

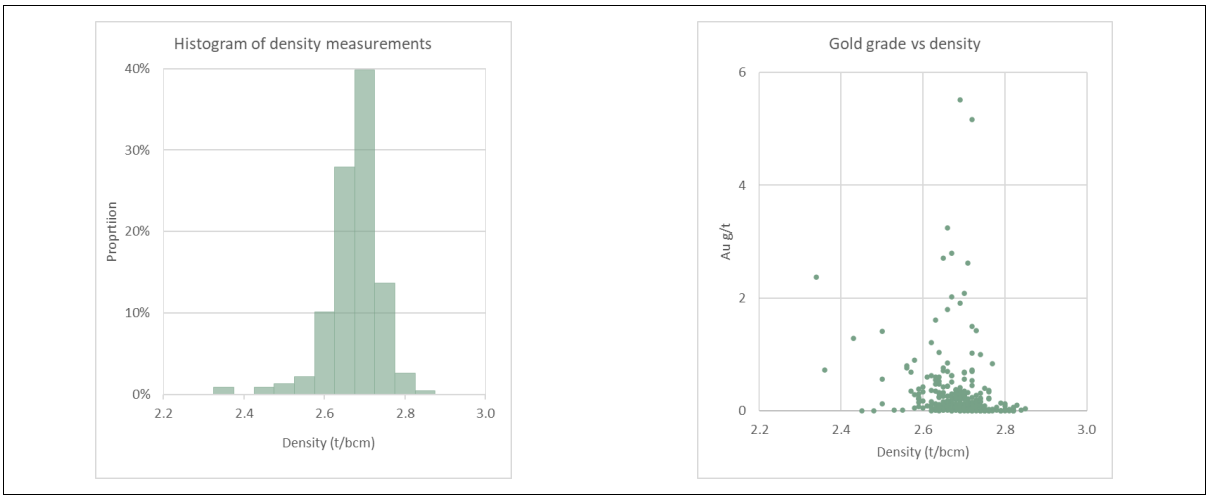

Figure 11-11: RPM density measurements

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11.4.5 Estimation Parameters

Block model frameworks

The RPM North and South MIK modelling utilized block models with panels selected on the basis of drill hole spacing for central portions of each deposit. Informed panels are constrained by a long sectional polygon digitized around 120 meters below the base of drilling.

RPM North modelling utilized 20 by 10 by 10-meter (East, North, Vertical) panels reflecting drill spacing in closely drilled portions of the deposit. These dimensions are notably smaller than hole spacing for the broadly drilled zones representing much of the modelled volume. A comparative model with panels more consistent with general drill spacing (40 by 20 by 20 meters) gave similar estimates to the primary model, supporting the use of the comparatively small panels in the modelling.

RPM South modelling utilized panels of dimensions 60 by 30 by 15 meters (East, North, Vertical).

Indicator thresholds and class grades for MIK modelling

Error! Reference source not found.2 lists the indicator thresholds and class mean grades for the RPM modeling domains, with upper bin medians shown in brackets. All bin grades were selected from the bin mean grade, with the exception of upper bin grades which were selected on a case-by-case basis as follows:

- RPM North South Domain: Upper Bin threshold (3.612 g/t)
- RPM North Low Grade: Upper bin mean excluding one high grade outlier grade composite (4.11 g/t).
- RPM North High Grade: Upper bin threshold (37.223 g/t).
- RPM South mineralized domain: Upper bin median (3.362 g/t).

This approach reduces the impact of small numbers of extreme gold grades on estimated resources and in Matrix's experience is appropriate for MIK modelling of highly variable mineralization such as RPM.

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Table 11-12: RPM indicator thresholds and class mean grades

Percentile	RPM North South Domain (Au g/t)		RPM North North LG (Au g/t)		RPM North North HG (Au g/t)		RPM South Min. domain (Au g/t)	
	Threshold	Mean	Threshold	Mean	Threshold	Mean	Threshold	Mean
10%	0.017	0.011	0.029	0.018	0.118	0.078	0.101	0.070
20%	0.029	0.023	0.048	0.040	0.189	0.158	0.146	0.123
30%	0.043	0.036	0.066	0.059	0.262	0.225	0.187	0.165
40%	0.060	0.051	0.086	0.076	0.356	0.307	0.243	0.214
50%	0.081	0.070	0.111	0.099	0.459	0.405	0.296	0.269
60%	0.113	0.095	0.139	0.124	0.637	0.543	0.358	0.328
70%	0.177	0.142	0.185	0.163	1.024	0.803	0.456	0.408
75%	0.215	0.195	0.212	0.198	1.328	1.164	0.508	0.483
80%	0.253	0.236	0.247	0.230	1.807	1.571	0.570	0.536
85%	0.376	0.318	0.308	0.274	2.688	2.227	0.661	0.620
90%	0.523	0.446	0.395	0.356	5.118	3.741	0.806	0.730
95%	1.150	0.747	0.535	0.446	13.644	8.809	1.024	0.913
97%	1.812	1.562	0.675	0.588	23.173	19.290	1.437	1.192
99%	3.612	2.582	0.961	0.801	37.223	30.838	2.094	1.593
100%	5.485	4.338	1.973	1.235	79.154	53.919	6.255	3.593
		4.457		1.124		49.440		3.362

Variogram models

RPM MIK modelling utilized variograms modelled from composites from the combined northern RPM North domains (**Error! Reference source not found.**3). In addition to indicator variograms modelled at each threshold, modelled variograms include a variogram of composite gold grades for determination of variance adjustment factors. Drilling available for the other mineralized domains provides too few regularly gridded and closely spaced data for reliable variogram modelling.

Spatial continuity observed in the variogram models is consistent with geological interpretation and trends shown by composite gold grades, showing strongest continuity within a sub vertical, east-west trending plane.

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Table 11-13: RPM variogram models

Percentile	Nug.	First Structure Exponential		Second Structure Spherical		Third Structure Spherical	
		Sill	Range (x,y,z)	Sill	Range (x,y,z)	Sill	Range (x,y,z)
10%	0.13	0.50	7.5,6.5,8.5	0.22	10,9.5,9	0.15	24,24,32
20%	0.12	0.44	11,7.5,8.0	0.24	12,10,12	0.20	32,25,45
30%	0.11	0.41	18,14,15	0.22	25,32,32	0.26	48,35,110
40%	0.11	0.41	18,14,15	0.22	25,35,32	0.26	48,32,110
50%	0.12	0.40	18,8.5,22	0.22	26,30,36	0.26	64,30,115
60%	0.13	0.39	22,9,32	0.22	33,30,48	0.26	70,31,125
70%	0.14	0.38	20,12,34	0.22	33,35,50	0.26	86,35,140
75%	0.15	0.37	15,12,32	0.22	17,15,56	0.26	90,36,150
80%	0.16	0.44	10,9.0,34	0.17	17,11,66	0.23	59,38,150
85%	0.17	0.45	10,8.5,20	0.17	17,9.5,76	0.21	41,21,150
90%	0.18	0.43	9.0,8.0,14	0.17	16,9.5,105	0.22	40,16,180
95%	0.20	0.57	8.0,7.0,8.5	0.14	13,8.5,89	0.09	35,14,190
97%	0.22	0.57	7.5,6.0,7.5	0.11	11,7.0,38	0.10	29,12,50
99%	0.26	0.55	7.5,4.0,7.0	0.09	11,5.0,14	0.10	13,6.0,26
Au g/t	0.18	0.49	9.0,5.0,13	0.17	13,22,68	0.16	44,25,230

Search criteria

Search passes informing the RPM resource estimates (**Error! Reference source not found.**4) represent a compromise between providing reasonably robust local estimates and estimating a reasonably large proportion of potentially mineralized volumes. These criteria were selected to inform a reasonably large proportion of the mineralized domains with some drill coverage while allowing blocks to be estimated by reasonably close data where possible. The variability in search criteria between deposits reflects the differences in drill spacing.

RPM North Measured resources are informed by Search Pass 1 and 2 panels, with Indicated estimates primarily informed by Search Pass 2. Search Pass 4 panels inform only Inferred resources and represent a relatively small proportions of the combined estimates.

Table 11-14: RPM estimation search passes

Deposit	Search Pass	Radii (m) (East, North, Vertical)	Minimum Data	Minimum Octants	Maximum Data
RPM North	1	25,10,25	16	4	48
	2	50,20,50	16	4	48
	3	50,20,50	8	2	48
	4	100,40,100	8	2	48
RPM North	1	60,30,60	16	4	48
	2	120,60,120	16	4	48
	3	120,60,120	8	2	48
	4	120,60,120	4	1	48

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Variance adjustment

The RPM MIK estimates include a variance adjustment to give estimates of recoverable resources at gold cut off grades. The variance adjustments were applied using the direct lognormal method and panel to block and information effect factors of 0.168 and 0.344 respectively for a total adjustment of 0.058.The variance adjustment factors, were estimated on the basis of the gold grade variogram model in **Error! Reference source not found.** and mining selectivity of 10 by 5 by 5 meters (cross strike, strike, vertical) with RC grade control sampling on a 10 by 8 by 3.05 meter pattern.

Bulk density assignment

The RPM estimates include a density of 2.65 t/bcm for all material on the basis of the average of the available measurements.

11.4.6 Classification of the Estimates

Estimates for the RPM North deposit are classified as Measured, Indicated and Inferred utilizing a set of plan-view polygons outlining areas of relatively consistent drill spacing. These polygons classify estimates tested by drilling spaced to around 25 meters and 50 meters respectively as Measured and Indicated and estimates for more broadly sampled mineralization extrapolated to around 120 meters from drilling as Inferred.

In Matrix's opinion, the available information does not define RPM South mineralization with sufficient confidence for estimation of Measured or Indicated resources. All RPM South resources estimated are classified as Inferred.

11.4.7 Plots of the Model Estimates

Error! Reference source not found. presents example cross-section plots of the RPM model estimates within the resource pit shell at 0.20 g/t cut off relative to modelling domains and drill hole traces within 30 meters of the section lines colored by composited gold grade. In this plot the model panels are scaled by the estimated recoverable proportion above the nominated cut off and colored by grade above cut-off. For presentation purposes the mineralized domains are truncated below the topography.

Error! Reference source not found. shows instances where model blocks appear to be un-correlated to the mineralized intercepts in the neighboring drill holes. This reflects the way the resource model blocks have been presented. The model blocks plotted are only those that contain an estimated resource above cut off and the proportion above cut off has been used to scale the dimension of the model block for presentation purposes. The scaling occurs about the model block centroid co-ordinate and therefore introduces the apparent mismatch between data and the resource model blocks.

Error! Reference source not found. demonstrates that although, as expected the model estimates are more smoothed than composite grades, they reflect trends shown by composite grades.

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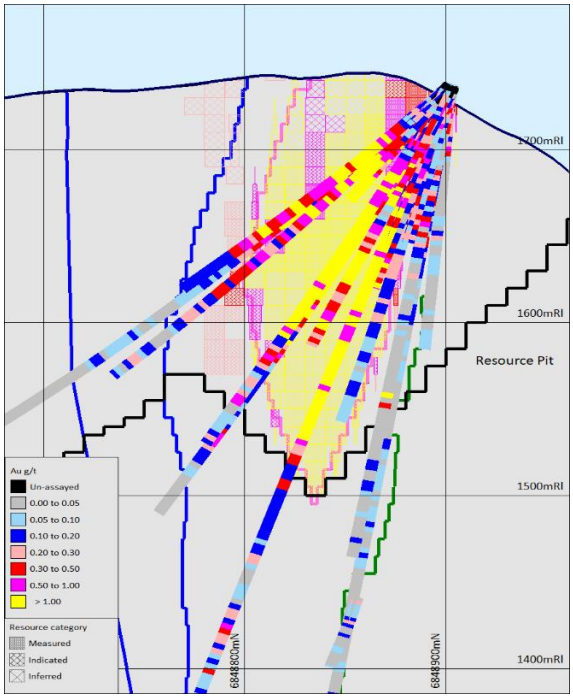
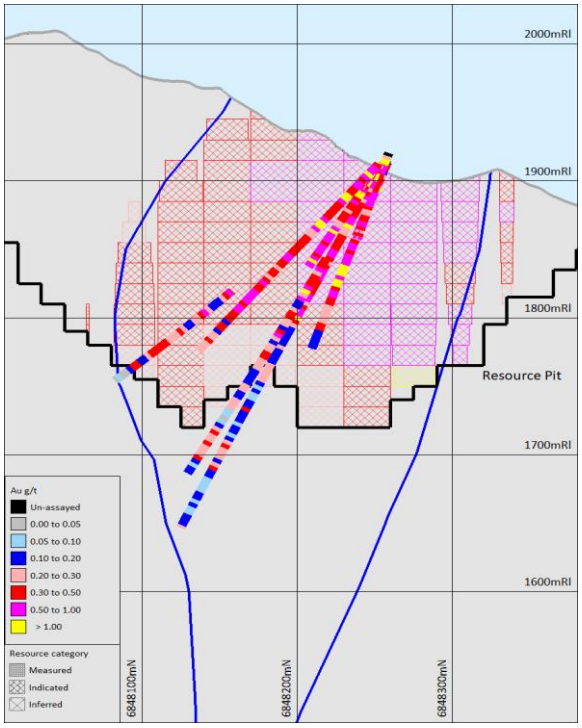
RPM North: 501,950 mE	
RPM South: 502,190 mE	

Figure 11-12: RPM Plots of model estimates

11.5 Mineral Resource Estimates

11.5.1 Establish Reasonable Prospects of Economic Extraction

To provide estimates with reasonable prospects for economic extraction, the Estelle mineral resources are reported within optimized pit shells generated from parameters supplied by Nova. These parameters reflecting Nova's review of comparable operations in the general area and available metallurgical and processing test work described in the relevant sections of this report. The optimization parameters reflect a conventional truck and shovel large-scale open pit operation with the cost and revenue parameters detailed in **Error! Reference source not found.**. The pit optimizations represent an initial assessment as defined by SK-1300.

The gold price is $2,000 per ounce, which is reasonable based on prices at the time of this initial assessment. It reflects the monthly average gold price reported by the World Gold Council (World Gold Council, 2023) for December 2023 of $2,029 per ounce, with rounding.

In Matrix's opinion and experience the parameters used for establishing the reasonable prospects of economic extraction of the mineral resources are appropriate for the Estelle deposits.

In assessment of the technical and economic factors likely to influence the prospect of economic extraction to establish economic potential, Matrix's considerations included the following:

- Site infrastructure:
- Mine design:
- Processing plant:
- Environmental compliance and permitting:
- Other reasonably assumed technical and economic factors, including plans, negotiations, or agreements with local individuals or groups, are necessary to demonstrate reasonable prospects for economic extraction.

As outlined in the preceding bullet points, Matrix considers that it is reasonable to believe that all issues associated with the relevant technical and economic factors likely to influence the prospect of economic extraction of the Estelle mineral resources can be resolved with further exploration and analysis.

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Table 11-15: Resource pit shell cut-off grade parameters

Gold Price		$2,000/ oz	
		Korbel Main and Cathedral	RPM North and South
Wall angles Mining cost per tonne mined		50º $1.65/t	50º $1.65/t
Processing	Sorter recovery	86.10%	-
	Processing recovery **Overall recovery**	88.20% **75.94%**	88.20% **88.20%**
Processing costs per tonne processed	Sorter Process G&A **Subtotal**	$0.73/t $4.50/t $1.30/t **$6.53/t**	- $9.80/t $1.30/t **$11.10/t**
Royalty (applied to recover ounces)		5%	5%

The $2,000/oz pit shell constraining Korbel mineral resources (**Error! Reference source not found.**, **Error! Reference source not found.**) extends over around 2.3 kilometers of strike with an average width of around 600 meters, and a maximum vertical depth below surface of approximately 430 meters.

The $2,000/oz pit shell constraining Cathedral mineral resources (**Error! Reference source not found.**,**Error! Reference source not found.**) extends over approximately 1.2 kilometers north-south by up to approximately 820 meters east-west, with a maximum vertical depth below surface of approximately 520 meters.

The RPM $2,000/oz resource pit shell encompasses the RPM North and South mineral resources (**Error! Reference source not found.**,**Error! Reference source not found.**). In the RPM North area, it covers an area around 840 meters east -west by 700 meters north-south and reaches a maximum vertical depth below topography of approximately 340 meters. In the RPM South area, it covers an area around 450 meters east-west by 480 meters north-south and reaches a maximum vertical depth below topography of approximately 250 meters.

The Qualified Person calculated the marginal cut-off grades selected for reporting mineral resources from the pit optimization parameters provided by Nova (Table 11-16).

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Table 11-16: Cut-off grade calculation

Cut-off grade formula		
Cut off (g/t) =		Combined Processing Cost + Difference between ore and waste mining cost (Realised Gold Price ($/g) x Combined Metallurgical Recovery)
Korbel Main and Cathedral cut-off grade calculation		
Parameters	Gold Price ($/g)	= $2000/31.103477 =$64.301/gram
	Realised Gold Price ($/g) =	= Gold Price ($/g) x (1-Royalty (%)) = 64.301 x (1-0.05) = 61.086 $/gram
	Combined Processing Cost ($/ore tonne)	=Sorter Cost + Processing Cost + G&A Cost =$0.73 +$4.50+$1.30 = $6.53/t
	Difference between ore and waste mining cost ($/t)	=$0.00/t
	Combined Metallurgical Recovery	=0.7594
Calculated cut off (g/t)		= (6.53+0.00) / (61.086 x 0.7594) =0.141 g/t
Rounded cut off (g/t)		**= 0.15 g/t**
RPM cut-off grade calculation		
Parameters	Gold Price ($/g)	= $2000/31.103477 =$64.301/gram
	Realised Gold Price ($/g) =	= Gold Price ($/g) x (1-Royalty (%)) = 64.301 x (1-0.05) = 61.086 $/gram
	Combined Processing Cost ($/ore tonne)	= Processing Cost + G&A Cost =$9.80+$1.30 = $11.10/t
	Difference between ore and waste mining cost ($/t)	=$0.00/t
	Combined Metallurgical Recovery	=0.8820
Calculated cut off (g/t)		= (11.10+0.00) / (61.086 x 0.8820) =0.206 g/t
Rounded cut off (g/t)		**= 0.20 g/t**

11.5.2 Mineral Resource Estimates

Error! Reference source not found. presents the Estelle mineral resource estimates. These estimates represent the MIK model estimates constrained within the $2,000/oz optimal pit shells at cut-off grades derived from the optimization parameters with minor rounding.

Table 11-18 present the 85% of mineral resources that is attributable to Nova's ownership share of the Estelle Gold Project. These figures are derived from the model estimates within the $2,000/oz optimal pit shells at the relevant cut-off grades with tonnages multiplied by 0.85 and appropriate rounding as described in the table notes.

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The Mineral Resource estimates are based on drill data up to March 31, 2023 and have an effective date of the January 31, 2024.

The figures in **Error! Reference source not found.** and **Error! Reference source not found.** are rounded to reflect the precision of the estimates and include rounding errors.

Table 11-17: Mineral Resource Estimate for total Estelle Gold Project (January 31, 2024)

Deposit	Cut-off Grade	Measured			Indicated			Inferred			Total		
		Tonnes Mt	Grade Au g/t	**Au Moz**	Tonnes Mt	Grade Au g/t	**Au Moz**	Tonnes Mt	Grade Au g/t	**Au Moz**	Tonnes Mt	Grade Au g/t	**Au Moz**
RPM North	0.20	1.4	4.1	0.18	3.0	1.6	0.15	23	0.60	0.45	28	0.88	0.78
RPM South	0.20	-	-	-	-	-	-	23	0.47	0.35	23	0.47	0.35
Total RPM		**1.4**	**4.1**	**0.18**	**3.0**	**1.6**	**0.15**	**46**	**0.54**	**0.80**	**51**	**0.70**	**1.13**
Korbel Main	0.15	-	-	-	240	0.31	2.39	35	0.27	0.30	275	0.30	2.70
Cathedral	0.15	-	-	-	-	-	-	150	0.28	1.35	150	0.28	1.35
Total Korbel		**-**	**-**	**-**	**240**	**0.31**	**2.39**	**185**	**0.28**	**1.65**	**425**	**0.30**	**4.05**
Total Estelle Gold Project		**1.4**	**4.1**	**0.18**	**243**	**0.33**	**2.54**	**231**	**0.33**	**2.45**	**476**	**0.3**	**5.17**

Table 11-18: Mineral Resource estimate for Nova's 85% attributable interest in the Estelle Gold Project (January 31, 2024)

Deposit	Cut-off Grade	Measured			Indicated			Inferred			Total		
		Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz	Tonnes Mt	Grade Au g/t	Au Moz
RPM North	0.20	1.2	4.1	0.16	2.6	1.6	0.13	20	0.60	0.39	24	0.89	0.68
RPM South	0.20	-	-	-	-	-	-	20	0.47	0.30	20	0.47	0.30
Total RPM		**1.2**	**4.1**	**0.16**	**2.6**	**1.6**	**0.13**	**40**	**0.53**	**0.69**	**44**	**0.70**	**0.98**
Korbel Main	0.15	-	-	-	210	0.31	2.09	30	0.27	0.26	240	0.31	2.35
Cathedral	0.15	-	-	-	-	-	-	120	0.28	1.08	120	0.28	1.08
Total Korbel		**-**	**-**	**-**	**210**	**0.31**	**2.09**	**150**	**0.28**	**1.34**	**360**	**0.30**	**3.43**
Total Estelle Gold Project		**1.2**	**4.1**	**0.16**	**213**	**0.33**	**2.22**	**190**	**0.33**	**2.03**	**404**	**0.34**	**4.41**

Notes to Tables 11-17 and 11-18:

1. A mineral resource is defined as a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity, that there are reasonable prospects for economic extraction.
2. The mineral resource applies a reasonable prospect of economic extraction with the following assumptions:
   - Gold price of US$2,000/oz
   - 5% royalty on recovered ounces
   - Pit slope angle of 50º
   - Mining cost of US$1.65/t
   - Processing cost for RPM US$9.80/t and Korbel US$5.23/t (inclusive of ore sorting for Korbel)
   - Combined processing recoveries of 88.20% for RPM and 75.94% for Korbel
   - General and Administrative Cost of US$1.30/t
   - Tonnages and grades are rounded to two significant figures and ounces are rounded to 1000 ounces. Rounding errors are apparent.

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11.6 Mineral Resource Sensitivity Analysis

Table 11-19 presents the resource model estimates reported within optimal pit shells generated using the parameters used to generate the resource pit shells, with gold prices of $1,800/oz and $2,200 respectively. These figures, which are rounded to reflect the precision of estimates and include rounding errors provide an indication of the sensitivity of mineral resource estimates to gold price. They are based on the resource models reported within optimal pit shells generated at the specified gold prices, at marginal cut off grades calculated at the relevant gold price.

Table 11-19: Mineral resource sensitivity to gold price

$1,800/oz												
Deposit, cut off Au g/t	**Measured**			**Indicated**			**Inferred**			**Total**		
	Mt	**Au g/t**	**Au Moz**	**Mt**	**Au g/t**	**Au Moz**	**Mt**	**Au g/t**	**Au Moz**	**Mt**	**Au g/t**	**Au Moz**
RPM North 0.23 g/t	1.4	4.2	0.19	2.6	1.9	0.16	19	0.60	0.37	23	0.96	0.72
RPM South 0.23 g/t	-	-	-	-	-	-	21	0.48	0.32	21	0.48	0.32
Total RPM	**1.4**	**4.2**	**0.19**	**2.6**	**1.9**	**0.16**	**40**	**0.54**	**0.69**	**44**	**0.73**	**1.04**
Korbel Main 0.16 g/t	-	-	-	200	0.32	2.06	12	0.29	0.11	212	0.32	2.17
Cathedral 0.16 g/t	-	-	-	-	-	-	120	0.29	1.12	120	0.29	1.12
Total Korbel	**-**	**-**	**-**	**200**	**0.32**	**2.06**	**132**	**0.29**	**1.23**	**332**	**0.31**	**3.29**
Total Estelle Gold Project	**1.40**	**4.12**	**0.19**	**203**	**0.34**	**2.22**	**172**	**0.35**	**1.93**	**376**	**0.36**	**4.33**
$2200/oz												
Deposit, cut off Au g/t	**Measured**			**Indicated**			**Inferred**			**Total**		
	Mt	**Au g/t**	**Au Moz**	**Mt**	**Au g/t**	**Au Moz**	**Mt**	**Au g/t**	**Au Moz**	**Mt**	**Au g/t**	**Au Moz**
RPM North 0.19 g/t	1.4	4.1	0.18	3.2	1.6	0.16	25	0.60	0.47	29	0.88	0.81
RPM South 0.19 g/t	-	-	-	-	-	-	25	0.45	0.36	25	0.45	0.36
Total RPM	**1.4**	**4.1**	**0.18**	**3.2**	**1.6**	**0.16**	**50**	**0.52**	**0.83**	**54**	**0.68**	**1.17**
Korbel Main 0.13 g/t	-	-	-	330	0.28	2.97	140	0.24	1.08	470	0.27	4.05
Cathedral 0.13 g/t	-	-	-	-	-	-	180	0.27	1.56	180	0.27	1.56
Total Korbel	**-**	**-**	**-**	**330**	**0.28**	**2.97**	**320**	**0.26**	**2.64**	**650**	**0.27**	**5.61**
Total Estelle Gold Project	**1.40**	**4.12**	**0.18**	**333**	**0.29**	**3.13**	**370**	**0.29**	**3.48**	**704**	**0.30**	**6.79**

Note: Sensitivity analysis is on 100% of mineral resource estimate.

