

# TECHNICAL REPORT ON THE MINERAL RESOURCES OF THE NALUNAQ PROJECT, GREENLAND

Prepared For  
**Amaroq Minerals**

Report Prepared by



SRK Consulting (UK) Limited

UK31414

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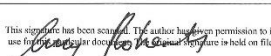
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## EXECUTIVE SUMMARY

# TECHNICAL REPORT ON THE MINERAL RESOURCES OF THE NALUNAQ PROJECT, GREENLAND

## 1 INTRODUCTION

SRK Consulting (UK) Limited (“SRK”) is an associate company of the international group holding company, SRK Consulting (Global) Limited (the “SRK Group”). SRK has been requested by Amaroq Minerals Ltd (“Amaroq”, formerly AEX Gold Ltd (“AEX”), hereinafter also referred to as the “Company” or the “Client”) to prepare an updated Mineral Resource estimate (“MRE”) for the Nalunaq gold project (hereinafter also referred to as “Nalunaq”, or the “Project”), located in southern Greenland. This report serves as an independent report prepared by a team of consultants, under the management of Dr Lucy Roberts (MAusIMM (CP)), a Principal Consultant (Resource Geology) and Mr Martin Pittuck, a Corporate Consultant (Resource Geology).

The international reporting code used for the reporting of Mineral Resource and Mineral Reserve statements herein is the CIM Definition Standards on Mineral Resources and Reserves prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council on May 10, 2014 (the “CIM Definition Standards”) which are incorporated by reference into National Instrument 43-101 - Standards of Disclosure for Mineral Projects (“NI-43-101”). Furthermore, the Mineral Resources as reported have also been prepared in accordance with the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines prepared by the CIM Mineral Resource and Mineral Reserve Committee and adopted by the CIM Council on 29 November 2019 (the “CIM Best Practice Guidelines”). The Mineral Resource Estimate and accompanying Statement presented herein has an effective date of 3 September 2022 and is signed off by Dr Lucy Roberts (MAusIMM (CP)), who acts as the Qualified Person (“QP”). The QP visited site between 9 and 17 September 2021.

SRK has relied upon the information provided by Amaroq in its review of the data quality used for the Mineral Resource Estimate; however, SRK takes full responsibility for the Mineral Resource Statement presented herein.

## 2 PROPERTY, ACCESS, AND HISTORY

The Nalunaq Project is located in Southern Greenland at 60°21’N latitude and 44°50’W longitude in the Municipality of Kujalleq. The property is located on the northern side of the Kirkespirdalen Valley, about 33 km northeast of the town of Nanortalik. The former mine which forms the focus of the Nalunaq Project is located in the centre of Exploitation Licence number 2003/05 which covers an area of 22 km<sup>2</sup>. The Exploitation Licence grants Nalunaq A/S (a wholly owned Greenlandic subsidiary of Amaroq Minerals) the exclusive right to undertake mineral exploration and exploitation within the licence area.



The mine site is located 6km inland along the Kirkspirdalen Valley from an embayment on the eastern side of Saqqaa Fjord. The fjord does not generally freeze over during the winter and navigation by boat to the former mine jetty is possible for most of the year. The topography in the area is rugged to alpine. Mountains reach from sea level to elevations of 1,500mASL. Many of them are glaciated and the southern tip of the permanent ice sheet is about 33km to the northeast of the mine. Valley floors and lower mountain sides are covered by typical sub-arctic vegetation. The climate of South Greenland is relatively mild for the latitude. In Nanortalik, the temperature ranges between averages of -5°C in January and 7°C in August.

South Greenland is accessed via the international airport at Narsarsuaq with regular flights from Denmark and Iceland as well as regular internal flights from other international airports in Greenland including Kangerlussuaq and Nuuk. From Narsarsuaq, there are regular helicopter flights to other towns in the area, including Nanortalik. Most areas can also be travelled by scheduled or chartered boat from Narsarsuaq or Qaqortoq. This takes around one hour by boat to reach Nalunaq from Nanortalik. From the jetty, the mine can be reached by 4x4 vehicle along the 9 km long former mine road which is unsealed but in reasonable condition. The 4x4 vehicle can be mobilised to the area by landing craft.

Exploration began in the area in the 1960s, when regional geological mapping was carried out by the Geological Survey of Greenland (“GGU”, later “GEUS”). Visible gold, hosted by quartz veins was discovered at Nalunaq in 1992. Various phases of exploration were completed, including surface sampling, surface drilling, and underground development. Once the mine was in production, a significant amount of underground chip and channel sampling was completed, along with underground drilling. Since the completion of the transfer of the project to Nalunaq A/S in March 2016, additional surface sampling and core drilling has been completed. This continues to the present time.

### **3 GEOLOGY AND MINERALISATION**

Nalunaq lies within the wider Psammite Zone in Southern Greenland that hosts the Nanortalik Gold Belt. The geology of the Nalunaq Mountain is dominated by a package of fine- to medium-grained tholeiitic basalt flows and locally coarser, sub-concordant doleritic sills. The sequence is intruded by later granites and several generations of late aplite and pegmatite dykes. Due to the lack of primary volcanic textures and a lack of age relations of the rock sequence, the true stratigraphic way up is unknown. The stratigraphy has therefore been assigned into the structural footwall (“FW”) and structural hanging wall (“HW”) with respect to the main gold-mineralised quartz vein (Nalunaq Main Vein, “MV”).

The MV varies in width from 0.05 m to 2.0 m, maintains an average dip of 38° towards the SE, and contains high and sometimes bonanza gold grades (up to 5,240 g/t gold over 0.8 m). The vein also often displays perpendicular quartz-filled tension gashes. Gold occurs mostly as native gold and occasionally as the gold-bismuth alloy, maldonite. Gold mineralisation is commonly associated with native bismuth and rare lollingite and arsenopyrite. Native gold particles range in size from a few microns up to eight millimetres across, with coarse visible gold being common in the high-grade sections of the Main Vein.

Amaroq have been developing a new mineralisation model which seeks to explain the locations of the observed high-grade plunges in the historical model, namely the Mountain, Target and South Blocks. This Dolerite Dyke model works on the premise that weakly to moderately mineralized fluids were trapped at locations aligned with the pre-mineralising and cross cutting dolerite dykes. Rapid pressure release, perhaps related to tectonic activity, causes instant boiling and deposition of significant quantities of gold.

## 4 DRILLING AND SAMPLING

Drilling and sampling at Nalunaq since 2016 has comprised of six separate campaigns aiming to delineate the full down-dip and along-strike extent of mineralisation, as well as increase confidence in the geological and grade continuity through infill drilling. Prior to 2016, several phases of drilling and sampling were undertaken by several operators. Drilling conducted during Amaroq's ownership of the Project, including surface sampling and diamond core drilling, has been carried out under the supervision of technically qualified personnel applying standard industry approaches. For all drillholes completed since 2016, when Amaroq took ownership, collar surveys were conducted using a handheld GPS and downhole surveys were completed in each drillhole using a Reflex EZ Trac magnetic survey tool at 15m intervals. In 2022, drillholes were surveyed with an QL40-OBI-2G optical televiewer from Mount Sopris Instruments which captures a high resolution 360° image of the hole and replaces traditional core orientation and magnetic survey tools

Due to the high relief of the topography, diamond drillholes were collared in areas which were accessible, either by road or by helicopter. Holes are drilled at a range of dips and azimuths to intersect the mineralisation appropriately. In addition, a significant amount of underground production data, in the form of chip, channel, or chip channel samples were taken during the operation of the mine. Production samples were taken from either development faces or side walls, and typically cover the full thickness of mineralisation. Underground drilling was also undertaken while the mine was in operation. Mineralisation typically dips at 38° towards the SE, resulting in variable drilling and sampling intersection angles.

Field duplicates, blank samples and certified reference materials were inserted into the regular sample stream as part of the QAQC programmes during the 2017-2022 drilling campaigns. Overall, SRK considers the majority of sample preparation, analyses and security protocols to conform to industry best practice. SRK notes the absence of QAQC sample results some of the historical drilling and sampling campaigns and as such, assay data from these drilling campaigns present a risk in terms of accuracy and precision of the associated assay grades.

## 5 MINERAL RESOURCE ESTIMATE

All geological wireframe models of the Nalunaq Project and used in this estimate were produced by Amaroq and reviewed by SRK. As part of this review, SRK provided feedback and recommendations to Amaroq geologists, and the models subsequently updated. Geological wireframes have been prepared for the MV and pegmatite dyke which occupies the Pegmatite Fault only. To better represent the distribution of very high-grade areas within the Main Vein, further sub-domains were developed by SRK prior to estimation. Modelling of these sub-domains was based on a primarily visual review of data including composite sample gold grades and the spacing of samples. This process sought to constrain the ultra-high grades (>100 g/t Au) seen in the historical mining areas to prevent undue influence of these samples on the surrounding lower grade material, as well as to better represent the high-grade zones.

SRK carried out the following steps to produce the MRE:

- database compilation and review;
- construction of wireframe geological models in Leapfrog Geo 2021.1 software;
- statistical analysis and definition of domains;
- geostatistical analysis (variography) within estimation domains;
- block modelling and grade interpolation using Leapfrog Edge software;
- model validation;
- Mineral Resource classification;
- consideration of reasonable prospects for eventual economic extraction (“RPEEE”); and
- reporting of the Mineral Resource Statement.

The SRK 2022 Mineral Resource Statement for the Nalunaq deposit is presented in Table ES 1. The Qualified Person for the declaration of Mineral Resources is Dr Lucy Roberts, MAusIMM (CP), of SRK Consulting (UK) Ltd. The Mineral Resource estimates and accompanying Statements were produced and reviewed by a team of consultants from SRK.

**Table ES 1: SRK Mineral Resource Statements for Nalunaq gold deposit, Greenland, as of 03 September 2022**

Zone	Classification	Tonnes (t)	Grade (g/t Au)	Contained (Oz Au)
In Mine	Inferred Mineral Resource	140,000	31.0	140,000
Extension Area	Inferred Mineral Resource	215,000	26.0	180,000
<b>Total</b>	<b>Inferred Mineral Resource</b>	<b>355,000</b>	<b>28.0</b>	<b>320,000</b>

In reporting the Mineral Resource Statements, SRK notes the following:

- Mineral Resources are reported in accordance with the CIM Definition Standards
- Mineral Resources have an effective date of 3 September 2022, and have been depleted to reflect the current understanding of the mining completed up to the date of production ceasing in 2013;
- Mineral Resources are reported as in-situ and undiluted. The Mineral Resources are reported above a cut-off grade of 5.0 g/t, generated using a gold price of 1,800 USD/ozAu.

Given these parameters, SRK considers there to be reasonable prospects for eventual economic extraction, and as such, fulfil the requirements for reporting a Mineral Resource;

- The In-Mine Mineral Resource is accessible from existing underground development while the Extension Mineral Resource requires development to be put in place for it to be accessed
- Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability, nor have any mining modifying factors been applied;
- The Qualified Person for the declaration of Mineral Resources is Dr Lucy Roberts, MAusIMM(CP), of SRK Consulting (UK) Ltd. The Mineral Resource estimates and accompanying Statements were produced and reviewed by a team of consultants from SRK.
- SRK notes that a site visit to Nalunaq was conducted by the CP in September 2021;
- All Mineral Resources are quoted at 100%;
- Tonnages are reported in metric units, with metal grades in grams per tonne (g/t). Tonnages and grades are rounded appropriately. Rounding, as required by reporting guidelines, may result in apparent summation differences between tonnes, grade and contained metal content. Where these occur, SRK does not consider these to be material.



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## TECHNICAL REPORT ON THE MINERAL RESOURCES OF THE NALUNAQ PROJECT, GREENLAND

### 1 INTRODUCTION

#### 1.1 Issuer and Terms of Reference

SRK Consulting (UK) Limited (“SRK”) is an associate company of the international group holding company, SRK Consulting (Global) Limited (the “SRK Group”). SRK has been requested by Amaroq Minerals Ltd (“Amaroq”, formerly AEX Gold Ltd (“AEX”), hereinafter also referred to as the “Company” or the “Client”) to prepare an updated Mineral Resource estimate (“MRE”) for the Nalunaq gold project (hereinafter also referred to as “Nalunaq”, or the “Project”), located in southern Greenland.

The international reporting code used for the reporting of Mineral Resource and Mineral Reserve statements herein is the CIM Definition Standards on Mineral Resources and Reserves prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council on May 10, 2014 (the “CIM Definition Standards”) which are incorporated by reference into National Instrument 43-101 - Standards of Disclosure for Mineral Projects (“NI-43-101”). Furthermore, the Mineral Resources as reported have also been prepared in accordance with the “CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” prepared by the CIM Mineral Resource and Mineral Reserve Committee and adopted by the CIM Council on 29 November 2019 (the “CIM Best Practice Guidelines”). The Mineral Resource Estimate and accompanying Statement presented herein has an effective date of 3 September 2022 and is signed off by Dr Lucy Roberts (MAusIMM (CP)), who acts as the Qualified Person (“QP”). The QP visited site between 9 and 17 September 2021.

SRK has relied upon the information provided by Amaroq in its review of the data quality used for the Mineral Resource Estimate. SRK takes full responsibility for the Mineral Resource Statement presented herein.

#### 1.2 Sources of Information

SRK’s report and study is based upon information provided by the Company, along with access to key personnel from the Project technical team on-site. The key sources of information for this report, including information relating to the data quality, data collection procedures and protocols, are as follows:

- Database files:
- drilling and sampling database (collar, survey and assay);
- drillhole logging database (lithology, weathering, oxidation, structure, mineralisation);
- density database;

- quality control sample database; and
- topographic and underground surveys.
- Relevant maps, plans and sections
- Geological interpretation developed by Amaroq geologists
- Reports
- Site visit

### 1.3 Capability and Independence of Consultant

This report was prepared on behalf of SRK by the persons whose qualifications and experience are set out in Table 1-1.

SRK is an independent consulting engineering organisation, wholly owned by its employees, that has been active in the mining and natural resources industries for nearly 40 years. The group operates globally and currently employs approximately 1,500 professionals in 48 offices worldwide. SRK has a demonstrated track record in undertaking independent assessments of resources and reserves, project evaluations and audits and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide.

This technical report has been prepared based on a technical and economic review by a team of consultants sourced from SRK's Group office in the United Kingdom.

Neither SRK nor any of its employees and associates employed in the preparation of this report has any material present or contingent interest in the outcome of this report or in the Asset being assessed. Nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of SRK. SRK will be paid a fee for the preparation of this report in accordance with normal consulting practice.

The individuals who have provided input to this report, and who are listed below, have extensive experience in the mining industry and are members in good standing of appropriate professional institutions.

**Table 1-1: Professional Qualifications of SRK Consulting (UK) Staff**

Name	Professional Qualifications and Affiliations	Discipline and Role
Martin Pittuck	Chartered Engineer and Member of the Institution of Materials, Minerals and Mining. Fellow of the Geological Society	Project director and reviewer
Lucy Roberts	BSc (Hons) Geochemistry, MSc (Distinction) Mineral Resources Member and Chartered Professional with the Australasian Institute of Mining and Metallurgy (MAusIMM(CP)); BSc (Hons) Geology; MSc (Distinction) Mineral Resources; PhD Applied Geostatistics	Geology and Mineral Resources (Qualified Person for Mineral Resource statement)
Tom Stock	BSc (Hons) Geology, MSc (Distinction) Mining Geology	Geology and Mineral Resources
Kirsty Reynolds	Fellow of the Geological Society of London MSci Geology; PhD Structural Geology and Geophysics	Geology and Mineral Resources

## **1.4 Scope of Work, Materiality, Limitations and Exclusions**

### **1.4.1 General**

SRK has independently assessed the Nalunaq Gold Project by reviewing pertinent data, including that relating to resources. All opinions, findings and conclusions expressed in this report are those of SRK.

SRK's opinion contained herein is effective as of 03 September 2022 with regards to the Mineral Resource Statements. SRK's opinion is based on information provided by the Company throughout the course of SRK's investigations, which, in turn, reflects various technical conditions at the time of writing. These conditions can change significantly over relatively short periods of time. The achievability of any technical-economic plans is neither warranted nor guaranteed by SRK.

This report contains technical information which may have been used in subsequent calculations to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding which consequently introduces margins of error. Where these occur, SRK does not consider them to be material to the purpose or use of this report.

### **1.4.2 Compliance and reporting standard**

The international reporting code used for the reporting of Mineral Resource and Mineral Reserve statements herein is the CIM Definition Standards on Mineral Resources and Reserves prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council on May 10, 2014 (the "CIM Definition Standards") which are incorporated by reference into National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI-43-101"). Furthermore, the Mineral Resources as reported have also been prepared in accordance with the "CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" prepared by the CIM Mineral Resource and Mineral Reserve Committee and adopted by the CIM Council on 29 November 2019 (the "CIM Best Practice Guidelines"). The Mineral Resource Estimate and accompanying Statement presented herein has an effective date of 3 September 2022 and is signed off by Dr Lucy Roberts (MAusIMM (CP)), who acts as the Qualified Person.

The CIM Definition Standards are aligned with the Committee for Mineral Reserves International Reporting Standards ("CRIRSCO") reporting template. Accordingly, SRK considers the CIM Definition Standards to be an internationally recognised reporting standard which is adopted world-wide for market-related reporting and financial investment.

### **1.4.3 Limitations**

SRK has no reason to believe that any material facts have been withheld and the Company believes it has provided all material information.

The achievability of any projections of technical-economic parameters as included in this Report are neither warranted nor guaranteed by SRK. Any projections as presented and discussed herein have been proposed by the Company's management and adjusted where appropriate by SRK and cannot be assured; they are necessarily based on economic assumptions, many of which are beyond the control of the Company. Future cashflows and profits derived from such forecasts are inherently uncertain and actual results may be significantly more or less favourable.

Unless otherwise expressly stated all the opinions and conclusions expressed in this Report are those of SRK.

#### **1.4.4 Reliance on information**

SRK believes that its opinion must be considered as a whole and that selecting portions of the analysis or factors considered by it, without considering all factors and analyses together, could create a misleading view of the process underlying the opinions presented in the Report.

This report includes technical information, which requires subsequent calculations to derive sub-totals, totals, and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, SRK does not consider them to be material.

SRK's assessment of Mineral Resources are based on information provided by the Company throughout the course of SRK's investigations, which in turn reflect various technical-economic conditions prevailing at the date of this Report. In particular, the Mineral Resources are based on expectations regarding the commodity prices and exchange rates prevailing at the date of this report. These projections can change significantly over relatively short periods. Should these change materially the projections could be materially different. Furthermore, SRK has no obligation or undertaking to advise any person of any change in circumstances which comes to its attention after the date of this Report or to review, revise or update the Report or opinion.

#### **1.4.5 Declaration**

SRK will receive a fee for the preparation of this report in accordance with normal professional consulting practice. This fee is not contingent on the outcome of any applications made by the Company and SRK will receive no other benefit for the preparation of this report. SRK does not have any pecuniary or other interests that could reasonably be regarded as capable of affecting its ability to provide an unbiased opinion in relation to the Mineral Resources and Mineral Reserves, and the projections and assumptions included in the various technical studies completed by the Company, opined upon by SRK and reported herein.

Neither SRK, the SRK professional staff responsible for authoring this Report, nor any Directors of SRK, have at the date of this report, nor have had within the previous two years, any shareholding in the Company, the Assets, or advisors of the Company. Consequently SRK, the SRK Qualified Persons and the Directors of SRK considers themselves to be independent of the Company.

#### **1.4.6 Copyright**

Copyright of all text and other matter in this document, including the manner of presentation, is the exclusive property of SRK. It is an offence to publish this document or any part of the document under a different cover, or to reproduce and/or use, without written consent, any technical procedure and/or technique contained in this document. The intellectual property reflected in the contents resides with SRK and shall not be used for any activity that does not involve SRK, without the written consent of SRK.

## 1.5 Inherent Risks

Mining and processing are carried out in an environment where not all events are predictable. Whilst an effective management team can identify the known risks and take measures to manage and mitigate these risks, there is still the possibility for unexpected and unpredictable events to occur. It is not possible therefore to totally remove all risks or state with certainty that an event that may have a material impact on the operation of a mine will not occur. Similar considerations apply to the marketing of the minerals.

## 1.6 Site Visits and Inspections

SRK Qualified Person, Dr Lucy Roberts, Principal Consultant (Resource Geology) visited the site between 9 and 17 September 2021. The visit involved a tour of the Project area including an inspection of underground adits and stopes; verification of a selection of drillhole collar positions; a review of selected core samples; discussion on the geological and mineralisation interpretation; and reviewing some quality assurance/quality control procedures employed by the Company.

## 2 RELIANCE ON OTHER EXPERTS

SRK's opinion, effective as of 3 September 2022, is based on information provided to SRK by the Company throughout the course of SRK's investigations as described. These in turn reflect various technical and economic conditions at the time of writing.

SRK was reliant upon information and data provided by the Company; however, SRK has, where possible, verified data provided independently and has undertaken a site visit to review physical evidence for the Project.

The main technical reports utilised for reference in producing this Technical Report are as follows:

- An Investigation into the Metallurgical Performance of a Sample from Nalunaq A/S, Unpublished internal report for AEX Gold Inc, 2020, SGS;
- AEX Gold Internal Feasibility Study Summary Report. Unpublished internal report for AEX Gold Inc, 2021, Halyard Inc;
- Nalunaq Gold Project Independent NI43-101 Technical Report (ES7664), 2016, SRK Exploration Services; and
- Competent Persons Report on AEX Gold Assets (ES7863), 2020, SRK Exploration Services.

### 3 PROJECT DESCRIPTION, LOCATION AND TENURE

#### 3.1 Property Description and Location

The Nalunaq Project is located in Southern Greenland at 60°21'N latitude and 44°50'W longitude in the Municipality of Kujalleq. The property is located on the northern side of the Kirkespirdalen Valley, about 33 km northeast of the town of Nanortalik (Table 3-1 and Table 3-2).

Greenland is an autonomous country within the Danish Realm. It is the largest island in the World with an area of 2,166,086 km<sup>2</sup> although it has a small population of just 56,000 people. Most of the island is covered by the Greenland ice sheet, thus the population lives along the coastal fringe which is heavily incised by fjords. Most of the population is located on the west and south coasts and the largest settlement is the capital, Nuuk.

The country is stable with a European-style democracy and maintains strong ties to Denmark. The exploration and mining industry is conducted within a modern mining code (the Mineral Resources Act of 2009) and the Government is supportive of these activities.

#### 3.2 Licences, Permits and Ownership

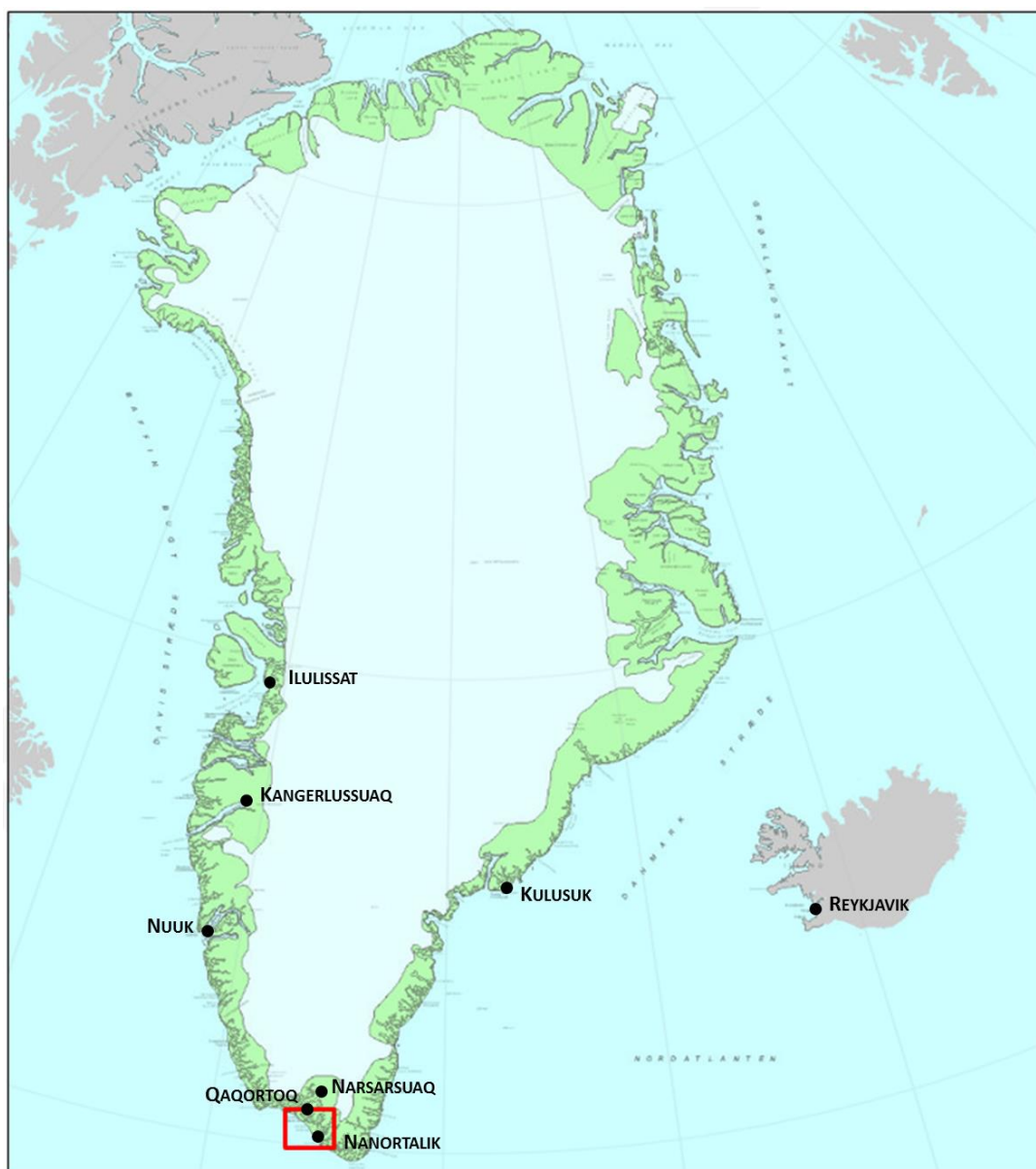
##### 3.2.1 Licence details

The former mine which forms the focus of the Nalunaq Project is located in the centre of Exploitation Licence number 2003/05 which covers an area of 22 km<sup>2</sup> (Figure 3-3).

The Exploitation Licence grants Nalunaq A/S (a wholly owned Greenlandic subsidiary of Amaroq Minerals) the exclusive right to undertake mineral exploration and exploitation within the licence area, subject to approval (see Section 3.4). The boundary coordinates for the Nalunaq exploitation licence are given in Table 3-1.

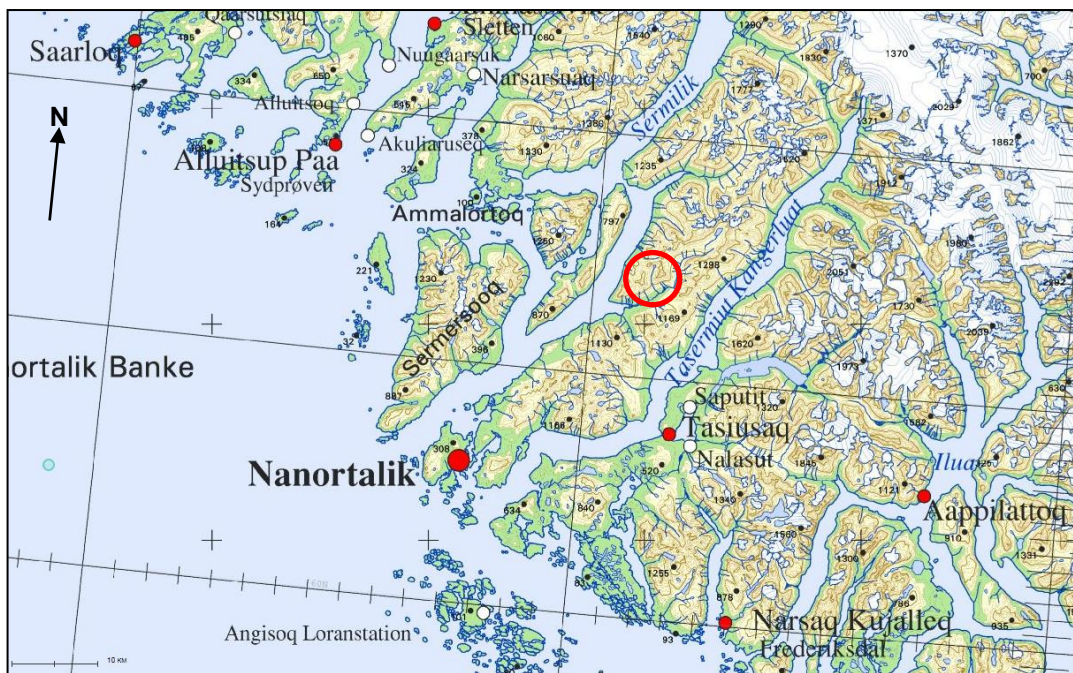
**Table 3-1: Boundary coordinates for exploitation licence 2003/05 (Source: MLSA 2016)**

Point	Latitude WGS84			Longitude WGS84		
	Degrees N	Min	Sec	Degrees W	Min	Sec
A	60	23	0	44	53	0
B	60	23	0	44	49	0
C	60	22	0	44	49	0
D	60	22	0	44	48	0
E	60	21	0	44	48	0
F	60	21	0	44	49	0
G	60	20	0	44	49	0
H	60	20	0	44	53	0

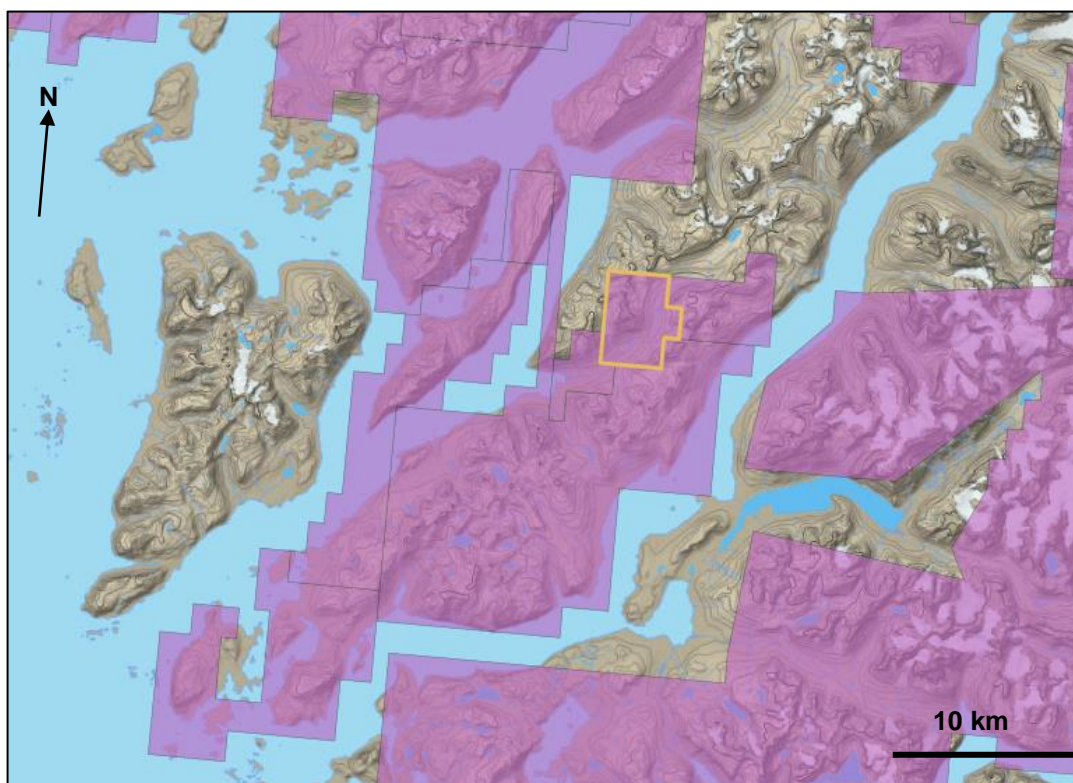


**Figure 3-1:** Location of the project area in Greenland with the area shown in Figure 3-2 highlighted by the red box. Relevant population centres shown as black circles. Grid lines spaced at 10° intervals and north is up. Map modified from Greenland [www.greenmin.gl](http://www.greenmin.gl) (Greenmin, 2016).





**Figure 3-2: Location of the Nalunaq gold project (red circle) in South Greenland (Image Source: [www.greenmin.gl](http://www.greenmin.gl) (Greenmin, 2016))**



**Figure 3-3: Location of the Nalunaq exploitation licence 2003/05 (yellow) and neighbouring exploration licences (red). The licence abutting Nalunaq to the east and south is also owned by Nalunaq (licence 2006/10). (Image Source: [www.govmin.gl](http://www.govmin.gl) (MLSA 2022)).**

### 3.2.2 Previous ownership

The licence was granted to Crew Gold Corporation in April 2003 and is valid until 24 April 2033. Angel Mining PLC, through their wholly owned Greenlandic subsidiary Angel Mining Gold A/S, purchased the project from Crew Gold in 2009 and operated, through their wholly owned UK subsidiary, Arctic Mining Ltd, until closure of the mine in 2013.

### 3.2.3 Current ownership

The management of Angel Mining (Gold) A/S was taken up by FBC Mining (Holdings) Limited (“FBC”) after Angel Mining PLC went into administration, although the exploitation licence remained in force. A decision in early 2015 by FBC and its wholly owned subsidiary, FBC Nalunaq, to seek corporate partners on the project resulted in Arctic Resources Capital (“ARC”) becoming the managers of the project following a meeting in June 2015 where approval was given to the Joint Venture by the Greenland Government. A Collaboration Agreement between the parties was signed on 17th July 2015 giving ARC 66.66 % and FBC Nalunaq 33.33% ownership in the project through a newly incorporated Greenlandic Joint Venture company, Nalunaq A/S. A Sale and Purchase Agreement was signed between Angel Mining (Gold) A/S and Nalunaq A/S on 15 October 2015 for the Nalunaq exploitation licence and all associated assets, and the Greenland Government formally transferred the licence to Nalunaq A/S in March 2016.

Prior to the Company’s IPO on the TSX-V, Nalunaq A/S and the Company underwent a corporate reorganisation, which resulted in the Company acquiring the entire issued share capital of Nalunaq A/S from ARC, certain of ARC’s shareholders and AEX Gold Limited (formerly FBC Mining (Nalunaq) and now renamed Amaroq Minerals), with these parties being issued shares in the Company in exchange. Upon listing Nalunaq A/S became a 100% wholly owned subsidiary of Amaroq.

### 3.2.1 Mineral tenure system

#### *Legal Foundation*

The Greenland Parliament Act No. 7 of 7 December 2009 on Mineral Resources and Mineral Resource activities (the “Mineral Resources Act”, or the “Act”) came into force on 1 January 2010. Amendments were made to the Act in 2012 and 2014.

The Act is intended as a framework that lays down the main principles for the administration of mineral resource activities and authorises the Greenland Government to lay down provisions in executive orders and standard licence terms as well as specific licence terms. The Act aims to ensure that activities under the Act are properly performed as regards safety, health, the environment, resource exploitation and social sustainability as well as properly performed according to acknowledged best international practices under similar conditions.

#### *Types of Mineral Licences*

##### Prospecting Licences

These are intended for early stage mineral prospecting activities (excluding drilling) and are granted for periods of up to five years at a time. They do not confer any exclusive rights to exploration and a similar licence or other types of licence may be granted to others for the same area.

### Exploration Licences

These provide exclusive rights for the licensee to undertake mineral exploration activities for all commodities (excluding hydrocarbons) within the licence area. They must have a minimum size of 5 km<sup>2</sup> and may consist of up to five separated sub-areas with no more than 100 km between areas.

Exploration licences are granted for an initial period of five years, after which the licensee is entitled to apply for a new period of five years for the same area. At expiry of the second licence period (years 6-10) the licensee may apply for further two year periods for the same area up to a maximum of 16 years (years 11-12, 13-14 and 15-16).

A fixed fee per square kilometre must be paid to the Government annually and this increases with the age of the licence. Additionally, the licensee is committed to a minimum exploration expenditure per licence per year. This amount is defined by the Government and is the same for all exploration licences, and it also increases with the age of the licence.

### Exploitation Licences

An Exploitation Licence may be granted to an Exploration Licence holder who has discovered and delineated commercially exploitable Mineral Resources and whose Bankable Feasibility Study (which must include a declaration of Mineral Reserves) has been approved by the Government.

The licence conveys the owner exclusive rights to exploitation and exploration and is granted for a period of 30 years (unless a shorter period is stipulated as a condition) up to a maximum of 50 years. The licence is terminated when exploitation activities have ceased and a closure plan (agreed with the Government at the time of application for the Exploitation Licence) has been completed to the Government's satisfaction.

Suspension of exploitation activities with a view to their subsequent resumption is possible but subject to approval by the Government. Approval may be granted for up to two years at a time, and renewed approval may be granted on modified terms. If temporary suspension has lasted six years, the Government may order the licensee to implement the closure plan.

## 3.2.2 Administrative authorities

The administrative authorities within the Government of Greenland that have responsibility for all matters relating to mineral resources:

#### The Mineral Licence and Safety Authority ("MLSA")

The MLSA is responsible for issuing mineral licences and for safety matters including supervision and inspections. Licensees and other parties covered by the Mineral Resources Act communicate with the MLSA and receive all notifications, documents and decisions from the MLSA.

#### The Ministry of Mineral Resources ("MMR")

The MMR is responsible for strategy-making, policy-making, legal issues and marketing of mineral resources in Greenland. The Ministry deals with geological issues through the Department of Geology.

The Ministry of Industry, Labour and Trade (“MILT”)

The MILT is the authority for issues concerning industry and labour policy including SIAs and IBAs for mineral resources and similar related socio-economic issues.

The Environmental Agency for Mineral Resource Activities (“EAMRA”)

EAMRA is the administrative authority for environmental matters relating to mineral resource activities, including protection of the environment and nature, environmental liability and EIAs.

### 3.3 Environmental Studies and Permits

As far as SRK is aware, Nalunaq A/S is not subject to any current environmental liabilities.

Following closure of the mine in 2014, annual environmental monitoring was carried out by EAMRA through its advisor the Danish Centre for Environment and Energy (“DCE”). It is understood that the costs for this monitoring were taken from the closure bond that became available when Angel Mining closed the mine and the surplus left at the end of the monitoring period in 2019 was returned to Nalunaq A/S. Overall, DCE assessed the current environmental impact on the environment from the former mining activities at Nalunaq as insignificant and that no further actions were needed to reduce the environmental impact. Consequently, DCE considered the Nalunaq gold project could serve as an example of how adequate environmental requirements together with detailed environmental monitoring and regulation can result in a mine operation in Greenland with minimum environmental impact.

All work programmes are reviewed by EAMRA and their approval is required before work can commence. Furthermore, exploration activities must adhere to the “Rules for Fieldwork and Reporting Regarding Mineral Resources” as published by the Government in 2000 which includes measures to protect the environment and wildlife.

The Company is currently in the process of agreeing its Environmental Impact Assessment with EAMRA.

### 3.4 Royalties

The mineral royalties are set by the Government of Greenland as set out in Addendum No. 3 dated 1 July 2014 of the Standard terms for Exploration Licences for Minerals in Greenland. These royalties relevant to the Nalunaq Project are summarised in Table 3-2.

**Table 3-2 Mineral Royalties in Greenland (Image Source: Government of Greenland 2014)**

Mineral	Type	Amount
Minerals, other than REE, uranium and gemstones	Sales royalty	2.5%
REE (*c)	Sales royalty	5.0%
Uranium (*d)	Sales royalty	5.0%
Gemstones	Sales royalty	5.5%
Surplus royalty – when a profit margin exceeds 40% (*e)	-	15.0%

\*c Corporate tax and corporate dividend tax may be offset against sales royalty

\*d Corporate tax and corporate dividend tax may not be offset against sales royalty

\*e Corporate tax and corporate dividend tax may not be offset against sales royalty or surplus royalty

## **4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **4.1 Physiography**

The mine site is located 6 km inland along the Kirkspirdalen Valley from an embayment on the eastern side of Saqqaa Fjord. The fjord does not generally freeze over during the winter and navigation by boat to the former mine jetty is possible for most of the year.

The topography in the area is rugged to alpine. Mountains reach from sea level to elevations of 1,500 m ASL. Many of them are glaciated and the southern tip of the permanent ice sheet is about 33 km to the northeast of the mine. Valley floors and lower mountain sides are covered by typical sub-Arctic vegetation. Views of the typical terrain in the area are shown in Figure 4-1 and Figure 4-2. In Figure 4-1, Nalunaq Mountain is on the left, slightly obscured by cloud, about 7 km from the photograph location. In Figure 4-2, the mine jetty can be seen in the bottom left and the mine access road can be seen parallel to the river.

### **4.2 Climate**

The climate of South Greenland is relatively mild for the latitude. In Nanortalik, the temperature ranges between averages of -5°C in January and 7°C in August. Temperatures below 0°C occur between November and March. Rainfall is moderate and fairly consistent at around 8 to 10 mm per month, although instances of heavier rain can occur. Snow cover is likely between October and April, with the possibility of deep snow during the winter months.

### **4.3 Access**

South Greenland is accessed via the international airport at Narsarsuaq with regular flights from Denmark and Iceland as well as regular internal flights from other international airports in Greenland including Kangerlussuaq and Nuuk. From Narsarsuaq, there are regular helicopter flights to other towns in the area, including Nanortalik. Most areas can also be travelled by scheduled or chartered boat from Narsarsuaq or Qaqortoq.

This takes around one hour by boat to reach Nalunaq from Nanortalik. From the jetty, the mine can be reached by 4x4 vehicle along the 9 km long former mine road which is unsealed but in reasonable condition. The 4x4 vehicle can be mobilised to the area by landing craft.

### **4.4 Local Resources and Infrastructure**

Qaqortoq is the largest town in South Greenland with a population of about 3,200. This is located 77 km northwest of Nalunaq. The closest population centre to Nalunaq is Nanortalik, which is 33km to the southwest. Nanortalik has a population of about 1,400 and is Greenland's most southerly town. It is readily accessible by boat or helicopter and has a port capable of handling cargo vessels. Most people in the town are engaged in fishing, public services, construction and tourism. There are many people still in Nanortalik who worked in the mine when it was operational, and the town remains a good source of local workers.



**Figure 4-1: View towards the northeast from close to the harbour (Image Source: SRK ES, 2016)**



**Figure 4-2: Aerial view north-eastwards up the Kirkespirdalen Valley with Nalunaq Mountain arrowed (Image Source: SRK ES, 2016)**

## 5 PROJECT HISTORY

### 5.1 Introduction

Gold was first reported in the area in 1986 when it was discovered in alluvial settings. However, it is thought that the Vikings, who once had settlements throughout South Greenland, were also aware of gold in the area of Nalunaq. Alluvial gold occurrences lead to exploration being focused in the Kirkespirdalen Valley within an exploration licence granted to NunaOil A/S, eventually leading to the discovery of the quartz-gold vein at Nalunaq in 1992. Further exploration confirmed the presence of a coherent mineralised structure hosting high grade, sometimes bonanza grade, gold. Visible gold is common (for example up to up to 5,240 g/t Au over 0.8 m in an exploration channel sample). A mining licence (2003/05) was granted to Crew Gold Corporation in 2003, who undertook mining from 2004 until 2009 with processing carried out in Spain and later Newfoundland. The project was then acquired by Angel Mining PLC who operated until closure in 2013, processing material at an underground cyanide plant on site. In total, around 367,130 oz of gold was produced, 352,307 oz Au being from Crew Gold's operation.

During 2014, the ownership of the exploitation licence was formally transferred from Angel Mining to FBC Mining Limited although it remained in the name of Angel Mining (Gold) A/S. FBC Mining entered a Joint Venture agreement with ARC which was approved by the Government of Greenland and signed on 17 July 2015, and the licence is now held in the name of the Greenlandic joint venture company, Nalunaq A/S.

### 5.2 Exploration History

Regional geological mapping in the area had been carried out in the 1960s by the Geological Survey of Greenland ("GGU", later "GEUS") and provide a foundation for mineral exploration. In the late 1980s, the exploration company Carl Nielsen A/S found small flakes of gold in alluvial gravels where the Kirkespirdalen valley meets the coast. Nunaoil A/S were granted an exploration licence for the area that includes Nalunaq in 1990, on the assumption that alluvial gold at the coast must be derived from primary mineralisation in the mountains around the Kirkespirdalen valley. This was supported by geochemical sampling of stream sediments and scree sediments which showed gold anomalies five to ten times higher than other areas in the region (Gowen et al., 1993). In 1992, further exploration led to the discovery of visible gold in a quartz vein of 0.5 to 2m in thickness, outcropping at about 400m above sea-level on the eastern flanks of the Nalunaq Mountain (Figure 5-1) and traceable for 800m up the mountain. This became known as the Main Vein.



**Figure 5-1: The “discovery outcrop” of the Main Vein close to the 400 Level Portal (Image Source: SRK ES, 2016)**

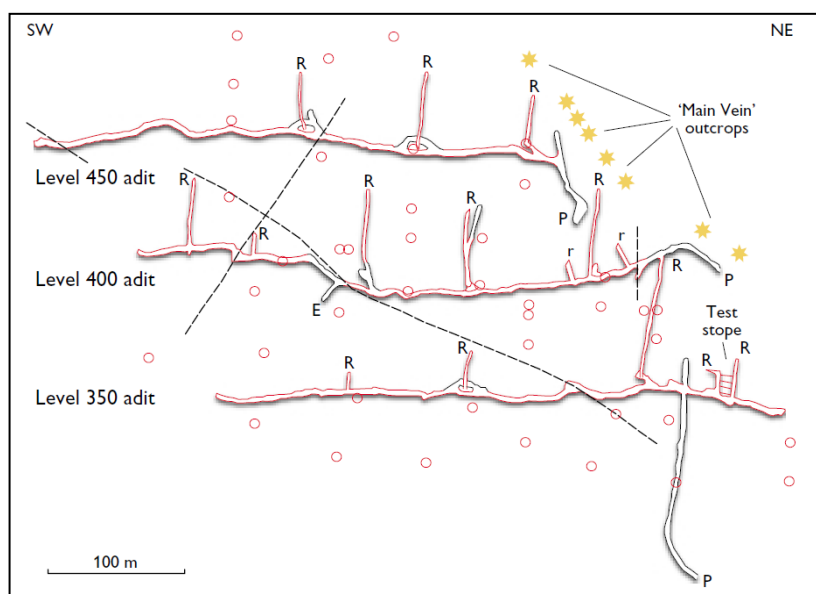
Exploration intensified after this discovery. In 1993, a NunaOil and Cyprus Greenland Corporation joint venture undertook surface mapping and a 13 hole NQ diamond drilling programme for a total of 2,950 m of drilling in order to test the continuity of the Main Vein. Cyprus withdrew later that year, but NunaOil continued mapping, sampling and drilling during 1994 to 1996, including 8 NQ diamond drillholes (848 m). This led to the discovery of a new quartz vein in the hangingwall and a section of the Main Vein low on the mountain that was vertically displaced from the rest of the vein. This was termed the South Block. NunaOil entered a new joint venture with Mindex A/S in 1997 and undertook mapping, sampling and metallurgical ‘bulk’ sampling of the Main Vein and Hanging Wall Vein from surface pits.

