NI 43-101 Technical Report: Ikkari Project, Finland

Rupert Resources Ltd

Effective Date: 13 September 2021

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Document Information Page

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Effective Date	13 September 2021	
Versions / Status	V7 - Final Draft	

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Appendix 2 – ALS Internal Standards and Blanks

Appendix 3 – Sample Pairs submitted to ALS

1. EXECUTIVE SUMMARY

1.1 Introduction

This technical report has been prepared by International Resource Solutions Pty Limited and was commissioned by Rupert Resources Ltd. The report relates to a maiden mineral resource estimate of the Ikkari Project ("Ikkari" or "the Project"). Ikkari is wholly owned by Rupert Resources Ltd (hereinafter referred to as "Rupert").

1.2 Location

The Ikkari project is located on a package of exploration licences controlled by Rupert ("Rupert Lapland Project") in Lapland, northern Finland (Figure 1.2_1), which includes the Pahtavaara Mine project and associated mining licences, located near Rajala village in the municipality of Sodankylä approximately 25km northwest of Sodankylä town. The Ikkari deposit lies at the eastern extreme of the Sirkka Line, a tectonic structure that traverses northern Finland, along which some 25 to 30 gold deposits / occurrences exist. Ikkari is situated at the margins of a low-lying aapa-mire, comprising broad wetlands to the north and west, and is sparsely forested. The landscape is predominantly flat with an elevation of approximately 225m above sea level and rising slightly towards the southeast and the margins of the Iso-Pulkittama hill, which has a maximum elevation of approximately 300m above sea level. The overburden cover of glacial till deposits is generally between 5m to 40m thick and rock outcrop is very limited across the majority of the exploration licence area. In most parts of the deposit area, the ground water table is typically located close to the ground surface.

1.3 Ownership

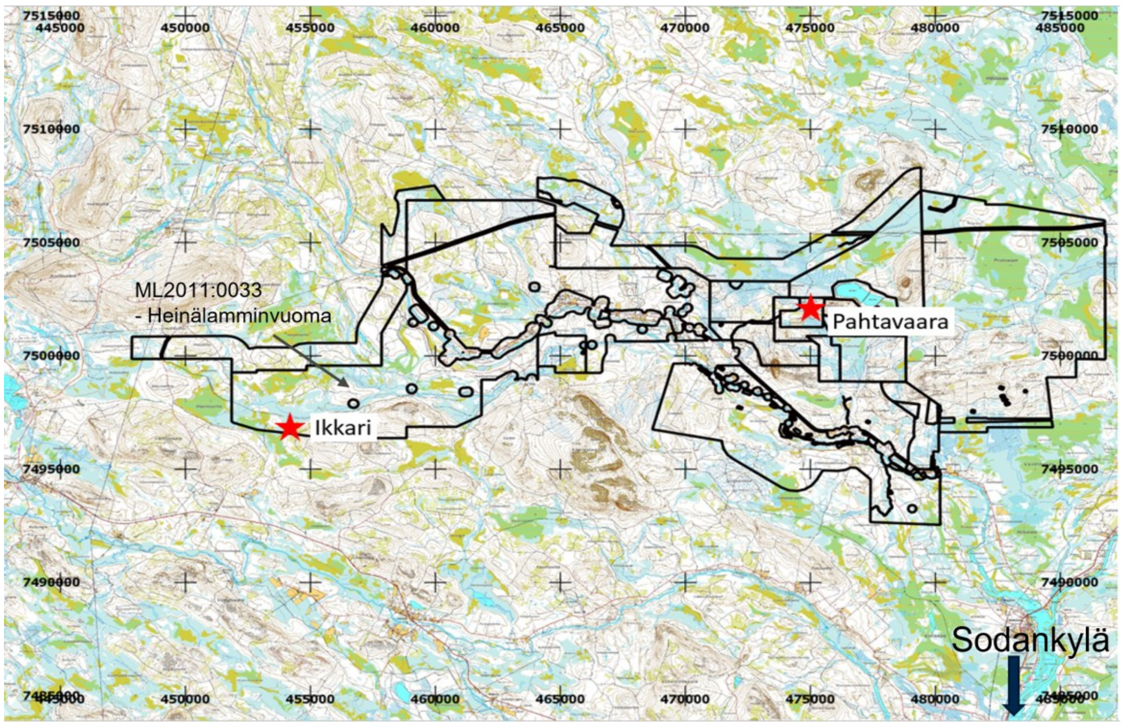
The Rupert Lapland Project area is 100% owned by Rupert Finland Exploration Oy & Rupert Finland Oy, wholly owned subsidiaries of Rupert Resources Ltd, a company incorporated in British Columbia, whose office is at 82 Richmond Street East, Suite 203, Toronto, Ontario, Canada, M5C 1P1. The Ikkari resource defined in this report is contained on an 84km² exploration licence (Heinälamminvuoma - ML2011:0033) contained within a wider contiguous land position of 279.5km² (Figure 1.3_1), as well as additional permits in the Central Lapland Belt region (total 558.42km², Table 4.2_1) referred to as the Rupert Lapland Project area.

1.4 Geology

Ikkari is a new, grassroots, undercover, orogenic gold discovery in the Palaeoproterozoic Central Lapland (greenstone) Belt, Finland. The CLB is part of the Fennoscandian shield, which hosts over 60 known gold occurrences across northern Finland, including Agnico Eagle's 4.1Moz Kittilä gold mine. To date, with 36,635m of drilling completed, a mineralised envelope up to 800m long, 300m wide and 500m deep is indicated at Ikkari, and the deposit is already the most significant gold discovery of the past 30 years in northern Europe.

Figure 1.2_1
Location of the Rupert Lapland Project Area, and Ikkari gold deposit, Finland

Figure 1.3_1
Rupert Resources land position in Central Lapland – The Rupert Lapland Project area



The Rupert Lapland exploration permits occur at a significant regional geological domain boundary zone, which trends predominantly E-W through the westernmost extent of the Rupert exploration licences (Figure 1.4_1). A ~4km wide zone of 2.05Ga Savukoski Group rocks, comprising fine-grained metasedimentary rocks, including phyllite, carbonaceous shale and mafic intrusive rocks, as well as komatiites, occurs between younger Kittilä Group rocks to the north (dominantly tholeiitic metabasalts) and Kumpu Group rocks (molasse-type fluviatile quartzites, subarkoses and polymictic conglomerates) to the south. This zone broadly corresponds with the 'Sirkka Line' structure that corresponds to the Savukoski/Kittila Group contact zone to the west of Ikkari, and continues as distinctive magnetic lineament(s) to the east/south of Ikkari. Some 25 to 30 gold deposits/occurrences have been reported along this structural zone.

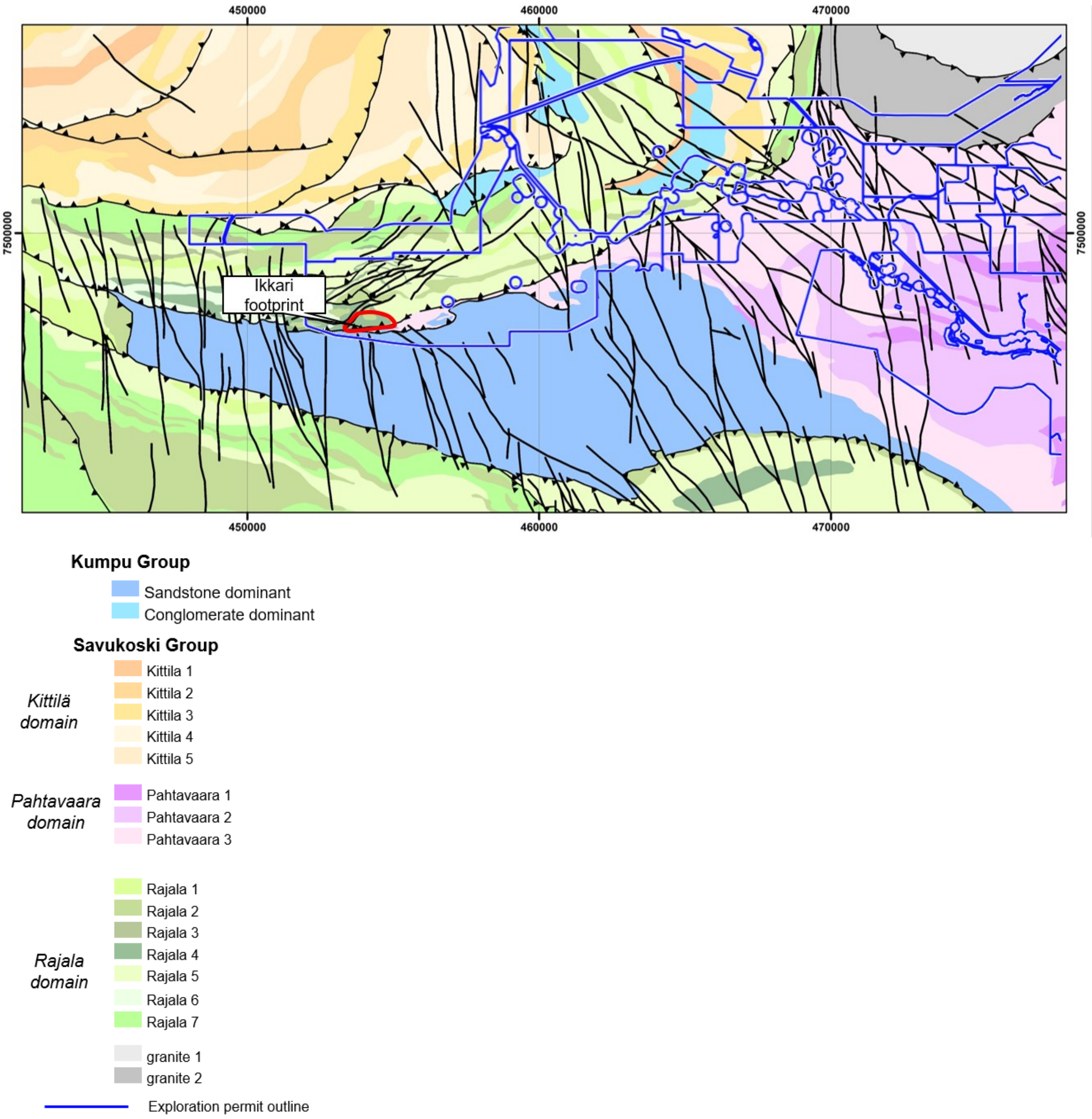
Structurally, the geometries of the various lithotypes are consistent with relatively low angle thrust-stacking and possibly associated large-scale tight to isoclinal folding (Figure 1.4_1).

1.4.1 Deposit Geology

Ikkari was discovered using systematic regional exploration that focused on geochemical sampling of bedrock/till interface through glacial till deposits of 5 to 40m thick. No outcrop is present, and topography is dominated by low-lying swamp areas.

The Ikkari deposit occurs within rocks that have been regionally mapped as 2.05-2.15 Ga old Savukoski group greenschist-metamorphosed mafic-ultramafic volcanic rocks, part of the Central Lapland Greenstone Belt (CLGB). Gold mineralisation is largely confined to the structurally modified unconformity between Savukoski and Kumpu groups strata (Figure 1.4_1). The two units are complexly interleaved, the result of early low angle thrusting and folding (D_1) and subsequent upright folding and shearing (D_2).

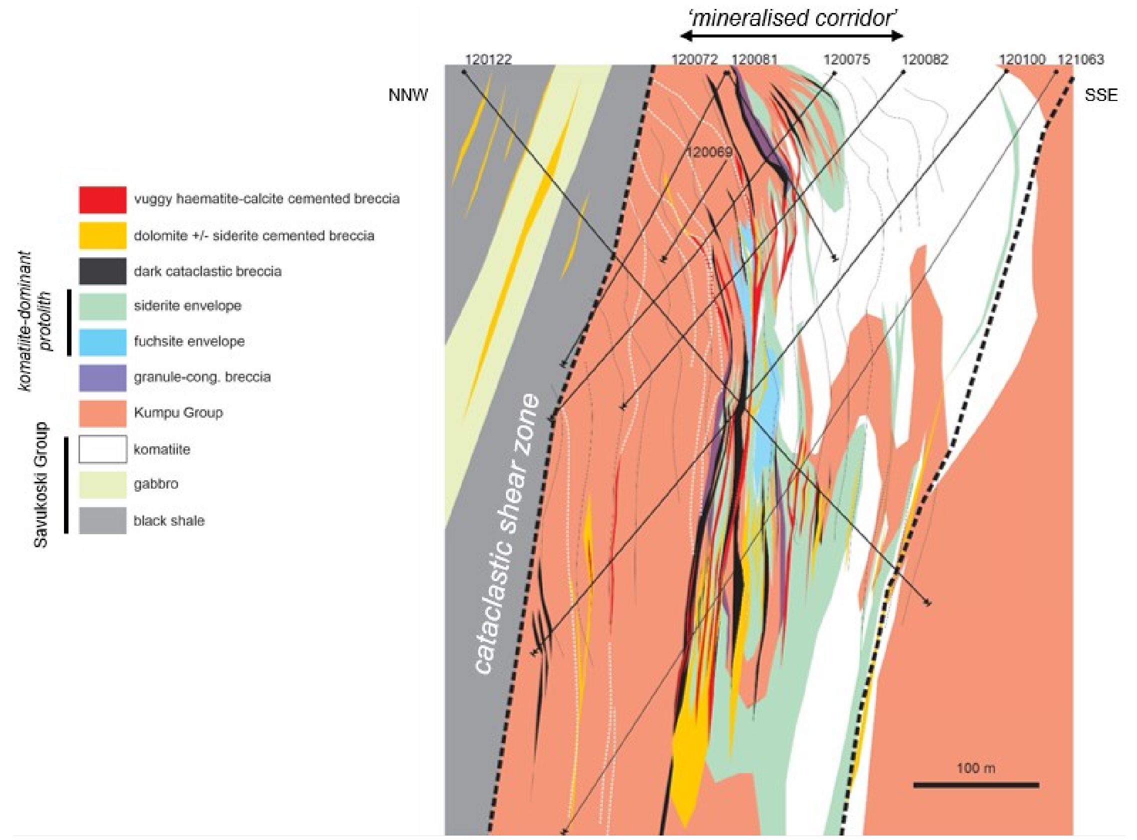
Figure 1.4_1
Structural domain map of the Ikkari-Pahtavaara district, based on potential field data



(Selley, 2019)

The mineralised zone is bounded to the north by a steeply N-dipping cataclastic zone and is closely associated with intercalations of Kumpu sediments within the Savukoski komatiite-dominated strata (Figure 1.4_2). The mineralised zone is overprinted by a complex history of hydrothermal brecciation, the latest stages associated with a second phase of high-grade gold mineralisation.

Figure 1.4_2
Representative cross section of the Ikkari deposit, looking east



1.5 Mineralisation

Within the mineralised zone, sedimentary slivers are interleaved with komatiite-dominated strata and these are mantled by Fe-metasomatic halos, which enclose the bulk of the Au resource. The main mineralised zone is strongly altered and characterised by intense veining and foliation that frequently overprint original textures. An early phase of finely laminated, grey ankerite/dolomite veins is overprinted by stockwork-like irregular siderite ± quartz ± chlorite ± sulphide veins. These vein arrays are often deformed with shear-related boudinaging and insitu brecciation. Magnetite and/or haematite are common, in association with pyrite. Hydrothermal alteration commonly comprises quartz-dolomite-chlorite-magnetite (± haematite).

Gold is hosted by disseminated and vein-related pyrite, frequently occurring as ~1mm visible gold grains. Multi-phase breccias are well developed within the mineralised zone, with early silicified cataclastic phases overprinted by late, carbonate- iron-oxide- rich, hydrothermal breccias which display a subvertical control. All breccias frequently host disseminated pyrite, and are often associated with bonanza gold grades, particularly where magnetite or haematite is prevalent. In the sedimentary lithologies, albite alteration is intense and pervasive, with pyrite-magnetite (± gold) hosted in veinlets in brittle fracture zones.

1.6 Project Status

Ikkari represents a new grass roots discovery that was initially identified through systematic base of till sampling in early 2019. In the Ikkari area, a single anomalous base of till sample of 0.2ppm Au was followed up with infill sampling to a 50 x 25m grid, and a small cluster of anomalous samples up to 1ppm Au was identified. The first drillhole into this geochemical anomaly (hole 120038) was drilled in April 2020 and assayed 54m grading 1.5g/t Au from 25m, under 13m of glacial till cover material. Follow-up drillhole intercepts demonstrated very broad mineralised zones with a high-grade component over an initial strike length of >500m.

At the end of June 2021, 102 diamond drillholes have been completed at Ikkari for 36,635m. Exploration and resource drilling (including infill drilling) is ongoing at Ikkari.

The resource published in this report is intended to be used as a baseline for future resource work leading to economic assessment of the property.

The Rupert Lapland land package, on which the Ikkari deposit is located, also hosts the historic Pahtavaara gold mine and associated mill and tailings facilities which are currently on care and maintenance. Ikkari is located 25km to the west from the Pahtavaara Mine site. Given the scale of the mineralisation at Ikkari, it is not considered likely that the two deposits will share main infrastructure and the Ikkari deposit is currently being explored and evaluated separately as a stand-alone project.

1.7 Mineral Processing and Metallurgical Testing

Metallurgical testwork has been completed on two representative samples from the Ikkari deposit. The results showed up to 99.5% of gold could be recovered using conventional processing methods. Initial recoveries of 94 to 97% have been demonstrated, using a conventional gold extraction process, and additional regrind of flotation concentrate resulted in total gold extraction of over 99%. Given the preliminary nature testwork to date a recovery of 92% has been used for the Mineral Resource estimate reporting. Results also show moderate grinding work index and reagent consumption and acid mine drainage tests indicate that the host lithology is naturally neutralising.

1.8 Mineral Resource Estimate

The Mineral Resource estimate for the Ikkari Project is reported in accordance with National Instrument 43-101 and has been estimated using the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") "Estimation of Mineral Resources and Mineral Reserves best Practice Guidelines". This mineral resource estimate is classified as Inferred as defined by the CIM. Numbers displayed in Table 1.8_1 are affected by rounding. Gold grade estimation was completed using Multiple Indicator Kriging (MIK) for the mineralised domains. MIK grade estimates have been localised to an SMU dimension using an analogous methodology to Localised Uniform Conditioning. This estimation approach was considered appropriate based on review of a number of factors, including the quantity and spacing of available data, the interpreted controls on mineralisation, and the style, geometry and tenor of mineralisation. The estimation was constrained with geological and mineralisation interpretations.

Table 1.8_1 Ikkari Gold Deposit Mineral Resource report (Inferred Resource) - Summary grade tonnage report					
	Lower Cutoff Grade (g/t Au)	Tonnes (Mt)	Average Grade (g/t Au)	Gold Metal (Mozs)	Gold Metal (Kg)
Open Pit	0.6	30.53	2.6	2.51	78,200
Underground	1.2	18.80	2.4	1.44	44,600
Total		**49.33**	**2.5**	**3.95**	**122,800**

Note: Appropriate rounding has been applied.

A cutoff of 0.6g/t Au was selected for open pit component with the reported estimate constrained within a Whittle pit with a revenue factor of 0.4. Pit slope angles are 50 degrees and 44.5 degrees for the northern and southern pit walls based on an initial review of the geotechnical data collected to date. A cutoff of 1.2g/t Au was selected to define the portion of the mineral resource estimate that falls outside the open pit and has reasonable prospects for eventual economic extraction using underground mining methods. Cutoff grade selection was based on operating costs derived from comparable operations and first principles calculations. Estimated operating costs of US$25.2 and US$49.0 for the open pit and underground components respectively include costs for mining, processing, waste management and G&A. Further assumptions including process recoveries of 92%, a revenue royalty of 0.15% and a gold price of USD1430 per ounce. Further cost optimisation and metallurgical test-work is to be undertaken in future studies.

1.9 Conclusions

The Inferred Resource of 49.33Mt grading 2.5g/t Au (3.95Moz Au) is reported using 0.6g/t Au cutoff for the open pit component of the mine and a cutoff of 1.2g/t for underground. This maiden estimate is based on an initial geological interpretation of the deposit, following a review of all available data that has been collected over the past 15 months since discovery in April 2020. The resource is based on 36,635m of drilling completed by Rupert from April 2020 up to the end June 2021.

The Ikkari deposit is demonstrably open at depth and along strike and drilling is underway to test potential extensions of the resource as well as infill drilling to upgrade the resource to the Measured and Indicated classifications.

1.10 Recommendations

- Whilst the current drill spacing of 80m x 60m is providing sufficient data for the inferred estimate, Rupert should continue to infill to 40m x 30m in order to increase the resource confidence to a higher confidence classification.
- Continue to extend mineralisation by ongoing systematic drilling along strike and down dip, given that the results demonstrate that the system remains constrained in size by data availability rather than any geological constraint.
- Additional data collection to more fully understand the probability of economic extraction, to include geotechnical and hydrogeological information, to allow production of better optimised pit shells.

- Development of the regional exploration program across the Rupert Lapland project area, to identify further exploration targets for reconnaissance drilling.

2. INTRODUCTION

2.1 Terms of Reference

In June 2021, Rupert Resources commissioned International Resource Solutions Pty Ltd of Perth, Australia to prepare an independent technical report in compliance with the Canadian Securities National Instrument 43-101 Standards of Disclosure for Mineral Properties and Form 43-101F1. The work was undertaken by the Principal and Director of the company, Brian Wolfe, BSc(Hons), MAIG.

The purpose of the Report is to produce a preliminary resource estimate for the Ikkari deposit and to completed a NI43-101 compliant resource estimate. This report has an effective date of 13 September 2021.

This report was prepared at the request of Mr James Withall, CEO of Rupert, a TSXV-listed company with symbol RUP.V and incorporated in the Province of Ontario. The Company's offices are located at: 82 Richmond Street East, Suite 203, Toronto, Ontario, M5C 1P1.

2.2 Site Visit

The Independent Qualified Person (Resource Geologist) Brian Wolfe, Principal Consultant of International Resource Solutions Pty Ltd, subcontracted the site visit to Eemeli Rantala of AFRY AB, an Independent Qualified Person. Mr Wolfe was unable to visit the Ikkari Project Site due to the restrictions in place on international travel that relate to the ongoing COVID pandemic. It is anticipated that these restrictions will ease towards the end of 2021 and this will enable a further site visit by Mr Wolfe.

Eemeli Rantala, P.Geo, of AFRY AB visited the Ikkari site and core logging/office facilities on the 2nd and 3rd of September 2021. Drilling locations were inspected and core logging, sampling and database procedures were reviewed.

2.3 Sources of Information

Sources of information include internal technical reports, documents and maps provided by Rupert to the author in addition to the publicly available information. A list of reports is provided in Section 27.

2.4 Abbreviations

A full listing of abbreviations used in this report is provided in Table 2.4_1 below.

Table 2.4_1
Ikkari Gold Deposit
List of Abbreviations

	Description		Description
$	United States of America dollars	l/hr/m²	litres per hour per square metre
µ	Microns	M	million
2D	two dimensional	m	metres
3D	three dimensional	Ma	Million years
AAS	atomic absorption spectrometer	MIK	Multiple Indicator Kriging
Au	Gold	ml	millilitre
bcm	bank cubic metres	mm	millimetres
CC	correlation coefficient	MMI	mobile metal ion
CLGB	Central Lapland Greenstone Belt	Moz	million ounces
cfm	cubic feet per minute	Mtpa	million tonnes per annum
CIC	carbon in column	Mt	Million tonnes
CIL	carbon-in-leach	N (Y)	northing
cm	Centimetre	NaCN	sodium cyanide
cusum	cumulative sum of the deviations	NATA	National Association of Testing Authorities
CV	coefficient of variation	NPV	net present value
DDH	diamond drillhole	NQ2	size of diamond drill rod/bit/core
DTM	digital terrain model	ºC	degrees centigrade
E (X)	Easting	OK	Ordinary Kriging
EDM	electronic distance measuring	oz	troy ounce
EV	expected value	P80 -75µ	80% passing 75 microns
g	Gram	PAL	pulverise and leach
g/m³	grams per cubic metre	ppb	parts per billion
g/t	grams per tonne	ppm	parts per million
HARD	half the absolute relative difference	psi	pounds per square inch
HDPE	high density poly ethylene	PVC	poly vinyl chloride
HQ2	size of diamond drill rod/bit/core	QC	quality control
hr	Hours	Q-Q	quantile-quantile
HRD	half relative difference	RAB	rotary air blast
ICP-MS	inductivity coupled plasma mass spectroscopy	RC	reverse circulation
ID	Inverse Distance weighting	RL (Z)	reduced level
ID²	Inverse Distance Squared	ROM	run of mine
IPS	integrated pressure stripping	RQD	rock quality designation
IRR	internal rate of return	SD	standard deviation
ISO	International Standards Organisation	SGS	Société Générale de Surveillance
ITS	Inchcape Testing Services	SMU	selective mining unit
kg	Kilogram	t	tonnes
kg/t	kilogram per tonne	t/m³	tonnes per cubic metre
km	Kilometres	Y	year
km²	square kilometres		

3. RELIANCE ON OTHER EXPERTS

While information provided by Rupert relating to the project history, mineral processing and metallurgical testing, environmental studies and permitting, mineral rights, and surface rights has been reviewed, no opinion is offered in these areas. Specifically, the Qualified Person is not expert in land, legal, permitting, and related matters and therefore has relied upon, and is satisfied, there is a reasonable basis for this reliance on the information provided by the company management regarding mineral rights, surface rights and permitting in Section 4 of this Technical Report.

4. PROPERTY DESCRIPTION AND LOCATION

4.1 Location of Ikkari Gold Deposit

The Ikkari Gold Deposit is located within Rupert Resources' "Rupert Lapland Project" exploration licences, which occur across an area surrounding the Rajala village in the municipality of Sodankylä approximately 25km northwest of Sodankylä in northern Finland (Figure 1.3_1). The Ikkari Gold Deposit occurs in the westernmost extents of the Rupert Lapland Project, approximately 10km NNW of Jeesiö village (for coordinates see Table 4.1_1) and 22km WSW of the Pahtavaara Mine.