11.7 QP Statement

The QP for this section is of the opinion that the resource estimates and resource classifications reported herein are a reasonable representation of the gold mineral resources for the Korbel Main, Cathedral, RPM North, and RPM South deposits and the TRS provides justification that the mineral resources have reasonable prospects of economic extraction.

The QP is of the opinion that with consideration of the recommendations summarized below and throughout this report, any issues relating to all relevant technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work.

The Mineral Resource Estimates may be materially affected if technical factors change, including mining, metallurgical, or infrastructure, from those currently anticipated for the Estelle Gold Project. Although the QP has a reasonable expectation that the majority of the inferred resources could be upgraded to indicated resources through further drilling programs, it should not be assumed that all or any part of an inferred resource will necessarily be converted to measured or indicated resource categories.

The QP recommends that Nova undertake infill drilling at all of the Estelle deposits with the aim of increasing confidence in estimated resources and increasing the proportion of resources classified as Measured and Indicated.

12. Mineral Reserve Estimates

No mineral reserves are reported for this SK-1300 Initial Assessment Technical Report Summary.

13. Mining Methods

The open pit optimization assumptions are based on the conventional truck and shovel mining method. The pit shells used for resource estimation are based on a 50° overall slope angle. Conceptual production rates range from 35 to 40 Mt/year.

The resource models utilized in the pit optimization studies were produced by Matrix. Input parameters containing processing, operating, fixed and mining costs and recovery were arrived at in consultation with Nova, which included base economic, geotechnical, mining and processing parameters required to establish an economic cut-off grade.

The open pit optimization assumptions are based on the conventional truck and shovel mining method. The program generates economic shells based on input parameters consisting of metal prices, operating costs (mining and processing costs), metallurgical recoveries, and geotechnical (slope) considerations. The models supplied were estimated using a multiple indicator kriging estimation process.

13.1 Geotechnical Parameters

Limited geotechnical assessment has been completed for the Korbel and RPM deposit areas. To determine the safe slope angles for the pit, benchmarks consisting of nearby properties, research data, internal data were used. An overall slope angle of 50° has been selected for all the deposits and is deemed sufficient for the initial assessment.

13.2 Hydrogeological Parameters

A hydrogeological assessment of the open pits and waste dump/stockpile foundations has not been completed for any of the deposits. A hydrogeological study should be integrated with geotechnical investigations of the pits, stockpiles waste dumps and tailings facilities as part of the PFS.

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13.3 Cut-Off Grades

A cut-off grade of 0.20g/t was chosen for the reporting RPM North and South mineral resources, and a cut-off grade of 0.15g/t was chosen for reporting Korbel Main and Cathedral mineral resources.

The cut-off grade for the RPM South and RPM North resource estimates is calculated as the grade required to pay for processing, transportation to the mill, and G&A costs. The cut-off grade for the Korbel Main and Cathedral resource estimates is calculated as the grade required to pay for ore sorting, subsequent processing and G&A costs. The reduced processing costs for Korbel Main and Cathedral reflect the average mass rejected by the sorters. An average sorter recovery was also used. Section 18 has further description of mining and processing costs used to generate economic cut-off grade. The cut-off grade calculations are shown in Table 11-16 above and the inputs used are shown below in Table 13-1.

Table 13-1: Economic inputs used as basis for cut-off grades

Deposit	Item	Value	Unit
RPM North & South	Gold Price	2,000	$/oz
	Process Recovery	88.2	%
	Process Costs	9.8	$/t resource
	G&A Costs	1.3	$/t resource
Economic Cut-off		0.20	g/t
Korbel Main & Cathedral	Gold Price	2,000	$/oz
	Process Recovery	88.2	%
	Sorter Recovery	86.1	%
	Sorter Costs	0.73	$/t resource
	Process Costs	4.5	$/t resource
	G&A Costs	1.3	$/t resource
Economic Cut-off		0.15	g/t

14. Process and Recovery Methods

The process flowsheet (Figure 14-1) and initial assessment level processing plant design is based on preliminary metallurgy and ore sorting tests.

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The process plant was designed using conventional processing unit operations with the addition of XRT ore sorting systems. Only ore originating from Korbel Main will be sorted, ore originating from the RPM deposits will bypass the sorters. The ore sorting test work performed to date was preliminary in nature in support of the flow sheet to determine the trade off on the gold recoveries. With the preliminary nature of the study, it is still yet to be determined if ore sorting will be included in the final flowsheet and future economic analysis. The product of the process will be doré bars.

Run-of-mine and run–of-stockpile ore will be hauled to the sorting facility where it will be crushed in a primary gyratory crusher before going through a sizing screen. The fines fraction head will be fed directly to the High-Pressure Grinding Rolls (HPGR), the mid-sized material will be fed to the XRT ore sorting system, and the oversize material will be crushed in a secondary cone crusher. The ore sorting system will separate the economical ore out from the waste, transporting it to an HPGR. The product of the HPGR will be sent to a closed circuit consisting of a ball mill and hydro-cyclone cluster. The P80 overflow of 75µm will flow through the flotation circuit. The tailings from this process will be sent to the tailing's thickener. The concentrate will move on to the cyclone cluster and IsaMill for fine grinding to P80 of 22µm before finally moving on to the pre-leach thickener where the underflow will report to the leach and CIP circuits.

The gold leached in the CIP circuit will be recovered by activated carbon and elution. From this elution circuit, the gold will be recovered by electrowinning cells in the gold room. The gold sludge will be dried, mixed with fluxes, and then smelted in a furnace to produce doré bars. Carbon will be re-activated in a regeneration kiln before being re-used in the CIP circuit. The CIP tailings will be treated for cyanide in the cyanide destruction circuit before being pumped to the tailings thickener. The waste byproduct of the tailings thickener will be pumped to the tailings storage facility.

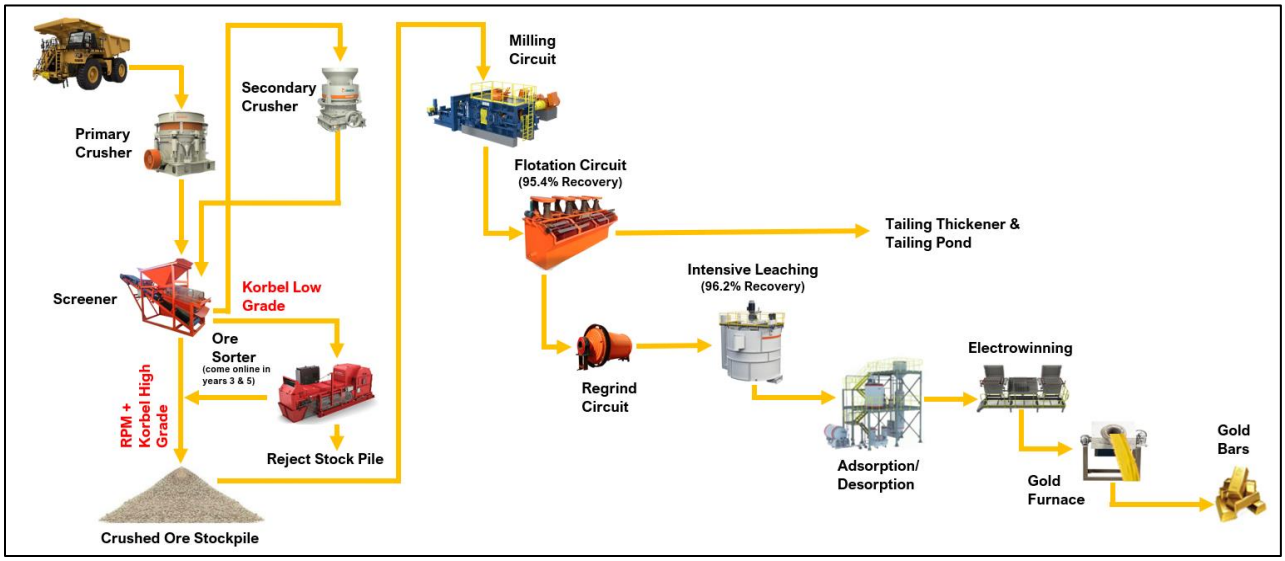

Figure 14-1: Simplified process flow sheet

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Based on metallurgical test work flotation overall recovery is expected to be 88% for RPM and 76% for Korbel.

15. Infrastructure

15.1 Roads and Access

A new access road (the proposed West Susitna Access Road) of approximately 146km leading to the project site is proposed. The road's usage will be primarily for the transportation of construction materials, equipment, and ongoing operations supplies. This road, if completed, will meet the American standard as defined by the Government of Alaska. The road will require a width of approximately 8-9 m and maximum gradient of 10% constructed with compacted road base. The access road will cross several rivers and will require the construction of bridges. Road construction is planned to be conducted by the Government of Alaska with access being provided on a toll basis.

The access road connects to the onsite roads, which include haul roads, process plant roads, and service roads associated with the facilities on the Project site. The onsite roads will be all-weather unpaved gravel roads that would require dust suppression in the dry months. Haul roads would be designed to accommodate the largest trucks planned. A haul road connecting the Korbel mill with the RMP deposits will need to be constructed. Details on haul roads are given in Section 16.

The Estelle site will have external pit haul roads and service roads (not including the all-weather site access road). Service roads will be used for smaller vehicles (i.e., light trucks) to access ancillary infrastructure such as the airstrip, a storage facility, and camp site. In general, site roads will be constructed with embankment fills using material from earthwork activities or from open pit waste material. The thicknesses of the roadbed material will be appropriate for existing ground conditions.

West Susitna Access Road Progresses to Permitting

An independent economic study prepared for the Alaska Industrial Development and Export Authority (AIDEA), and fully supported by the Alaska State Governor, recommends beginning the West Sustina Access Road permitting process.

AIDEA has submitted the CWA 404 permit application to the USACE for the West Susitna Access project, initiating the environmental review process through compliance with the National Environmental Policy Act. Field studies will begin in the summer of 2024 with further evaluation of cultural and historical sites, fish and wildlife habitat, engineering refinement, and alternative route analysis. (Figure 15-1).

Alaska Governor, Mike Dunleavy, who fully supports the roads construction said "The West Susitna Road is important for local residents and gaining fair access to hunting, fishing, and potential jobs.

"My administration is constantly looking at ways to grow our economy and this project is a

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great opportunity for not only south-central Alaska but the entire state" "I am committed to this project and unlocking resources that benefit all Alaskans. "

Construction of the road could decrease the capital and operating cost of a future mine at Estelle thereby allowing the mineral resource cut-off grade to be lowered to the Fort Knox and Dublin Gulch cut-off level.

For the full press release see below

https://www.aidea.org/Portals/0/PressReleases/3-21-2023%20West%20Susitna%20Access%20Project%20Announcement%20Press%20Release%20Final.pdf

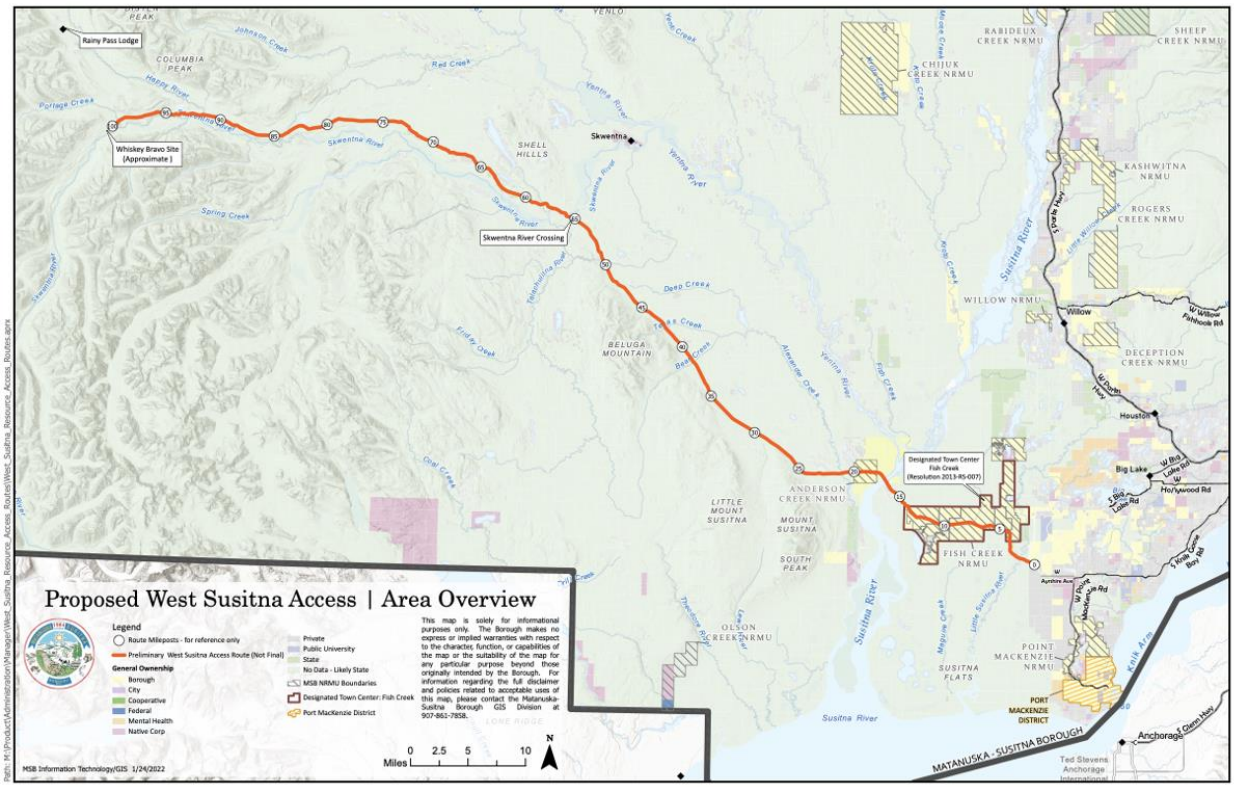

Figure 15-1: Proposed West Susitna access road

16. Market Studies

16.1 Gold Market and Price

There is a steady demand of gold from numerous buyers as it is a freely traded precious metal commodity on the world market. Therefore, gold forms a semi-predictable trend in market demand. Gold produced from Estelle can be sold to a variety of gold bullion dealers or smelters at spot prices on a competitive basis. There are numerous available gold purchasers both locally and

internationally. Gold production from the Estelle Gold Project is likely to be sold on the spot market through marketing experts retained by or on behalf of Nova.

Nova Minerals expects that terms contained within any refining and sales contracts to be entered into would be typical of, and consistent with, standard industry practices. These contracts would be competitive to alternative contracts for the supply of gold (bullion and doré) elsewhere in the world.

16.1.1 Commodity Price Projections

Precious metal markets are highly liquid and readily sold on open markets around the world. The price of gold used in the cut-off grade analysis in this technical report is US$ 2,000/oz. This price closely aligns with the recent spot price for gold. It reflects the monthly average gold price reported by the World Gold Council (World Gold Council, 2023) for December 2023 of $2,029 per ounce, with rounding.

16.1.2 Contracts

There are no mining, concentrating, smelting, refining, transportation, handling, sales and hedging, forward sales contracts, or agreements currently in place for the Project that are relevant to this Technical Report. This situation is typical of a project that is still several years away from production.

16.2 QP Statement

The QP is of the opinion that the use of a $2,000 gold price is appropriate for mineral resource estimation.

17. Environmental Studies, Permitting, and Plans, Negotiations, or Agreements with Local Individuals or Groups

17.1 Introduction

This section outlines the environmental permitting requirements that apply to the Estelle Project ("The Project") including the mine site and mine access road. It also describes the baseline environmental studies necessary to address the permitting requirements. Finally, it assesses some of the potential social and community issues involving the Project.

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17.2 Environmental Assessment

This section outlines the major environmental resources in the Project area, gives a summary of any environmental baseline data collection done to date, and describes the work necessary to collect the remaining data necessary for permitting and National Environmental Policy Act (NEPA) analysis.

17.2.1 Wetlands

A complete delineation of the wetlands types in the Project area will be necessary to obtain the US Army Corps of Engineers (ACOE) permit under Section 404 of the Clean Water Act (wetlands permit). This is a critical authorization, as it is the only major federal authorization necessary for this Project and will trigger the NEPA review. A detailed field mapping program will be required.

Reconnaissance-level wetland mapping has been completed for both the RPM and Korbel sites. For Korbel, the area includes the area from airstrip and exploration camp site to and including the valley of the deposit. For RPM, it includes the area beginning at the confluence of Emerald Creek and the Skwentna River and proceeding upstream past the RPM deposit.

The reconnaissance-level mapping is adequate for locating facilities and planning transportation routes. More detailed mapping will be necessary for preparation of an application for NEPA analysis and a federal wetlands permit, especially in light of the Supreme Court's Sackett decision.

17.2.2 Hydrology and Water Quality

Along with geochemistry, hydrologic information is crucial for permitting and mine design. The project has gathered three years or data on the project in three components.

1. Surface water. The Korbel project established 9 surface water flow and water quality stations and gathered flow and quality data in September 2021: two stations on Portage Creek, five on Prairie Creek, and two on the North Fork of Prairie Creek. Dataloggers were installed and continuous stage measurements is recorded at the sites during the open-water season. The sites were sampled for flow and quality in September 2021; twice in 2022; and twice in 2023. Water quality sampling included the full suite of metals and typical field measurements.

   For RPM, the project established eight surface water flow and quality sites in 2022. The sites were sampled twice in 2022 and twice in 2023. Dataloggers were also installed for continuous stage levels during the open-water season.

2. Groundwater. Hydrologic monitoring wells at the Korbel site have been tested and sampled to help with aquifer delineation, transmissivity, and groundwater quality. Fourteen wells at Korbel have been sampled for two years. Sampling wells are expected to be established at RPM in the 2024 season.

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3. Conceptual Site Model. The information from groundwater and surface water has been assembled into a conceptual hydrologic site model for Korbel, incorporating the geology and other available information. The conceptual model describes flows through the mining area in a manner that enables mine planning to understand and accommodate hydrologic considerations.

17.2.3 Air Quality

The major issue with respect to air quality is expected to be control of fugitive dust. The Alaska Department of Environmental Conservation (DEC) requires a year of baseline meteorological data before applying for a minor air permit or a Prevention of Significant Deterioration (PSD) permit. A PSD permit also requires data on background air pollutants in the area. In addition to the year of baseline data collection, modelling and permit preparation can require another six months, and DEC can require roughly a year to process a PSD application. The air quality information required for DEC should be adequate for the NEPA submission.

17.2.4 Aquatic Resources

The Project has initiated an aquatic baseline data collection program in anticipation of project planning and environmental evaluation. Data collection was designed to establish baseline conditions of aquatic communities and water quality while quantifying natural variability of both, and to evaluate the overall health and productivity of the drainage. The sampling program includes the establishment of long-term biomonitoring sites and aerial and ground-based fish surveys. The goal of the aquatic baseline study is to collect data to support the NEPA evaluation and ADFG Fish Habitat Permit review and issuance.

Ground-based fish surveys to establish fish habitat, use, and population have occurred at Korbel since 2021, and at RPM since 2022.

According to ADFG's Anadromous Fish Stream Catalogue, Portage Creek downstream from the deposit is used by King salmon for rearing. The catalogue also shows that the Skwentna River is used by King, Coho, and Sockeye salmon. Emerald Creek, at RPM is not listed in the catalogue. According to the catalogue, it is upstream of the upper limit of anadromous use on the Skwentna River.

17.2.5 Wildlife

Though the Project may not be in a particularly sensitive area for wildlife, the impact of the Project on wildlife may be an important issue because of commercial and non-commercial big game hunting activity in the area, and some reliance on subsistence resources by residents. In addition, according to USFWS maps, the Project, there are no critical or endangered species habitat within or adjacent to the project area. However, wildlife information will be required to understand the project's impact on Avian, large mammal, and subsistence resources. This information will be necessary for the required consultations with the USFWS and will be critical to ensure that the Project complies with the Endangered Species Act, Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act. Project construction activities will be required to comply with timing restrictions for vegetation clearing during migration and nesting activities.

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17.2.6 Cultural Resources

It is unknown whether there was significant, historic use of the area by Native peoples, or sites of other historic importance. The extent of cultural resources analysis will depend on the state and federal determination of whether there is a high potential for on-the-ground archaeological resources within the Project footprint.

17.2.7 Noise

The Project is in a remote part of the state, characterized by relatively low ambient sound levels. Noise impacts from the operating mine are not anticipated for any nearby communities.

17.2.8 Land Use and Recreation

The mine area is on lands owned by the State of Alaska and managed by the Alaska Department of Natural Resources (DNR). Lands surrounding the project area are primarily owned by the State, with small parcels of privately owned recreational properties scattered throughout the region. There are no Federal lands within the Project area.

The mine-area itself is classified for Minerals in the DNR's land-use plan for the area. Subunit R-07 in the Susitna Matanuska Area plan has the primary designation of Minerals. This designation indicates that DNR expects mineral development but indicates it should be managed in a manner that minimizes harm to anadromous streams with riparian buffers, avoid moose winter concentration areas, and protect the Iditarod Trail.

17.2.9 Life Cycle Assessment (LCA)

The environmental impacts of a particular product or service and the drivers of those impacts can be conducted via LCA. The large area along the life cycle of a product, or service where emissions are remarkable can identify. LCA helps to reduce the environmental impacts such as GHG emissions, energy, air quality, water consumption and water quality indicators of those products and services.

17.3 Environmental Authorizations and Permits

This section provides a list of the authorizations that will be required for the construction and operation of the Estelle Mine.

17.3.1 Existing Permits and Authorizations

The Project currently holds the following authorizations and permits under the Alaska Permit for Mining Activities (APMA) system which are valid through 2027, except as set forth below:

- Miscellaneous Land use Permit #3042, which authorizes hard rock exploration activities on the Project site. This permit is issued by the Alaska Department of Natural Resources (DNR) Mining Section.

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- Temporary Water Use Authorization, which authorizes water removal from surface waterbodies for exploration activities. This authorization is issued by DNR's Water Section.

- Fish Habitat Permit (and/or fish Passage Permit, which authorizes activities in fish-bearing waters, primarily for water withdrawal structures. This authorization is issued by ADFG's Habitat Division.

- Camp Permit, which authorizes the exploration camp. This permit is issued by DEC's Division of Environmental Health, Food Safety and Sanitation Program as part of the Miscellaneous Land Use Permit #3042 described above.

- Estelle Man Camp Permit, which provides approval to construct modifications to the existing drinking water system. This permit is issued by the Department of Environmental Conservation, Division of Environmental Health, Drinking Water Program (expires November 8, 2025)

17.3.2 DNR Plan of Operations, Reclamation Plan Approval, and Mill Site Lease

These three authorizations are DNR's major authorizations for operation of the mine. The authorizations have considerable overlap.

The Plan of Operations approval balances the applicant's right to extract the minerals with the mine's effect on public resources. DNR has the authority under the plan of operations to stipulate changes in the design and operation of the mine to protect public resources. Subunit R-07 in the Susitna Matanuska Area plan has the primary designation of Minerals. This designation indicates that DNR expects mineral development but indicates it should be managed in a manner that minimizes harm to anadromous streams with riparian buffers, avoid moose winter concentration areas, and protect the Iditarod Trail.