1998 saw the start of a major exploration effort when 5,134m of drilling was completed from 37 surface NQ holes, and a 288 m long exploration drive was driven at 400 m ASL. Two raises were developed from this drive to test grade continuity and variability of the Main Vein. Exploration in 1999 included drilling a further 19 diamond holes (2,520 m) for resource expansion and underground development planning. Channel sampling was also undertaken at 1m intervals on the exposed Main Vein between elevations of 468 m to 775 m. Mindex A/S merged with Crew Development Corporation that year, with Crew becoming the operator of the Nalunaq Project.

Mineral Resource Development International (“MRDI”) produced a Pre-Feasibility Study in 1999 based on the surface and underground exploration data. This was positive and defined a resource of 425,000 oz gold in material with an average grade of 32 g/t gold (diluted to 1m true thickness).



As is usually required with mineralisation of this type, an underground development programme was started in 2000 with the aim of determining grade and geological continuity of the Main Vein. This was carried out by Strathcona Mineral Services (Strathcona, 2000; 2001; 2002b) and comprised a bulk sampling programme. This required development of the 350 and 450 Levels and extension of the 400 Level, from which the Main Vein (“MV”) was blocked out at approximately 80 m intervals by linking the levels with a series of raises (Figure 5-2). In Figure 5-2, black lines indicate development in waste to access the MV and red lines indicate development in mineralisation. The dashed lines show minor dextral faults with metre-scale offsets, and red circles indicate MV intersections from surface drilling. In total, 1,902 m of lateral development was carried out, including 893 m of driving and 538 m of raising. 341 bulk samples totalling 21,300 tonnes were collected and analysed. This activity included the use of a pilot plant on site (Lind et al. 2001).



**Figure 5-2: Longitudinal section drawn in the plane of the Main Vein (“MV”), dipping at about 36° SE, showing the first exploration adits and raises (from Lind et al, 2001).**

Diamond drilling and underground development continued in 2001 for a total of 2,478 m (13 holes) and 1,500 m respectively. In 2002, Kvaener completed a Feasibility Study for mining operations at Nalunaq. This was based on Mineral Resources as described in Section 5.3 and presented a number of operational scenarios, with the best economic case including no mineral processing on site, but shipping produced material elsewhere to an existing processing plant.

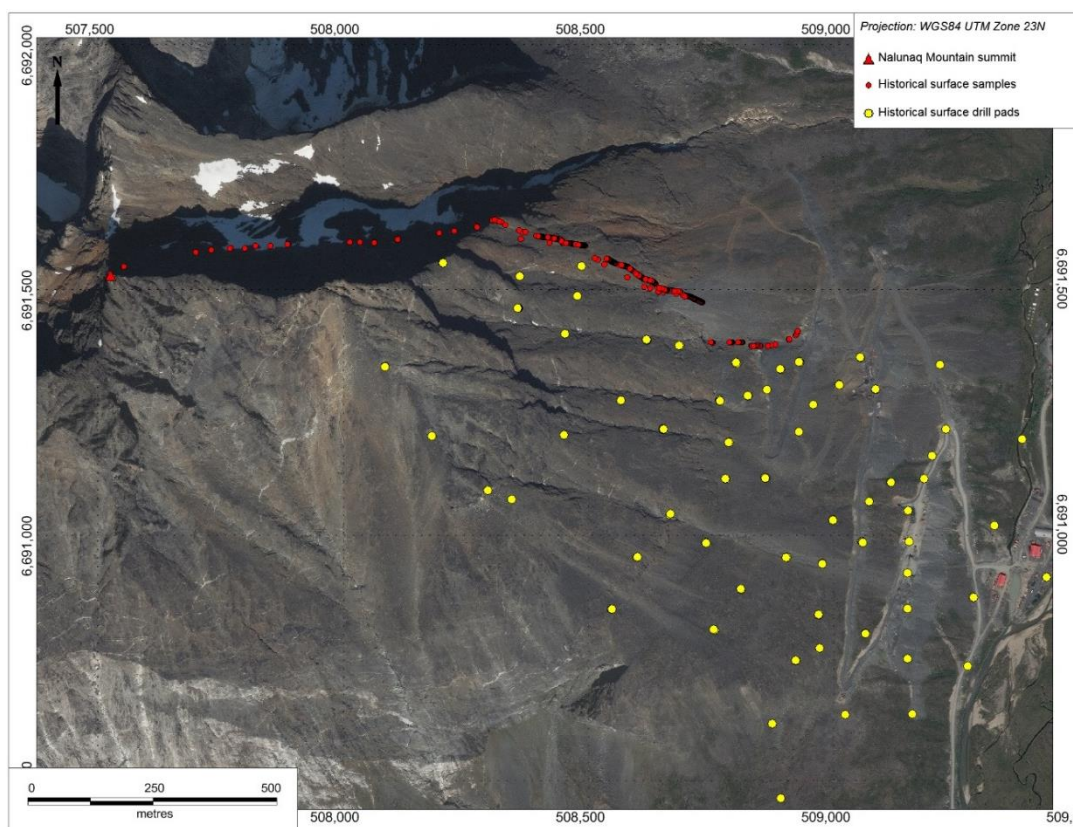
Surface drilling continued after mining operations commenced in 2004. Between 2004 and 2006, 83 surface holes were drilled for a total of 13,404 m, mainly in the Mountain and South Blocks. This brought the total amount of surface drilling at Nalunaq between 1993 and 2006 to 172 drillholes for 30,478 m. Underground development and exploration drilling was also carried out between 2004 and 2008. The total amount completed was 237 drillholes for 5,572 m.

Underground continuous chip sampling was undertaken throughout the exploration and mine development; there are 2,041 samples with gold assays that were taken in exploration adits and raises, and 5,478 samples from development workings.

GEUS has provided Amaoroq with a database for all sampling at Nalunaq for the period 1993 to 2008. This dataset is described in more detail by Schlatter and Olsen (2011), and its contents are summarised in Table 5-1. The distribution of historical surface sampling and diamond drilling is shown in Figure 5-3.

**Table 5-1: Summary of samples from exploration and development at Nalunaq which have gold assays assigned to them as of 2011 (from Schlatter and Olsen, 2011)**

Type of Sample	Number of samples with gold assays
Drill core from surface drillholes	7,164
Surface rock samples	458
Drill core from underground drillholes	723
Underground exploration chip samples	2,041
Underground development chip samples	5,478
Miscellaneous samples (not from Main Vein)	104
Total samples	15,968



**Figure 5-3 Locations of historical surface exploration sampling and surface diamond drilling pads**

Since the completion of the transfer of the project by Nalunaq A/S in March 2016, additional surface sampling and core drilling has been completed. Exploration continues currently, with the current activities detailed in Sections 8 and 9.

## 5.3 Previous Mineral Resource Estimates

### 5.3.1 Historical mineral resource estimates

The Mineral Resources declared by previous operators, particularly those prior to mining operations, have largely been mined out. They are however described here to illustrate the order of magnitude of material that has been identified by the early stages of operations in the lower north-eastern parts of the mountain.

An independent Mineral Resource Estimate (“MRE”) was produced by SRK Consulting (Toronto) (“SRK NA”) in 2002 using three-dimensional computer block modelling and geostatistical kriging methods using Gemcom software (SRK NA, 2002). This was based on data provided by databases provided by the joint venture company (Nalunaq A/S) and prepared in accordance with the CIM Code (2000) and the guidelines of National Instrument 43-101: Standards of Disclosure for Mineral Projects. It was used as the basis for Kvaener’s 2002 Feasibility Study.

Although exploration data included surface sampling from 400 masl to 1,250 masl, the 2002 MRE only related to the developed portion of the Main Vein in the Target Block between 300 masl and 500 masl. However, the potential for additional resources beyond this target area was recognised. Table 5-2 provides a summary of the 2002 MRE.

Later in 2002, SRK NA updated the MRE to include samples from a further 800 m of underground development, using the same estimation method. This added ounces to the Target and South Blocks and converted some Inferred Mineral Resources to Indicated/Measured. The updated estimate is summarised in Table 5-3, reported at a 1.5 m minimum stoping width.

**Table 5-2: Summary of the SRK NA 2002 Mineral Resource Estimate, reported at a zero cut-off grade and at various minimum stoping widths (from Kvaener, 2002)**

Measured & Indicated Mineral Resources	Over 1.0 m		Over 1.2 m		Over 1.5 m		Ounces Gold
	Tonnes	g/t gold	Tonnes	g/t gold	Tonnes	g/t gold	
Main Vein (including stockpiles)	352,100	30.3	414,200	25.8	508,300	20.9	343,700
South Vein	58,000	28.3	69,700	23.6	88,300	18.7	52,900
<b>Total</b>	<b>410,100</b>	<b>30.0</b>	<b>483,900</b>	<b>25.5</b>	<b>596,600</b>	<b>20.6</b>	<b>396,600</b>

Inferred Mineral Resources	Over 1.0 m		Over 1.2 m		Over 1.5 m		Ounces Gold
	Tonnes	g/t gold	Tonnes	g/t gold	Tonnes	g/t gold	
Main Vein	200,000	24.7	240,100	20.6	326,000	15.9	159,100
South Vein	34,000	22.4	41,200	18.7	52,000	14.8	24,800
<b>Total</b>	<b>234,000</b>	<b>24.4</b>	<b>281,300</b>	<b>20.3</b>	<b>378,000</b>	<b>15.7</b>	<b>183,900</b>

**Table 5-3: Summary of the updated Mineral Resource Estimate produced by SRKNA in 2002 reported at a 1.5 m minimum stope width and a zero cut-off grade (SRK NA, 2002; Table taken from Dominy and Sides, 2005).**

Resource Category	Tonnage (t)	Grade (g/t gold)	Ounces gold
<b>Main Vein Resource</b>			
<b>Measured</b>	245,000	19	150,000
<b>Indicated</b>	210,000	21	142,000
<b>Inferred</b>	260,000	18	150,000
<b>South Vein Resource</b>			
<b>Measured</b>	56,000	12	21,600
<b>Indicated</b>	120,000	12	46,300
<b>Inferred</b>	95,000	11	33,600

In addition to the MRE for areas that were subject to underground exploration development, SRK NA (2002) also defined Inferred Mineral Resources for the Upper and Mountain Blocks based on diamond drilling and surface sampling (Table 5-4). These were reported at a minimum stope width of 1.5 m and a zero cut-off grade and used the 2000 CIM Reporting Code.

**Table 5-4: Mineral Resource Estimate for the Upper and Mountain Blocks (SRK NA, 2002a; table taken from Dominy and Sides, 2005)**

Inferred Mineral Resources	Tonnage (t)	Grade (g/t gold)	Ounces gold
<b>Upper Block</b>	125,000	11.5	46,200
<b>Indicated</b>	201,000	18.7	121,000

### 5.3.2 Mineral resource estimates during mining operations

Following the start of mining in 2004, Mineral Resources were updated by Snowden in 2005 (Dominy and Sides, Dominy 2005a). Mineral Resources were estimated using a kriged block model in Datamine software and reported in accordance with the 2004 CIM Code. In contrast to the SRK estimate, which defined Measured Mineral Resources to all blocks that were within 10 m of development, Snowden assigned developed parts of the Target Block to the Indicated category. This reflected Snowden's belief that the required level of confidence for Measured Mineral Resources was not present, even proximal to underground development. Furthermore, even with mining underway, grade continuity was not being proved. Table 5-5 shows the mineral inventory remaining in the Target Block as of September 2005, having accounted for depletion through mining.

**Table 5-5: Target Block Mineral Resources diluted to 1.4 m and at a zero cut-off grade (Snowden, 2005a)**

Block	Inferred Mineral Resources	All tonnes in resource <sup>1</sup>	Stope tonnes	Pillar tonnes (in-situ)	Pillar tonnes (planned)	Grade g/t gold	Ounces gold
Target	Indicated	381,000	329,000	14,000	38,000	21	257,000
	Inferred	270,000	243,000	None	27,000	16	139,000
South Central	Indicated	57,000	51,000	None	6,000	19	35,000
	Inferred	80,000	72,000	None	8,000	17	44,000

<sup>1</sup> Depleted by 145,000 tonnes from production

Snowden (2005) also provided an estimate for Inferred Mineral Resources for other blocks based on diamond drilling and surface sampling (Table 5-6). A 'payability factor' was applied to the tonnage estimates to provide a payable tonnes value. This was to account for likely upgrading and associated uncertainty. An average factor of 45% was used, based on the relative proportion of high-grade mineralised zones believed to pass through each block.

**Table 5-6: South, Target North, Upper and Mountain Blocks Inferred Mineral Resources (Snowden, 2005a)**

Block	Tonnage <sup>1</sup>	Grade <sup>2</sup> g/t gold	Ounces gold
South	520,000	18 (16-21)	301,000
Target North	290,000	18 (16-21)	168,000
Upper	320,000	18 (16-21)	185,000
Mountain	190,000	18 (16-21)	110,000
Global	1,320,000	18 (16-21)	765,000

<sup>1</sup> Payable tonnage factored

<sup>2</sup> Global best estimate grade within a grade range

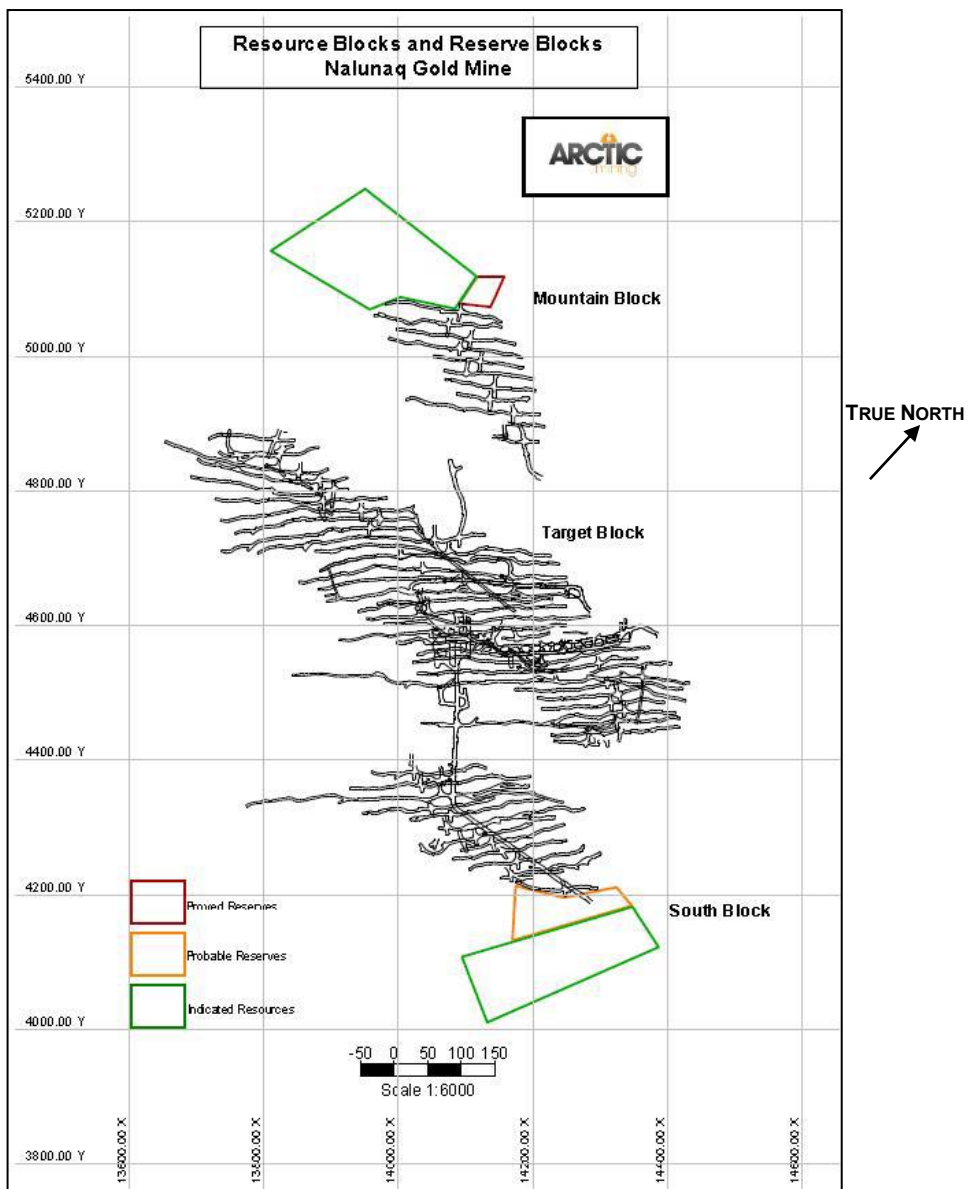
A final resource and reserve statement was produced internally by Arctic Mining, the subsidiary of Angel Mining PLC that operated the mine at the end of 2013 after the decision to close the mine had been taken. This is summarised in Table 5-7 as reported by Graham (2014), and the resource and reserves areas are shown in Figure 5-4 and Figure 5-5. SRK does not consider these statements to be compliant to international reporting codes.

Inferred Mineral Resources were defined as those parts of the Mineral Resources that could be demonstrated to provide reasonable evidence for structural continuity, on the basis of surface drilling, but where the widely spaced sampling could not provide reliable data for grade estimation. Indicated Mineral Resources were declared in areas where underground development and sampling had taken place along the mineralised structure or in areas of continuous surface sampling. It appears that Indicated Mineral Resources were also assigned to blocks where at least one third of drillholes intersecting the block included intersections exceeding 6 g/t gold. “Mineable reserves” were declared only in areas where the Main Vein had been fully exposed and developed by strike drives and slot raises, and where the drifts have been systematically sampled and assayed. In the areas where the structure was well-defined, the reserve blocks are extended two levels (c. 20 m vertically) away from the last mine opening.

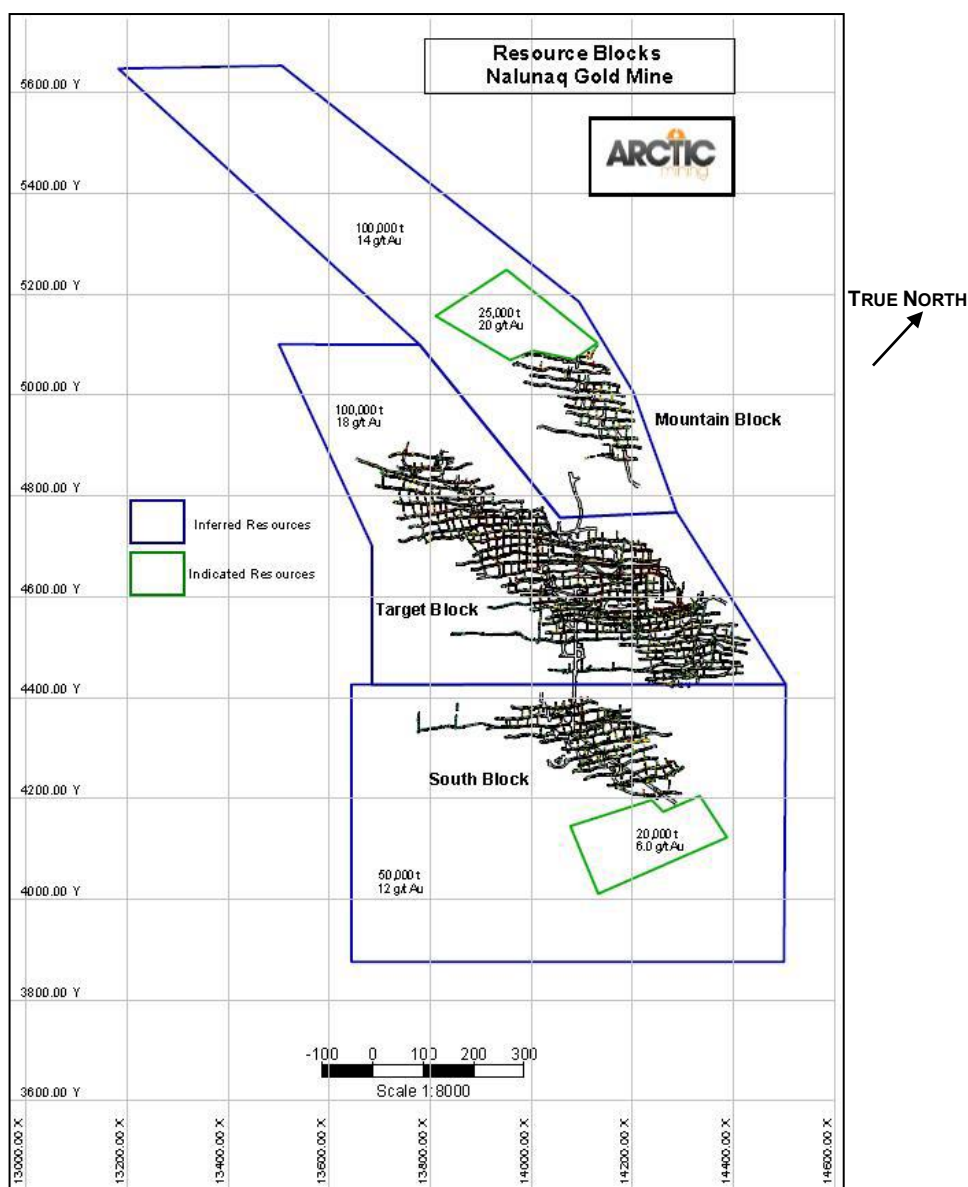
As far as SRK is aware, no geostatistical analysis was used for resource estimation; the estimation process involved the simple extrapolation of grade across polygonal blocks and the dilution of grade to a 1.5 m stopping thickness. SRK does not consider this to be an appropriate method for this style of mineralisation nor does it meet industry standards for the disclosure of Mineral Resources.

**Table 5-7: Resource and Reserve statement compiled at the end of mining operations in December 2013 (Graham, 2014)**

<b>Nalunaq Resources 31/12/2013</b>	<b>Tonnes</b>	<b>Grade, g/t gold</b>	<b>Contained gold, oz</b>
Total Inferred	250,000	15.2	120,000
Total Indicated and Measured	45,000	13.8	19,000
Resources in Pillars	11,000	19.0	6,700
<b>Nalunaq Ore Reserves 31/12/2013</b>			
Total Reserves (all blocks and stopes)	25,500	19.8	16,000
Total Reserves	28,000	18.7	16,800



**Figure 5-4: Nalunaq mine plan showing the locations of (non-compliant) Indicated Resource blocks and Reserves. Note that coordinates are in the historical mine grid, with the true north indicated by arrow. (Image Source: Graham, 2014)**



**Figure 5-5: Nalunaq mine plan showing the locations of (non-compliant) Inferred and Indicated Resource blocks. Note that coordinates are in the historical mine grid, with the true north indicated by arrow. (Image Source: Graham, 2014)**

### 5.3.3 Mineral Resource Estimates Conducted by Nalunaq A/S

Since taking ownership of the project, Nalunaq A/S have completed two Mineral Resource Estimates, both of which were reported in accordance with CIM Guidelines and Definitions. These are termed as MRE1 and MRE2.



*MRE1*

In December 2016, SRK Exploration Services Limited (“SRK ES”) produced a Mineral Resource estimate for the Nalunaq project based on the data available and their understanding of the geological model. The compiled Mineral Resource statement was split between Inferred Mineral Resources in the area surrounding the historical mine layout (the “Mine Area”) and Inferred Mineral Resources for in-situ remnant material within the mine that could practically and safely be mined as part of a larger exploration or mining operation. While this estimate recognised the existence of a number of plunging high grade features within an extended Main Vein model, it was believed at the time that the estimation parameters would need to be updated in future estimates to account for greater geological knowledge of the gold hosting environment. Table 5-8 provides a summary of MRE1.

**Table 5-8: Nalunaq Mineral Resource Estimate as of December 2016 (“MRE1”)**

Zone	Classification	Tonnage (t)	Grade (g/t Au)	Contained Gold (oz)
Remnant Material	Inferred	18,900	27.6	16,770
Mine Area	Inferred	428,000	17.9	246,300
<b>Total</b>	<b>Inferred</b>	<b>446,900</b>	<b>18.7</b>	<b>263,070</b>

*Notes:*

1. Remaining Stopes reported at a cut-off grade of 5.5 g/t gold, Mine Area reported at a cut-off grade of 5.5 g/t gold
2. Diluted to 1.8 m true width at 0.0 g/t gold
3. Cut off calculated using a gold price of USD 1,300/oz
4. Total refining, transportation and royalties costs of USD 50.00/oz
5. Total operating costs of USD 200/t
6. All figures are rounded to reflect the relative accuracy of the estimate
7. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
8. 100% of the Mineral Resource is attributable to Nalunaq A/S

Further to this Mineral Resource estimate, SRK ES also produced an Exploration Target, extrapolated from the estimate across the main vein extents known at the time. SRK ES considered this area as holding significant potential and outlined an Exploration Target of some 80 koz to 1.2 Moz gold contained within 1 Mt to 2 Mt grading between 2.5 g/t to 19.0 g/t Au.

*MRE2*

A second Mineral Resource Estimate (“MRE2”) was reported for the Nalunaq project by SRK ES in 2020 ahead of AEX Gold’s listing on the Alternative Investment Market of the London Stock Exchange (“AIM”).

This estimate was based on additional exploration data, and better understanding of the geological model. Estimation strategy was tailored to a model of high-grade plunging mineralised shoots. The Mineral Resource statement was again split between Inferred Mineral Resources in the area surrounding the current mine layout (the “Mine Area”) and Inferred Mineral Resources for in-situ remaining stope material within the mine that could practically and safely be mined as part of a larger exploration or mining operation.

**Table 5-9: Nalunaq Mineral Resource Estimate as of June 2020 (“MRE2”) (Modified from SRK ES, 2020)**

Zone	Classification	Gross		
		Tonnes (t)	Grade (g/t Au)	Contained Gold (oz)
Remaining Stopes	Inferred	26,690	20.8	17,890
Mine Area	Inferred	396,080	18.3	233,080
Total Inferred		422,770	18.5	250,970

Notes:

1. Remaining Stopes reported at a cut off of 6.0g/t Au
2. Mine Area reported at a cut-off grade of 6.0g/t Au
3. Diluted to 1.2m true thickness at 0.0g/t Au
4. Gold price of US\$1,500
5. Total refining, transportation and royalties costs of US\$57
6. Total operating costs of US\$254/t.
7. All figures are rounded to reflect the relative accuracy of the estimate
8. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability
9. 100% of the Mineral Resource is attributable to Nalunaq A/S

## 5.4 Previous Mineral Reserve Estimates

No previous Mineral Reserve estimates, reported in accordance with an Internationally Recognised Reporting Code, such as the CIM Definitions and Standards have been reported for the Nalunaq Project.

## 5.5 Historical Production

### 5.5.1 Crew Gold Corporation

The Greenlandic and Danish Governments granted the Nalunaq Exploitation Licence to Crew Gold Corporation (“Crew Gold”) in April 2003 for 30 years. Crew Gold commenced mining in 2004 and owned and operated the gold mine until July 2009. No processing was carried out on site during their tenure. From early 2004 until late 2006, mined material was shipped to a processing facility in Spain, and from then until they ended operations in 2009, it was shipped to Crew Gold’s Nugget Pond processing plant in Newfoundland.

In total, between the two processing plants, 352,307 oz of gold were produced by Crew Gold from 654,755 t of milled at an average production cost of USD 530/oz gold.

**Table 5-10: Data for shipments and gold production from the Nalunaq Gold Mine from 2004 to 2009**

Year	Processing Location	Tonnage shipped	Average Grade, g/t	Contained Gold (est.), oz	Tonnage Milled	Recovered Gold, oz.
2004	Spain	97,300	20.6	71,468	94,144	56,817
2005		114,106	20.4	76,542	113,921	66,769
2006		107,557	16.5	62,716	107,600	67,937
Sub-totals		318,963		210,727	315,665	191,523
2007	Nugget Pond	155,341	15.4	84,471	132,768	70,996
2008		135,308	11.2	53,801	140,870	59,046
2009*		50,227	11.3	19,996	65,452	30,742
Sub-totals		340,876		158,268	339,090	160,784
<b>Total</b>		<b>659,839</b>		<b>368,995</b>	<b>654,755</b>	<b>352,307</b>

\* 2009 was a short year up to the end of operations. The last shipment was in March 2009.

The shipments to Spain can be correlated to the throughput at the mill. There are however differences in both the tonnage milled compared to the tonnage shipped, suggesting that there were inaccuracies in weighing material either at the mine or at the processing plant. The amount of gold recovered is also substantially different to the estimated contained gold in the shipments. This is most likely due to over-estimation of grade in the mine, gold losses in the mine, underestimation of the amount of dilution, or material being lost during transport.

These differences are less marked for the period that material was processed at Nugget Pond, but it is more difficult to correlate shipments against milling. As demonstrated in the differences between the annual shipments and the annual milled material, the processing facility must have been stockpiling material and processing it in subsequent years. Overall, the data suggest that some problems with the mine call may have been addressed.

All underground mining activities ceased by 28 February 2009 and Nalunaq was placed on care and maintenance. Crew Gold sold the mine and all associated infrastructure to Angus & Ross Plc. (which became Angel Mining PLC) in early July 2009 for US\$ 1.5 million.

## 5.5.2 Angel Mining (Gold) A/S

After acquisition of the Nalunaq Gold Mine assets, the mining permit was transferred to Angel Mining (Gold) A/S ("Angel Mining") in September 2009. A subsidiary of Angel Mining, Arctic Mining Ltd., carried out all mining operations and installed an underground processing plant in the mine at the 300 Level. This plant required an investment of USD 35 M and comprised a mill and a carbon-in-pulp cyanide leaching circuit ("CIP") which fed into a furnace that produced doré bars. The plant was designed for a head grade of 13.5 g/t gold.

The first gold pour was carried out in late May 2011, with an optimum production target of approximately 24,000 oz Au per annum, but this target was never reached. A number of problems disrupted early production and the challenging logistics of operating at the site were highlighted. Early in 2012, two significant production delays occurred. The first was that incorrect parts were sent for a critical pump causing plant downtime of two weeks while waiting for the correct parts. The second delay was on 5 March 2012 when the main generator failed and the back-up generator was not of sufficient capacity to power the crushing circuit. It took six weeks to repair the generator, during which time no material could be crushed.

Gold production figures are shown in Table 5-11. The average monthly production by Angel Mining from June 2011 to July 2013 was approximately 600 oz Au, well short of their target optimum production rate of 2,000 oz gold per month. The Angel Mining production rates are also low compared to the average of 5,544 oz gold per month produced by the Nugget Pond processing plant, when averaged over the 29 months of operation at this plant.

**Table 5-11: Angel Mining at Nalunaq Gold Mine, Monthly Doré Production Figures 2011 to 2013**

Period	Gold produced (kg)	Gold produced (oz)
May 2011 first gold pour	0.93	30
June	1.26	41
July	5.97	192
August	12.25	394
2011 September	21.80	701
October	10.40	335
November	21.60	693
December	29.20	940
<b>2011 TOTAL</b>	<b>103.41</b>	<b>3,326</b>
January	32.40	1,042
February	17.00	545
March	15.00	481
April	-	-
May	40.70	1,309
2012 June	27.50	883
July	29.30	941
August	8.31	240
September	8.87	256
November	19.25	557
December	20.77	601
<b>2012 TOTAL</b>	<b>219.10</b>	<b>6,855</b>
January	5.04	162
February	25.01	804
March	21.06	677
2013 April	24.42	785
May	29.64	953
June	23.05	741
July	16.17	520
<b>2013 TOTAL</b>	<b>144.38</b>	<b>4,642</b>
<b>TOTAL FOR ALL YEARS</b>	<b>466.89</b>	<b>14,823</b>

Due to financial difficulties and an inability to repay loans, Angel Mining PLC went into administration on 27 February 2013, and Stephen Cork and Andrew Beckingham of Cork Gully LLP (52 Brook Street, London, W1K 5DS) were appointed Joint Administrators.

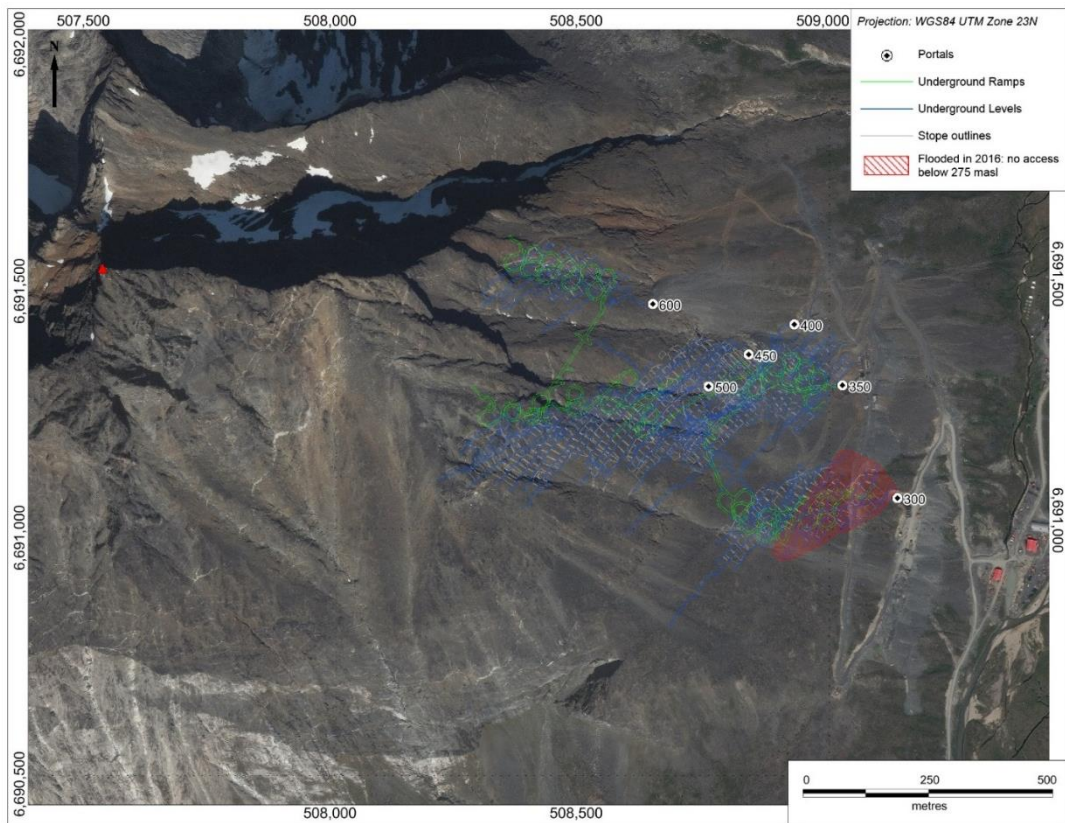
The Administrators took the decision to keep the mine in production. During this period Arctic Mining continued mine operations and run of mine material was predominantly sourced from pillar mining with minor additional material from level ramping. Development continued and in February 2013 exploration was being carried out at the 720 MB Level, consisting of raises and an adit towards the west at the 740 MB Level. The Main Vein was followed for 12 m to the west where it stopped, mirroring the structure observed in the 720 MB level. It is known that in August 2013, pillar mining and level ramping on the 470 MB Level and 730 MB Level respectively produced a total of 2,990 tonnes.

Minor problems continued with the processing plant. During February 2013, for example, 2,917 tonnes were milled at an average head grade of 18.5 g/t gold. However, during this period the grade of the tailings averaged 3.3 g/t with tailings samples ranging from 0.9 g/t to 34.0 g/t gold. These high grades indicate a significant loss of gold due to a combination of factors. These included the fact that the plant was receiving material that graded above its designed head grade of 13.5 g/t gold, meaning that a proportion of the gold was not being recovered from the leachate. Secondly, that an incorrect order of fine-grained carbon had been placed, meaning that, when introduced into the plant, it was not recovered during screening causing carbon combined with gold to be lost to the tailings.

Arctic Mining expected that doré produced at Nalunaq in 2013 would contain 90% gold and 8% silver for planning purposes. In 2013, actual doré assay results returned gold and silver contents of 85.5% and 11.6% respectively in January 2013, and 93.2% and 6.4% respectively in July 2013.

In total, 102 staff were employed at Nalunaq Mine in February 2013. This number declined to 60 by October 2013 with a combined wage bill of USD 395,000 per month. Of the 60 staff, 14 were based in the camp or office, 11 in the engineering department, 16 in mining and 19 in the processing departments.

The closure of Nalunaq was announced in October 2013 and by 15 November 2013 all mining staff had left and remediation by a local construction company began. All mining equipment and surface infrastructure, including the camp and the port facility (apart from the jetty) was removed or destroyed. The underground processing plant was left in place, and the mine portals were closed with waste rock. Figure 5-6 shows the final extent of the mine at the time of closure and the locations of mine portals.



**Figure 5-6:** The final extent of the mine superimposed onto satellite imagery of the area and the former mine camp on the right (Image Source: SRK ES, 2016)

## 6 GEOLOGY

### 6.1 Regional Geology

Nalunaq lies within the wider Psammite Zone in Southern Greenland that hosts the Nanortalik Gold Belt (Hughes et al., 2013). This zone is part of the Ketilidian Mobile Belt which evolved between 1,850 Ma to 1,725 Ma during supposedly northward subduction of an oceanic plate under the southern margin of the Archaean North Atlantic Craton. Similarities to gold mineralisation of the same age and orogenic setting have been noted and it is possible that the Nanortalik Gold Belt is a continuation of the Swedish Gold Line (Schlatter et al., 2016).

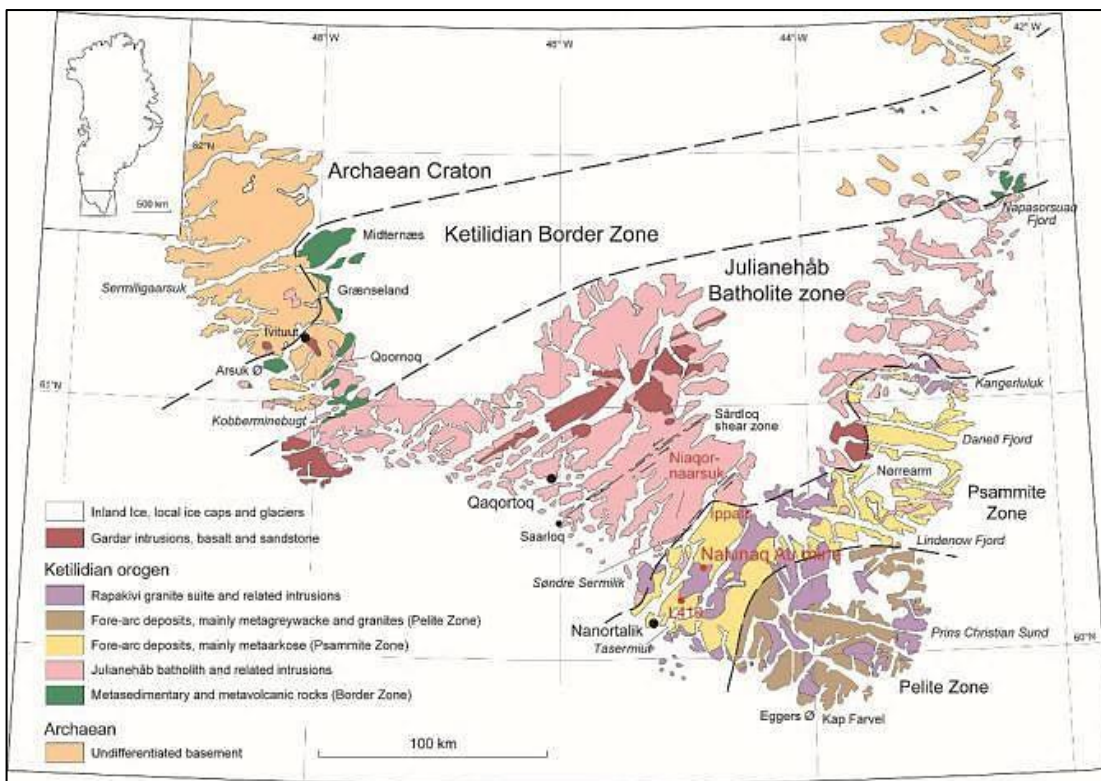
The Ketilidian belt is divided into four geological domains: the Ketilidian Border Zone, the Julianehåb Batholith Zone, the Psammite Zone and the Pelite Zone (Figure 6-1). For the purposes of describing the metallogeny of South Greenland, Steenfelt et al. (2016) divides South Greenland into the Northern, Central and Southern Domains (Figure 6-2).

The Nanortalik Gold Belt parallels the boundary between the Psammite Zone and the Julianehåb Batholith Zone and includes a significant number of gold occurrences. Apart from Nalunaq, these are at an early stage of exploration or have not yet been systematically explored at all. Known gold occurrences are shown in Figure 6-2, whilst stream sediment and heavy mineral geochemical data shows numerous anomalies for gold and gold pathfinder elements, indicating further unexplored potential in the area (Figure 6-3).

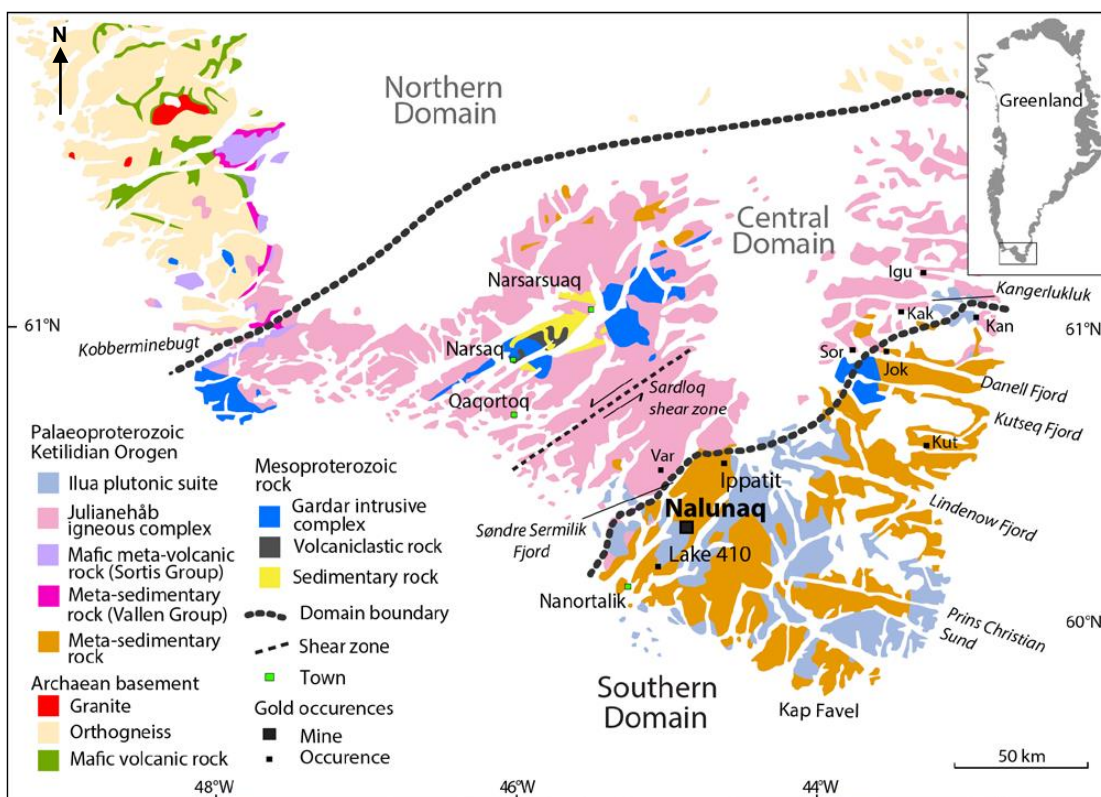
In Figure 6-2 the abbreviated gold occurrence names are: Igu- Igutsait, Jok- Jokum's Shear, Kan- Kangerluk, Kak- Kangerluluk, Kut- Kutseq, Sor- Sorte Nunatak, Var –Vagar, modified from Garde et al. (2002), Stendal and Frei (2000); Schlatter and Hughes (2014) and Steenfelt et al. (2016)).

In Figure 6-3, anomalies are defined as values above the 95th percentile of the frequency distributions of data for entire South Greenland with large symbols are above the 99th percentile.

Yellow shading in Figure 6-3 shows areas of greenschist to amphibolite metaarkose rocks.