Table 4.1_1
Ikkari Gold Deposit Coordinates

Reference Grid	Easting	Northing
EUREF	454,100	7,496,950
YKJ	3,454,253	7,500,083

4.2 Right of Tenure

The Rupert Lapland Project area (in which the Ikkari Gold Deposit occurs) is comprised of a contiguous package of mining licences, exploration licences, claims and reservations for exploration totalling an area of 379.74km², and additional permits elsewhere in the Central Lapland Belt, totalling 558.42km² (see Table 4.2_1 for component parts, expiry and annual fees). The mineral resource defined in this report is contained within the existing valid exploration permit Heinälamminvuoma - ML2011:0033, with an area of 84km² (Figure 1.3_1). The rights conveyed to the landholder are defined in the Mining Act of Finland (621/2011) and summarised as follows:

4.2.1 Mining Permit

A mining permit is required for the establishment of a mine and the undertaking of mining activity. The mining permit entitles the holder to exploit the mining minerals found in the mining area, the organic and inorganic surface materials, waste rock and tailings generated as by-products of mining activities as well as other materials belonging to the bedrock and soil of the mining area to the extent that their use is necessary for the purposes of mining operations in the mining area. The mining permit also entitles its holder to perform ore prospecting within the mining area.

4.2.2 Exploration Permit

The holder of an exploration permit has the right to explore the structures and composition of geological formations on the permit holder's own land and on land owned by another landowner within the area referred to in the permit (exploration area). The permit holder also has the right to conduct other prospecting in order to prepare for mining activity and other exploration in order to locate a deposit and to investigate its quality, extent and degree of exploitation in accordance with the exploration permit.

Table 4.2_1
Ikkari Gold Deposit
Land Components of the Rupert Lapland Project

Type	Code	Status	Name	Company	Area (km²)	Granted	Expires	Fee Eur/ha
Mining Licence	3921	Valid	Pahtavaara	Rupert Finland Oy	3.86	9/14/93	N/A	50
	KL2013:0001-01	Valid	Pahtavaara laajennus	Rupert Finland Oy	0.35	9/12/13	Review after 10 years	50
Sub total					*4.21*			
Exploration Licence	ML2011:0034-01	Valid	Paskahaara 1	Rupert Finland Oy	17.00	8/11/17	9/12/21	20
	ML2013:0012-01	Valid	Paskamaa 2b-3b	Rupert Finland Oy	0.09	8/11/17	9/12/21	40
	ML2011:0033-01	**Valid**	**Heinälamminvuoma**	Rupert Exploration Finland Oy	**84.33**	**8/11/17**	**9/12/21**	**20**
	ML2017:0079-01	Valid	Rajala	Rupert Exploration Finland Oy	2.94	27/05/19	26/06/23	20
	ML2017:0080-01	Valid	Liikavaara	Rupert Exploration Finland Oy	3.71	05/02/19	07/03/23	20
	ML2012:0196-01	Valid	Soretiajärvi 4 (Hirvilavanmaa)	Rupert Exploration Finland Oy	0.96	19/07/18	20/08/21	50
	ML2011:0008-02	Valid	Soretiajärvi 3 (Hirvilavanmaa)	Rupert Exploration Finland Oy	0.09	19/07/18	20/08/21	50
	ML2019:0005	Valid	Satta	Rupert Finland Oy	4.54	02/07/19		30
	ML2019:0023	Valid	Satta SE	Rupert Exploration Finland Oy	43.49	07/11/19	18/03/24	20
	ML2019:0024	Valid	Pahta NW	Rupert Exploration Finland Oy	37.82	07/11/19	18/03/21	20
Sub total					*194.97*			
Exploration Licence	ML2020:0006	Application	Area 51	Rupert Exploration Finland Oy	65.56	17/02/20	N/A	N/A
	ML2020:0007	Application	Liika	Rupert Exploration Finland Oy	0.79	20/02/20	N/A	N/A
	ML2012:0195-01	Application	Pahtarimpi 2-3	Rupert Finland Oy	1.66	31/07/21		N/A
	ML2013:0013	Application	Pahtarimpi 10-11	Rupert Finland Oy	**5.46**	31/07/21		N/A
	ML2013:0014-01	Application	Paskamaa 1-5	Rupert Finland Oy	4.88	31/07/21		N/A
	ML2012:0080-02	Application	Liikamaa 1-4	Rupert Finland Oy	1.97	31/07/21		N/A
	ML2021:0003	Application	Jeesiö	Rupert Exploration Finland Oy	58.28	*Pending*		
Sub total					*138.6*			
Reservation for Exploration Licence	VA2020:0047	Application	Möykkelmä	Rupert Exploration Finland Oy	101.29	16/08/2020	N/A	N/A
	VA2021:0050-01	Application	Kallo	Rupert Exploration Finland Oy	119.35	13/07/2021	N/A	N/A
Sub total					*220.64*	*N/A*	*N/A*	*N/A*
Total					558.42			

The permit holder may build or transfer to the exploration area temporary constructions and equipment necessary for exploration activity in accordance with the exploration permit. An exploration permit does not authorise the exploitation of the deposit. It does, however, provide the holder with a privilege for the mining permit, which in turn provides the right to exploit the deposit. The prerequisites for the granting of the mining permit are to do with the size, ore content and technical characteristics of the deposit concerning its exploitability.

Exploration permits are valid for up to 15 years.

4.2.3 Reservation

For the purpose of preparing an application for an ore prospecting permit, an applicant may reserve an area for themself by submitting a notification to the mining authority about the matter (reservation notification). A privilege based on a reservation notification becomes valid once the reservation notification has been submitted in compliance with the provisions laid down in section 44 of the Mining Act (621/2011) and there is no reason, as specified in the Mining Act, for the rejection of the reservation. The validity of the privilege expires when the decision made by the mining authority on the basis of the reservation notification (reservation decision) expires or is cancelled. The reservation does not entitle the applicant to perform exploration. Instead, the reservation grants a privilege as regards the submission of an ore prospecting application.

4.3 Annual Fees and Royalties

Legislation requires holders of exploration and mining permits to make annual payments to landowners on EUR/ha basis (see Table 4.3_1). A statutory mining royalty of 0.15% of the value of the exploited mineral / metal is also payable to the landowner.

Table 4.3_1
Heinälamminvuoma exploration permit ML2011:0033-01
Annual royalty payments according to Finland Mining Act 2011

Permit Type	EUR/ha
Exploration (years 1 - 4)	20
Exploration (years 5 - 7)	30
Exploration (years 8 - 10)	40
Exploration (years 11 - 15)	50
Mining	50

No royalty agreements are relevant to the Ikkari deposit.

4.4 Environmental Bonds

N/A

5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Property Access

The airport of Rovaniemi has several scheduled domestic flights daily to and from Helsinki. The distance from Rovaniemi to Sodankylä is 130km by road and takes just under two hours to drive. To reach Ikkari from Sodankylä, turn towards Kittilä onto main road 80. Continue to follow road 80 towards Kittilä, 4.5km after Jeesiö village turn right to Pulkittama. Continue to follow Pulkittama road for 7.5km where forest tracks lead directly to the exploration site.

Access to the site is possible throughout the year.

5.2 Physiography

The landscape was sculpted by extensive glaciers in the most recent ice age between 110,000 and 10,000 years ago. Following the last glacial period, melting ice sheets resulted in shallow lakes and extensive boggy lowlands. Broad valleys were scoured out in the direction of glacial transport, flanking low-lying hills underlain by resistant rocks. The landscape is dominated by low rolling hills and flat lowlands comprised of bogs and lakes. Hills are mostly covered by glacial moraine and sands and are forested, primarily with birch, pine, and spruce. Bedrock outcrops on the hills and along riverbanks, but is limited to some 2% or less of the project area. The Ikkari gold deposit is located at the margins of low-lying bog terrain, cut by a small stream, rising towards boulder-dominated gentle slope in the south/southeast. The area in general is approximately 225m above sea level. This terrain largely drains to the north and then east into the Saitta River and then into the Sattanen River and further into the catchment basin of the Kitinen River, and eventually the area drains into the Kemi River.

5.3 Climate

According to Köppen climate classification, northern Finland belongs is classified as Dfc (Continental, without a dry season and a cold summer). The region has cold, wet winters, where the mean temperature of the warmest month is no lower than 10°C and that of the coldest month no higher than -3°C. The rainfall is, on average, moderate in all seasons.

The climate is typical of northern Fennoscandia with temperate summers and cold winters. During the summer months (June to August), temperatures are mostly between 10°C and 20°C, and during the winter months (November to April) between -2°C and -20°C based on 10-year averages from 2005 to 2015 for Sodankylä snow covers the terrain on an average of 183 days in the year with a maximum snow thickness varying from 0.6m to 1.2m in March. Bogs, lakes and rivers are frozen for four to five months of the year. Exploration work can be conducted during the winter by taking advantage of the frozen bogs for access.

Annual rainfall is around 600mm with a monthly range between 30mm (April) to 90mm (July). The wettest period is June to July and the driest period from February to April. The climate of northern Finland is influenced by its arctic location between the 60th and 70th northern parallels located in the Eurasian continental coastal zone. This region has characteristics of both the maritime and continental climate depending on the direction of airflow. When westerly winds prevail, the weather is warm and clear due to the airflows from the Atlantic Gulf Stream. When airflow is from the east, the Asian continental climate prevails resulting in severe cold in winter and extreme heat in summer.

The mean temperature in northern Finland is several degrees higher than that of other areas in these latitudes such as Siberia and southern Greenland due to the moderating effect of the Atlantic Ocean and the Baltic Sea.

Weather patterns in the project area and in the general region can change quite rapidly, particularly in winter, because northern Finland is located in a zone of prevailing westerly winds where cooling sub-tropical and polar air masses collide. The weather systems known to have the greatest influence on the climate are the low-pressure systems originating near Iceland and the high-pressure systems drifting in from Siberia and the Azores.

5.4 Local Resources and Regional Infrastructure

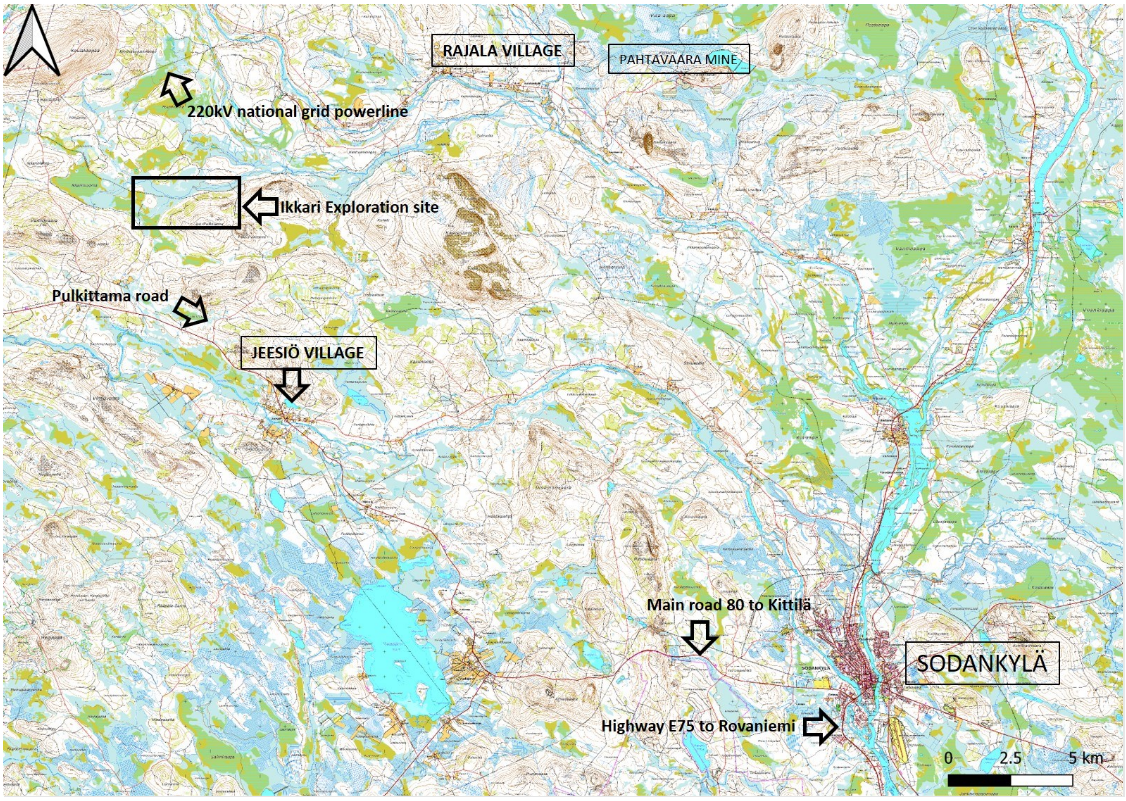
The town of Rovaniemi in Finland is located some 150km south-southwest of Pahtavaara. Rovaniemi has a population of approximately 40,000 inhabitants and is the administrative centre of Finnish Lapland. The regional technical centre of the Geological Survey of Finland (GTK) and its analytical laboratory are also located here.

The town of Sodankylä provides most of the support services for the Pahtavaara mine and Rupert Lapland exploration permits, including accredited sample preparation facilities operated by ALS Minerals and Eurofins Labtium. ALS Minerals and Eurofins Labtium are internationally accredited laboratories and are ISO compliant (ISO 9001:2008, ISO/IEC 17025:2005). The regional industrial base is currently dominated by small businesses involved in forestry, agriculture and manufacturing. There are several hotels, shops, and restaurants which accommodate a growing year-round influx of tourists into Lapland. A skilled work force is in place.

Hydroelectric power in the region is relatively inexpensive for commercial use. A main high voltage electrical power line is present 5km north of the Ikkari deposit (Figure 5.4_1).

No surface infrastructure is currently present at Ikkari, but facilities including a heavy vehicle workshop, administration building, two core sheds and a processing plant are available at the Pahtavaara mine site 22km ENE of Ikkari, which is the logistical hub for Ikkari exploration activities.

Figure 5.4_1
Regional infrastructure



6. HISTORY

The Heinälamminvuoma exploration permit on which the Ikkari Gold Deposit is located, was applied for in 2011 by Lapland Goldminers, who were then owners of the Pahtavaara Mine. The Heinälamminvuoma exploration permit has been part of the Rupert Lapland Project area since that time, although very little exploration was undertaken and exploration field activities confined to the easternmost parts of the licence, adjacent to the Pahtavaara Mine itself. Lappland Goldminers held Heinälamminvuoma exploration permit, as part of its Pahtavaara Mine operations, until 2014 when the parent company in Sweden filed for bankruptcy. Rupert Resources purchased the Pahtavaara operation, and associated exploration permits, from the administrators of Lappland Goldminers in September 2016.

Ikkari is an under-cover grass roots discovery. Limited previous exploration activities have been undertaken in the area prior to the work conducted by Rupert Resources during 2019 – 2021.

6.1 Previous Mapping and Surface Sampling

Regional mapping has been undertaken by the GTK, but due to the limited outcrop of the region, the majority of this has been interpreted using regional geophysical surveys. Limited bedrock observations have been undertaken by GTK, largely restricted to higher ground outside of the current exploration permit boundaries.

6.2 Previous Geochemical Surveys

Regionally, the Geological Survey of Finland has historically carried out limited outcrop and boulder sampling across the hills to the south and southeast of Ikkari, and Terra Mining (previous owners of the Pahtavaara Mine (1991-2000)) undertook broad spaced till sampling also across higher ground to the south and east of Ikkari, but no sampling has been undertaken across the Heinälamminvuoma area which hosts the Ikkari deposit.

Previous geochemical sampling within the Heinälamminvuoma exploration licence area comprises only historic (1974-1979) till geochemistry in very broad-spaced (>1km) lines conducted by GTK. These samples were assayed for Ag, Pb, Zn, Cu, Ni, Co, Mn, Cr, V, Ti, K, Na, Ca, Mg, Fe, Al and Si and did not include assays for gold. Sample depths appear to have been within the till horizons and did not reach the bedrock contact.

6.3 Previous Geophysical Surveys

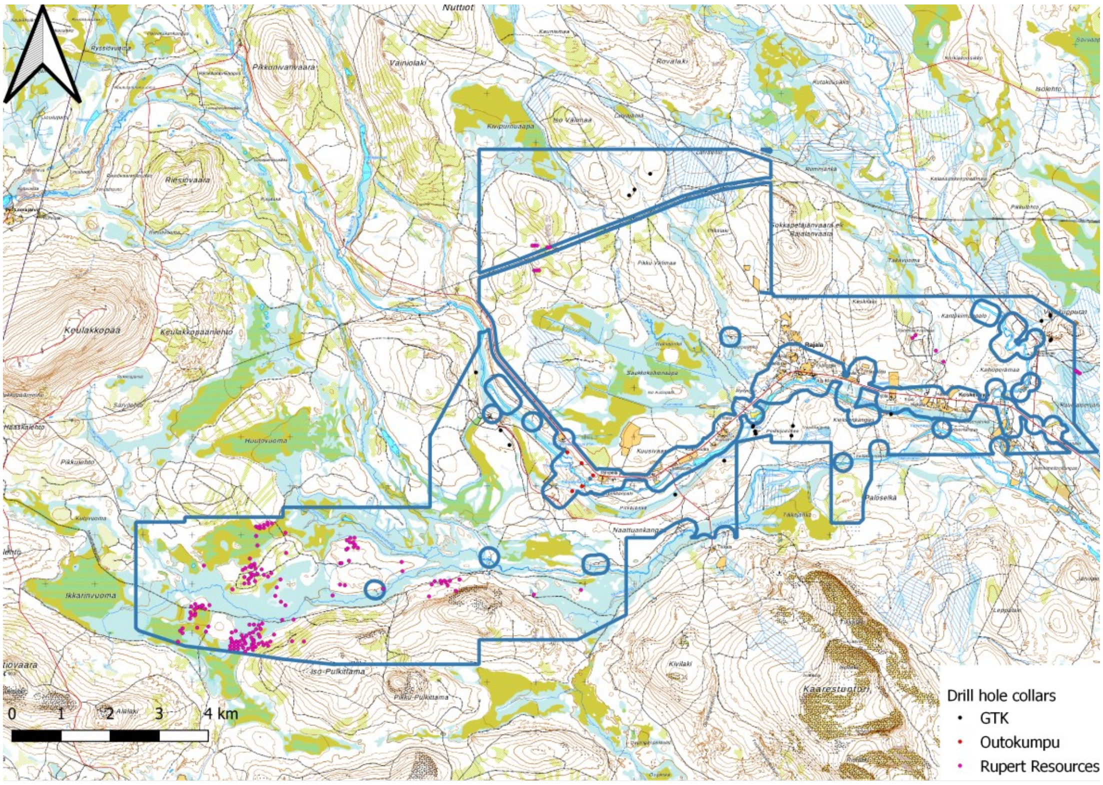
The Geological Survey of Finland (GTK) has conducted low-altitude, airborne magnetic, electromagnetic and radiometric surveys and systematic ground magnetic and slingram surveys within the exploration licence areas. The GTK has also conducted ground gravity, AEM, IP and VLF-R surveys in the Pahtavaara mine area. Scan Mining analysed the ground geophysics in 2007.

6.4 Drilling by Previous Explorers

Within the Heinälamminvuoma exploration licence area, a total of 2,420m of historic diamond drilling has been completed within the licence area, from 26 drillholes (Table 6.4_1). Very limited drilling has been undertaken by any previous explorers and the majority of these holes is confined to the eastern extent of the licence area (Figure 6.4_1).

Table 6.4_1 Ikkari Gold Deposit Summary of historic drill data for Heinälamminvuoma exploration permit area			
Company	DH Type	Holes	Metres % of Total
Outokumpu (1989 to 1991)	Diamond	5	584
Geological Survey of Finland (Pre- 1989)	Diamond	21	1836
Total		**26**	**2,420**

Figure 6.4_1
Location of drilling on the Heinälamminvuoma exploration licence



No previous drilling has been undertaken at the Ikkari deposit. A review of the drillhole assay database has indicated that much of the drilling by previous explorers was been selectively sampled, with few assays for gold.

6.5 Historical Resource and Reserve Estimates

N/A

6.6 Production History

N/A

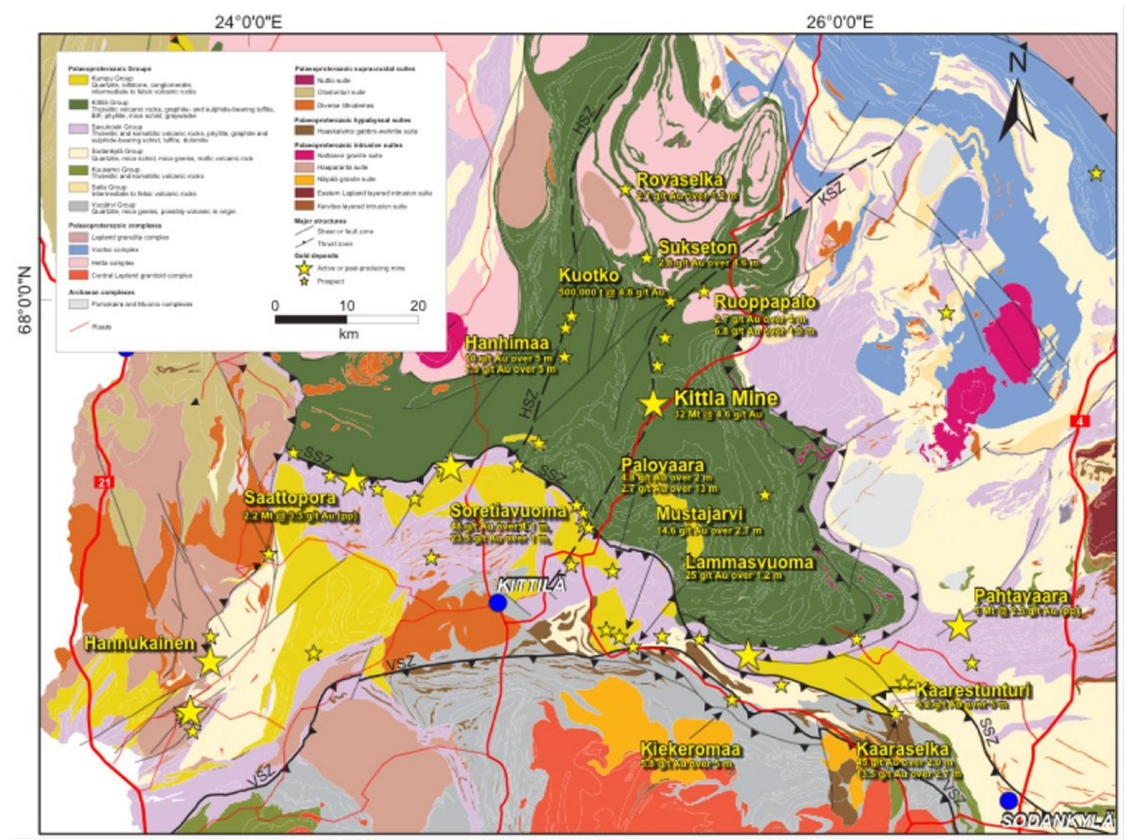
7. GEOLOGICAL SETTING AND MINERALISATION

7.1 Geological Setting

The Rupert Lapland Project area and Ikkari deposit is located within the CLGB, part of the Fennoscandian shield, which hosts 1,700 known incidences of mineralisation in Finland, Sweden, Norway and Russia including around 80 mines. The CLGB has two gold mines of significance. Agnico Eagle's 4.1Moz Kittilä mine which produced 208,125oz of gold in 2020 and the historically producing Pahtavaara mine which mined an estimated 441koz of gold in three periods of ownership between 1996 and 2014 (GTK, Mineral Deposit Report) with a remnant Inferred Resource of 4.6 million tonnes grading 3.2g/t Au (estimated by Rupert Resources in 2018).

The Rupert Lapland Project area lies at the eastern extreme of the Sirkka Line (Sirkka shear zone, Eilu et al. 2007), a tectonic structure that traverses northern Finland, along which some 25 to 30 gold deposits exist, either within or related to subsidiary structures along it (Figure 7.1_1). The shear zone is also associated with intense alteration (albitisation, sericitisation and carbonatisation) as well as anomalous Au along its entire length (Eilu et al, 2007).