The Reclamation Plan provides DNR authority to review operations to ensure that they comply with state's law, AS 27.19.20: "A mining operation shall be conducted in a manner that prevents unnecessary and undue degradation of land and water resources and the mining operation shall be reclaimed as contemporaneously as practical with the mining operation to leave the site in a stable condition." For hard rock mines, implementing DNR's authority under the law typically requires them to review the mine's plan of operations.

The law, AS 27.19.040, directs DNR to require a Reclamation Bond: "an individual financial assurance in an amount not to exceed an amount reasonably necessary to ensure the faithful performance of the requirements of the approved reclamation plan." The bonding requirement overlaps DEC's authority to require financial assurance under their waste management plan.

A mill site lease provides a surface authorization for mine facilities that are not located on the upland mining lease or mining claim. The mine facilities will be located on mining claims, as is typical of mining projects in the State. Therefore, a mill site lease is not required. A mill site lease requires an annual lease payment equal to the fair market value of the land.

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17.3.3 Reclamation Bond

The Reclamation Bond is required by DNR under their Reclamation Plan and Dam Safety authorities, and by DEC under the authority of the solid waste permit.

Financial assurance is necessary to reclaim the site and to complete post-mining water quality treatment, water quality monitoring, and site maintenance. DNR typically administers the bond. The size of the bond is usually driven by any required water quality treatment. If post-mining water quality treatment is required, the issue will be the annual cost and the length of time such treatment will need to be continued.

17.3.4 DEC Air Quality Permit

The construction, modification, and operation of mining facilities that produce air contaminant emissions require a state Air Quality Control Permit to Construct, and a separate Air Quality Control Permit to Operate. Generally, air quality must be maintained at the lowest practical concentrations of contaminants specified in the Ambient Air Quality Standards of 18 AAC 50.020(a).

DEC requires a minor air permit for ambient air emissions above certain thresholds. If the modeling shows that the total emissions and changes in air quality are above the threshold that requires a permit but below certain other standards, the minor air permit will require best management practices for equipment, and facilities (such as maintenance of the road and methods to minimize dust from operations). If emissions are above these standards, a much more complicated Prevention of Significant Deterioration (PSD) permit is required.

One of the minimum thresholds for a minor air quality permit is the presence of a crusher with the rated capacity of more than 5 tons/hour, therefore an air quality permit will be required.

Air permit processing is typically independent of the NEPA schedule and other permits. DEC will not allow construction of the mill to begin before the air permit is issued.

The air permit requires roughly a year for acquiring the baseline data, and roughly 18 months to two years to prepare the permit application and for DEC to process the permit.

17.3.5 DEC APDES Permit

DEC authorizes effluent discharges under its Alaska Pollutant Discharge Elimination System Permit (commonly called APDES Permit). DEC requires characterization of the discharge and receiving water. The characterization requires water quality and flowrate information.

To comply with regulations, the baseline environmental studies will include hydrologic studies, and presence and identification of fish in the receiving waters.

17.3.6 DEC Solid Waste Management Permit

The major issue with respect to the tailings and waste rock is the potential for acid rock drainage and metals leaching. Geochemistry and hydrologic investigations will be required before DEC issues these permits.

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A solid waste permit is required for the tailings facility. DEC has the authority under the Solid Waste Permit to require financial assurance from the company. This requirement overlaps DNR's authority to require a reclamation bond under its reclamation authorities, and a dam maintenance bond under its Dam Safety Program. DNR and DEC jointly determine the bond and DNR typically administers the bond.

DEC also has the authority but not the mandate to require a solid waste permit for the placement of waste rock. DEC typically only requires a solid waste permit for waste rock if the rock has the potential to generate acid rock drainage or significant metals leaching. If these do not occur, DEC may determine that DNR's Plan of Authorization approval provides adequate oversight for the waste rock placement.

DEC also requires a solid waste permit for the disposal of inert wastes from construction, ash from incineration, etc.

17.3.7 U.S. Army Corps of Engineers Wetlands Permit

The U.S. Army Corps of Engineers (ACOE) permit under Section 404 of the Clean Water Act requires an authorization (wetlands permit) before allowing discharge of fill into waters of the United States, including wetlands. The wetlands permit is expected to be the only major federal permit for the Project. Activities that may require a wetlands permit include road or bridge construction, construction of dams for tailings or water storage, and stream diversion structures. The ACOE is responsible for determining consistency of the proposed action with Clean Water Act, Section 404 guidelines. Under Section 404(c), the EPA has review authority over the ACOE 404 permit decisions.

The ACOE provides detailed methodology for identification of wetlands under federal jurisdiction. DEC must certify that the ACOE permit meets state water quality standards.

Over the last decade, the ACOE also requires mitigation for wetlands affected during mine development, even if the reclamation plan will restore the wetlands after mining. Mitigation is proportional to the wetland disturbance area. The ACOE uses a hierarchy of mitigation strategies, beginning with restoring affected wetlands, then on to repairing nearby wetland impacts or enhancing low-functioning wetlands, then to monetary compensation.

17.3.8 Right-of-way

The access road to the site is planned to be constructed and operated by the state, with a toll paid to the state. Part of the access road may be made available for public use, except for the final 10 to 20km which will require a right-of-way.

17.3.9 DNR Water Right or Temporary Water Use Authorization

A water right or temporary water use authorization from DNR is required before taking a significant amount of water. DNR conditions those permits to protect other water right holders, other water users, or the presence of fish habitat; none of which is likely to be a problem for the Project. A water right is a long-term or permanent property right to the water. A temporary water use authorization is for a use of less than 5 years. Typically, a mine will require water rights for

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their permanent use of water, such as for processing, and temporary authorizations for some other uses, such as road building or other construction uses.

A significant amount of water is defined in regulation (11 AAC 93.970) as more than 5,000 gallons per day from a single source; recurring use of more than 500 gallons per day for more than 10 days per year from a single source, or the non-consumptive use of more than 30,000 gallons of water per day from a single source, or any water use that might adversely affect the water rights of other appropriators or the public interest.

17.3.10 DNR Materials Sale

Most sand and gravel for building the road will presumably be taken from the nearby state land. Material from the road right-of-way and from the mining claims may be used on the mining claims or road without a sale without payment. Material from outside mining claims and outside the right-of-way require a materials sale and payment to DNR. A material sale on state land requires public notice.

17.3.11 DNR Mining Lease

A mining lease consolidates mining claims into a single lease. It is not a permit or authorization; it differs from the authorizations in this report in that it only consolidates the private property rights of the multiple mining claims into a single legal vehicle – the mining lease. It does not change the underlying property right. A mining lease requires public notice.

17.3.12 DEC Stormwater Plan

The Clean Water Act requires control of stormwater. A mine (or exploration site) is required to have a stormwater plan to control the discharge of stormwater. Stormwater includes runoff from roads, and other locations within the mine that are not a part of the active mine area and should not have mine leachate or other chemicals. Water from adits, tailings piles, mine areas, etc. is classified as process water and may only be discharged under the APDES discharge program (described in section 20.3.5). Stormwater plan has less stringent requirements than does an APDES permit. DEC administers the program under the supervision of the US Environmental Protection Agency (EPA). These plans are not publicly noticed, but DEC may review the proposed stormwater plan and may inspect the facility for compliance with an approved plan.

17.3.13 ADFG Fish Passage Permits

The ADFG issues fish passage permits under AS 16.05.841 for work within the ordinary high-water mark of fish streams that are *not* listed in ADFG's Anadromous Fish Stream Catalogue. The criterion for the permit is to ensure that the work does not block fish passage. For road crossings the agency will require some basic hydrologic information to assure that a bridge or culvert is appropriately sized.

ADFG also requires a fish habitat permit for any activity in waters that are listed in the Anadromous Fish Stream Catalogue (AS 16.05.871). The waters close to the Project that are currently listed in the Catalogue are Portage Creek and Skwentna River, although our aquatic baseline program may result in additional waterbodies being listed in the Catalogue. A fish habitat

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permit will be required for any activity, such as a water withdrawal, in Portage Creek, or any other waterbodies where anadromous fish are discovered. An examination of Portage Creek upstream and downstream of the project site will be required.

17.3.14 NOAA Fisheries Essential Fish Habitat

The National Oceanic and Atmospheric Administration Fisheries agency (NOAA Fisheries), under authority of the Magnuson-Stevens Act, may require that federal agencies condition their permits to protect essential fish habitat. The Act requires cooperation among NOAA Fisheries and other federal agencies to protect, conserve, and enhance "essential fish habitat". Congress defined essential fish habitat for federally managed fish species as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." NOAA Fisheries does the essential fish habitat consultation as a part of a federal permit evaluation. Thus, NOAA-recommended stipulations would be applied to the ACOE wetland permit.

17.3.15 FWS Bald Eagle Protection Act; Migratory Bird Treaty; and Threatened and Endangered Species Act

The US Fish and Wildlife Service (FWS), under authority of the federal Bald Eagle Protection Act, will require identification of eagle nest, roost, and perch trees.

Under authority of various migratory bird treaties, the FWS may advise federal agencies to condition their permits to ensure that a project is consistent with various treaties concerning migratory birds.

Finally, the FWS has authority over certain threatened and endangered species. FWS mapping shows that there are no threatened or endangered species within the project area.

Like the NOAA Fisheries Essential Fish Habitat, a separate authorization is not required. However, the federal agencies have the authority to require conditions on the ACOE wetlands permit. These consultations occur as a part of the NEPA process, and the information generated for the NEPA analysis should be adequate.

17.3.16 U.S. Army Corps or DNR Cultural Resources

The cultural resource analysis will be required for ground disturbance that could damage archaeological artifacts. The state and federal governments have overlapping jurisdiction over protection of cultural resources. For activities authorized by the state, it is the State Historic Preservation Office (SHPO) within DNR's Division of Parks and Outdoor Recreation. Because a wetlands permit will be required, the lead federal agency is the ACOE. The ACOE will coordinate evaluation of cultural resources with SHPO. The agencies will require a cultural resources analysis and possibly an on-the-ground survey if they determine there is a likelihood of historic or pre-historic cultural resources affected by the Project.

<u>U.S. Army Corps of Engineers; National Historic Preservation Act</u>

Section 106 of the National Historic Preservation Act requires review of any project funded, licensed, permitted, or assisted by the federal government for impact on significant historic

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properties. The agencies must allow the SHPO and the Advisory Council on Historic Preservation, a federal agency, to comment on a project. Following that review, the ACOE has the authority to require stipulations on federal permits, generally the Wetlands Permit, to protect cultural resources. The stipulation may require that an applicant protect the physical integrity of the cultural resource, or that the applicant ensure that the information from the cultural resources is gathered before an effect takes place, or that another means is used for protection. If there were no wetlands permit, there would be no ACOE jurisdiction over this issue and the cultural resources would be regulated by the state.

State Historic Preservation Act

The Alaska Historic Preservation Act, AS 41.35, contains a provision similar to Section 106, which mandates that any project with state involvement be reviewed in a similar manner. It gives the SHPO similar jurisdiction to the ACOE for state permits.

Through the permit review process, SHPO staff work with federal and state agencies during the early stages of project planning to protect cultural resources. They do this by providing information on the location of known sites and information from cultural resources surveys previously done in an area.

The state mitigation required under the Cultural Resources authorizations will most likely be applied to the DNR Plan of Operations. The state mitigation should satisfy both state and federal governments. However, it is possible that some mitigation may be applied to the Corps of Engineers Wetlands Permit.

17.3.17 Other DEC Wastewater Permits

DEC must authorize the discharge of wastewater into or upon all waters and land surfaces of the state. Any discharge for which an APDES permit is not required (such as a land application of mine wastewater) will require a separate permit from DEC.

17.3.18 DNR Dam Safety Permit

Dam safety permits can be technically complex and will be required for a tailings storage dam.

DNR's Division of Mining, Land and Water must issue a "Certificate of Approval to Construct" and a separate "Certificate of Approval to Operate" a dam. These authorizations are required for dams that are greater than 10 feet higher and hold back more than 50 acre-feet of water; any dam more than 20 feet high; or any dam that the department determines may pose a threat to lives or property. These certifications involve a detailed engineering review of the dam's design and operation.

The background information is the same needed for a competent dam design: relevant hydrology and geotechnical information. Public notice is not required. Application for this authorization may be made during the EIS processing period or after the major permits are signed, but typically the dam designs are reviewed concurrently with DEC's waste management permit and DNR's Plan of Operations Approval.

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17.3.19 Alaska's Large Mine Permitting Process

Federal requirements under the National Environmental Policy Act (NEPA) provide the structure for Alaska's Large Mine Permit Process. This section outlines the NEPA procedures and expected schedule as they likely apply to the Project.

17.3.20 NEPA Overview: EA or EIS

The National Environmental Policy Act (NEPA) requires federal agencies to incorporate environmental considerations into decision-making. All major federal actions require a NEPA analysis, and the wetlands permit from the U.S. Army Corps of Engineers (ACOE) constitutes a major federal action under the law. Consequently, Estelle will require a NEPA analysis: either an Environmental Assessment (EA) or the Environmental Impact Statement (EIS).[1]

An EA must determine whether the Project, including the mine, road, and mill, would significantly affect the environment. If the answer is "no", the agency issues a "Finding of No Significant Impact (FONSI)". The FONSI may address measures that an agency will take to mitigate potentially significant impacts. If, on the other hand, the EA determines that the environmental consequences of a proposed federal undertaking may be significant, an EIS is prepared.

Most hard-rock mines in Alaska have required an EIS: Red Dog Mine, Greens Creek Mine, Pogo Mine, and Kensington Mine. The Nixon Fork, and Rock Creek mines were authorized under an EA. The Illinois Creek Gold Mine and the True North Gold Mine did not require any significant federal permit, (no wetlands) and consequently there was no major federal action and no NEPA analysis. The decision whether to require an EA or EIS will be made by the lead federal agency (likely the ACOE) after permit applications are submitted.

Both an EA and an EIS will require public notice, typically two rounds of public notice. The first round is for scoping (identifying issues specific to that Project for analysis by the EA/EIS), and the second on the draft document.

Lead Agency. The lead federal agency prepares the NEPA analysis, EA or EIS, usually using a 3rd-party NEPA contractor, paid for by the applicant. Since the ACOE is the only federal agency with permit authority in the Project, it will be the lead federal agency – the agency that supervises the NEPA analysis and makes the decision about whether an EA or EIS is required.

Cooperating Agencies. A federal, state, tribal or local agency having special expertise with respect to an environmental issue or jurisdiction by law may be a "cooperating agency" in the NEPA process. A cooperating agency has the responsibility to assist the lead agency by participating in the NEPA process at the earliest possible time; by participating in the scoping process; in developing information and preparing environmental analyses including portions of the environmental impact statement concerning which the cooperating agency has special expertise;

[1] Technically, there is a third category of environmental analysis in addition to an EA or EIS. There are small-scale activities which qualify for a categorical exclusion from NEPA analysis. Estelle will not qualify for a categorical exclusion, and so this category is ignored in this report.

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and in making available staff support at the lead agency's request to enhance the lead agency's interdisciplinary capabilities.

The EPA and the State of Alaska are usually cooperating agencies in hard-rock mine project EISs and would likely serve in this role for the Estelle NEPA process. More and more, the FWS has been a cooperating agency in Alaska EISs, and there is a high likelihood that they will be cooperators here as well.

In recent years, the lead federal agency has typically invited potentially affected tribal governments to be cooperating agencies. Recent efforts indicate that the ACOE may instead consult with the tribes separately, but not integrate them into the process as cooperating agencies.

The State of Alaska is a particularly critical cooperating agency. The State's participation is coordinated by DNR's Office of Project Management and Permitting (OPMP), who will represent all the relevant state agencies during the process.

State Agency Process. Alaska state agencies use the Alaska Large Mine Permitting Process (LMPP) to work with the federal agencies and to issue state decisions on a mine. LMPP is voluntary process, paid for by the applicant, and is run by DNR's OPMP. The process has significant advantages, and every hard-rock mine project in Alaska has used it. Using the LMPP for mine permitting, rather than relying solely on individual permit staff will ultimately decrease permitting costs by making the overall permitting process more efficient.

Once the applicant begins the process, OPMP assigns a project coordinator and creates a permitting team with members from all of the pertinent state agencies. Frequently, federal agencies use the LMPP to coordinate their involvement as well. The ACOE is familiar and supportive of the state process. Other federal agencies that may use the process include the FWS, NOAA Fisheries, and EPA. Also, the project coordinator works with the applicant to coordinate the public process, and so the public can go to one point-of-contact for the Project.

The advantage of Alaska's LMPP is that it is more efficient for the agencies, the public, and the applicant. This is especially true for a project with a significant public process component, with significant technical issues, and one involving an EIS. The advantages for a company are:

- There is a lead state official who is responsible to the company for an efficient process. If there is a problem, this official is responsible to see that it is solved;
- The team approach should minimize contradictory direction from different agencies;
- The team approach should minimize overlapping data requirements — one data program should satisfy all team members;
- By using the team to work through mine design questions, it minimizes negative interactions between mine design and permitting; and
- The public has a single point-of-contact: the project coordinator.

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For projects involving an EIS, there is often another advantage as well. The federal EIS team frequently involves people who do not know Alaska. A LMPP project team has enough respected expertise to help ensure that odd or impractical ideas are eliminated quickly without derailing the process. The LMPP project team provides an avenue to help control rumors that can otherwise become "officially sanctioned" by repetition from un-knowledgeable agencies.

NEPA Schedule. With a good quality application based on adequate environmental baseline data, an EA can frequently be completed within a year. Hard-rock mine EIS processes in Alaska have taken significantly longer than that. Pogo required 3-1/2 years from the time of application (i.e., excluding the time to collect baseline environmental information); the Kensington Supplemental EIS required just more than three years from the time of the application to the Record of Decision.

Permitting Schedule. The ACOE must complete the EA or EIS before it can issue its Section 404 wetlands permit (the only major federal authorization necessary for the Project). The ACOE must wait at least 30 days after finalizing the EA or EIS before it can first issue its Record of Decision, and then issue the wetlands permit. For planning purposes, 120 days should be budgeted for issuance of the wetlands permit after the EA or EIS is finalized.

A major focus of Alaska's LMPP is to coordinate the processes for all the state permits so that they can be issued concurrently with, or as soon as possible after, the completion of either the EA or the EIS. It is expected that all state authorizations should be issued prior to, or concurrently with, the federal wetlands permit.

17.4 Closure and Reclamation

At the end of mine life, the mine will be closed and reclaimed in accordance with state laws and regulations. The primary authorities that set closure requirements are 1) DNR Reclamation Plan Approval, 2) ADEC Waste Management Permit, and 3) DNR Dam Safety Certification for any jurisdictional dam structures. These authorizations are described in more detail in Section 20.3.

17.4.1 Solid Waste Management Permit

A Solid Waste Permit from DEC is required for the tailings facility and may be required for the placement of waste rock. This permit will have closure requirements, primarily focused on ensuring long-term water quality meets state and federal standards. If necessary, this permit will require long-term water treatment and monitoring. DEC has the authority under the Solid Waste Permit to require financial assurance from the company.

17.4.2 Dam Safety Certification

DNR will require a Dam Safety Certification for any jurisdictional dams necessary for this Project, which would include dams for a wet tailings management facility. The Dam Safety Certification would include requirements for closure, either complete decommissioning, or provisions for care and maintenance. The Certification would include requirements for bonding/financial assurance to cover the costs of closure for the dams.

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17.5 QP Statement

The QP is of the opinion that the level of environmental assessment for the Estelle Gold Project is adequate for mineral resource estimation.

18. Capital and Operating Costs

Capital costs have not been estimated for this Initial Assessment Technical Report.

The operating cost estimates presented in this Initial Assessment Technical Report are based on comparisons to similar operations in the region and industry standard operating costs. The operating cost estimates for this Initial Assessment were conducted in 2023 US dollars (US$) unless otherwise stated. All cost projections are referenced on a nominal 2023 US dollar basis.

The operating cost estimate contained in the Initial Assessment is considered preliminary in nature. The accuracy of the estimate should be considered +/- 50%. Mineral resources are not mineral reserves and have no demonstrated economic viability. There is no certainty that economic forecasts outlined in the Initial Assessment will be realized. The Initial Assessment Technical Summary may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant factors.

18.1 Mining Operating Costs

The mine operating cost estimates in this Initial Assessment were provided by Nova Minerals and reviewed Roughstock Mining. The operating cost estimate was compiled using a combination of industry factors, database costs, and directly related project experience. The estimate was benchmarked against similar operations (Figure 18-1).

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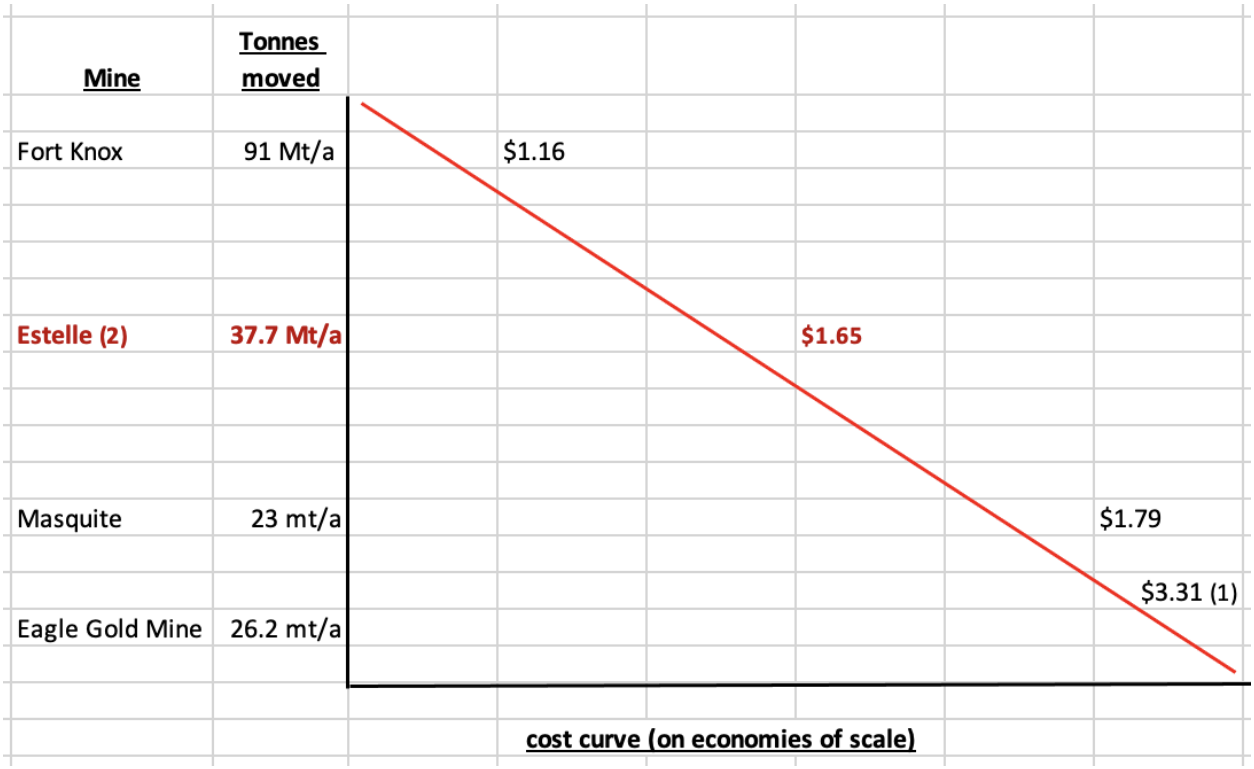

Figure 18-1: Mining cost of comparable operations

18.2 Processing Operating Costs

The process operating cost estimates in this Initial Assessment were provided by Nova Minerals and reviewed METS Engineering. Processing operating costs span the operation and maintenance of processing facilities, including all gold recovery activities to produce gold doré on site. It covers expenses related to process plant labor/personnel, consumables (reagents, grinding media, etc.), power/energy consumption, and process plant equipment maintenance for crushing, grinding, leaching, carbon handling, gold refining, and tailings disposal. Processing costs are expressed in terms of $ per tonne of resource for the purpose of economic cut-off grade calculation.