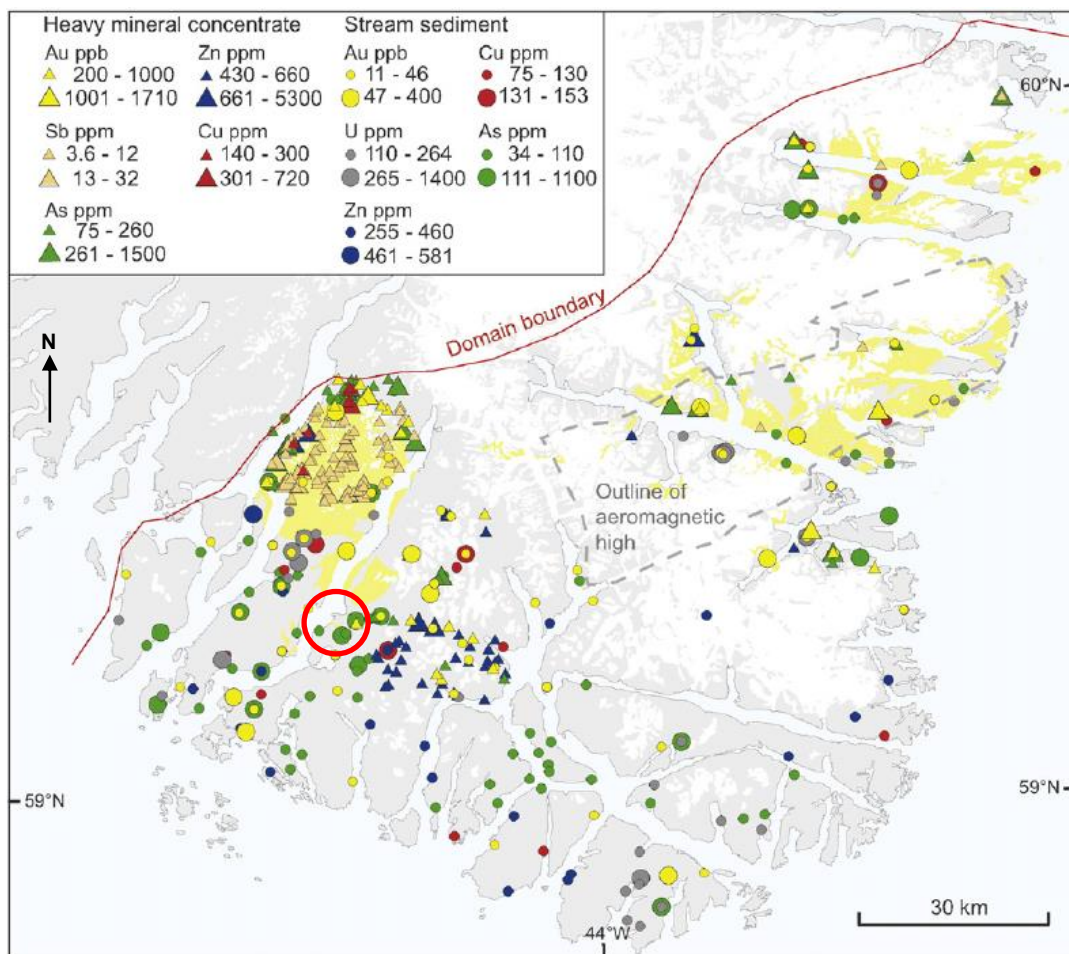


**Figure 6-1: Summary geological map of South Greenland showing the principal geological domains (Image Source: Secher et al., 2008)**



**Figure 6-2: Simplified geological map of South Greenland, highlighting the major tectonic divisions of the Ketilidian Orogen and noting gold occurrences (Image Source: Bell, 2016)**

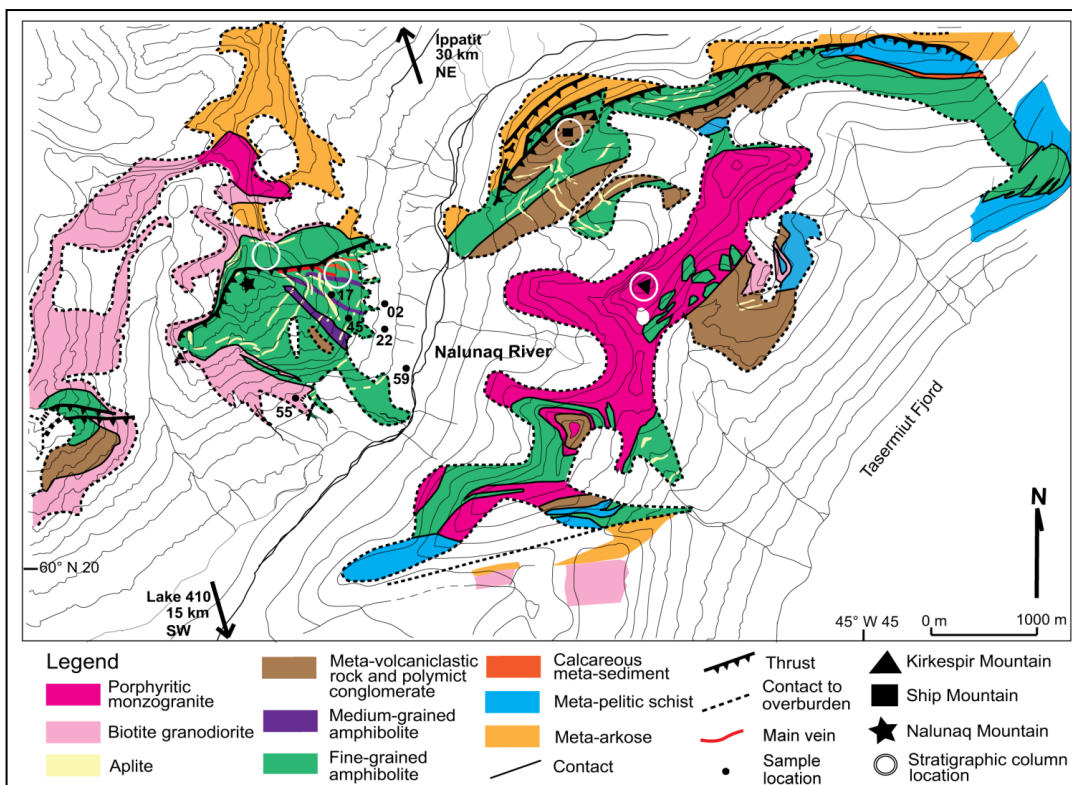




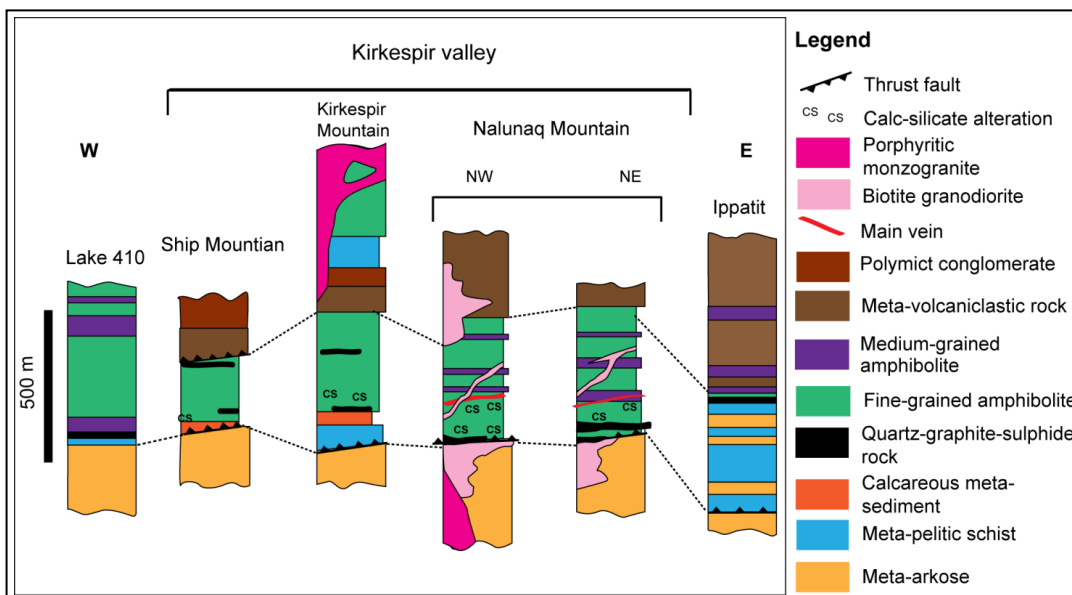
**Figure 6-3: Stream sediment (<0.1 mm fraction) and heavy mineral concentrate anomalies in South Greenland. Nalunaq is indicated by the red circle (Image Source: Steenfelt et al., 2016)**

## 6.2 Local Geology

The geology of the Nalunaq Mountain is dominated by a package of fine- to medium-grained tholeiitic basalt flows and locally coarser, sub-concordant doleritic sills. This package is part of the Nanortalik Nappe and has been thrust over metasediments. The sequence is intruded by later granites and several generations of late aplite and pegmatite dykes. Figure 6-4 shows the geology of the Kirkespir Valley including Nalunaq, and Figure 6-5 shows simplified stratigraphic columns for various locations in the area, highlighting the base of the Nanortalik Nappe. Locations of the stratigraphic columns shown in Figure 6-5 are marked by white circles in Figure 6-4. Sample locations relate to material taken by Bell (2016) for U/Pb dating. In Figure 6-5, lithological units below the thrust correlate throughout the area, marking the base of the Nappe (modified from Petersen, 1993, and Kaltoft et al., 2000)



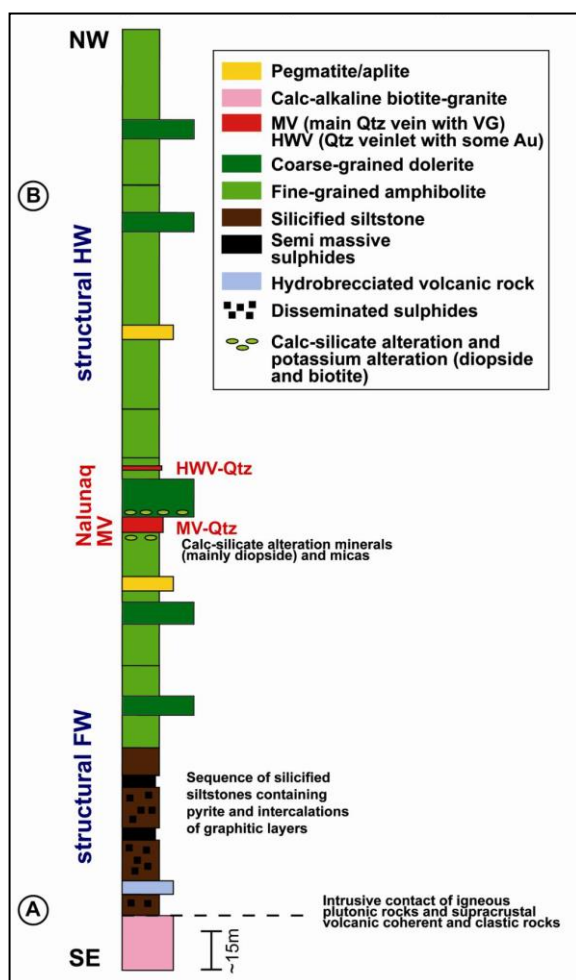
**Figure 6-4: Map of the Kirkespir valley showing the geology of Nalunaq, Kirkespir and Ship Mountains (Image Source: Bell, 2016, modified from Petersen, 1993)**



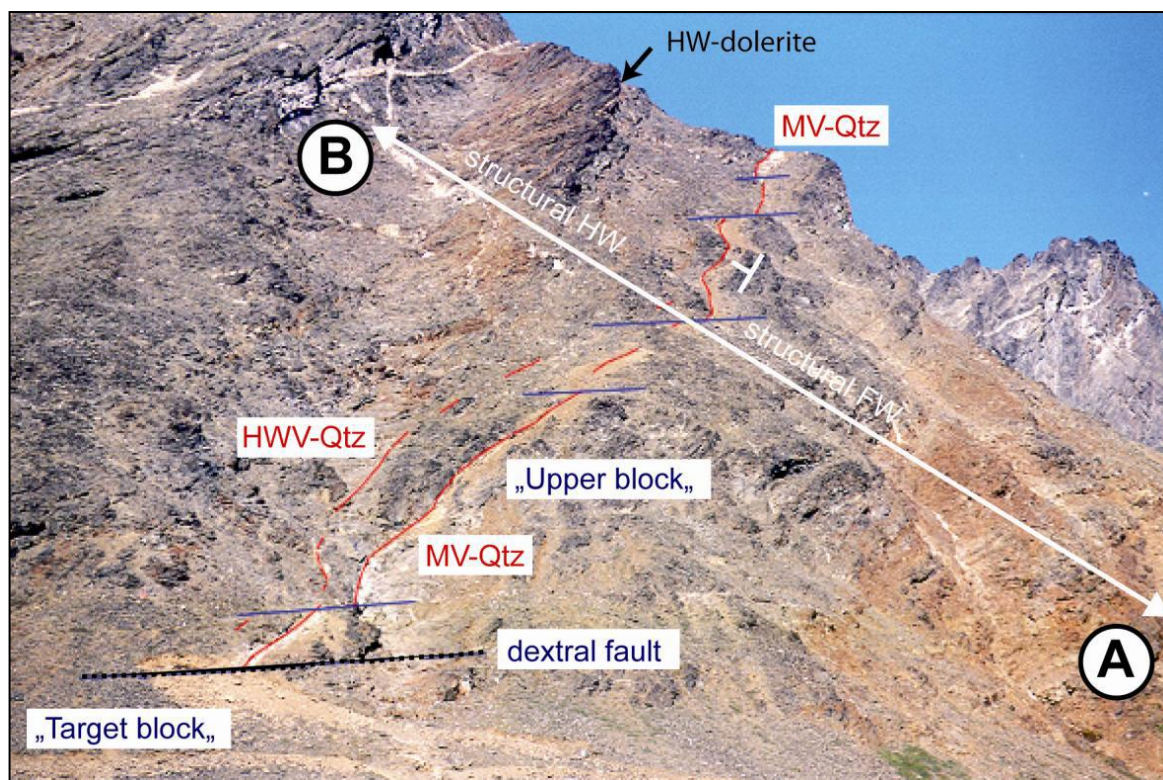
**Figure 6-5: Schematic stratigraphic sequences for sections of the Nanortalik Nappe (Image Source: Bell, 2016)**

Most previous workers believe that the gold-bearing quartz vein is associated with a shear zone that is several metres thick (Secher et al. 2008). The volcanic host rocks have been metamorphosed to upper greenschist or amphibolite facies. Following a review of data from geological mapping (Petersen 1993; Kaltoft et al. 2000) and drilling programmes (Schlatter 1997; Schlatter 1998; Kludt and Schlatter 2000; Schlatter and Aasly 2001), Schlatter and Olsen (2011) drew up a simplified stratigraphic column through the mineralised horizons at Nalunaq (Figure 6-6).

Due to the lack of primary volcanic textures and a lack of age relations of the rock sequence, the true stratigraphic way up is unknown. The stratigraphy has therefore been assigned into the structural footwall (“FW”) and structural hanging wall (“HW”) with respect to the main gold-mineralised quartz vein (Nalunaq Main Vein, “MV”) (Schlatter and Olsen, 2011). These are shown in outcrop in Figure 6-7. There is also a less continuous and thinner auriferous quartz vein about 15-20 m above the MV and is known as the Hanging Wall Vein (“HWV”). The labels A and B in Figure 6-7 refer to positions on the stratigraphic column shown in Figure 6-6. Note that the Upper Block is referred to as the Mountain Block in this report.



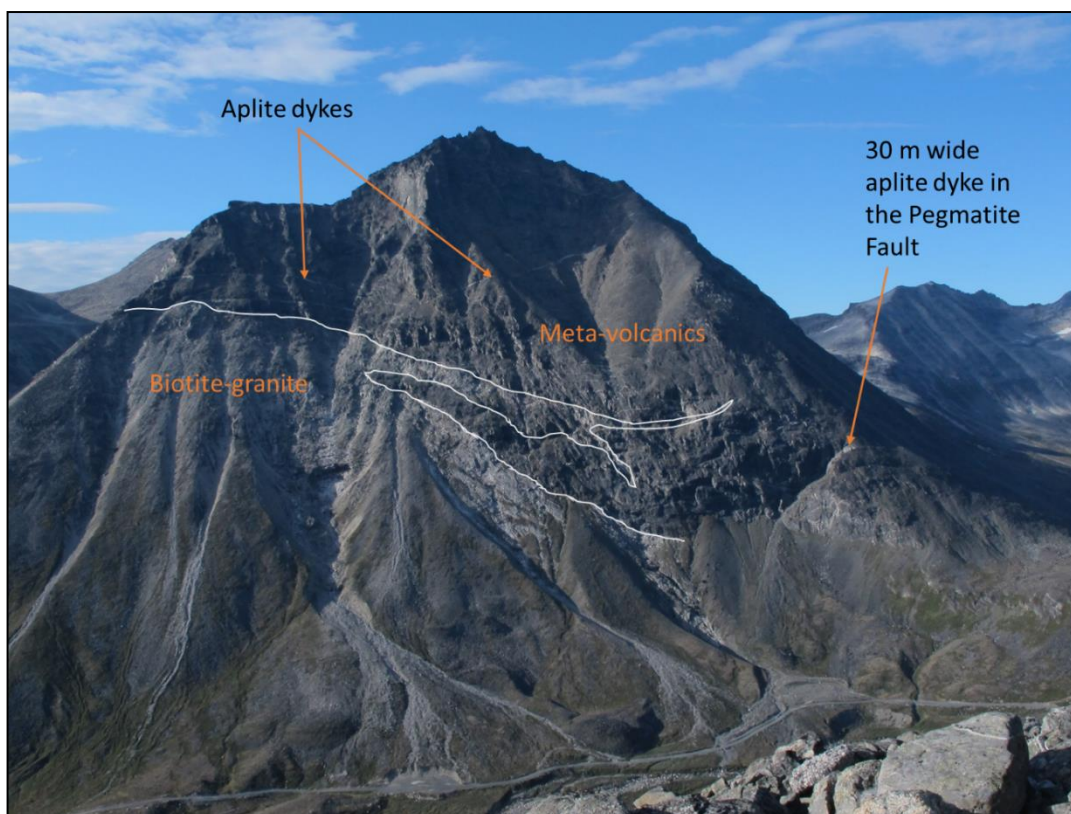
**Figure 6-6: Simplified stratigraphic column for the Nalunaq Mountain through the mineralised horizons (Image Source: Schlatter and Olsen, 2011)**



**Figure 6-7: Photograph of the southeast face of the Nalunaq Mountain showing the principal stratigraphic components. (Image Source: Schlatter and Olsen, 2011)**

### 6.2.1 Structural Footwall

The structural footwall (“FW”) comprises metavolcanics intruded by biotite granites, and the contacts between these can be seen at surface (Figure 6-8) and in drill core. Volcanic and volcanoclastic rocks comprise a sequence of silicified siltstone with abundant sulphides and intercalated graphitic beds, fine-grained amphibolite and coarse-grained dolerite sills or dykes which can be several metres thick, all intruded by thin aplite dykes or sills. Greenish calc-silicate alteration appears to be more common in the FW than the hangingwall (“HW”), present as elongated lenses and stringers (Figure 6-9) that become increasingly parallel to the Main Vein the closer they become to it (Kolb, 2013). Whilst most authors refer to this alteration as calc-silicate, it more correctly comprises garnet-epidote and clinopyroxene alteration (Kolb, 2013). The sequence of sulphide-rich volcanics represent part of the lowermost stratigraphy of the Nanortalik Nappe and are the base of the mineralised thrust sheet.



**Figure 6-8:** Photograph of the south-western face of the Nalunaq Mountain showing the biotite-granite intrusion in the FW, meta-volcanics that host the MV and outcrops of aplite dykes (Image Source: SRK ES, 2016)



**Figure 6-9:** Typical FW lithology showing conjugate veins and stringers of calc-silicate alteration (Image Source: SRK ES, 2016)

### 6.2.2 Nalunaq main vein

The main mineralised horizon is represented by the 0.5 to 2 m thick Main Vein (“MV”), commonly with increased alteration extending for up to 1 to 1.5 m in width on both sides of the vein. The MV slightly cross-cuts the foliation and can be traced at surface for over 1 km on the east- and north-facing slopes of Nalunaq Mountain, about 250 m across the western face of the mountain, and at least 800 m down the south-western slopes.

### 6.2.3 Hangingwall vein

The Hangingwall Vein (“HWV”) is less continuous, thinner (typically only up to 10 cm thickness) and lower grade than the MV. It pinches out along strike and may only be represented by thin seams of calc-silicate alteration and silicification in the volcanic rocks, or it is not present at all. It is possible that it represents a splay off the MV (Schlatter and Olsen, 2011). Amaroq has not observed this structure underground but noted its presence above the MV on the west face of the mountain. Amaroq consider that the HWV may provide additional opportunities for exploration.

### 6.2.4 Structural hangingwall

The structural hangingwall (“HW”) consists of a sequence of fine-grained amphibolite and medium- to coarse-grained dolerites, with the MV often carrying increased gold grades at the contact with these dolerites. They are distinctly more massive and darker than FW lithologies (Figure 6-10) and this colour/texture contrast can be seen at distance on surface (Figure 6-7 and Figure 6-11). Several generations of pegmatite and aplite crosscut these lithologies. Figure 6-11 shows the darker HW lithologies above the eroded trace of the MV. Patches of the MV can be seen exposed on the FW surface below and the lower climber to the right hand side. Figure 6-11 shows how all HW units are cut by aplite dykes.



**Figure 6-10: Dark coarse-grained meta-dolerite in the HW showing some garnet-epidote alteration. This is less common in the HW than the FW. (Source: SRK ES, 2016)**



**Figure 6-11: Climbers sampling the MV where exposed on the SW side of the mountain (Source: SRK ES, 2016)**

### 6.2.5 Structural blocks of the Nalunaq Mountain

The Nalunaq deposit has been divided into four main blocks based on their division by post-mineralisation faulting. From southeast to northwest these are named Valley Block, South Block, Target Block and Mountain Block.

The most significant fault is between the South Block and the Target Block. This fault, known as Pegmatite Fault despite not exhibiting particularly pegmatitic features, shows normal fault movement resulting in about 80m of vertical offset of the South Block relative to the Target Block. The fault also exhibits dextral displacement interpreted by Amaroq to be approximately 85m. It is well exposed on surface and intruded by a 30m thick aplite dyke (Figure 6-12).



**Figure 6-12: The Pegmatite Fault exposed on the south side of the mountain with the South Block to the east and the Target Block to the west. It has been intruded by a 30m wide aplite dyke (Image Source: SRK ES, 2016)**

Lind et al. (2001) suggest that the Target Block is separated from the Mountain Block by a dextral fault with minor displacement of only a few metres, known as the Mosquito Net Fault. However, former geologists from the Nalunaq mine suggest that, to date, there is limited evidence of faulting in this area and Amaroq has found no evidence of it underground. This area requires further structural assessment, and continuity of the MV between the Target and Mountain Blocks cannot be ruled out. Other significant faults that cut the MV, albeit with much smaller offsets than the Pegmatite Fault, include the Clay Fault and Your Fault.

Offsets created by these late faults have added considerable complications to exploration, mine design and mining operations at Nalunaq, and misinterpretation of movement on faults could easily result in the MV being lost. Small deviations in the direction of underground development drives or small fault offsets relative to the direction of the drives can easily result in the vein being missed while underground.

### 6.2.6 Influences of Aplite Dykes and Sills

Numerous aplite dykes and sills are found within the mine area and throughout Nalunaq Mountain. These emanate from the granitic intrusions that underlie the mountain (Figure 6-13) and cross-cut and invade the main mineralised body (Figure 6-14 and Figure 6-15). More attention is required to determine their influences with respect to gold grade, structural understanding and mine planning. Factors to be further investigated include:

- Their possible role as a heat engine in the remobilisation of gold is not yet understood.
- Their possible association to multiple populations of gold grades in Nalunaq is worth investigating further.
- Several areas have been observed where dykes have intruded faults (Figure 6-16), or

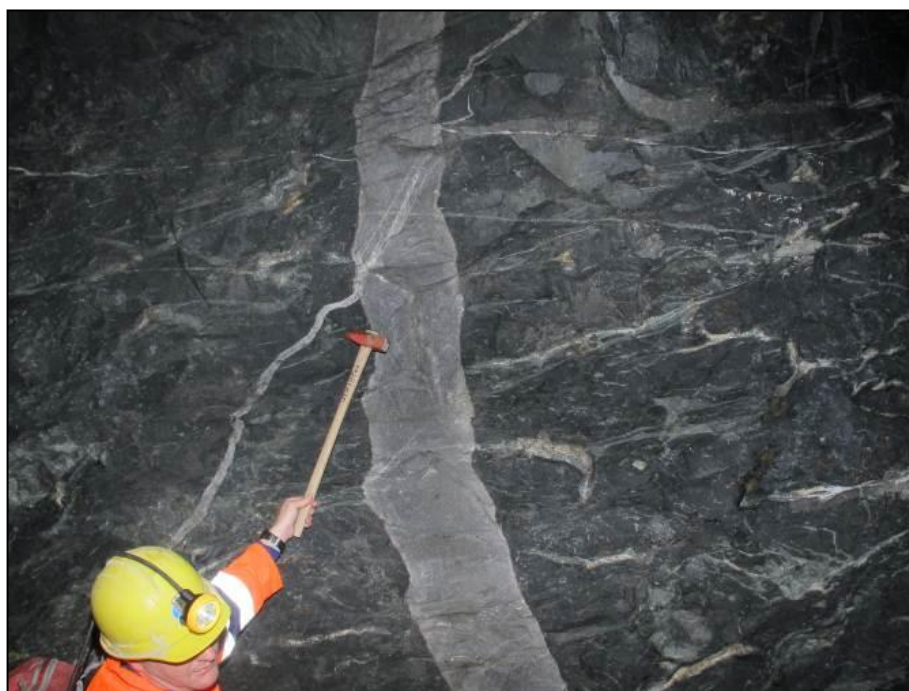


faulting has occurred post-intrusion (Figure 6-17). In both cases, the presence of a fault and the possible offset of the MV may not have been recognised due to the feature being obscured by the dyke, causing the drives to deviate away from the MV;

- Some areas of the mine show more intensive intrusion and dilution of the MV through the intrusion of the aplite dykes (Figure 6-18). In future it will be important to recognise these areas in advance such that mining can be planned accordingly. It is reasonable to assume that dykes and sills will become more numerous closer to the granitic intrusions, both along strike and down-dip.



**Figure 6-13: Views of the granitic intrusion that underlies Nalunaq Mountain and aplite dykes/sills that emanate from it. Left: northern side of mountain. Right: southern side of mountain (Image Source: SRK ES, 2016)**



**Figure 6-14: Aplite dyke on the main ramp adjacent to the 560 Level cross-cutting FW lithologies (Image Source: SRK ES, 2016)**



**Figure 6-15: 580 Level ventilation raise along on an aplite dyke but apparently sampled as shown by blue sampling lines (Image Source: SRK ES, 2016)**



**Figure 6-16: Large aplite dyke on the 720 Level Mountain Block West exploiting a fault which is displacing the MV (Image Source: SRK ES, 2016)**



**Figure 6-17: Aplite dyke exposed on the wall of the 350 Level West. There is fault gouge at the margins of the dyke indicating movement post-emplacment (Image Source: SRK ES, 2016)**



**Figure 6-18: Aplite dyke diluting the MV structure on the 600 Level West (Image Source: SRK ES, 2016)**

### 6.2.7 Cross-cutting Dolerite Dykes

The metavolcanic sequence is cut by several dolerite dykes which are differentiated from surrounding amphibolites mainly by their coarser grain size (Figure 6-19). These dykes are geochemically equivalent to the finer-grained amphibolites but are generally weakly altered. The dolerite dykes are only slightly discordant to bedding in the metavolcanic sequence and are typically on the order of 10 to 20 m thick. In the Valley Block, there is frequently a dolerite in the immediate footwall to Main Vein, in contrast to it being more common in the hanging wall of Target Block. This suggests that mineralised shoots are not only developed along one contact of the dolerite dykes, but at both contacts. Mineralisation also occurs within the dykes and for up to approximately 10 m from the contacts. Dolerites have been mapped on surface and frequently occur in series of avalanche gullies on the east face of Nalunaq mountain.



**Figure 6-19: Main Vein (top row) with fine-grained banded amphibolite in the hanging wall and immediate footwall, followed by 13m of medium-grained dolerite in the footwall**

### 6.3 Mineralisation

The presence of gold mineralisation in South Greenland was first recognised in the early 1990s. Gold occurs in structures both within the supracrustal rocks of the Psammite Zone as well as in the Julianehåb Batholith (see Section 6.1). The gold is typically associated with As-Bi-W-Cu-(Mo). Arsenic is found in small but widespread amounts in the region and is considered a good proxy for gold mineralisation. Mineralisation at Nalunaq, in common with other lode-gold style systems are generally characterised by a high nugget effect (>50%) and the presence of coarse gold particles (>100 µm in size).

Kaltoft et al. (2000) report that the principal mineralised body at Nalunaq, the MV, and associated zones of veining are hosted within a ‘*continuous ductile shear zone*’ that is related to deformation and metamorphism associated with the regional Nanortalik Nappe structure, emplaced in a brittle-ductile regime during multiple influxes of hypothermal fluids (300-600°C). Kaltoft et al. (2000) suggest that mineralisation is related to the late-stage deformation events of the Ketilidian Orogeny, and were contemporaneous with granite emplacement.

The MV structure (Figure 6-20) varies in width from 0.05m to 2.0m, maintains an average dip of 38° towards the SE, and contains high and sometimes bonanza gold grades (up to 5,240 g/t gold over 0.8m). Exposures of the vein in underground development often display pinch and swell structures, show evidence of both compressive and dilatational post-mineralisation deformation, and are cut by late aplitic dykes.

The vein also often displays perpendicular quartz-filled tension gashes (Figure 6-21). These may be developed either upwards from the MV or, more rarely, downwards (Figure 6-22). Their presence alludes to deformation in a brittle environment, rather than ductile as suggested by previous workers (e.g. Kaltoft et al., 2000).



**Figure 6-20: Classic form of the Main Vein in the Mountain Block showing grey vitreous quartz. 630 Level, stope number 1 (Image Source: SRK ES, 2016)**



**Figure 6-21: The Main Vein structure in the Target Block exhibiting quartz-filled tension gashes perpendicular to the Main Vein (Image Source: SRK ES, 2016)**



**Figure 6-22: Downward-developed tension gashes as part of a 'stacked' MV. 520 Level, stope number 28 (Image Source: SRK ES, 2016)**

Gold occurs mostly as native gold and occasionally as the gold-bismuth alloy, maldonite. Gold mineralisation is commonly associated with native bismuth and rare lollingite and arsenopyrite. (Grammatikopoulos et al, 2004). Gold fineness ranges from approximately 800 to 950‰. Native gold particles range in size from a few microns up to eight millimetres across, with coarse visible gold being common in the high-grade sections of the Main Vein.

### 6.3.1 Vein complexities

As well as complications caused by offsets on late faults, there are also complexities within the vein itself. Whilst the basic structure that hosts the Main Vein shows continuity over thousands of metres, the vein is more variable and shows marked pinching, swelling and splitting, sometimes reducing from tens of centimetres in width to a few centimetres or pinching-out completely over a few metres (Figure 6-23). Where the vein pinches out, the hosting structure can still be identified, often with hydrothermal alteration and some minor, poorly mineralised veinlets. In some areas the MV is cut or invaded by aplite dykes (Figure 6-18).



**Figure 6-23: Main Vein reducing in thickness from 110 cm in the foreground to 15 cm over a distance of only 4 m in the 390 Level East reef drive (Image Source: SRK ES, 2016)**

### 6.3.2 Mineralisation controls

Amaroq have been developing a new mineralisation model which seeks to explain the locations of the observed high-grade plunges in the historical model, namely the Mountain, Target and South Blocks. This “Dolerite Dyke model” works on the premise that weakly to moderately mineralized fluids were trapped at locations aligned with the pre-mineralising and cross cutting dolerite dykes. These locations would impede the progression of the fluids until each trap site progressively failed due to a combination of fluid over-pressure and tectonic events. Each failure or rupture would result in a rapid upward propagation of the fluids and local, but very intense pressure reductions and related high-grade mineralisation through the precipitation of gold. This process is termed as Injection Driven Swarm (IDS) behaviour and is described and well documented by Hronsky, 2019 and Cox et al. (1991).

The development of this model has made a significant impact on the targeting model used by Amaroq in its efforts to expand the known mineralisation in the Valley Block as well as the predicted Welcome Block to the southwest of the historical mine. The model has also been used to develop a number of prospective mineralisation corridors up dip from the three previously known mineralised shoots as well as in the domaining and capping strategy used in the current Mineral Resource Estimate.



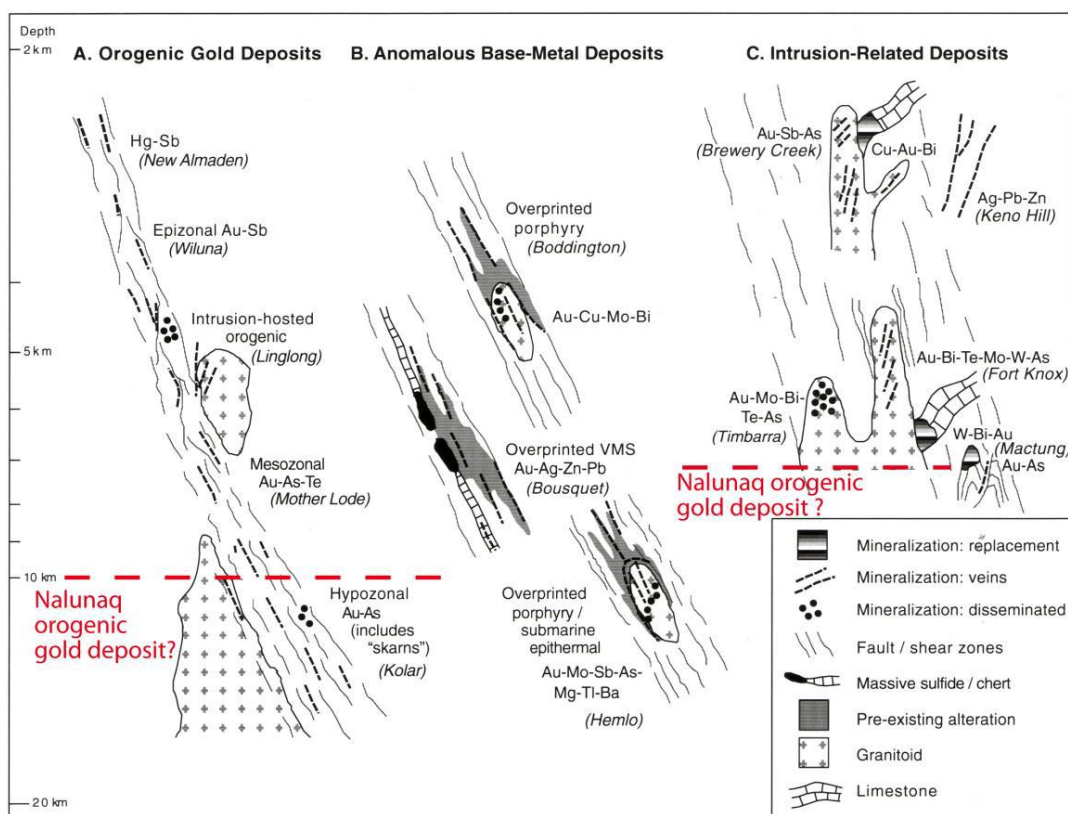
## 7 DEPOSIT TYPES

Gold mineralisation at Nalunaq is hosted in an amphibolite-granite sequence and can be classified as a narrow-vein orogenic lode-gold type system. It displays typical features, being:

- Typically less than 1m in true thickness;
- Dominated by quartz veining;
- Structurally controlled;
- Associated with wall rock hydrothermal alteration that shows symmetry in the hanging wall and footwall;
- Dominated by coarse, often visible gold and a nuggetty grade distribution (Figure 7-1), and
- Having a formation temperature of between 300 and 600°C at a crustal level of about 10km depth (Figure 7-2) and related to brittle-ductile deformation (Kaltoft et al., 2000).



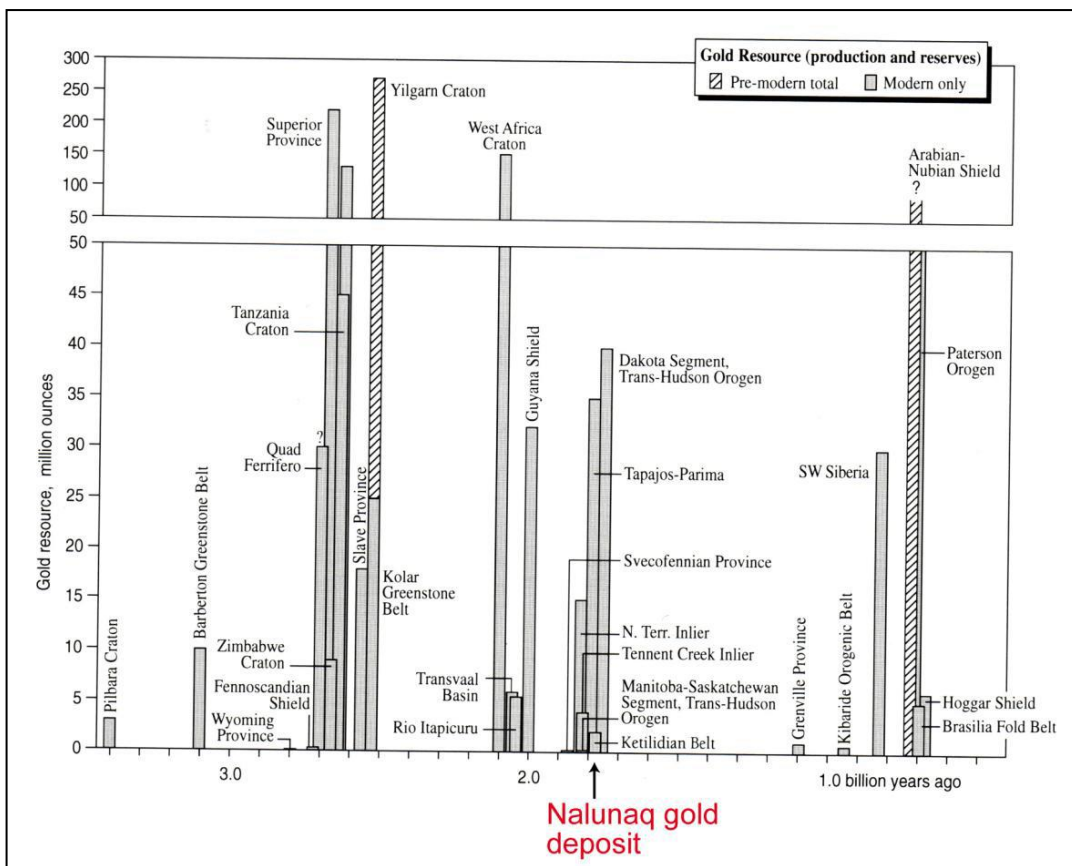
**Figure 7-1:** High grade gold-quartz vein sample from the Nalunaq Main Vein containing coarse gold (Image Source: Crew Gold Corporation).



**Figure 7-2: Classification of gold deposits after Goldfarb et al. (2005), adapted by Schlatter and Olsen (2011) to illustrate Nalunaq's classification as a hypozonal orogenic gold deposit.**

High salinity (14 to 26wt% NaCl + CaCl<sub>2</sub> eq.) observed in fluid inclusion studies on Nalunaq samples by Kaltoft et al. (2000) may indicate that the Nalunaq deposit is related to intrusions (Schlatter and Olsen, 2011). "Typical" orogenic gold deposits are more commonly characterised by low salinity ( $\leq 6$  wt% NaCl eq.) fluid inclusions (Groves et al. 2003).

The age of gold mineralisation at Nalunaq has been estimated at 1.8 to 1.77 Ga (Stendal and Frei, 2000) which is a favourable age when compared to orogenic gold deposits worldwide (Goldfarb et al., 2005, Figure 7-3).



**Figure 7-3: Circa 1.8 Ga is a favourable age for gold mineralisation and the Nalunaq deposit in the Ketilidian Belt falls within this window (from Goldfarb et al. 2005, adapted by Schlatter, 2011).**

## 8 EXPLORATION

### 8.1 Introduction

Historical exploration at Nalunaq prior to Nalunaq A/S' involvement is summarised in Section **Error! Reference source not found.** and in further detail in SRK ES (2016). The following sections describe exploration completed by Nalunaq A/S (Amaroq) since 2015 which has resulted in, amongst other things, confirmation of mineralisation over larger areas that previously demonstrated, and significant new structural interpretations.

### 8.2 Nalunaq A/S Surface Exploration 2015/2016

The outcrop of the Main Vein to the north of the old mine and running up the north-eastern and northern sides of the mountain has been known about for some time and sampled fairly extensively. The continuation of this MV outcrop around the western side of the mountain as well as on the south-western flanks has long been postulated. A major objective of Nalunaq A/S' 2015 and 2016 exploration programmes were to locate and sample this suspected continuation of the MV outcrop. This allowed for the extension of the prospective MV structure up-dip and along strike, raising the possibility of substantial additions to the potential mineralisation at Nalunaq.

In order to access the MV outcrop area to the west, which is on the sheer face of the Nalunaq Mountain, specialist access was required. Five abseil descents (each separated laterally by approximately 50 m) from this fixed line to the projected location of the MV were conducted; on all occasions the MV structure was encountered. The descents were monitored by two geologist spotters on an opposite mountain who guided the mountaineers via VHF radio to the MV location. The mountaineers then collected samples where possible and used a handheld GPS to take an averaged (5 minute) location. In addition to sampling the MV, quartz stringer veins were sampled and located by GPS when and where possible.

Samples were collected using a geological hammer and biased toward quartz. Samples were no more than 3 kg in size each, due to the access method required. The samples were placed into cotton sample bags, given an ID number and GPS location, and sent to ALS Geochemistry in Loughrea, Ireland for analysis.

#### 8.2.1 Sample analysis results

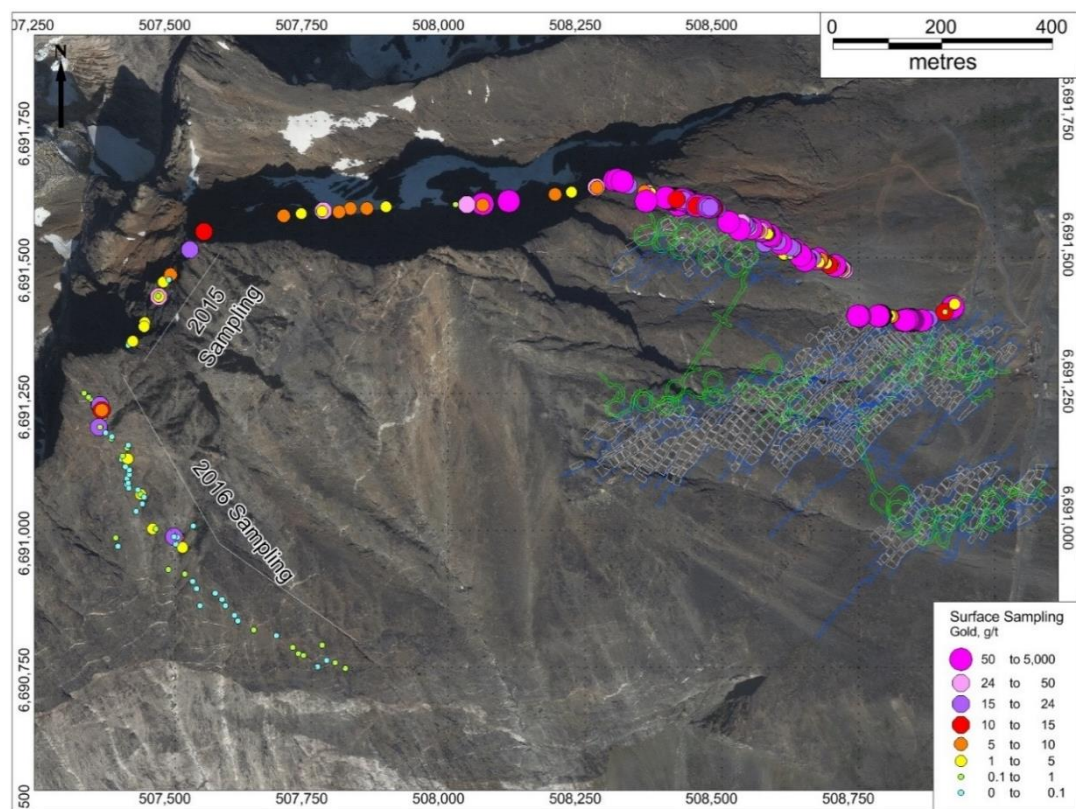
The 113 surface samples taken during the 2015 and 2016 field seasons were submitted for analysis. The samples were crushed, pulverised and analysed using a screened metallic fire assay method (ALS code Au-SCR24). This involves screening the sample at 100 microns and analysing the coarse and fine fractions separately, with the results providing an indication of the proportions of coarse and fine gold mineralisation.

Results for gold are shown in Figure 8-1, plotted onto the satellite imagery for the area and showing the existing underground mine layout superimposed for context. The results are plotted alongside historical sampling results across the northern side of the mountain for context and to show full sampling coverage, although recent and historical results should not be directly compared due to differences in sampling methods. It should also be noted that numerous low-grade results in the historical data are obscured by the symbols used for high grade results; not all historical samples collected as very high grade.

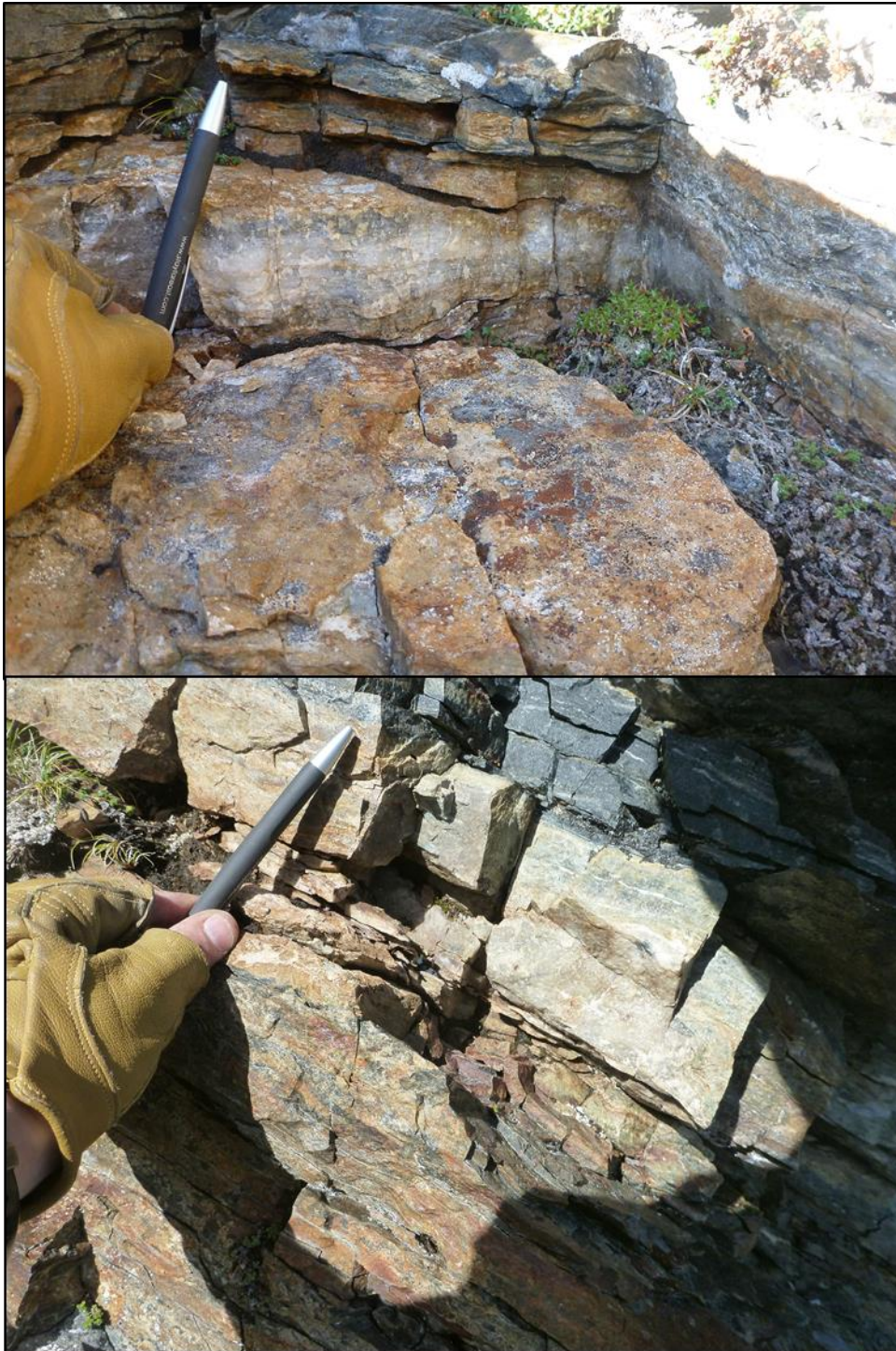
The best assay from the 2015 programme was 32.5 g/t Au from a 0.50 m thick vein. In 2016, the best result was 23.7 g/t Au from a 5 cm thick vein.