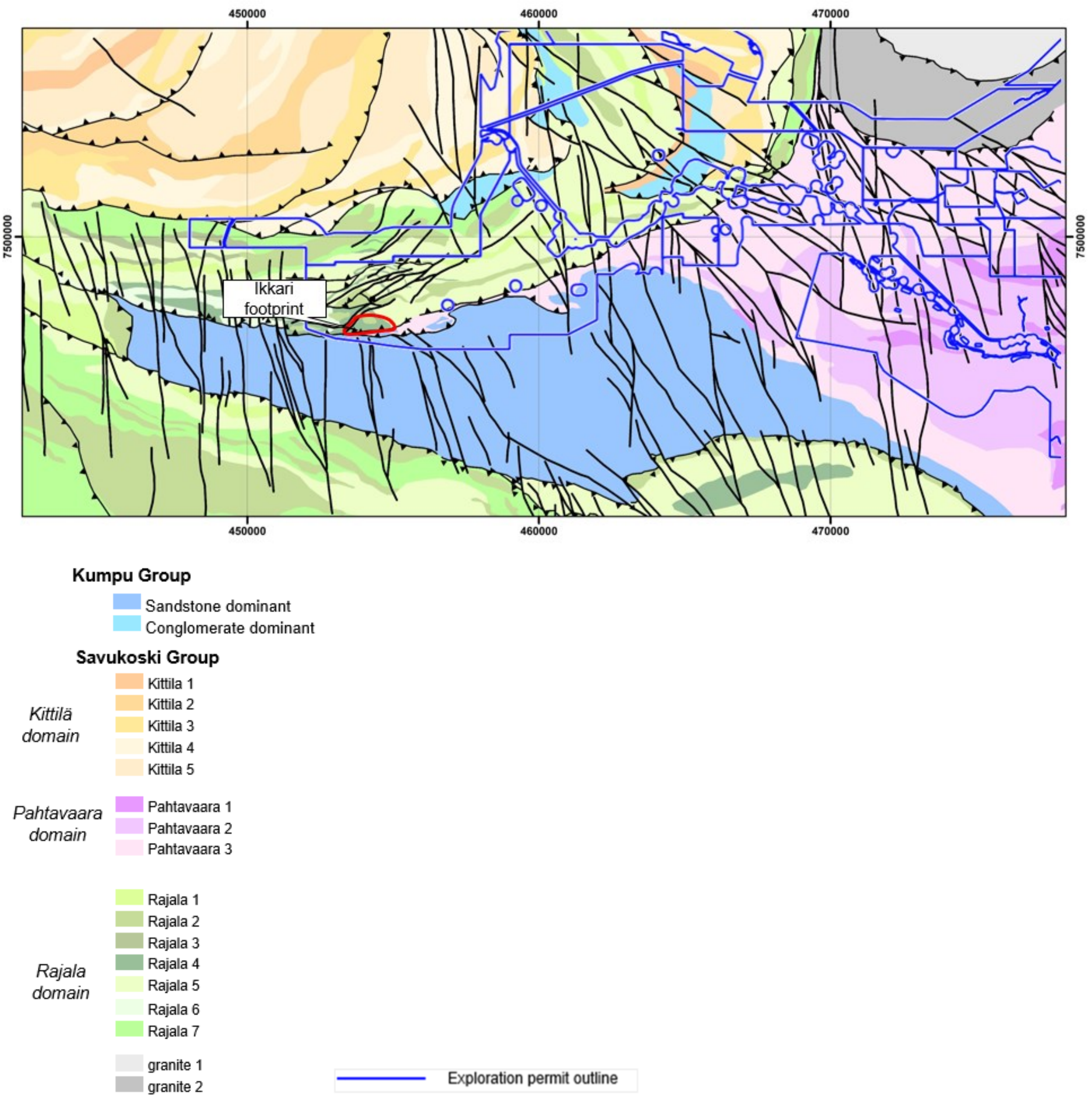
Figure 7.1_1
Geological map of Central Lapland greenstone belt



(Geology after Lehtonen et al., 1998)

The Rupert Lapland Project exploration permits occur at a significant regional geological domain boundary zone, which trends predominantly E-W through the westernmost extent of the Rupert exploration licences (Figure 7.1_2). A ~4km wide zone of 2.05Ga Savukoski Group rocks, comprising fine-grained metasedimentary rocks, including phyllite, carbonaceous shale and mafic intrusive rocks, as well as komatiites, occurs between younger Kittilä Group rocks to the north (dominantly tholeiitic metabasalts) and Kumpu Group rocks (molasse-type fluviatile quartzites, subarkoses and polymictic conglomerates) to the south.

Figure 7.1_2
Structural domain map of the Ikkari-Pahtavaara district, based on potential field data



(Selley, 2019)

Regional drilling and mapping by Rupert Resources, indicate that the Savukoski Group 'corridor' across the Heinälamminvuoma permit area is steeply dipping and structurally thickened via upright folding, with the boundaries between steep-and shallow-dipping domains interpreted as NE striking D_1 thrust ramps, slightly oblique to a main thrust front to the south (Selley 2019).

Structurally, the geometries of the various lithotypes are consistent with relatively low angle thrust-stacking and possibly associated large-scale tight to isoclinal folding (Figure 7.1_2). F_2 fold closures are remarkably consistent in their orientation with associated intersection lineations plunging shallowly WSW to WNW, consistent with broadly N-S shortening (i.e. sub-parallel to that inferred for D_1). Particularly in the eastern parts of the permits area, progressive amplification of upright folds has led to the development of piggy-back sub-basins hosting Kumpu Group conglomerates, and the presence of the Archean Möykkelmä dome in the east, has acted as rigid indenter against which, thrust fronts have tightened and locked up with shear reactivation of steepened fold limbs leading to the development of a complex brittle-ductile permeability network (Selley, 2019).

The Ikkari deposit occupies a complex structural position between thrust imbricated Savukoski Group metavolcanics and metasediments, and synorogenic molasse-type siliciclastic strata of the Kumpu Group. Regionally, a southward convex thrust corridor is dissected by ENE-striking elements to the north of the deposit, whereas an array of apparently late-stage N-S to NW-striking faults propagates from the Kumpu Group 'basin' to the south (Figure 7.1_2). The unconformity between the Savukoski and Kumpu Groups has been structurally modified, and forms the locus of hydrothermal alteration and gold mineralisation.

7.2 Deposit Geology

It should be noted that outcrop across most of the Heinälamminvuoma permit area and especially in the immediate vicinity of the Ikkari deposit, is virtually non-existent. Transported boulders, particularly of Kumpu Group rocks to the south of Ikkari, are not considered reliable indicators of sub-surface geology. Ikkari is a grassroots discovery, located under 10-25m of transported glacial till cover.

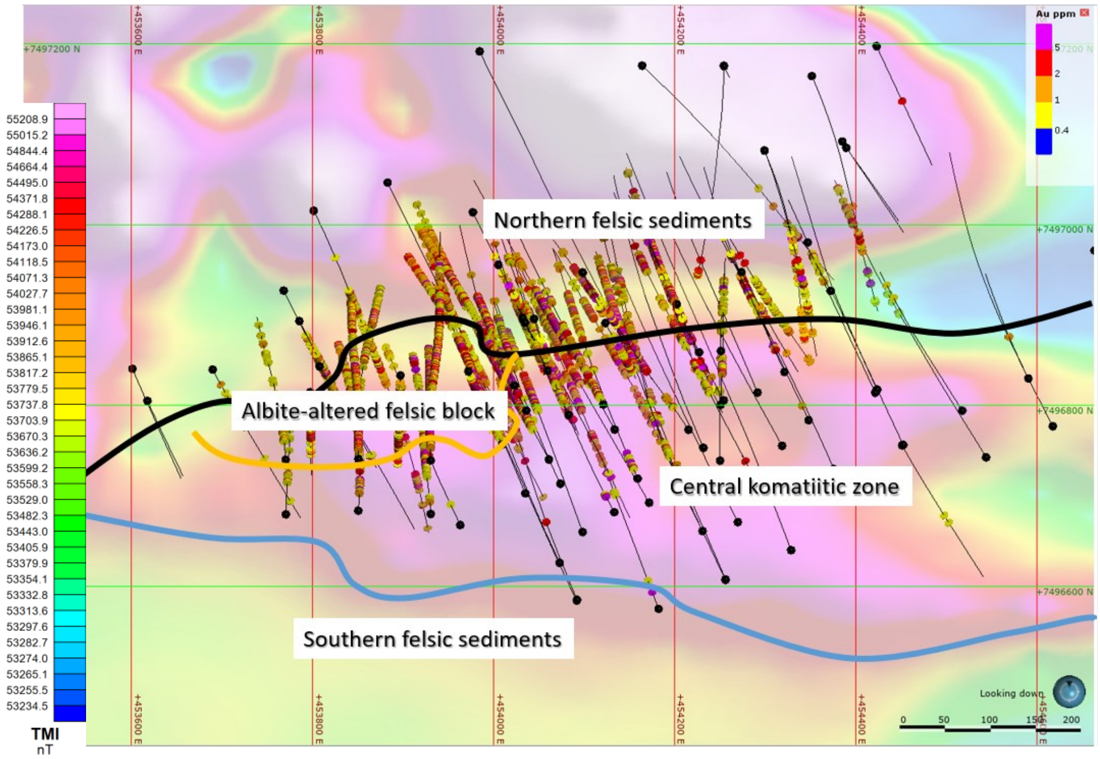
Ikkari occupies a complex structural position between thrust imbricated Savukoski Group metavolcanics and metasediments, and synorogenic molasse-type siliciclastic strata of the Kumpu Group. At their most basic level, a 4-fold lithologic subdivision is constructed for the host rocks of Ikkari mineralisation (Figure 7.2_1):

- dark pyritic shales and siltstones (intruded by gabbro) comprise the majority of the northern fault block.
- A central komatiite-dominant zone with complexly folded intercalations of texturally diverse 'felsic' facies.
- A northern, banded 'felsic' facies, intensely albite-altered in places, that pinches out in the eastern part of the deposit.
- A southern zone comprising dominantly coarse 'felsic' siliciclastics – massive, banded, conglomeratic and typically more quartz-rich than the northern facies.

7.2.1 Rock Types

Ultramafic units are dark grey to green-grey schistose extrusive rocks, which occasionally exhibit volcanoclastic textures with lapilli-like deformed clasts. Geochemically, they are komatiitic in composition (> 60% Mg) and are almost completely altered to talc-chlorite composition, but also variably contain serpentine, amphibole and biotite and characteristic narrow, wispy calcite veinlets (Figure 7.2_2). In places, intensely altered ultramafic rocks may appear as a more mafic lithology (magnesium replaced by iron), in proximity to the mineralised zone (Figure 7.2_3). The ultramafic sequence forms over 100m-thick continuous unit between the Ikkari mineralisation and footwall quartzites.

Figure 7.2_1
Plan view of Ikkari deposit showing surface contacts of key lithologic units, on background TMI magnetics



Scale bar: 200m, Grid: 200m

Figure 7.2_2
Example of barren ultramafic rocks with characteristic calcite veining

Hole 120065 at 138m
*Core size HQ (63.5mm core width)

Figure 7.3_3
Example of chaotically veined, stockwork-like siderite ± quartz ± chlorite± sulphide veins in altered mafic-ultramafic rock with strong sericite-silica overprint

Fine-grained disseminated pyrite hosts 5.78g/t Au in this sample. Hole 120086 at 166m.
*Core size NQ (50.7mm core width)

The sedimentary package is characterised by highly variable alteration styles, in places intense veining and foliation that frequently overprint texture, making identification of the original lithology difficult. Geochemical characterisation of these rocks also gives a 'mixed' signature and it is inferred that the sediments range from felsic (pelites) through to heterogeneous mafic-dominated composition (greywacke), implying a variable volcanogenic component. Where original textures are preserved, finely-laminated dark grey to green-brown silty sediments are common, with occasional coarse grained (up to gravel-sized clasts) units. Hydrothermal alteration overprints a biotite-chlorite-mica greenschist assemblage and commonly comprises quartz-dolomite-chlorite-magnetite (± haematite), particularly in association with veining (Figure 7.2_4). In places, sedimentary banding is commonly defined (or enhanced) by albite flooding.

Figure 7.2_4
Example of boundinaged quartz-carbonate veins in altered mafic-ultramafic rock

Hole 1120071 at 240m.
*Core size HQ (63.5mm core width)

Felsic sediments are intensely and pervasively albite-altered, particularly forming a large block of albitised rock in the north western extent of the deposit. Albite alteration varies from brown to brick red in colour and original sedimentary textures are obliterated (Figure 7.2_5). Albite-altered rocks are dominated by brittle fracture, with gold mineralisation associated with pyrite (±magnetite) in veinlets.

Figure 7.2_5
Example of strongly albite-altered felsic sedimentary rock with micro-veinlets hosting pyrite-magnetite, assays of 4.1g/t Au in this sample

Hole 120072 at 106m.
*Core size HQ (63.5mm core width)

Laminated carbonaceous shale (black schist) forms the hangingwall (northern margin) to mineralisation in most places. It contains significant amounts of syngenetic disseminated pyrite (Figure 7.2_6), which is often banded, and although graphite content is overall low, graphitic fractures occur in places.

Figure 7.2_6
Example of laminated carbonaceous shale displaying folding with unmineralised pyrite

Hole 120119 at 374m
*Core size NQ (50.7mm core width)

In the northernmost extent of the deposit is a mafic intrusive of gabbroic composition, which intrudes the carbonaceous shale, including locally, narrow dykes.

To the south of the mineralised zone, is the contact with the Kumpu Group quartzites. These are coarse-grained, relatively unaltered and weakly strained. The contact appears to be faulted and brecciated and dips irregularly towards the north. Minor mineralisation is seen in quartz veinlets at the contact and in some places, within the quartzite.

It should be noted that the age and relative timing of the felsic sediments, particularly those intercalated within the ultramafics, is currently unclear. Preliminary dating of some of these units indicates that they are all of a similar Kumpu age ~1.88 Ga (Harju, 2021) which suggests that these younger rocks must have been complexly structurally interposed within the older komatiite units.

Breccias are common throughout the deposit and occur is most lithology types. Structural relationships indicate at least three main phases of brecciation:

1) A polymictic breccia, with coarse fragments, frequently fuchsitic or intensely chlorite-altered, displaying elongation of clasts parallel to S2 foliation (Figure 7.2_7).
2) A cataclastic tourmaline-carbonate-silica-cemented breccia commonly contains clasts of albite-altered sediments (Figure 7.2_8).
3) A late, carbonate-iron-oxide-rich, hydrothermal breccia that contains rounded quartz grains in a fine-grained matrix and is sometimes vuggy (Figure 7.2_9). With typically narrow (10-30cm wide) cross-cutting geometries that indicate fluidised injection (Figure 7.2_10), these breccias frequently host disseminated pyrite, and associated gold grades. Breccias appear to have a dominant sub-vertical control and are associated with high-grade gold mineralisation and sulphide concentrations, within and particularly at margins.

Figure 7.2_7
Example of chlorite alteration and disseminated pyrite (seen here as rusty staining) within disrupted coarse carbonate- veined ultramafic rock

Hole 120059 at 132m, containing 1.57ppm Au.
Thicker, coarser-grained siderite veins frequently appear to occupy a marginal position to the mineralised zone.
*Core size NQ (50.7mm core width)

Figure 7.2_8
Example of polymictic, cataclastic breccia with fuchsitic siltstone clasts and rounded quartz grains

Hole 120059 at 276m
*Core size NQ (50.7mm core width)

Figure 7.2_9
Example of late haematite-cemented breccia in albite-altered felsic sediments

Hole 120075 177m, containing 4.35ppm Au.
*Core size NQ (50.7mm core width)

Figure 7.2_10
Example of narrow, iron-oxide-rich breccia

Hole 120123 at 196.4m, containing 64.9ppm Au.
*Core size NQ (50.7mm core width)

Figure 7.2_11
Example of narrow, late calcite veins cross cutting breccia development (left) and sedimentary banding (right)

Hole 120086 at 299m
*Core size NQ (50.7mm core width)

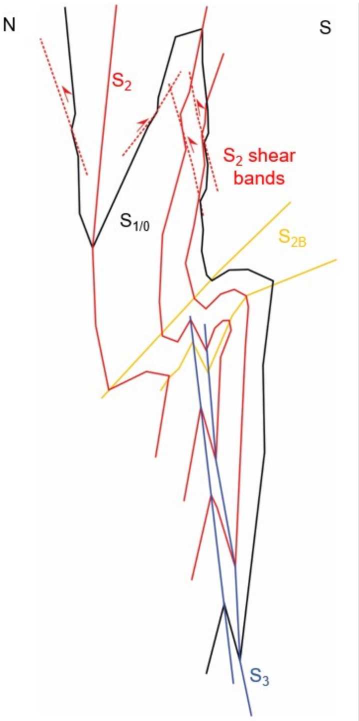
7.3 Structure

Occurring at the structurally modified unconformity between the Savukoski and Kumpu Groups, the Ikkari mineralisation is largely confined to a ~ENE striking, ~200m wide corridor of structurally interleaved Kumpu and komatiite-dominated Savukoski groups strata (Figure 1.4_2). A steeply N-dipping cataclastic, tourmaline-bearing shear defines the northern margin of the mineralised, interleaved, corridor, obliquely cutting units in the latter, but sub-paralleling the strike of Savukoski black (carbonaceous) shale-dominated strata to the north. The southern margin of the mineralised corridor is less well constrained by drilling, but appears to comprise an outlier of quartzitic Kumpu Group sandstones and conglomerates that is at least locally in sheared contact with komatiitic rocks to the north.

Initial structural studies of representative drillhole intersections from Ikkari (Selley, 2021) indicate three distinct phases of deformation that are texturally and geometrically analogous to the deformation history recorded throughout the region (Figure 7.3_1). These phases of deformation have led to the development of a complex meshwork of structures and fractures which have acted as fluid flow pathways at various times. These structural meshworks, and relative timing of iron- and gold-bearing fluids have resulted in the deposition of gold mineralisation, associated with pyrite at structural and geochemical 'trap' sites.

A first phase of deformation (D_1) records early orogenic, large-scale recumbent folding and thrust stacking, with layer-parallel fabrics developed (e.g. Figure 7.4_2). Although this deformation is poorly preserved it interpreted to represent complex interleaving of shale (northern felsic block), and komatiitic facies, which appears to have been a necessary 'pre-conditioning' for gold mineralisation, especially in the eastern part of the deposit.

Figure 7.3_1
Schematic representation of three phases of structural deformation at Ikkari deposit, showing planar fabric relationships and resulting complex structural meshwork



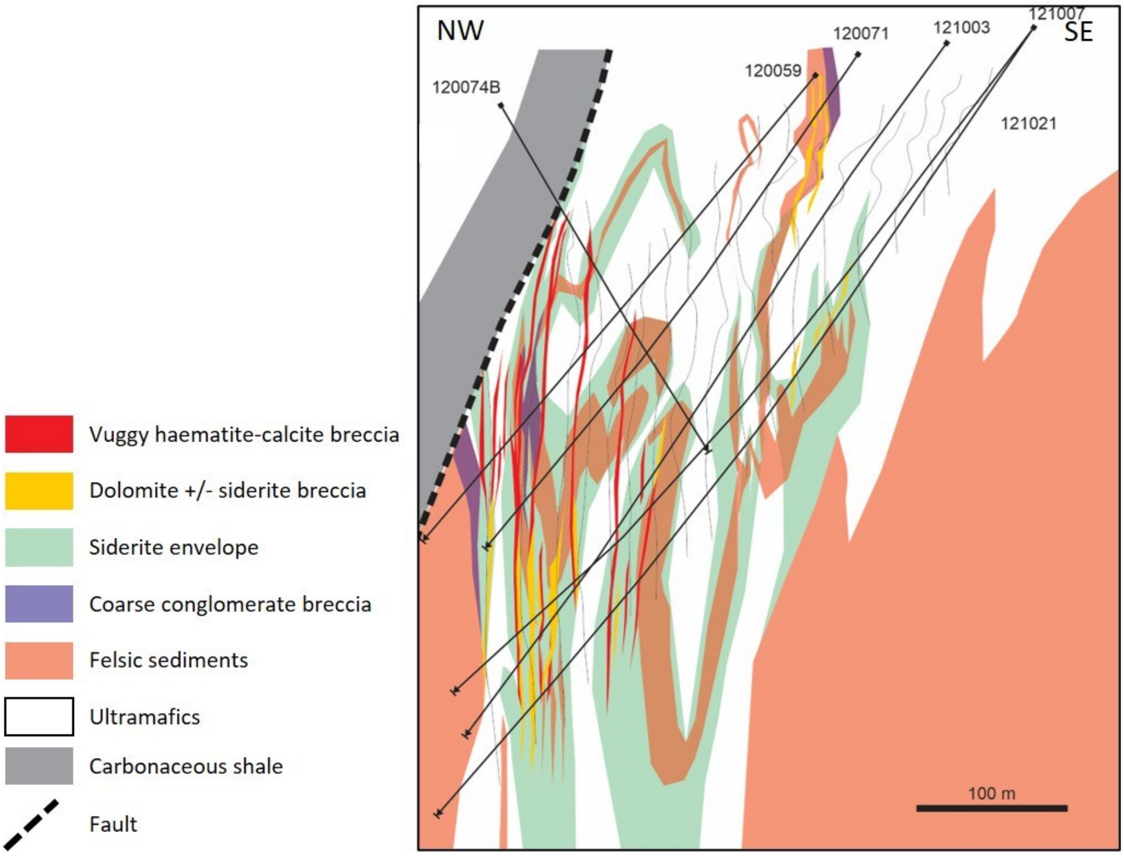
(Selley, 2021)

A later deformational event (D_2) N-S to NW-SE compression of the thrust stack, resulted in the development of tight (meter-scale) upright folds (shallowly SW-plunging fold axes), which resulted in the complex geometries of the interleaved sediments that are now observed (cf. Figures 7.3_2, 7.3_3, 7.3_4). It is apparent that this geometry also contributes to the localisation of gold mineralisation, fold hinges appear preferentially mineralised and host many of the high-grade intercepts.

This deformation phase included NE- to E-W striking, steeply dipping shear zones that dissect the fold geometry and provide the dominant foliation across the deposit. N-dipping narrow, cataclastic shears mark the southern and northern boundaries of the tightly folded, mineralised block in the central part of the deposit. Both fault zones show evidence of multistage activation, with brittle-ductile and brittle fabrics dominating.

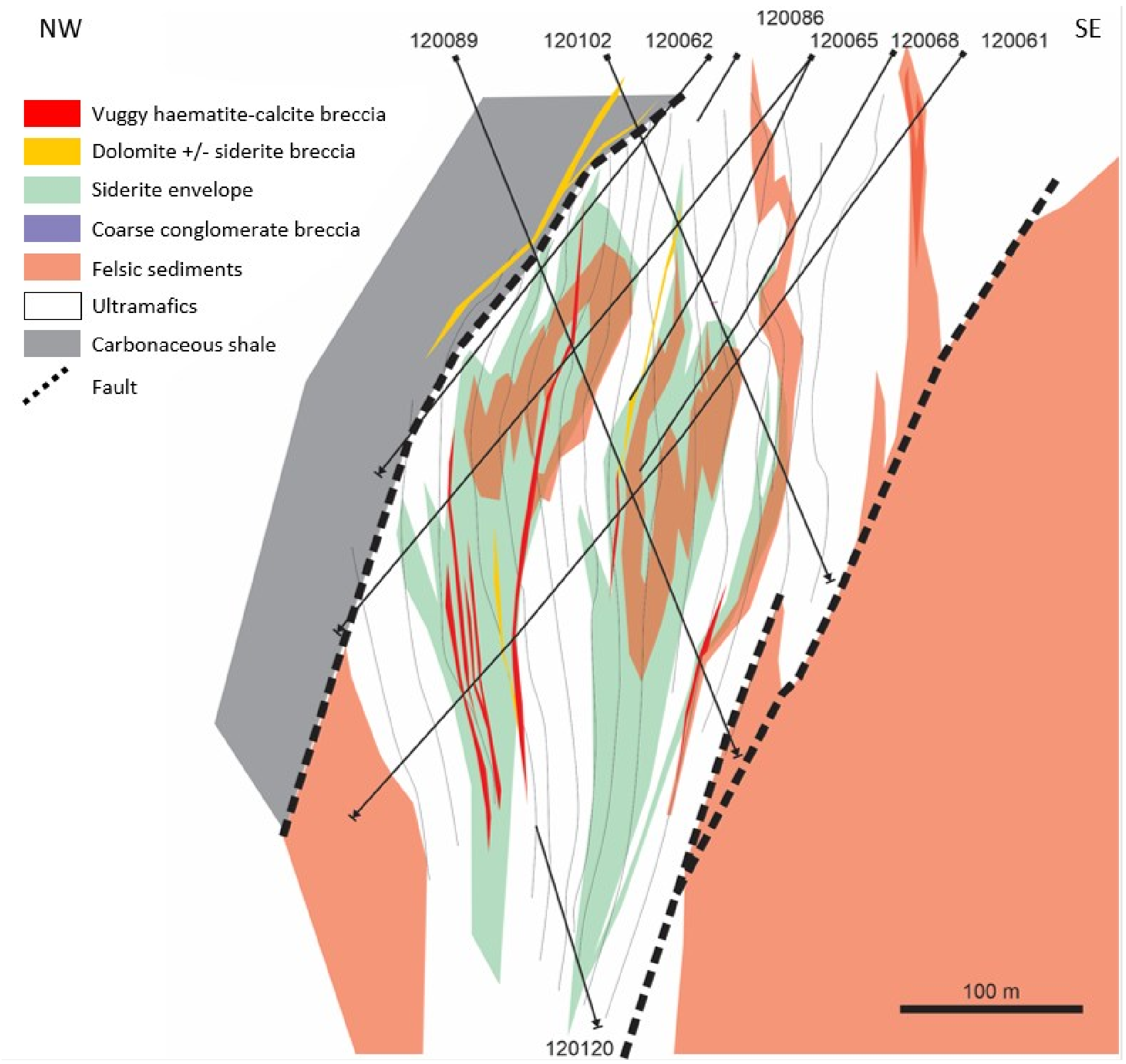
D_2 fabrics are most closely associated with Au-related alteration. An early phase of quartz-sericite-pyrite+/-dolomite veining appears to account for the many of the low and moderate grade Au intervals. The central komatiitic zone is affected by semi-ductile shears, surrounded by a sericite alteration envelope. However, pyrite-rich zones of chlorite-magnetite-siderite alteration (reflecting early Fe-concentration) are also typically well mineralised.