RPM processing costs are estimated to be $9.80 per tonne of resource. Korbel processing costs are estimated to $5.23 per tonne of resource. The Korbel cost are expected to be lower cost per tonne of resource because of the use of sorting after the crushing process.

18.3 General and Administration Costs

General and Administrative ("G&A") costs comprise of costs not directly linked to the production of gold. Cost items estimated under G&A were based on previous experience alongside benchmarking with similar projects. G&A costs comprise the following categories:

- Administration, site services, and water treatment plant labor.
- On-site items such as: health and safety, environmental, human resources, insurance (physical plant, earthquake etc.), legal, external consulting, IT, communications, office

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supplies, site service equipment operation and maintenance, and employee transportation to and from site.

The total G&A unit operating cost is estimated to be $1.30 per tonne of resource.

18.4 QP Statement

The QP is of the opinion that the level of operating cost estimation for the Estelle Gold Project is adequate for mineral resource estimation.

19. Economic Analysis

No economic analysis has been performed as part of the Initial Assessment of mineral resources.

20. Adjacent Properties

This chapter provides public source information on properties adjacent to the Estelle Gold Project. The information and mineralization related to adjacent properties is not necessarily indicative of the mineralization on the Estelle Gold property. Roughstock Mining Services has not verified the information or the styles of mineralization on these adjacent properties held by other companies.

20.1 Exploration Properties

The Tintina Gold Belt contains an abundance of rare metal mining projects, as shown in **Error! Reference source not found.**. The closest mineral property to Estelle is the US Goldmining Inc's Whistler Project; a gold and copper porphyry-style exploration stage project which is located approximately 150km northwest of the city of Anchorage and directly adjacent to the Estelle property.

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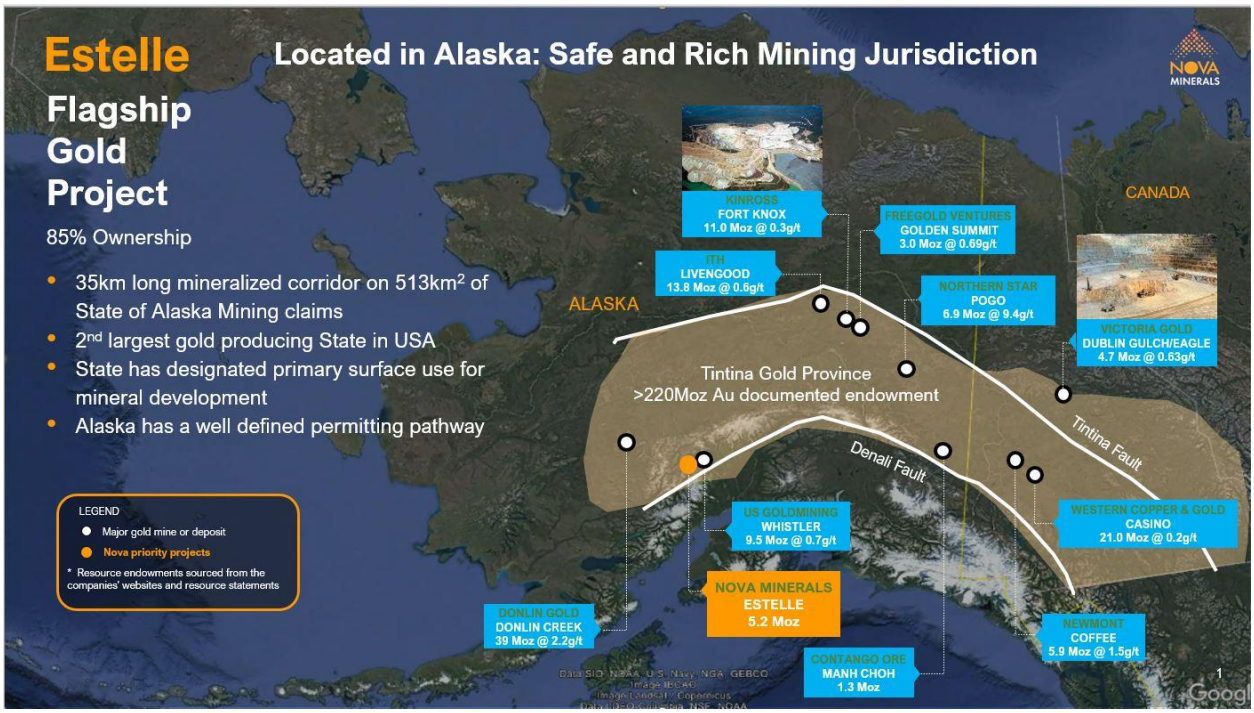

Figure 20-1: Mineral deposits within the Tintina Gold Belt

20.2 Whistler Project

The Whistler Project, immediately adjacent to the Estelle Gold Project, is show in Figure 20-1. The Whistler Project is comprised of 377 Alaska State Mining claims covering over 218 km^2. In 2015, Gold Mining Inc. (formerly Brazil Resources Inc.) acquired control of the Whistler Project form Kiska Metals. Gold Mining Inc. completed a technical report on the Resource Estimate of the property, where a total of 257 drilled holes (70,247m) were reported to have been completed by all operators to date (Giroux, 2016). Gold Mining Inc. created a subsidiary, U.S. Gold Mining Inc. in 2022 to advance the Whistler Project. The Whistler Project is comprised of three deposits: Whistler, Raintree West, and Island Mountain. The estimated indicated resources and commodities are summarized in Table 20-1.

The gold equivalent grade assumes metal prices of USD $1,250/oz of gold, USD $16.50/oz of silver, and USD $2.10/lb. of copper and $1.50 mining cost. The recoveries of silver and gold were found to be approximately 75%, whereas copper's recovery is 85%. A gold equivalent cut-off of 0.3 g/t for all three properties was highlighted in the estimate as a possible open pit cut-off, and a gold equivalent cut-off of 0.6 g/t for underground operations at Raintree was approximated (Giroux, 2016).

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Table 20-1: Summary of resource estimate for the Whistler Project

	Tonnes & Grade					Contained Metal			
Resource Category	Tonnes (Mt)	Au (g/t)	Ag (g/t)	Cu (%)	Au Eq. (g/t)	Au (Moz)	Ag (Moz)	Cu (Moz)	Au Eq. (Moz)
Indicated	110.3	0.50	1.76	0.14	0.79	1.765	6.130	343.1	2.797
Inferred	311.3	0.47	2.26	0.11	0.68	4.626	22.610	713.5	6.731

20.3 Donlin Creek Project

Donlin Creek is a 39Moz @ 2.2 g/t gold deposit located approximately 450 km west of Anchorage and 250 km northeast of Bethel up the Kuskokwim River. (Figure 20-1) The project is owned by Donlin Gold LLC (Donlin Gold), which is jointly owned by NovaGold (no association with Nova Minerals) and Barrick on a 50:50 basis. Donlin Gold leases 72 complete sections from Calista Corporation, an Alaska native regional corporation. Additional partial sections are leased from Calista Corporation associated with project infrastructure. Donlin Gold leases approximately 200 square kilometers from the Calista Corporation and also holds 493 Alaska State mining claims comprising 290 square kilometers. The total mineral tenure is close to 490 square kilometers. Donlin Gold also has a surface use agreement in place with the Kuskokwim Corporation, which owns a majority of the private surface estate in the area.

Placer gold was originally discovered in a tributary to Donlin Creek in the early 1900's. Modern era exploration has been conducted by Resource Associates of Alaska in 1974-1975 WestGold during 1989-1988, and Teck in 1993. Placer Dome worked the project between 1995 to 2000 and from 2002-2005. NovaGold completed work in 2001 and 2002 before forming a joint venture with Barrick in 2007. Barrick was the sole operator of the property in 2006. Since 2007 the project has been operated by Donlin Gold.

Approximately 1,834 exploration and development diamond core (90%) and RC (10%) drill holes totalling 404,420m were completed from 1988 through 2010. In 2017, 85 holes were drilled to test potential high-grade extensions. Model confirmation holes were drilled in 2017, 2020, and 2021.

Donlin Creek follows a high-level, reduced intrusion related vein system, with one portion of the district more closely following the low-sulfidation, reduced intrusion related, epizonal system with both vein and disseminated mineral assemblages. The deposits are primarily hosted in igneous rocks associated with an Upper Cretaceous gold-arsenic-antimony-mercury hydrothermal system. Gold primarily occurs in sulfide and quartz-carbonate-sulfide vein networks hosted in igneous rocks, and to a lesser extent sedimentary rock. Table 20-2 summarizes mineral resources at Donlin as of 2021. (Donlin Gold Project S-K 1300, 2021)

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Table 20-2: Donlin Creek mineral resources summary

Category	Tonnage (kt)	Au (g/t)	Contained Au (koz)
Measured	7,731	2.52	626
Indicated	533,607	2.24	38,380
Total Measured and Indicated	**541,337**	**2.24**	**39,007**
Inferred	**92,216**	**2.02**	**5,993**

21. Other Relevant Data and Information

21.1 Land Status

The Estelle Gold Project, as well as any proposed access roads including the West Susitna Access Road, are fully encompassed by State of Alaska lands. There are no federal or native corporation land titles throughout the greater project area.

21.2 Mining Claims

The Estelle Gold Project is comprised of 800 Alaska State mining claims. See Appendix 1. for detailed maps and a claim list.

All claims were acquired by our Joint Venture Partner (JVP) by staking in Alaska with the Division of Mining, Land and Water, and the Alaska Department of Natural Resources (DNR). The mining claims are wholly owned by AKCM (AUST) Pty Ltd (an incorporated joint venture company between Nova Minerals Ltd and AK Minerals Pty Ltd) via 100% ownership of Alaskan incorporate company AK Custom Mining LLC. AKCM (AUST) Pty Ltd is owned 85% by Nova Minerals Ltd and 15% by AK Minerals Pty Ltd. Nova owns 85% of the property through the joint venture agreement and AK Minerals Pty Ltd owns the remaining 15% along with a 2% NSR over the property.

Under Alaska mining law AK Custom Mining LLC owns the rights to all locatable minerals discovered on and within the allocated claims. Mining claims may be located by what is known as aliquot part legal description, which is meridian, township, range, section, quarter section, and if applicable quarter-quarter section. These claims are known as MTRSC locations, and they are generally located using GPS latitude and longitude coordinates. A quarter section location is typically about 160 acres in size, and a quarter-quarter section location is typically 40 acres in size. Rent for the larger size is always four times greater.

All the mining claims are in good standing and to retain title to the property, AK Custom Mining LLC must submit an affidavit of annual labor and pay the annual rents as calculated by the DNR by November 30 each year. The rental fees for the period September 1, 2023, to September 1,

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2024, of $164,298 have been paid, and the claims have been renewed accordingly to September 1, 2024.

No other rights are held by any other company on the property and the claims are held to perpetuity as long as annual minimum expenditure requirements are met and rents paid on time each year. Reclamation must be completed annually and a reclamation report is submitted to the DNR.

As of June 30, 2023, the Company has total capitalized exploration and evaluation expenditure on the property of A$81,070,075 and the associated plant and equipment has a net value of A$3,025,170

Figures 21-1 and 21-2 are fact sheets from the Alaska Department of Natural Resources outlining the Alaska State mining claims recording requirements.

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Department of Natural Resources

Division of Mining, Land and Water

Fact Sheet: Key Dates for Miners on State Land

Recording Requirements

Requirement	Time Period Covered	Date Due	Where
Recording new mining claims and prospecting sites	_____	Within 45 days after posting date	District Recorder's Office in which the claim is located.
Paying first required rental for claims is $40 per traditional or ¼-¼ section MTRSC claim; and $165 for each ¼ section MTRSC claim; and $305 for each prospecting site.	For claims – from posting date through August 31. For prospecting sites – for the full two-year term of the site.	Within 45 days after posting date.	Department of Natural Resources (DNR) Public Information Center Offices, Anchorage Financial Services Office or the Recording Office at the time of recording and if accompanied by required worksheet.
Paying future claim rental is: $40 or $165 per claim for year 0-5; $85 or $330 per claim for years 6-10; $205 or $825 per claim for years 11 or more. **Paying further lease rental is** $1.03 per acre 0-5 years $2.06 per acre 6-10 years $5.16 per acre 11 or more years.	Rental Years begin at noon on September 1 Examples: 2020 Rental Year is: Sept 1, 2019 – Sept 1, 2020 2021 Rental Year is: Sept 1, 2020 – Sept 1, 2021 Etc.	Due September 1 at the start of the Rental Year but payable no later than November 30.	DNR per Courtesy Billing Notice
Recording Annual Labor Statement describing required labor information for claims in the minimum amount of $100 per traditional or ¼ - ¼ section MTRSC claim; or $400 per ¼ section MTRSC claim and $100 per each 40 acres of a mining lease. **OR** A payment in lieu of labor equivalent to the above amounts per claim with a recorded Statement of Annual Labor.	Labor Year is Noon September 1 through Noon September 1 of the following year. 2020 Labor Year is: Sept 1, 2019 – Sept 1, 2020 2021 Labor Year is: Sept 1, 2020 – Sept 1, 2021	Statement of Annual Labor must be recorded by November 30. Payment must be received at DNR by September 1 at the end of the Labor Year and a Statement of Annual Labor must be recorded by November 30.	District Recorder's Office in which claim is located. DNR in which the claim is located.

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Figure 21-1: Alaska State mining claim requirements (page 1)

State-Selected Land: Annual Labor **is not due** until the State receives tentative approval or patent to the selection from the federal government. The Labor Year for a Mining Claim or Leasehold Location begins at noon on the first September 1 after the date the federal government conveys the selection and is due the following September 1. Annual rental begins on the date of conveyance and must be received within 90 days of conveyance. The first payment covers from the date of conveyance to noon September 1. The Mining Section attempts to notify owners of claims on state-selected land when tentative approval is received. Ultimately it is the claim owner's responsibility for keeping informed of changes.

Permitting / Reclamation / Mining Taxes

Requirement	Time Period Covered	Date Due	Where
Annual Placer Mining, Hardrock Exploration, Or Suction Dredge Application	Annual, or Multi-Year up to 5 years	Early November-December is not too soon.	Division of Mining, Land & Water (DMLW)
Reclamation Plan (If greater than 5 acres)	Up to 10 years	60 or more days prior to mining.	DMLW
Reclamation Letter of Intent (If less than 5 acres)	Annual	Prior to mining.	DMLW
Reclamation Statement (If less than 5 acres)	Annual	January 1 of the year following mining.	DMLW
Mining License Tax on Mines and Mining	Tax Year	April 30	Department of Revenue
Mining License Tax on royalties from Mining	Tax Year	April 30	Department of Revenue
Production Royalty	Calendar Year Fiscal Year	May 1 1st day of the 5th month after the end of the fiscal year.	DMLW

Mining Information Contacts

Questions concerning mining on **State** land can be directed to:

Public Information Center
550 West 7th Avenue, Suite 1360
Anchorage, AK 99501-3561
Phone: 907-269-8400
Fax: 907-269-8901
dnr.pic@alaska.gov

Public Information Center
3700 Airport Way
Fairbanks, AK 99709-4699
Phone: 907-451-2705
Fax: 907-451-2706
fbx-pic@alaska.gov

Division of Mining, Land & Water
550 West 7th Avenue, Suite 900B
Anchorage, AK 99501-3577
Phone: 907-269-8642

Statewide TTY: 711 for Alaska Relay or 1-800-770-8973

Questions concerning mining on **Federal** land can be directed to:

Bureau of Land Management
222 West 7th Avenue # 13
Anchorage, AK 99513
Phone: 907-271-5960

Bureau of Land Management
1150 University Avenue
Fairbanks, AK 99709
Phone: 907-474-2200

July 2021 *Page 2 of 2*

Figure 21-2: Alaska State mining claim requirements (page 2)

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22. Interpretation and Conclusions

The Initial Assessment Technical Review Summary provides justification to state mineral resources at Estelle Gold Project.

22.1 Sampling, Preparation, Analysis and Security

The procedures documented for sampling, analysis and security are deemed adequate. Analysis of the QAQC samples indicates the laboratory results are of sufficient quality for resource estimation.

22.2 Data Verification

The resource database provided is of sufficient quality for resource estimation.

22.3 Metallurgical Test Work

The recoveries used for Resource estimate are reasonable for this level of study based on the metallurgical testing to date.

22.4 Resource Estimate

In the opinion of the QP the block model resource estimate and resource classification reported herein are a reasonable representation of the gold mineral resources found in the Korbel Main, Cathedral, RPM North, and RPM South deposits. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve.

22.5 Risk and Opportunities

No addition risks or opportunities were identified by the Qualified Persons.

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23. Recommendations

Based on the results obtained from this TRS, the following steps are recommended to maximize the economic potential of the Estelle Gold Project:

- Investigating the feasibility of particle ore sorting on the RPM resources. Ore sorting is crucial to boost the profit recovery on the Korbel Main ore and it may be able to high grade the material sent from RPM.
- Metallurgical laboratory program for RPM material to determine whether there is free gold present that is separate from the arsenopyrite, and whether it impacts flotation and leach recoveries. Gravity concentration tests should also be included in the test program.
- Conducting laboratory testing on fines to obtain an average grade to determine potential upgrading in fines. Higher grade fines have a considerable positive effect on the economics and help with increasing the sorter performance being fed lower grade ore.
- Ongoing resource delineation drilling to continue to prove up and expand existing deposits.
- Ongoing exploration activities leading to further discoveries and additional resource deposit potential.
- Continue drilling, test work and studies required for completion of a Pre-Feasibility Study

24. References

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25. Reliance on Information Provided by the Registrant

Some of the technical information included in the report is reliant on estimates and assumptions provided by Nova Minerals. Roughstock Mining has not researched into the validity of the information provided and considers the client to be responsible for the justification of the information.

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This report summarizes the expected responsibilities of work carried out by each company. The scope of work or division of responsibility for each company is listed in

and when combined, makes up the total Project scope.

Table 25-1: Estelle Gold Project - Initial Assessment Report division of responsibility

Division of Responsibility		
Section	**Section Name**	**Responsible Party**
1	Executive Summary	Roughstock Mining
2	Introduction	Roughstock Mining
3	Property Description	Hans Hoffman, Nova
4	Accessibility, Climate, Local Resources, Infrastructure and Physiography	Hans Hoffman, Nova
5	History	Hans Hoffman, Nova
6	Geological Setting, Mineralization and Deposit	Hans Hoffman, Nova
7	Exploration	Hans Hoffman, Nova
8	Sample Preparation, Analysis, and Security	Yukuskokon
9	Data Verification	Vannu Khounphakdee, Nova
10	Mineral Processing and Metallurgical Testing	METS Engineering
11	Mineral Resource Estimates	Matrix Resource Consultants
12	Mineral Reserve Estimates	Not applicable
13	Mining Methods	Hans Hoffman, Nova
14	Process and Recovery Methods	METS Engineering
15	Infrastructure	Hans Hoffman, Nova
16	Market Studies	Christopher Gerteisen, Nova
17	Environmental Studies, Permitting and Social or Community Impact	Jade North
18	Capital and Operating Costs	Christopher Gerteisen, Nova
19	Economic analysis	Not applicable
20	Adjacent Properties	Hans Hoffman, Nova
21	Other Relevant Data and Information	Hans Hoffman, Nova
22	Interpretation and Conclusions	All
23	Recommendations	All
24	References	All

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25.1 QP Statements

Roughstock Mining Services, LLC

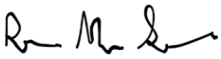
Roughstock Mining Services, LLC (Roughstock Mining) certifies that:

1. This certificate applies to the SK-1300 Initial Assessment Technical Report Summary for the Estelle Gold Project Alaska, USA with an effective date of January 31, 2024.
2. Roughstock Mining is located at 250 Blue Sky Trail, Bozeman, Montana 59718, USA.
3. Roughstock Mining employs professional geologists and engineers that conform to the SEC qualified person definition.
4. Roughstock Mining employs qualified persons with at least 5 year of relevant experience with this type of project.
5. Roughstock Mining employees involved with the preparation of the report have read the definition of "qualified person" set out in SEC SK-1300 Regulation and certify that by reason of education, affiliation with a professional association, and past relevant work experience, that said Roughstock Mining employees fulfill the requirements to be a "qualified person" for the purposes of SEC Regulation SK-1300.
6. Roughstock Mining is responsible for the preparation Sections 1 and 2 of this report.
7. Roughstock Mining completed a personal inspection of the Estelle Gold Project on November 30th and December 1st, 2023.
8. As defined in SEC Regulation SK-1300, Roughstock is independent of the issuer, Nova Minerals.
9. To the best of Roughstock Mining's knowledge, information and belief, at the effective date of January 31, 2024, the Initial Assessment Technical Report Summary contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Effective Date: January 31, 2024

Signed Date: 1-24-2024

Signed:



Roughstock Mining Services

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Hans Hoffman, Nova Minerals

I, Hans Hoffman, a State of Alaska Certified Professional Geologist, employed by Nova Minerals do certify that:

1. This certificate applies to the SK-1300 Initial Assessment Technical Report Summary for the Estelle Gold Project Alaska, USA with an effective date of January 31, 2024.
2. I am a Geologist affiliated with Nova Minerals which is located at 1150 S Colony Way, Suite 3-440, Palmer, AK 99645
3. I am American Institute of Professional Geologists member number 11898in good standing. I am a graduate of University of Wisconsin, Madison, Wisconsin in 2003 with a Bachelor of Science in Geological Engineering with a double major in Geology &Geophysics.
4. I am a qualified person with at least 5 years of relevant experience with this type of project. I have nearly 20 years' experience in mineral exploration and infrastructure development projects across the State of Alaska.
5. I have read the definition of "qualified person" set out in SEC SK-1300 Regulation and certify that by reason of education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a Qualified Person (QP) for the purposes of SEC Regulation SK-1300.
6. I am responsible for the preparation Sections 3, 4, 5, 6, 7, 13, 15, 20 and 21 of this report.
7. I am a direct contractor to Nova Minerals and have been involved with the Estelle Gold Project intermittently since *June, 2010*.
8. To the best my knowledge, information and belief, at the effective date of January 31, 2024, the Initial Assessment Technical Report Summary contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Effective Date: January 31, 2024

Signed Date: ____1-23-2024_____

Signed:

_____

Hans Hoffman

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Yukuskokon Professional Services

Yukuskokon Professional Services (Yukuskokon) certifies that:

1. This certificate applies to the SK-1300 Initial Assessment Technical Report Summary for the Estelle Gold Project Alaska, USA with an effective date of January 31, 2024.
2. Yukuskokon is located at 4394 Farm Loop Road, Palmer Alaska, 99645.
3. Yukuskokon employs professional geologists and engineers that conform to the SEC qualified person definition.
4. Yukuskokon employs qualified persons with at least 5 year of relevant experience with this type of project.
5. Yukuskokon employees involved with the preparation of the report have read the definition of "qualified person" set out in SEC SK-1300 Regulation and certify that by reason of education, affiliation with a professional association, and past relevant work experience, that said Yukuskokon employees fulfill the requirements to be a Qualified Person (QP) for the purposes of SEC Regulation SK-1300.
6. Yukuskokon is responsible for the preparation Section 8 of this report.
7. Yukuskokon has conducted many regular site inspections since 2018, and its personnel has been at site throughout all drilling, logging, sampling and preparation activities since 2018.
8. As defined in SEC Regulation SK-1300, Yukuskokon is independent of the issuer, Nova Minerals.
9. To the best of Yukuskokon's knowledge, information and belief, at the effective date of January 31, 2024, the Initial Assessment Technical Report Summary contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Effective Date: January 31, 2024

Signed Date: 1/25/2024

Signed: Digitally signed by William J. Burnett
Date: 2024.01.25 20:52:29 -09'00'

Yukuskokon Professional Services

Vannu Khounphakdee, Nova Minerals

I, Vannu Khounphakdee, P. Geo employed by Nova Minerals do certify that:

1. This certificate applies to the SK-1300 Initial Assessment Technical Report Summary for the Estelle Gold Project Alaska, USA with an effective date of January 31, 2024.
2. I am a Geologist affiliated with Nova Minerals which is located at Savang village, Vangvieng district, Vientiane province, Lao P.D.R.
3. I am a Professional Geologist, and member (#8369) of the Australian Institute of Geoscientists, in good standing. I am a graduate of Krivoy Rog National University, Ukraine, 1992 with a Master of Science in Mine Geology and Engineering
4. I am a qualified person with at least 5 years of relevant experience with this type of project having held numerous technical roles with a focus primarily on precious metals.
5. I have read the definition of "qualified person" set out in SEC SK-1300 Regulation and certify that by reason of education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a Qualified Person (QP) for the purposes of SEC Regulation SK-1300.
6. I am responsible for the preparation Section 9 of this report.
7. I am an employee of Nova Minerals and have worked on the Estelle Gold Project since August, 2021.
8. To the best my knowledge, information and belief, at the effective date of January 31, 2024, the Initial Assessment Technical Report Summary contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Effective Date: January 31, 2024

Signed Date: January 25, 2024

Signed:

_____

Vannu Khounphakdee

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METS Engineering

METS Engineering certifies that:

1. This certificate applies to the SK-1300 Initial Assessment Technical Report Summary for the Estelle Gold Project Alaska, USA with an effective date of January 31, 2024.
2. METS Engineering is located at located at L3, 44 Parliament Place, West Perth, 6005, Australia.
3. METS Engineering employs professional metallurgists and engineers that conform to the SEC qualified person definition.
4. METS Engineering employs qualified persons with at least 5 year of relevant experience with this type of project.
5. METS Engineering employees involved with the preparation of the report have read the definition of "qualified person" set out in SEC SK-1300 Regulation and certify that by reason of education, affiliation with a professional association, and past relevant work experience, that said METS Engineering employees fulfill the requirements to be a Qualified Person (QP) for the purposes of SEC Regulation SK-1300.
6. METS Engineering is responsible for the preparation Sections 10 and 14 of this report.
7. METS Engineering has not made a personal inspection of the Estelle Gold Project site. The nature of work related to Sections 10 and 14 do not require a personal inspection of the site.
8. As defined in SEC Regulation SK-1300, METS Engineering is independent of the issuer, Nova Minerals.
9. To the best of METS Engineering's knowledge, information and belief, at the effective date of January 31, 2024, the Initial Assessment Technical Report Summary contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Effective Date: January 31, 2024

Signed Date: January 26, 2024

Signed:

_____ _____

METS Engineering

Matrix Resource Consultants Pty Ltd

Matrix Resource Consultants Pty Ltd (Matrix) certifies that:

1. This certificate applies to the SK-1300 Initial Assessment Technical Report Summary for the Estelle Gold Project Alaska, USA with an effective date of January 31, 2024.
2. Matrix is located at 6/32 Hulme Court, Myaree, Perth 6154, Australia.
3. Matrix employs professional geologists that conform to the SEC qualified person definition.
4. Matrix employs qualified persons with at least 5 year of relevant experience with this type of project.
5. Matrix employees involved with the preparation of the report have read the definition of "qualified person" set out in SEC SK-1300 Regulation and certify that by reason of education, affiliation with a professional association, and past relevant work experience, that said Matrix employees fulfill the requirements to be a Qualified Person (QP) for the purposes of SEC Regulation SK-1300.
6. Matrix is responsible for the preparation of Section 11 of this report.
7. Matrix has not made a personal inspection of the Estelle Gold Project site. The nature of work related to Section 11 does not require a personal inspection of the site.
8. As defined in SEC Regulation SK-1300, Matrix is independent of the issuer, Nova Minerals.
9. To the best of Matrix's knowledge, information and belief, at the effective date of January 31, 2024, the Initial Assessment Technical Report Summary contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Effective Date: January 31, 2024

Signed Date: January 26, 2024

Signed:

_____

Matrix Resource Consultants

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Christopher Gerteisen, Nova Minerals

I, Christopher Gerteisen, is employed by Nova Minerals and certifies that:

1. This certificate applies to the SK-1300 Initial Assessment Technical Report Summary for the Estelle Gold Project Alaska, USA with an effective date of January 31, 2024.
2. I am a Geologist affiliated with Nova Minerals which is located at 1150 S. Colony Way, Suite 3-440, Palmer, Alaska 99645.
3. I am a Professional Geologist, and member (#2924) of the Australian Institute of Geoscientists, in good standing. I am a graduate of Western Australian School of Mines, Kalgoorlie, Western Australia in 1999 with a Master of Science in Economic Geology.
4. I am a qualified person with at least 5 year of relevant experience with this type of project having held numerous technical and executive roles with a focus primarily on precious and base metals.
5. I have read the definition of "qualified person" set out in SEC SK-1300 Regulation and certify that by reason of education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a Qualified Person (QP) for the purposes of SEC Regulation SK-1300.
6. I am responsible for the preparation Sections 16 and 18 of this report.
7. I am an employee of Nova Minerals and have worked on the Estelle Gold Project since July, 2019.
8. To the best my knowledge, information and belief, at the effective date of January 31, 2024, the Initial Assessment Technical Report Summary contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Effective Date: January 31, 2024

Signed Date: January 23, 2024

Signed:

Christopher Gerteisen

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Jade North

Jade North, LLC (Jade North) certifies that:

1. This certificate applies to the SK-1300 Initial Assessment Technical Report Summary for the Estelle Gold Project Alaska, USA with an effective date of January 31, 2024.
2. Jade North is located at 2543 Brooke Drive, Anchorage, Alaska 99517
3. Jade North employs professional environmental scientists that conform to the SEC qualified person definition.
4. Jade North employs qualified persons with at least 5 year of relevant experience with this type of project.
5. Jade North employees involved with the preparation of the report have read the definition of "qualified person" set out in SEC SK-1300 Regulation and certify that by reason of education, and past relevant work experience, that said Jade North employees fulfill the requirements to be a Qualified Person (QP) for the purposes of SEC Regulation SK-1300.
6. Jade North is responsible for the preparation Section 17 of this report.
7. Jade North completed 2 personal inspections of the Estelle Gold Project: December 2020 and September 2021.
8. As defined in SEC Regulation SK-1300, Jade North is independent of the issuer, Nova Minerals.
9. To the best of Jade North's knowledge, information and belief, at the effective date of January 31, 2024, the Initial Assessment Technical Report Summary contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Effective Date: January 31, 2024

Signed Date: January 25, 2024

Signed:

Jade North, LLC

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26. Appendix 1: Estelle Gold Project Mining Claims

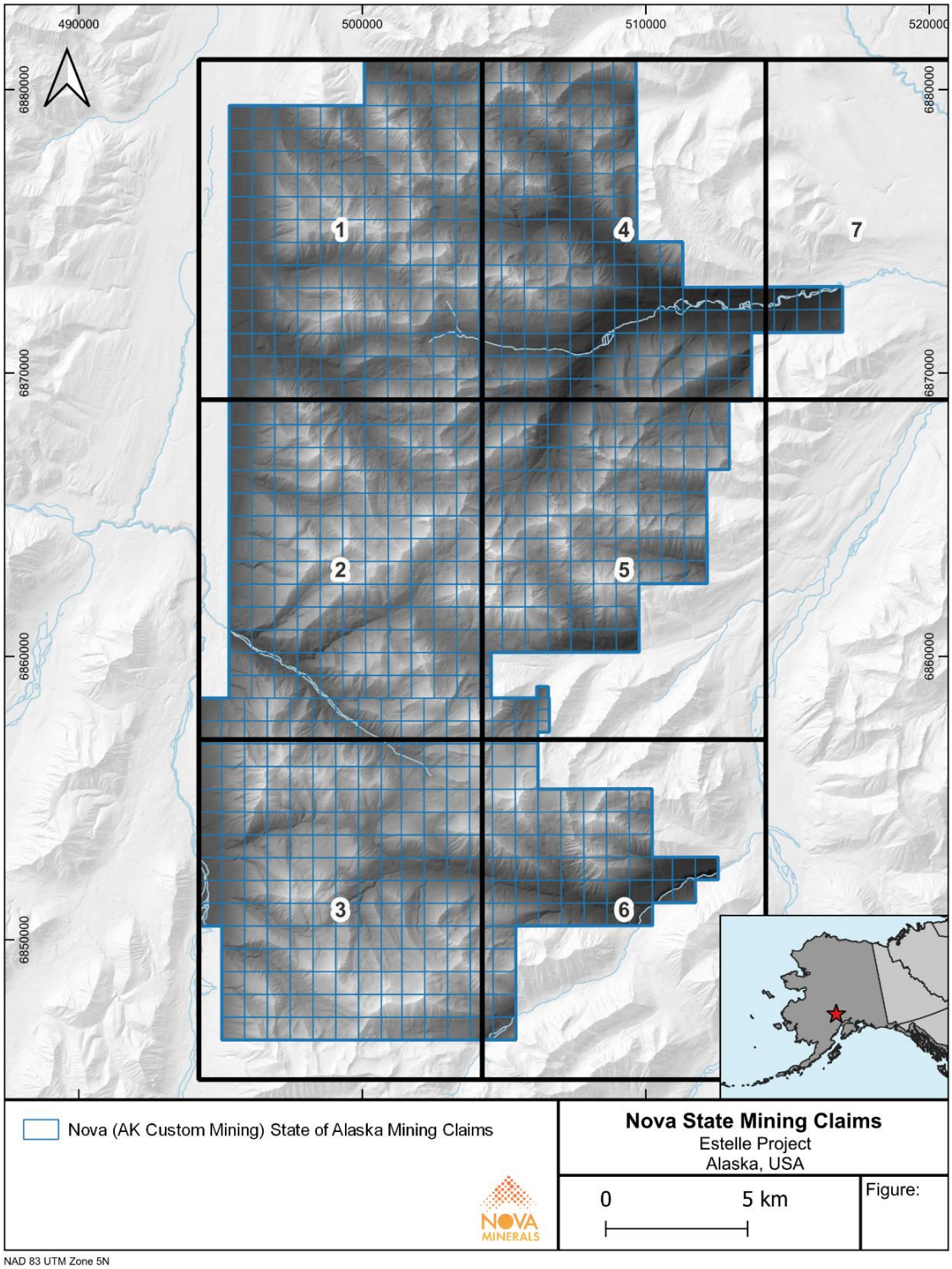

Figure 26-1: Map of Nova Minerals controlled Alaska State mining claims

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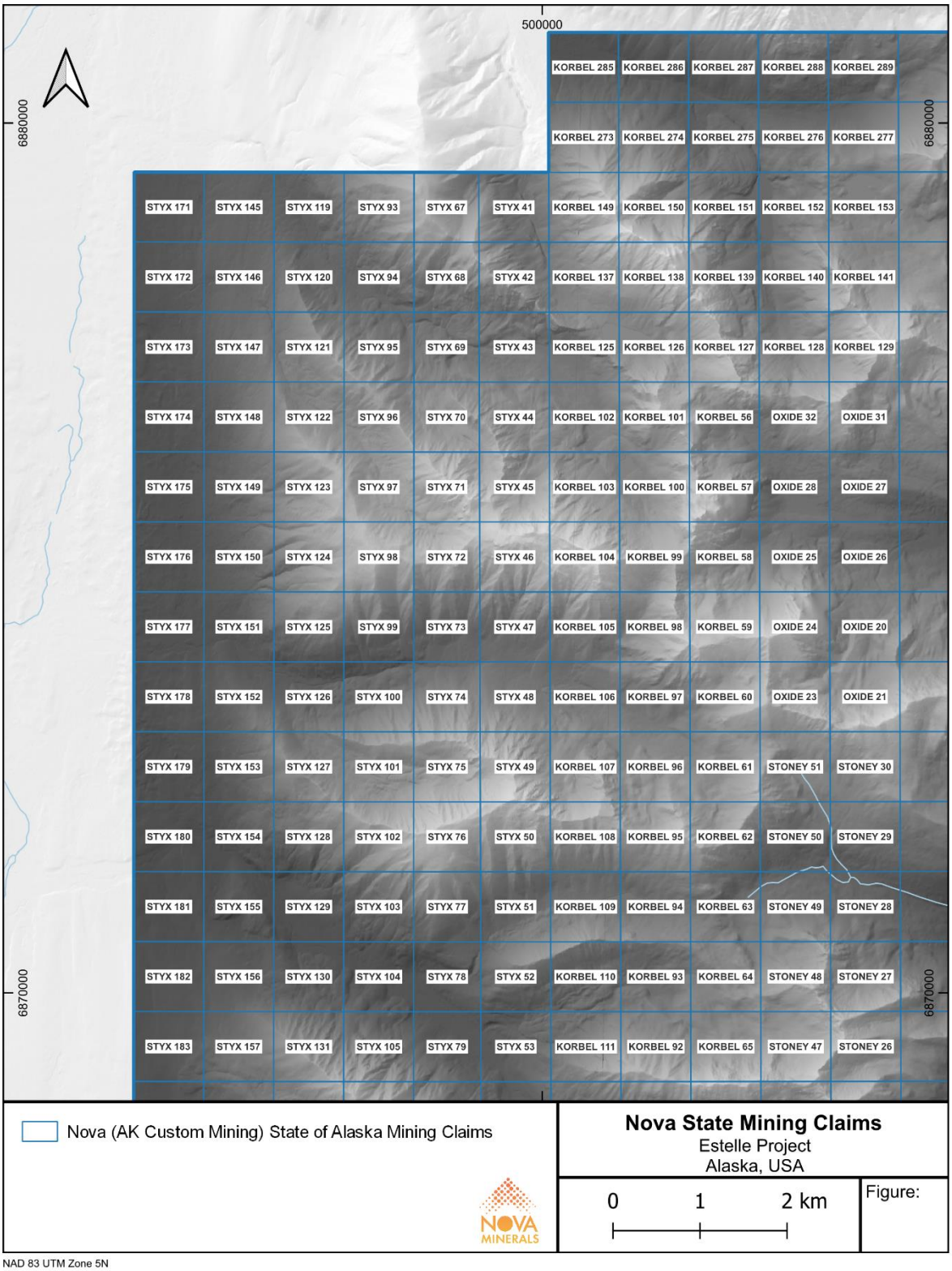
The following figures correspond to Figure 26-1 Section 1 through 7:



Section 1.

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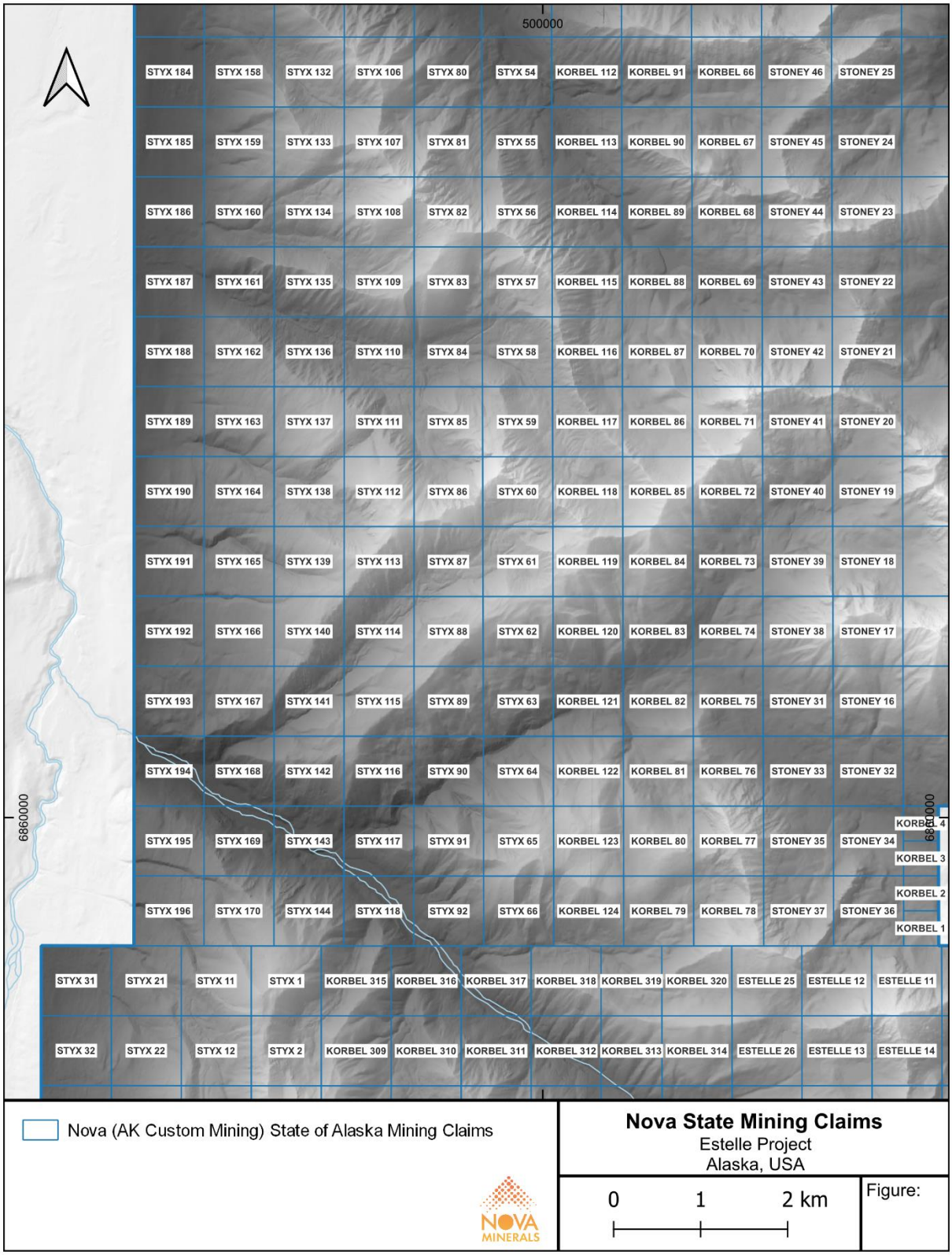

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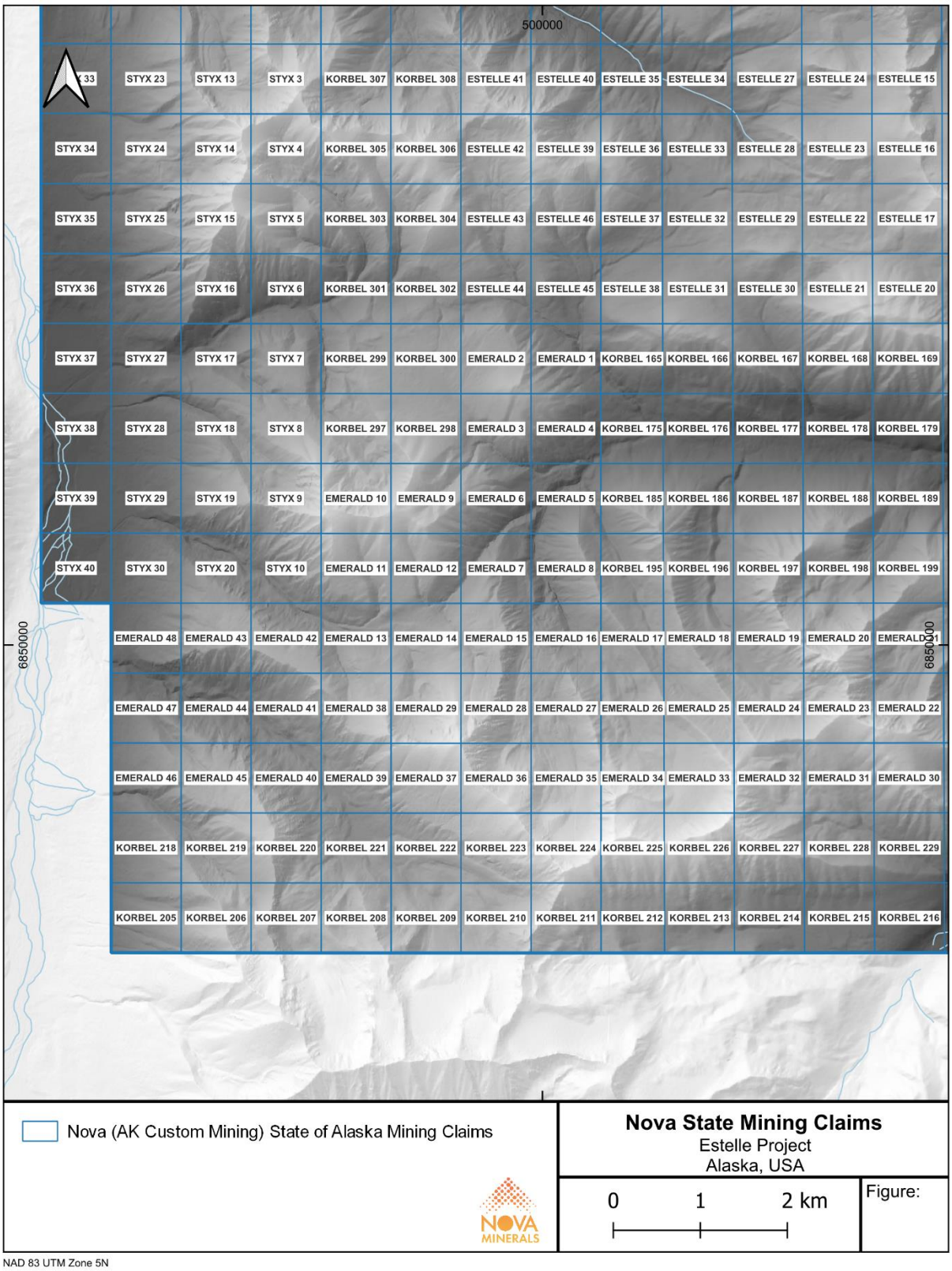

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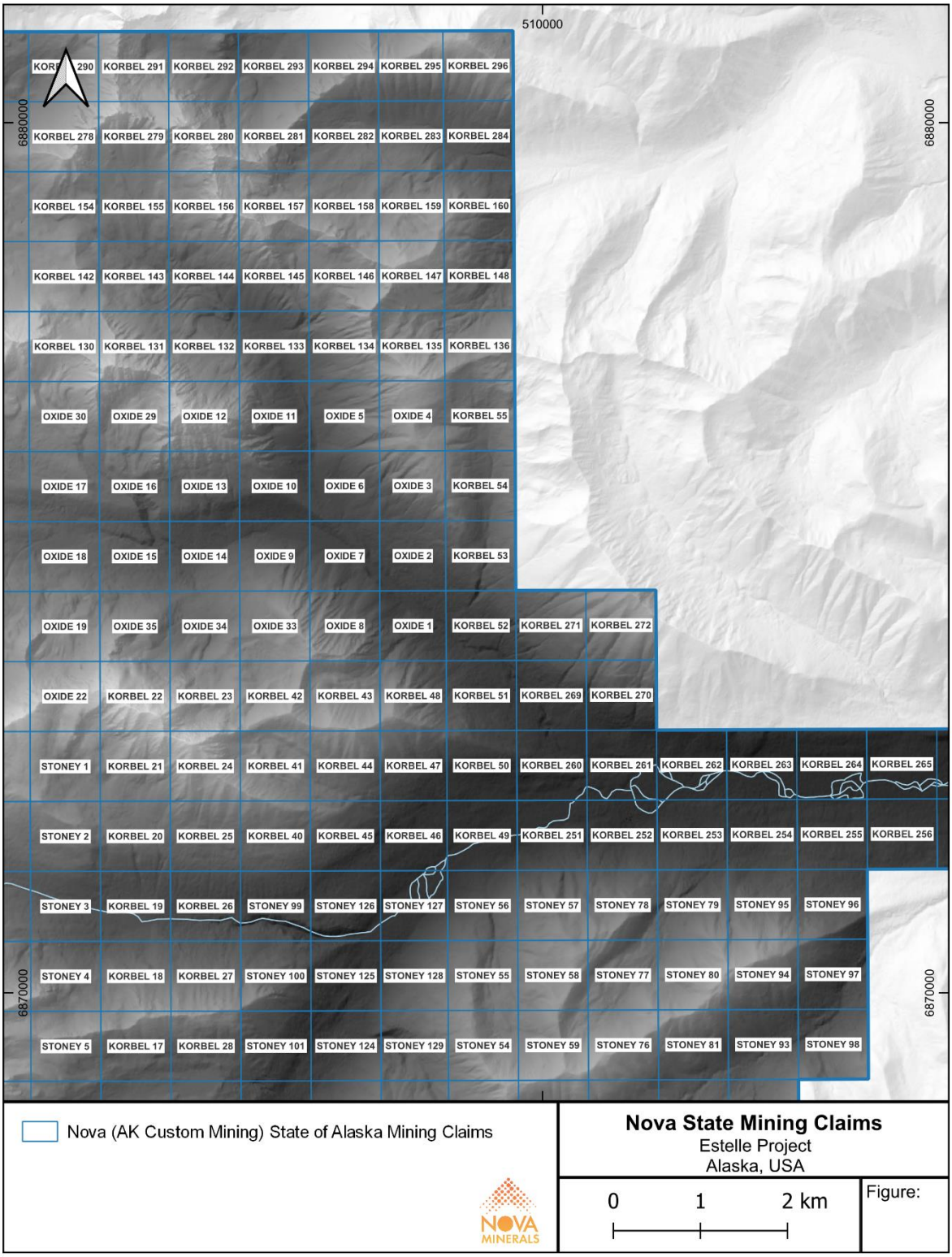