The sample results show erratic but occasionally high gold grades. These, combined with geological observations and structural continuity between areas, strongly suggest that the feature sampled on the west and southwest faces of the mountain was the MV. Furthermore, photographs and geological observations taken at locations that yielded elevated gold grades show typical features of the MV with respect to the nature of the vein, FW and HW lithologies and associated alteration (Figure 8-2). Figure 8-2 also shows the characteristic contrast in FW meta-volcanics and HW meta-dolerite lithologies that is often found in mineralised areas. A chip sample returned an assay grade of 5.75 g/t Au at this location

Due to the terrain and difficult access in this area, the sampling completed was at a much wider spacing than historical rock chip sampling along the north-eastern outcrop of the MV. Also, the 2015 and 2016 samples were necessarily smaller for logistical reasons, and small samples are generally thought to under-report gold grades at Nalunaq (Dominy et al., 2006). Despite this, the results seem to illustrate the same extremely nuggety style of coarse gold mineralisation that had been previously observed in the Nalunaq Project. This is also seen in the results of the screen fire assays, where samples with a total grade above 2.4 g/t Au contain the majority of their gold within the coarse fraction (>100µm).



**Figure 8-1: Results of 2015 and 2016 surface sampling on the W and SW sides of Nalunaq, plotted alongside historical sampling results across the N side of the mountain to show full sampling coverage (source: SRK ES, 2016)**



**Figure 8-2: Characteristic MV (top) and typical alteration associated to the MV (bottom) exposed at 919m (sample ID 14421. Source: SRK ES, 2016)**

## 8.2.2 Summary

The identification of the MV on the west and southwest faces of the mountain has been confirmed by geological observations, structural measurements and sampling results. This in conjunction with the historical sampling results demonstrates the up-dip and along-strike continuity of the MV structure, and confirms that it is still mineralised. The lowermost mineralised sample (sample ID 14443, elevation 884 m, returning 3.47 g/t Au), is located a strike distance of approximately 930 m from the uppermost part of the Mountain Block and 770 m from the uppermost part of the Target Block. The up-dip extension of the Main Vein structure from the top of the Target Block to the outcrop on the west face is approximately 1,000 m. The sampling results from the 2015 and 2016 campaigns represent a substantial increase in the known extent of the structure and provide the boundaries to the area considered to represent the exploration potential.

Whilst the 2016 sampling profile suggests decreasing grade down-dip, it is possible that the sampling deviated off-structure as a result of the terrain and increasing amounts of scree obscuring the structure.

## 8.3 Underground Geological Assessment

The distribution of gold mineralisation at Nalunaq was historically thought to relate to multiple shoots within the MV structure that plunge towards the east-northeast. This interpretation is based on underground chip sampling results and the fact that many of the drives end in low grade material, thus providing boundaries to mineralisation. In 2016, SRK ES undertook a programme of geological investigation that focussed on such areas where abrupt decreases in grade are observed. The aim of this was to better understand the controls on mineralisation, whether there could be other reasons for decreased grade, and what the implications of this were for continuation of mineralisation in the MV structure further along strike from the current mine excavations.

Following two phases of geological investigation undertaken in late-June/early-July and in mid-August 2016, small scale faulting at the end of drives that coincided with rapid reductions in grade were noted. It was concluded that 18 of the 30 drives visited end off-reef due to this issue.

This provided an interpretation that implies that the mineralised shoot model may not have been correct. This, however, has not been proved as yet and will require further underground mapping and exploratory drilling. As such Nalunaq A/S have continued to use the plunging or shoot model during their exploration. This interpretation has been further refined through the development and implementation of the Dolerite Dyke model. In order to continue to develop the understanding of the deposit, the faulting/off-reef interpretation will be continually reviewed through subsequent exploration.

## 8.4 Metallurgical Sampling

In order to obtain samples for future metallurgical testwork, Nalunaq A/S took two large samples from two parts of the mine during the 2016 field season. These materials were used in subsequent metallurgical test work conducted by SGS in 2020 and is outlined in Section 12.

The sampling has allowed Nalunaq A/S to retain a stock of material in case testwork is needed to confirm the performance of any third-party processing plants that may be used in future. This work also has the benefit of providing representative gold grades that could be compared to grades in the historic database for validation purposes.

For full details of this study, the reader is directed to SRK ES (2016) where further information and aspects are presented.

## **8.5 Assessment of Remnant Mining Areas**

SRK ES' conducted studies in 2015 to identify the possibility of unmined material within or immediately adjacent to the current mine infrastructure. This was derived via a combination of modelling, examination of mine plans and discussions with Kurt Christensen, the former Chief Geologist. Nalunaq A/S was interested in examining these areas in more depth in order to assess their potential as an opportunity for small-scale mining that could generate some cash flow alongside exploration for extensions of the main mineralised structure. This work was therefore a main focus of the 2016 field season, with the assessment being undertaken between 29 June and 6 July 2016.

During the site visit and the assessment, SRK ES identified approximately 25,000 t of material which remained in remnant material. Accurate estimates of the amount of material and the cost of recovering this were not prepared. It is likely that there will be substantial amounts of site setup and associated indirect costs, as well as the cost of new underground development to access mining areas. It is expected that profitable recovery of these mining areas as a standalone project is unlikely.

For full details of this study, the reader is directed to SRK ES (2016) where further information and aspects are presented.

## **8.6 Underground Sweepings Assessment**

Vamping, a word to describe a mining method used to recover higher grade material left in stoped areas is perhaps not applicable to the Nalunaq mine as the stopes are open, have debris in them and are considered unsafe to enter. Most were seen to have little or no mineralisation 'frozen' to the hanging wall or footwall contacts, often as a result of over-break particularly in the footwall.

By contrast, sweepings are accumulations of fine material (including free gold and quartz vein fragments that host gold) that have been blasted in the stoped areas and subsequently washed down to settle on the floor of the drives below. They may also be derived from mucking operations or will accumulate at the bottom of passes or in areas of mineral processing if not kept clean. It can be reasonably expected that the grade of sweepings should be similar to the stope immediately up dip of the stope drive. It is highly likely that the grade could be higher due to the concentration effects of the water washing down the stopes and the process of hydraulic equivalence sedimentation that could happen in the stope drives, and due to dust suppression carrying lighter material away.



Whilst assessing the mining areas and carrying out geological work, SRK ES noted the presence of sweepings in all of the stope drives visited, and in other areas such as passes and the processing plant. Recovery of these sweepings has apparently been attempted in certain places in the mine in the past by Crew Gold (K. Christensen, *pers. comms.*), but SRK ES had no records to show where and when this took place, or the head grades or the gold recovery that resulted from this activity. Drives where sweepings removal may have taken place still had several centimetres of sweepings on the floor.

For full details of this study, the reader is directed to SRK ES (2016) where further information and aspects are discussed.

## **9 DRILLING**

### **9.1 Introduction**

Since 2017 when Amaroq took ownership of the Nalunaq Project, there have been multiple drilling campaigns. All drilling conducted was using diamond coring methods, with collars being chosen to best intersect the mineralisation whilst also considering the high relief of the area and difficult access. The aim of the drilling campaigns has been to better delineate the full down-dip and along-strike extent of mineralisation, as well as increase confidence in the geological and grade continuity through infill drilling.

### **9.2 Drilling (1998 to 2016)**

Prior to Amaroq taking ownership, multiple drilling campaigns by the previous owners and operators were completed. This included drilling from both surface and underground. In 1998, 5,134 m of drilling was completed from 37 surface NQ holes, and a 288 m long exploration drive was driven at 400 m above sea level. Two raises were developed from this drive to test grade continuity and variability of the Main Vein. In 1999, a further 19 diamond holes drilled (2,520 m) for resource expansion and underground. Between 2000 and 2001, alongside an extensive underground development programme, 13 holes were drilled for a total of 2,478m. Mining commenced in 2004, and exploration drilling continued during production. Between 2004 and 2006, 83 surface holes were drilled (13,404 m). Underground drilling conducted between 2004 and 2008 comprised some 237 drillholes for 5,572 m.

### **9.3 Drilling (2017-present)**

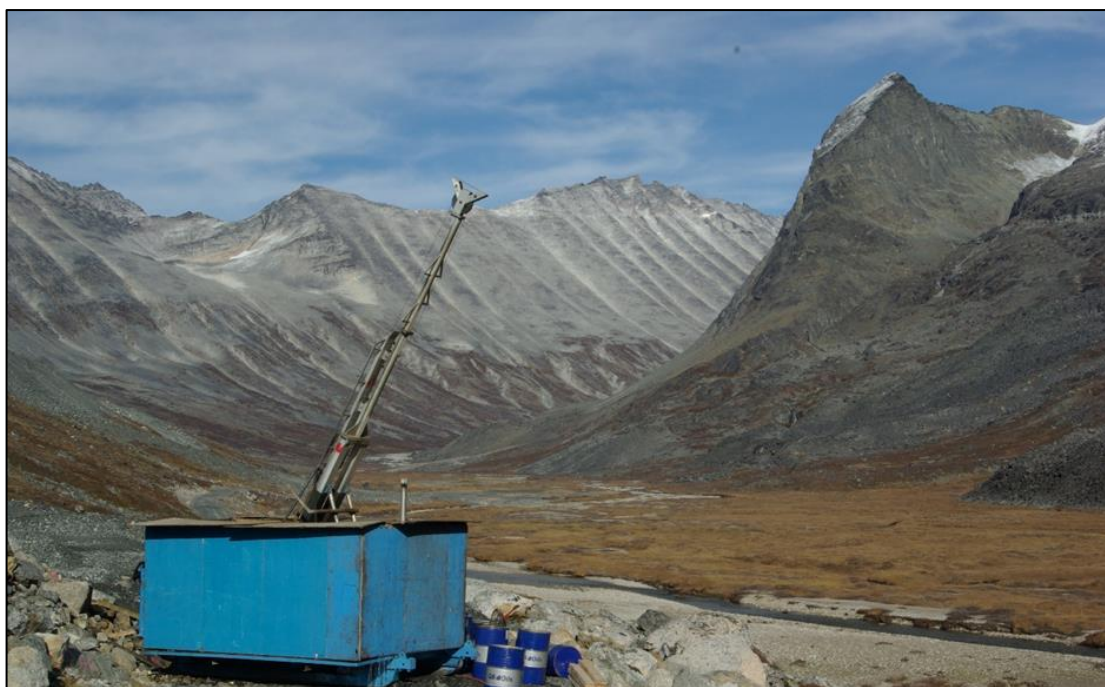
Amaroq have drilled a total of 102 diamond drillholes at the Nalunaq Licence totalling 21,106 m between 2017 and 2021. Drilling continued in 2022, but data was not available for use in this Mineral Resource Estimate. The purpose of the exploration drilling was to intersect the extensions of the Main Vein (“MV”), with a focus on the South and Valley Blocks. A summary of the drillhole database, as provided by Amaroq is given in Table 9-1.

**Table 9-1: Summary of drilling database (1998 to present)**

Sample Type	Year	Operator	Number holes or Samples	Length of samples or drillholes
Surface DDH	1993	NunaOil / Cyprus Greenland Corp	13	2,975.4
	1995	Nunaoil	8	848.3
	1998	Nunaoil	37	5,131.7
	1999	Nunaoil	19	2,523.5
	2001	Nunaoil	13	2,740.6
	2004	Crew	12	1,232.5
	2005	Crew	56	11,255.5
	2006	Crew	15	3,770.5
	2017	Amaroq	14	2,444.9
	2018	Amaroq	18	3,831.7
	2019	Amaroq	9	1,764.6
	2020	Amaroq	10	2,041.1
	2021	Amaroq	51	11,023.7
	Total		275	18,661.1
Underground DDH	2004	Crew	52	1,556.3
	2005	Crew	1	41.0
	2006	Crew	2	52.9
	2007	Crew	22	530.7
		Total		77

## 9.4 Drilling Methods

Cartwright Drilling from Goosebay, Canada was contracted to drill in 2017 and 2018. They mobilised one CDI 500 helicopter (“heli”) portable wireline diamond drill rig in 2017 and two in 2018. During 2017, seven heli supported holes were drilled on Nalunaq mountain totalling 895.74 m. For all remaining holes drilled, the rig was skid mounted with holes collared on the old Nalunaq mine road (Figure 9-1). In 2019 three holes were drilled with a Helios wireline diamond drill rig mobilised from Nuuk by Xploration Services Greenland A/S. All remaining holes were drilled with a Silver Bear A5 1,300 m wireline diamond drill rig mobilised from Nuuk by MT Højgaard A/S.



**Figure 9-1: Skid-mounted rig drilling from the Nalunaq Mine road in 2017**

In 2020 drilling was undertaken using a Zinex A5 diamond drill rig leased from MT Højgaard in Nuuk, with Amaroq hiring a Canadian driller and local drilling assistants. All core was NQ (47.6 mm) in size. Holes were surveyed for dip and azimuth using a Reflex magnetic survey tool at 15 m intervals and most of the core was orientated using a Reflex ACT core orientation tool. A red mark was placed on the end of each run to indicate bottom of hole. Holes were generally straight with no excessive hole deviation. A total of 10 holes totalling 2,191 m were drilled from 5 pads. Drill pads were prepared using a Komatsu loader and a Hitachi excavator. Holes were designed to infill in the Valley Block area and to test for down dip extensions of the South Block.

Over the course of the 2021 season (Figure 9-2), a total of 51 holes for 11,023.66 m of NQ core was drilled from 25 pads. A total of 49 holes reached target depth. Additional drillholes which were stopped include AEX21071 which was stopped at the end of the season with the drill rig still in place due to time constraints, AEX21092 which was stopped short of Main Vein due to mechanical issues at the end of the season, and AEX21006 which was abandoned due to technical problems prior to reaching the modelled Main Vein depth. A total of 4 drill rigs were in operation during the season. Initially, two Zinex A5 rigs from MT Højgaard were operated by Arndt Drilling. Later in the season two additional rigs, a NW1500 and a track mounted Sondeq SS71 were sourced from International Peruminas Resources Ltd who took over operation of all drill rigs. Both Zinex A5 rigs were mounted on steel skids to facilitate transport and alignment, and to prevent misalignment during drilling.



**Figure 9-2: Drilling from the prepared pads in 2021**

## **9.5 Core Recovery**

Core recoveries at Nalunaq during all field seasons were very good. The rock is generally very competent and can be geotechnically described as massive with only minimal jointing. Overall drill recoveries once the glacial overburden is excluded from the calculation were >99%.

## **9.6 Drillhole Surveying**

### **9.6.1 Collar surveys**

Holes were sighted using a Garmin 64S handheld GPS and aligned using standard compass clinometers, adjusted for regional magnetic declination by Amaroq geologists prior to commencing drilling. Once drilling was complete, collar locations were picked up using handheld GPS units.

### 9.6.2 Downhole surveys

In 2021, downhole surveys were conducted using a Reflex EZ Trac magnetic survey tool at 15 m intervals. During all years the core was orientated using a Reflex ACT core orientation tool. In 2022, drillholes were surveyed with an QL40-OBI-2G optical televiewer from Mount Sopris Instruments which captures a high resolution 360° image of the hole and replaces traditional core orientation and magnetic survey tools.

A total of 29 holes were surveyed, with the remainder were not surveyed due to poor near surface ground conditions and occasions when the tool was unable to pass the casing. Surveyed holes were generally straight with no excessive deviations recorded.

### 9.7 Logging, Sample Mark Up and Photography

SRK ES established core logging and sampling procedures prior to the start of drilling in 2017. These same procedures were followed in subsequent programmes by Amaroq geologists with only minor changes. Core was removed from the inner tube by the drillers and placed in wooden core trays marked with the drillhole ID and tray number along with the start and end of each tray. Wooden depth markers were placed at the end of each drill run displaying the depth of the hole. During all field seasons, Amaroq geologists regularly conducted depth checks at the rig when the rods were pulled to ensure the depths were accurate. Core was transported to the logging area by the drillers and handed over to the geologists at the end of each shift.

A covered core logging area was established at the Amaroq field camp. All core was laid out in the logging area on core racks then orientation lines and meter marks were drawn on the core. Any problems or discrepancies with the core were discussed with the drillers and corrected prior to logging commencing. A basic geotechnical log was undertaken recording TCR, RQD, SCR, IRS, and joint count on a run-by-run basis. The core was then logged with separate continuous logs for lithology, mineralisation, and alteration with a separate discrete log created for structural data. During the 2018 programme, a change was made to the way veining and mineralisation was logged with a separate log created for veining. All logging was recorded onto paper and then manually entered into an Excel logging template designed by SRK ES.

From 2018, data was directly logged using electronic spreadsheets. All data relating to the borehole was recorded into the Excel log including all collar, survey, geological logging, and sampling data. Late in the 2020 season, an MX Deposit database was implemented, with data being entered into the database directly. Once the geological log had been completed, areas thought likely to contain gold mineralisation were identified by the supervising geologist and marked up for sampling. A minimum sample length of 0.5 m was used to ensure there was enough material for the screen fire assay method which requires 1 kg of sample. The maximum sample length used was 1.5 m, with cut lines marked on the core 10 degrees off the orientation line. All core was photographed both dry and wet prior to sampling.

Paper cross sections of the drillholes were made showing the geology encountered in each hole as the core was logged. All finished digital borehole logs were stored on two portable hard drives, one primary and a backup while in the field. After the field season all data was transferred into a database. Periodically during the field season downhole data was entered into Leapfrog Geo 3D modelling software. The working model of the deposit was updated in order to better inform the upcoming drillholes.

## 9.8 Drillhole Orientation Relative to Mineralisation

The majority of DD holes at Nalunaq are drilled to intersect the mineralisation at the best possible angle, given difficulties with access due to the high relief of the topography. The drilling has variable dips, including drilling upwards from underground. As such, the inclination of drilling varies between typically 88° upwards to vertical downwards. The azimuth is equally variable. Mineralisation typically dips at 38° towards the SE. Drilling intersection angles are typically between resulting in drilling intersection angles of 60° to 90°. Overall, SRK considers drillhole orientations relative to mineralisation to be suitable to support the Mineral Resource estimate presented herein.

## 9.9 Drillhole Quantity and Spacing

Drilling at Nalunaq has been completed on a variable spacing, to reflect the challenges relating to access. In addition, a significant amount of underground drilling and sampling has been completed over the development of the Project. On average, the drillhole spacing for areas which have not been sampled from underground is between 30 m and 50 m, although some areas are wider.

The Nalunaq drillhole database contains a total of 63,775.85 m of sampling, from either drilling, or chip / channel sampling. This includes 17,494 sample assay results (totalling 17,280.26 m of samples). The majority of these drillholes and samples have been used to support the main areas modelled in support of the present MRE. SRK considers the current drilling database sufficient to support the Mineral Resource estimate presented herein.

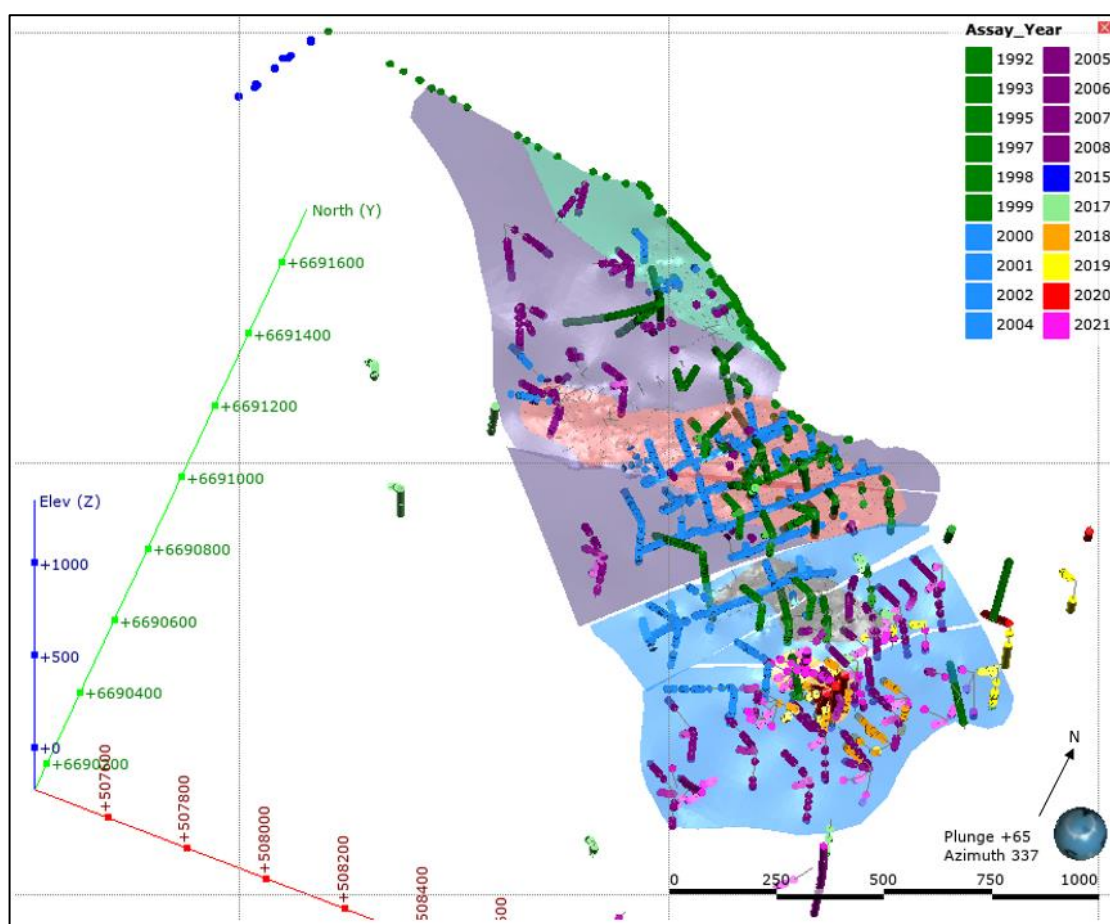
## 9.10 Drilling Summary

Overall, SRK is satisfied that Amaroq drilling procedures, including collar and downhole surveys, logging and sampling generally conform to industry best practice and provide a sound basis for the Mineral Resource Estimate presented herein. Much less information is available regarding the drilling procedures associated with the historical drilling (pre-2017). SRK notes that the spatial accuracy and core recovery from these holes presents a risk when compared to drillholes completed using industry standard operating procedures during the more recent drilling campaigns. SRK considers that the risk is mitigated to some extent by the addition of numerous close-spaced holes completed between 2017 and 2022.

# 10 SAMPLE PREPARATION, ANALYSES AND SECURITY

## 10.1 Introduction

Five sampling campaigns have been undertaken at the Nalunaq Project, comprising historical sampling (prior to 2006), surface sampling between 2015 and 2017, drilling between 2017 and 2019, 2020 drilling and 2021-2022 drilling. In addition, extensive production sampling was undertaken while the mine was in operation. Assay results from 2022 drilling have not been received as of the effective date of this report, and as such, these drillholes have not be used to inform geological modelling and grade estimation in this MRE. The sampling data used for the MRE reported herein, coloured by the year of assay, is shown in Figure 10-1.



**Figure 10-1: Sampling data coloured by year**

SRK Exploration Services (“SRK ES”) has previously reviewed and summarised the sample preparation, analyses, security and Quality Assurance Quality Control (“QAQC”) data for historical sampling, 2015-2017 surface sampling and 2017-2019 drilling at Nalunaq. Details pertaining to these sampling campaigns in this section are taken from SRK ES (2016) and SRK ES (2020). The SRK ES report refers to Nalunaq A/S, which is a wholly owned subsidiary of Amaroq.

The details of more recent sampling programmes at Nalunaq (2020 and 2021 drilling campaigns) have been reviewed by SRK and are also summarised in this section.



## 10.2 Historical Sampling

### 10.2.1 Sampling Methods

Dominy and Sides (2005) provides a summary of sample preparation, analysis and security procedures that were in place at Nalunaq at the time of his writing and this has been adopted here. This is not necessarily relevant to Nalunaq A/S' recent exploration results and future planning by Nalunaq A/S but is included here since SRK ES is reliant on Dominy and Sides (2005) for the QAQC procedures and results related to historical sampling. SRK ES has not, however, seen a full QAQC database relevant to historical drilling or underground sampling.

No subsequent reports have been seen by SRK regarding the historical data and it is assumed that the same methods were applied in later years. This was confirmed by former Chief Geologist Kurt Christensen (*pers. comms.*, 2016) who states that the methods reported by Dominy and his recommendations were adhered to for the remainder of the time that Crew Gold operated the mine and exploration, but less so (if at all) once Angel Mining took over the operation.

There are few details as to what methods were employed during Angel Mining's tenure, but SRK ES notes that the vast majority of exploration and development sampling that is included in the database for the project was carried out by Crew Gold and thus was subject to their protocols. The only sampling that can be assigned to Angel Mining appears to be a limited amount in the top levels of the Mountain Block.

### 10.2.2 Sample Preparation

#### *Exploration Sampling*

Each face or channel (c. 4 kg) sample was crushed to <3.4 mm in its entirety, and 1 kg split and pulverised to approximately <75 µm for screen fire assay (105 µm screen) at XRAL Laboratories, Canada. The entire oversize was assayed to extinction, and a 50 g charge of the undersize taken for fire assay.

#### *Production Sampling*

During the operational period, a laboratory was located at the Nalunaq camp. This was inspected by Dominy and Sides (2005) and was found to be clean and well run, with a full-time chemist supervising operations. Approximately 30 samples per day could be prepared and analysed and an average of 200 samples from the mine could be processed per month.

Each channel sample (approximately 1-2 kg) was dried and crushed to <10 mm in its entirety, and then pulverised in an LM5 mill to >85% passing <75 microns. Between samples, a vacuum head and compressed air blast was used to clean out the pulveriser bowl, and subsequently a barren sand charge was run for 10 seconds.

### 10.2.3 Assay Analysis

A total of 500 g of sample material was scooped off the crushed and pulverised sample for a LeachWell bottle roll assay. The rolling time was 4.5 hours, after which the solution is left to stand for 15 hours prior to extraction of the gold by DIBK and AAS.

Based on Gy sampling theory, Dominy and Sides (2005) calculated the fundamental sampling error for the current laboratory protocol (for material with a head grade of 19 g/t gold) to be 9.1% at a confidence level of 90%. This is wholly acceptable within a coarse gold environment, but it does not account for any segregation error that may occur in the pulverised sample lot during handling and scooping out the final assay charge.

#### 10.2.4 Quality Assurance and Quality Control – Exploration

A QAQC programme was instigated by Crew Gold and Strathcona (Strathcona, 2001, 2002a, 2003; Schlatter, 2001). Three certified standards and one reference material were inserted into the sample stream at a rate of one in ten, giving an average of two to five standards in each sample batch.

**Table 10-1: Details of reference materials used in QAQC of Crew Gold exploration samples (Dominy, 2005)**

Standard	Number used	Certified grade value (g/t Au)	Accepted range: 2SD grade (g/t Au)	Laboratory mean grade (g/t Au)	Number outside accepted range
<b>G06</b>	21	14.7	13.4 - 16.0	14.0	9%
<b>G397-8</b>	18	11.7	10.2 - 13.1	11.4	11%
<b>Ma-1b</b>	29	17.0	15.4 - 18.6	17.1	7%
<b>CDN-GS-8</b>	22	33.5	31.8 - 35.2	33.1	9%

The mean values determined by XRAL Laboratories for the four standards tend to be lower than the certified values with occasional individual values falling outside, mainly below the accepted ranges. There was no pattern in the assay results of the various standards in individual batches to suggest a consistent bias in the assaying. In any individual batch, most results for standards were acceptable. The differences between the mean values obtained by the laboratory compared to the certified values are generally small, and Dominy and Sides (2005) concludes that the results of the assaying are slightly low but acceptable with respect to accuracy.

Assay precision was monitored by re-assaying 50 g duplicates of the <105 µm fraction. This was the same charge weight as for the initial assay. This was done for 74 samples and precision was acceptable given the coarse gold-high-nugget nature of the mineralisation and was generally within ±15% (using Half Absolute Relative Difference, or “HARD”).

In addition to the pulp duplicates, reject re-splits were selected for duplicate assaying. The protocol required one duplicate for every ten original samples. Samples were selected after original assaying to ensure a range of gold grades were tested, and only 14 samples were assayed. Despite this small number, the degree of scatter was small (within ±15% HARD) and the results indicate no bias.

An investigation into gold contamination during crushing and pulverising was undertaken and reported a gold loss of up to 1.6% in one case.

All equipment was purged with 500 g of barren silica sand between each sample.

Blank field samples were inserted at sample numbers ending in 01 and 51, effectively one blank in fifty. During the previous review, SRK ES did not identify what material was used for blank samples.

#### *SRK Comments on Historical QAQC Procedures*

Dominy and Sides (2005) concluded that the quality of sample preparation, analysis and QAQC for exploration samples was generally good at the time of his writing and the resultant assay data was considered reliable for the purposes of Mineral Resource estimation in the context of coarse gold, high-nugget mineralisation.

SRK cannot comment on the performance of sample analysis and QAQC in subsequent years but notes that there appears to be no record of field duplicates (for example, parallel channel samples) being taken and analysed. Furthermore, during the site visit in 2016, SRK ES undertook an underground sampling programme which showed that there was a distinct competency contrast between the HW, MV and FW lithologies, with the MV substantially easier to sample and the FW being particularly hard. This suggests a potential risk of sampling bias, especially during manual chip samples across mineralised zones, and it is not known how this was controlled or monitored.

SRK ES also noted that the preservation of exploration drilling data is somewhat lacking. During the 2016 and 2020 reviews, SRK ES did not see photographs of surface of underground drill core, and most of the core appears to have been discarded except for selected core intervals from selected surface boreholes retained by the MLSA in Narsarsuaq. Drilling logs exist in hardcopy, but the digital database is incomplete and only limited information has been recorded in the digital database in a manner that can be readily modelled.

### 10.2.5 Quality Assurance and Quality Control - Production

Three certified reference materials, purchased from Gannet Holdings, were inserted into the sample batch at a rate of 1 in every 15 samples to check for accuracy, the results of which are summarised in Table 10-2.

**Table 10-2: Summary of analysis of standards at the Nalunaq laboratory (Dominy, 2005).**

Standard	No of samples	Certified mean grade (g/t Au)	Laboratory mean grade (g/t Au)	No. samples breaching 1SD	No. samples breaching 2SD	Acceptable
ST08	78	0.33	0.32	5	0	Yes
ST06	109	1.10	1.16	26	0	Yes
ST18	98	9.70	9.57	2	0	Yes

No standard values breached the two standard-deviation (“2SD”) level, which can be considered as the action point requiring re-assay of pulps.

Blank samples were not used routinely, though all results (n = 31) seen by Snowden in 2005 were below 0.03 g/t gold, with a single value of 0.07 g/t gold, indicating minimal contamination.

An inter-laboratory duplicate pulp sample of 50 g was retained at the rate of 1 in 10 and submitted to ALS Chemex (Sweden) for fire assay. Dominy and Sides (2005) determined that 76% of samples were within  $\pm 15\%$  (HARD), which can be considered as showing a moderate variability.

The quality of the pulveriser output was monitored once per week, with the aim of achieving +85% passing -75 microns.

One in 20 of the LeachWell residues were sent to ALS Chemex for fire assay. Dominy (2005) compared the primary LeachWell sample results and residue results, and noted that as primary grade increases so does residue grade. This is not uncommon, and often reflects larger quantities of coarse gold in high-grade samples that are poorly dissolved by the cyanide. In general, the residue grades were below 2 g/t gold (90%). Based on 59 data points, the mean residue percentage is 3.5%, giving an overall recovery of 96.5% gold for the LeachWell method. It was considered that this value was reasonable in the presence of coarse gold.

Laboratory duplicates were not routinely taken at Nalunaq, although Dominy determined from 18 sample pairs that 66% of samples were within 15% (HARD). This can be considered as showing a high variability, but is common for material containing coarse gold where pulverisation is often not perfect due to the malleability of gold.

#### *SRK Comments on Historical QAQC Procedures*

In 2005, Snowden (Dominy, 2005) considered that there were some shortcomings in QAQC procedures at Nalunaq and made a number of recommendations for improvements. However, in the context of the resource estimate produced by Snowden in 2005, the data were considered useable.

A database of QAQC results is not available for the project, although SRK understands that all recommendations made by Snowden were adopted and followed until the mine was sold by Crew Gold (K. Christensen, *pers. comms.*, 2016). Thus, between 2005 and 2009, it is assumed (but cannot be confirmed) that the same QAQC protocols were in place. It is thought that post-2009, QAQC procedures were more limited although data arising from this period represents only a small part of the database. Considering that the project lacks a QAQC database and that there is some uncertainty as to the procedures applied for later years of the mine's life, SRK considers that the exploration data can be used for the subsequent Mineral Resource estimate.

### **10.2.6 Chain of custody and sample security**

Strathcona monitored sample security during underground exploration by placing samples into 'lockable' plastic pails prior to shipping. If the seal on any pail was broken, this could indicate tampering.

During subsequent exploration, once samples were collected underground in numbered plastic bags, they were taken directly by either the geologist or geo-technician to the laboratory. The same also applied to drill core being submitted to the laboratory.

## 10.3 2015-2016 Surface Sampling

### 10.3.1 Sampling methods

In 2015 and 2016, channel sampling of the Main Vein (“MV”) at surface was undertaken by a team of Hekla Consulting Ltd mountaineers. The mountaineers were inserted by helicopter and all work required access by rope. They were monitored by a geologist spotter on the opposite side of the valley who guided the mountaineers via VHF radio to the MV location. All samples were taken using a hammer and chisel, as using a saw was not possible. Samples were typically between about 1 kg and 3 kg in weight.

Sample locations were recorded using a handheld Garmin GPS unit. At each sampling location, the true width of the MV structure was recorded as well as its dip, strike and basic geological characteristics. The climbers were instructed how to take dips and strikes with Silva Ranger type compass-clinometers by SRK ES. Their competency in this regard was regularly tested. Photographs were also taken at each sampling location.

Samples were placed into cotton sample bags, given an ID number and GPS location, and sent to ALS Geochemistry in Ireland for analysis.

### 10.3.2 Sample preparation

All samples taken during surface sampling between 2015 and 2016 were dispatched by air freight from Nanortalik to ALS Geochemistry in Loughrea, Ireland, for preparation and analysis. Sample preparation used ALS code PREP-31b which comprises crushing to 70% passing 2 mm, splitting off 1 kg and pulverising the split to 85% passing 75 microns.

### 10.3.3 Assay analysis

Gold analysis was done by the screened metallic procedure (ALS code Au-SCR24**Error! Reference source not found.**). This involves screening the 1 kg pulverised split at 100 microns and running a duplicate fire assay on the undersize and fire assaying the oversize to extinction. The sample aliquot used for the fire assay is nominally 50 g although may be lower if the mass of the oversize is less than this. The results produced by this method provide an indication of the proportions of coarse and fine gold in the sample. The method also helps to reduce over- or under-estimation of gold grades in coarse gold environments. As part of this method, a regular 50 g fire assay (Au-AA26) result is also reported

Samples from 2015-16 were also analysed for trace elements in order to identify gold pathfinder elements for samples in which gold grades may be low but are still on the mineralised structure. The 2015 samples were analysed for 35 elements using ALS method ME-ICP41 which involves digestion by aqua regia and analysis by ICP-AES. The 2016 samples were analysed for 33 elements using ALS method ME-ICP61 which involves four acid digestion followed by analysis by ICP-AES. The decision to use four acid digestion for the 2016 samples as opposed to aqua regia was taken to ensure that the samples were fully digested. This was considered important for the 2016 samples since a larger amount of aplite dykes were encountered which may contain minerals that are more resistant. From 2017 onwards it was decided that multielement analysis was not worth continuing and samples were only assayed for gold.

### 10.3.4 Quality Assurance and Quality Control

A basic QAQC programme was undertaken on the surface sampling programme including Certified Reference Material samples, coarse blanks, and coarse reject duplicates. The results from this programme were acceptable for the level of confidence required for this sampling:

#### Blank samples

Coarse blank samples were included in sample batches. No indication of contamination or mineralisation in samples was detected with the Au-AA26 method in 2015 and 2016 or with the ME-ICP61 method in 2016. The assay results by both methods are within the lower and upper limits.

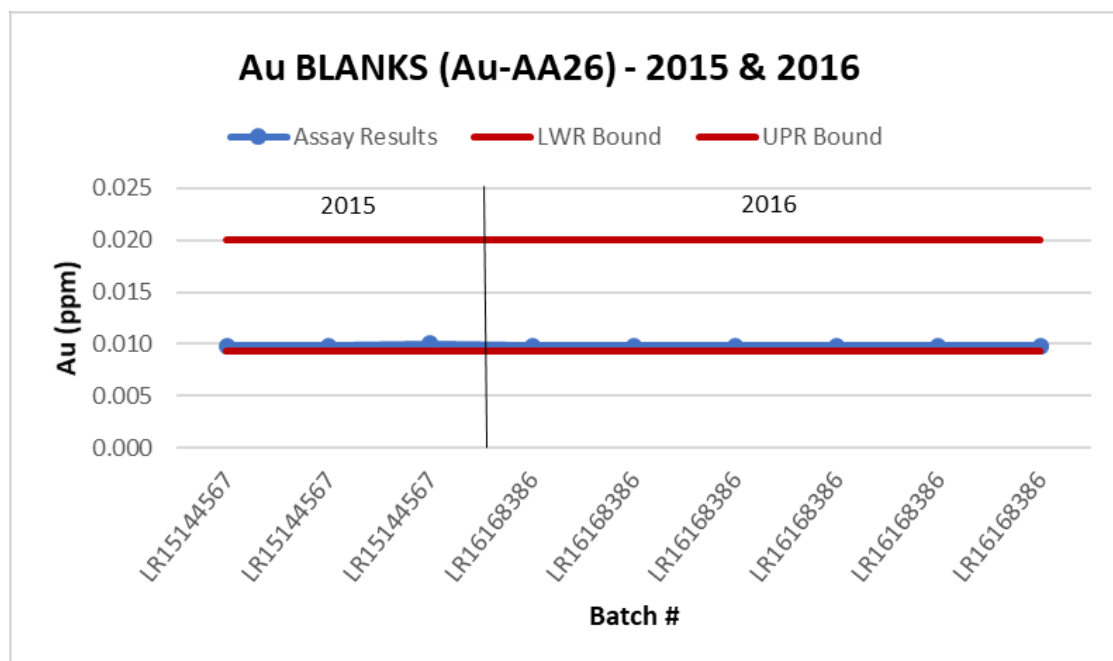
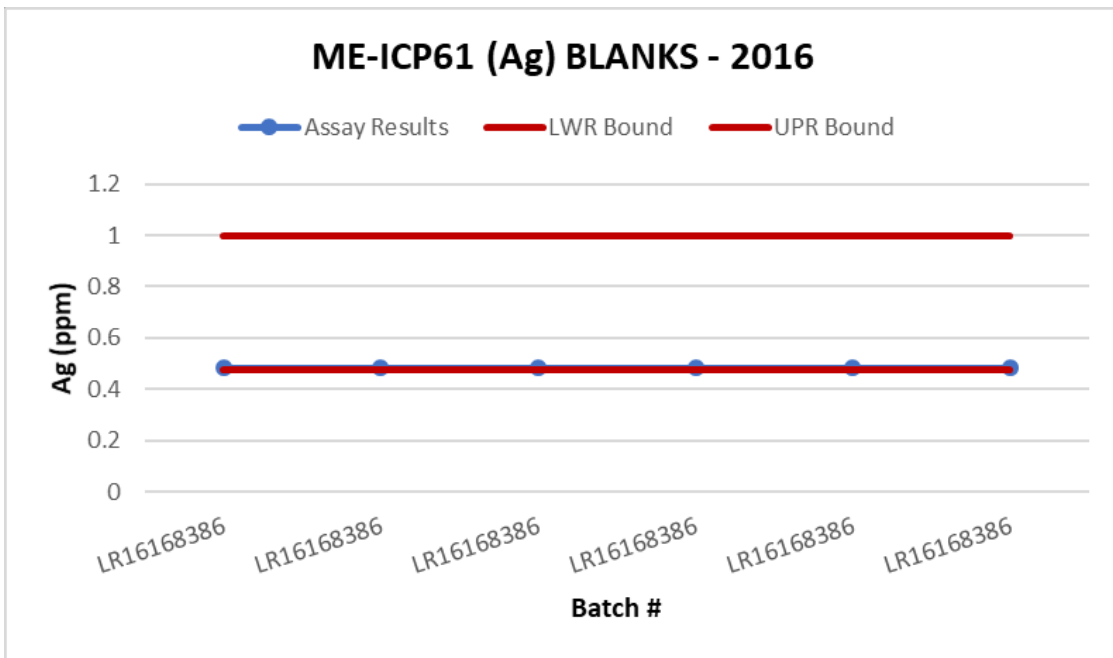


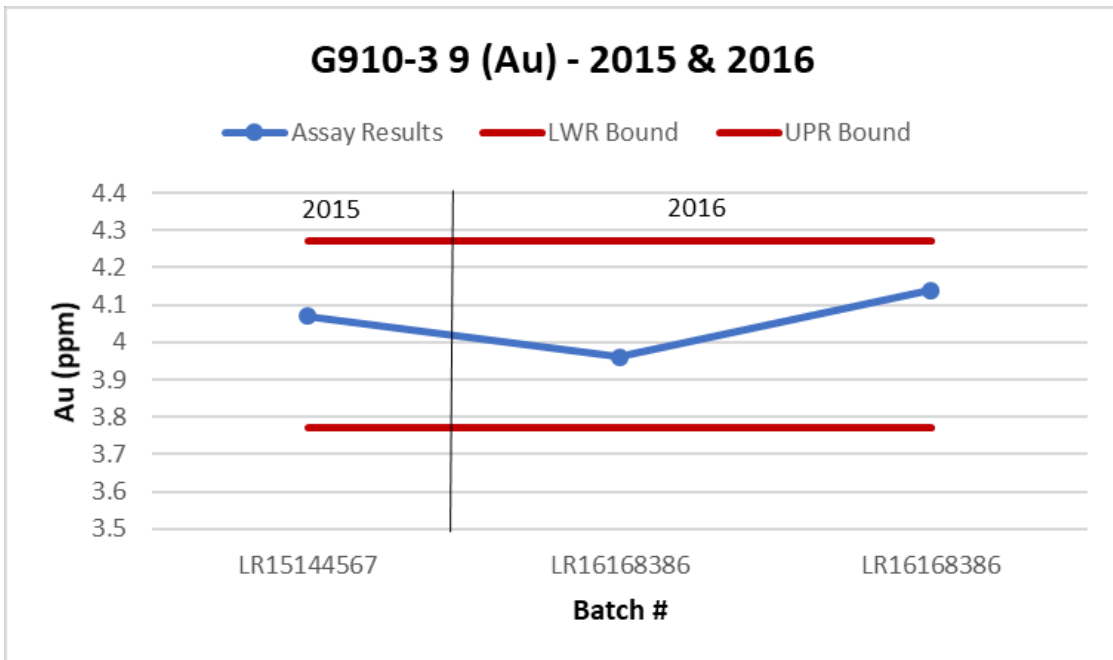
Figure 10-2: Au-AA26 blanks results for 2015 and 2016 (SRK ES, 2020)



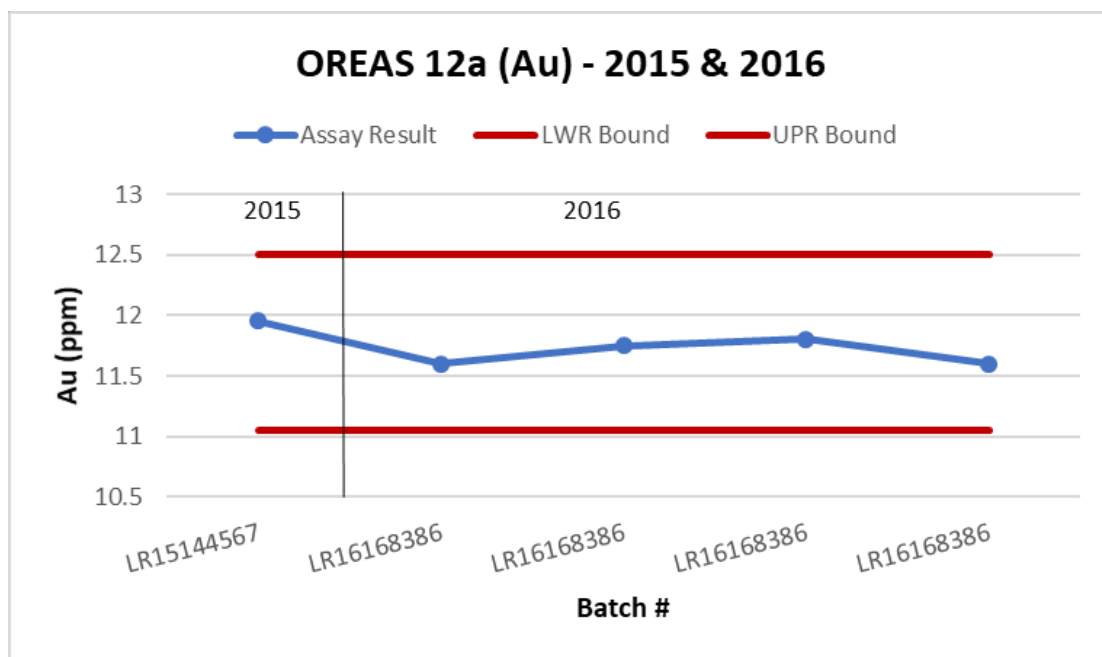
**Figure 10-3: ME-ICP61 blanks results for 2016 (SRK ES, 2020)**

*Certified reference materials (CRM)*

Standards used in the 2015 and 2016 included G910-3 9 and OREAS 12a. Assay results for these are presented in Figure 10-4 and Figure 10-5 respectively. The assay results for both standards are within the accepted limits, highlighting the consistency of the assay programme in both years.