Figure 7.3_2
Cross section (looking NE) through Ikkari deposit (central section)



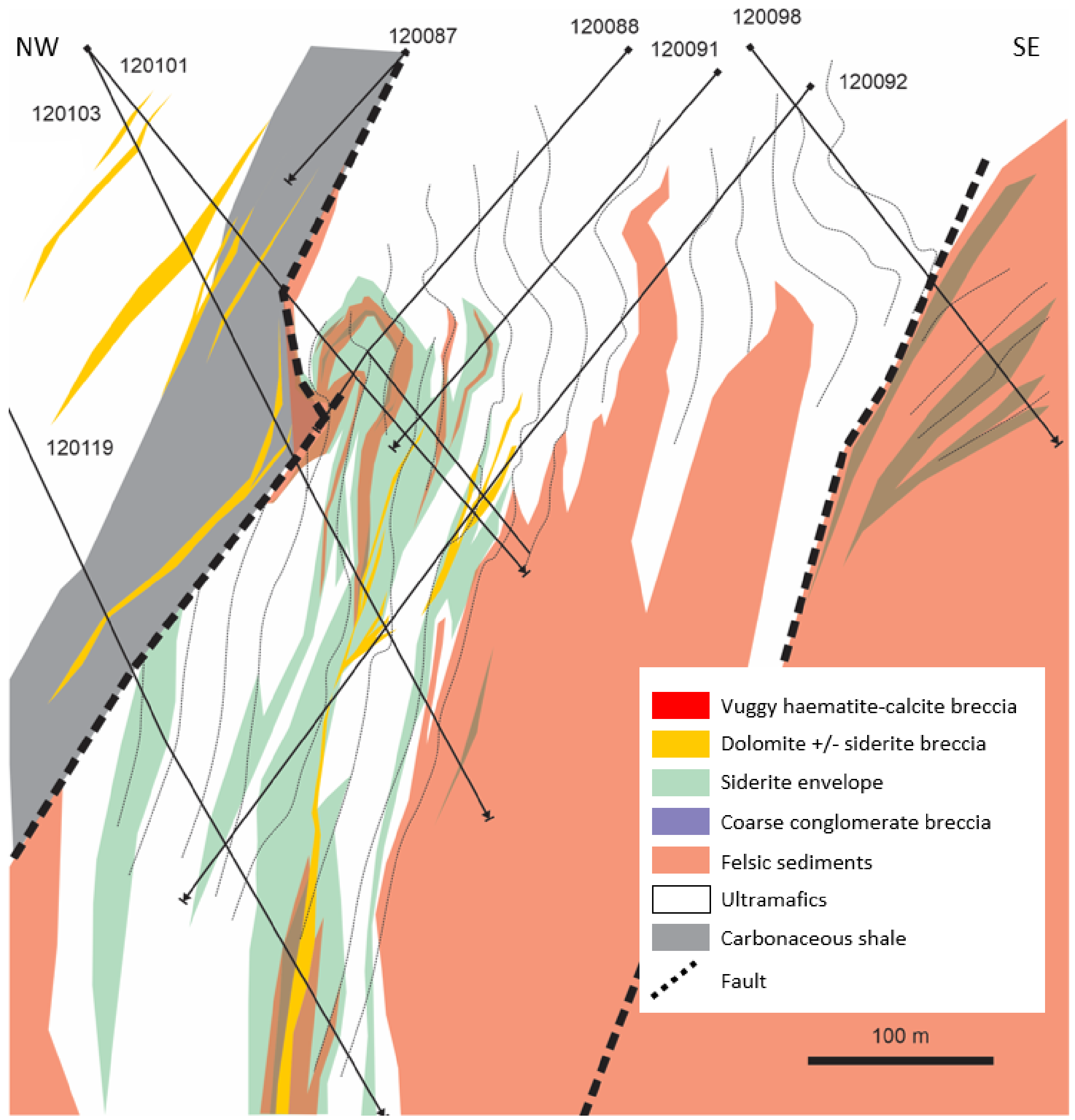
(Selley, 2021)

Figure 7.3_3
Cross section (looking NE) through Ikkari deposit (eastern section)



(Selley, 2021)

Figure 7..3_4
Cross section (looking NE) through Ikkari deposit (eastern section)



(Selley, 2021)

A third deformation phase records E-W compression which reactivated subvertical shears, recording strike-slip movement and developed steep, sub-vertically plunging fold axes which contribute to the difficulty of tracing sedimentary intercalations between sections. This D_3 folding is responsible for the anticlockwise rotation of pre-existing fabrics at the western end of the deposit (which corresponds to a reduction in ore volume), and a more subtle anticlockwise deflection at the eastern end of the Northern Felsic Zone, where the ore volume is greatest.

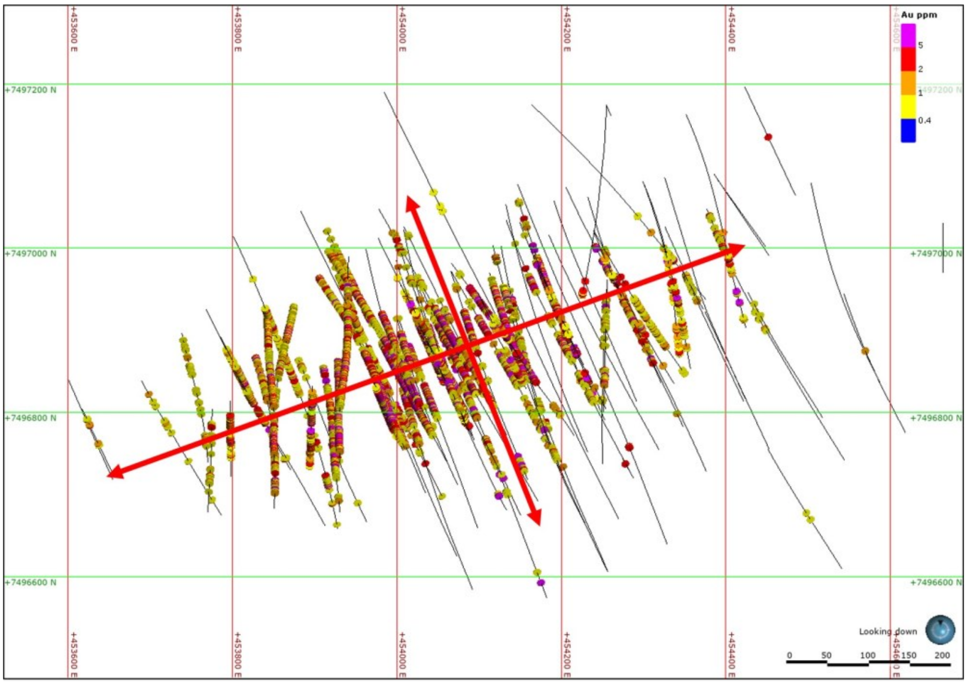
Late-stage vuggy, carbonate-rich breccias that have a subvertical control are considered to be controlled by the D_3 folding, and the close spatial association with the youngest phase of Au-rich (typically high-grade) quartz-haematite-calcite-pyrite brecciation suggests a second phase of gold-bearing fluid injection at this time.

7.4 Mineralisation

The Ikkari deposit can be described as an orogenic, hydrothermal gold deposit. Modelling of the mineralisation, using over 36,000m of drilling available, shows the deposit to lie within a mineralised envelope of up to 800m long, 300m wide and 400m deep (Figure 7.4_1) and that the deposit remains demonstrably open at depth and along strike.

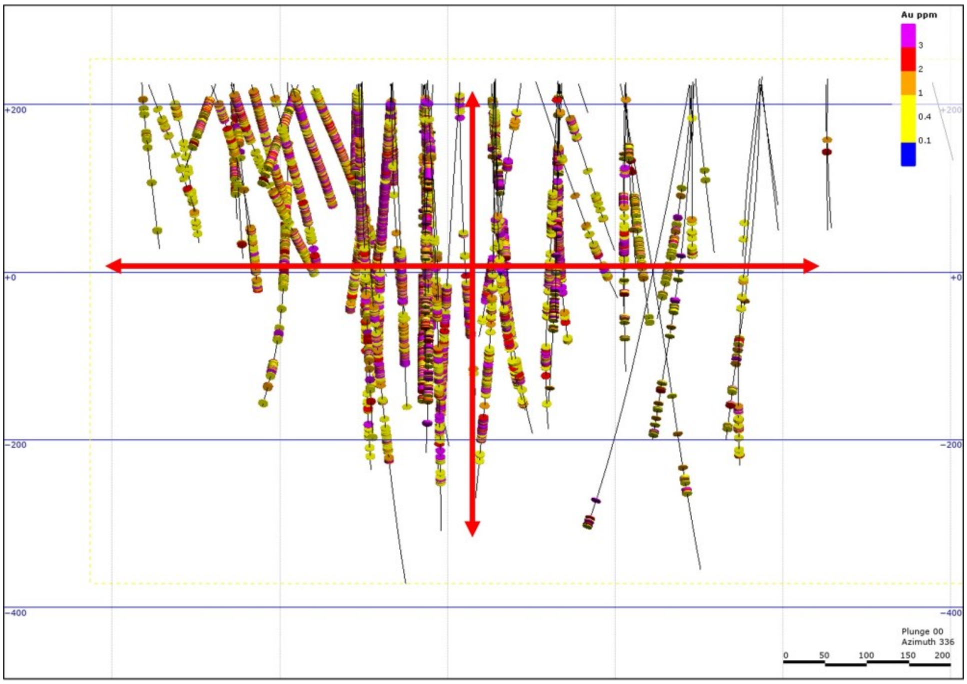
Figure 7.4_1
Currently defined limits of Ikkari mineralisation

Plan View



Scale bar: 200m, Grid: 200m

Looking Northwest



Scale bar: 200m, Grid: 200m

Overall, the mineralisation trends at approximately 065° strike and has a strong sub-vertical control. However, within the mineralised halo, higher grade zones appear to have varying plunges on a local scale and this varies from approximately 30° to the ENE to sub-horizontal.

Mineralisation at Ikkari occurs in several styles, but in all cases, gold distribution is associated with disseminated pyrite and intensity of veining, which are in turn considered to be related to faulting and folding intensity and localisation at lithological contacts. Significant controls on mineralisation localisation include:

1) Brittle-fracture in intensely albite-altered felsic sediments that controls veinlets of gold associated with fine-grained pyrite and magnetite (e.g. Figure 7.2_5). This type of mineralisation is particularly prevalent in the north-western part of Ikkari where felsic sediments form a large block and are the dominant rock type.
2) Complex and concentrated short-wavelength (metre-scale) parasitic folding of narrow felsic sediment intercalations within intensely chlorite-sericite-altered mafic-ultramafic rocks (e.g. Figure 7.4_2), that appears to have focused fluid flow and pyrite deposition, particularly at fold hinges and lithological contacts. Intense, irregular carbonate-quartz veining is frequently developed in these zones and are also mineralised (e.g. Figure 7.4_3). This type of mineralisation comprises the bulk of the high-grade, broad drill intercepts within the central part of the deposit.
3) At lithological contacts; notably within intensely sericite-pyrite-(±fuchsite)-altered sediments, at contacts with felsic sediments or mafic-ultramafic rocks; felsic-mafic contacts often as narrow intercalations; faulted contacts with Kumpu quartzites (and infrequently in narrow quartz veinlets within quartzite).
4) Within and the margins of, several phases of hydrothermal and tectonic brecciation (e.g. Figure 7.2_8), that have a sub-vertical expression and overprint folding and cross-cut lithological contacts. Where these breccias host intense disseminated pyrite, bonanza gold grades are commonly seen (e.g. Figure 7.4_3).

Although vein arrays and stockwork zones are considered to be linked to the main gold phase, in that pyrite content increases, there is little consistent relationship between vein density, vein volume, and gold grade. There appears to be a further relationship between gold content, sulphide and late-stage iron-oxides. Magnetite-bearing veins and breccias typically contain elevated gold grades, with associated disseminated pyrite, and where late haematite is (also) present, particularly in coarse breccias comprising haematite (+ pyrite) in the matrix, bonanza grades are observed. These iron-rich fluids are interpreted to be D_3-related, and may have been introduced during late-stage E-W strike slip, that also resulted in shearing textures within pre-existing quartz-siderite veins.

Despite these variations in localisation at the deposit scale, it is considered that all the gold mineralisation is related to the same (oxidised) fluid event that was introduced along a complex brittle-ductile permeability meshwork. Sites of gold deposition are structurally controlled but locally dependent on the availability of a geochemical reductant that allows deposition of pyrite and associated gold. Such iron-rich reductants include chlorite, magnetite, syngenetic pyrite, graphite (related to carbonaceous shale) or the presence of a pre-existing reduced fluid. However, the spatial association of high-grade gold zones to apparently later D_3 structural domains suggests that a later gold-bearing fluid phase was also present.

Mineralisation remains open at depth, down-plunge in many zones and also up-plunge in several places.

Figure 7.4_2
Example of 'felsic' intercalations within the central komatiite zone.
Vibrant green fuchsitic wisps are locally developed at the unit boundaries, and are interpreted as selectively replaced, sheared siltstone intervals

*Core size NQ (50.7mm core width)

Figure 7.4_3
Visible gold within brecciated carbonate veining

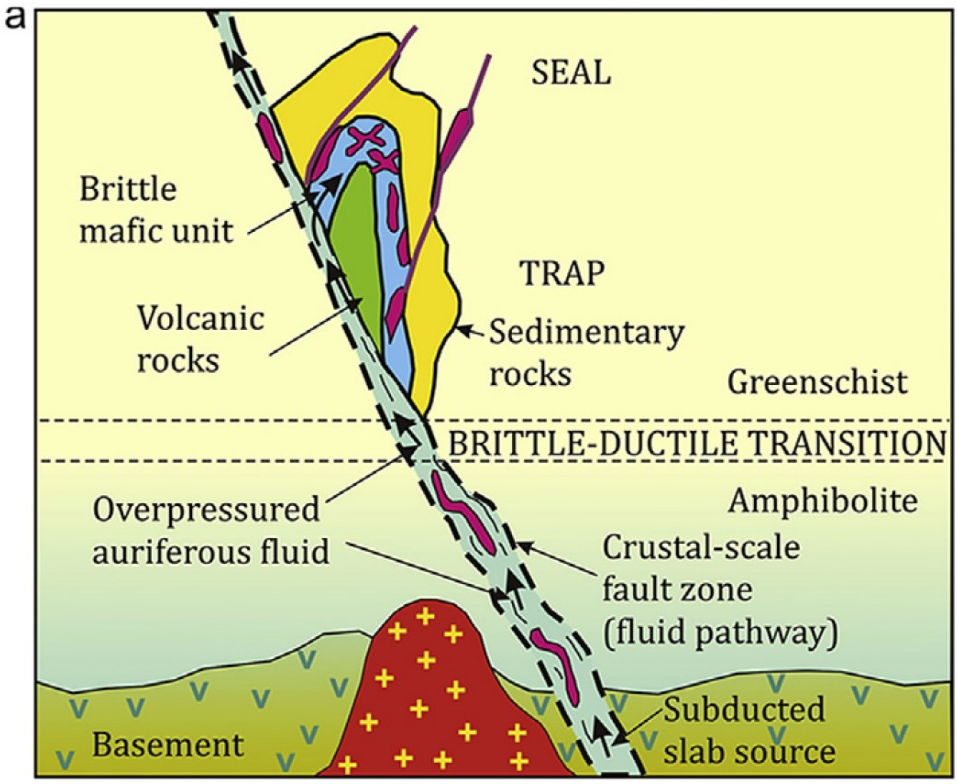
Hole 120102 at 224m (assay 56.2ppm Au)
*Core size NQ (50.7mm core width)

8. DEPOSIT TYPES

Ikkari is considered to be an orogenic gold deposit with gold mineralisation associated with low sulphidation alteration. Genetic models for orogenic gold deposits have been discussed in several studies (e.g., Groves et al., 1998 and Groves and Santosh, 2015). The key aspects of these models are:

1) Metals, complexing agent(s) and fluids transporting the metals are released from the source (or sources) at depth;
2) Metal-carrying fluids are focused into shear zones, and
3) The auriferous fluids migrate along structures into suitable structural and/or chemical traps where the gold and associated metals are deposited via various physicochemical reactions (Niiranen,et al, 2015 pp 733 - 734,), Figure 8_1.

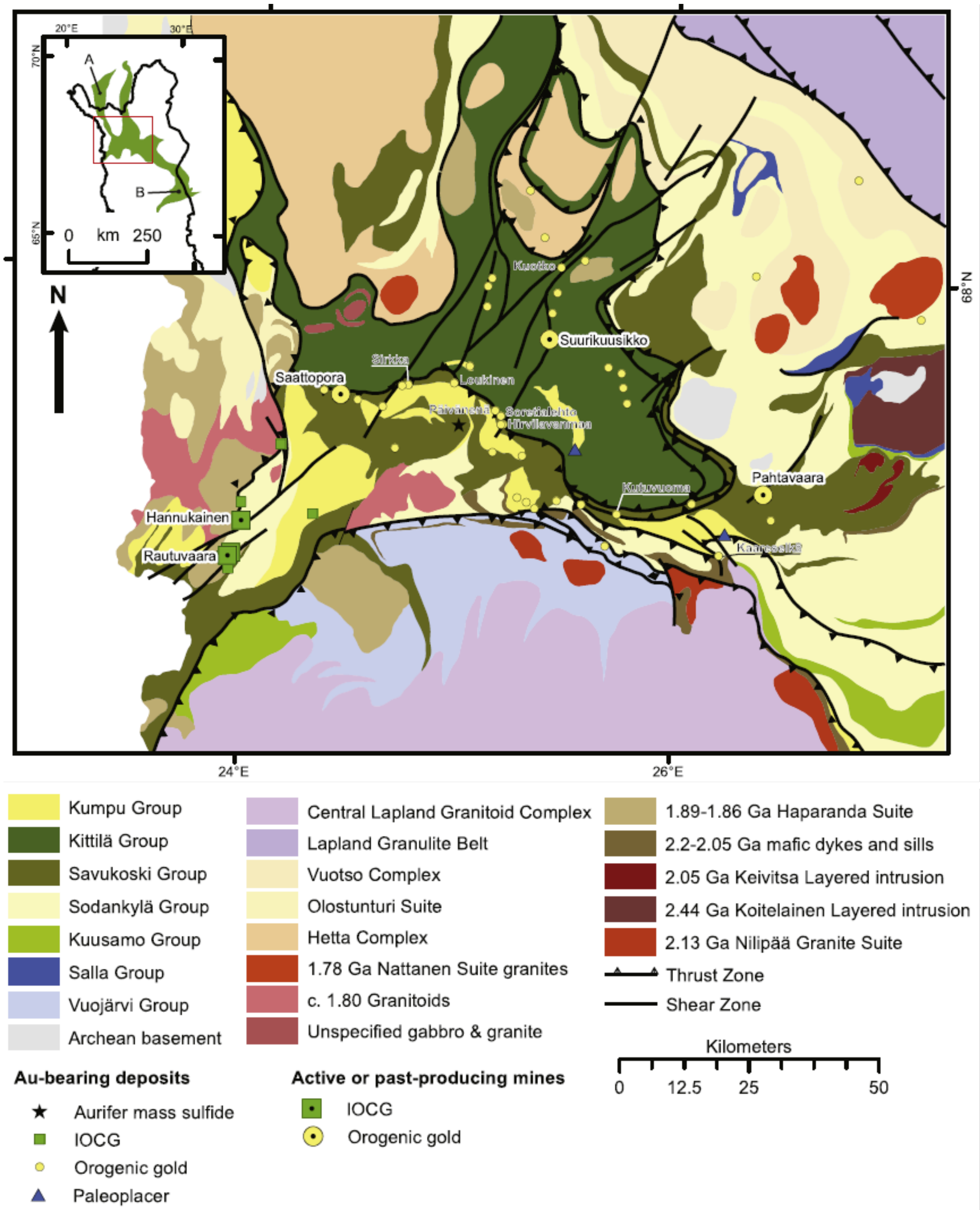
Figure 8_1
Schematic representation of a permissive scenario for all orogenic gold deposits



(From Groves and Santosh, 2015)

A number of orogenic gold deposits are believed to be hosted in the CLGB Belt including the Pahtavaara and Suurikuusikko deposits (Kittilä Mine) (Figure 8_2). Global examples of other orogenic gold deposits include Kalgoorlie (Australia), Val d'Or (Canada) and Ashanti (Ghana) (Groves et al., 1998).

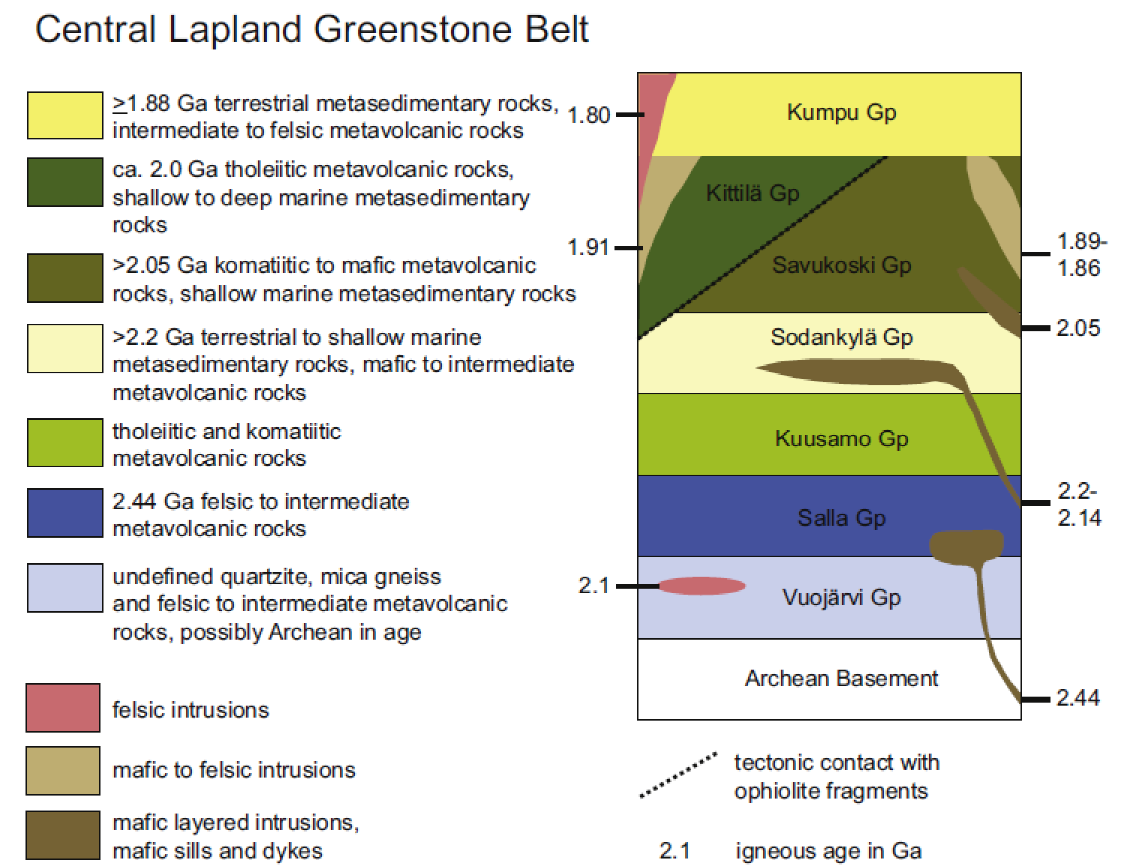
Figure 8_2
Geology and Gold Deposits of the CLGB



(From Niiranen et al, 2015)

At a camp and district scale, known deposits cluster in proximity to transcrustal or other major deformation zones that are formed synchronously with the thickening of the crust during accretionary or collisional tectonic events. In most prospective districts, the deposits were formed at mid-crustal levels, as suggested by the dominant greenschist facies metamorphic assemblages of the host rocks (Niiranen et al, 2015). Within the Rupert land package, including known gold occurrences at Pahtavaara, Koppelokangas and Hookana, gold mineralisation is located close to a number of structures identified on regional geophysics within rocks of the Savukoski Group, and in the westernmost areas of Rupert's licence, hosted within the Kittilä Group and the thrusted margin between the Kittilä and Savukoski Groups (Figure 8_3).

Figure 8_3
Stratigraphy and Main Igneous Events of the CLGB



(From Niiranen et al, 2015)

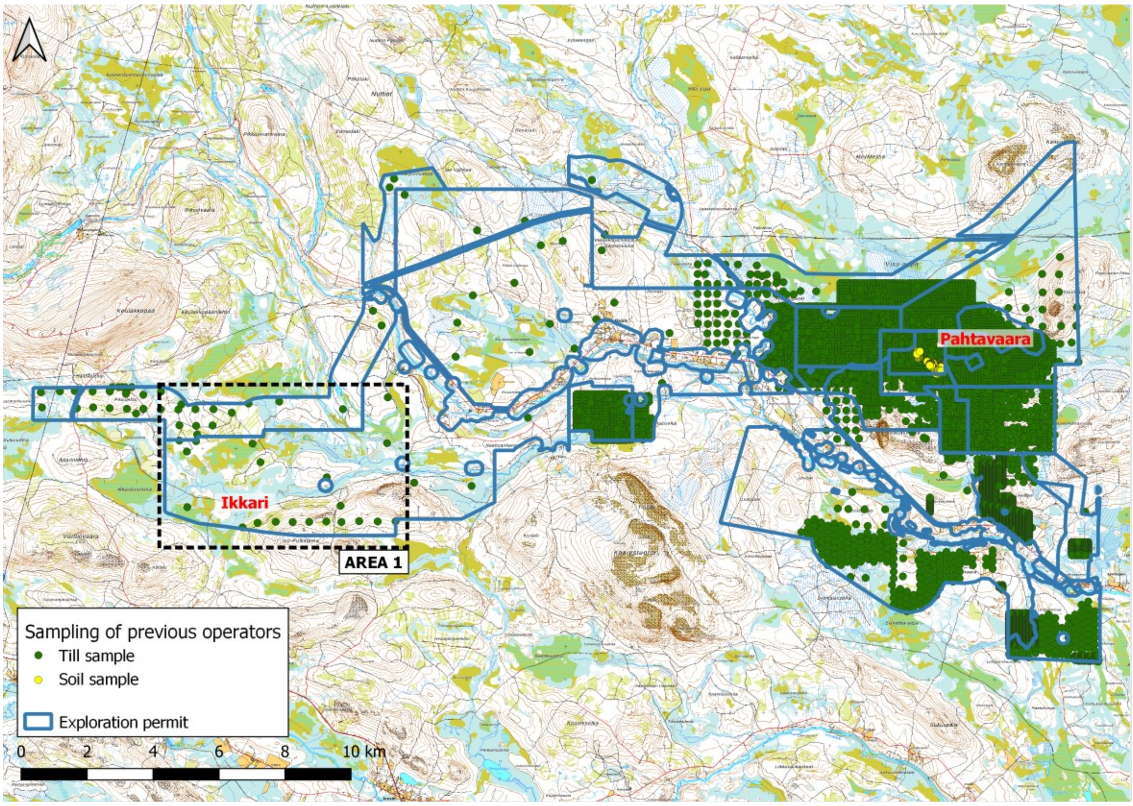
9. EXPLORATION

9.1 Previous Exploration

In the 1970s, the GTK Geochemical Department carried out regional geochemical mapping along lines in the CLGB Belt. The concentration of Si, Al, Fe, Mg, Ca, Na, K, Ti, V, Cr, Mn, Co, Ni, Cu, Zn, Pb, and Ag were analysed. The area of the Sattasvaara komatiite complex, near Pahtavaara Mine, was characterised by elevated contents of Mg, Cr, Ni, and Co, and several local Cu anomalies appeared in the monotonous komatiitic environment indicating sulphide mineralisation. Additional geochemical till sampling was carried out using a grid of 50 × 100m in the winter of 1984 to 1985 to check the Cu anomalies and Au was also analysed. A distinct gold anomaly was found at Pahtavaara and follow-up studies in 1985 including sampling of the bedrock surface by percussion drilling and excavated trenches, defined an altered zone containing visible gold between komatiitic lavas and tuffites (Pulkkinen et al.,1986; Korkiakoski, 1992).