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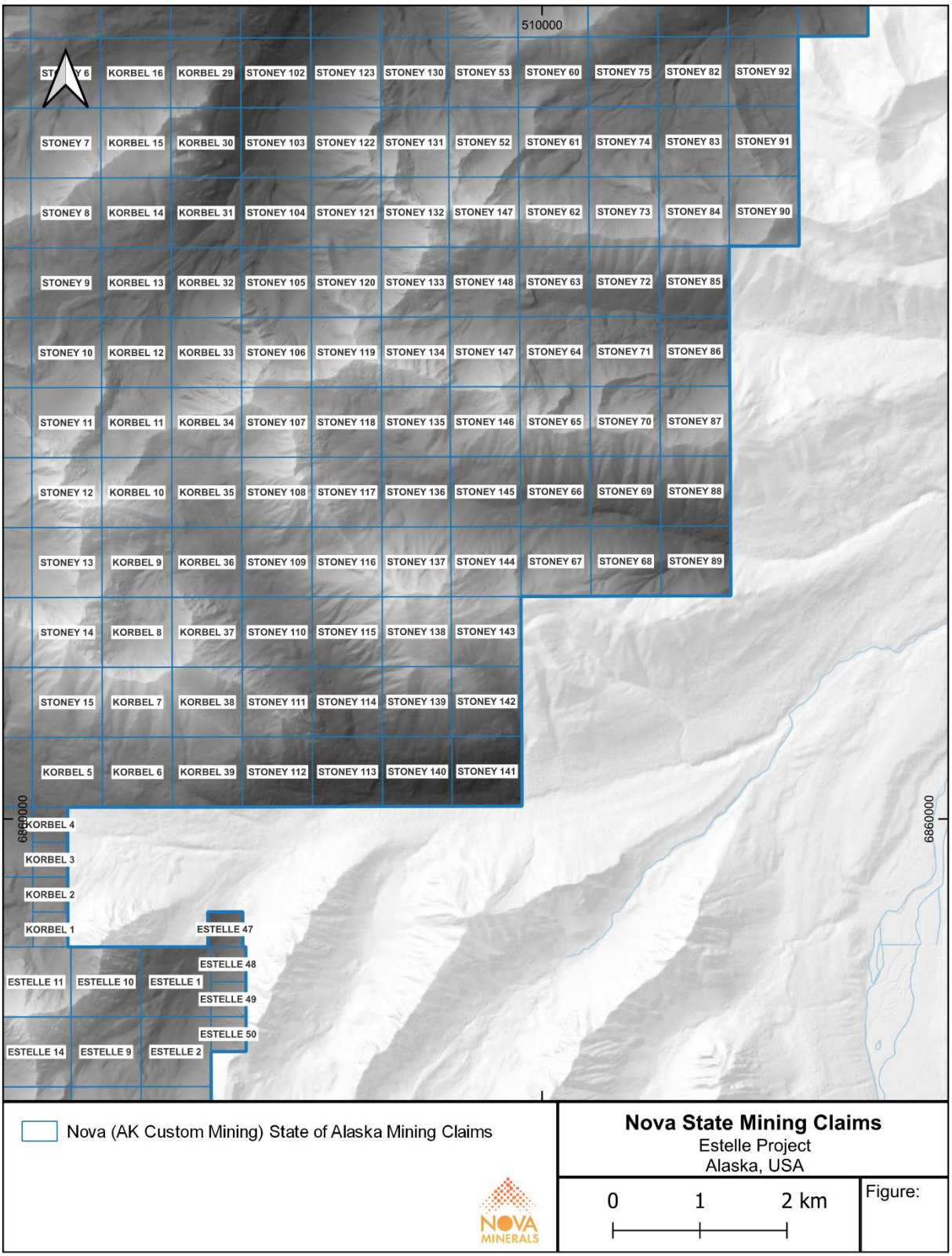

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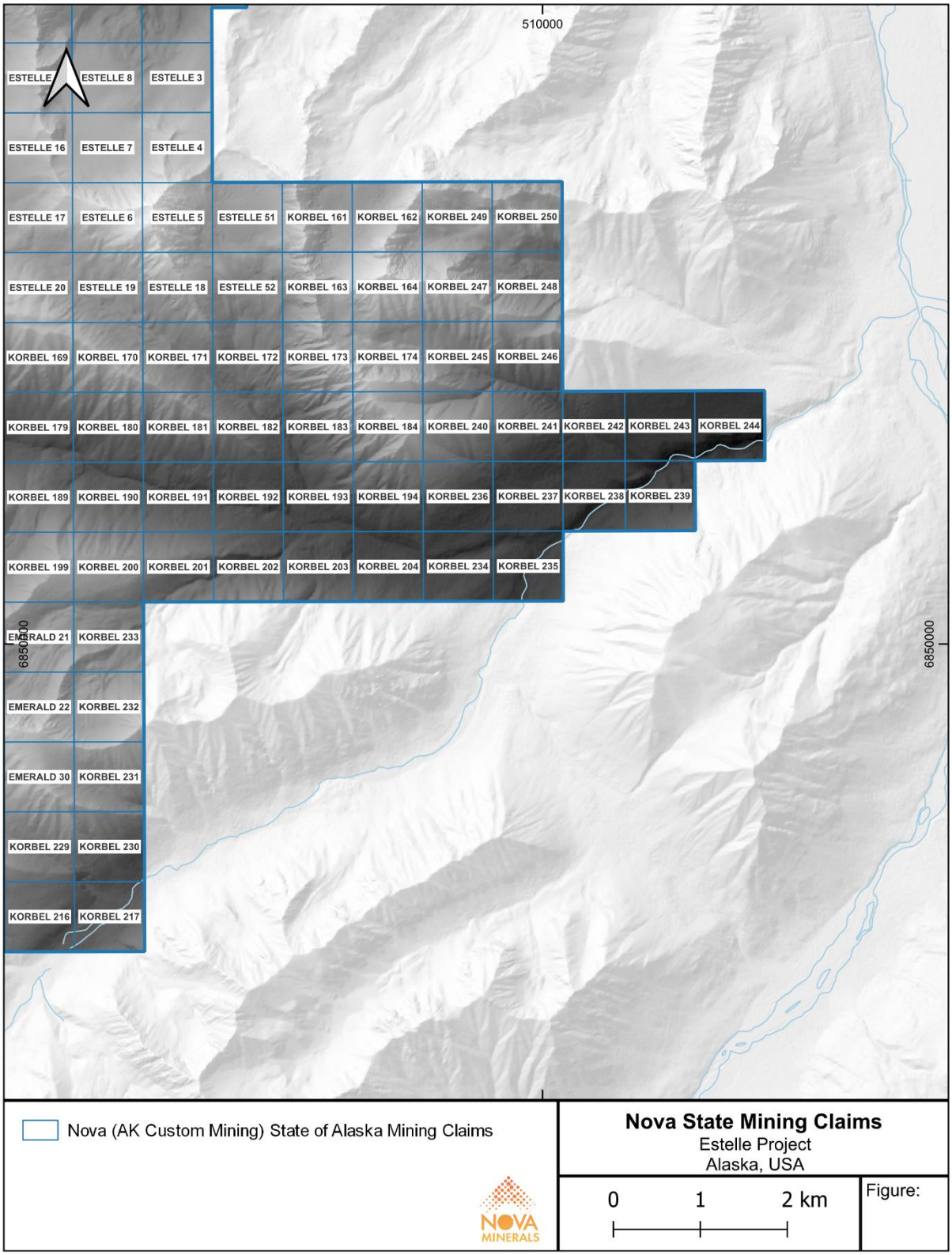

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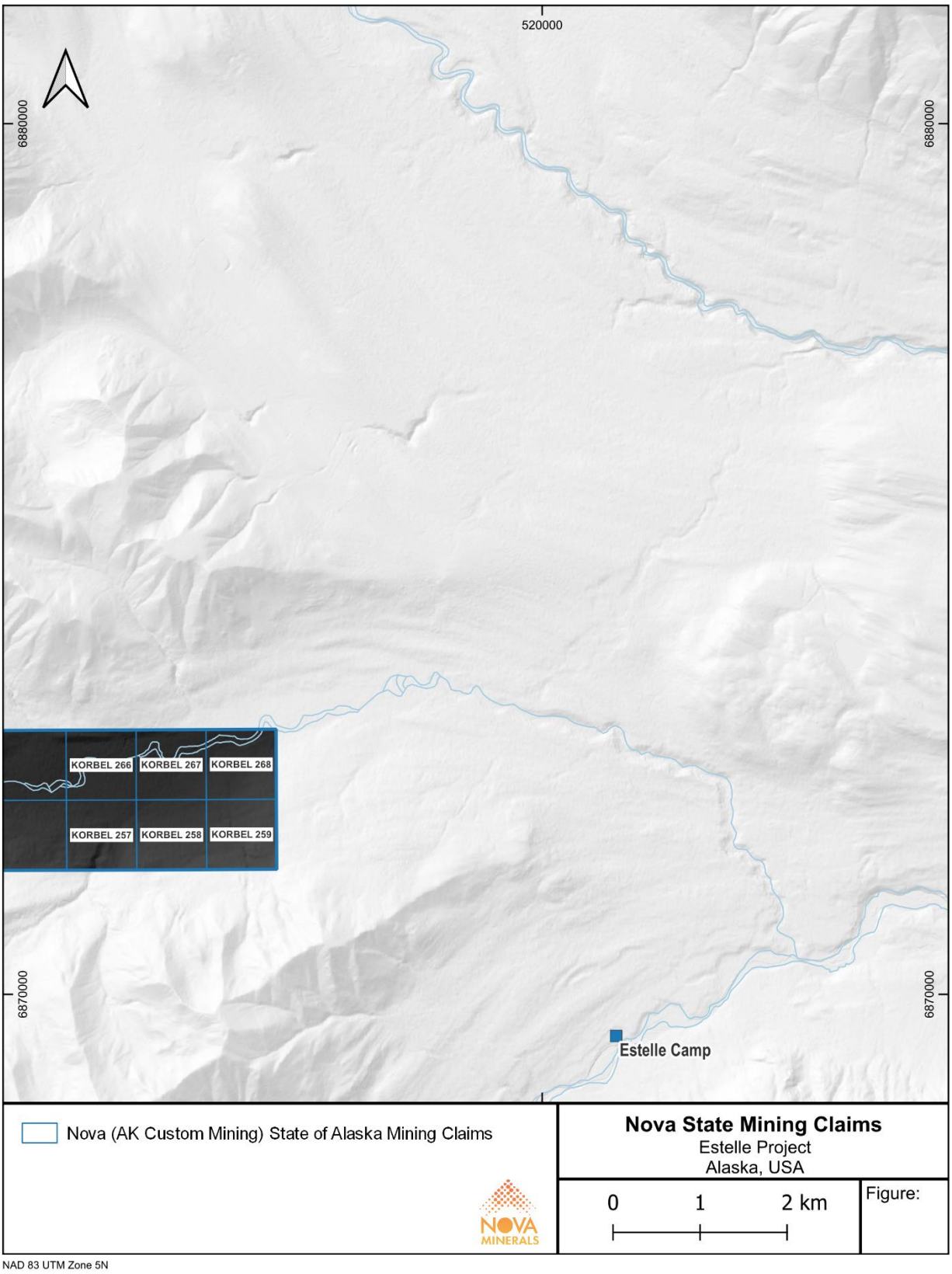

Section 7.