**Figure 10-4: Assay results for standard G910-3 9 for 2015 and 2016 (SRK ES, 2020)**



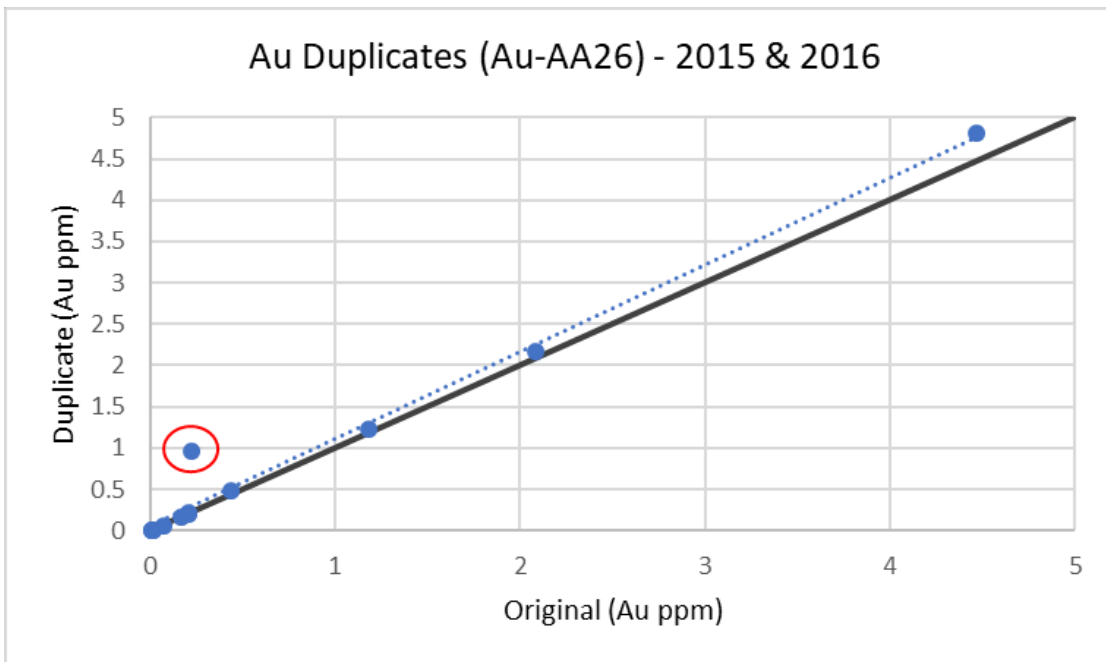
**Figure 10-5: Assay results for standard OREAS 12a for 2015 and 2016 (SRK ES, 2020)**

*Duplicate samples*

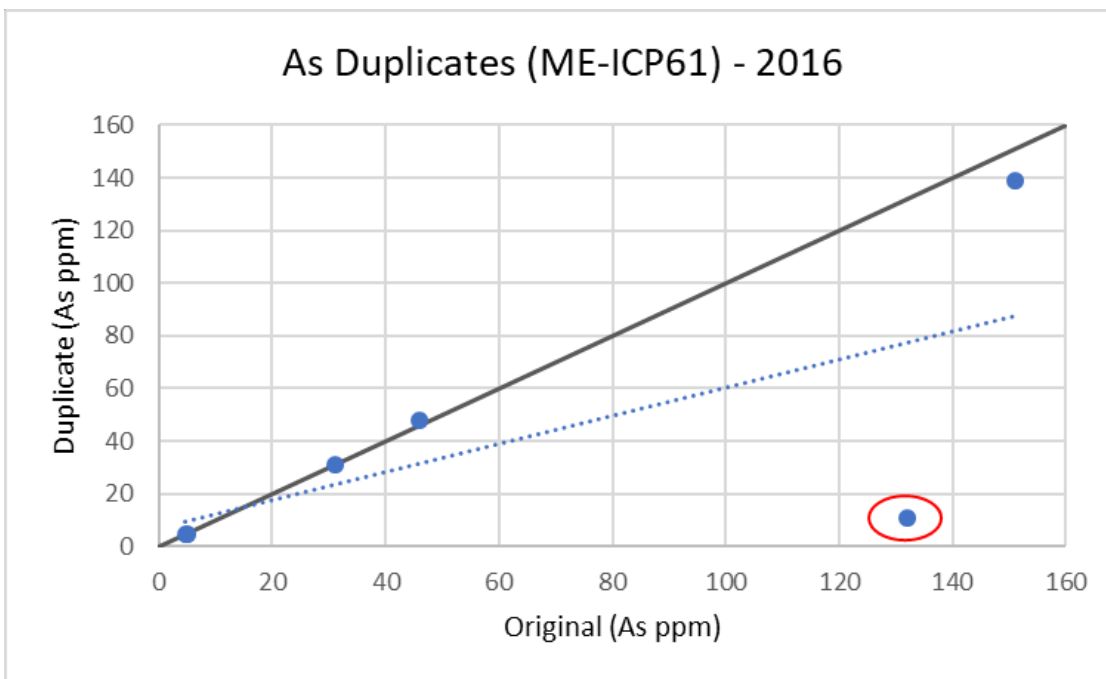
No field duplicates were taken. Gold assay results for coarse duplicate samples and their corresponding original samples analysed by the Au-AA26 method in 2015 and 2016 are plotted in Figure 10-6. The circled sample, 14463 from batch LR16168386, showed a slight difference in the original and duplicate gold values, otherwise good repeatability is observed from the rest of the results.

Arsenic and silver assay results for duplicates and their original samples are presented in Figure 10-7 and Figure 10-8 respectively. Arsenic results have a poor correlation due to a single high value fail, but removing it improves the correlation in the remaining population. One sample on the silver duplicates graph showed slightly higher silver grades in the original sample. Both the failed arsenic and silver samples were analysed from the 2016 batch LR16168386, which is the same batch with the failed gold duplicate results discussed above.

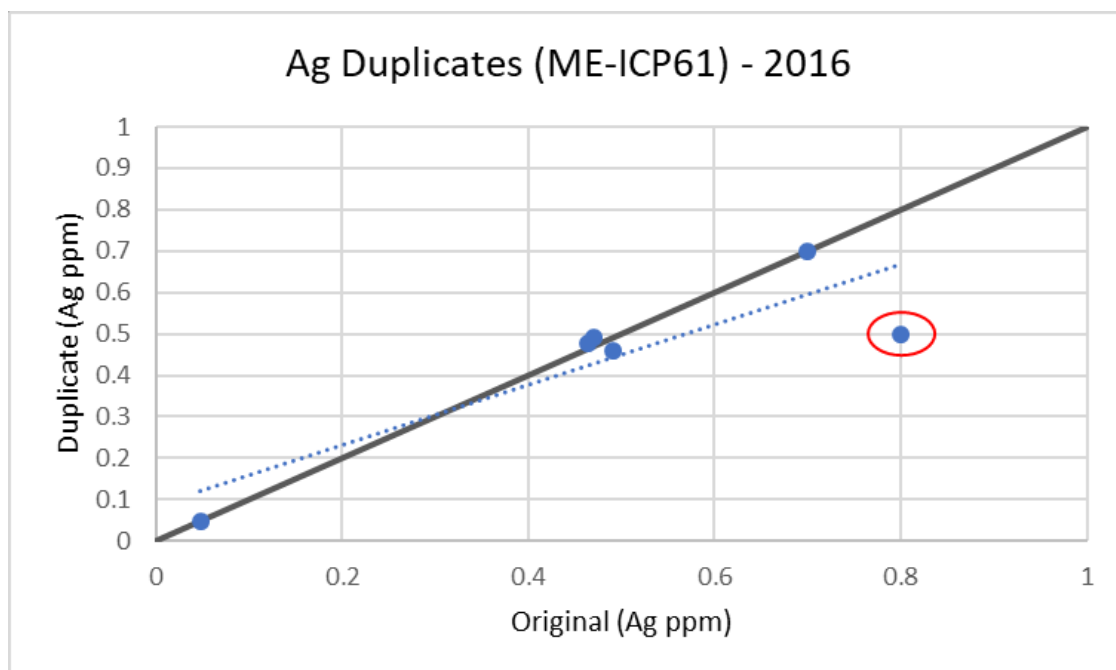




**Figure 10-6: Gold assay results for coarse duplicate samples and their original samples for 2015 and 2016. Analysis by Au-AA26 (SRK ES, 2020)**



**Figure 10-7: Arsenic assay results for coarse duplicate samples and their original samples for 2015 and 2016. Analysis by ME-ICP61 (SRK ES, 2020)**



**Figure 10-8: Silver assay results for duplicate samples and their original samples for 2015 and 2016. Analysis by ME-ICP61 (SRK ES, 2020)**

*SRK Comment on QAQC Procedures*

SRK considers the procedures implemented are sufficient. Recommendations made at the time of sampling included the implementation of a more rigorous QAQC procedure including more regular insertion of QAQC samples and the use of more than one type of CRM so that the range of expected gold grades can be represented.

### 10.3.5 Chain of custody and sample security

The 2015 surface samples were held in bags sealed with cable ties in a secure storage facility in Nanortalik prior to be collected by a shipping company for air freight to Ireland. A list of samples was provided to the receiving ALS laboratory and ALS confirmed that all samples were received and that there was no evidence of tampering.

The 2016 samples were placed in their individual sample bags into 10 large bags for shipment. These large bags were sealed with cable ties marked with unique identification numbers and held in a secure storage facility in Nanortalik until collected by a shipping company for air freight to the ALS laboratory in Ireland.

## 10.4 2017-2019 Drilling

### 10.4.1 Sampling methods

All core was sampled half core and cut using a diamond bladed core saw. The right-hand side (looking down hole) of the core was always sampled. All sample IDs (including QAQC samples) were marked on the core prior to photography. The IDs and intervals were then re-marked on the cut half of the core after sampling. All samples were picked and placed into calico sample bags marked on the outside with the sample ID and containing a sample ticket with the same ID by Amaroq geologists. All samples were securely stored in a shipping container on site prior to dispatch to the lab.

### 10.4.2 Sample preparation

Sample preparation used ALS code PREP-31b which comprises crushing to 70% passing 2 mm, splitting to 1 kg and pulverising the split sub-sample to 85% passing 75 microns.

### 10.4.3 Assay analysis

Gold analysis was carried out via two different methods. Screened metallic procedure (ALS code Au-SCR24) was undertaken as standard for all samples during the 2017-18 programmes and was replaced by standard 50 g fire assay with an atomic absorption spectroscopy finish (ALS code Au-AA26; Figure 10-9) during the 2019 programme. The method Au-AA26 has lower and upper detection limits of 0.01g/t and 100 g/t Au, respectively. All samples from the three programmes have a reported Au-AA26 result due to this being part of the Au-SCR24 technique. For comparison, all QAQC analysis on the Amaroq drilling data (as well as the recent surface samples) have been undertaken using the Au-AA26 fire assay result. No multi-elemental trace element analysis was undertaken on the drill core samples.

CODE	ANALYTE	RANGE (ppm)	DESCRIPTION
<b>Trace Level</b>			
Au-ICP21	Au	0.001-10	Au by fire assay and ICP-AES.
Au-ICP22			<b>30g sample</b> <b>50g sample</b>
Au-AA23		0.005-10	Au by fire assay and AAS.
Au-AA24			<b>30g sample</b> <b>50g sample</b>
<b>Ore Grade</b>			
Au-AA25	Au	0.01-100	Au by fire assay and AAS.
Au-AA26			<b>30g sample</b> <b>50g sample</b>
Au-GRA21		0.05-1000	Au by fire assay and gravimetric finish.
Au-GRA22			<b>30g sample</b> <b>50g sample</b>

**Figure 10-9: Sample analysis method Au-AA26 (ALS Services Schedule, 2020)**

### 10.4.4 Quality Assurance and Quality Control

A total of 208 QAQC samples have been used during the three phases of exploration drilling from 2017-19 at a global insertion rate of 17.6%. The breakdown of the QAQC samples is summarised in Table 10-3. The planned insertion rate for the three separate QAQC sample types was 5%, with a total QC planned insertion rate of 15%.

**Table 10-3: Summary of QAQC Samples from 2017 to 2019 Exploration Drilling Programmes**

Type	Count	Insertion Rate (%)*	Comment
Total Assayed	1388	N/A	
Normal Sample	1180	100.00%	
Field Blank	79	6.70%	Locally sourced Granite - Coarse
Total CRM	80	6.80%	
G914-6	29**	2.50%	
G914-7	30	2.50%	
G916-5	21**	1.80%	
Field Duplicates	49	4.20%	Quarter Core - None in 2019
Pulp Duplicates	0	0.00%	
<b>Total QAQC Samples</b>	<b>208</b>	<b>17.60%</b>	
Umpire Laboratory Check Assays	0	0.00%	

\*Based on the total number of "normal" half core samples submitted for analysis.

\*\*One sample was not analysed due to insufficient sample material submitted.

#### *Certified reference materials (CRM)*

Three different CRM were chosen and used throughout all the drilling sampling programmes, they were all sourced from Geostats Pty Ltd. All three CRM are described as being high grade, low sulphide material and are certified for both 50 g fire assay and aqua regia techniques. The certified values for the three CRM are provided in **Error! Reference source not found.**

**Table 10-4: Certified Au grades for CRM used during 2017-2019 drilling (SRK ES, 2020)**

CRM code	Certified Au value (g/t)	Standard Deviation (g/t)	Number of results
G914-6	3.21	0.12	179
G914-7	9.81	0.30	178
G916-5	19.92	0.69	175

These CRM were selected with a range of grades in order to best match the mineralogy and grade of the type of mineralisation expected at Nalunaq. The samples were submitted as pulverised 50 g packages and as such were only assayed using the Au-AA26 method. A total of 80 CRMs has been submitted to date as part of the sampling programme, with an insertion rate of 6.8% split between the three different types (Table 5-10). The populations of the individual CRMs (n.21-30) are insufficient for use in developing a robust review of the laboratory's precision, however they are sufficient to gain a good understanding of the laboratory's general performance over the drilling programmes to date.

All three of the CRMs performed well, with the results all falling within the +/- 2SD of the certified mean. The results show a very minor positive bias in the lower grade CRM (G914-6 – 3.21 g/t Au) and a minor negative bias with the high-grade CRM (G915-6 – 19.92 g/t Au). However, this is not material and the calibration and accuracy of the analytical equipment can be seen to be suitable for the grade ranges expected of the samples submitted. Graphs showing the results of the three CRMs by batch over time are shown below in Figure 10-10 to Figure 10-12.

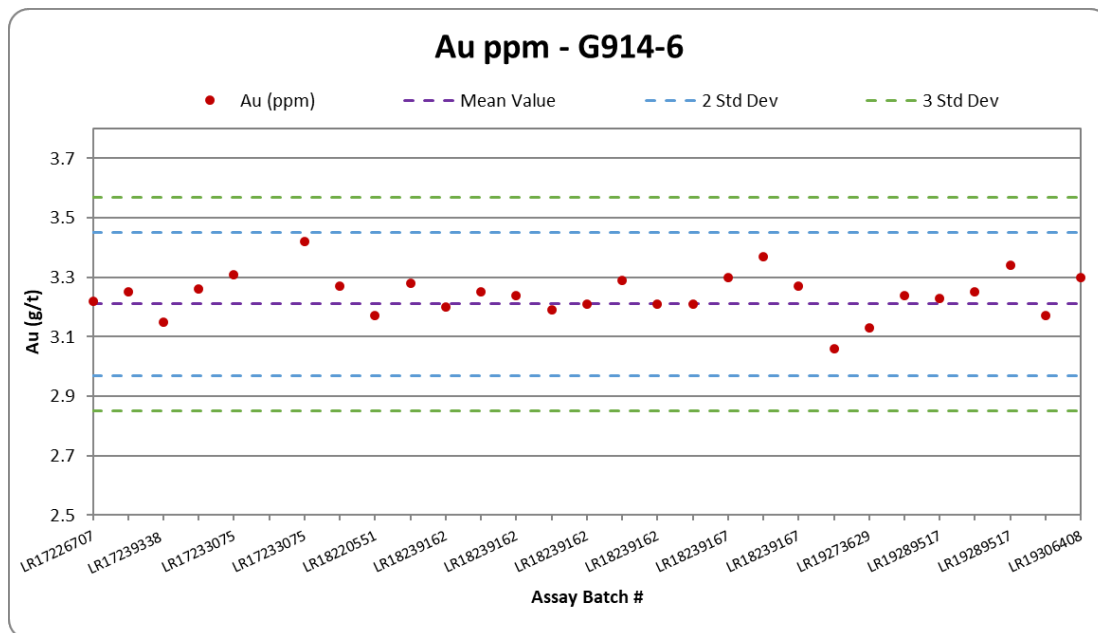


Figure 10-10: Results for Au in G914-6 by laboratory batch (SRK ES, 2020)

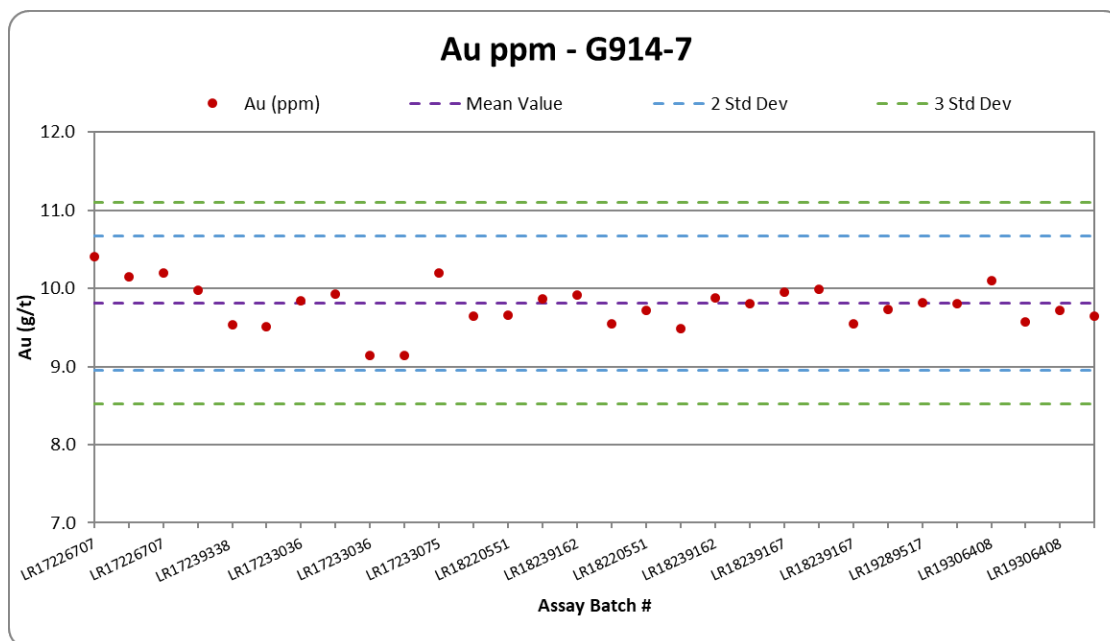
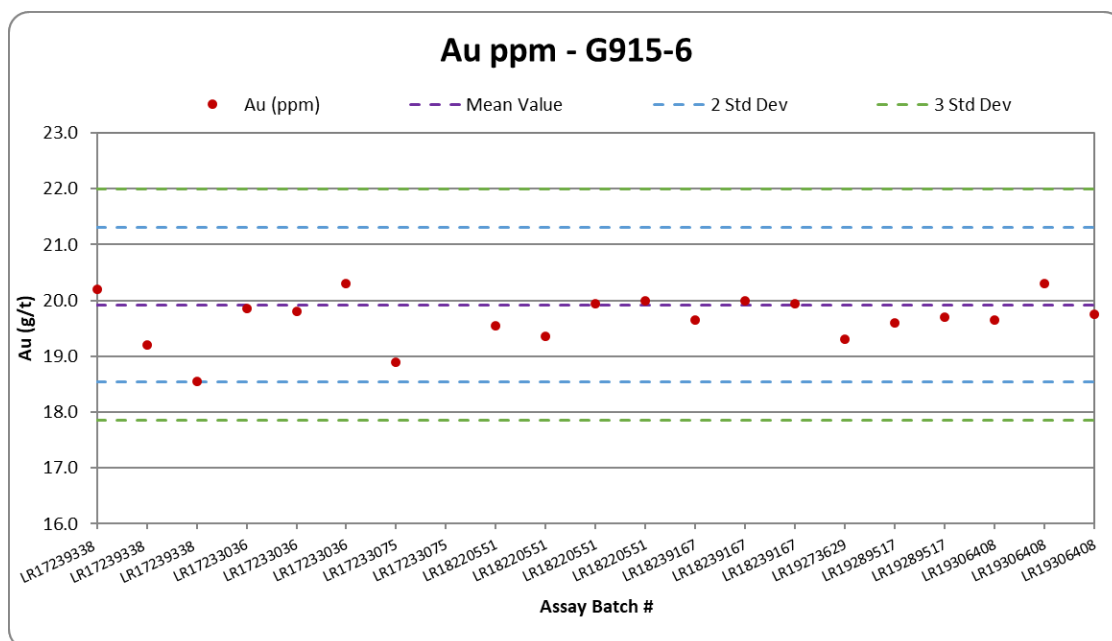


Figure 10-11: Results for Au in G914-7 by laboratory batch (SRK ES, 2020)

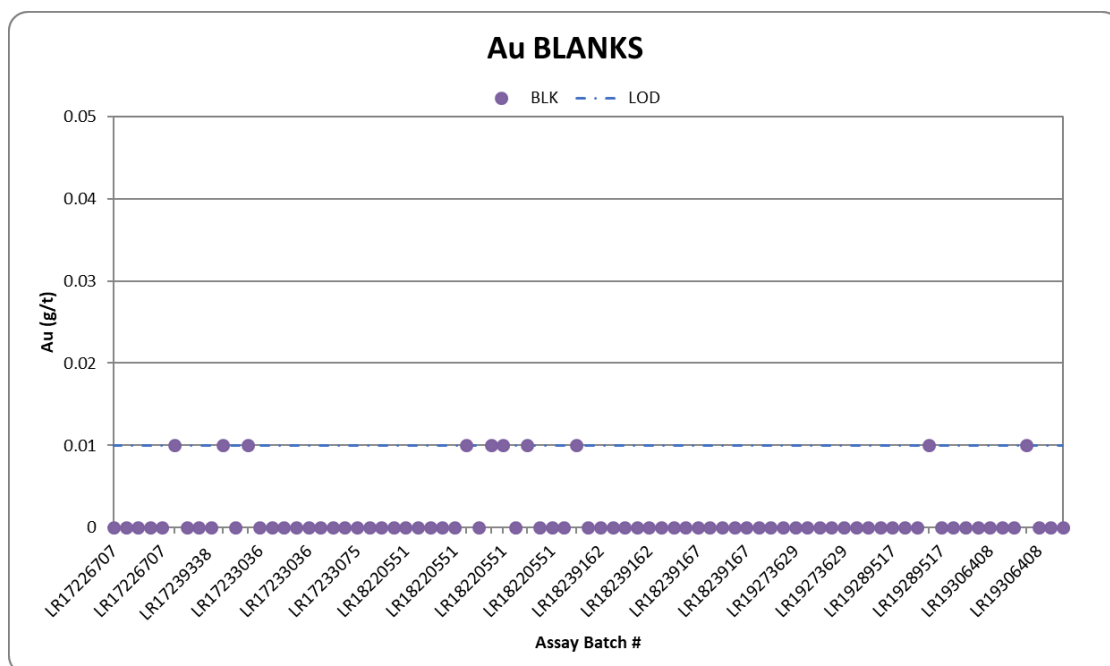


**Figure 10-12: Figure 10 10: Results for Au in G914-7 by laboratory batch (SRK ES, 2020)**

*Blank samples*

Field blanks were randomly inserted during all drilling programmes into the sample stream by the geologists as the drill core was sampled. The insertion rate for the field blanks was 6.7%. A porphyritic quartz, feldspar biotite granite known as the Rapikivi Granite was used for these samples, locally sourced. 2-3 kg of the blank material was placed in each sample bag which was clearly marked with the sample ID and a sample ticket placed in each bag.

The blanks performed well with 10 samples returning results at the level of detection (“LOD”) and no samples exceeding this (Figure 10-13). As the blank material is not certified and has a potentially heterogenous mineralogy, the possibility that this material contains very low traces of gold cannot be ruled out.



**Figure 10-13: Blank results from the 2017-19 exploration drilling (SRK ES, 2020)**

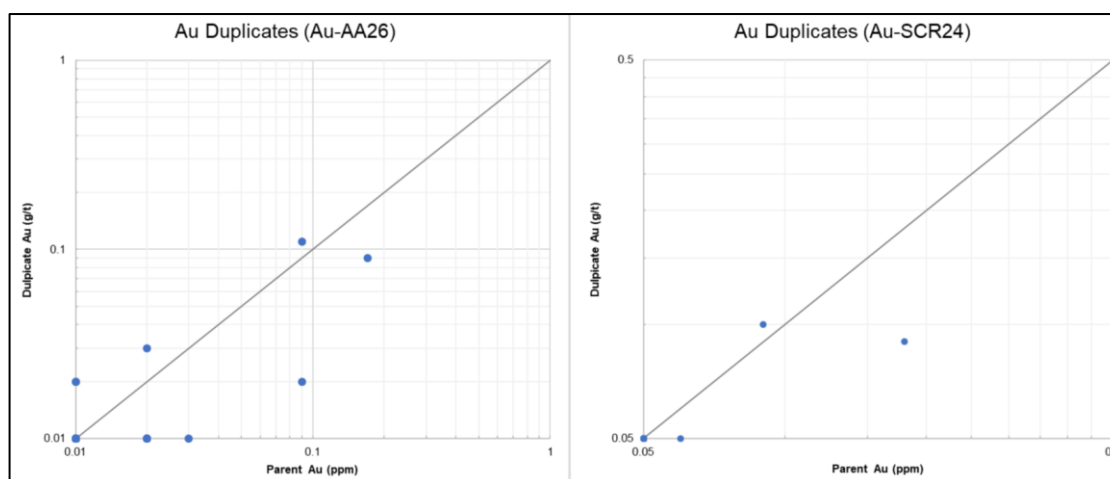
#### *Duplicate samples*

Field duplicates were taken at the core sampling stage as quarter core from the retained half core. The core size of this drilling was predominantly BTW in size (42 mm diameter). The purpose of these is to assess how repeatable the sampling was and therefore the suitability of the sampling method given the mineralisation style.

A total of 49 field duplicates were taken from the 2017 to 2018 programmes, with none taken during the 2019 drilling programme. Of these samples, only a minority returned grades above the LOD for either analytical method (Figure 10-14). The insertion rate of the total programme is 4.2%, reflecting the lack of sample collection in 2019.

The lack of results above the LOD due to the mineralisation style at Nalunaq, together with the mineralisation's high variability (nugget effect) and relatively small size of the samples, makes it hard to draw any meaningful conclusions from these results. It does highlight the issues relating to drill core sampling within this type of mineralisation. Even though the results show a poor repeatability in terms of absolute values, generally samples of moderate grade (>5x LOD) show a relationship.

Amaroq stopped collecting field duplicates at the core sampling stage due to the issue mentioned above.



**Figure 10-14: Comparison of field duplicate results by analytical method (SRK ES, 2020)**

#### *SRK Comments on QAQC Procedures*

SRK considers the procedures implemented to be generally sufficient for this stage of sampling and the blank and CRM results are adequate. The inherent issues with the core sampling process given the nature of the mineralisation at Nalunaq are highlighted by the previous field duplicate sampling programme. Amaroq stopped collecting field duplicates in 2019 but, at that time, SRK ES considered the results from this work to be important, and recommended that it should be resumed, or alternative protocols put in place. This is key to assess the confidence and repeatability of the sampling methodology.

### **10.4.5 Chain of custody and sample security**

The sample security for all drilling derived samples was the same for the surface sampling described in Section 10.3. The drilling samples were collected and stored following the same procedure as the surface sampling. The only difference being that the samples were delivered by Amaroq personnel via charter boat to DHL in Narsarsuaq who then organised transportation to ALS in Ireland.

## **10.5 2020 and 2021 Drilling**

### **10.5.1 Sampling methods**

After logging, the core was marked up for sampling. Typically, a minimum sample length of 0.5 m was used to ensure there was enough material for the screen fire assay method which requires 1 kg of sample. The maximum sample length used was 1.5 m.

In 2020, core was cut in half using a diamond blade core saw. Where a bottom of hole orientation line was present, the cut line was marked approximately 5 degrees off axis, and the right-hand side of the core was sampled. Drill core samples were placed into calico or thick polymer bags with a sample ticket, weighed, and assigned a sample ID. Each sample was sealed with a security tag, which assigns a unique security ID to the sample.



During the 2021 drilling campaign, three-quarter core samples were taken in order to maximise the sample size. The core was initially cut in half, with one half being cut again. The half core and a single quarter core sample were then sent for assay separately. In order to produce a single grade for the database, an average grade, weighed by laboratory weighed sample mass, was taken. SRK has validated the weighted average methodology applied.

### 10.5.2 Sample preparation

In 2020, samples were submitted to SGS Sudbury, ON, Canada for preparation and analysis. Sample preparation method PRP94 was applied to all samples, with the addition of a rotary split. This involves crushing to 75% passing 2 mm, a rotary split to 1 kg, and pulverizing the 1kg sub-sample split to better than 85% passing 75 microns.

In 2021, samples were instead submitted to ALS Geochemistry, Loughrea, Ireland for preparation and analysis. Samples were prepared using method PREP-31BY. This involves crushing to 70% passing 2 mm, a rotary split to 1 kg, and pulverizing the 1kg sub-sample split to better than 85% passing 75 microns.

Both the SGS and ALS laboratories are certified ISO 9001 for quality.

### 10.5.3 Assay analysis

Samples tested by SGS were analysed by 50g fire assay with ICP-AES finish (GE\_FAI50V5) which has a detection limit of 0.001 ppm Au. Samples containing visible gold and samples considered to be the Main Vein were assayed with screen-metallics fire assay (GO FAS50M) which has a detection limit of 0.01 ppm Au. This involves screening 1 kg of pulverised sample to 106 µm followed by 50 g fire assay of the entire plus fraction and duplicate analysis of the minus fraction. In addition, all samples were assayed with a Four-Acid Digestion / 33 element ICP-AES (GE\_ICP40Q12).

Samples tested by ALS were analysed by 50g fire assay (Au-AA26) which has a detection limit of 0.01 ppm Au. Samples containing visible gold and samples considered to be the Main Vein were assayed with screen-metallics fire assay (Au-SCR24) which has a detection limit of 0.05 ppm Au. This involves screening 1kg of pulverised sample to 106 microns followed by a gravimetric assay of the entire plus fraction and a duplicate 50 g AAS assay of the minus fraction. In addition, all samples were assayed with a 48-element Four-Acid Digestion ICP-MS technique (ME-MS61).

### 10.5.4 Quality Assurance and Quality Control - 2020

A total of 85 QAQC samples were submitted as part of the 2020 drill programme, at an overall insertion rate of 6.1%. A summary of QAQC samples for 2020 and 2021 drill campaigns is given in Table 10-5. This included the submission of blank samples and CRM. SRK notes that no duplicate samples were submitted in 2020, following a decision made by Amaroq in 2019 (Section 10.4.4). The average sample mass was approximately 2kg in 2020 and 2021.

### *Certified reference materials (CRM)*

The three CRM sourced from Geostats used during the 2017-2019 drilling campaign were used during the 2020 drilling campaign, at an overall insertion rate of 2.9%. The CRM G914-7 was only inserted five times, whereas G914-6 and G916-5 were inserted 17 and 18 times, respectively. The results for the CRM analysed are shown in Figure 10-15. The CRM performed well throughout the campaign, with only one instance of a CRM assay result falling just outside 2 standard deviations of the certified mean (G914-7).

### *Blank Samples*

The Blank samples were inserted into the sample stream at a rate of 3.2%. The blanks samples comprised a locally sourced Rapikivi Granite, as was used for the 2017-2019 drilling campaign.

The gold results for blank values are displayed in Figure 10-16. When assessing the performance of blank samples for this programme, it must be noted that almost all samples were analysed using the 50g fire assay with ICP-OES finish (SGS code GE\_FAI50V5), with a notably low detection limit of 1 ppb. With this consideration, the blank samples generally performed well, with all but two of the samples returning gold values more than 5 times the detection limit (5 ppb). One of these samples, which returned a gold value of 0.04 ppm, was analysed by a screen fire assay method, which was only utilised occasionally for samples after visible-gold bearing samples. As the blank material is not certified and may have a heterogenous mineralogy, the possibility that this material contains very low traces of gold cannot be ruled out. In general, blank samples do not display any indication of contamination.

**Table 10-5: Summary of QAQC Samples from 2020 and 2021 drilling programmes**

Sample type			2020 Drilling		2021 Drilling	
			No. of samples	QAQC sample insertion (%)	No. of samples	QAQC sample insertion (%)
<b>Normal samples</b>			1393		1353	
<b>QAQC samples</b>	Blanks	Blank (Rapaviki granite)	45	3.2%	<b>134</b>	9.9%
		<b>Total blanks</b>	<b>45</b>	<b>3.2%</b>	<b>134</b>	<b>9.9%</b>
	CRM	G914-6	17	1.2%	32	2.4%
		G914-7	5	0.4%	32	2.4%
		G916-5	18	1.3%	33	2.4%
		<b>Total CRM</b>	<b>40</b>	<b>2.9%</b>	<b>97</b>	<b>7.2%</b>
	Duplicates	Field	-	-	127	9.4%
		Coarse	-	-	-	-
		Pulp	-	-	-	-
		Umpire	-	-	-	-
		<b>Total duplicates</b>	<b>-</b>	<b>-</b>	<b>127</b>	<b>9.4%</b>
<b>Total QAQC samples</b>			<b>85</b>	<b>6.1%</b>	<b>358</b>	<b>26.5%</b>

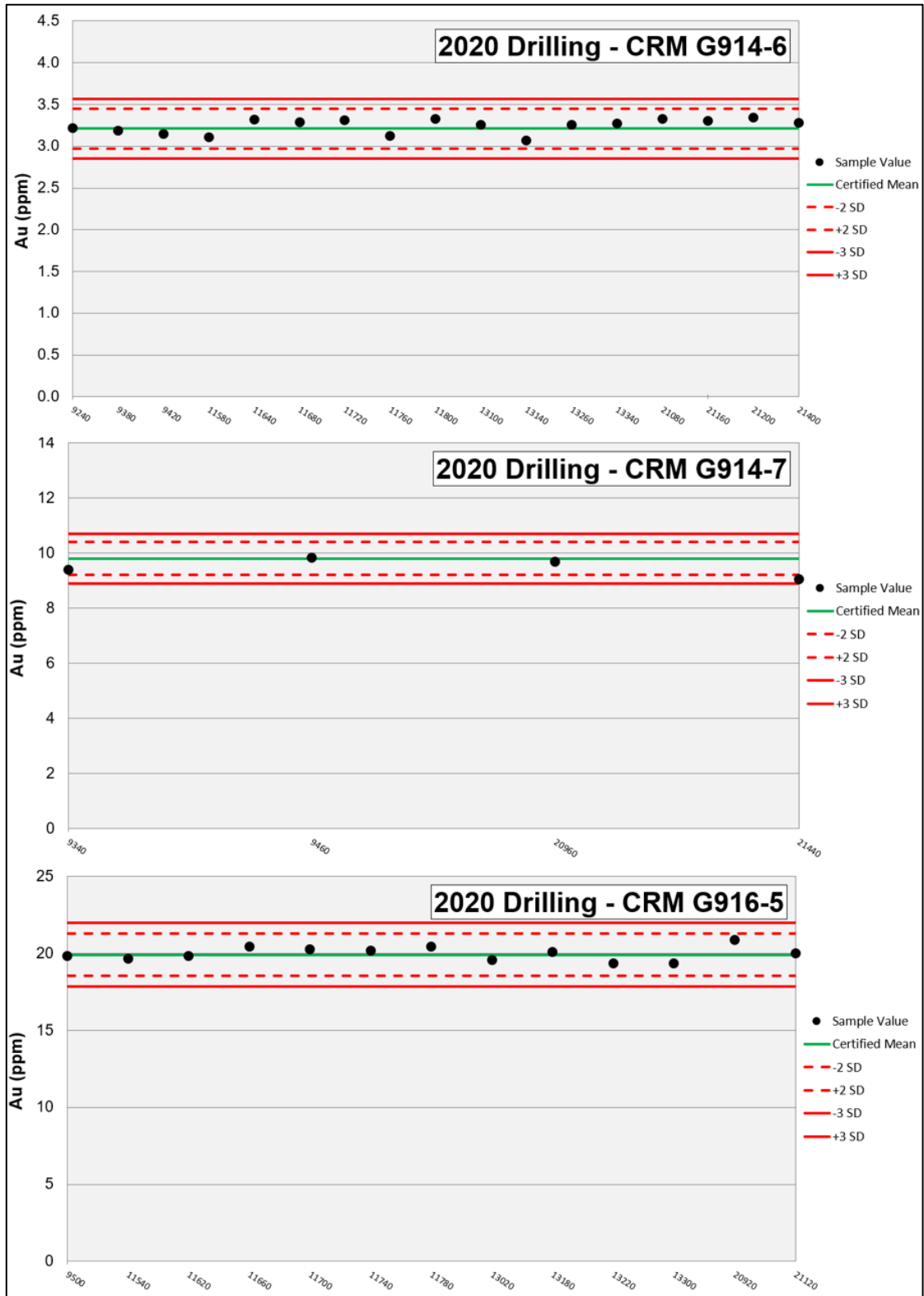


Figure 10-15: CRM data for 2020 drilling programme

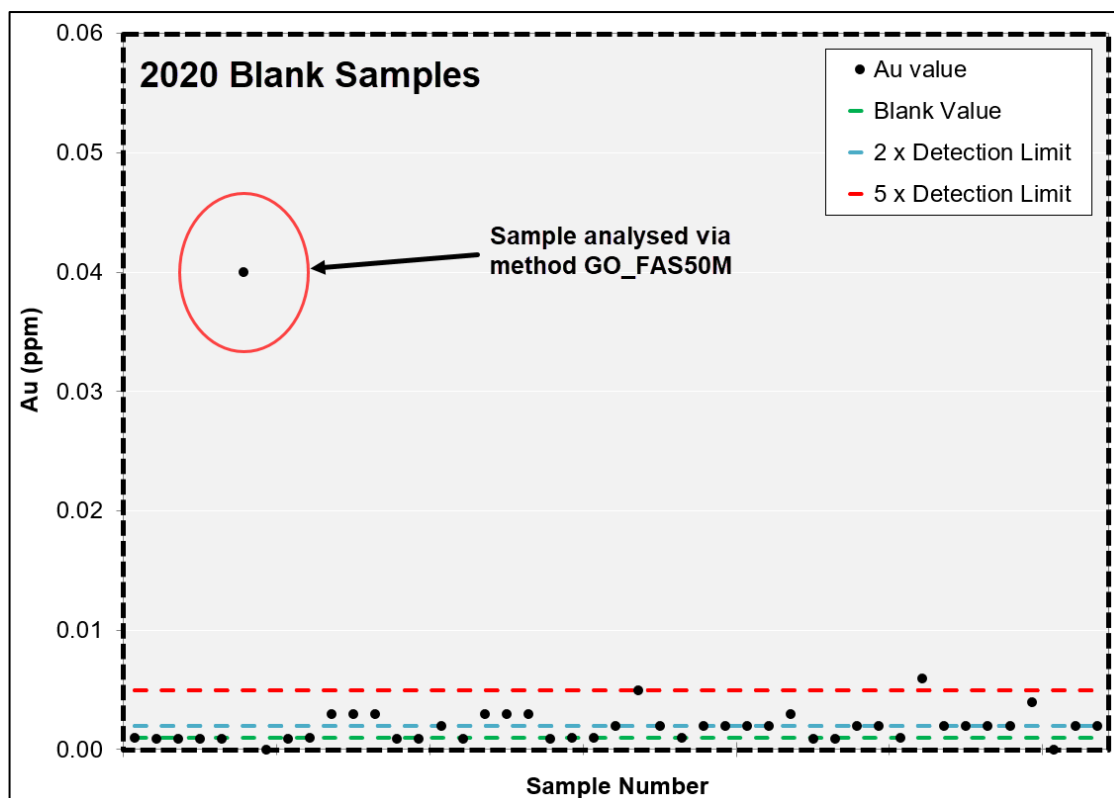


Figure 10-16: Blank data for 2020 drilling programme

### 10.5.5 Quality Assurance and Quality Control - 2021

A total of 358 QAQC samples were submitted as part of the 2021 drill programme, at an overall insertion rate of 26.5%. A summary of QAQC samples for the 2021 drill campaigns is given in Table 10-5. The programme involved the insertion of blanks, CRM and field duplicate samples.

#### *Certified reference materials (CRM)*

The three CRM sourced from Geostats used during previous drilling campaigns were used during the 2021 drill programme, at an overall insertion rate of 7.2%. Plots showing the performance of CRM through time are shown in Figure 10-17. In general, the CRM performed well, with the results for two of the CRM (G914-6 and G916-5) not exceeding 2 standard deviations from the certified mean. For G914-7, two analyses exceeded 2 standard deviations from the mean, with one value outside 3 standard deviations. Given this is the case for one out of 32 total analyses of this CRM, this is not considered to be a material issue. There is no evidence of bias towards higher or lower grades in any of the CRM.

#### *Blank Samples*

As with previous QAQC programmes, the blank sample comprised locally sourced Rapikivi Granite, and was inserted at an overall rate of 9.9%. A plot summarising the gold values of blanks is shown in Figure 10-18. All but three of the blank samples returned gold values at the detection limit, or at twice the detection limit, equivalent to 97.8% of blanks submitted. Two of the remaining blank samples fall within 5 x detection limit, with one sample exceeding this level. Given the small number of samples that marginally exceed twice the detection limit, and that the blank is not certified, this is not considered to be a material issue.

### *Duplicate Samples*

Field duplicates were taken at the core sampling stage as quarter core from the retained half core. A total of 127 duplicate samples were submitted during the 2021 programme, equivalent to an insertion rate of 9.4%. The performance of duplicate samples is summarised in scatter plots in Figure 10-19. At grades of greater than 0.8 g/t Au, there is a significant degree of scatter, with no clear correlation between original and duplicate sample grades, whereas a weak to moderate correlation exists at grades of less than 0.8 g/t. The overall correlation is poor, with an  $R^2$  value of 0.52. This is likely an indication of coarse or nuggety gold. Given the known coarse gold nature of the mineralisation, it is likely that the same small sample size of the duplicate samples is causing the poor reproducibility of results.

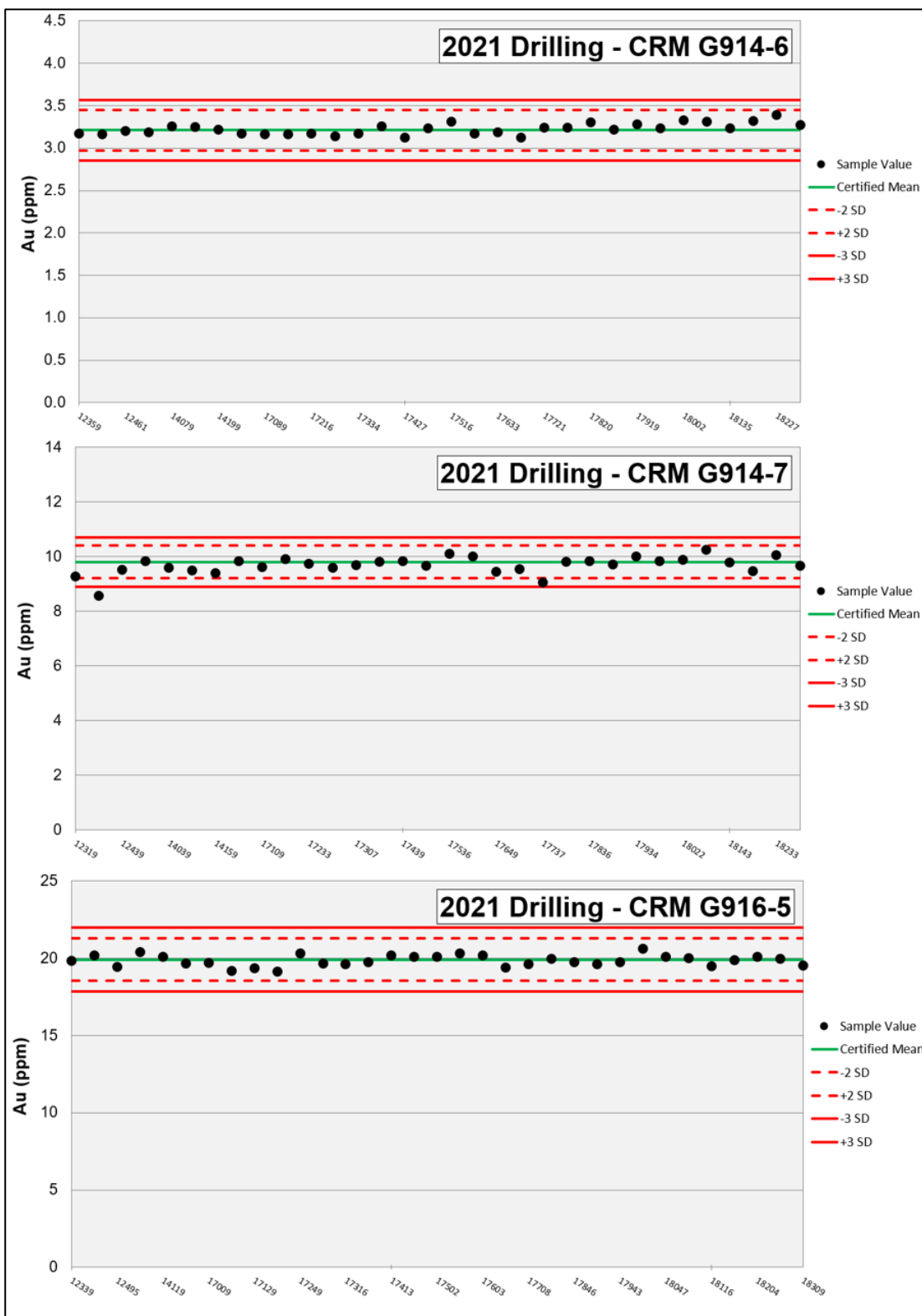


Figure 10-17: CRM data for 2021 drilling programme

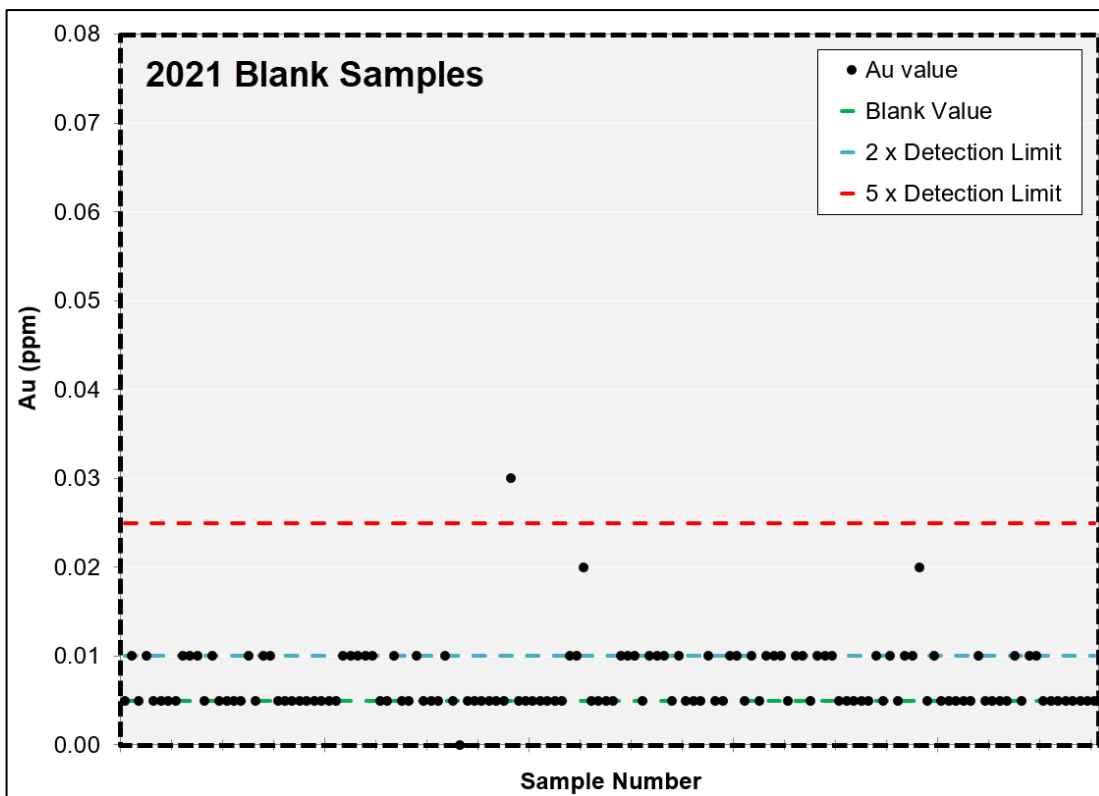


Figure 10-18: Blank data for 2021 drilling programme

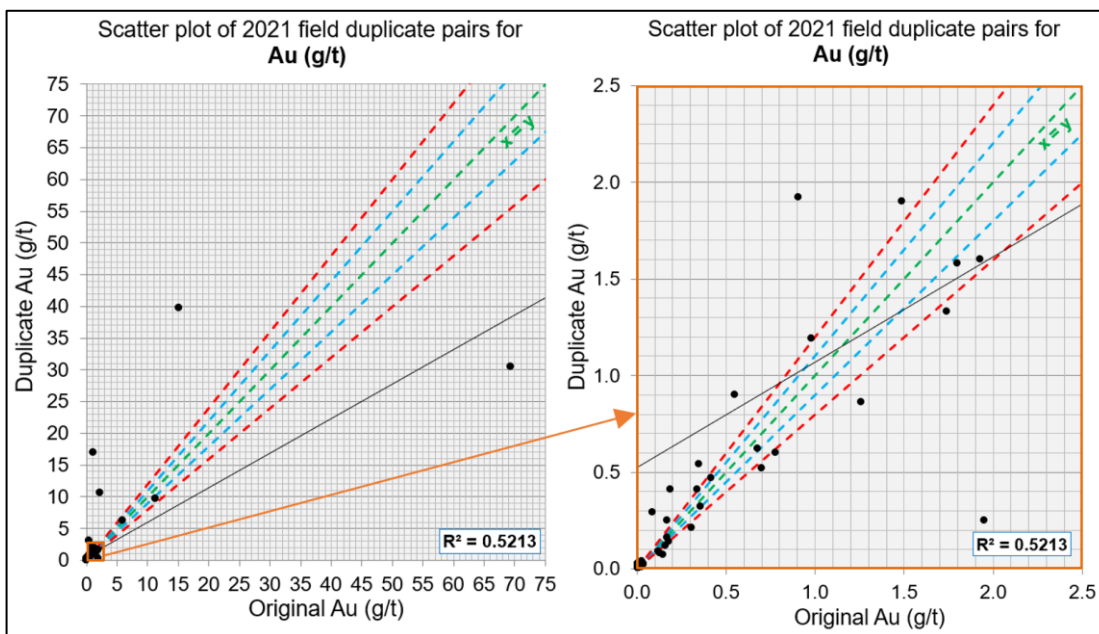


Figure 10-19: Duplicate data for 2021 drilling programme

### 10.5.6 Chain of Custody and Sample Security

The sample security for the 2020 and 2021 drilling samples was consistent with that for the 2017 to 2019 campaigns. Samples were delivered by Amaroq personnel via charter boat to DHL in Narsarsuaq who then organised transportation to the relevant laboratories.