Historical till sampling comprises 426,737 samples compiled in regional programs conducted by GTK and previous operators at Pahtavaara Mine (Figure 9.1_1) across the entire exploration land package, including 5,485 samples by previous operator Terra Mining, of which some 5,383 were assayed for gold and 139 soil samples by Scan Mining of which 128 were assayed for gold.

Figure 9.1_1
Historical till sampling



Scale bar: 10km

9.2 Geophysical Surveys by Previous Operators

The GTK flew airborne geophysics in the area in the 1970s and 1980s. The survey was originally flown with a low level DC-3 system between 1973 and 1979 and was resurveyed in the 1980s using the Twin Otter system. The surveys were flown at a height of 30m with some blocks flown on N-S lines and others E-W, depending on the geological strike. These surveys included aeromagnetic surveys, EM surveys and radiometric surveys. More detailed survey methods conducted by GTK included slingram and ground magnetic surveys. In addition to these surveys, previous operators have undertaken local IP and magnetic surveys on several targets, including Lappland Goldminers' electromagnetic (VTEM) survey in 2010 on near-mine targets and SkyTEM electromagnetic and magnetic surveys in 2011.

9.3 Exploration Undertaken by Rupert Resources

Focusing only on the work Rupert Resources has undertaken within the package of Rupert Lapland exploration licences, including Area 1 and the Ikkari discovery, the following exploration programs have been completed.

9.3.1 Geophysics

During May 2018 Rupert Resources conducted a permit-wide aeromagnetic survey using an unmanned aerial vehicle (UAV), which, along with available regional geophysics data, was used as the basis for a regional structural study conducted by structural geology consultant Brett Davis, which highlighted the dominant E-W trending structures across the Heinälamminvuoma permit as being highly prospective for gold exploration (Davis, 2018).

The May 2018 detailed low-altitude magnetic survey represents the most detailed magnetic survey completed to date. This survey extended across the majority of the exploration permit package (Figure 9.3_1). In addition, a series of ground magnetic programs were completed during 2020 across selected target areas in Area 1, including Ikkari and Heinä South. Ground magnetics were completed with a walking magnetometer + differential GPS with 1 second sampling (GEM GSM-19W).

A ground gravity survey was completed in 2019, across the majority of the Rupert permit area, at a 200m spaced grid resolution (Figure 9.3_2), with 3,416 measurements taken.

Since 2016, Rupert has completed 27 line km of IP geophysics on the Rupert Lapland Project area.

A series of ground IP pole-dipole programs were completed across specific targets in Area 1 during 2020 (Figure 9.3_3), using a GDD 32cRx receiver, GDD Tx4 5kW transmitter, PbCl2 electrodes and stainless steel. Primary voltage was apparent resistivity and chargeability with 20 arithmetic time channels 80ms each, 240ms delay.

At Heinä South, 200 point measurements were taken across 8 lines with electrode spacing at 25m and 50m (transient time 2s, full waveform measurement).

At Ikkari, an initial 200 point program was completed with 9 initial profiles completed at 100m line spacing, followed by an extension of the program towards the east, with an additional 6 lines completed at 200m line spacing.

At Saitta a 100 point program was completed across 2 lines with electrode spacing at 25m and 50m.

Figure 9.3_1
Composite magnetic image of Rupert Lapland Exploration permits, showing results from drone magnetic survey and ground magnetics in Area 1

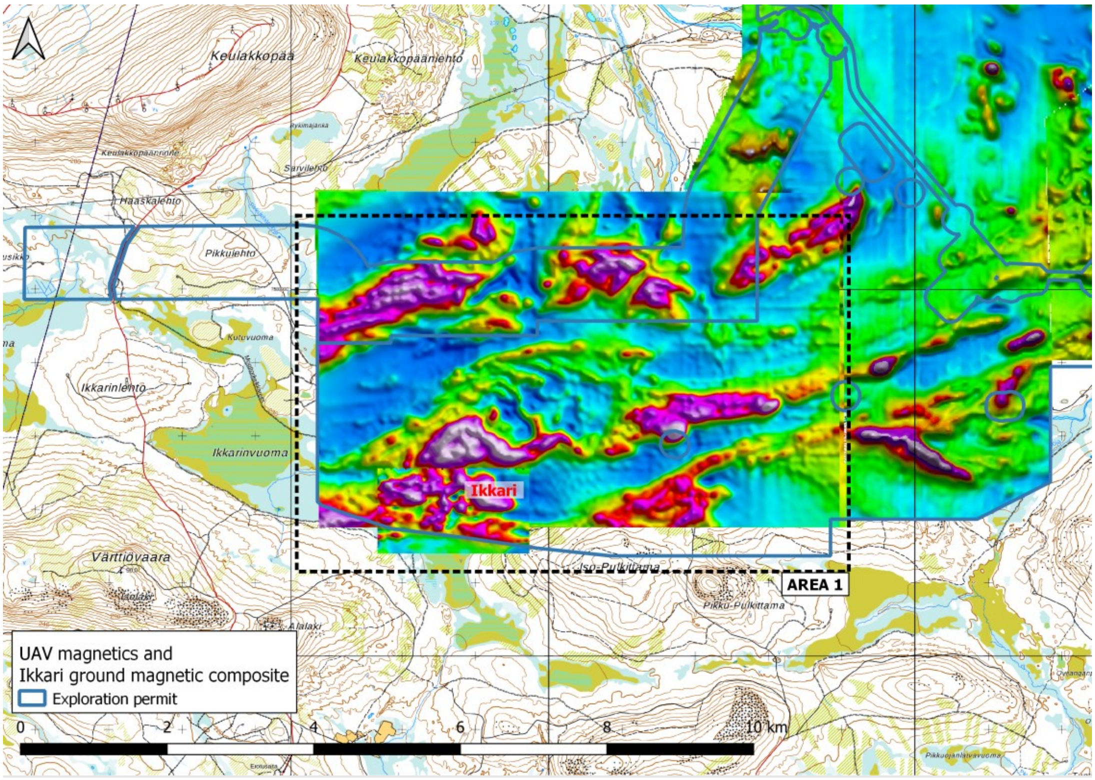
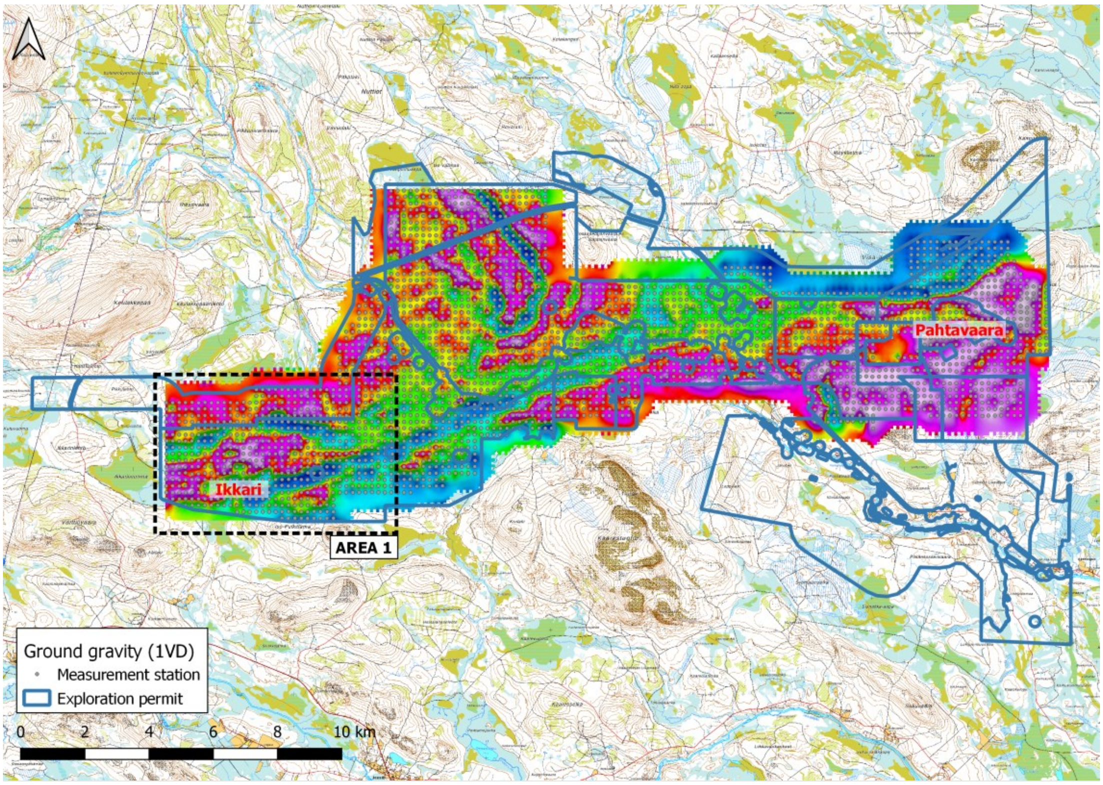
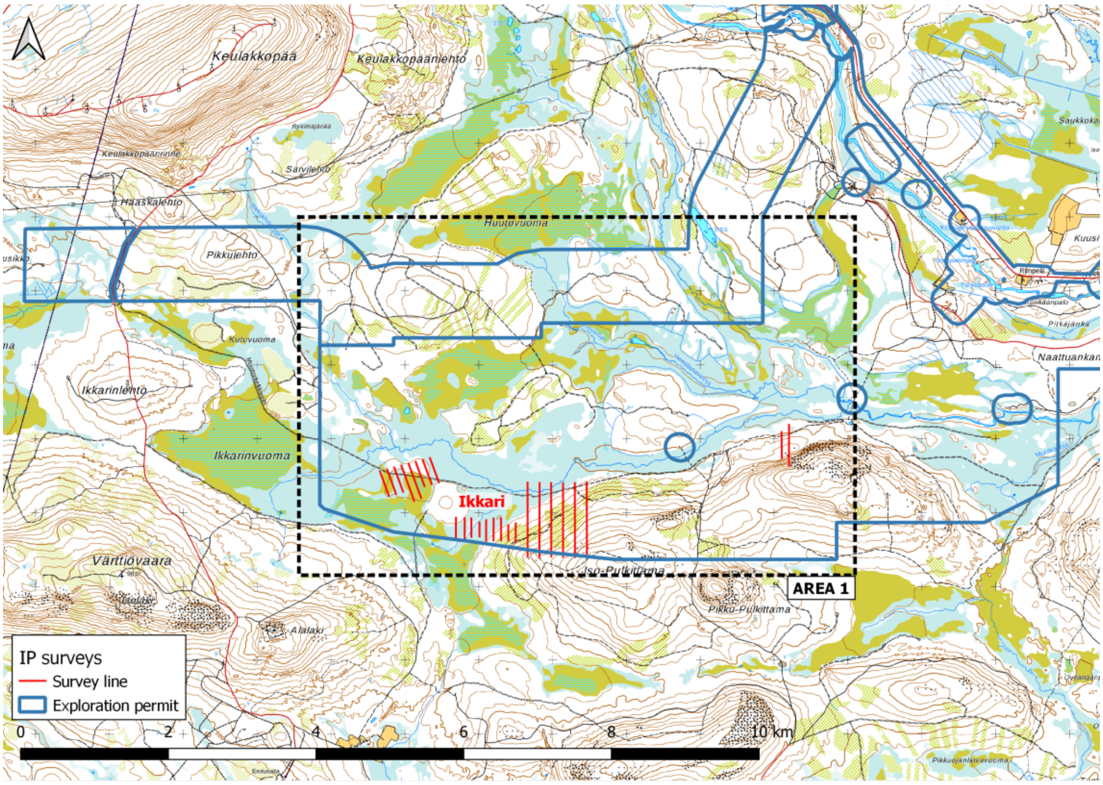


Figure 9.3_2
Ground gravity program with points for each measurement shown



Scale bar: 10km

Figure 9.3_3
Location of pole-dipole IP lines at target areas within Area 1



Scale bar: 10km

9.3.2 Geochemistry

Initial work by Rupert on the Rupert Lapland Project area, was focused on the area immediately surrounding the Pahtavaara mine (Figure 9.3_4). The bedrock mapping and boulder-hunting database contains 593 rock observations including assayed samples collected by Rupert across the project area. However, within the Heinälamminvuoma permit, in which the Ikkari deposit is located, fewer rocks and boulders have been sampled by Rupert, largely due to the lack of outcrop and extensive bogs and thick till cover sequences, especially across Area 1. However, where accessible, surface geochemical sampling has been undertaken in these areas (Figure 9.3_5).

In early 2019, Rupert commenced a base of till sampling program, using a flow-through sampler with a bandwagon mounted rig, across the extent of the Heinälamminvuoma permit aiming to traverse across the key identified structures and identify zones of gold anomalism in base of till soil samples. Infill base of till sampling was completed in areas that displayed anomalism in the first pass 'tram line' traverses.

Follow up systematic drill testing of identified base of till gold anomalies was initiated with gold occurrences identified at several locations within the permit, including at Ikkari. Initial 'tram line' BoT traverses yielded a single point anomaly of 0.2ppm Au and this was followed up with closer spaced infill sampling that identified a cluster of >1ppm Au anomalies. The first drillhole into geochemical anomaly (hole 120038) assayed 54m grading 1.5g/t gold from 25m, including 4.7g/t over 1m from 35m, 5.2g/t over 2m from 65m and 5.7g/t over 1m from 71m.

Figure 9.3_4
Base of Till and soil sampling locations completed by Rupert Resources

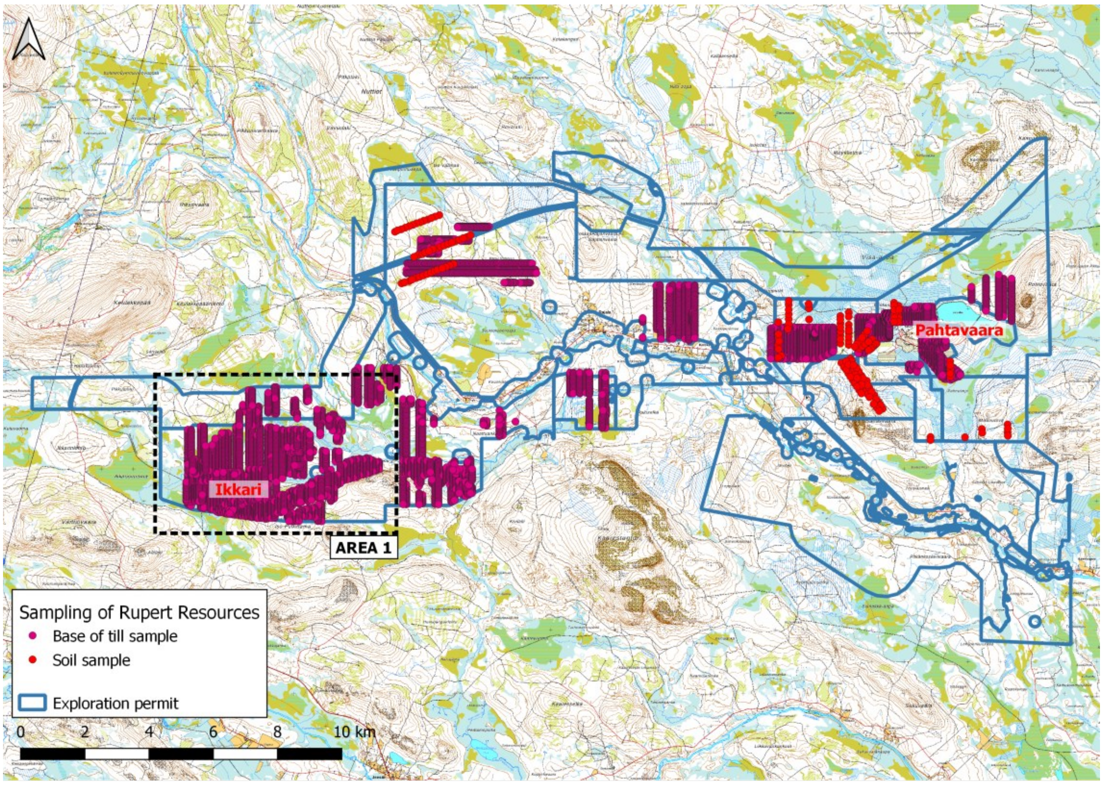
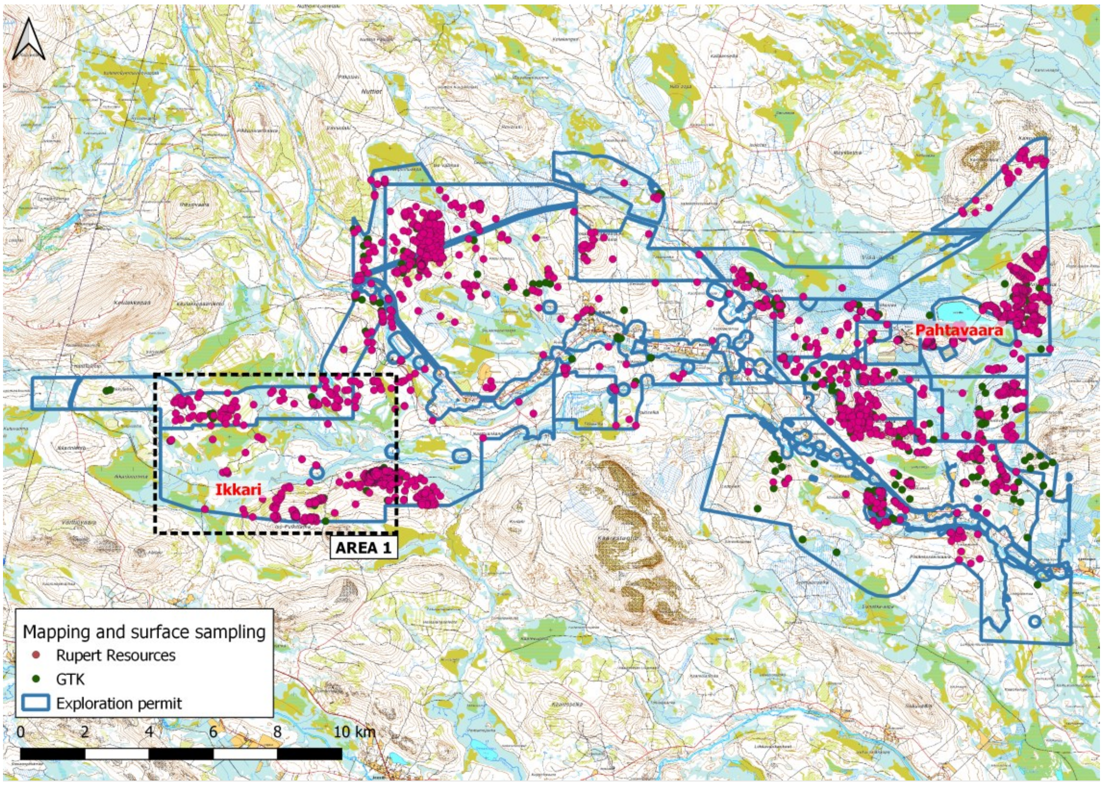


Figure 9.3_5
Boulder and outcrop observations undertaken by Rupert Resources

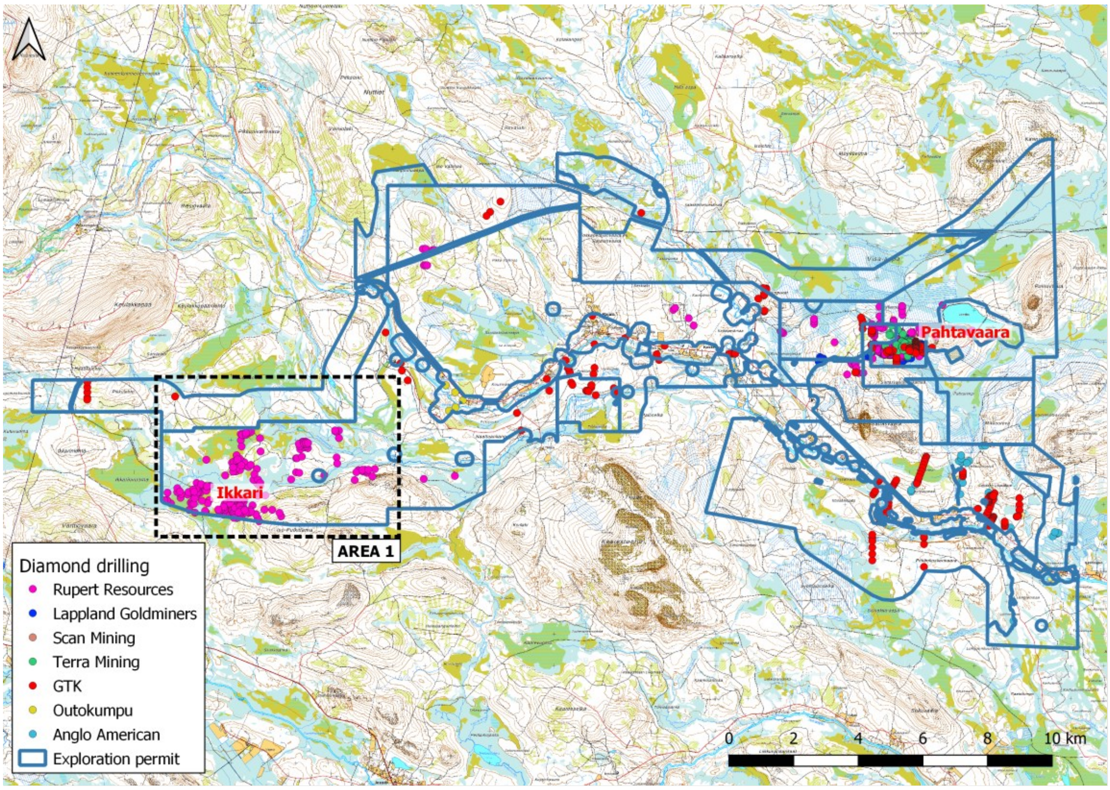


10. DRILLING

10.1 Drilling by Previous Operators

Considering initially the entire Rupert Lapland exploration licences, the vast majority of historic drilling has been carried out at the Pahtavaara Mine site, and near mine areas with very little drilling completed elsewhere on the permits (Figure 10.1_1). No drilling has been undertaken by previous operators at or near the Ikkari deposit area.

Figure 10.1_1
Diamond drilling on the Rupert Lapland Project licence area



10.2 Drilling by Rupert Resources

Within the Heinälamminvuoma exploration permit area, Rupert Resources has used diamond drilling to predominantly target base of till gold anomalies. In late 2019, following the generation of base of till targets at Area 1, drilling was undertaken at specific prospect locations at Area 1. These drilling statistics are summarised in Table 10.2_1.

At Ikkari, an initial two drillholes in early April 2020, tested base of till anomalism along the E-W trend, at the possible margin of a magnetic anomaly. Both of these holes returned gold mineralisation over substantial downhole widths, hosted by sedimentary rocks, and both holes demonstrate strong foliation, shearing, occurrences of visible gold associated with intensive albite-sericite alteration and finely disseminated pyrite throughout.

Table 10.2_1
Drillhole summary for drilling undertaken by Rupert Resources on the Rupert Lapland exploration licence (outside of the Pahtavaara Mine area, up to end of June 2021)

Prospect name	DH Type	Holes	Metres	% of Total
Paskamaa (2019)	Diamond	18	1605	2
Heinä South (2019)	Diamond	2	200	14
Heinä South (2020)		22	3951	
Heinä South (2021)		28	4929	
Heinä North (2019)	Diamond	10	1612	2
Heinä Central (2019)	Diamond	19	3593	10
Heinä Central + extn. (2020)		10	2416	
Heinä Central + extn. (2021)		4	680	
Island North (2019)	Diamond	1	152	5
Island North (2020)		10	1791	
Island North (2021)		7	1405	
Saitta (2020)	Diamond	11	1960	3
Ikkari (2020*)	**Diamond**	**62**	**19,485**	**56**
Ikkari (2021* – to end of June)**		**40**	**17,076**	
Others (2019 – 2021)	Diamond	32	4573	7
Total		275	65,228	100%

* Including extensions to drillholes

** Including holes completed but not assayed, and therefore not included in the resource estimation (section 14.2)

Hole 120038 intersected 54m grading 1.5g/t gold from 25m, including 4.7g/t over 1m from 35m, 5.2g/t over 2m from 65m and 5.7g/t over 1m from 71m.

Hole 120042 intersected 137.2m grading 1.8g/t gold from 10.8m, including 7.1g/t gold over 14m from 23m and 10.6g/t over 3m from 27m.

Following these initial results, bold step out drilling was pursued along the interpreted strike, targeting further base of till anomalism and the magnetic anomaly margin. These holes successfully intersected further mineralisation and indicated a potential strike length of 450m.

Hole 120065 intersected 2.1g/t gold over 31.0m from 53m including 23.7g/t gold over 1m. The hole targeted near surface mineralisation and extended the known mineralised strike eastwards. Hole 120067 intersected 1.3g/t gold over 172.4m from surface including 12m at 2.6g/t gold with the hole ending in mineralisation, extending the known limits 100m to the north of hole 120042 (1.8g/t gold over 137.2m).

These confirmed the presence of a significant mineralised system at Ikkari and further drill testing was prioritised, with some 62 holes for 19,485m completed during 2020. Wide-spaced drilling traverses were completed between the initial holes in the east and west as well as testing extensions to the trend of base of till anomalies along strike that now extends in excess of 1km.

10.2.1 Hole Planning and Set-up

Diamond Drilling at Ikkari from 2019 to 2021 was undertaken predominantly by contractor MK Core Drilling supplemented by Arctic Drilling Company (ADC). The core diameter used was predominantly NQ2 (50.7mm) and WL76 (57.5mm).