Table 26-1: List of Nova Minerals 800 Alaska State mining claims

ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 725940	ESTELLE 13	07-SEP-17	S020N020W05	160
ADL 725941	ESTELLE 22	07-SEP-17	S020N020W17	160
ADL 725942	ESTELLE 23	07-SEP-17	S020N020W08	160
ADL 725943	ESTELLE 24	07-SEP-17	S020N020W08	160
ADL 725944	ESTELLE 26	07-SEP-17	S020N020W05	160
ADL 725945	ESTELLE 27	07-SEP-17	S020N020W08	160
ADL 725946	ESTELLE 34	07-SEP-17	S020N020W07	160
ADL 725947	ESTELLE 35	07-SEP-17	S020N020W07	160
ADL 725948	ESTELLE 36	07-SEP-17	S020N020W07	160
ADL 725949	STONEY 18	07-SEP-17	S021N020W22	160
ADL 725950	STONEY 19	07-SEP-17	S021N020W15	160
ADL 725951	STONEY 39	07-SEP-17	S021N020W21	160
ADL 725952	STONEY 40	07-SEP-17	S021N020W16	160
ADL 725953	STONEY 41	07-SEP-17	S021N020W16	160
ADL 725954	STONEY 42	07-SEP-17	S021N020W09	160
ADL 725955	STONEY 43	07-SEP-17	S021N020W09	160
ADL 725956	EMERALD 38	07-SEP-17	S020N021W35	160
ADL 725957	EMERALD 39	07-SEP-17	S019N021W02	160
ADL 725958	EMERALD 40	07-SEP-17	S019N021W03	160
ADL 725959	EMERALD 41	07-SEP-17	S020N021W34	160
ADL 725960	EMERALD 42	07-SEP-17	S020N021W34	160
ADL 725961	EMERALD 43	07-SEP-17	S020N021W34	160
ADL 725962	EMERALD 44	07-SEP-17	S020N021W34	160
ADL 725963	EMERALD 45	07-SEP-17	S019N021W03	160
ADL 725964	EMERALD 46	07-SEP-17	S019N021W04	160
ADL 725965	EMERALD 47	07-SEP-17	S020N021W33	160
ADL 725966	EMERALD 48	07-SEP-17	S020N021W33	160
ADL 726071	OXIDE 1	07-SEP-17	S022N019W18	160
ADL 726072	OXIDE 2	07-SEP-17	S022N019W07	160
ADL 726073	OXIDE 3	07-SEP-17	S022N019W07	160
ADL 726074	OXIDE 4	07-SEP-17	S022N019W06	160
ADL 726075	OXIDE 5	07-SEP-17	S022N020W01	160
ADL 726076	OXIDE 6	07-SEP-17	S022N020W12	160
ADL 726077	OXIDE 7	07-SEP-17	S022N020W12	160
ADL 726078	OXIDE 8	07-SEP-17	S022N020W13	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 726079	OXIDE 9	07-SEP-17	S022N020W12	160
ADL 726080	OXIDE 10	07-SEP-17	S022N020W12	160
ADL 726081	OXIDE 11	07-SEP-17	S022N020W01	160
ADL 726082	OXIDE 12	07-SEP-17	S022N020W02	160
ADL 726083	OXIDE 13	07-SEP-17	S022N020W11	160
ADL 726084	OXIDE 14	07-SEP-17	S022N020W11	160
ADL 726085	OXIDE 15	07-SEP-17	S022N020W11	160
ADL 726086	OXIDE 16	07-SEP-17	S022N020W11	160
ADL 726087	OXIDE 17	07-SEP-17	S022N020W10	160
ADL 726088	OXIDE 18	07-SEP-17	S022N020W10	160
ADL 726089	OXIDE 19	07-SEP-17	S022N020W15	160
ADL 726090	OXIDE 20	07-SEP-17	S022N020W15	160
ADL 726091	OXIDE 21	07-SEP-17	S022N020W15	160
ADL 726092	OXIDE 22	07-SEP-17	S022N020W15	160
ADL 726093	OXIDE 23	07-SEP-17	S022N020W16	160
ADL 726094	OXIDE 24	07-SEP-17	S022N020W16	160
ADL 726095	OXIDE 25	07-SEP-17	S022N020W09	160
ADL 726096	OXIDE 26	07-SEP-17	S022N020W10	160
ADL 726097	OXIDE 27	07-SEP-17	S022N020W10	160
ADL 726098	OXIDE 28	07-SEP-17	S022N020W09	160
ADL 726099	OXIDE 29	07-SEP-17	S022N020W02	160
ADL 726100	OXIDE 30	07-SEP-17	S022N020W03	160
ADL 726101	OXIDE 31	07-SEP-17	S022N020W03	160
ADL 726102	OXIDE 32	07-SEP-17	S022N020W04	160
ADL 726103	STONEY 1	07-SEP-17	S022N020W22	160
ADL 726104	STONEY 2	07-SEP-17	S022N020W22	160
ADL 726105	STONEY 3	07-SEP-17	S022N020W27	160
ADL 726106	STONEY 4	07-SEP-17	S022N020W27	160
ADL 726107	STONEY 5	07-SEP-17	S022N020W34	160
ADL 726108	STONEY 6	07-SEP-17	S022N020W34	160
ADL 726109	STONEY 7	07-SEP-17	S021N020W03	160
ADL 726110	STONEY 8	07-SEP-17	S021N020W03	160
ADL 726111	STONEY 9	07-SEP-17	S021N020W10	160
ADL 726112	STONEY 10	07-SEP-17	S021N020W10	160
ADL 726113	STONEY 11	07-SEP-17	S021N020W15	160
ADL 726114	STONEY 12	07-SEP-17	S021N020W15	160
ADL 726115	STONEY 13	07-SEP-17	S021N020W22	160
ADL 726116	STONEY 14	07-SEP-17	S021N020W22	160
ADL 726117	STONEY 15	07-SEP-17	S021N020W27	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 726118	STONEY 16	07-SEP-17	S021N020W27	160
ADL 726119	STONEY 17	07-SEP-17	S021N020W22	160
ADL 726120	STONEY 20	07-SEP-17	S021N020W15	160
ADL 726121	STONEY 21	07-SEP-17	S021N020W10	160
ADL 726122	STONEY 22	07-SEP-17	S021N020W10	160
ADL 726123	STONEY 23	07-SEP-17	S021N020W03	160
ADL 726124	STONEY 24	07-SEP-17	S021N020W03	160
ADL 726125	STONEY 25	07-SEP-17	S022N020W34	160
ADL 726126	STONEY 26	07-SEP-17	S022N020W34	160
ADL 726127	STONEY 27	07-SEP-17	S022N020W27	160
ADL 726128	STONEY 28	07-SEP-17	S022N020W27	160
ADL 726129	STONEY 29	07-SEP-17	S022N020W22	160
ADL 726130	STONEY 30	07-SEP-17	S022N020W22	160
ADL 726131	STONEY 31	07-SEP-17	S021N020W28	160
ADL 726132	STONEY 32	07-SEP-17	S021N020W27	160
ADL 726133	STONEY 33	07-SEP-17	S021N020W28	160
ADL 726134	STONEY 34	07-SEP-17	S021N020W34	160
ADL 726135	STONEY 35	07-SEP-17	S021N020W33	160
ADL 726136	STONEY 36	07-SEP-17	S021N020W34	160
ADL 726137	STONEY 37	07-SEP-17	S021N020W33	160
ADL 726138	STONEY 38	07-SEP-17	S021N020W21	160
ADL 726139	STONEY 44	07-SEP-17	S021N020W04	160
ADL 726140	STONEY 45	07-SEP-17	S021N020W04	160
ADL 726141	STONEY 46	07-SEP-17	S022N020W33	160
ADL 726142	STONEY 47	07-SEP-17	S022N020W33	160
ADL 726143	STONEY 48	07-SEP-17	S022N020W28	160
ADL 726144	STONEY 49	07-SEP-17	S022N020W28	160
ADL 726145	STONEY 50	07-SEP-17	S022N020W21	160
ADL 726146	STONEY 51	07-SEP-17	S022N020W21	160
ADL 726147	ESTELLE 1	07-SEP-17	S020N020W03	160
ADL 726148	ESTELLE 2	07-SEP-17	S020N020W03	160
ADL 726149	ESTELLE 3	07-SEP-17	S020N020W10	160
ADL 726150	ESTELLE 4	07-SEP-17	S020N020W10	160
ADL 726151	ESTELLE 5	07-SEP-17	S020N020W15	160
ADL 726152	ESTELLE 6	07-SEP-17	S020N020W16	160
ADL 726153	ESTELLE 7	07-SEP-17	S020N020W09	160
ADL 726154	ESTELLE 8	07-SEP-17	S020N020W09	160
ADL 726155	ESTELLE 9	07-SEP-17	S020N020W04	160
ADL 726156	ESTELLE 10	07-SEP-17	S020N020W04	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 726157	ESTELLE 11	07-SEP-17	S020N020W04	160
ADL 726158	ESTELLE 12	07-SEP-17	S020N020W05	160
ADL 726159	ESTELLE 14	07-SEP-17	S020N020W04	160
ADL 726160	ESTELLE 15	07-SEP-17	S020N020W09	160
ADL 726161	ESTELLE 16	07-SEP-17	S020N020W09	160
ADL 726162	ESTELLE 17	07-SEP-17	S020N020W16	160
ADL 726163	ESTELLE 18	07-SEP-17	S020N020W15	160
ADL 726164	ESTELLE 19	07-SEP-17	S020N020W16	160
ADL 726165	ESTELLE 20	07-SEP-17	S020N020W16	160
ADL 726166	ESTELLE 21	07-SEP-17	S020N020W17	160
ADL 726167	ESTELLE 25	07-SEP-17	S020N020W05	160
ADL 726168	ESTELLE 28	07-SEP-17	S020N020W08	160
ADL 726169	ESTELLE 29	07-SEP-17	S020N020W17	160
ADL 726170	ESTELLE 30	07-SEP-17	S020N020W17	160
ADL 726171	ESTELLE 31	07-SEP-17	S020N020W18	160
ADL 726172	ESTELLE 32	07-SEP-17	S020N020W18	160
ADL 726173	ESTELLE 33	07-SEP-17	S020N020W07	160
ADL 726174	ESTELLE 37	07-SEP-17	S020N020W18	160
ADL 726175	ESTELLE 38	07-SEP-17	S020N020W18	160
ADL 726176	ESTELLE 39	07-SEP-17	S020N021W12	160
ADL 726177	ESTELLE 40	07-SEP-17	S020N021W12	160
ADL 726178	ESTELLE 41	07-SEP-17	S020N021W12	160
ADL 726179	ESTELLE 42	07-SEP-17	S020N021W12	160
ADL 726180	EMERALD 1	07-SEP-17	S020N021W24	160
ADL 726181	EMERALD 2	07-SEP-17	S020N021W24	160
ADL 726182	EMERALD 3	07-SEP-17	S020N021W24	160
ADL 726183	EMERALD 4	07-SEP-17	S020N021W24	160
ADL 726184	EMERALD 5	07-SEP-17	S020N021W25	160
ADL 726185	EMERALD 6	07-SEP-17	S020N021W25	160
ADL 726186	EMERALD 7	07-SEP-17	S020N021W25	160
ADL 726187	EMERALD 8	07-SEP-17	S020N021W25	160
ADL 726188	EMERALD 9	07-SEP-17	S020N021W26	160
ADL 726189	EMERALD 10	07-SEP-17	S020N021W26	160
ADL 726190	EMERALD 11	07-SEP-17	S020N021W26	160
ADL 726191	EMERALD 12	07-SEP-17	S020N021W26	160
ADL 726192	EMERALD 13	07-SEP-17	S020N021W35	160
ADL 726193	EMERALD 14	07-SEP-17	S020N021W35	160
ADL 726194	EMERALD 15	07-SEP-17	S020N021W36	160
ADL 726195	EMERALD 16	07-SEP-17	S020N021W36	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 726196	EMERALD 17	07-SEP-17	S020N020W31	160
ADL 726197	EMERALD 18	07-SEP-17	S020N020W31	160
ADL 726198	EMERALD 19	07-SEP-17	S020N020W32	160
ADL 726199	EMERALD 20	07-SEP-17	S020N020W32	160
ADL 726200	EMERALD 21	07-SEP-17	S020N020W33	160
ADL 726201	EMERALD 22	07-SEP-17	S020N020W33	160
ADL 726202	EMERALD 23	07-SEP-17	S020N020W32	160
ADL 726203	EMERALD 24	07-SEP-17	S020N020W32	160
ADL 726204	EMERALD 25	07-SEP-17	S020N020W31	160
ADL 726205	EMERALD 26	07-SEP-17	S020N020W31	160
ADL 726206	EMERALD 27	07-SEP-17	S020N021W36	160
ADL 726207	EMERALD 28	07-SEP-17	S020N021W36	160
ADL 726208	EMERALD 29	07-SEP-17	S020N021W35	160
ADL 726209	EMERALD 30	07-SEP-17	S019N020W04	160
ADL 726210	EMERALD 31	07-SEP-17	S019N020W05	160
ADL 726211	EMERALD 32	07-SEP-17	S019N020W05	160
ADL 726212	EMERALD 33	07-SEP-17	S019N020W06	160
ADL 726213	EMERALD 34	07-SEP-17	S019N020W06	160
ADL 726214	EMERALD 35	07-SEP-17	S019N021W01	160
ADL 726215	EMERALD 36	07-SEP-17	S019N021W01	160
ADL 726216	EMERALD 37	07-SEP-17	S019N021W02	160
ADL 727286	ESTELLE 43	17-FEB-18	S020N021W13	160
ADL 727287	ESTELLE 44	17-FEB-18	S020N021W13	160
ADL 727288	ESTELLE 45	17-FEB-18	S020N021W13	160
ADL 727289	ESTELLE 46	17-FEB-18	S020N021W13	160
ADL 728676	OXIDE 33	22-NOV-18	S022N020W13	160
ADL 728677	OXIDE 34	22-NOV-18	S022N020W14	160
ADL 728678	OXIDE 35	22-NOV-18	S022N020W14	160
ADL 728680	ESTELLE 48	22-NOV-18	S020N020W03	40
ADL 728681	ESTELLE 49	22-NOV-18	S020N020W03	40
ADL 728682	ESTELLE 50	22-NOV-18	S020N020W03	40
ADL 728683	ESTELLE 51	22-NOV-18	S020N020W15	160
ADL 728684	ESTELLE 52	22-NOV-18	S020N020W15	160
ADL 730362	KORBEL 1	23-SEP-19	S021N020W34	40
ADL 730363	KORBEL 2	23-SEP-19	S021N020W34	40
ADL 730364	KORBEL 3	23-SEP-19	S021N020W34	40
ADL 730365	KORBEL 4	23-SEP-19	S021N020W34	40
ADL 730366	KORBEL 5	23-SEP-19	S021N020W27	160
ADL 730367	KORBEL 6	23-SEP-19	S021N020W26	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 730368	KORBEL 7	23-SEP-19	S021N020W26	160
ADL 730369	KORBEL 8	23-SEP-19	S021N020W23	160
ADL 730370	KORBEL 9	23-SEP-19	S021N020W23	160
ADL 730371	KORBEL 10	23-SEP-19	S021N020W14	160
ADL 730372	KORBEL 11	23-SEP-19	S021N020W14	160
ADL 730373	KORBEL 12	23-SEP-19	S021N020W11	160
ADL 730374	KORBEL 13	23-SEP-19	S021N020W11	160
ADL 730375	KORBEL 14	23-SEP-19	S021N020W02	160
ADL 730376	KORBEL 15	23-SEP-19	S021N020W02	160
ADL 730377	KORBEL 16	23-SEP-19	S022N020W35	160
ADL 730378	KORBEL 17	23-SEP-19	S022N020W35	160
ADL 730379	KORBEL 18	23-SEP-19	S022N020W26	160
ADL 730380	KORBEL 19	23-SEP-19	S022N020W26	160
ADL 730381	KORBEL 20	23-SEP-19	S022N020W23	160
ADL 730382	KORBEL 21	23-SEP-19	S022N020W23	160
ADL 730383	KORBEL 22	23-SEP-19	S022N020W14	160
ADL 730384	KORBEL 23	23-SEP-19	S022N020W14	160
ADL 730385	KORBEL 24	23-SEP-19	S022N020W23	160
ADL 730386	KORBEL 25	23-SEP-19	S022N020W23	160
ADL 730387	KORBEL 26	23-SEP-19	S022N020W26	160
ADL 730388	KORBEL 27	23-SEP-19	S022N020W26	160
ADL 730389	KORBEL 28	23-SEP-19	S022N020W35	160
ADL 730390	KORBEL 29	23-SEP-19	S022N020W35	160
ADL 730391	KORBEL 30	23-SEP-19	S021N020W02	160
ADL 730392	KORBEL 31	23-SEP-19	S021N020W02	160
ADL 730393	KORBEL 32	23-SEP-19	S021N020W11	160
ADL 730394	KORBEL 33	23-SEP-19	S021N020W11	160
ADL 730395	KORBEL 34	23-SEP-19	S021N020W14	160
ADL 730396	KORBEL 35	23-SEP-19	S021N020W14	160
ADL 730397	KORBEL 36	23-SEP-19	S021N020W23	160
ADL 730398	KORBEL 37	23-SEP-19	S021N020W23	160
ADL 730399	KORBEL 38	23-SEP-19	S021N020W26	160
ADL 730400	KORBEL 39	23-SEP-19	S021N020W26	160
ADL 730401	KORBEL 40	23-SEP-19	S022N020W24	160
ADL 730402	KORBEL 41	23-SEP-19	S022N020W24	160
ADL 730403	KORBEL 42	23-SEP-19	S022N020W13	160
ADL 730404	KORBEL 43	23-SEP-19	S022N020W13	160
ADL 730405	KORBEL 44	23-SEP-19	S022N020W24	160
ADL 730406	KORBEL 45	23-SEP-19	S022N020W24	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 730407	KORBEL 46	23-SEP-19	S022N019W19	160
ADL 730408	KORBEL 47	23-SEP-19	S022N019W19	160
ADL 730409	KORBEL 48	23-SEP-19	S022N019W18	160
ADL 730410	KORBEL 49	23-SEP-19	S022N019W19	160
ADL 730411	KORBEL 50	23-SEP-19	S022N019W19	160
ADL 730412	KORBEL 51	23-SEP-19	S022N019W18	160
ADL 730413	KORBEL 52	23-SEP-19	S022N019W18	160
ADL 730414	KORBEL 53	23-SEP-19	S022N019W07	160
ADL 730415	KORBEL 54	23-SEP-19	S022N019W07	160
ADL 730416	KORBEL 55	07-SEP-19	S022N019W06	160
ADL 730417	KORBEL 56	23-SEP-19	S022N020W04	160
ADL 730418	KORBEL 57	23-SEP-19	S022N020W09	160
ADL 730419	KORBEL 58	23-SEP-19	S022N020W09	160
ADL 730420	KORBEL 59	23-SEP-19	S022N020W16	160
ADL 730421	KORBEL 60	23-SEP-19	S022N020W16	160
ADL 730422	KORBEL 61	23-SEP-19	S022N020W21	160
ADL 730423	KORBEL 62	23-SEP-19	S022N020W21	160
ADL 730424	KORBEL 63	23-SEP-19	S022N020W28	160
ADL 730425	KORBEL 64	23-SEP-19	S022N020W28	160
ADL 730426	KORBEL 65	23-SEP-19	S022N020W33	160
ADL 730427	KORBEL 66	23-SEP-19	S022N020W33	160
ADL 730428	KORBEL 67	23-SEP-19	S021N020W04	160
ADL 730429	KORBEL 68	23-SEP-19	S021N020W04	160
ADL 730430	KORBEL 69	23-SEP-19	S021N020W09	160
ADL 730431	KORBEL 70	23-SEP-19	S021N020W09	160
ADL 730432	KORBEL 71	23-SEP-19	S021N020W16	160
ADL 730433	KORBEL 72	23-SEP-19	S021N020W16	160
ADL 730434	KORBEL 73	23-SEP-19	S021N020W21	160
ADL 730435	KORBEL 74	23-SEP-19	S021N020W21	160
ADL 730436	KORBEL 75	23-SEP-19	S021N020W28	160
ADL 730437	KORBEL 76	23-SEP-19	S021N020W28	160
ADL 730438	KORBEL 77	23-SEP-19	S021N020W33	160
ADL 730439	KORBEL 78	23-SEP-19	S021N020W33	160
ADL 730440	KORBEL 79	23-SEP-19	S021N020W32	160
ADL 730441	KORBEL 80	23-SEP-19	S021N020W32	160
ADL 730442	KORBEL 81	23-SEP-19	S021N020W29	160
ADL 730443	KORBEL 82	23-SEP-19	S021N020W29	160
ADL 730444	KORBEL 83	23-SEP-19	S021N020W20	160
ADL 730445	KORBEL 84	23-SEP-19	S021N020W20	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 730446	KORBEL 85	23-SEP-19	S021N020W17	160
ADL 730447	KORBEL 86	23-SEP-19	S021N020W17	160
ADL 730448	KORBEL 87	23-SEP-19	S021N020W08	160
ADL 730449	KORBEL 88	23-SEP-19	S021N020W08	160
ADL 730450	KORBEL 89	23-SEP-19	S021N020W05	160
ADL 730451	KORBEL 90	23-SEP-19	S021N020W05	160
ADL 730452	KORBEL 91	23-SEP-19	S022N020W32	160
ADL 730453	KORBEL 92	23-SEP-19	S022N020W32	160
ADL 730454	KORBEL 93	23-SEP-19	S022N020W29	160
ADL 730455	KORBEL 94	23-SEP-19	S022N020W29	160
ADL 730456	KORBEL 95	23-SEP-19	S022N020W20	160
ADL 730457	KORBEL 96	23-SEP-19	S022N020W20	160
ADL 730458	KORBEL 97	23-SEP-19	S022N020W17	160
ADL 730459	KORBEL 98	23-SEP-19	S022N020W17	160
ADL 730460	KORBEL 99	23-SEP-19	S022N020W08	160
ADL 730461	KORBEL 100	23-SEP-19	S022N020W08	160
ADL 730462	KORBEL 101	23-SEP-19	S022N020W05	160
ADL 730463	KORBEL 102	23-SEP-19	S022N020W05	160
ADL 730464	KORBEL 103	23-SEP-19	S022N020W08	160
ADL 730465	KORBEL 104	23-SEP-19	S022N020W08	160
ADL 730466	KORBEL 105	23-SEP-19	S022N020W17	160
ADL 730467	KORBEL 106	23-SEP-19	S022N020W17	160
ADL 730468	KORBEL 107	23-SEP-19	S022N020W20	160
ADL 730469	KORBEL 108	23-SEP-19	S022N020W20	160
ADL 730470	KORBEL 109	23-SEP-19	S022N020W29	160
ADL 730471	KORBEL 110	23-SEP-19	S022N020W29	160
ADL 730472	KORBEL 111	23-SEP-19	S022N020W32	160
ADL 730473	KORBEL 112	23-SEP-19	S022N020W32	160
ADL 730474	KORBEL 113	23-SEP-19	S021N020W05	160
ADL 730475	KORBEL 114	23-SEP-19	S021N020W05	160
ADL 730476	KORBEL 115	23-SEP-19	S021N020W08	160
ADL 730477	KORBEL 116	23-SEP-19	S021N020W08	160
ADL 730478	KORBEL 117	23-SEP-19	S021N020W17	160
ADL 730479	KORBEL 118	23-SEP-19	S021N020W17	160
ADL 730480	KORBEL 119	23-SEP-19	S021N020W20	160
ADL 730481	KORBEL 120	23-SEP-19	S021N020W20	160
ADL 730482	KORBEL 121	23-SEP-19	S021N020W29	160
ADL 730483	KORBEL 122	23-SEP-19	S021N020W29	160
ADL 730484	KORBEL 123	23-SEP-19	S021N020W32	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 730485	KORBEL 124	23-SEP-19	S021N020W32	160
ADL 730486	KORBEL 125	23-SEP-19	S022N020W05	160
ADL 730487	KORBEL 126	23-SEP-19	S022N020W05	160
ADL 730488	KORBEL 127	23-SEP-19	S022N020W04	160
ADL 730489	KORBEL 128	23-SEP-19	S022N020W04	160
ADL 730490	KORBEL 129	07-SEP-19	S022N020W03	160
ADL 730491	KORBEL 130	07-SEP-19	S022N020W03	160
ADL 730492	KORBEL 131	07-SEP-19	S022N020W02	160
ADL 730493	KORBEL 132	07-SEP-19	S022N020W02	160
ADL 730494	KORBEL 133	07-SEP-19	S022N020W01	160
ADL 730495	KORBEL 134	07-SEP-19	S022N020W01	160
ADL 730496	KORBEL 135	07-SEP-19	S022N019W06	160
ADL 730497	KORBEL 136	07-SEP-19	S022N019W06	160
ADL 730498	KORBEL 137	23-SEP-19	S023N020W32	160
ADL 730499	KORBEL 138	23-SEP-19	S023N020W32	160
ADL 730500	KORBEL 139	07-SEP-19	S023N020W33	160
ADL 730501	KORBEL 140	23-SEP-19	S023N020W33	160
ADL 730502	KORBEL 141	07-SEP-19	S023N020W34	160
ADL 730503	KORBEL 142	07-SEP-19	S023N020W34	160
ADL 730504	KORBEL 143	07-SEP-19	S023N020W35	160
ADL 730505	KORBEL 144	07-SEP-19	S023N020W35	160
ADL 730506	KORBEL 145	07-SEP-19	S023N020W36	160
ADL 730507	KORBEL 146	07-SEP-19	S023N020W36	160
ADL 730508	KORBEL 147	07-SEP-19	S023N019W31	160
ADL 730509	KORBEL 148	07-SEP-19	S023N019W31	160
ADL 730510	KORBEL 149	23-SEP-19	S023N020W32	160
ADL 730511	KORBEL 150	07-SEP-19	S023N020W32	160
ADL 730512	KORBEL 151	07-SEP-19	S023N020W33	160
ADL 730513	KORBEL 152	07-SEP-19	S023N020W33	160
ADL 730514	KORBEL 153	07-SEP-19	S023N020W34	160
ADL 730515	KORBEL 154	07-SEP-19	S023N020W34	160
ADL 730516	KORBEL 155	07-SEP-19	S023N020W35	160
ADL 730517	KORBEL 156	23-SEP-19	S023N020W35	160
ADL 730518	KORBEL 157	07-SEP-19	S023N020W36	160
ADL 730519	KORBEL 158	07-SEP-19	S023N020W36	160
ADL 730520	KORBEL 159	07-SEP-19	S023N019W31	160
ADL 730521	KORBEL 160	07-SEP-19	S023N019W31	160
ADL 733438	ESTELLE 47	11-OCT-20	S021N020W35	40
ADL 733439	KORBEL 161	10-OCT-20	S020N020W14	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 733440	KORBEL 162	10-OCT-20	S020N020W14	160
ADL 733441	KORBEL 163	10-OCT-20	S020N020W14	160
ADL 733442	KORBEL 164	10-OCT-20	S020N020W14	160
ADL 733443	KORBEL 165	10-OCT-20	S020N020W19	160
ADL 733444	KORBEL 166	10-OCT-20	S020N020W19	160
ADL 733445	KORBEL 167	10-OCT-20	S020N020W20	160
ADL 733446	KORBEL 168	10-OCT-20	S020N020W20	160
ADL 733447	KORBEL 169	10-OCT-20	S020N020W21	160
ADL 733448	KORBEL 170	10-OCT-20	S020N020W21	160
ADL 733449	KORBEL 171	10-OCT-20	S020N020W22	160
ADL 733450	KORBEL 172	10-OCT-20	S020N020W22	160
ADL 733451	KORBEL 173	10-OCT-20	S020N020W23	160
ADL 733452	KORBEL 174	10-OCT-20	S020N020W23	160
ADL 733453	KORBEL 175	11-OCT-20	S020N020W19	160
ADL 733454	KORBEL 176	11-OCT-20	S020N020W19	160
ADL 733455	KORBEL 177	11-OCT-20	S020N020W20	160
ADL 733456	KORBEL 178	11-OCT-20	S020N020W20	160
ADL 733457	KORBEL 179	11-OCT-20	S020N020W21	160
ADL 733458	KORBEL 180	11-OCT-20	S020N020W21	160
ADL 733459	KORBEL 181	11-OCT-20	S020N020W22	160
ADL 733460	KORBEL 182	11-OCT-20	S020N020W22	160
ADL 733461	KORBEL 183	11-OCT-20	S020N020W23	160
ADL 733462	KORBEL 184	11-OCT-20	S020N020W23	160
ADL 733463	KORBEL 185	11-OCT-20	S020N020W30	160
ADL 733464	KORBEL 186	11-OCT-20	S020N020W30	160
ADL 733465	KORBEL 187	11-OCT-20	S020N020W29	160
ADL 733466	KORBEL 188	11-OCT-20	S020N020W29	160
ADL 733467	KORBEL 189	11-OCT-20	S020N020W28	160
ADL 733468	KORBEL 190	11-OCT-20	S020N020W28	160
ADL 733469	KORBEL 191	11-OCT-20	S020N020W27	160
ADL 733470	KORBEL 192	11-OCT-20	S020N020W27	160
ADL 733471	KORBEL 193	11-OCT-20	S020N020W26	160
ADL 733472	KORBEL 194	11-OCT-20	S020N020W26	160
ADL 733473	KORBEL 195	11-OCT-20	S020N020W30	160
ADL 733474	KORBEL 196	11-OCT-20	S020N020W30	160
ADL 733475	KORBEL 197	11-OCT-20	S020N020W29	160
ADL 733476	KORBEL 198	11-OCT-20	S020N020W29	160
ADL 733477	KORBEL 199	11-OCT-20	S020N020W28	160
ADL 733478	KORBEL 200	11-OCT-20	S020N020W28	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 733479	KORBEL 201	11-OCT-20	S020N020W27	160
ADL 733480	KORBEL 202	11-OCT-20	S020N020W27	160
ADL 733481	KORBEL 203	11-OCT-20	S020N020W26	160
ADL 733482	KORBEL 204	11-OCT-20	S020N020W26	160
ADL 733483	KORBEL 205	10-OCT-20	S019N021W09	160
ADL 733484	KORBEL 206	10-OCT-20	S019N021W10	160
ADL 733485	KORBEL 207	10-OCT-20	S019N021W10	160
ADL 733486	KORBEL 208	10-OCT-20	S019N021W11	160
ADL 733487	KORBEL 209	10-OCT-20	S019N021W11	160
ADL 733488	KORBEL 210	10-OCT-20	S019N021W12	160
ADL 733489	KORBEL 211	10-OCT-20	S019N021W12	160
ADL 733490	KORBEL 212	10-OCT-20	S019N020W07	160
ADL 733491	KORBEL 213	10-OCT-20	S019N020W07	160
ADL 733492	KORBEL 214	10-OCT-20	S019N020W08	160
ADL 733493	KORBEL 215	10-OCT-20	S019N020W08	160
ADL 733494	KORBEL 216	10-OCT-20	S019N020W09	160
ADL 733495	KORBEL 217	10-OCT-20	S019N020W09	160
ADL 733496	KORBEL 218	10-OCT-20	S019N021W04	160
ADL 733497	KORBEL 219	10-OCT-20	S019N021W03	160
ADL 733498	KORBEL 220	10-OCT-20	S019N021W03	160
ADL 733499	KORBEL 221	10-OCT-20	S019N021W02	160
ADL 733500	KORBEL 222	10-OCT-20	S019N021W02	160
ADL 733501	KORBEL 223	10-OCT-20	S019N021W01	160
ADL 733502	KORBEL 224	10-OCT-20	S019N021W01	160
ADL 733503	KORBEL 225	10-OCT-20	S019N020W06	160
ADL 733504	KORBEL 226	10-OCT-20	S019N020W06	160
ADL 733505	KORBEL 227	10-OCT-20	S019N020W05	160
ADL 733506	KORBEL 228	10-OCT-20	S019N020W05	160
ADL 733507	KORBEL 229	10-OCT-20	S019N020W04	160
ADL 733508	KORBEL 230	10-OCT-20	S019N020W04	160
ADL 733509	KORBEL 231	10-OCT-20	S019N020W04	160
ADL 733510	KORBEL 232	10-OCT-20	S020N020W33	160
ADL 733511	KORBEL 233	11-OCT-20	S020N020W33	160
ADL 733512	KORBEL 234	11-OCT-20	S020N020W25	160
ADL 733513	KORBEL 235	11-OCT-20	S020N020W25	160
ADL 733514	KORBEL 236	11-OCT-20	S020N020W25	160
ADL 733515	KORBEL 237	11-OCT-20	S020N020W25	160
ADL 733516	KORBEL 238	11-OCT-20	S020N019W30	160
ADL 733517	KORBEL 239	11-OCT-20	S020N019W30	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 733518	KORBEL 240	11-OCT-20	S020N020W24	160
ADL 733519	KORBEL 241	11-OCT-20	S020N020W24	160
ADL 733520	KORBEL 242	11-OCT-20	S020N019W19	160
ADL 733521	KORBEL 243	11-OCT-20	S020N019W19	160
ADL 733522	KORBEL 244	11-OCT-20	S020N019W20	160
ADL 733523	KORBEL 245	10-OCT-20	S020N020W24	160
ADL 733524	KORBEL 246	10-OCT-20	S020N020W24	160
ADL 733525	KORBEL 247	10-OCT-20	S020N020W13	160
ADL 733526	KORBEL 248	10-OCT-20	S020N020W13	160
ADL 733527	KORBEL 249	10-OCT-20	S020N020W13	160
ADL 733528	KORBEL 250	10-OCT-20	S020N020W13	160
ADL 733529	KORBEL 251	11-OCT-20	S022N019W20	160
ADL 733530	KORBEL 252	11-OCT-20	S022N019W20	160
ADL 733531	KORBEL 253	11-OCT-20	S022N019W21	160
ADL 733532	KORBEL 254	11-OCT-20	S022N019W21	160
ADL 733533	KORBEL 255	11-OCT-20	S022N019W22	160
ADL 733534	KORBEL 256	11-OCT-20	S022N019W22	160
ADL 733535	KORBEL 257	11-OCT-20	S022N019W23	160
ADL 733536	KORBEL 258	11-OCT-20	S022N019W23	160
ADL 733537	KORBEL 259	11-OCT-20	S022N019W24	160
ADL 733538	KORBEL 260	11-OCT-20	S022N019W20	160
ADL 733539	KORBEL 261	11-OCT-20	S022N019W20	160
ADL 733540	KORBEL 262	11-OCT-20	S022N019W21	160
ADL 733541	KORBEL 263	11-OCT-20	S022N019W21	160
ADL 733542	KORBEL 264	11-OCT-20	S022N019W22	160
ADL 733543	KORBEL 265	11-OCT-20	S022N019W22	160
ADL 733544	KORBEL 266	11-OCT-20	S022N019W23	160
ADL 733545	KORBEL 267	11-OCT-20	S022N019W23	160
ADL 733546	KORBEL 268	11-OCT-20	S022N019W24	160
ADL 733547	KORBEL 269	11-OCT-20	S022N019W17	160
ADL 733548	KORBEL 270	11-OCT-20	S022N019W17	160
ADL 733549	KORBEL 271	11-OCT-20	S022N019W17	160
ADL 733550	KORBEL 272	11-OCT-20	S022N019W17	160
ADL 733551	KORBEL 273	10-OCT-20	S023N020W29	160
ADL 733552	KORBEL 274	10-OCT-20	S023N020W29	160
ADL 733553	KORBEL 275	10-OCT-20	S023N020W28	160
ADL 733554	KORBEL 276	10-OCT-20	S023N020W28	160
ADL 733555	KORBEL 277	10-OCT-20	S023N020W27	160
ADL 733556	KORBEL 278	10-OCT-20	S023N020W27	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 733557	KORBEL 279	10-OCT-20	S023N020W26	160
ADL 733558	KORBEL 280	10-OCT-20	S023N020W26	160
ADL 733559	KORBEL 281	10-OCT-20	S023N020W25	160
ADL 733560	KORBEL 282	10-OCT-20	S023N020W25	160
ADL 733561	KORBEL 283	10-OCT-20	S023N019W30	160
ADL 733562	KORBEL 284	10-OCT-20	S023N019W30	160
ADL 733563	KORBEL 285	10-OCT-20	S023N020W29	160
ADL 733564	KORBEL 286	10-OCT-20	S023N020W29	160
ADL 733565	KORBEL 287	10-OCT-20	S023N020W28	160
ADL 733566	KORBEL 288	10-OCT-20	S023N020W28	160
ADL 733567	KORBEL 289	10-OCT-20	S023N020W27	160
ADL 733568	KORBEL 290	10-OCT-20	S023N020W27	160
ADL 733569	KORBEL 291	10-OCT-20	S023N020W26	160
ADL 733570	KORBEL 292	10-OCT-20	S023N020W26	160
ADL 733571	KORBEL 293	10-OCT-20	S023N020W25	160
ADL 733572	KORBEL 294	10-OCT-20	S023N020W25	160
ADL 733573	KORBEL 295	10-OCT-20	S023N019W30	160
ADL 733574	KORBEL 296	10-OCT-20	S023N019W30	160
ADL 733575	KORBEL 297	11-OCT-20	S020N021W23	160
ADL 733576	KORBEL 298	11-OCT-20	S020N021W23	160
ADL 733577	KORBEL 299	11-OCT-20	S020N021W23	160
ADL 733578	KORBEL 300	11-OCT-20	S020N021W23	160
ADL 733579	KORBEL 301	11-OCT-20	S020N021W14	160
ADL 733580	KORBEL 302	11-OCT-20	S020N021W14	160
ADL 733581	KORBEL 303	11-OCT-20	S020N021W14	160
ADL 733582	KORBEL 304	11-OCT-20	S020N021W14	160
ADL 733583	KORBEL 305	11-OCT-20	S020N021W11	160
ADL 733584	KORBEL 306	11-OCT-20	S020N021W11	160
ADL 733585	KORBEL 307	11-OCT-20	S020N021W11	160
ADL 733586	KORBEL 308	11-OCT-20	S020N021W11	160
ADL 733587	KORBEL 309	11-OCT-20	S020N021W02	160
ADL 733588	KORBEL 310	11-OCT-20	S020N021W02	160
ADL 733589	KORBEL 311	11-OCT-20	S020N021W01	160
ADL 733590	KORBEL 312	11-OCT-20	S020N021W01	160
ADL 733591	KORBEL 313	11-OCT-20	S020N020W06	160
ADL 733592	KORBEL 314	11-OCT-20	S020N020W06	160
ADL 733593	KORBEL 315	11-OCT-20	S020N021W02	160
ADL 733594	KORBEL 316	11-OCT-20	S020N021W02	160
ADL 733595	KORBEL 317	11-OCT-20	S020N021W01	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 733596	KORBEL 318	11-OCT-20	S020N021W01	160
ADL 733597	KORBEL 319	11-OCT-20	S020N020W06	160
ADL 733598	KORBEL 320	11-OCT-20	S020N020W06	160
ADL 737162	STYX 1	08-NOV-21	S020N021W03	160
ADL 737163	STYX 2	08-NOV-21	S020N021W03	160
ADL 737164	STYX 3	08-NOV-21	S020N021W10	160
ADL 737165	STYX 4	08-NOV-21	S020N021W10	160
ADL 737166	STYX 5	08-NOV-21	S020N021W15	160
ADL 737167	STYX 6	08-NOV-21	S020N021W15	160
ADL 737168	STYX 7	08-NOV-21	S020N021W22	160
ADL 737169	STYX 8	08-NOV-21	S020N021W22	160
ADL 737170	STYX 9	08-NOV-21	S020N021W27	160
ADL 737171	STYX 10	08-NOV-21	S020N021W27	160
ADL 737172	STYX 11	08-NOV-21	S020N021W03	160
ADL 737173	STYX 12	08-NOV-21	S020N021W03	160
ADL 737174	STYX 13	08-NOV-21	S020N021W10	160
ADL 737175	STYX 14	08-NOV-21	S020N021W10	160
ADL 737176	STYX 15	08-NOV-21	S020N021W15	160
ADL 737177	STYX 16	08-NOV-21	S020N021W15	160
ADL 737178	STYX 17	08-NOV-21	S020N021W22	160
ADL 737179	STYX 18	08-NOV-21	S020N021W22	160
ADL 737180	STYX 19	08-NOV-21	S020N021W27	160
ADL 737181	STYX 20	08-NOV-21	S020N021W27	160
ADL 737182	STYX 21	08-NOV-21	S020N021W04	160
ADL 737183	STYX 22	08-NOV-21	S020N021W04	160
ADL 737184	STYX 23	08-NOV-21	S020N021W09	160
ADL 737185	STYX 24	08-NOV-21	S020N021W09	160
ADL 737186	STYX 25	08-NOV-21	S020N021W16	160
ADL 737187	STYX 26	08-NOV-21	S020N021W16	160
ADL 737188	STYX 27	08-NOV-21	S020N021W21	160
ADL 737189	STYX 28	08-NOV-21	S020N021W21	160
ADL 737190	STYX 29	08-NOV-21	S020N021W28	160
ADL 737191	STYX 30	08-NOV-21	S020N021W28	160
ADL 737192	STYX 31	08-NOV-21	S020N021W04	160
ADL 737193	STYX 32	08-NOV-21	S020N021W04	160
ADL 737194	STYX 33	08-NOV-21	S020N021W09	160
ADL 737195	STYX 34	08-NOV-21	S020N021W09	160
ADL 737196	STYX 35	08-NOV-21	S020N021W16	160
ADL 737197	STYX 36	08-NOV-21	S020N021W16	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 737198	STYX 37	08-NOV-21	S020N021W21	160
ADL 737199	STYX 38	08-NOV-21	S020N021W21	160
ADL 737200	STYX 39	08-NOV-21	S020N021W28	160
ADL 737201	STYX 40	08-NOV-21	S020N021W28	160
ADL 737202	STYX 41	08-NOV-21	S023N020W31	160
ADL 737203	STYX 42	08-NOV-21	S023N020W31	160
ADL 737204	STYX 43	08-NOV-21	S022N020W06	160
ADL 737205	STYX 44	08-NOV-21	S022N020W06	160
ADL 737206	STYX 45	08-NOV-21	S022N020W07	160
ADL 737207	STYX 46	08-NOV-21	S022N020W07	160
ADL 737208	STYX 47	08-NOV-21	S022N020W18	160
ADL 737209	STYX 48	08-NOV-21	S022N020W18	160
ADL 737210	STYX 49	08-NOV-21	S022N020W19	160
ADL 737211	STYX 50	08-NOV-21	S022N020W19	160
ADL 737212	STYX 51	08-NOV-21	S022N020W30	160
ADL 737213	STYX 52	08-NOV-21	S022N020W30	160
ADL 737214	STYX 53	08-NOV-21	S022N020W31	160
ADL 737215	STYX 54	08-NOV-21	S022N020W31	160
ADL 737216	STYX 55	08-NOV-21	S021N020W06	160
ADL 737217	STYX 56	08-NOV-21	S021N020W06	160
ADL 737218	STYX 57	08-NOV-21	S021N020W07	160
ADL 737219	STYX 58	08-NOV-21	S021N020W07	160
ADL 737220	STYX 59	08-NOV-21	S021N020W18	160
ADL 737221	STYX 60	08-NOV-21	S021N020W18	160
ADL 737222	STYX 61	08-NOV-21	S021N020W19	160
ADL 737223	STYX 62	08-NOV-21	S021N020W19	160
ADL 737224	STYX 63	08-NOV-21	S021N020W30	160
ADL 737225	STYX 64	08-NOV-21	S021N020W30	160
ADL 737226	STYX 65	08-NOV-21	S021N020W31	160
ADL 737227	STYX 66	08-NOV-21	S021N020W31	160
ADL 737228	STYX 67	08-NOV-21	S023N020W31	160
ADL 737229	STYX 68	08-NOV-21	S023N020W31	160
ADL 737230	STYX 69	08-NOV-21	S022N020W06	160
ADL 737231	STYX 70	08-NOV-21	S022N020W06	160
ADL 737232	STYX 71	08-NOV-21	S022N020W07	160
ADL 737233	STYX 72	08-NOV-21	S022N020W07	160
ADL 737234	STYX 73	08-NOV-21	S022N020W18	160
ADL 737235	STYX 74	08-NOV-21	S022N020W18	160
ADL 737236	STYX 75	08-NOV-21	S022N020W19	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 737237	STYX 76	08-NOV-21	S022N020W19	160
ADL 737238	STYX 77	08-NOV-21	S022N020W30	160
ADL 737239	STYX 78	08-NOV-21	S022N020W30	160
ADL 737240	STYX 79	08-NOV-21	S022N020W31	160
ADL 737241	STYX 80	08-NOV-21	S022N020W31	160
ADL 737242	STYX 81	08-NOV-21	S021N020W06	160
ADL 737243	STYX 82	08-NOV-21	S021N020W06	160
ADL 737244	STYX 83	08-NOV-21	S021N020W07	160
ADL 737245	STYX 84	08-NOV-21	S021N020W07	160
ADL 737246	STYX 85	08-NOV-21	S021N020W18	160
ADL 737247	STYX 86	08-NOV-21	S021N020W18	160
ADL 737248	STYX 87	08-NOV-21	S021N020W19	160
ADL 737249	STYX 88	08-NOV-21	S021N020W19	160
ADL 737250	STYX 89	08-NOV-21	S021N020W30	160
ADL 737251	STYX 90	08-NOV-21	S021N020W30	160
ADL 737252	STYX 91	08-NOV-21	S021N020W31	160
ADL 737253	STYX 92	08-NOV-21	S021N020W31	160
ADL 737254	STYX 93	08-NOV-21	S023N021W36	160
ADL 737255	STYX 94	08-NOV-21	S023N021W36	160
ADL 737256	STYX 95	08-NOV-21	S022N021W01	160
ADL 737257	STYX 96	08-NOV-21	S022N021W01	160
ADL 737258	STYX 97	08-NOV-21	S022N021W12	160
ADL 737259	STYX 98	08-NOV-21	S022N021W12	160
ADL 737260	STYX 99	08-NOV-21	S022N021W13	160
ADL 737261	STYX 100	08-NOV-21	S022N021W13	160
ADL 737262	STYX 101	08-NOV-21	S022N021W24	160
ADL 737263	STYX 102	08-NOV-21	S022N021W24	160
ADL 737264	STYX 103	08-NOV-21	S022N021W25	160
ADL 737265	STYX 104	08-NOV-21	S022N021W25	160
ADL 737266	STYX 105	08-NOV-21	S022N021W36	160
ADL 737267	STYX 106	08-NOV-21	S022N021W36	160
ADL 737268	STYX 107	08-NOV-21	S021N021W01	160
ADL 737269	STYX 108	08-NOV-21	S021N021W01	160
ADL 737270	STYX 109	08-NOV-21	S021N021W12	160
ADL 737271	STYX 110	08-NOV-21	S021N021W12	160
ADL 737272	STYX 111	08-NOV-21	S021N021W13	160
ADL 737273	STYX 112	08-NOV-21	S021N021W13	160
ADL 737274	STYX 113	08-NOV-21	S021N021W24	160
ADL 737275	STYX 114	08-NOV-21	S021N021W24	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 737276	STYX 115	08-NOV-21	S021N021W25	160
ADL 737277	STYX 116	08-NOV-21	S021N021W25	160
ADL 737278	STYX 117	08-NOV-21	S021N021W36	160
ADL 737279	STYX 118	08-NOV-21	S021N021W36	160
ADL 737280	STYX 119	08-NOV-21	S023N021W36	160
ADL 737281	STYX 120	08-NOV-21	S023N021W36	160
ADL 737282	STYX 121	08-NOV-21	S022N021W01	160
ADL 737283	STYX 122	08-NOV-21	S022N021W01	160
ADL 737284	STYX 123	08-NOV-21	S022N021W12	160
ADL 737285	STYX 124	08-NOV-21	S022N021W12	160
ADL 737286	STYX 125	08-NOV-21	S022N021W13	160
ADL 737287	STYX 126	08-NOV-21	S022N021W13	160
ADL 737288	STYX 127	08-NOV-21	S022N021W24	160
ADL 737289	STYX 128	08-NOV-21	S022N021W24	160
ADL 737290	STYX 129	08-NOV-21	S022N021W25	160
ADL 737291	STYX 130	08-NOV-21	S022N021W25	160
ADL 737292	STYX 131	08-NOV-21	S022N021W36	160
ADL 737293	STYX 132	08-NOV-21	S022N021W36	160
ADL 737294	STYX 133	08-NOV-21	S021N021W01	160
ADL 737295	STYX 134	08-NOV-21	S021N021W01	160
ADL 737296	STYX 135	08-NOV-21	S021N021W12	160
ADL 737297	STYX 136	08-NOV-21	S021N021W12	160
ADL 737298	STYX 137	08-NOV-21	S021N021W13	160
ADL 737299	STYX 138	08-NOV-21	S021N021W13	160
ADL 737300	STYX 139	08-NOV-21	S021N021W24	160
ADL 737301	STYX 140	08-NOV-21	S021N021W24	160
ADL 737302	STYX 141	08-NOV-21	S021N021W25	160
ADL 737303	STYX 142	08-NOV-21	S021N021W25	160
ADL 737304	STYX 143	08-NOV-21	S021N021W36	160
ADL 737305	STYX 144	08-NOV-21	S021N021W36	160
ADL 737306	STYX 145	09-NOV-21	S023N021W35	160
ADL 737307	STYX 146	09-NOV-21	S023N021W35	160
ADL 737308	STYX 147	09-NOV-21	S022N021W02	160
ADL 737309	STYX 148	09-NOV-21	S022N021W02	160
ADL 737310	STYX 149	09-NOV-21	S022N021W11	160
ADL 737311	STYX 150	09-NOV-21	S022N021W11	160
ADL 737312	STYX 151	09-NOV-21	S022N021W14	160
ADL 737313	STYX 152	09-NOV-21	S022N021W14	160
ADL 737314	STYX 153	09-NOV-21	S022N021W23	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 737315	STYX 154	09-NOV-21	S022N021W23	160
ADL 737316	STYX 155	09-NOV-21	S022N021W26	160
ADL 737317	STYX 156	09-NOV-21	S022N021W26	160
ADL 737318	STYX 157	09-NOV-21	S022N021W35	160
ADL 737319	STYX 158	09-NOV-21	S022N021W35	160
ADL 737320	STYX 159	09-NOV-21	S021N021W02	160
ADL 737321	STYX 160	09-NOV-21	S021N021W02	160
ADL 737322	STYX 161	09-NOV-21	S021N021W11	160
ADL 737323	STYX 162	09-NOV-21	S021N021W11	160
ADL 737324	STYX 163	09-NOV-21	S021N021W14	160
ADL 737325	STYX 164	09-NOV-21	S021N021W14	160
ADL 737326	STYX 165	09-NOV-21	S021N021W23	160
ADL 737327	STYX 166	09-NOV-21	S021N021W23	160
ADL 737328	STYX 167	09-NOV-21	S021N021W26	160
ADL 737329	STYX 168	09-NOV-21	S021N021W26	160
ADL 737330	STYX 169	09-NOV-21	S021N021W35	160
ADL 737331	STYX 170	09-NOV-21	S021N021W35	160
ADL 737332	STYX 171	09-NOV-21	S023N021W35	160
ADL 737333	STYX 172	09-NOV-21	S023N021W35	160
ADL 737334	STYX 173	09-NOV-21	S022N021W02	160
ADL 737335	STYX 174	09-NOV-21	S022N021W02	160
ADL 737336	STYX 175	09-NOV-21	S022N021W11	160
ADL 737337	STYX 176	09-NOV-21	S022N021W11	160
ADL 737338	STYX 177	09-NOV-21	S022N021W14	160
ADL 737339	STYX 178	09-NOV-21	S022N021W14	160
ADL 737340	STYX 179	09-NOV-21	S022N021W23	160
ADL 737341	STYX 180	09-NOV-21	S022N021W23	160
ADL 737342	STYX 181	09-NOV-21	S022N021W26	160
ADL 737343	STYX 182	09-NOV-21	S022N021W26	160
ADL 737344	STYX 183	09-NOV-21	S022N021W35	160
ADL 737345	STYX 184	09-NOV-21	S022N021W35	160
ADL 737346	STYX 185	09-NOV-21	S021N021W02	160
ADL 737347	STYX 186	09-NOV-21	S021N021W02	160
ADL 737348	STYX 187	09-NOV-21	S021N021W11	160
ADL 737349	STYX 188	09-NOV-21	S021N021W11	160
ADL 737350	STYX 189	09-NOV-21	S021N021W14	160
ADL 737351	STYX 190	09-NOV-21	S021N021W14	160
ADL 737352	STYX 191	09-NOV-21	S021N021W23	160
ADL 737353	STYX 192	09-NOV-21	S021N021W23	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 737354	STYX 193	09-NOV-21	S021N021W26	160
ADL 737355	STYX 194	09-NOV-21	S021N021W26	160
ADL 737356	STYX 195	09-NOV-21	S021N021W35	160
ADL 737357	STYX 196	09-NOV-21	S021N021W35	160
ADL 740524	STONEY 52	21-AUG-23	S021N019W06	160
ADL 740525	STONEY 53	21-AUG-23	S022N019W31	160
ADL 740526	STONEY 54	21-AUG-23	S022N019W31	160
ADL 740527	STONEY 55	21-AUG-23	S022N019W30	160
ADL 740528	STONEY 56	21-AUG-23	S022N019W30	160
ADL 740529	STONEY 57	21-AUG-23	S022N019W29	160
ADL 740530	STONEY 58	21-AUG-23	S022N019W29	160
ADL 740531	STONEY 59	21-AUG-23	S022N019W32	160
ADL 740532	STONEY 60	21-AUG-23	S022N019W32	160
ADL 740533	STONEY 61	21-AUG-23	S021N019W05	160
ADL 740534	STONEY 62	21-AUG-23	S021N019W05	160
ADL 740535	STONEY 63	21-AUG-23	S021N019W08	160
ADL 740536	STONEY 64	21-AUG-23	S021N019W08	160
ADL 740537	STONEY 65	21-AUG-23	S021N019W17	160
ADL 740538	STONEY 66	21-AUG-23	S021N019W17	160
ADL 740539	STONEY 67	21-AUG-23	S021N019W20	160
ADL 740540	STONEY 68	21-AUG-23	S021N019W20	160
ADL 740541	STONEY 69	21-AUG-23	S021N019W17	160
ADL 740542	STONEY 70	21-AUG-23	S021N019W17	160
ADL 740543	STONEY 71	21-AUG-23	S021N019W08	160
ADL 740544	STONEY 72	21-AUG-23	S021N019W08	160
ADL 740545	STONEY 73	21-AUG-23	S021N019W05	160
ADL 740546	STONEY 74	21-AUG-23	S021N019W05	160
ADL 740547	STONEY 75	21-AUG-23	S022N019W32	160
ADL 740548	STONEY 76	21-AUG-23	S022N019W32	160
ADL 740549	STONEY 77	21-AUG-23	S022N019W29	160
ADL 740550	STONEY 78	21-AUG-23	S022N019W29	160
ADL 740551	STONEY 79	21-AUG-23	S022N019W28	160
ADL 740552	STONEY 80	21-AUG-23	S022N019W28	160
ADL 740553	STONEY 81	21-AUG-23	S022N019W33	160
ADL 740554	STONEY 82	21-AUG-23	S022N019W33	160
ADL 740555	STONEY 83	21-AUG-23	S021N019W04	160
ADL 740556	STONEY 84	21-AUG-23	S021N019W04	160
ADL 740557	STONEY 85	21-AUG-23	S021N019W09	160
ADL 740558	STONEY 86	21-AUG-23	S021N019W09	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 740559	STONEY 87	21-AUG-23	S021N019W16	160
ADL 740560	STONEY 88	21-AUG-23	S021N019W16	160
ADL 740561	STONEY 89	21-AUG-23	S021N019W21	160
ADL 740562	STONEY 90	21-AUG-23	S021N019W04	160
ADL 740563	STONEY 91	21-AUG-23	S021N019W04	160
ADL 740564	STONEY 92	21-AUG-23	S022N019W33	160
ADL 740565	STONEY 93	21-AUG-23	S022N019W33	160
ADL 740566	STONEY 94	21-AUG-23	S022N019W28	160
ADL 740567	STONEY 95	21-AUG-23	S022N019W28	160
ADL 740568	STONEY 96	21-AUG-23	S022N019W27	160
ADL 740569	STONEY 97	21-AUG-23	S022N019W27	160
ADL 740570	STONEY 98	21-AUG-23	S022N019W34	160
ADL 740571	STONEY 99	18-SEP-23	S022N020W25	160
ADL 740572	STONEY 100	18-SEP-23	S022N020W25	160
ADL 740573	STONEY 101	18-SEP-23	S022N020W36	160
ADL 740574	STONEY 102	18-SEP-23	S022N020W36	160
ADL 740575	STONEY 103	18-SEP-23	S021N020W01	160
ADL 740576	STONEY 104	18-SEP-23	S021N020W01	160
ADL 740577	STONEY 105	18-SEP-23	S021N020W12	160
ADL 740578	STONEY 106	18-SEP-23	S021N020W12	160
ADL 740579	STONEY 107	18-SEP-23	S021N020W13	160
ADL 740580	STONEY 108	18-SEP-23	S021N020W13	160
ADL 740581	STONEY 109	18-SEP-23	S021N020W24	160
ADL 740582	STONEY 110	18-SEP-23	S021N020W24	160
ADL 740583	STONEY 111	18-SEP-23	S021N020W25	160
ADL 740584	STONEY 112	18-SEP-23	S021N020W25	160
ADL 740585	STONEY 113	18-SEP-23	S021N020W25	160
ADL 740586	STONEY 114	18-SEP-23	S021N020W25	160
ADL 740587	STONEY 115	18-SEP-23	S021N020W24	160
ADL 740588	STONEY 116	18-SEP-23	S021N020W24	160
ADL 740589	STONEY 117	18-SEP-23	S021N020W13	160
ADL 740590	STONEY 118	18-SEP-23	S021N020W13	160
ADL 740591	STONEY 119	18-SEP-23	S021N020W12	160
ADL 740592	STONEY 120	18-SEP-23	S021N020W12	160
ADL 740593	STONEY 121	18-SEP-23	S021N020W01	160
ADL 740594	STONEY 122	18-SEP-23	S021N020W01	160
ADL 740595	STONEY 123	18-SEP-23	S022N020W36	160
ADL 740596	STONEY 124	18-SEP-23	S022N020W36	160
ADL 740597	STONEY 125	18-SEP-23	S022N020W25	160