## 10.6 Density analysis

The density database supplied to SRK includes a total of 257 measurements collected during the 2021 drilling programme. Density determinations were carried out using drill core samples. Competent sections of core were cut prior to measurements being taken. No other density samples have been taken by Amaroq or by previous owners / operators.

Densities for 203 samples were measured on-site using the Archimedes principle of first weighing the sample dry, and then submerged in water. No wax/plastic coating was applied as the core was considered to be relatively competent. Moisture content was not measured and is assumed to be negligible.

The remaining 54 sample measurements were collected by ALS Minerals using method OA-GRA09. This method also uses the Archimedes principle to determine specific gravity.

## 10.7 Summary

Overall, SRK considers the majority of sample preparation, analyses and security protocols to conform to industry best practice. SRK notes the absence or general poor records of QAQC sample results for the drilling and sampling programmes prior to 2015. As such, drilling and sampling results from these campaigns present a risk in terms of accuracy and precision of the associated assay grades. The results of the 2015 to 2021 QAQC programmes are summarised as follows:

Accuracy:

The results for a range of certified reference materials submitted for analysis between 2015 and 2021 are generally acceptable.

Precision:

Looking at the duplicates inserted into the sample stream between 2017 and 2021, SRK notes that there is a high degree of scatter, with poor reproducibility. Given the nature of the mineralisation, which is typically characterised by coarse visible gold, this is to be expected. In addition, the relatively small size samples from drill core will also increase this observed “nugget effect”. It would be expected that these assay disparities are primarily attributable to the natural heterogeneity of the deposit, and therefore would be expected to reduce with increasingly homogenised coarse and pulp duplicate sampling.

Contamination:

The blank samples submitted between 2017 and 2021 to not demonstrate any material issues regarding contamination. A very small number of samples returned higher than zero values, but this is thought to be related to the mineralogy of the blank material, rather than a systematic problem with the sampling and assaying processes.



## **11 DATA VERIFICATION**

### **11.1 Historical Data Validation and Verification**

During the 2016 and 2020 reviews, SRK ES did not inspect the historical core in detail and as such, data pertaining to core measurements have been taken in good faith but are based on reporting by previous Competent / Qualified Persons.

Selected intervals from a total of 35 surface holes are stored at the MLSA core storage in an airport warehouse in Narsarsuaq. SRK ES visited this in 2016 to inspect core from particular areas of interest. In particular, core from boreholes NQ158 and NQ163 was sought in order to confirm the presence of the MV between the current reef drives and the outcrop of the MV on the mountainside, and to investigate additional mineralised intercepts in the FW and HW. It was disappointing to find that core from NQ158 is incomplete; not all of the core has been stored and the important intersection depths are missing. There was no core at all from NQ163.

### **11.2 2021 SRK QP Site Visit**

SRK Qualified Person, Dr Lucy Roberts, Principal Consultant (Resource Geology) visited the site between 9 and 17 September 2021. The visit involved a tour of the Project area including an inspection of underground adits and stopes; verification of a selection of drillhole collar positions; a review of selected core; discussion on the geological and mineralisation interpretation; and reviewing quality assurance/quality control procedures employed by the Company.

Prior to undertaking the MRE, both collar and downhole surveys were checked visually in 3D in order to highlight any clear errors in the survey readings. Additionally, Qualified Person, Dr Lucy Roberts of SRK verified the position of three drillholes collar locations from the 2021 campaign.

### **11.3 Database Checks and Independent Verification**

Since acquisition of the Project, all data from the Nalunaq Project is managed using a combination of industry standard database management systems and manual checking. These include:

- inconsistent collar coordinates;
- incorrect or missing DTH survey records;
- missing assay records;
- missing data or overlapping interval errors; and
- incorrect 3D plotting of drillhole traces.

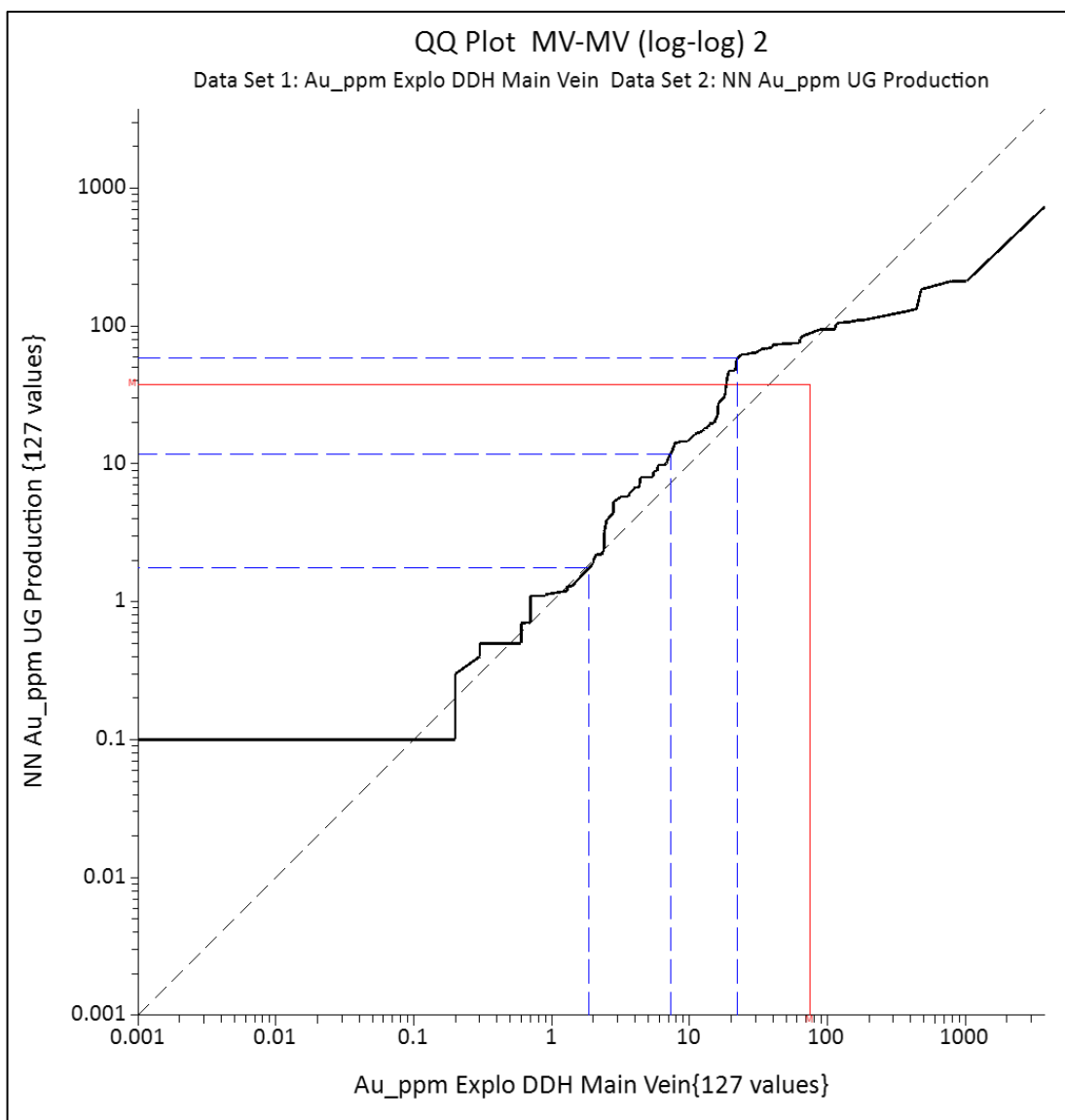
Any errors highlighted during this process are actioned by the Endeavour database management team as appropriate. While SRK has not independently verified the database management procedures carried out by Amaroq, a review of the exported database did not highlight any major issues.

## 11.4 Comparison of Production and Exploration Drilling Data

A number of internal reviews have highlighted the fact that in global comparisons of underground production data (face and channel samples) versus exploration drilling data, the production data has a higher proportion of high-grade samples and has a higher average grade. Given that historical mining, and therefore the production data, was intentionally focussed on the high-grade parts of the mineralisation and therefore selective by design, and that exploration drilling is designed to sample all parts of the mineralisation equally, and is therefore not, this apparent bias makes intuitive sense. However, in order to use both production data and exploration drilling data in Mineral Resource estimation, it is necessary to assess whether there is a true high-grade bias in production assays versus exploration drilling assays.

In order to make an effective comparison and remove biases due to sampling frequency and location, SRK compared a subset of exploration drilling and production data. Entirely unassayed drillholes were excluded in order to remove false blanks and only exploration drillholes with logged intersections of Main Vein and which intersect the area within or at the margin of the production data were considered. Distance buffers were used to select production samples within a 10 m radius of the selected exploration drilling samples. A nearest neighbour estimate was used to calculate a local distance-weighted average gold grade for production samples within a 10 m radius of each exploration drillhole sample.

SRK present a Q-Q plot comparing the exploration drillhole gold assay with the local Nearest Neighbour weighted average gold grade for underground production samples in a 10 m radius in Figure 11-1. The data plot close to the X=Y line and overall the Q-Q plot does not indicate any material bias. Based on this analysis SRK consider that there is no material bias between the sample types and that both underground production samples and exploration drilling data may be relied upon in grade interpolations.



**Figure 11-1: Q-Q plot of select Main Vein Au assays from exploration drilling versus NN average of underground production data.**

## 12 MINERAL PROCESSING AND METALLURGICAL TESTING

Two shipments of metallurgical sample were provided to SGS in Lakefield for comminution testing, mineralogical analysis, gravity separation testing and flotation testing. The results of the metallurgical testing were reported in SGS (2020). Of the 17 samples received, four were used for metallurgical testing (listed in Table 12-1) while the others were stored for future project work. Samples 2.1 Product and 2.1 Waste were submitted for comminution testing. Containers 8 (689:1000R Sub Sample -3.35 mm) and 9 (689:2000R Sub Sample - 3.35 mm) were submitted for pulp and metallics gold analysis. Two batches of Master Composite were prepared from the Container 9 material and the 2.1 Waste sample, and subsamples of each were submitted for head analyses, which are presented in Table 12-2.

**Table 12-1: Received Samples Used for Metallurgical Testing**

Sample Type	Container name	Sample Name
Met Sample	Container 8	689:1000R Sub Sample -3.35 mm
Met Sample	Container 9	689:2000R Sub Sample -3.35 mm
Sorting	n/a	Sample 2.1 Product
Sorting	n/a	Sample 2.1 Waste

**Table 12-2: Master Composite Head Assays**

Composite	Au, g/t			Mean	As %	S %
	Cut A	Cut B	Cut C			
Master Composite	19	11.2	22.8	<b>17.7</b>	0.051	0.29
Master Composite 2	16.8	15.3	19.7	<b>17.3</b>	0.058	0.28

Samples 2.1 Product and 2.1 Waste were submitted for Bond abrasion index and Bond Ball Work Index testing. These samples were found to be somewhat more abrasive than most mineralisation types when compared with the SGS database, with the 2.1 Product sample ( $A_i = 0.545$ ) more abrasive than the 2.1 Waste sample ( $A_i = 0.446$ ). Bond Ball Work Indices of 17.4 and 15.3 kWh/t were obtained for the 2.1 Product and 2.1 Waste samples, respectively, which places them slightly above average hardness compared to the extensive SGS database.

An Extended Gravity Recoverable Gold (E-GRG) test was conducted on the Master Composite. Three stages of gravity recovery were performed at P80 of 602 $\mu$ m, 263 $\mu$ m, and 68 $\mu$ m achieving cumulative gold recoveries of 58.1%, 78.7%, and 90.3%, respectively. Size-by-size analysis shows minimal recovery in the coarsest fractions, with the best results in stage three, indicating that a grind finer than 100 microns is required to improve gravity gold recovery.

Gravity separation tests were conducted to produce Knelson Concentrator tailings as feed for batch flotation testing. A series of 19 rougher and cleaner flotation tests were conducted using various reagents and dosages. The historical reagent scheme of PAX and A208 was tested in differing ratios and dosages, with a mid-range dosage in test F7 at the 2:1 PAX to A208 ratio achieving favourable results. Flotation recovery to the cleaner concentrate was 66.3% (93.2% gravity plus flotation) at a gold grade of 331 g/t. Further testing using 3418A as the collector at varying dosages was conducted, giving generally lower gold recoveries than the preferred PAX:A208 scheme of F7. Other reagent schemes tested involved activation with copper sulphate, or the use of xanthate alone. The Test F7 conditions of 70 g/t PAX and 35 g/t A208 were selected for locked cycle testing and bulk flotation testing.

Arsenic grade and recovery were also examined in this flotation program, showing a strong association of gold and arsenic in the Master Composite. While tests using 3418A collector were more selective against arsenic, this led to an overall lower gold recovery. Further examination of the mineralogical occurrence of arsenic and its relation to gold is warranted to define the potential for arsenic rejection and gold recovery.

One locked cycle test was conducted using F7 conditions, and circuit stability was achieved in the early cycles. Flotation recovery to the final cleaner concentrate was 72.0% (96.9% overall recovery with gravity and flotation) at a concentrate gold grade of 195 g/t.

A series of bulk flotation tests was conducted in order to produce downstream tailings for third party testwork. These tests produced over 200 kg of tailings pulp assaying an average grade of 0.64 g/t Au, 0.006% As, and 0.04% S. The tailings pulps were shipped to Pocock Industries and Golder Associates for further testwork.

Several samples of concentrates and tailings, as well as locked cycle test concentrates, and combined bulk flotation tailings, were submitted for expanded chemical analyses, including whole rock elements and deleterious elements such as mercury, bismuth, antimony, and cadmium. While this material type has significant amounts of arsenic reporting to the concentrates, ranging from 1.8% As to 4.3% As, other deleterious elements were either very low or below detection limits.

This test program was an initial examination into the metallurgical behaviour of the Nalunaq Master Composite. It was recommended that further grindability testing, mineralogical analysis, gravity separation testing, and flotation testing be conducted to further explore the optimisation of gold recovery and arsenic rejection, as well as an analysis of the variability of the deposit and the response of samples from different spatial locations within the deposit to standard conditions.

## 13 MINERAL RESOURCE ESTIMATE

### 13.1 Introduction

SRK has collated the available exploration information from the Nalunaq deposit and has prepared an MRE in accordance with the CIM Definition Standards. Section 13.2 summarises the available drilling data. The MRE and accompanying Statement is the responsibility of the Qualified Person, Dr Lucy Roberts.

This section describes the methodology used to estimate the Mineral Resources and summarises the key assumptions considered by SRK. SRK considers that the Mineral Resource estimate reported herein is a sound representation of the grade and tonnage of the deposit at the current level of sampling.

Leapfrog Geo version 2021.1 was used to construct the Mineral Resource estimation domains, prepare assay data for geostatistical analysis, construct the block model, estimate metal grades, and tabulate Mineral Resources. The underlying geological model was constructed by Amaroq, and took account of the recently developed Dolerite Dyke Model (Section **Error! Reference source not found.**).

SRK carried out the following steps to produce the MRE:

- database compilation and review;
- construction of wireframe geological models in Leapfrog Geo 2021.1 software;
- statistical analysis and definition of domains;
- geostatistical analysis (variography) within estimation domains;
- block modelling and grade interpolation using Leapfrog Edge software;
- model validation;
- Mineral Resource classification;
- consideration of reasonable prospects for eventual economic extraction (“RPEEE”); and
- reporting of the Mineral Resource Statement.

### 13.2 Mineral Resource Database

The database used in preparation of this Mineral Resource Estimate was provided to SRK in multiple parts, including a variety of Microsoft Excel workbooks, .csv documents, previous Leapfrog Geo projects and other digital files. The most recent data provided to SRK and used in this estimate was received on 04 April 2022.

The collated database includes details of 8,787 “collar” positions, including a variety of different sampling methods such as diamond drilling, pre-production channel sampling, production chip sampling and surface chip sampling. In total, 63,775.85 m of geological investigation (i.e. drilling and sampling) are recorded along with 17,494 sample assay results (totalling 17,280.26 m of samples). Samples were collected between 1992 and 2021 and have been grouped in Table 13-1 below into Pre-Production sampling (1992 to 2003), Production Sampling (2004 to 2009) and Amaroq sampling (2015 to 2021).

**Table 13-1: Nalunaq MRE database summary**

Sample Type		Channel Sample	Chip Sample	Surface Drillhole	Underground Drillhole	Total	
Pre-Production (1992 to 2003)	Investigations	Count	1,410	1,147	90	-	2,647
		Length	1,052	885	14,219	-	16,156
	Samples	Count	1,410	1,147	2,933	-	5,490
		Length	1,052	885	4,551	-	6,488
Production (2004 to 2009)	Investigations	Count	-	-	83	96	179
		Length	-	-	16,258	2,614	18,872
	Samples	Count	-	-	1,311	303	1,614
		Length	-	-	712	215	927
Amaroq Minerals (2015 to 2021)	Investigations	Count	-	21	102	-	123
		Length	-	6	21,106	-	21,112
	Samples	Count	-	21	4,228	-	4,249
		Length	-	6	4,880	-	4,886
Unknown Age	Investigations	Count	-	5,697	-	141	5,838
		Length	-	4,677	-	2,958	7,635
	Samples	Count	-	5,697	-	444	6,141
		Length	-	4,677	-	302	4,979
Total	Investigations	Count	1,410	6,865	275	237	8,787
		Length	1,052	5,569	51,584	5,572	63,777
	Samples	Count	1,410	6,865	8,472	747	17,494
		Length	1,052	5,569	10,143	517	17,281

### 13.2.1 Database adjustments

Minor adjustments to the database provided were discussed with Amaroq and rectified prior to continuing with the MRE as part of the data review process; changes included:

- Exclusion of drillholes which were either not complete, or assays were not back from the laboratory prior to the start of the MRE
- where necessary, unsampled intervals or samples returning results below detection were set to half of the limit of detection (“LOD”), 0.005 g/t
- Exclusion of drillholes where no assay data is available.
  - o Excluded holes IDs are as follows: T300-03, T300-04, NQ92, NQ94, NQ95, NQ98, B024, B043, B044, B045, B046, B048, B051, B052, B055, B056, B087, B135, B089, B159, UG-300-12, UG-450-05, UG-450-09, UG-450-10

## 13.3 Geological and Mineralisation Modelling

All geological wireframe models of the Nalunaq Project and used in this estimate were produced by Amaroq and reviewed by SRK. As part of this review, SRK provided feedback and recommendations to Amaroq geologists, and the models subsequently updated.

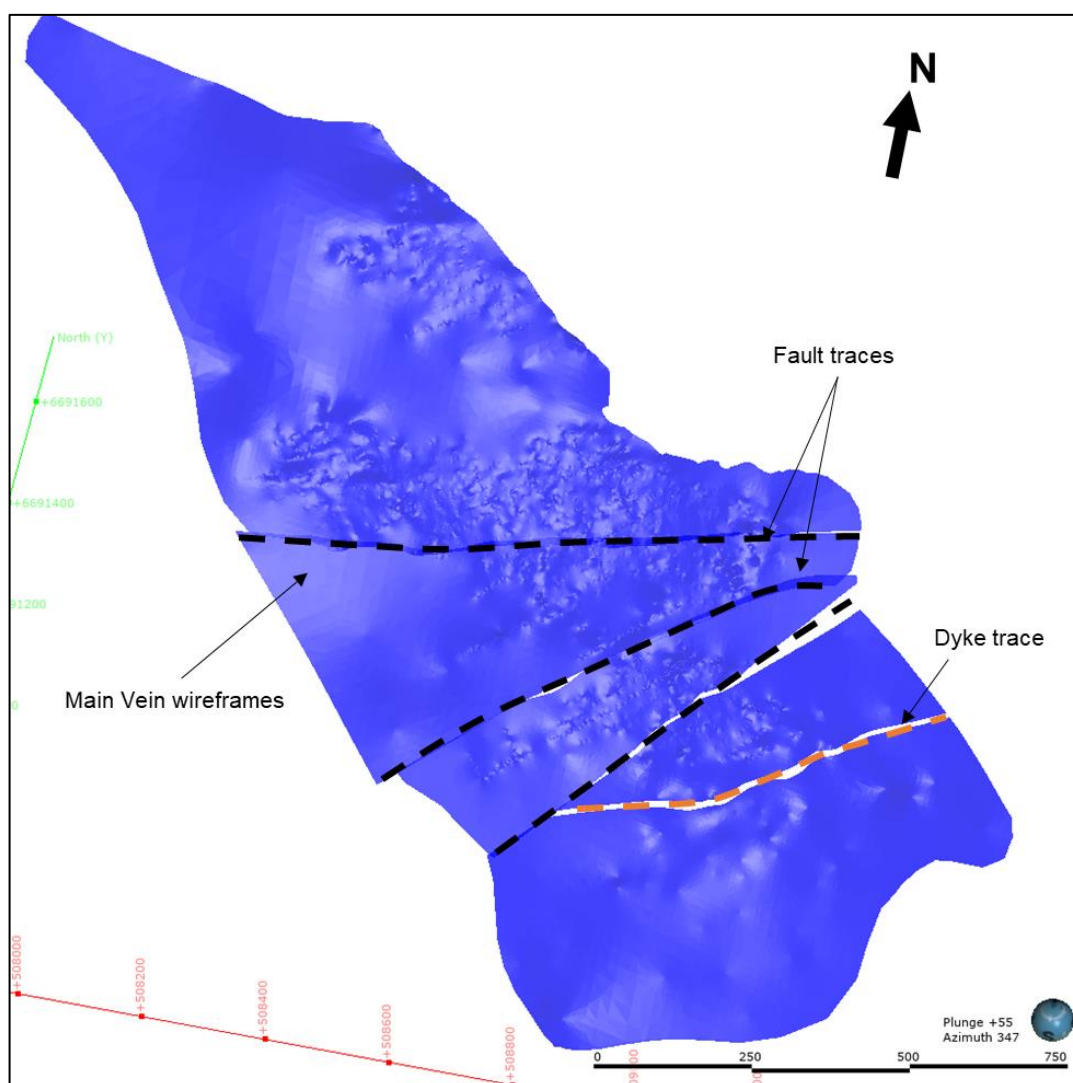
### 13.3.1 Lithological domains

Geological wireframes have been prepared for the Main Vein (“MV”) and pegmatite dyke which occupies the Pegmatite Fault only.

The MV wireframes have been created in Leapfrog Geo using semi-implicit modelling. The veins are based on a manual section of sample intervals, based on sample gold grades. A modelling threshold of approximately 0.1 g/t Au was used, however a small number of samples (<2%) have been included where necessary to maintain geological continuity.

Figure 13-1 shows a 3D view of the Main Vein. Due to the high number of production samples within the historically mined areas, the modelled vein closely matches the underground LiDAR survey volumes provided. Outside of these areas, the vein is informed primarily by drillhole intercepts, surface sampling and geological mapping. The position of the vein on the northern and western side of the mountain is informed by interpretation of satellite imagery and by the channel sampling conducted by climbers.

The MV is also separated into a series of fault blocks. These faults have been modelled based on drillhole intercepts and underground and surface geological mapping, and the trace of their intersection with the main vein is shown in Figure 13-1. On cross-cutting dyke has also been modelled, and its trace is also shown in Figure 13-1.



**Figure 13-1: 3D view of the Main Vein geological model**



### 13.3.2 Weathering domains

No weathering domain model was created as part of this estimate.

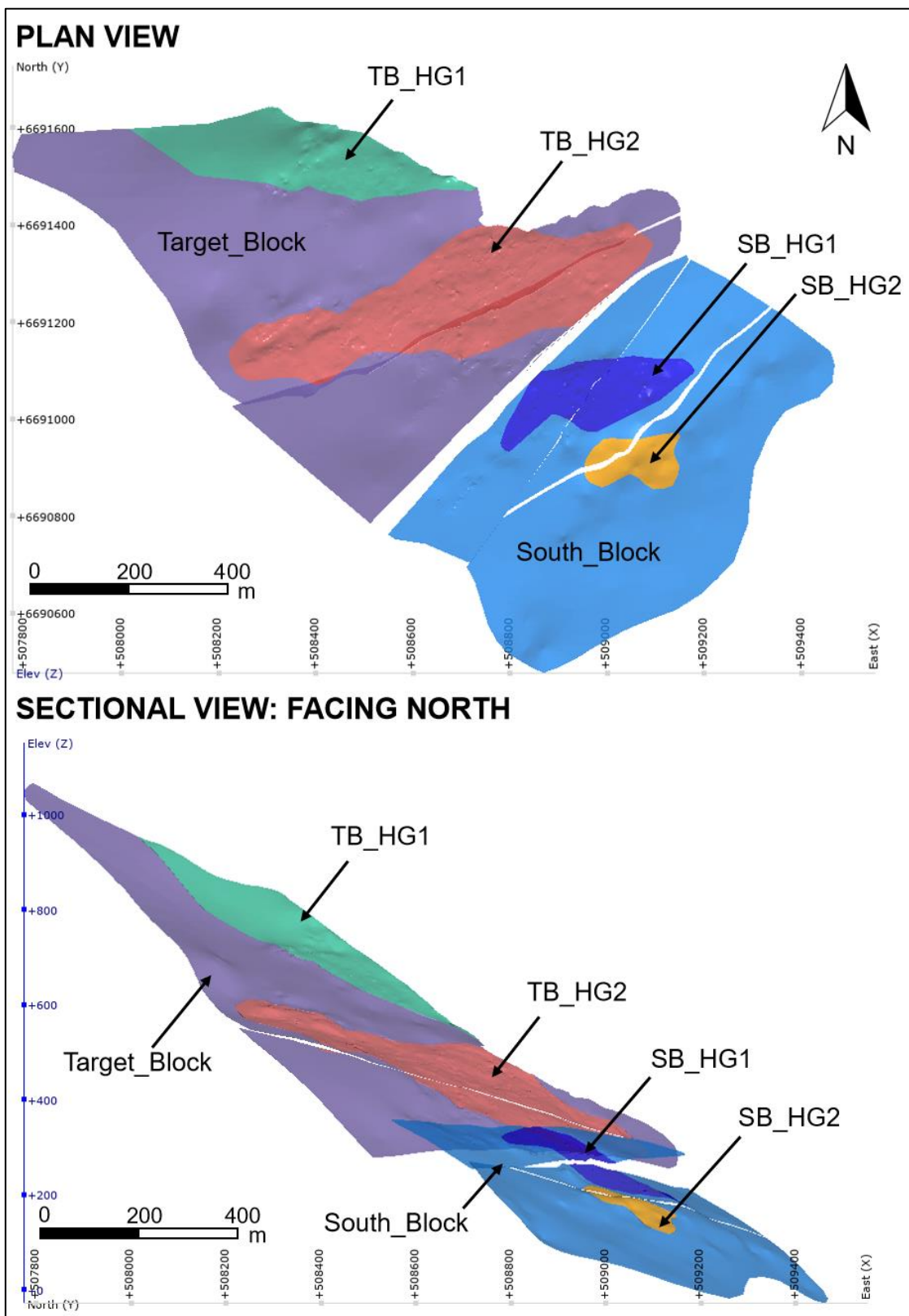
### 13.3.3 Estimation domains

To better represent the distribution of very high-grade areas within the Main Vein, further sub-domains were developed by SRK prior to estimation.

Modelling of these sub-domains was based on a primarily visual review of data including composite sample gold grades and the spacing of samples. The estimation domains also took into account the location of the cross-cutting dolerite dykes, as generated as part of the company's Dolerite Dyke Model (Section **Error! Reference source not found.**). This process should constrain the ultra-high grades (>100 g/t Au) seen in the historical mining areas to prevent undue influence of these samples on the surrounding lower grade material, as well as to better represent higher grade zones identified through drilling. All domains were validated for statistical robustness prior to estimation. Figure 13-2 shows the various estimation domains modelled within the deposit, with further description of the domains provided in Table 13-2.

**Table 13-2: Descriptions and equivalent codes for modelled estimation domains at Nalunaq**

Domain Code	Domain Description
<b>TB_HG1</b>	Target Block High Grade 1 "Mountain Block" area of historical mining, extended to the north based on results of historical drillholes and new surface samples.
<b>TB_HG2</b>	Target Block High Grade 2 – "Target Block" area of historical mining.
<b>SB_HG1</b>	South Block High Grade 1 – "South Block" area of historical mining.
<b>SB_HG2</b>	South Block High Grade 2 – Area of higher grades identified through drilling of the South Block and Valley Block
<b>Target Block</b>	Target Block Low Grade – MV material within the Target Block and Mountain Block areas but excluded from the high-grade sub-domains
<b>South Block</b>	South Block Low Grade - MV material within the South Block and Valley Block areas but excluded from the high-grade sub-domains



**Figure 13-2: Modelled mineralised domains at Nalunaq in plan view (top) and in sectional view looking north (bottom)**

## 13.4 Statistical Analysis

### 13.4.1 Summary statistics

Summary statistics for each of the modelled estimation domains is provided in Table 13-3.

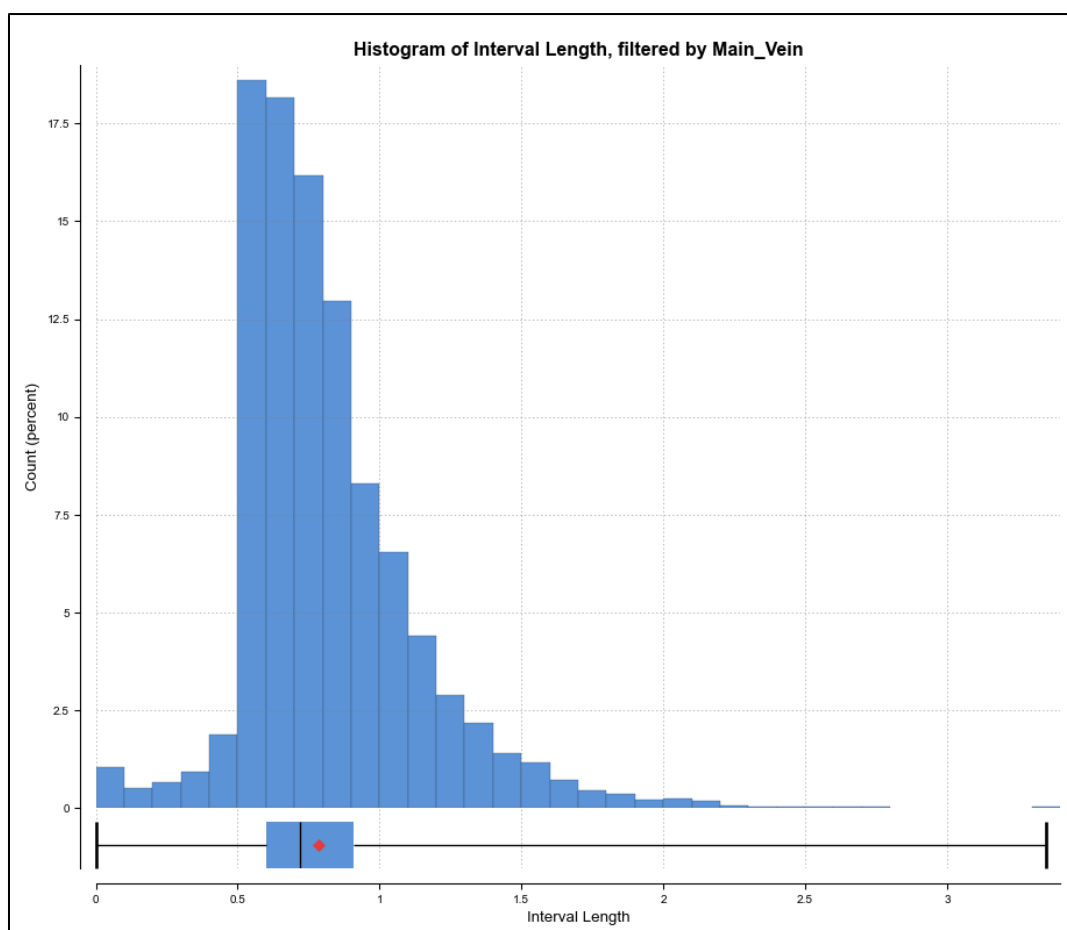
**Table 13-3: Sample summary statistics per domain**

Domain	Count	Mean (Au g/t)	Standard deviation	Coefficient of variation	Minimum (Au g/t)	Maximum (Au g/t)
SB_HG1	1231	33.7	67.0	2.0	0.0005	917.4
SB_HG2	36	12.6	20.9	1.7	0.0005	120.4
South Block	487	3.9	18.5	4.7	0.0005	232.6
Target Block	797	8.8	63.9	7.3	0.0005	1177.7
TB_HG1	1040	37.6	171.3	4.6	0.0005	3777.0
TB_HG2	4868	33.7	67.0	2.0	0.0005	917.4

### 13.4.2 Compositing

To avoid a biased model, all samples used in geostatistical analysis and grade estimation should have equal sample support. Data compositing is the process undertaken to reduce or remove sample support bias. This process can be used to reduce the inherent variability that exists within the population and should take into consideration the scale of the potential mining selectivity and/or the level of resolution appropriate for the style of mineralisation.

The Nalunaq Main Vein model is mainly supported by single-sample assay intervals across the full thickness of each vein intercept. The sample interval length is therefore largely determined by the local thickness of the vein. The majority of intervals (80%) are 0.5 to 1.0 m thick; however they range from 0.1 to 3.4 m (Figure 13-3). In typical compositing schemes, samples are composited to equal lengths in order to remove biases; however, due to the narrow vein style of mineralisation and the large relative variations in thickness this is not considered suitable for Nalunaq. Given the majority of intersections are single-sample any geostatistics or estimation carried out using the raw dataset is effectively 2D; therefore, SRK elected to composite across the full thickness of the vein model to produce 2D composites. This has resulted in less than 2% reduction in number of samples from 8,545 to 8,384.



**Figure 13-3: Histogram of raw sample intervals lengths within Main Vein.**

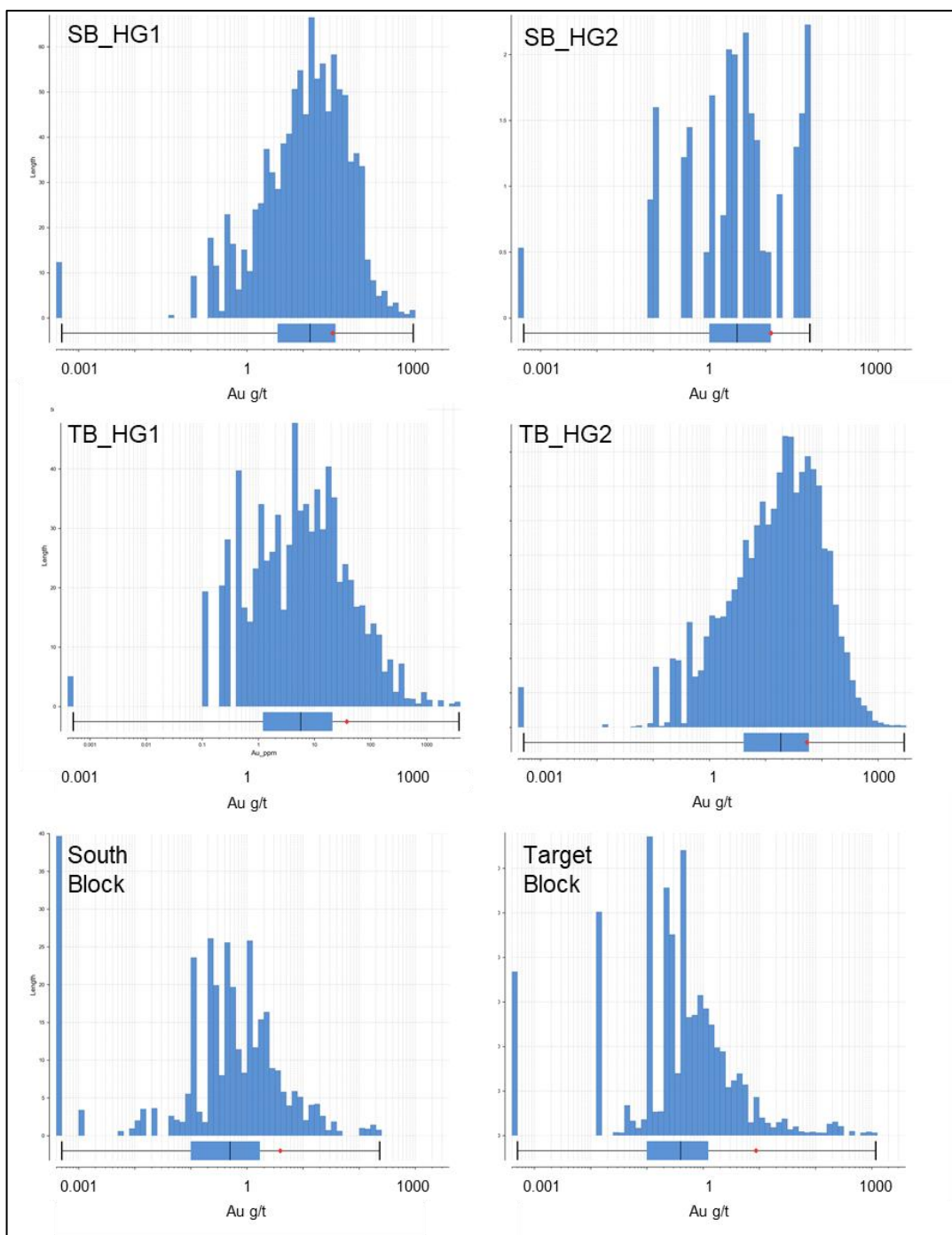
### 13.4.3 Domain statistics

Summary statistics for the various estimation domains are provided in Table 13-4, including a comparison with un-composited sample mean average grades. Despite the statistical changes to the sample populations through compositing, the minimum, maximum and mean average grades have remained the same.

Log-histograms of composite sample gold grade per domain are provided in Figure 13-3.

**Table 13-4: Composite sample summary statistics per domain**

Domain	Count	Mean (Au g/t)	Standard deviation	Coefficient of variation	Minimum (Au g/t)	Maximum (Au g/t)	Uncomposited Mean (Au g/t)	Percentage Difference
SB_HG1	1370	33.7	66.9	2.0	0.0005	917.4	33.7	0.0%
SB_HG2	42	12.6	19.0	1.5	0.0005	61.4	12.6	0.0%
South Block	525	3.9	18.5	4.7	0.0005	232.6	3.9	0.0%
Target Block	820	8.8	63.9	7.3	0.0005	1177.7	8.8	0.0%
TB_HG1	1207	37.6	171.3	4.6	0.0005	3777.0	37.6	0.0%
TB_HG2	5762	54.8	123.6	2.3	0.0005	2935.8	54.8	0.0%



**Figure 13-4: Domain histograms – Sample composites – Au, g/t**

### 13.5 Treatment of High-Grade Outliers

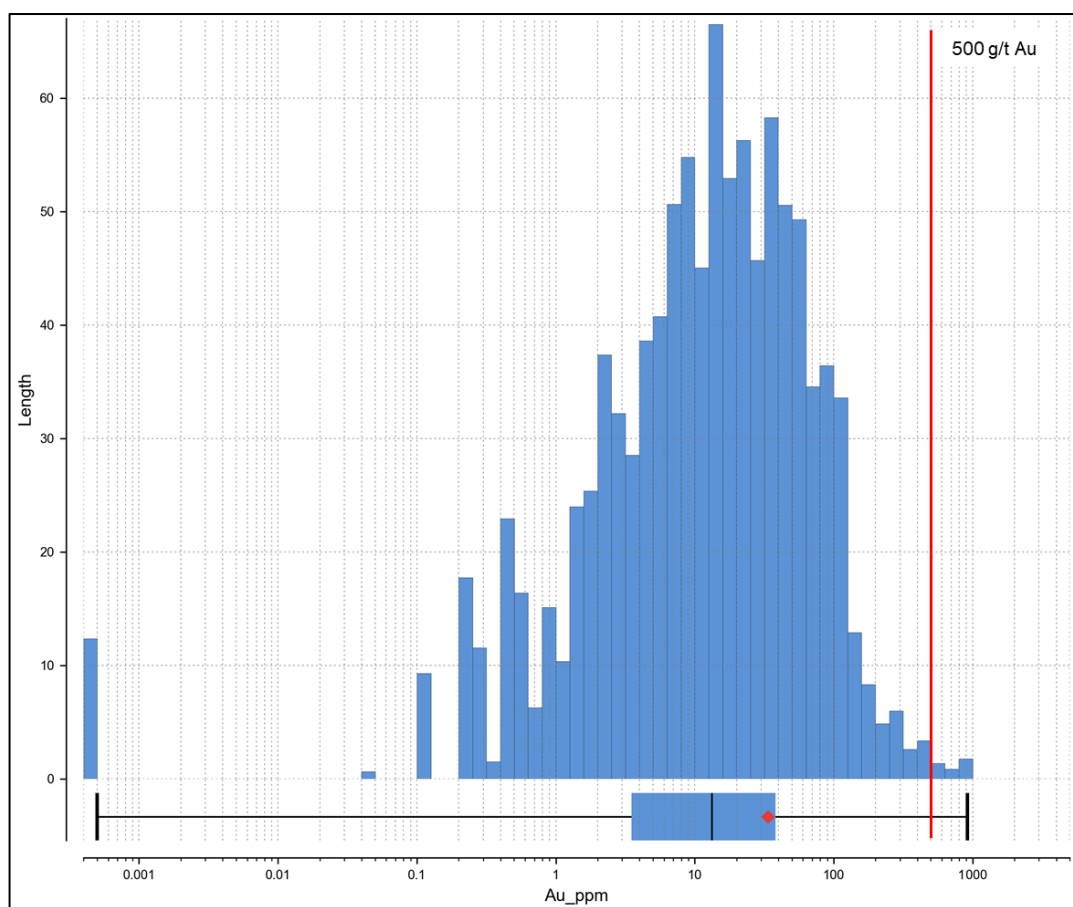
SRK has completed an analysis of high-grade outliers to identify any very high grade samples which might have a disproportionate impact on the local grade estimation. Due to the sometimes-extreme local variation in sample grades, capping limits were reviewed on a domain-by-domain basis. Initial selections were based on review of log-histograms, probability plots, and a spatial review of whether the “ultra-high” grade samples followed patterns or trends. Selected capping limits were then reviews and adjusted through an iterative estimation and visual validation loop.

The selected capping for each domain are shown in Table 13-5.

**Table 13-5: High Grade Capping Limits**

Mineralisation Domain	High-grade Cap (Au g/t)
SB_HG1	500
SB_HG2	-
TB_HG1	500
TB_HG2	1500
South Block	50
Target Block	500

The log histogram plot showing the selected high grade capping limit is illustrated (for example) for the SB\_HG1 domain in Figure 13-5.