After drillholes are planned the Rupert staff surveyors get collar coordinates and also coordinates for the planned end of the hole, along with the dip and azimuth.

For drillholes collared at the ground surface, the surveyor uses DGPS to locate the collar location, orients the hole direction from the azimuth determined from the DGPS (according to direction between start and end coordinates).

The collar location is marked by wooden marker (which has the planned hole number, the coordinates, azimuth and initial dip written on it). The planned azimuth of the hole is also is marked with another survey post oriented front in the planned drilling direction. An additional 'marker' peg is located in order to assist with the drill rig orientation. All orientation 'pegs' are annotated to indicate which is the 'front peg' (with the – HoleID) and which is the 'back peg' (also with the HoleID).

The drillers use the two orientation guide pegs to set up and orient the drill rig correctly.

10.2.2 Surveying and Orientations

For surface drillholes the actual collar position is picked up using DGPS total survey equipment. The drilling contractor does downhole surveys after the drillhole has been completed. The current survey tool is a DeviFlex downhole survey instrument. The Deviflex instrument measures dip and azimuth every three meters, starting from the bottom of the hole and proceeding upwards to the drillhole collar. The survey data is delivered to the supervising geologist via email as csv- and ds-format using the DeviSoft instrument software. The azimuth field is re-processed at all depths from the collar when the collar survey is available

10.3 Dry Bulk Density Collection

Since initiation of drilling in April 2020, the majority of diamond drillholes have been routinely measured for density. A 10cm to 15cm piece of core from every core box, or every 5 meters, is weighed first in air, and then in water. These values are recorded in the acQuire database, which calculates the density using formula density = ρsubstance / ρH2O, [dry weight/(dry weight-weight in water)].

The logging geologist marks additional measurement points to core boxes in cases of special rock types, for example massive sulphides or breccias.

The bulk density of the lithologies at Ikkari range between 2 to 4gm/cm³ with an average value of 2.86gm/cm³.

For this resource update the density of widely occurring rock types was also assessed to determine if those that host the majority of gold mineralisation have a different density to the unmineralised units (Table 10.3.3_1).

The most commonly logged lithologies are carbonaceous shale (MSB), felsic sediments (SSI, SST), and separately, quartzite (MQZ), ultramafics (UKO-VUO-IUO), altered ultramafics (MSCU) and gabbro (IGB).

In general, the sedimentary units are of lower density than the mafic-ultramafic units but are consistent between them at 2.7gm/cm³. Mafic-ultramafic units are also consistently 2.8-2.9gm/cm³ with altered ultramafics, which host a lot of the pyrite mineralisation, slightly higher at 2.9gm/cm³.

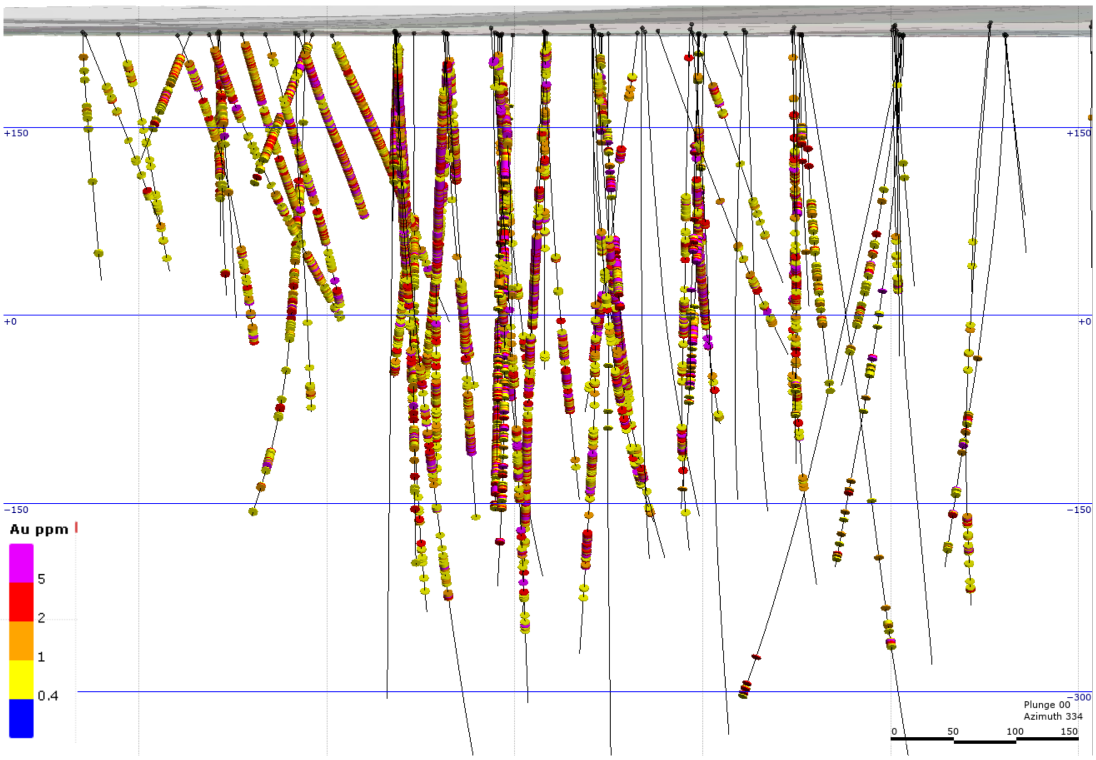
Table 10.3.3_1 Ikkari Gold Deposit - Density statistics (gm/cm³) by lithology group 2020-2021 by Rupert Resources					
Lithology Series	Median	Mean	1st Quartile	3rd Quartile	Number
Ultramafic (UKO-VUO-IUO)	2.88	2.88	2.86	2.90	883
Felsic sediments (SSI, SST, SCO)	2.76	2.79	2.72	2.83	1055
Quartzite (MQZ)	2.71	2.73	2.69	2.75	181
Carbonaceous shale (MSB)	2.76	2.73	2.69	2.80	217
Altered mafic-ultramafic (MSCU)	2.94	2.94	2.87	3.01	1325
Gabbro (IGB)	2.85	2.85	2.79	2.94	306
Mineralised lithologies (>0.5ppm Au)	2.87	2.87	2.74	3.0	723

The average of all mineralised lithologies (regardless of lithology) is 2.87gm/cm³, which is slightly higher than the host sediments and likely represents the overlap of mineralisation between sediments and mafic-ultramafic units.

10.4 Drill Database

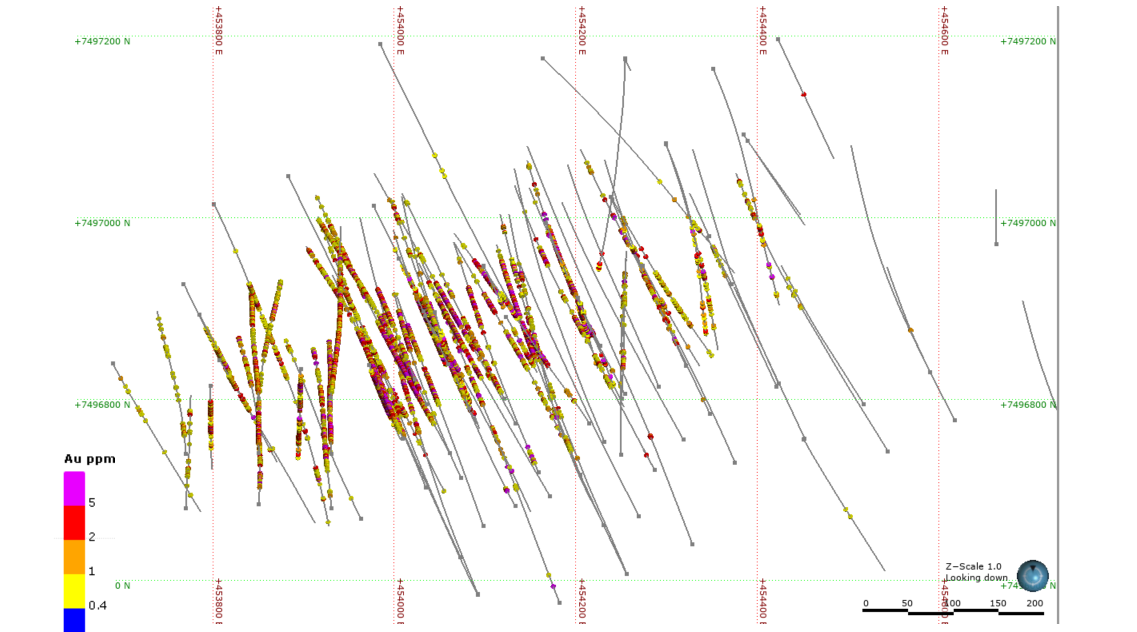
The Ikkari database used in this resource evaluation contains 100 diamond drillholes (36,113m) (Table 10.2_1 and Figures 10.4_1, 10.4_2 and 10.4_3). The drilling database used in this resource calculation contains 27,523 Au assays and 25,517 multi-element assays. The database also contains 6,924 downhole survey stations and 4,481 density measurements.

Figure 10.4_1
Long section of gold intersections at Ikkari (looking northwest)



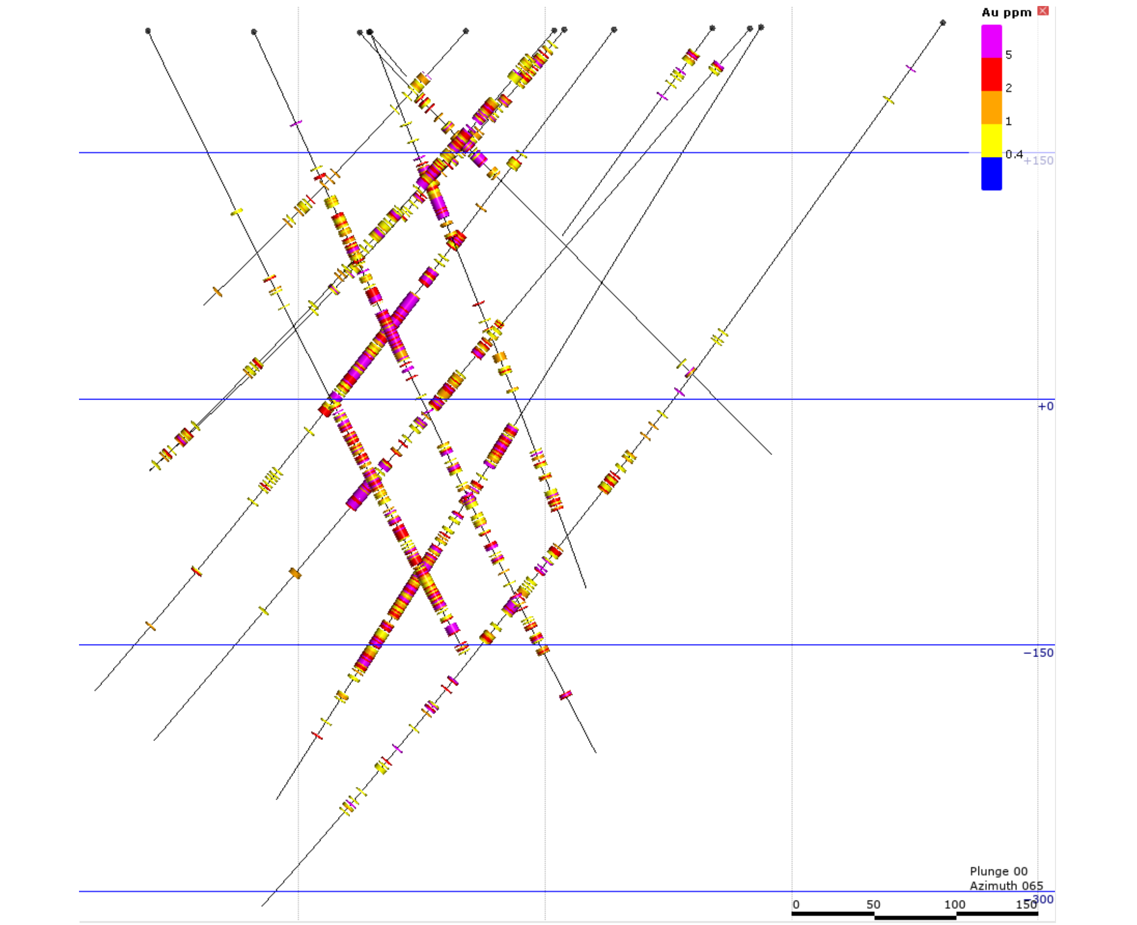
Grid and scale bar 150m

Figure 10.4_2
Plan view of Ikkari showing drillhole locations



Grid and scale bar 200m

Figure 10.4_3
Cross section looking towards 065° showing main mineralised zones



Grid and scale bar 150m

11. SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 Sample Method and Approach

11.1.1 Chain of Custody, Sample Preparation, and Analyses

The drilling contractor brings the core at the end of their shift to prearranged laydown yard, from where it is collected and transported to Rupert by a transport contractor.

The sample handling team then checks that core samples are in right order, move the core inside the trays against its left border and assembles any broken segments if possible.

After organising the core boxes and core samples, each piece of the core is taken out from the core box and arranged in the rail of the logging table to draw continuous bottom line on the core, and downhole direction pointed with arrows along the line. Reflex ACT III orientation tool is used by drilling contractors to get oriented core. The core is measured and meters intervals are marked on core boxes and on core.

Core logging is done by using Geobank Mobile logging software. Log sheets to be filled include lithology, structural data, magnetic susceptibility and core recovery (RQD) sheets and a sample data sheet.

The geotechnical logging includes the magnetic susceptibility and core recovery data. Once the meters are measured and marked correctly onto the core, the magnetic susceptibility of the core is measured. This is done meter by meter, scanning between each meter mark by using a Terraplus KT-10 handheld magnetic susceptibility and conductivity meter. KT-10 has a scanner mode, which automatically calculates the average susceptibility for each scanned interval.

RQD values are measured each meter interval and marked on the left side of each meter line in the core box with pencil. Geobank mobile calculates RQD percentage automatically from given recovery and RQD centimetres.

The geology logging includes the geology, “geozone” code, structure and sample data including company check samples.

After all the logging and sampling has been undertaken, all the core boxes are photographed. Two photographs are taken: the first of dry core and second of wet core.

The Geobank Mobile sampling table creates automatically 1 meter long sampling intervals. It also reminds to enter a QC-sample, company blank or commercial standard every tenth sample. Logging geologist inserts one core duplicate per 20 samples and marks it also to the core box. Unique sample numbers are assigned to the QC-samples based on sample books. QC-samples include also pulp duplicates. The preparation laboratory has been instructed to insert one pulp duplicate in every 20 samples. Pulp duplicates have sample ID number same as the original sample, with suffix PD.

Sampling intervals are marked on the core box (below a certain interval) with a red marker. Places where the sampling intervals begin and end are marked with red arrows (on the core box and on the core) and the sampling number is written with the first 6 numbers at the top right edge of the core box and the last 3 numbers under each sample interval on the core box below the core at the beginning of the interval. The QC-samples are marked on the core boxes. All sampling documents for a batch of samples, along with sachets containing standards and blanks and sample tickets are placed in a sealed bag for dispatch along with the batch of samples.

Drill core is sawn in the Rupert core logging and sampling facility by a Rupert technician. Cutting is done next to the orientation line, and the half with the line remains in the core box. After the core has been sawn, the samples (half core samples, blanks, core duplicates and standards) are packed in plastic bags tagged with sample tag from the sample book, and are packed onto EUR-pallet to be shipped to laboratory. During packing each sample is weighted and the information is added to the database.

Geologists are responsible for creating new sample batches, and sending the sample submittal form and assay order form to the laboratory. Sample shipment is requested and followed up by the Rupert technician, who handles the contacts with the courier company.

The assay laboratory used by Rupert is ALS Minerals at Sodankylä, Finland (prep lab) and gold assay laboratory ALS Geochemistry in Rosia Montana, Romania. The assay method in use has been Au-AA26, Au by fire assay and AAS finish (0.01-100ppm). Preparation methods include CRU-31 fine crushing minimum 70% to <2mm, and PUL-24e, pulverising the entire sample (max 3kg) minimum 85% to 75 microns. Samples greater than 3kg are split prior to pulverising with method SPL-22. After pulverising 250g extra split is packed separately and returned to Rupert for use in umpire lab checks. The over limit samples (>100ppm Au) are automatically re-assayed via fire assay with gravimetric finish, code Au-GRA22. Multi-elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr) have been routinely assayed using method ME-MS61, four acid digestion with ICP-MS finish (Ultra Trace Level Method – 48 elements by HFHNO3-HClO4 acid digestion, HCl leach, and a combination of ICP-MS and ICP-AE). Multi-elements are assayed by ALS Geochemistry in Loughrea Ireland. All ALS laboratories are internationally accredited in accordance with ISO 17025.

All core is under custody from the drill site to the core processing facility. The Company's QA/QC program includes the regular insertion of blanks and standards into the sample shipments, as well as duplicate sampling. Standards, blanks and duplicates are inserted at appropriate intervals. Approximately five percent (5%) of the pulps are sent for check assaying at a second lab (umpire split 250g). Core recovery in the mineralised zones has averaged >99%.

11.2 Assay Quality Control

Analysis of internationally accredited assay standards or certified reference material ("CRM") has been carried out.

For drilling carried out since the beginning of exploration until present the following sets of data have been reviewed and statistically assessed:

- CRM submitted by Rupert Resources (Rupert) to the independent assay laboratories.
- CRM inserted internally by the assay laboratories.
- Sample pairs, including drill core duplicates, pulp duplicates and pulp replicates.
- Barren samples ("blanks") submitted by both Rupert and the assay laboratory.

11.3 QAQC Data

11.3.1 Introduction

QAQC data from sampling and analyses have been compiled in AcQuire 4 relational database. The relevant information has been downloaded for statistical review and analysis and includes the following datasets:

Blanks

- Submitted by Rupert
- Internal ALS blanks

CRM (Standards)

- Submitted by Rupert
- ALS internal CRM

Data Pairs

- Core duplicates (quarter core pairs).
- Lab duplicate (duplicate samples taken after pulverised to >85% <75 microns).
- Pulp duplicates (duplicates samples taken from within one pulp sachet).
- Umpire checks (Pulp split sent to second laboratory).

Blanks

Analyses on blanks have been carried out on blank samples submitted by Rupert and on inserted blanks inserted by laboratories, as part of the laboratory QAQC procedures. The blank material Rupert has been using and continues to use is quartz gravel provided by Sibelco Nordic/Nilsiä kvartsi.

Table 11.3.1_1 and Figures 11.3.1_1 and 11.3.1_2 summarises the results of assaying blank samples. For the great majority of analyses, the blanks returned less than detection limit results.

Table 11.3.1_1
Ikkari Gold Deposit
Blanks

Standard	Assay Method	Laboratory	Number	Expected Value	Mean	% Bias	% RSD	% in Tolerance
Blanks Submitted by Rupert								
BLK-CO01	Au-AA26-ppm	ALS	1667	0.01	0.0063	-37.1626	35.4197	100
Internal ALS blanks								
BLK-ALS	Au-AA26-ppm	ALS	980	0.01	0.0063	-36.8878	35.4122	100

Figure 11.3.1_1
Rupert company blank (BLK-CO01) performance in AA26 ALS

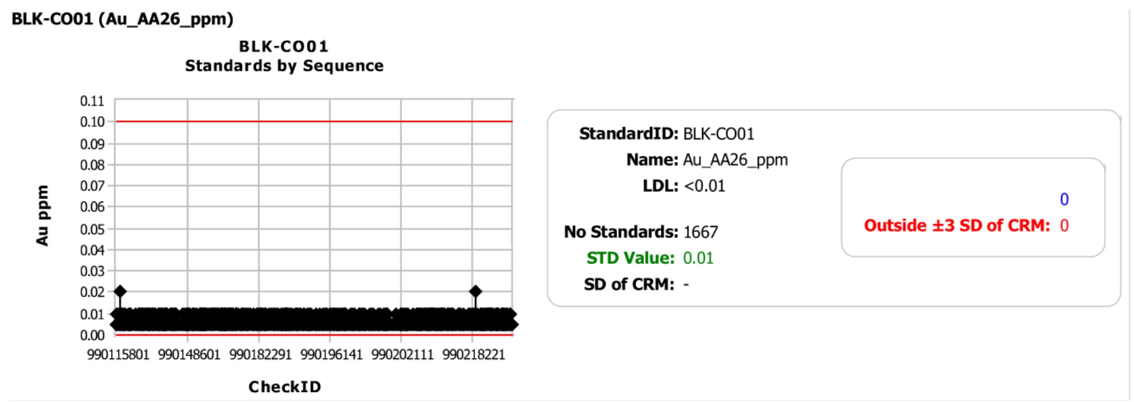
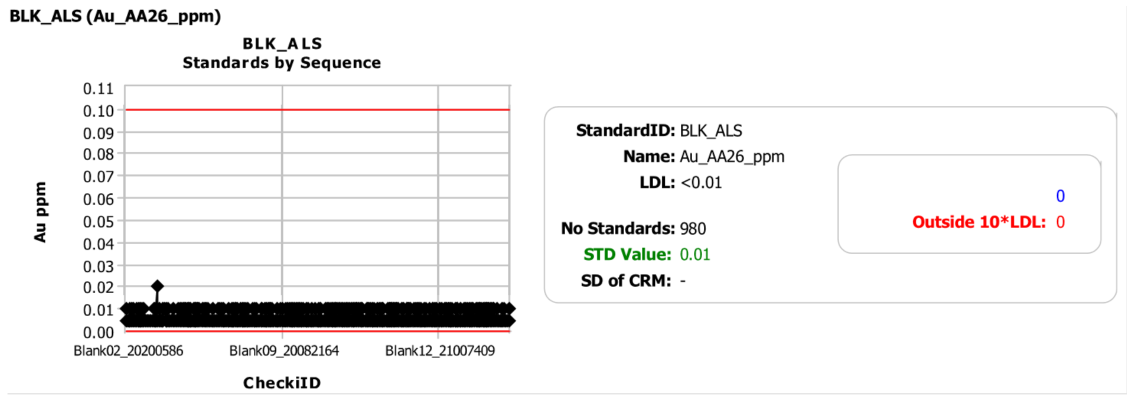


Figure 11.3.1_2
ALS internal blank (BLK-ALS) performance in AA26 ALS



11.3.2 CRM Submitted by Rupert

Rupert routinely submitted accredited CRM. Rupert has been using Au certified reference materials produced by Geostats Pty Ltd. These CRM's (G912-3, G915-2, G915-6, G314-2, G315-7, G398-4, G312-4, and G917-4) have been selected to represent three different gold grades. Rupert has used also CRM's prepared by CDN Resource Laboratories Ltd (CDN-GS-3H, CDN-GS-3K, CDN-GS-P7B and CDN-GS-P7H).

Table 11.3.3_1
Ikkari Gold Deposit
Standards submitted to ALS by Rupert Resources

Standard	Assay method	Number	Expected Value	Mean	% Bias	% RSD	% in Tolerance
G312-4	Au-AA26	2	5.3	5.135	-3.1132	1.7901	100
G314-2	Au-AA26	54	0.99	0.9817	-0.8418	2.5706	100
G315-7	Au-AA26	48	0.3	0.2931	-2.2917	2.6478	100
G398-4	Au-AA26	15	0.66	0.646	-2.1212	3.1399	100
G912-3	Au-AA26	458	2.09	2.091	0.0501	2.8184	100
G915-2	Au-AA26	529	4.98	5.0342	1.0875	1.8866	100
G915-6	Au-AA26	460	0.67	0.656	-2.096	3.9675	100
G917-4	Au-AA26	6	5.1	5.1	0	1.4881	100
CDN-GS-3H	Au-AA26	14	3.04	3.0179	-0.7284	2.587	100
CDN-GS-3K	Au-AA26	11	3.19	3.1464	-1.3679	2.7535	100
CDN-GS-P7B	Au-AA26	1	0.71	0.69			100
CDN-GS-P7H	Au-AA26	26	0.799	0.8019	0.3658	2.2589	100

Figure 11.3.2_1
Rupert CRM's performance in AA26 ALS

11.3.3 Internal CRM analysed by ALS

ALS, as part of their standard QAQC procedures routinely analyse CRM prepared by independent suppliers. Rupert has obtained all the available internal ALS CRM analytical results and statistical analysis has been carried out on the gold data.

Table 11.3.3_1 summarises the results of the analytical performance by ALS on these internally submitted CRM. The assay method used for the different CRM is also noted in Table 11.3.3_1.

Table 11.3.3_1
Ikkari Gold Deposit
ALS Internal Standards

Standard	Assay Method	Number	Expected Value	Mean	% Bias	% RSD	% in Tolerance
BLK_ALS	Au-AA26	980	0.01	0.0063	-36.8878	35.4122	100
G312-4_ALS	Au-AA26	14	5.3	5.3207	0.3908	2.3995	100
G398-10_ALS	Au-AA26	468	4.07	4.0946	0.6048	2.3111	100
G913-10_ALS	Au-AA26	69	7.09	7.101	0.1554	2.7033	100
JK-17_ALS	Au-AA26	32	1.998	1.9659	-1.6047	1.5816	100
LEA-16_ALS	Au-AA26	14	0.501	0.5057	0.941	2.1542	100
OREAS-219_ALS	Au-AA26	431	0.76	0.7564	-0.4732	2.228	100
OREAS-226_ALS	Au-AA26	160	5.45	5.4497	-0.0046	1.8565	100
OxA131_ALS	Au-AA26	148	0.077	0.0745	-3.2117	8.4768	100
OxC129_ALS	Au-AA26	44	0.205	0.2002	-2.3282	15.7746	97.73
OxF125_ALS	Au-AA26	46	0.806	0.8017	-0.5286	1.865	82.61
OxP116_ALS	Au-AA26	263	14.92	14.9878	0.4546	2.0799	73
OxQ90_ALS	Au-GRA22	2	24.88	25.15	1.0852	0.2812	100

11.3.4 Comparison of common CRM

All CRM's Rupert has been using since July 2018 perform very well with used fire assay methods in both laboratories, the main laboratory ALS minerals (Figure 11.3.2_1 and Table 11.3.3_1) and Eurofins Labtium.