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ADL Number	Claim Name	Recording Date	Meridian, Township, Range, Section	Claim Size (Acres)
ADL 740598	STONEY 126	18-SEP-23	S022N020W25	160
ADL 740599	STONEY 127	18-SEP-23	S022N019W30	160
ADL 740600	STONEY 128	18-SEP-23	S022N019W30	160
ADL 740601	STONEY 129	18-SEP-23	S022N019W31	160
ADL 740602	STONEY 130	18-SEP-23	S022N019W31	160
ADL 740603	STONEY 131	18-SEP-23	S021N019W06	160
ADL 740604	STONEY 132	18-SEP-23	S021N019W06	160
ADL 740605	STONEY 133	18-SEP-23	S021N019W07	160
ADL 740606	STONEY 134	18-SEP-23	S021N019W07	160
ADL 740607	STONEY 135	18-SEP-23	S021N019W18	160
ADL 740608	STONEY 136	18-SEP-23	S021N019W18	160
ADL 740609	STONEY 137	18-SEP-23	S021N019W19	160
ADL 740610	STONEY 138	18-SEP-23	S021N019W19	160
ADL 740611	STONEY 139	18-SEP-23	S021N019W30	160
ADL 740612	STONEY 140	18-SEP-23	S021N019W30	160
ADL 740613	STONEY 141	18-SEP-23	S021N019W30	160
ADL 740614	STONEY 142	18-SEP-23	S021N019W30	160
ADL 740615	STONEY 143	18-SEP-23	S021N019W19	160
ADL 740616	STONEY 144	18-SEP-23	S021N019W19	160
ADL 740617	STONEY 145	18-SEP-23	S021N019W18	160
ADL 740618	STONEY 146	18-SEP-23	S021N019W18	160
ADL 740619	STONEY 147	18-SEP-23	S021N019W07	160
ADL 740620	STONEY 148	18-SEP-23	S021N019W07	160
ADL 740621	STONEY 147	18-SEP-23	S021N019W06	160

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