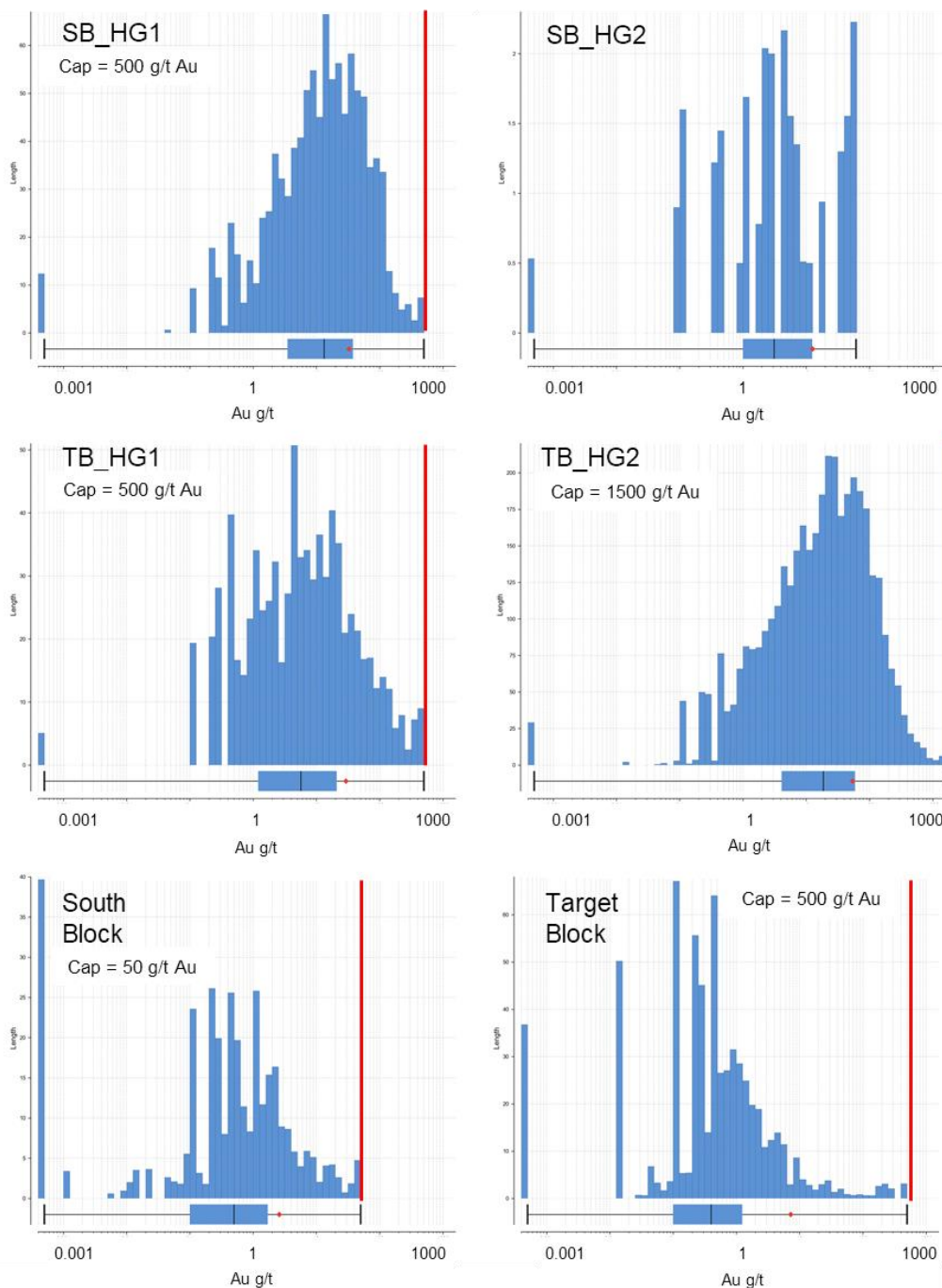
**Figure 13-5: High grade outlier review for gold in SB\_HG1. Selected capping limit shown by red line on log histogram.**

Summary statistics for the capped samples per domain, along with the change to the mean gold grades are shown in Table 13-6. The results indicate that the reduction in the gold grade in capped zones ranges between 0% and 34% (per estimation domain). Whilst some of the caps have resulted in larger percentage changes, such as that applied to South Block, the absolute change is low. SRK deems these changes to the mean average grades to be within acceptable margins.

Log-histograms of the estimation domains are shown in Figure 13-6.

**Table 13-6: Comparison of mean composite grades versus capped composite grades by estimation domain.**

Domain	Count	Mean (Au g/t)	Standard deviation	Coefficient of variation	Minimum (Au g/t)	Maximum (Au g/t)	Uncapped Mean (Au g/t)	Percentage Difference
SB_HG1	1370	32.9	58.7	1.8	0.0005	500.0	33.7	-2%
SB_HG2	42	12.6	19.0	1.5	0.0005	61.4	12.6	0%
South Block	525	2.6	7.1	2.7	0.0005	50.0	3.9	-34%
Target Block	820	7.3	42.7	5.9	0.0005	500.0	8.8	-17%
TB_HG1	1207	29.4	71.4	2.4	0.0005	500.0	37.6	-22%
TB_HG2	5762	54.0	110.0	2.0	0.0005	1500.0	54.8	-1%



**Figure 13-6: Domain histograms – Capped sample composites – Au, g/t**

## 13.6 Geostatistical Analysis

SRK undertook a geostatistical study (variography) to investigate the grade continuity within mineralisation domains and derive parameters for grade estimation. The purpose of the study was to examine the 3-D variability and spatial relationships between composite samples, and to fit appropriate variogram models to be used in block grade interpolation. This analysis was carried out for 2D composite Au (ppm) samples within the high grade subdomains (TB\_HG1, TB\_HG2, SB\_HG1 and SB\_HG2). Variography was not carried out for the low grade domains (South Block and Target Block) as they rely on extremely irregularly spaced samples, including very close-spaced production samples and much wider exploration drilling.

The following approach was used:

- The dip and strike of the initial variogram was aligned with the best-fit plane parallel to the plane of mineralisation; that is, the local orientation of the vein;
- A radial variogram map was generated in the dip–strike plane of the mineralisation and the major axis was aligned to the principal direction of continuity and anisotropy; the semi-major axis direction was set perpendicular to the major axis.
- Major and semi-major axis experimental variograms were generated using lag distances of 2 to 5 m for domains supported mainly by production samples (TB\_HG1, TB\_HG2, and SB\_HG1) and 20–30 m for domains supported mainly by exploration drilling (SB\_HG2), which reflects the minimum sample spacing.
- Variogram models were fitted to the experimental directional variograms to obtain the nugget (normalised), sill (normalised) values and ranges.
- No down-hole variograms were modelled due to there being no downhole variability.

The nugget variance (0.25 to 0.5), principal direction of continuity and major semi-variogram could be clearly modelled for the three domains supported by production samples (TB\_HG1, TB\_HG2, and SB\_HG1). Little or no structure was observed in the semi-major axes. The sill was reached in ranges of 15 to 21 m, which visually matches with the length-scale of short-range high-grade trends within the domains, and the variograms are oriented slightly oblique to the plunge of the central axis of each of the domains.

For domain SB\_HG2, no clear structure was observed in experimental semi-variograms and the sill was reached in distances equivalent to the drillhole spacing. The variogram orientation was set to be parallel to the plunge of the domain central axis, similar to the trends modelled for the other three domains.

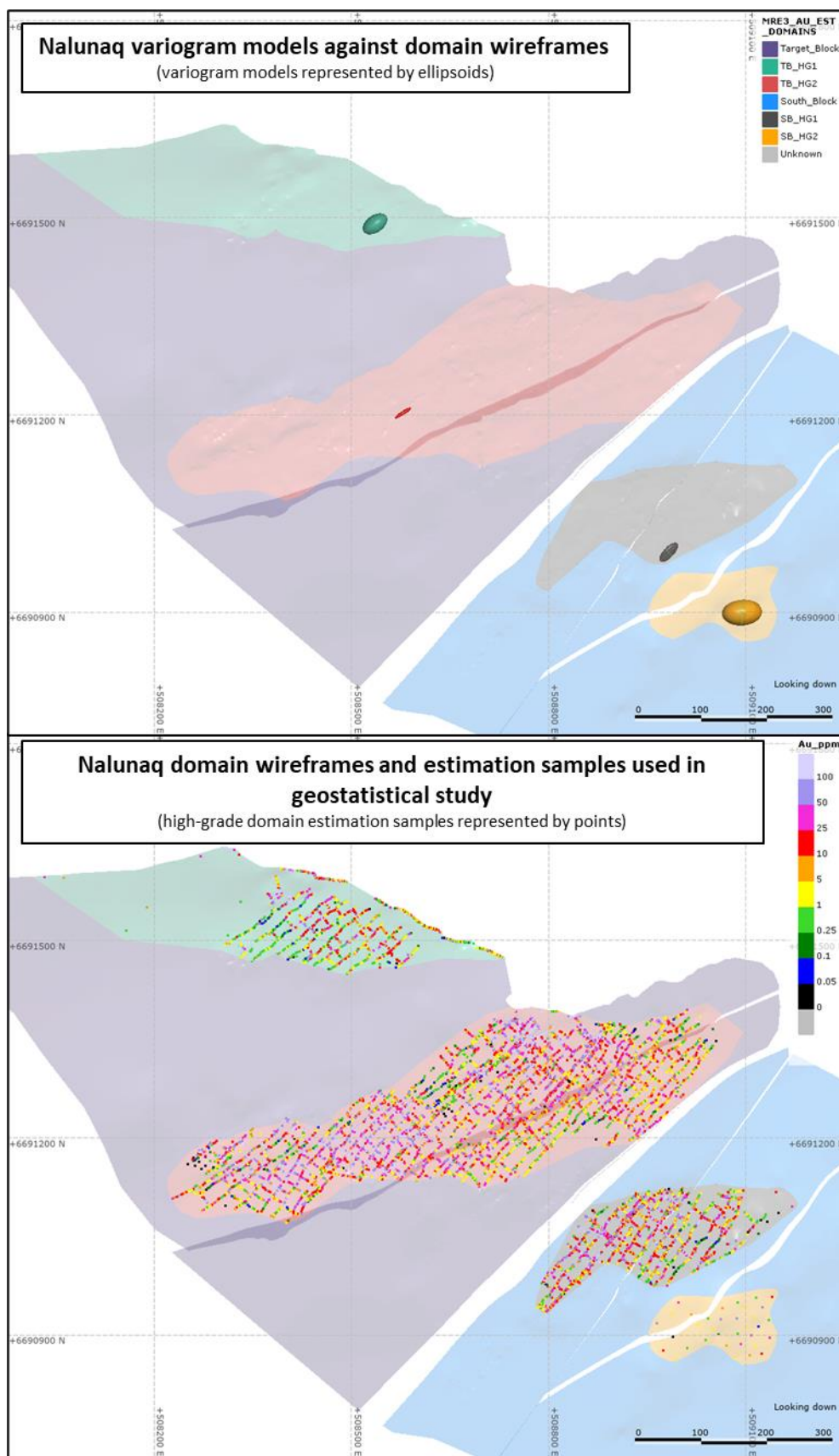
Variogram model parameters are presented in



Table 13-7 and a visual representation of the variogram models are presented alongside the high grade domains and estimation samples in Figure 13-7. Variogram ranges are elongated along the major axis.

**Table 13-7: Variogram model parameters**

<b>DOMAIN</b>	<b>TB_HG1</b>	<b>TB_HG2</b>	<b>SB_HG1</b>	<b>SB_HG2</b>
<b><i>Normalised Nugget</i></b>	0.25	0.5	0.35	0.35
<b>Variogram trend</b>				
<b><i>Dip (°)</i></b>	36	33	33	27
<b><i>Dip direction (°)</i></b>	136	135	126	126
<b><i>Pitch (°)</i></b>	11	15	10	53
<b>Structure 1</b>				
<b><i>Model</i></b>	Spheroidal (Alpha 3)	Spheroidal (Alpha 3)	Spheroidal (Alpha 3)	Spheroidal (Alpha 3)
<b><i>Normalised Sill</i></b>	0.75	0.5	0.65	0.65
<b><i>Major (m)</i></b>	21	15	19	32
<b><i>Semi-major (m)</i></b>	13	3	9	20



**Figure 13-7: Nalunaq variogram models and estimation samples (high-grade domains only)**

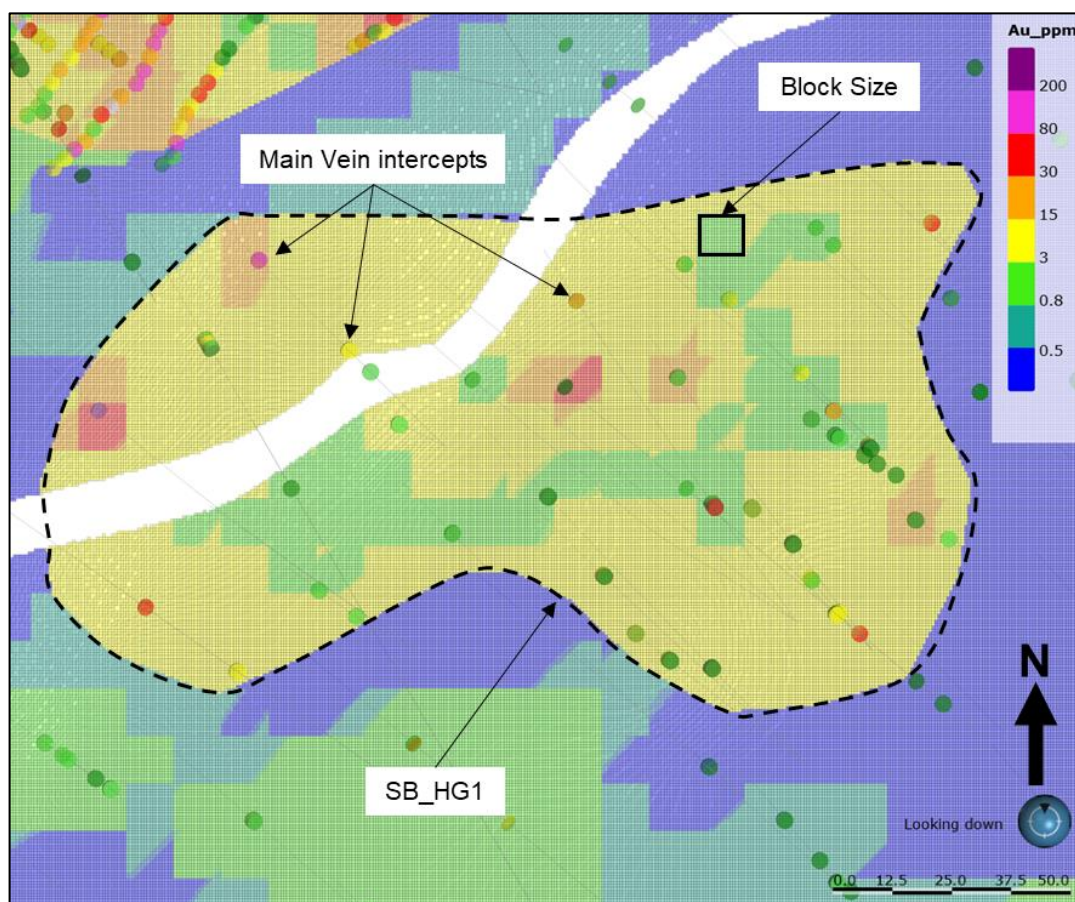
### 13.7 Block model definition

A block model was created for the Nalunaq deposit based on the WGS84 UTM Zone 23N grid and covering an area encompassing all modelled mineralised zones. The geometry and extents of the block model are summarised in Table 13-8. Parent block dimensions are 10mX by 10mY by 5mZ and are sub-blocked to 0.625m x 0.625m x 0.3125m (octree sub-blocking by divisor of 16). No rotation was applied to the block model.

**Table 13-8: Details of the Nalunaq block model dimensions for grade estimation**

Axis	Origin (WGS84 UTM Zone 23N)	Block Size (m)	Boundary length (m)	No. Blocks	Minimum sub-block size (m)
X	507660	10	2000	200	0.625
Y	6690300	10	1600	160	0.625
Z	1350	5	1500	300	0.3125

The block size was selected to be small enough to reflect short-range grade features in the production data without over-smoothing, while being large enough to be suitable for estimation using exploration drilling data. The chosen block size is equivalent to between a half and quarter of the average drillhole spacing in the SB\_HG2 (Valley block) high grade domain, which has a spacing of between 15 and 40 m (see Figure 13-8)



**Figure 13-8: SB\_HG1 domain with drillhole intercepts and patent block sizes shown**

## 13.8 Grade Estimation Parameters

### 13.8.1 Estimation Strategy

Gold block grades were estimated within the Main Vein only, which is split into six separate domains (four high-grade and two low-grade). The estimation techniques and search parameters are presented in Table 13-9. All estimates were based on capped 2D composites within mineralisation domains using hard boundaries. In addition to capping, a distance restriction was applied at select high-grade thresholds in order to accurately reflect within the block model short-range high-grade trends within domains, which were not suited to additional sub-domaining. This is discussed further below.

As the nugget variance and major semi-variogram could be modelled clearly for the high-grade domains, SRK consider it appropriate to use Ordinary Kriging (“OK”) for estimation of gold in these parts of the block model. The data spacing is too wide and irregular to perform a geostatistical analysis for the low-grade domains; therefore, Inverse Distance Weighting (“IDW”) to the power of 3 (“ID3”) was used for interpolation of the South Block and Target Block domains.

A three pass search approach was used. For domains interpolated using OK, spherical search volumes were used; for domains interpolated using ID3, ellipsoidal search volumes were used, with the long axis oriented WNW-ESE, parallel to the plunge and trend of the adjacent high grade domain. Selection of estimation volumes was based on an iterative approach of re-estimation and visual validation, as well as being informed by drillhole and development spacing. A second search pass is used to fill most of the remaining (unestimated) blocks, and in some cases a third search is required to ensure all blocks were appropriately estimated. The dimensions of the first search pass were set to be similar to maximum variogram range or similar to the closest drillhole spacing, such that the majority of densely sampled areas were estimated in the first search pass. Subsequent search passes were significantly enlarged in order to populate blocks along the edges of domains and parts of the domains supported by irregular or wide-spaced samples.

Quadrant search restrictions, which specified the maximum number of empty search quadrants allowed when estimating a block grade, were applied to the high-grade domain interpolations. This technique enables the minimum number of quadrants of the search ellipse containing samples to be specified, which helps to reduce or prevent undue smearing that may occur due to the position of a block relative to the closely gridded spatial arrangement of production samples.

The selected estimation parameters are presented in Table 13-9.

**Table 13-9: Summary of estimation parameters for Nalunaq mineralisation domains**

			Domain					
			SB_HG1	SB_HG2	TB_HG1	TB_HG2	South Block	Target Block
<b>Interpolation technique</b>			Ordinary Kriging				Inverse Distance Weighting	
<b>Search Volume 1</b>	<b>Search Radius</b>		20	40	20	20	60/30	60/30
	<b>Number of Samples</b>	<b>Minimum</b>	8	6	8	8	8	8
		<b>Maximum</b>	32	24	32	32	20	20
		<b>Max per hole</b>	-	-	-	-	-	-
	<b>Sector Search</b>	<b>Type</b>	Quadrant	Quadrant	Quadrant	Quadrant	-	-
		<b>Max per sector</b>	8	8	8	8	-	-
		<b>Max empty sectors</b>	1	2	1	1	-	-
<b>Search Volume 2</b>	<b>Search Radius</b>		200	200	200	200	250/100	250/100
	<b>Number of Samples</b>	<b>Minimum</b>	8	6	8	8	8	8
		<b>Maximum</b>	32	24	32	32	20	20
		<b>Max per hole</b>	-	-	-	-	-	-
	<b>Sector Search</b>	<b>Type</b>	Quadrant	Quadrant	Quadrant	Quadrant	-	-
		<b>Max per sector</b>	8	8	8	8	-	-
		<b>Max empty sectors</b>	1	2	3	1	-	-
<b>Search Volume 3</b>	<b>Search Radius</b>		300	-	400	400	500/250	500/250
	<b>Number of Samples</b>	<b>Minimum</b>	8	-	8	8	2	2
		<b>Maximum</b>	20	-	32	32	20	20
		<b>Max per hole</b>	-	-	-	-	-	-
	<b>Sector Search</b>	<b>Type</b>	None	-	Quadrant	Quadrant	-	-
		<b>Max per sector</b>	-	-	8	8	-	-
		<b>Max empty sectors</b>	-	-	3	2	-	-

In addition to applying caps to the samples, which was used to limit the impact of a small number of ultra high-grade samples, distance restrictions were also applied to each search during grade interpolation, based on a lower, but still high-grade, threshold value. This technique enables additional capping to be applied once distance between the high-grade sample and the block centroid exceeds a nominated distance. The distance restrictions allowed local, short-range high-grade features within domains to be represented in the block model, while preventing very high-grades having an overt influence on block estimates outside of these local features. This approach honours the interpretation of grade shoots within the background mineralised vein, whilst preventing smearing of high grades into areas of relatively limited sample coverage.

Distance restriction parameters were developed through an iterative process of estimation and visual review to derive a consistent method of application. Grade shells modelled at various cut off grades within the high-grade domains were used to investigate high grade “pods” consistently forming zones approximately 20 m in extent. Threshold grade values were determined using a rounded value reflecting the 95<sup>th</sup> to 97<sup>th</sup> percentile in each domain.

Table 13-10 shows the restriction distances beyond which the grade threshold was capped. Samples with grades above the threshold value are capped at that threshold value if the distance between the sample and block centroid is greater than the restriction distance but are unaffected if they lie within the restriction distance. The distance restriction is applied as a percentage of search distance radius. In anisotropic searches this results in different restriction distances per axis. SRK investigated the impact the distance restriction had on the overall estimate through comparing the block models with and without the restriction applied. The differences were investigated through visual comparisons, which indicated that the distance restrictions applied improved the visual trends and observed grade distributions, indicating that the distance restrictions were performing as expected.

**Table 13-10: Distance restriction thresholds and restriction distances per domain**

Mineralisation Domain	Threshold value (Au g/t)	Restriction Distance (m)
SB_HG1	200	10
SB_HG2	10	10
TB_HG1	100	10
TB_HG1	200	10
South Block	10	10/5*
Target Block	10	10/5*

## 13.9 Tonnage Estimation

SRK assessed a database of 168 dry density measurements obtained for samples from the Main Vein during 2021 using the water displacement method. Of these, 144 were measured by Amaroq and 24 measured by ALS. The sample densities were typically very similar, irrespective of sample length which varied between 0.5 and 2.5 m, and sample location. SRK found there was a slightly wider spread of density results for smaller sample lengths and a tighter cluster of density result for longer sample lengths; therefore, SRK elected to use a length-weighted average density for the Main Vein.

A density of 2.96 g/cm<sup>3</sup> has been applied to blocks within the Main Vein.

## 13.10 Block Model Validation

### 13.10.1 Introduction

SRK has validated the results of the estimate primarily through visual validation, locally comparing block model values to the supporting sample composites. Examples of these comparisons are shown below.

SRK have also prepared swath plots for each of the estimated domains. Whilst there is a high degree of clustering within some of the historically mined areas, the estimation routine and block model parameters selected have limited the impact of this clustering and provide a suitable comparison.

Whilst some mining reconciliation data is available for the mine between 2004 and 2009, it appears to be an incomplete reflection of the material mined and milled during this time. After detailed review of the reconciliation data by both SRK and Amaroq, the reconciliation data has been discounted as a suitable method of verifying the estimates.

SRK considers that the block model reflects the current understanding of the distribution of mineralisation and is an acceptable basis for a Mineral Resource Statement.

### 13.10.2 Visual validation

Visual validation was undertaken as part of the estimation parameter selection process, as well as on the final estimation parameters. Estimation composites and block model values were colour coded using the same scale and visual comparisons made to confirm suitable correlation between the two data.

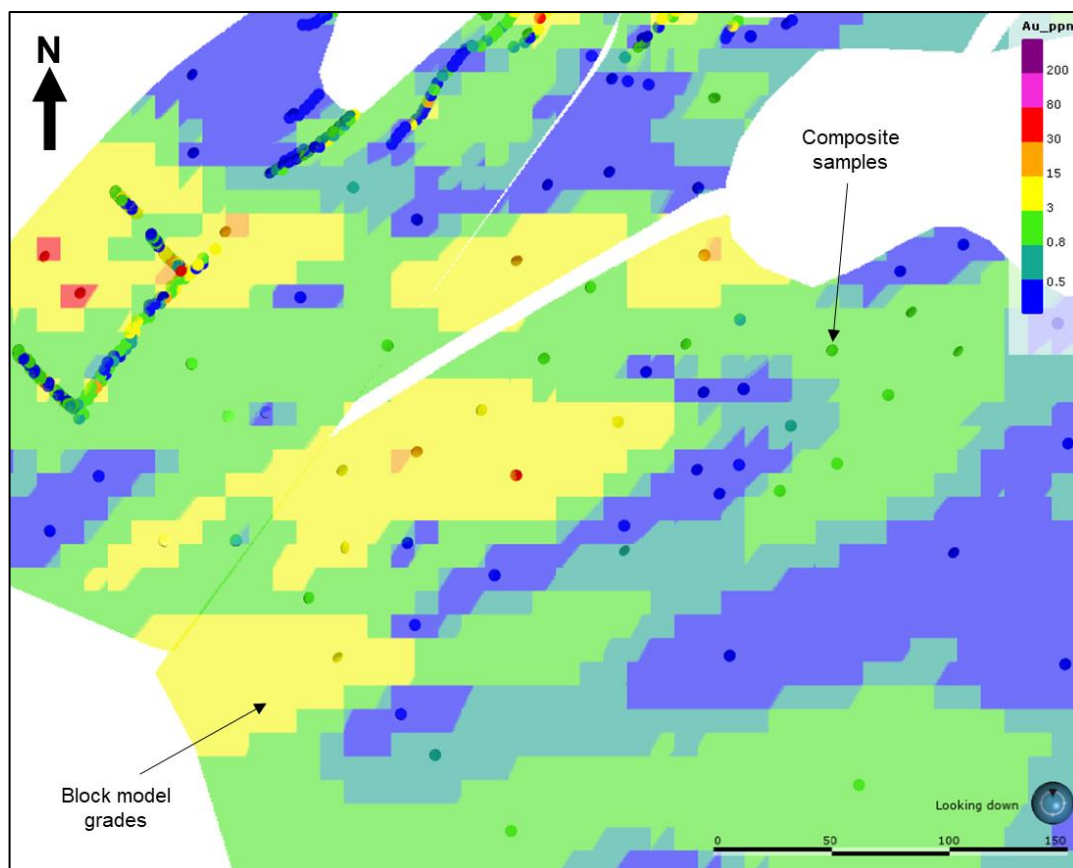
Figure 13-9 shows an example visual validation image from the SB\_HG1 domain. Whilst there is some inevitable smoothing of the estimate, in part due to the difference in resolution of the sample data and block model, SRK considers that the overall trend of average grades is reflected well. Areas of high-grade samples are represented by similarly high-grade blocks within appropriately discrete zone, and areas of lower grade are also present where expected.



Figure 13-9: Visual validation example from a historically mined area – SB\_HG1 domain

Figure 13-10 shows an example of visual validation from the South Block domain in an area with no historical mining or development. The resolution of the sampling data and block model are more equally matched, and the distribution of composite sample grades is again well reflected in the block model.





**Figure 13-10: Visual validation example from an area of the estimate informed by drilling only – South Block domain**

### 13.10.3 Swath Plots

Swath plots compare the average block model values to the average capped composite sample grades within a “slice” of the modelled domain, in this case along X and Y planes. Figure 13-11 shows swath plots from each of the high-grade domains, and Figure 13-12 from the low-grade domains. Average sample grades are shown in black, and average block grades shown in red.

Overall, the swath plots show that the estimate has an appropriate degree of local smoothing, and whilst there are high grade “spikes” which are not fully reflected in the estimate, the overall grade trends are honoured. Areas where there is higher variance between the composite sample grades and block grades are typically in areas with a lower sample count where the estimate is more likely to be influenced by outside samples.

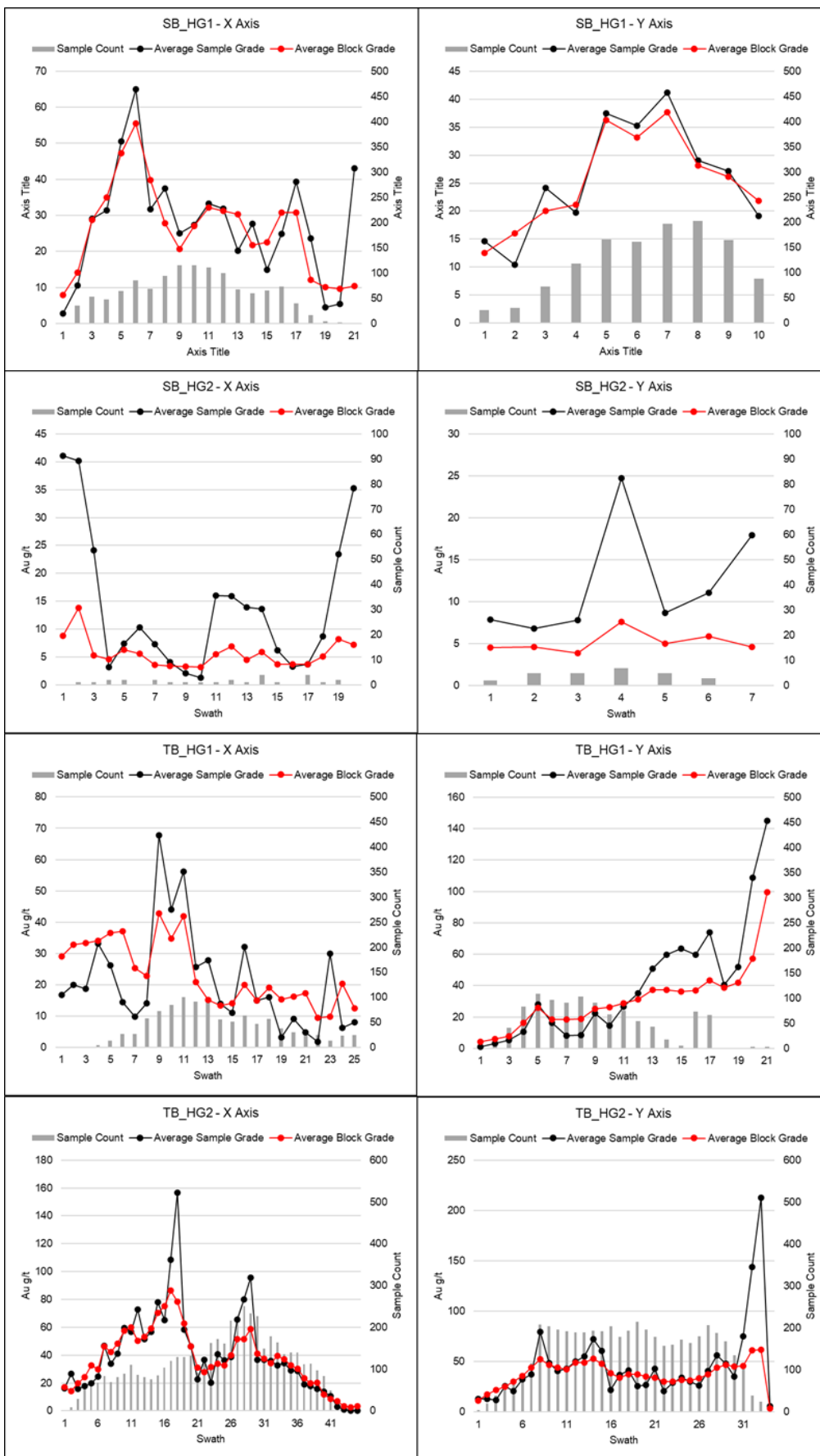


Figure 13-11: X and Y swath plots from the high-grade estimation domains

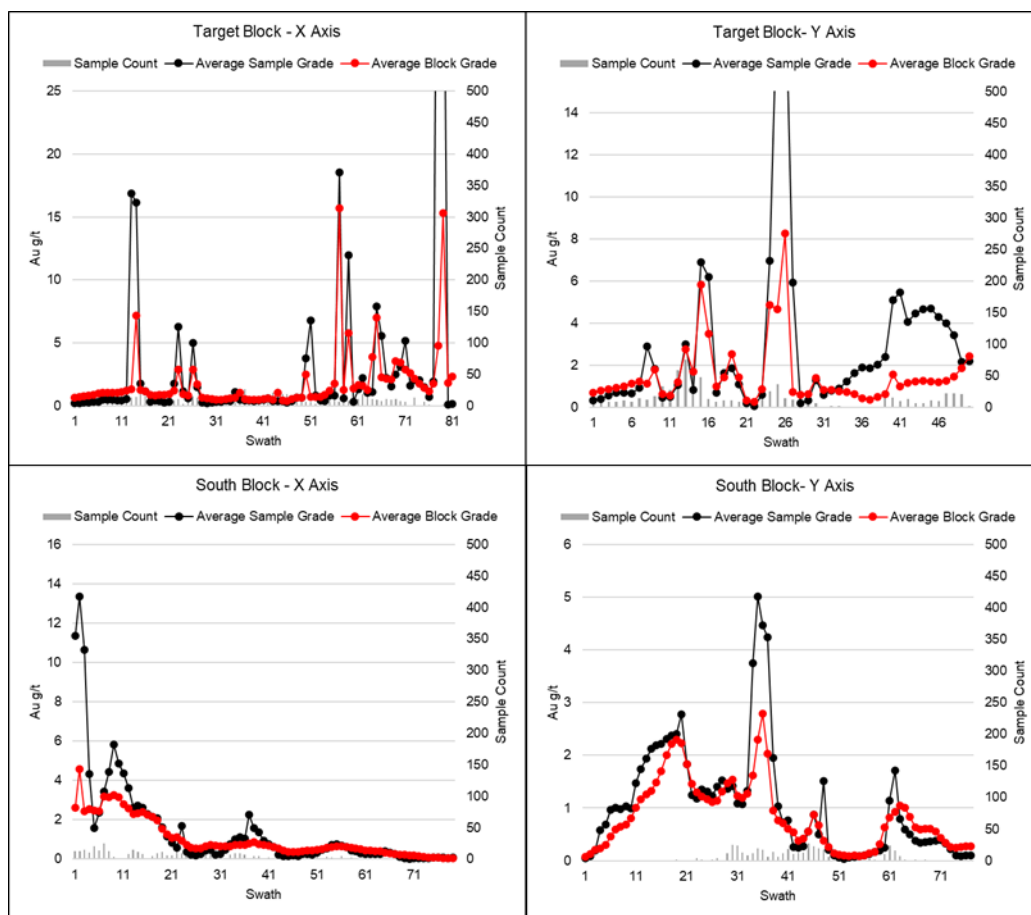


Figure 13-12: X and Y swath plots from the low-grade estimation domains

### 13.10.4 Mine Reconciliation Data

In an attempt to validate the quality of the historical sampling data and the Mineral Resource Estimate, SRK and Amaroq have undertaken a detailed review of the available mining, processing and sales data for the mine when operated by Crew Gold and Angel Mining. As discussed in Section 5.5 however, there were numerous reconciliation issues between mine and mill during these operations, including (but not limited to):

- Differences between the tonnages mined and the tonnages received at the processing plant;
- Substantially different amounts of gold recovered compared to shipment estimates (based on resource estimates, grade control data and run-of-mine sampling);
- Stockpiling of material at the processing plant, sometimes for over a year, limiting the comparability of “mined” and “processed” grades/tonnages;
- Significant loss of gold to tailings due to mineral processing errors and differences between head-grade and grade control/resource models.

Investigation is also limited by the poor availability and granularity of records, with only annual or quarterly production data available for some time periods, and no detailed mining records available.

Whilst there is a broad agreement between this MRE and historical production data, and the gap between the estimate and production can be reduced with application of sensible rates of dilution, loss and metallurgical recoveries, there is overall low confidence in this data and it has been discounted from use in validation of this estimate.

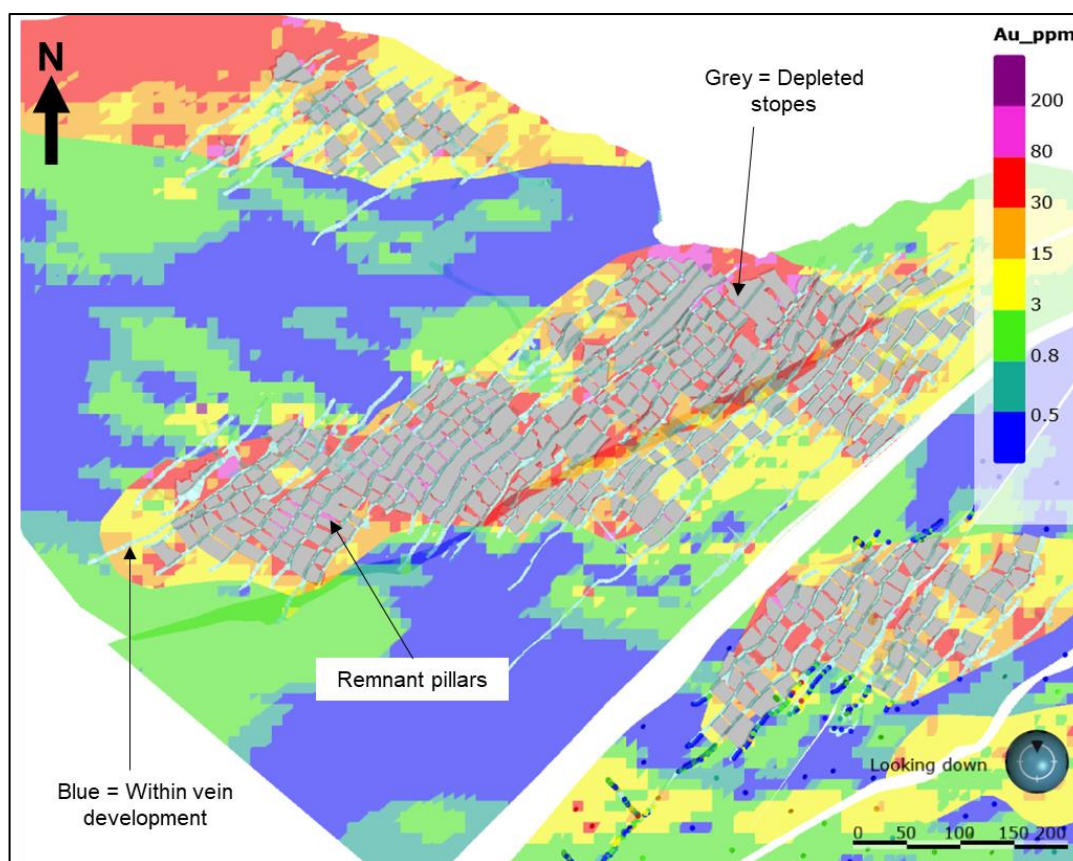
### 13.11 Depletion

Areas depleted by historical mining were surveyed in 2016 as part of a stope inventory, and again in 2019 with an underground stope and development LiDAR survey.

In previous estimates, depletion has been applied to the block model relatively simplistically as a series of large, continuous volumes. To refine the depletion, and better reflect the potential to extract material from remnant pillars in the future, SRK have prepared revised development and stope wireframes for use in this Mineral Resource Estimate. These wireframes were produced in Leapfrog Geo and are based on the LiDAR survey and the older stope plans, together with manual edits made to reflect Amaraq's knowledge of planned stopes known not to have been mined or additional stopes mined but which did not appear on plans. Where the surveyors were unable to access areas of the mine (e.g., due to flooding), the 2016 stope inventory and maps provided by GEUS have been used instead.

The stope wireframes were modelled such that the entire thickness of the modelled Main Vein can be depleted within each stope. SRK note, however, that based on observations made by Dr Lucy Roberts during a site visit in 2022 and by Amaraq, unmined vein material is still present in the roof and pillars of some stopes, therefore this depletion approach may be conservative.

The depletion models have been evaluated onto the block model and filter created for use in reporting. Figure 13-13 shows an example of a depleted zone, highlighting the pillars not included between stopes.



**Figure 13-13: Example of depletion wireframes applied to the block model and remnant pillars**

### 13.12 Mineral Resource Classification

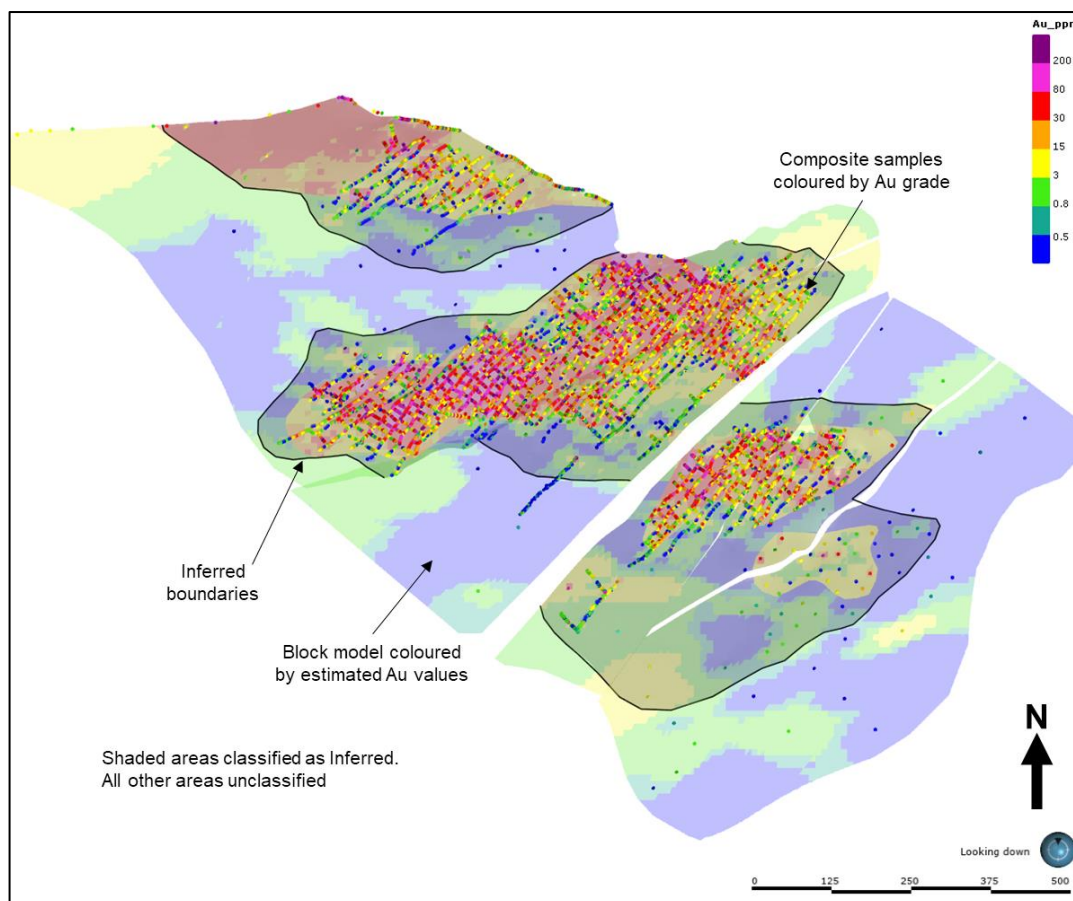
The Mineral Resource estimate for Nalunaq has been classified in accordance with the CIM Definition Standards. All material within the estimate is classified as either Inferred or unclassified. The CIM definition of Inferred Mineral Resources is included below (CIM Definition Standards, 2014):

*“An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.”*

Figure 13-14 provides an outline of the classification boundaries applied to the block model. These boundaries were developed by SRK based on multiple factors including:

- geological confidence,
- data density, and
- data confidence.

There is good understanding of the geology and style of mineralisation at Nalunaq and there is high confidence in the continuity of both geology and mineralised grade. Additionally, significant parts of the block model are supported by dense production sample data (2 to 5 m spacing) and close-spaced exploration drilling (approximately 30 m spacing).



**Figure 13-14: Nalunaq block model coloured by Au grade and showing Inferred Mineral Resources in shaded areas.**

The new domaining employed has helped to significantly improve geostatistical performance, and overall, the nugget variance is relatively low for this style of mineralisation. A number of visual and statistical validation methods have been employed and SRK consider that the block model validates well against underlying sample data at both a local and global scale.

There are a number of factors that preclude assigning a higher classification than an Inferred Mineral Resource. Whilst the available QAQC data generally supports the assay results both in terms of sample collection/preparation methods and analytical accuracy/precision, there is no original QAQC data available earlier than 2015, when the mine was in production. Whilst previous reports do include some comment on the QAQC results (e.g., Dominy, 2005), these are generally not supportive and indicate that there were improvements which could be made. In this case, the reliability of the data cannot be achieved through alternative means, such as assessment of reconciliation data, due to the issues outlined in Section 13.10.4.

### 13.13 Assessment of Reasonable Prospects for Eventual Economic Extraction (“RPEEE”)

In line with previous reporting of Mineral Resources at Nalunaq, the reporting standard adopted for the reporting of the Mineral Resource statements included in this report is that defined by the terms and definitions given in the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Mineral Reserves (December 2005) as required by NI 43-101 (“the CIM Code”)

The CIM Code is a reporting code which has been aligned with the Committee for Mineral Reserves International Reporting Standards (“CRIRSCO”) reporting template. Accordingly, SRK considers the CIM Code to be an internationally recognised reporting standard that is recognised and adopted worldwide for market-related reporting and financial investments.

According to the CIM Code reporting requirements, in order to determine the quantities of material offering “...reasonable prospects for eventual economic extraction” (or “RPEEE”) by open-pit mining methods, SRK has used reasonable mining and processing assumptions to develop a reporting cut-off grade. The block model was then interrogated at this cut-off grade to determine which areas formed contiguous zones, which formed reasonable mining targets. The parameters used to determine the cut-off grade are based on discussion and approval by Amaroq and benchmarked against other similar projects, where appropriate. The cut-off grade calculation parameters are provided in Table 13-11. The metal prices for Mineral Resource reporting are based on input from Amaroq and SRK. SRK considers that these pricing assumptions reflect a certain degree of optimism and, as such, supports the “reasonable” and “eventual” reporting components for reporting Mineral Resources in line with the CIM Code.

SRK notes that Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. Before the material included in the Mineral Resources can be included in any Mineral Reserves statement, in line with the CIM Code, technical studies to at least a Preliminary Feasibility level (“PFS”) need to be completed to ensure that the appropriate modifying factors have been applied to the Mineral Resource to demonstrate technical feasibility and economic viability. Technical work at the PFS level, such as geotechnical assessments, hydrogeological assessments, processing route definitions, underground optimisation design and scheduling, tailings storage assessments, and environmental, social and governance (“ESG”) studies are required to have been carried out.

For narrow underground vein deposits SRK often incorporates the effects of dilution in the process of applying cut-off grade to a block model, in this case, in discussion with the client, it was agreed not to do this.