11.4 Data Pairs

11.4.1 Introduction

Rupert current QAQC routine with the fire assay method includes submitting core duplicates, pulp duplicates, and umpire checks, each 5 % of the samples.

Available data pairs have been reviewed, subdivided by the assay laboratory and assay method (Table 11.4_1). The different types of data pairs comprise the following:

- Field duplicates (quarter core pairs).
- Lab duplicates (two samples taken after pulverising sample material >85% <75 microns).
- Pulp duplicates (duplicates samples taken from within one pulp sachet).
- Umpire checks (Pulp split sent to second laboratory).

Table 11.4_1 Ikkari Gold Deposit Data Pairs								
Duplicate Type	**Submitted by**	**Laboratory**	**Assay Method**	**Total Number of Pairs**	**Au1 Mean (g/t)**	**Au2 Mean (g/t)**	**Corr. Coeff.**	**Mean AMPRD**
Field duplicate	Rupert	ALS	Au-AA26	1623	1.6218	1.5871	0.9049	65.9647
Pulp duplicate	Rupert	ALS	Au-AA26	1631	2.0187	2.081	0.9825	24.6807
Lab duplicate	ALS	ALS	Au-AA26	1721	2.9843	2.9676	0.9735	26.0982
Lab dup (Umpires)	Eurofins	Eurofins	Au-705P	34	7.2206	6.8279	0.9568	11.1521
Lab duplicate	ALS	ALS	Au-GRA22	4	115.5	109.55	0.9019	6.6599

Duplicate Type	Original laboratory	Umpire Laboratory	Assay Method Original	Assay Method Check	Total Number of Pairs	Au1 Mean (g/t)	Au 2 Mean (g/t)	Corr. Coeff.	Mean AMPRD
Umpire	ALS	Eurofins	AA26	705P/704P	1049	6.7613	7.1226	0.9722	13.9583

The paired assay data has been assessed using the following techniques and plots:

- MPRD by Mean Grade
- Correlation Plot.
- Quantile-Quantile Plot.

11.4.2 Samples Submitted to ALS

Samples submitted to ALS for data pair analysis have included the following sample types:

- Field duplicates (two separate quarter core samples from the same sample interval) - Figure 11.4.2_1.
- Pulp duplicates (two sub-samples taken from the same pulp sachet) – Figure 11.4.2_2.
- Lab Duplicates (two samples taken after pulverising sample material >85% <75 microns) – Figures 11.4.2_3 and 11.4.2_4.

Figure 11.4.2_1
Sample pair statistical analysis: Samples submitted to ALS: field duplicates

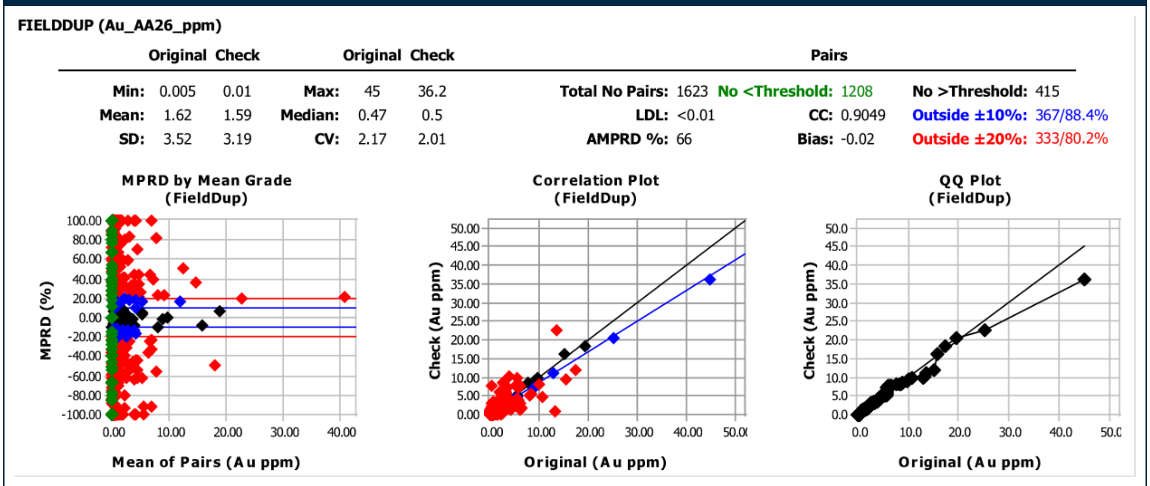


Figure 11.4.2_2
Sample pair statistical analysis: Samples submitted to ALS: pulp duplicates

PULPDUP (Au_AA26_ppm)

	Original	Check		Original	Check	Pairs					
Min:	0.02	0.005	**Max:**	32.4	30.7	**Total No Pairs:**	1631	**No <Threshold:**	1132	**No >Threshold:**	499
Mean:	2.02	2.08	**Median:**	0.7	0.7	**LDL:**	<0.01	**CC:**	0.9825	**Outside ±10%:**	298/59.7%
SD:	3.58	3.69	**CV:**	1.78	1.77	**AMPRD %:**	24.7	**Bias:**	0.03	**Outside ±20%:**	207/41.5%

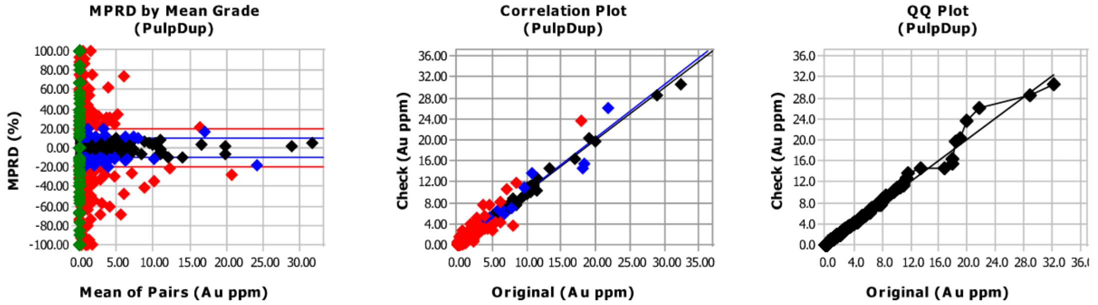


Figure 11.4.2_3
Sample pair statistical analysis: Samples submitted to ALS: lab duplicates Au-AA26

LABDUP (Au_AA26_ppm)

	Original	Check		Original	Check	Pairs					
Min:	0.03	0	**Max:**	100	100	**Total No Pairs:**	1721	**No <Threshold:**	981	**No >Threshold:**	740
Mean:	2.98	2.97	**Median:**	0.86	0.94	**LDL:**	<0.01	**CC:**	0.9735	**Outside ±10%:**	463/62.6%
SD:	6.72	6.57	**CV:**	2.25	2.21	**AMPRD %:**	26.1	**Bias:**	-0.01	**Outside ±20%:**	316/42.7%

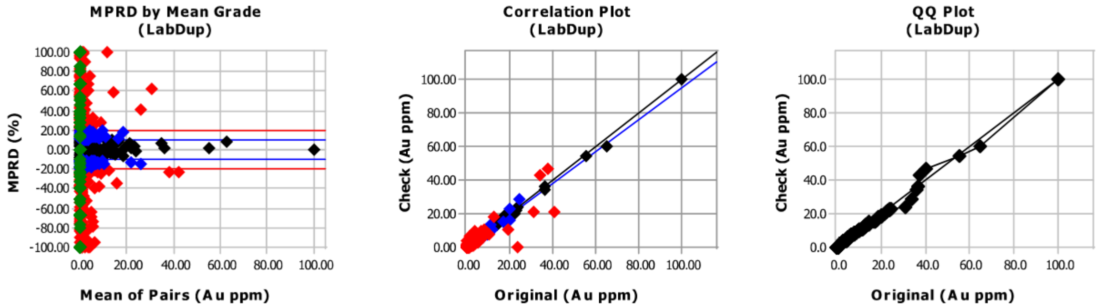
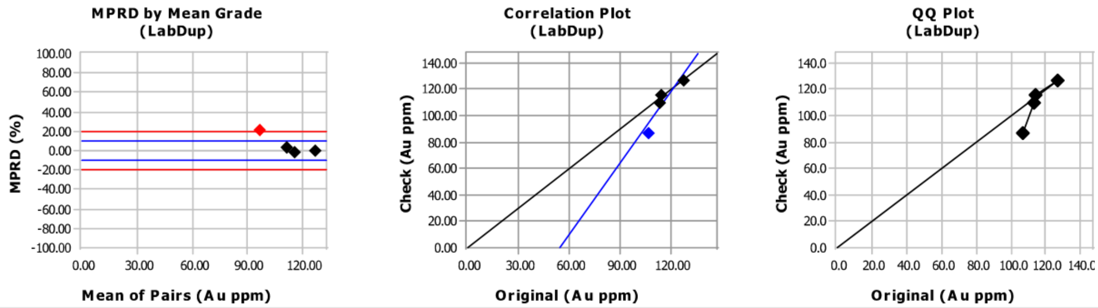


Figure 11.4.2_4
Sample pair statistical analysis: Samples submitted to ALS: lab duplicates Au-GRA22

LABDUP (Au_GRA22_ppm)

	Original	Check		Original	Check	Pairs					
Min:	107	86.7	**Max:**	127	126	**Total No Pairs:**	4	**No <Threshold:**	0	**No >Threshold:**	4
Mean:	115.5	109.55	**Median:**	114	112.75	**LDL:**	<0.05	**CC:**	0.9019	**Outside ±10%:**	1/25%
SD:	8.36	16.68	**CV:**	0.07	0.15	**AMPRD %:**	6.7	**Bias:**	-0.05	**Outside ±20%:**	1/25%



11.4.3 Samples Submitted to Eurofins Labtium

ALS Minerals laboratory has been instructed to make 250g extra split at pulverising stage, to be sent to second laboratory for laboratory check. 5% of all samples have been sent to Eurofins Labtium for their Au-705P fire assay by OES finish. Sample pairs submitted to Eurofins Labtium include the following:

- Lab duplicates (Split from umpire powder at weighting stage) – Figure 11.4.3_1.
- Umpire checks (Pulverising stage split for samples originally assayed at ALS by fire assay AA26) – Figure 11.4.3_2.

Figure 11.4.3_1
Sample pair statistical analysis: Samples submitted to Eurofins Labtium: lab duplicates (Umpires)

LABDUP (Au_705P_ppm)

	Original	Check		Original	Check	Pairs					
Min:	1.137	1.195	**Max:**	26.82	27.6	**Total No Pairs:**	34	**No <Threshold:**	0	**No >Threshold:**	34
Mean:	7.22	6.83	**Median:**	4.57	4.73	**LDL:**	<0.005	**CC:**	0.9568	**Outside ±10%:**	10/29.4%
SD:	6.64	6.46	**CV:**	0.92	0.95	**AMPRD %:**	11.2	**Bias:**	-0.05	**Outside ±20%:**	3/8.8%

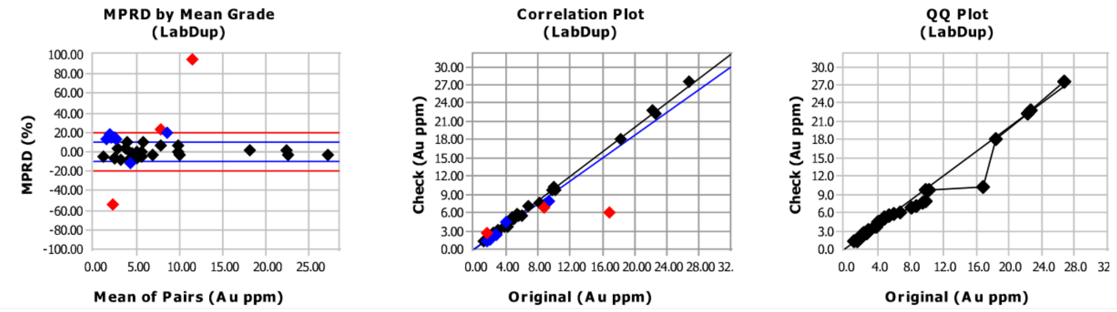
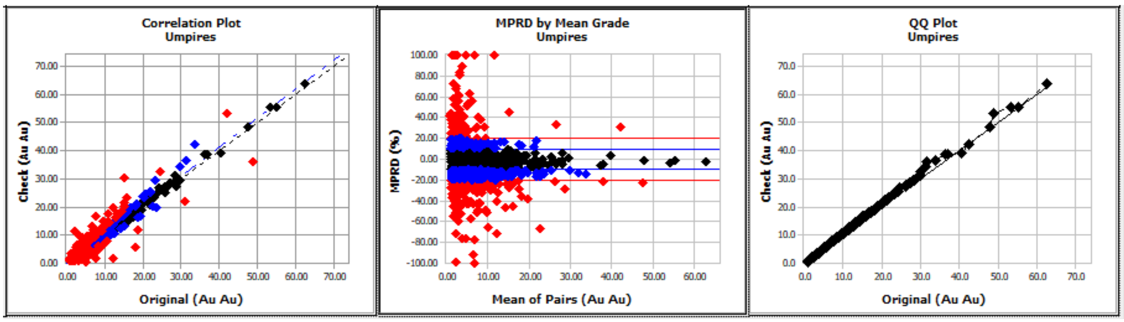


Figure 11.4.3_2
Sample pair statistical analysis: Umpires: original ALS AA26, check labtium 705P



11.5 Conclusions

These methods of data verification are considered at or above industry standard. The results of the QAQC data analyses discussed in the preceding sections demonstrate that the quality of the data is acceptable for use in mineral resource estimation.

All sample preparation was carried out at independent laboratory in Finland, and analyses were carried out at independent laboratories in Romania, Ireland, or Finland. No aspect of laboratory sample preparation or analysis was conducted by an employee, officer, director or associate of either Rupert or its predecessors.

Rupert Resources has used a combination of duplicates, checks, blanks and standards to ensure suitable quality control of sampling methods and assay testing. The procedures and QA/QC management are consistent with good industry practice and are deemed fit for purpose. Results of recent sampling have not identified any issues which materially affect the accuracy, reliability or representativeness of the results.

12. DATA VERIFICATION

12.1 Independent Qualified Person Review and Verification

This section of the report was prepared by Independent Qualified Person Eemeli Rantala, P.Geo, who undertook a site visit on the 2nd and 3rd September 2021 and performed the following:

- At the Ikkari drill site, located and confirmed drill collars with a handheld GPS device.
- Inspection of diamond drill core as it is logged and processed at the core yard at the Pahtavaara office site, including collection of geological, structural and geotechnical information.
- Inspected mineralised drill core in holes included in the resource calculation.
- Compared drill core data against sections and three dimensional geological models of the mineralisation.
- Inspection of sampling and logging procedures.
- Review of data collection, database management and data validation procedures.

The Independent Qualified Person (Resource Geologist) Brian Wolfe, Principal Consultant of International Resource Solutions Pty Ltd, has not visited the Ikkari Project Site due to the restrictions in place on international travel that relate to the ongoing COVID pandemic.

The Qualified Person has reviewed and cross-checked sections of this Report prepared by Rupert geologists.

The Qualified Person completed the resource estimate for the Ikkari Gold Deposit. Additional data verification steps undertaken during this estimate process included the following:

- Validation of drilling, geology and assay database (including checks on overlapping intervals, samples beyond hole depth and other data irregularities).
- Review of Rupert QAQC data and charts for standards, blanks and duplicates.
- Visual and statistical analysis of resource estimate model outputs versus primary data.
- Random cross checks of assay reports against the database.
- Review of previous technical documentation for the Ikkari Gold project

Based on this review work, the Qualified Person is of the opinion that the dataset provided by Rupert Resources is of an appropriate standard to use for resource estimation work.

12.2 QAQC Data Analysis

The quality control data has been statistically evaluated, and summary plots have been produced for interpretation as described in the previous sections.

12.3 Conclusions

These methods of data verification are considered at or above industry standard. The results of the QAQC data analyses discussed in the preceding sections demonstrate that the quality of the data is acceptable for use in mineral resource estimation.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Recovery Methods

Preliminary metallurgical work undertaken by Grinding Solutions Ltd of Truro, United Kingdom indicates that Ikkari could be processed using a simple flow sheet using proven extraction methods (Cook M., 2021). The results are summarised as follows:

- Milling - 15.5kwh/t Bond Ball Index (Ikkari rocks are of average hardness).
- Gravity recoverable gold (GRG) test - showed that the sample contained a GRG content of 65.22% achieved to a mass pull of 2.19% (contribution from gravity process is significant)
- In whole ore cyanide leach test - gold recovery ranged between 95% to 99% at grind sizes between 106 microns and 38 microns (Ikkari ore is non-refractory).
- Bulk flotation testing - showed that high gold recoveries can be achieved to concentrate at a primary grind size of 125 microns. Gold recovery of 99.70 % to a rougher concentrate with a mass pull of 5.97%, yielding a gold grade to the concentrate of 60.0g/t Au (simplified low cost option to final product is emerging). Regrinding of this rougher concentrate and intensive cyanide leaching saw overall gold recoveries (taking account of flotation performance) of between 98.45% and 99.40%.
- Waste material testing - the bulk flotation tailings along with a number of various waste rock samples were shown to be acid neutralising. Initial solid liquid separation testing has shown that the bulk flotation tailings responded well to flocculation and settling (potential for low environmental impact waste management).
- A simple flowsheet could include a gravity recovery stage within a milling circuit followed by flotation at a primary grind size of 125 microns. At this point, the flotation concentrate may form a saleable product, however testing has shown the viability of an option to cyanide leach the flotation concentrate to allow on-site doré production (various options emerging for process route but with opportunities for capital and operating cost optimisation).

14. MINERAL RESOURCE ESTIMATES

14.1 Introduction

This Mineral Resource for the Ikkari Gold Deposit has been estimated as at the effective date of the 13 September 2021. Gold grade estimation was completed using Multiple Indicator Kriging (MIK) for the mineralised domains. MIK grade estimates have been localised to an SMU dimension using an analogous methodology to Localised Uniform Conditioning. This estimation approach was considered appropriate based on review of a number of factors, including the quantity and spacing of available data, the interpreted controls on mineralisation, and the style, geometry and tenor of mineralisation. The estimation was constrained with geological and mineralisation interpretations.

14.2 Database Validation

The resource estimation was based on the available exploration drillhole database which was compiled in-house by Rupert. The database has been reviewed and validated prior to commencing the resource estimation study.

The database consists of solely of surface diamond drilling. Database statistics are provided below as Table 14.2_1. A plan view of all drilling is presented in Figure 14.2_1.

Table 14.2_1
Summary of available drill data for Ikkari

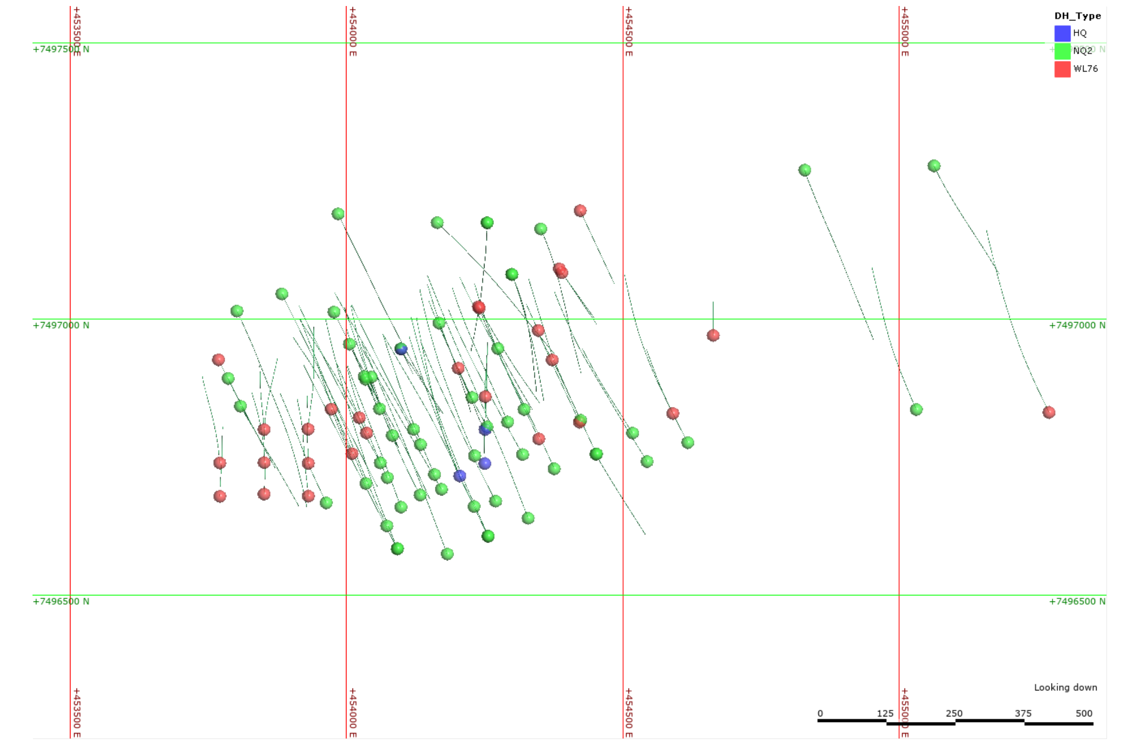
Company	DH Type	Holes	Metres	% of Total
Rupert Resources (April 2020 to June 2021)	Diamond (HQ)	4	1,098	3
	Diamond (NQ2)	65	27,110	22
	Diamond (WL76)	31	7,905	75
Total		100	36,113	100%

All diamond drilling has been sampled per meter and assayed for gold as well as 50 other multi-elements.

The resultant database has been validated, and the checks made to the database prior to use included:

- Check for overlapping intervals.
- Downhole surveys at 0m depth.
- Consistency of depths between different data tables.
- Check gaps in the data.
- Replacing less than detection samples with half detection.
- Replacing intervals with no sample with -999.
- Replacing intervals with assays not received with -998.

Figure 14.2_1
Ikkari Gold Deposit - Plan View of all Drilling



14.3 Interpretation and Modelling

14.3.1 Mineralisation Interpretation

Mineralisation at Ikkari is hosted by sedimentary intercalations within extrusive ultramafic rocks. This heterogeneous package has been folded into a series of tight (metre-scale), upright folds, which have been subsequently cut by later hydrothermal breccias (sub-vertical). Early thrusts bound the mineralised zone to the north and south.

Mineralisation at Ikkari occurs in four principal styles:

1) Brittle-fracture in intensely albite-altered felsic sediments that controls veinlets of gold associated with fine-grained pyrite and magnetite. This type of mineralisation is particularly prevalent in the north-western part of Ikkari where felsic sediments form a large block which pinches out eastwards.

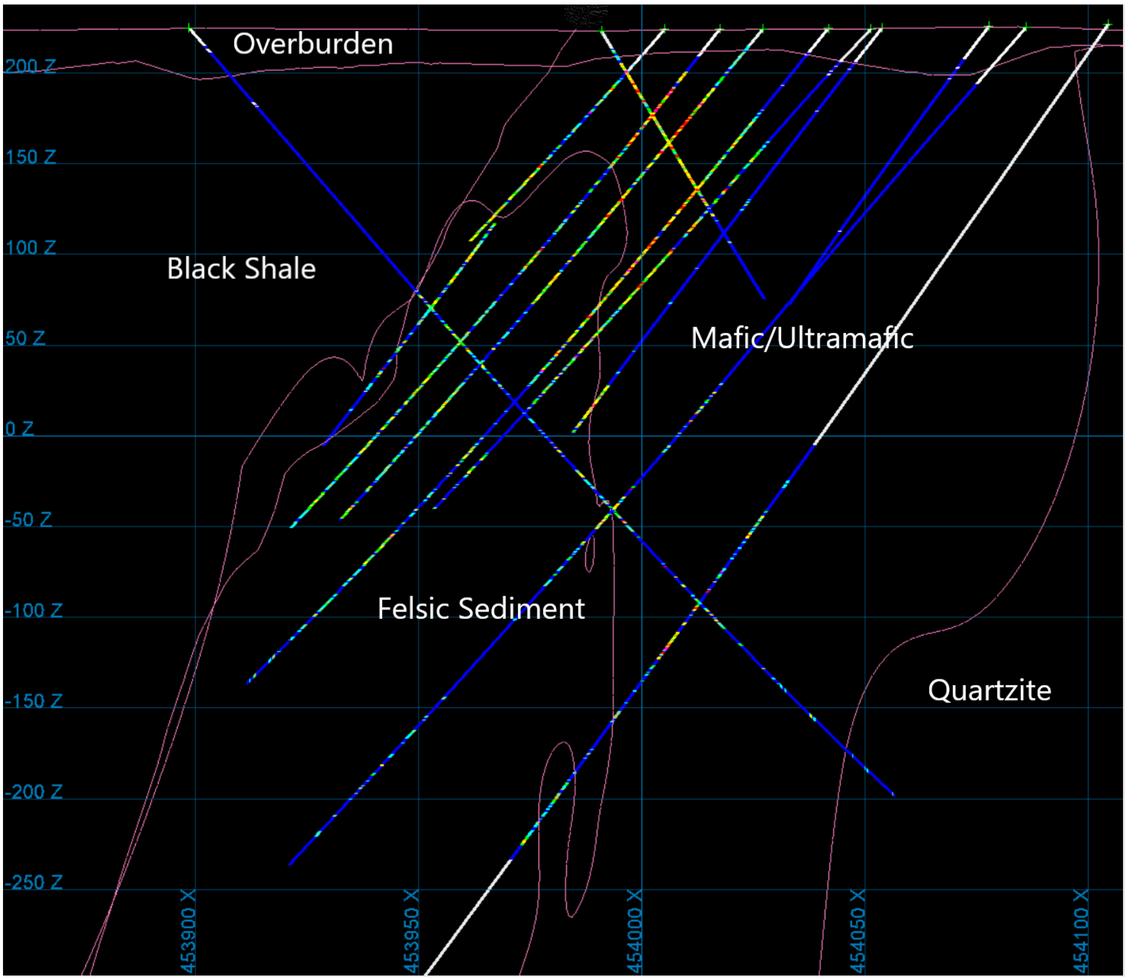
2) Complex and concentrated short-wavelength (metre-scale) parasitic folding of narrow felsic sediment intercalations within intensely chlorite-sericite-altered mafic-ultramafic rocks. Intense, irregular carbonate-quartz veining is frequently developed in these zones and are also mineralised. This type of mineralisation comprises the bulk of the high-grade, broad drill intercepts within the central part of the deposit.