**Table 13-11: Mineral Resource reporting: Mining technical and economic assumptions for Nalunaq cut-off grade calculation**

Technical Economic Parameters	Unit	Value	Formula
<b>Metal Price</b>			
A	Gold Price	USD/oz	1,800
<b>Refining, Transportation, and Royalties</b>			
B	Refining Cost	USD/oz	5.00
C	Transportation (1% Government Royalty (2.5% on	USD/oz	15.00
D	NSR)	USD/oz	37.00
E	Total	USD/oz	57.00 B+C+D
<b>Metal Value</b>			
F	Metal Price	USD/oz	1800.00 A
G	Refining, Transportation, Royalties	USD/oz	57.00 E
H	Metal Value Dore	USD/oz	1743.00 A-E
I	Process Recovery	%	92.00
J	Metal Value Feed	USD/oz	1603.56 HxI
<b>Operating Cost</b>			
K	Mining	USD/t	154.85
M	Milling	USD/t	46.15
N	General and Administration	USD/t	53.85
O	Total	USD/t	254.85 K+M+N
<b>Cut-off Grade</b>			
P	Cut-off grade	oz/t	0.16 O/J
Q	Conversion	g/oz	31.105
R	Cut-off grade	g/t	4.94 PxQ
<b>Cut off grade used</b>		<b>g/t</b>	<b>5.00</b>

### 13.14 Mineral Resource Statement

The Nalunaq Mineral Resource Statement, as at 03 September 2022, and depleted to reflect the current understanding of the status of mining, includes:

- Inferred Mineral Resources of approximately 355 kt at a mean grade of 28.0 g/t Au for a total of 320,000 oz; and
- There are no Measured or Indicated Mineral Resources.

The SRK 2022 Mineral Resource Statement for the Nalunaq deposit is presented in Table 13-12. The Qualified Person for the declaration of Mineral Resources is Dr Lucy Roberts, MAusIMM(CP), of SRK Consulting (UK) Ltd. The Mineral Resource estimates and accompanying Statements were produced and reviewed by a team of consultants from SRK.



**Table 13-12: SRK Mineral Resource Statements for Nalunaq gold deposit, Greenland, as of 03 September 2022**

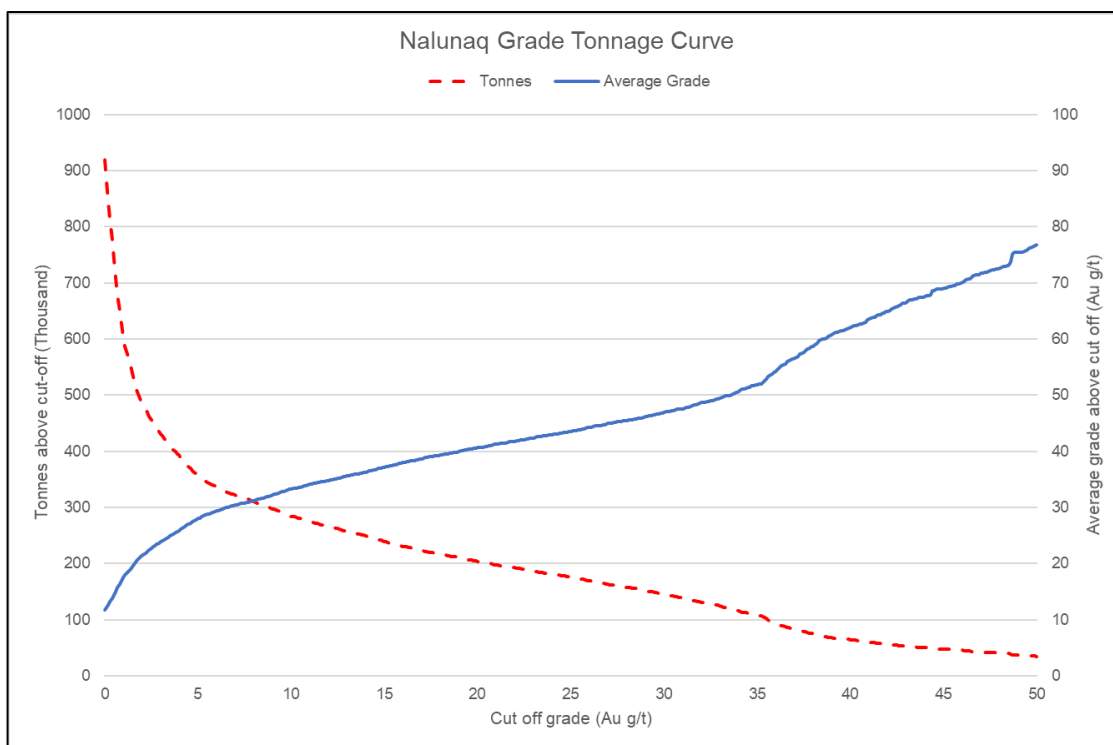
Zone	Classification	Tonnes (t)	Grade (g/t Au)	Contained (Oz Au)
In Mine	Inferred Mineral Resource	140,000	31.0	140,000
Extension Area	Inferred Mineral Resource	215,000	26.0	180,000
<b>Total</b>	<b>Inferred Mineral Resource</b>	<b>355,000</b>	<b>28.0</b>	<b>320,000</b>

In reporting the Mineral Resource Statements, SRK notes the following:

- Mineral Resources are reported in accordance with the CIM Definition Standards
- Mineral Resources have an effective date of 3 September 2022, and have been depleted to reflect the current understanding of the mining completed up to the date of production ceasing in 2013;
- Mineral Resources are reported as in-situ and undiluted. The Mineral Resources are reported above a cut-off grade of 5.0 g/t, generated using a gold price of 1,800 USD/ozAu. Given these parameters, SRK considers there to be reasonable prospects for eventual economic extraction, and as such, fulfil the requirements for reporting a Mineral Resource;
- The In-Mine Mineral Resource is accessible from existing underground development while the Extension Mineral Resource requires development to be put in place for it to be accessed
- Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability, nor have any mining modifying factors been applied;
- The Qualified Person for the declaration of Mineral Resources is Dr Lucy Roberts, MAusIMM(CP), of SRK Consulting (UK) Ltd. The Mineral Resource estimates and accompanying Statements were produced and reviewed by a team of consultants from SRK.
- SRK notes that a site visit to Nalunaq was conducted by the CP in September 2021;
- All Mineral Resources are quoted at 100%;
- Tonnages are reported in metric units, with metal grades in grams per tonne (g/t). Tonnages and grades are rounded appropriately. Rounding, as required by reporting guidelines, may result in apparent summation differences between tonnes, grade and contained metal content. Where these occur, SRK does not consider these to be material.

### 13.15 Sensitivity Analysis

The Mineral Resource estimate has been reported using a cut-off grade of 5.0 g/t Au, which was determined by SRK based on assumptions regarding the likely mining and processing costs, estimates of operating costs and a gold price of 1,800 USD/ozAu. The high-grade nature of the deposit means that it is relatively insensitive to the application of cut-off grade, as shown in Figure 13-15 and Table 13-13 below.



**Figure 13-15: Grade-tonnage curve - Nalunaq MRE3**

**Table 13-13: Cut off grade sensitivity – Nalunaq MRE3**

Cut off Grade	Tonnes above cut-off (kt)	Average grade above cut off (Au g/t)	Contained Metal (Au koz)
0	919.2	11.7	345
1	604.1	17.5	340
2	486.9	21.4	335
3	431.0	23.9	331
4	392.8	25.8	326
<b>5</b>	<b>355</b>	<b>28</b>	<b>320</b>
6	336.5	29.4	318
7	322.3	30.4	315
8	310.5	31.2	312
9	297.4	32.2	308
10	283.9	33.3	304

### 13.16 Comparison with Previous Estimates

Previously, a Mineral Resource Statement for Nalunaq was reported by SRKES, with an effective date of 19 June 2020. The Mineral Resource Statement on a 100% basis is provided for comparison purposes. This is presented in Table 13-14.

**Table 13-14: Mineral Resource Statements for Nalunaq gold deposit, Greenland, as of 19 June 2020**

Zone	Classification	Tonnes (t)	Grade (g/t Au)	Contained (Oz Au)
Remaining Stopes	Inferred Mineral Resource	26,690	20.8	17,890
Mine Area	Inferred Mineral Resource	396,080	18.3	233,080
Total	Inferred Mineral Resource	422,770	18.5	250,970

Since the completion of this estimate, there have been several significant updates to the underlying drilling data and models, including:

- Additional drilling, particularly in the southernmost Valley block area. This drilling amounts to some 51 drillholes, for 11,024 m;
- Significant improvements in the geological understanding, interpretation, and modelling including the development of a new exploration model (the Dolerite Dyke Model). This included modelling of both the host lithologies and the Main Vein. Internal domaining within the Main Vein has also been improved;
- Improved understanding and development of an improved model of the mined areas, to enable more accurate depletion of the Mineral Resources;
- Minor differences in the compositing, capping, block model definition, and grade estimation strategies;
- The use of a two-tier approach to cap the influence of high and ultra-high grade values in the interpolation process in which the former were given distance restrictions and the latter were both capped and given distance restrictions;
- A change in approach to applying the cut off grade for reporting the Mineral Resources, previously grades were diluted to reflect a 1.2m minimum mining width, whereas in this MRE, the model has been reported undiluted;
- A change in the reporting cut-off grade from 6.0g/tAu previously to 5.0g/tAu in this MRE, to reflect a higher gold price; and
- A change in the assumed density value from 3.00 t/m<sup>3</sup> to 2.96 t/m<sup>3</sup>.

Total reported gold content (Inferred Mineral Resources only) has increased from 251 koz Au in the previous MRE to 320 koz Au as of this MRE. The declared tonnes have decreased from 422 kt to 357 kt, due to no longer including planned dilution in the MRE and also reflecting the change in classification boundaries. The mean average gold grade has increased from 18.5 g/t Au to 28 g/t Au, also reflecting the change in estimation and reporting approach. The total contained gold has increased by some 69 koz.

Several changes to the grade estimate have also increased the amount of contained gold reported. These include changes to the depletion shapes and the capping approach. Additional exploration in the Valley Block has also increased the reported Mineral Resources in this area. Changes to the capping approach include increasing the hard cap to the very highest grade, but also applying a distance restriction, with threshold grades similar to the previously applied caps. This has allowed the very high-grade areas of the deposit to be better reflected in the estimate, without the samples unduly influencing a wider area. This mirrors the grade distributions observed in the drilling and underground sampling data available

## **14 MINERAL RESERVE ESTIMATE**

No Mineral Reserves are reported for the Nalunaq Project at this time.

## **15 MINING METHODS**

This section is not applicable to this report.

## 16 RECOVERY METHODS

### 16.1 Introduction

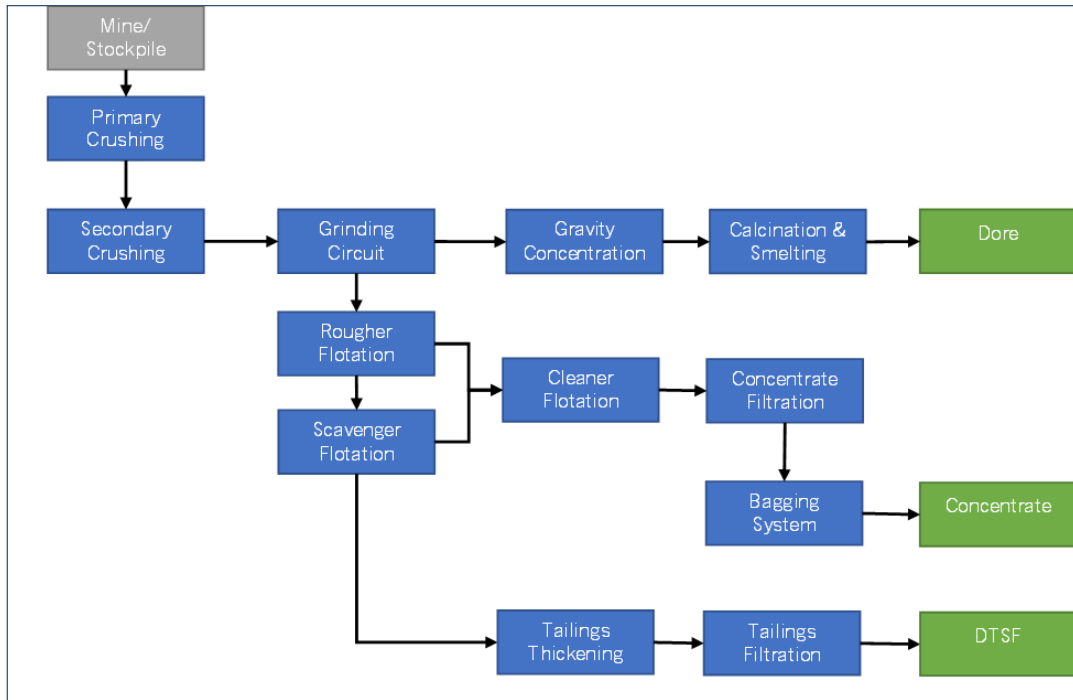
While future processing and recovery requirements will be dependent on the outcome of exploration and the nature of a future mining operation, Nalunaq A/S have commissioned a study from Halyard Inc (“Halyard”) to investigate this. As part of the design and reporting work conducted by Halyard for Nalunaq A/S, an outline of the likely processing and recovery methods has been produced. SRK has not reviewed the technical work undertaken by Halyard Inc, and notes that the plant has not been commissioned, and that a detailed report is not available. As such, the information in this section has been summarised for information purposes only. Amaroq notes that any further study would likely form part of a future pre or full feasibility reporting exercises in due course.

### 16.2 Process Activities

Amaroq currently plans mined material would be fed to the processing facility at a base rate of 104,025 t per year at a nominal feed rate of 300 t per day for 365 days in the year. This represents an availability of 95%. Additionally, the process plant would be designed to allow for an upgrade to 150,000 t per year with the addition of a second ball mill and upgraded flotation circuit. The processing facility will consist of the following extraction circuits: crushing, grinding, gravity recovery, flotation, thickening, tailings filtering, and a gravity concentrate smelting facility.

The processing will take place inside a winterized building equipped with a dust extraction system in the crushing plant section only where dry processing takes place. The balance of the process is wet and does not require dust extraction. Captured dust will be recirculated into the processing circuit. A 5t capacity overhead crane will service both the dry and wet areas using a curtain between the two to traverse the areas.

The current flowsheet is developed around the high propensity of the gold at Nalunaq to be recovered in a gravity concentration circuit, calculated to be in the order of 65-75%. An additional 20-25% of the gold in the remaining slurry will be recovered by the flotation circuit downstream of the gravity concentration circuit. A block diagram of the flowsheet is provided in Figure 16-1.



**Figure 16-1: Diagram of processing facility flowsheet (Source: Halyard Inc, 2021)**

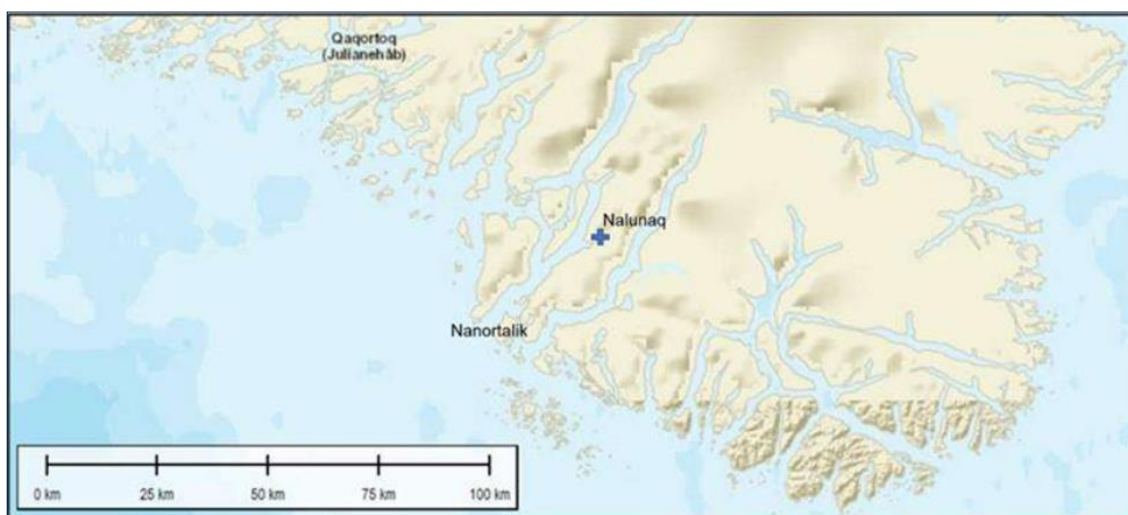
## 17 PROJECT INFRASTRUCTURE

### 17.1 Introduction

While future infrastructure requirements will be dependent on the outcome of exploration and the nature of a future mining operation, Nalunaq A/S have commissioned a study from Halyard on the likely surface and plant infrastructure requirements for a future operation. This has been produced to a pre-feasibility level of detail. SRK notes that as much of this study has not yet commissioned or reported within a larger study, sections of the work undertaken by Halyard are provided here for information only.

### 17.2 Site Description

The Nalunaq Mine site is located in southern Greenland, approximately 35km northeast of the town of Nanortalik, in the Municipality of Kujalleq. The mine lies on the northern slopes of the Kirkespirdalen (Kirkespir Valley), approximately 9km from the eastern side of the Sarqå Fjord (Figure 17-1). The mine site is connected to the Sarqå Fjord shore by a gravel road.



**Figure 17-1: Approximate location of the Nalunaq Project, Greenland (Source: Halyard, 2021)**

### 17.3 Surface Infrastructure

The future Nalunaq Project infrastructure is planned to comprise the following, with some of this already in existence. An overall site plan is illustrated in Figure 17-2. The site infrastructure requirements are:

Located at Underground Mine Nalunaq Mountain:

- Underground mine;
- Process plant, mobile equipment, and maintenance shops;
- Office / administration and dry complex;
- Waste rock management areas;
- Tailings management facility;
- Electrical power generation, of substation and distribution; and



- Fuel storage.

Located at beach / mouth of Kirkespir River / Sarqå Fjord:

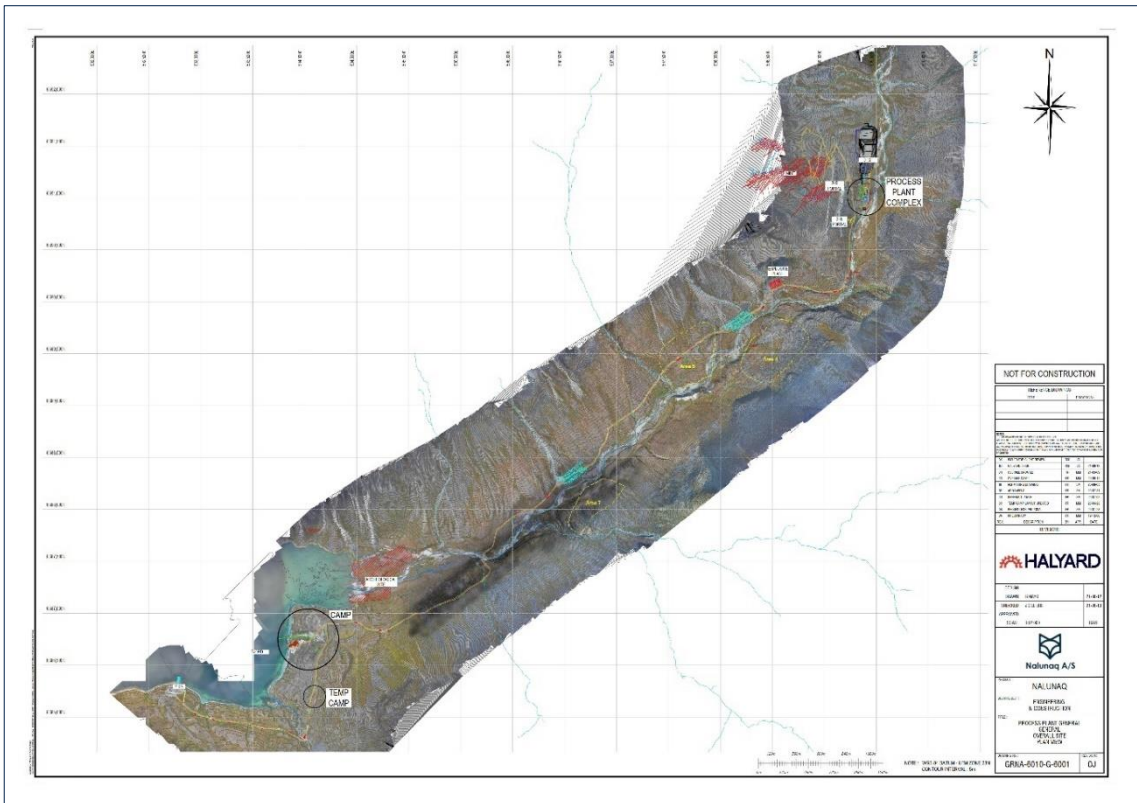
- New beach landing area;
- Existing jetty;
- Temporary camp;
- Permanent camp;
- Fuel Storage (main camp & mine site);
- Incinerator;

This infrastructure is required to support the personnel and site operations for an initial mining rate 100,000t per year. All activities will be self-contained at the site. Staff will move on and off the site on a rotation basis. Materials will be brought to site by boats to support the operations in terms of consumables, perishables, and capital equipment items. Products from the operation will be exported from the site in terms of gold concentrate in 1t bags and dore gold bars.

As far as possible, previously disturbed areas from previous operations will be used to construct new structures. Infrastructure footprints will be kept as small as possible in order to mitigate additional disturbances. The location of all infrastructure has been identified with consideration for safe operations and practical utility. Due to the fact that there is very limited space in the valley below the Nalunaq Mountain, careful consideration has been made in order to position the process plant, infrastructure and the tailings facility.

Structures in the valley will be required to be elevated approximately 2 m from the valley floor in order to stay above the flood line of the river. Fill material for the structures will come from mine development waste rock, existing waste rock on site and from quarries along the main access road.

Tailings from the plant will be placed on the Dry Tailings Storage Facility (“DTSF”) at the base of the Nalunaq Mountain adjacent to the process plant (Figure 17-3). The DTSF has been designed by Golder & Associates with considerations for the limited space available and the saturated ground conditions. Protection from flooding and avalanches has also been considered in the design of the DTSF and other structures.



**Figure 17-2: Nalunaq - Planned Site Layout (Source: Halyard, 2021)**



**Figure 17-3: Nalunaq - Site Layout Process Plant Location (Source: Halyard, 2021)**

### 17.4 Site Roads

The project benefits from an existing 9km gravel road running from the jetty past the permanent camp up to the mine area (Figure 17-4). The road was repaired in 2019 and maintenance work will be ongoing during the construction and the operations. The Kirkespir River Crossing bridge has been expanded to provide more flow capacity under the 1:1,000 years' flooding events.



**Figure 17-4: Nalunaq - River Crossing bridge structure on site road (Source: Halyard, 2021)**

## 17.5 Temporary Camp

The temporary camp (Figure 17-5) is located at the Sarqå Fjord, consisting of dormitory modules, a kitchen and a dining room, a laundry unit, a change room, as well as a recreation building including a gymnasium and an administration office. The camp can host 45 people, with capacity to expand to 75 people.

This camp is currently being used for the exploration phase during the winter but will require additional winterisation for particularly heavy winters. Halyard states that an alternative camp is planned for the operations phase of the project. Water is trucked to the camp on a daily basis from the nearby river. Effluent is discharged into the fjord.



Figure 17-5: Nalunaq - Aerial photo of the temporary camp (Source: Halyard, 2021)

## 17.6 Underground Infrastructure

### 17.6.1 Ramp

The ramp allows access to all parts of the mine (except currently the flooded South Block). It has been developed in the footwall and comprises a series of spirals and inclines with short crosscuts leading to drives. It connects to the surface via the 300, 350, 400, 450 and 600 Level portals, although access is currently only possible via the 300 Level portal. Ground stability conditions are good throughout the parts of the ramp inspected by Amaroq. This includes all areas above 275 masl. The floor of the ramp has been built up with crushed material imported from outside, and in some places, there are washouts that would need to be repaired in order to allow vehicle access.

### 17.6.2 Refuge and Egress

Temporary refuge stations exist underground but they may have been scavenged and may not be in working order. Therefore, new temporary refuge stations will need to be purchased and set-up near future working areas or, if appropriate, existing refuges will need to be refurbished.

There is currently only one point of egress at the 300 Level Portal. Future operations will require a second egress for safety reasons, and this could be provided without additional development (apart from removing materials blocking the portals) at the 350, 400, 450 or 600 Level portals.

Some long escapeways have been constructed in the mine, such as one that connects lower parts of the South Block to near the 300 Level. With some refurbishment to ensure they are appropriate for use; these represent a substantial capital saving.

### 17.6.3 Ventilation

There is currently no functioning ventilation system in the mine, and this will need to be installed prior to future exploration or operational activities. However, vent raises that connect to the surface appear to remain open and this allows natural ventilation in the mine to maintain good air quality. Amaroq considers that air movement is typically from the top of the mine downwards. This does not negate the need for ventilation to be supplied to areas where new exploration work may take place.

### 17.6.4 Power

The power distribution system that remains underground appears to be in reasonable condition but has not been tested by Nalunaq A/S. Whilst the system could potentially be re-commissioned, it is recommended that power for underground exploration operations is provided by local generators.

### 17.6.5 Piped Distribution Systems

The piped distribution systems that remain in the mine (compressed air, water, and dewatering) appear to be in reasonable condition in Nalunaq A/S' opinion. However, pipes and clamps are rusty in many areas, so it is anticipated that there could be numerous leaks once the systems are pressurised. These systems have not been tested by Nalunaq A/S. Typically, in the ramp there is 150 mm Victaulic groove pipe for compressed air, 50 mm Victaulic groove pipe for water, and 100 mm dewatering pipe, although these are only located on some of the lower levels of the mine. Victaulic grooved pipes of various sizes (typically 50 mm) for compressed air and water are located sporadically within the drives.

## **18 MARKET STUDIES AND CONTACTS**

This section is not applicable to this report.

## **19 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

### **19.1 Introduction**

Following closure of the mine in 2014, annual environmental monitoring was carried out by Environmental Agency for Mineral Resource Activities (“EAMRA”) through its advisor the Danish Centre for Environment And Energy (“DCE”). Amaroq understands that the costs for this monitoring were taken from the closure bond that became available when Angel Mining closed the mine and the surplus left at the end of the monitoring period in 2019 was returned to Nalunaq A/S. Overall, DCE assessed the current environmental impact on the environment from the former mining activities at Nalunaq as insignificant and that no further actions were needed to reduce the environmental impact. Consequently, DCE considered the Nalunaq gold project could serve as an example of how adequate environmental requirements together with detailed environmental monitoring and regulation can result in a mine operation in Greenland with minimum environmental impact.

All work programmes are reviewed by EAMRA and their approval is required before work can commence. Furthermore, exploration activities must adhere to the “Rules for Fieldwork and Reporting Regarding Mineral Resources” as published by the Government in 2000 which includes measures to protect the environment and wildlife.

The Company is currently in the process of agreeing its Environmental Impact Assessment with EAMRA.

### **19.2 Status of Environmental Approvals**

Currently in Addendum 5 dated 13 March 2020 to the Nalunaq Exploitation licence 2003-05 certain time limits are included, namely the commencement of exploitation is to begin on 1 January 2023; no later than the 31 December 2022, the Licensee shall prepare an Environmental Impact Assessment (“EIA”) and a Social Impact Assessment (“SIA”) regarding all planned exploitation activities and submit reports on these to the MLSA; no later than 31 December 2022, and the Licensee shall negotiate, conclude and perform an Impact Benefit Agreement (“IBA”)

The Company has submitted an application to extend these time limits since it is not unusual for time limits to be changed as a project progresses and is not currently aware of any reason why the extension would not be granted.

The Company is in the process of updating its Environmental Impact Assessment and Social Impact Assessment, which it expects to complete during 2023. Following the approval of the SIA, the Company will begin negotiations with stakeholders with a view to agree the Impact Benefit Agreement which it expects to complete during 2024.

## **20 CAPITAL AND OPERATING COSTS**

This section is not applicable to this report.



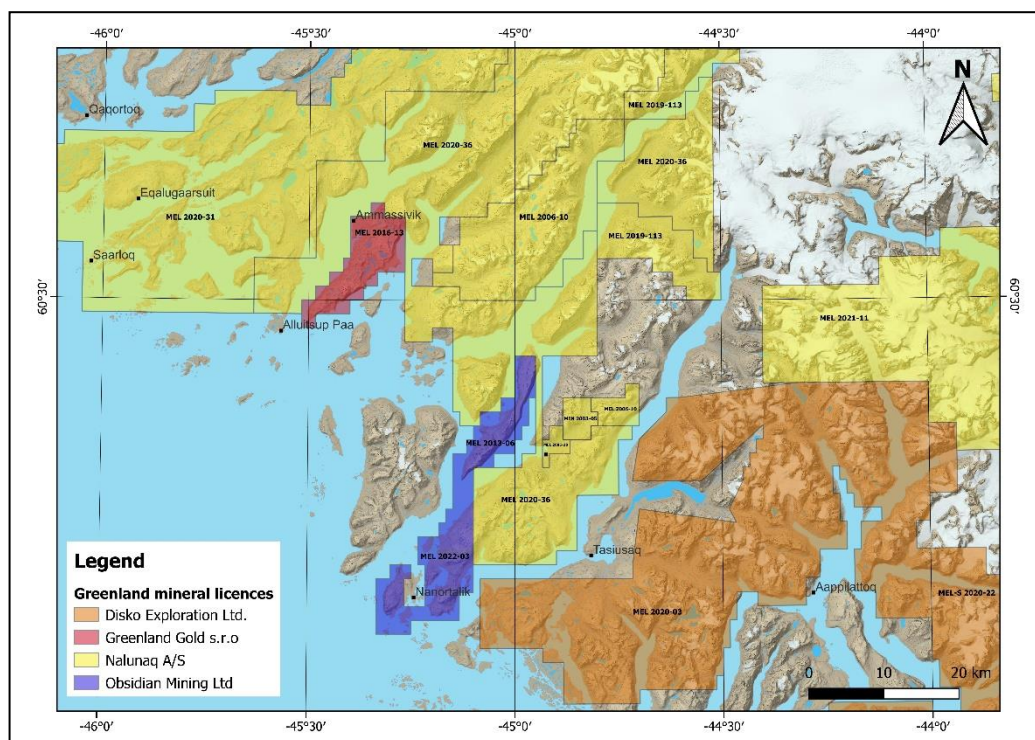
## **21 ECONOMIC ANALYSIS**

This section is not applicable to this report.

## 22 ADJACENT PROPERTIES

### 22.1 Introduction

The following properties are located close to Nalunaq and are described here for the purposes of illustrating other areas of mineral potential in the region. Amaroq has not been able to verify the information presented below and the information is not material to the mineralisation in the Nalunaq Project. The locations of adjacent properties are shown in Figure 22-1.



**Figure 22-1: Location of the Nalunaq exploitation licence MIN 2003/05 (yellow in centre) and adjacent exploration licences (source: MLSA 2022)**

### 22.2 Nalunaq A/S Exploration Licences

Centred approximately 25km north of Nalunaq, Nalunaq A/S, a wholly owned subsidiary of Amaroq, holds a 292km<sup>2</sup> exploration licence MEL 2006-10, named 'Vagar'. The licence covers part of the Julianehåb granitic batholith and hosts several gold occurrences, some of which may represent intrusion-related mineralisation. Exploration has been ongoing since the early 1990s. Gold mineralisation is thought to be of similar age to that at Nalunaq, i.e., related to the Ketilidian orogeny. Recent exploration activities have included diamond drilling in 2022 at the Vagar Ridge target which was previously drilled by NunaMinerals A/S in 2012 and 2013. Licence MEL 2006-10 also includes two sub-areas adjacent to the Nalunaq licence MIN 2003-05. The sub-area to the northeast includes the 'Ship Mountain' target, a continuation of the metavolcanic sequence (the Nanortalik Nappe) which hosts the Nalunaq deposit. The sub-area to the southwest contains a palladium-platinum and nickel-copper bearing ultramafic dyke 'Saqqaa' which was sampled in 2021. No drilling has been carried out in these two smaller sub-areas of licence 2006-10.

Nanortalik Nappe metavolcanic rocks are also exposed in Nalunaq A/S' licence MEL 2020-36, at the 'Lake 410' target, and in licence MEL 2019-113 'Ippatit'. Both areas host minor gold occurrences. The Lake 410 occurrence was drilled in 2004 and 2005 by Crew Gold.

### **22.3 Licence MEL 2013-06 - Obsidian Mining Ltd**

Located approximately 10km west of Nalunaq, Obsidian Mining Ltd, a wholly owned subsidiary of GreenRoc Mining plc, holds a 48km<sup>2</sup> exploration licence. The licence holds potential for graphite mineralisation and a small graphite mine was operational on Amitsoq Island in the early 1900s. There are also small platinum-bearing ultramafic dykes that cross the island. Amaroq understands that recent exploration activities have included diamond drilling at the Amitsoq graphite target in 2021 and 2022. In March 2022, GreenRoc announced a Maiden Mineral Resource estimate with a total combined Indicated and Inferred Mineral Resource of some 8.28 Mt at 19.75% graphitic carbon for 1.63 Mt contained graphite.

### **22.4 Licence MEL 2022-03 - Obsidian Mining Ltd**

Located approximately 20km southwest of Nalunaq, Obsidian Mining Ltd holds a 67km<sup>2</sup> exploration licence. The licence holds potential for graphite mineralisation.

### **22.5 Licence MEL 2020-03 – Disko Exploration Ltd.**

Located approximately 30km southeast of Nalunaq, Disko Exploration Ltd., a wholly owned subsidiary of Bluejay Mining plc, holds a 1,473 km<sup>2</sup> exploration licence. The licence holds potential for gold and base metal mineralisation. Amaroq understands that recent exploration activities have included a regional stream sediment survey and remote sensing study in 2020.

### **22.6 Licence MEL 2016-13 – Greenland Gold s.r.o**

Located approximately 35km northwest of Nalunaq, Greenland Gold s.r.o holds a 72 km<sup>2</sup> exploration licence. There is currently no public data available for this property. It is currently held by the Czech Geological Research Group who are thought to be targeting gold mineralisation.

## **23 OTHER RELEVANT DATA AND INFORMATION**

### **23.1 Geotechnical Assessment**

A geotechnical assessment was carried out during the SRK ES site visit in June/July 2016 alongside the assessment of remnant mining areas. The findings and outcomes are summarised here. Full details are provided in the SRK ES (2016) report. The scope of the geotechnical work was to make an observational assessment of the current rockmass and excavation conditions, provide comments and to identify any fatal flaws that would prohibit mining in certain areas.

Additionally, recommendations were provided with respect to safe access into and around the mine for the purposes of further inspection or exploration development. These were based on internationally accepted minimum standards for working in underground mining environments as well as information provided by former Chief Geologist Kurt Christensen and SRK ES's experience and engineering judgement related to the rock mass conditions and excavation stability.

Whilst rock conditions are good, Nalunaq does not currently meet international standards and the recommendations provided by SRK ES in 2016 should be considered prior to embarking on any further underground work. Further detailed engineering assessment will be required prior to any future operations.

## 24 INTERPRETATION AND CONCLUSIONS

Nalunaq exhibits typical characteristics of a high grade, narrow-vein orogenic gold deposit. The project benefits from a significant quantity of exploration data, a mining history and underground access which aids in the understanding of the mineralisation and the nature of possible additional resources.

SRK has produced an updated MRE and accompanying Statement for the Nalunaq Project. The Qualified Person for the declaration of Mineral Resources is Dr Lucy Roberts, MAusIMM(CP), of SRK Consulting (UK) Ltd. The Mineral Resource estimates and accompanying Statements were produced and reviewed by a team of consultants from SRK.

The Nalunaq Mineral Resource Statement is reported using a cut-off grade of 5.0g/t Au, has an effective date of 03 September 2022, and is depleted to reflect the current understanding of the status of mining. The high-grade nature of the deposit means that it is relatively insensitive to the application of cut-off grade. The Mineral Resource Statement includes:

- Inferred Mineral Resources of approximately 355 kt at a mean grade of 28 g/t Au for a total of 320,000 oz; and
- There are no Measured or Indicated Mineral Resources.

The 2022 MRE is an update to the previously reported MRE, as reported in June 2020. Since the completion of the 2020 MRE, there have been several significant updates to the underlying drilling data and models, including:

- Additional drilling, particularly in the southernmost Valley block area. This drilling amounts to some 51 drillholes, for 11,024 m;
- Significant improvements in the geological understanding, interpretation, and modelling including the development of a new exploration model (the Dolerite Dyke Model). This included modelling of both the host lithologies and the Main Vein. Internal domaining within the Main Vein has also been improved;
- Improved understanding and development of an improved model of the mined areas, to enable more accurate depletion of the Mineral Resources;
- Minor differences in the compositing, capping, block model definition, and grade estimation strategies;
- The use of a two-tier approach to cap the influence of high and ultra-high grade values in the interpolation process in which the former were given distance restrictions and the latter were both capped and given distance restrictions;
- A change in approach to applying the cut off grade for reporting the Mineral Resources, previously grades were diluted to reflect a 1.2m minimum mining width, whereas in this MRE, the model has been reported undiluted;
- A change in the reporting cut-off grade from 6.0g/tAu previously to 5.0g/tAu in this MRE, to reflect a higher gold price; and
- A change in the assumed density value from 3.00 t/m<sup>3</sup> to 2.96 t/m<sup>3</sup>.

Total reported gold content (Inferred Mineral Resources only) has increased from 251 koz Au in the previous MRE to 320 koz Au as of this MRE. The declared tonnes have decreased from 422 kt to 357 kt, due to no longer including planned dilution in the MRE and also reflecting the change in classification boundaries. The mean average gold grade has increased from 18.5 g/t Au to 28 g/t Au, also reflecting the change in estimation and reporting approach. The total contained gold has increased by some 69 koz.

## 25 RECOMMENDATIONS

SRK recommend the following to improve confidence in the geological model and quality of the Mineral Resource estimates in future:

- Systematic underground mapping of the stopped areas to determine the amount of material which may be held in the hangingwall of the mined areas;
- Revisit the available production data to determine whether additional information can be gathered from other sources (e.g. annual or financial reports of previous operators) to determine the amount of gold recovered from the mine in more detail, and to improve confidence in the available data;
- Once the production data has been further verified, this can then be used to assess the performance of the block model, as well as build a level of understanding regarding anticipated dilution and losses. This would improve confidence in the geological model, as well as the grade and tonnage estimates.

SRK are aware that Amaroq have continued exploration activities at Nalunaq throughout 2022, including drilling areas considered to be an extension of Valley block to the west. At the effective date of this report, the results of this phase of exploration were not available for inclusion.

SRK notes that Amaroq intends to continue exploration activities at Nalunaq in the future, including a helicopter supported drilling campaign in Mountain Block, and additional drilling in the Welcome Block. The next phase of exploration would comprise in the region of some 3,500 m of diamond drilling. The anticipated exploration expenditure for these activities is summarised in Table 25-1. SRK would also recommend that a close spaced magnetic survey be undertaken, to help further structural and geological modelling at the project. Given the nature and development stage of the Nalunaq Project, SRK considers this level of exploration expenditure to be warranted.

In addition, the Company is currently assessing options regarding taking a bulk sample, which would also allow for direct access to the unmined mineralised areas. This would allow for an assessment of the close spaced grade distribution and improve confidence in both the geological and grade continuity.


**Table 25-1: Amaroq anticipated exploration expenditure to continue developing the Nalunaq Project**

Item	Cost (CAD)
Drilling	1,325,000
Helicopter	800,000
Laboratory	40,000
Drill pad construction	35,000
Extras	70,000
Total	2,270,000

-

**For and on behalf of SRK Consulting (UK) Limited**


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**Dr Lucy Roberts,**  
Principal Consultant (Resource Geology),  
**Project Manager and Qualified Person**  
SRK Consulting (UK) Limited

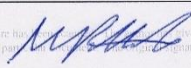
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**Mr Martin Pittuck,**  
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## Glossary

Amaroq	Amaroq Minerals Ltd
Amphibolite facies	Metamorphic rocks that formed under the medium temperatures and pressures typically 500–700 °C and 2–12 kilobars
Amphibolites	Rock composed largely or dominantly of minerals of the amphibole group
Angel Mining	Angel Mining (Gold) A/S
Aplite	an intrusive igneous rock in which the mineral composition is the same as granite, but in which the grains are much finer, under 1 mm across
Auriferous	Gold-bearing
Calc-silicate	Alteration metasomatic alteration of existing rocks in which calcium silicate minerals such as diopside and wollastonite are produced
CIM Best Practice Guidelines	CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines prepared by the CIM Mineral Resource and Mineral Reserve Committee and adopted by the CIM Council on 29 November 2019
CIM Definition Standards	CIM Definition Standards on Mineral Resources and Reserves prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council on May 10, 2014
Crew Gold	Crew Gold Corporation
Dolerite	A dark, medium-grained igneous rock, typically with ophitic texture, containing plagioclase, pyroxene, and olivine
Dykes	Flat body of rock that cuts through another type of rock
Halyard	Halyard Inc
Inferred Mineral Resources	An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity
Metasediments	Sediment or sedimentary rock that shows evidence of having been subjected to metamorphism
Metavolcanics	Volcanic rock that shows evidence of having been subjected to metamorphism
Mineral Resources Act	Greenland Parliament Act No. 7 of 7 December 2009 on Mineral Resources and Mineral Resource activities
Mountain Block	Structural block of the Nalunaq deposit
Nalunaq	Nalunaq Gold Project
Nalunaq A/S	Wholly owned subsidiary of Amaroq
NI-43-101	National Instrument 43-101 - Standards of Disclosure for Mineral Projects
Outcrop	A rock formation that is visible on the surface
Pegmatite	Coarse-grained crystalline igneous rocks, usually of granitic composition and characterized by interlocking crystals several centimeters up to tens of meters in length
Quartz vein	A fracture which has been filled by quartz and other minerals which have crystallised from mineralised fluids
Sill	Flat body of rock that does not cut through another type of rock
South Block	Structural block of the Nalunaq deposit
SRK Group	SRK Consulting (Global) Limited

Sweepings	Accumulations of fine material (including free gold and quartz vein fragments that host gold) that have been blasted in the stoped areas and subsequently washed down to settle on the floor of the drives below
Target Block	Structural block of the Nalunaq deposit
Tholeiitic basalt	Basaltic rocks characterised by calcic plagioclase with augite, pigeonite or hypersthene, and olivine (rarely) as the dominant mafic minerals
Upper greenschist facies	Metamorphic rocks that formed under the lowest temperatures and pressures usually produced by regional metamorphism, typically 300–450 °C and 2–10 kilobars
Valley Block	Structural block of the Nalunaq deposit
Vamping	A mining method used to recover higher grade material left in stoped areas
Volcaniclastic	Composed of broken fragments (clasts) of volcanic rock
Welcome Block	Interpreted structural block of the Nalunaq deposit, not yet intersected by significant drilling

## Abbreviations

2SD	Two standard-deviations
AEX	AEX Gold Ltd
AIM	Alternative Investment Market of the London Stock Exchange
ARC	Arctic Resources Capital
CIP	Carbon-in-pulp cyanide leaching circuit
CRIRSCO	Committee for Mineral Reserves International Reporting Standards
DCE	Danish Centre for Environment and Energy
DD	Diamond Drilling
DTSF	Dry Tailings Storage Facility
EAMRA	Environmental Agency for Mineral Resource Activities
EIA	Environmental Impact Assessment
ESG	Environmental, social and governance
FBC	FBC Mining (Holdings) Limited
FW	Structural footwall
GEUS	Geological Survey of Greenland
GGU	Geological Survey of Greenland
GPS	Global Positioning System
HARD	Half Absolute Relative Difference
Heli	Helicopter portable
HW	Structural hanging wall
HWV	Hanging Wall Vein
IBA	Impact Benefit Agreement
ID3	Inverse Distance Weighting to the power of 3
IDS	Injection Driven Swarm
IDW	Inverse Distance Weighting
IRS	Intact Rock Strength
LOD	level of detection
MILT	Ministry of Industry, Labour and Trade
MLSA	Mineral Licence and Safety Authority
MMR	Ministry of Mineral Resources
MRDI	Mineral Resource Development International

MRE	Mineral Resource estimate
MV	Main Vein
OK	Ordinary Kriging
PFS	Preliminary Feasibility level
QAQC	Quality Assurance Quality Control
QP	Qualified Person
RPEEE	Reasonable prospects for eventual economic extraction
RQD	Rock Quality Designation
SCR	Solid Core Recovery
SIA	Social Impact Assessment
SRK ES	SRK Exploration Services Limited
SRK	SRK Consulting (UK) Limited
SRK NA	SRK Consulting (Toronto) Inc
TCR	Total Core Recovery

## Units

%	Percent
°	Degrees
‰	Per mille
CAD	Canadian Dollars
g/t	Grams per metric tonne
Ga	Billion years
km	Kilometers
Koz	Thousand troy ounces
m	Meters
Ma	Million years
mASL	Meters above sea level
Mt	Million metric tonnes
°C	Centigrade
oz	Troy oz
t	Metric tonnes
USD	US Dollars
wt%	Weight Percent

## **APPENDIX**

### **A QUALIFIED PERSON CONSENT STATEMENT**

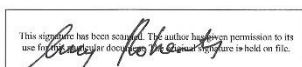


## Qualified Person's Consent Statement – Mineral Resources

I, Lucy Sarah Roberts BSc MSc PhD, AusIMM(CP), do hereby certify:

1. I am a Principal Consultant (Resource Geology) with SRK Consulting (UK) Limited at 5<sup>th</sup> Floor, Churchill House, 17 Churchill Way, Cardiff, CF10 2HH, UK
2. I am a graduate of Cardiff University, Wales, UK, with a 2:1 degree (BSc, 2000) in Exploration Geology and Masters degree with Distinction (MSc, 2001) in Mineral Resources. I also a graduate from James Cook University, with a PhD in Applied Geostatistics (2005).
3. I am a member in good standing of The Australasian Institute of Mining and Metallurgy and a Chartered Professional (Geology). My membership number is 211381.
4. I have practiced my profession continuously since graduation. I have been employed by SRK Consulting (UK) Ltd since April 2006.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible for the preparation of section 13 of the technical report titled Technical Report on the Mineral Resources of the Nalunaq Gold Project, Greenland and dated 15 October 2022 (the "Technical Report") relating to the Nalunaq property. I visited the Nalunaq property between the 9 and 17 September 2021 for 8 days.
7. I have not had prior involvement with the property that is the subject of the Technical Report.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

This signature has been scanned. The author has given permission to its use for filing and public disclosure. The author's signature is held on file.



Dr Lucy Roberts  
Principal Consultant (Resource Geology)  
SRK Consulting (UK) Limited