3) At lithological contacts; notably within intensely sericite-pyrite-(±fuchsite)-altered sediments, at contacts with felsic sediments or mafic-ultramafic rocks.

4) Within and the margins of, several phases of hydrothermal and tectonic brecciation, that have a sub-vertical expression and overprint folding and cross-cut lithological contacts. Where these breccias host intense disseminated pyrite, bonanza gold grades are commonly seen.

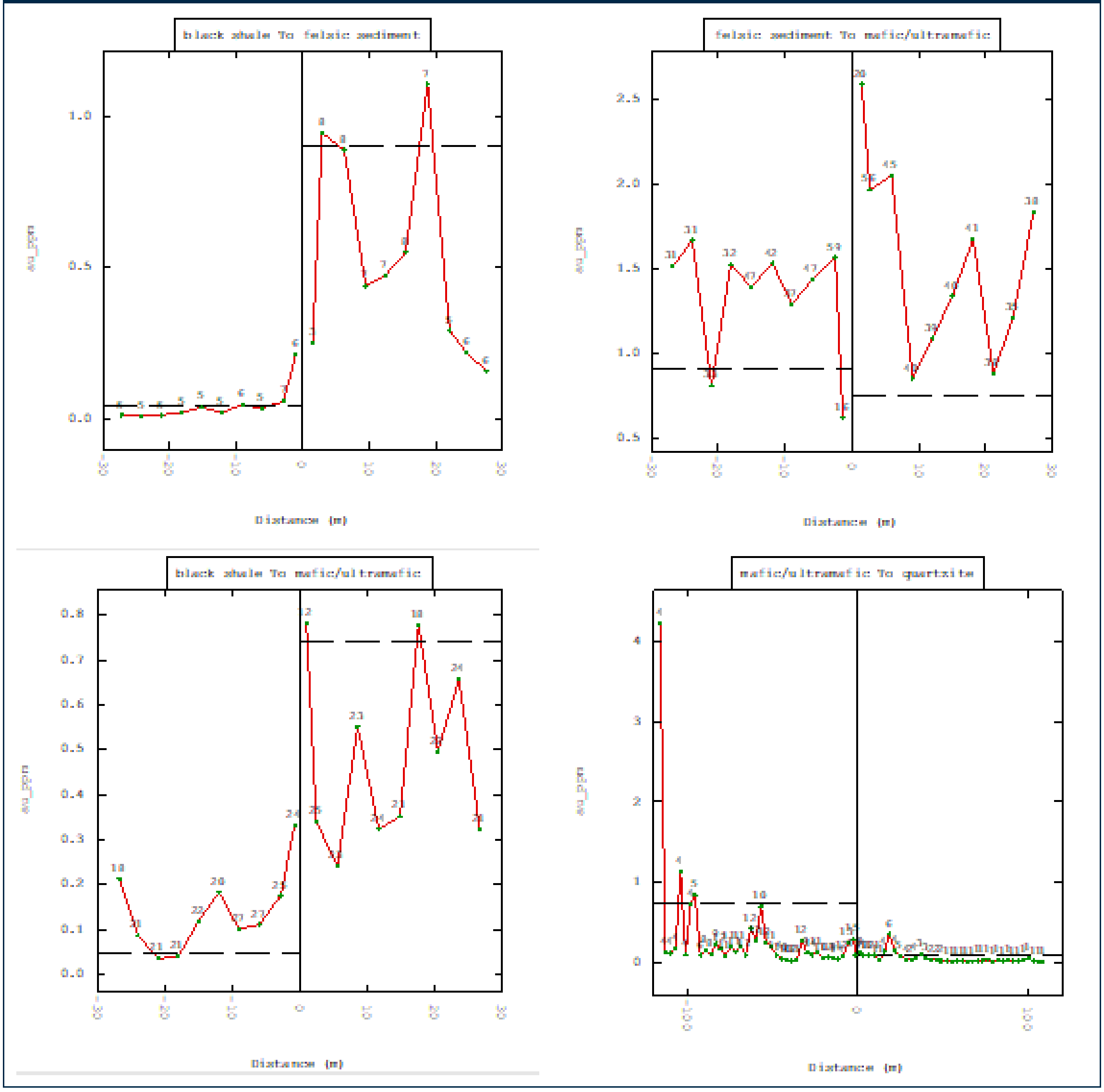
As a consequence of the structural complexity of the mineralised lithologies, the mineralisation often presents as somewhat irregularly distributed on the scale of the drill sections completed to date (approximately 40m to 80m), although mineralised zones overall persist across multiple sections. Figure 14.3.1_1 presents a sectional view demonstrating variability in grade, thickness and orientation of gold mineralisation. The intricate folding and faulting of the sedimentary intercalations and the overprinting breccias makes the traditional approach of wireframing 'host lithology' on a sectional and plan basis extremely difficult with multiple plausible geometrical solutions often existing.

Figure 14.3.1_1
Cross section showing main mineralised zones (looking towards 065°)



Contact analysis tests were performed to determine if changes in gold grades were related to the various lithological contacts. The tests examine the applicability of the lithological boundaries as estimation boundaries as significant changes in gold grades sustained at and across the lithological boundaries may require these to be used as such. The Contact Analysis application calculates and displays the mean value of a variable in a domain as a function of the distance of the samples to the contact with another domain. The mean value is calculated on samples at a predetermined lag distance (3m in this case) along the drillholes. Results are graphically displayed in Figures 14.3.1_2.

Figure 14.3.1_2
Ikkari Gold Deposit - Lithological contact analysis



The graphical representation adequately demonstrates a marked change in grade from the black shale to the felsic sediment while the transition from the black shale to the mafic/ultramafic lithology is more gradually transitional. In the case of the felsic sediment transition to the mafic/ultramafic there is no evident change indicating that this lithological boundary may not be relevant as a control on gold grade. No grade change can be demonstrated at the boundary of the quartzite and mafic/ultramafic.

To establish appropriate grade continuity, the mineralisation models were therefore based upon a nominal 0.3ppm Au indicator mineralisation shell estimated using 3m unconstrained downhole composites. This interpretation is designed to capture the broad mineralisation halo that encompasses the geological system and is not intended to constrain individual veins or lithologies. As the main grade estimation technique is MIK with change of support technique, this type of mineralisation constraint is deemed appropriate.

The mineralisation grade shells were generated by grade estimation via indicator kriging at a single cutoff, 0.3g/t Au. Grade estimation was into block models with cell dimensions of 10mE × 5mN × 5mRL. Two domains were adopted, one to capture the minor mineralisation in the black shales and the other to cover the mafic/ultramafic and felsic sediments. Grade shell triangulations were then generated by constraining the block model at a 25% probability cutoff (Figure 14.3.1_1).

Indicator variogram parameters are presented below in Table 14.3.1_1 and the variogram in Figures 14.3.1_3.

Table 14.3.1_1
Ikkari Gold Deposit
Indicator variogram parameters IK estimate

Variable	C°	Axis Orientation (°)			Structure 1				Structure 2			
		Bearing	Plunge	Dip	C1	Major	Semi-Major	Minor	C2	Major	Semi-Major	Minor
Au 0.3ppm cutoff	0.065	065	-25	90	0.075	50	40	15	0.076	250	200	60

Figure 14.3.1_3
Ikkari Gold Deposit - Indicator variogram 0.3g/t Au

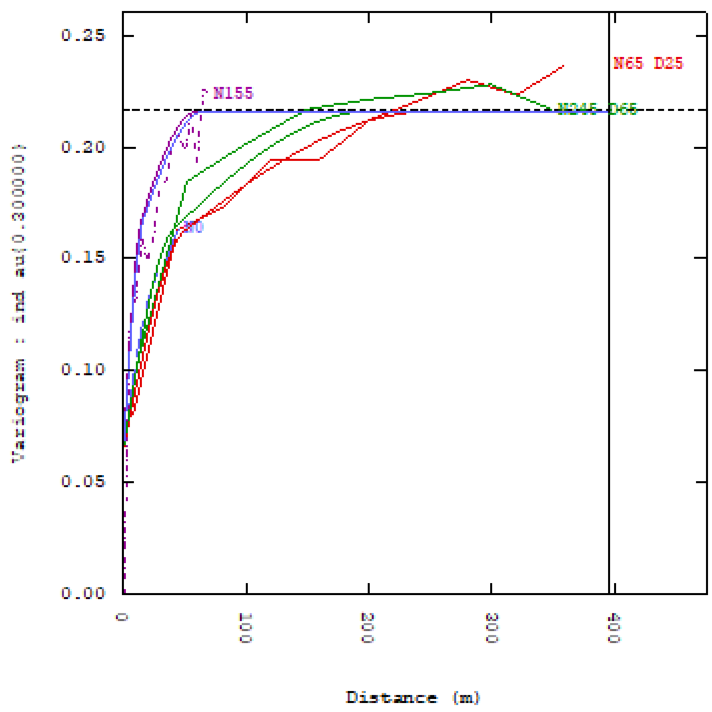


Table 14.3.1_2 details the indicator estimate sample search parameters. Estimate search axis orientations were rotated to match the overall average mineralisation geometry and the variogram for the black shale was adopted from the main mafic/ultramafic/felsic sediment domain and was rotated to match the shale orientation.

Table 14.3.1_2 Ikkari Gold Deposit Sample search parameters IK estimate										
Domain	Estimation Pass	Axis Orientation (°)			Search Distance (m)			Min. No. of Comp.	Max. No. of Comp,	Max. No. of Comp. per DH	Discret-isation
		Bearing	Plunge	Dip	X	Y	Z				
Main felsic / mafic / ultramafic	1	065	-25	90	250	200	60	12	24	4	2*2*2
Black shale	1	065	-25	65	150	100	40	12	12	4	2*2*2

The probability cutoff may be considered somewhat subjective and may seem arbitrary, however was selected based on extensive review of a range of probability cutoffs. The selected probability shell is considered optimal to capture the observed continuity and tenor of mineralisation while excluding obvious low-grade material. Grade shells were reviewed in multiple orientations and in plan and section views prior to being accepted for grade estimation and block modelling purposes.

Mineralisation estimation domains were thus defined with further sub-division being differentiated on the basis that a minor amount of mineralisation is hosted in the black shale lithology to the hanging wall side of the northern thrust that bounds one side of the main mineralised package. This mineralisation was determined to be different in orientation and tenor to the main body of mineralisation as described earlier. The black shale domain is denoted Zone 100 and the main mineralisation Zone 200. A typical section demonstrating the black shale hanging wall and the constraining grade shell outline is presented in Figure 14.3.1_4. A plan and isometric view of the mineralisation wireframe is presented in Figures 14.3.1_5 and 14.3.1_6 respectively.

Figure 14.3.1_4
Ikkari Gold Deposit - Typical cross section (looking east)

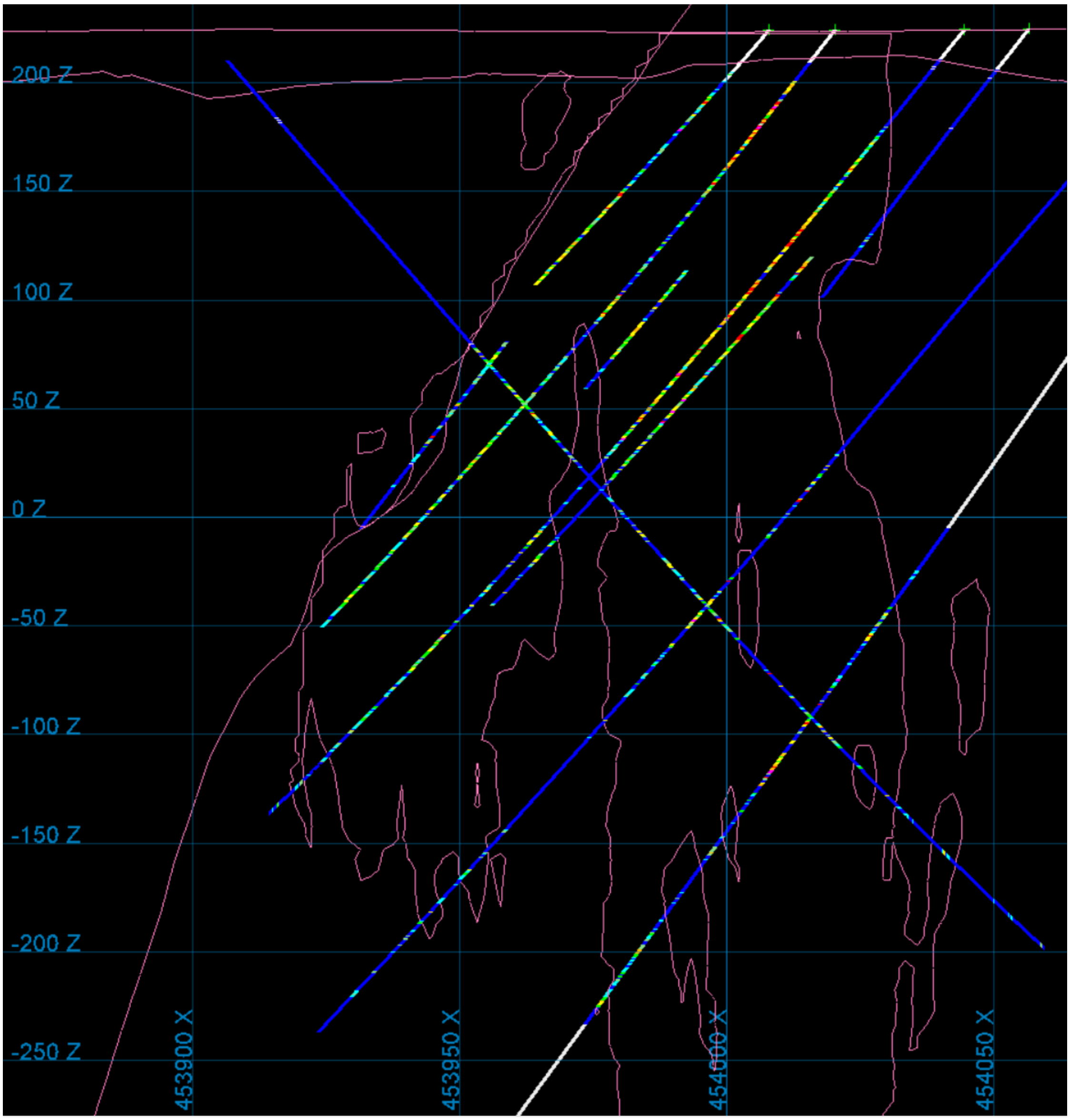


Figure 14.3.1_5
Ikkari Gold Deposit
Estimation Domains Plan View

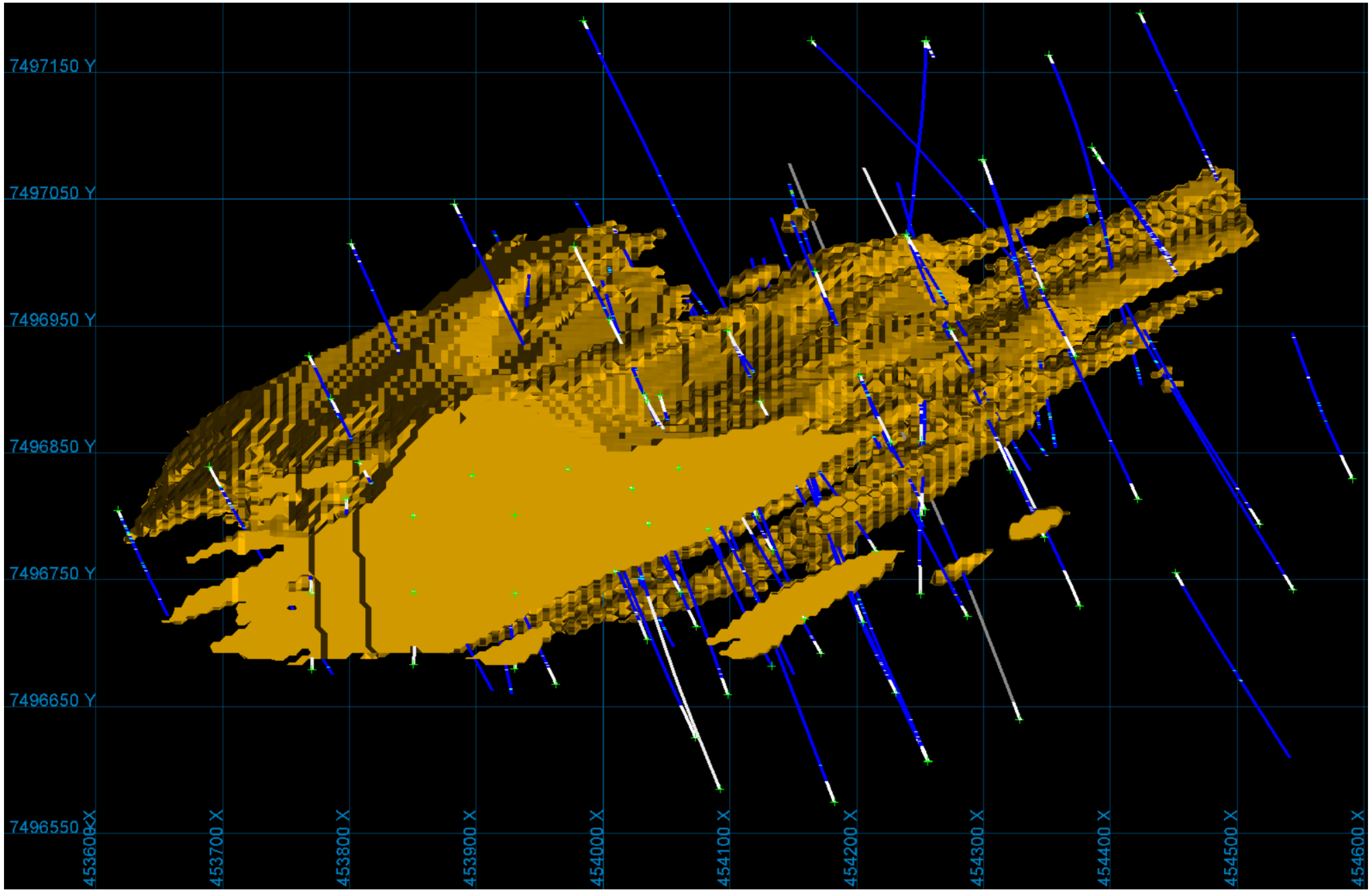
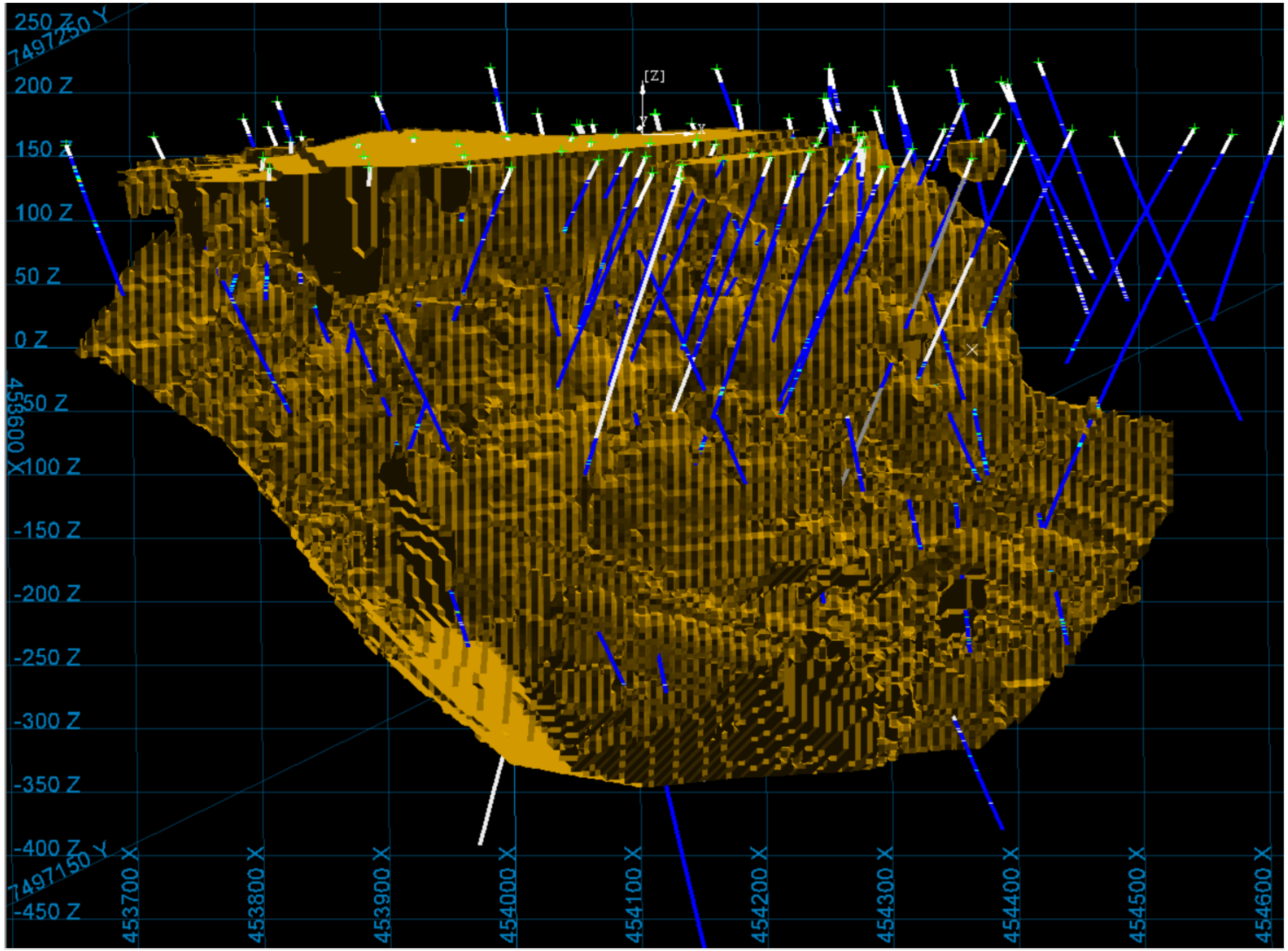


Figure 14.3.1_6
Ikkari Gold Deposit
Estimation domains isometric SE view



14.4 Data Flagging and Compositing

Drillhole samples were flagged with the relevant indicator grade shell, lithological wireframes and topographical surfaces. Coding was undertaken on the basis that if the individual sample centroid fell within the grade shell boundary it was coded as within the grade shell. Each sub-domain has been assigned a unique numerical code to allow the application of hard boundary domaining if required during grade estimation.

The drillhole database coded within each grade shell or mineralisation wireframe was then composited as a means of achieving a uniform sample support. It should be noted, however, that equalising sample length is not the only criteria for standardising sample support. Factors such as angle of intersection of the sampling to mineralisation, sample type and diameters, drilling conditions, recovery, sampling/sub-sampling practices and laboratory practices all affect the 'support' of a sample. Exploration/mining databases which contain multiple sample types and/or sources of data provide challenges in generating composite data with equalised sample support, and uniform support is frequently difficult to achieve.

After consideration of relevant factors relating to geological setting and mining, including likely mining selectivity and bench/flitch height, a regular 3m run length (downhole) composite was selected as the most appropriate composite interval to equalise the sample support at the Ikkari Gold Deposit. Compositing was broken when the routine encountered a change in flagging (grade shell boundary) and composites with residual intervals of less than 3m were retained in the composite file.

14.5 Statistical Analysis

14.5.1 Summary Statistics

The composites flagged as described in the previous section were used for subsequent statistical, geostatistical and grade estimation investigations.

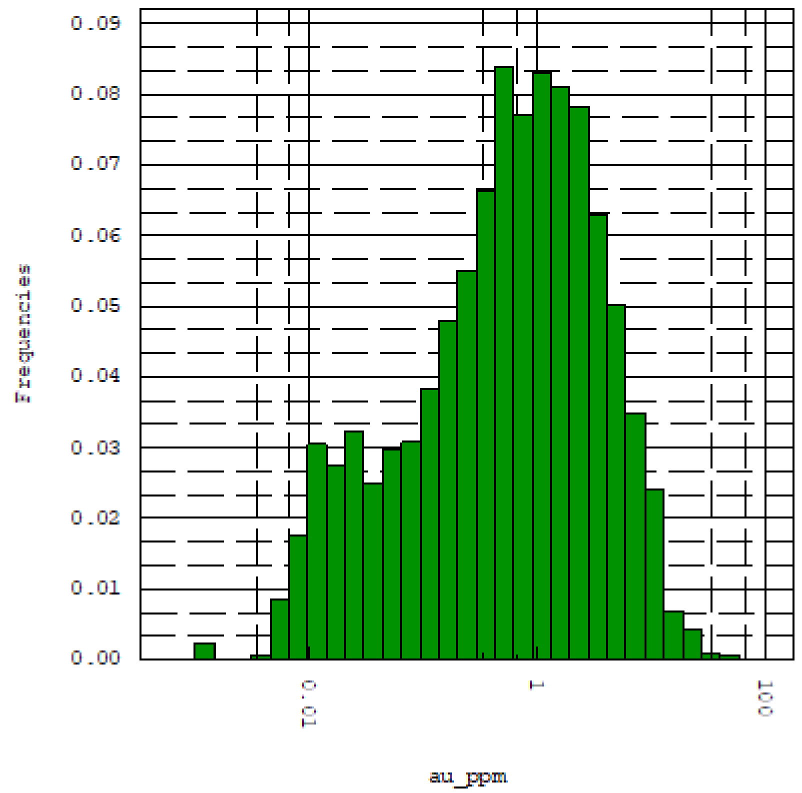
3m composite summary statistics for gold within the grade shell and subdivided by lithology are presented in Table 14.5.1_1. It is evident that the contribution to total metal by the black shale is minimal (<1%) and that the statistics for the felsic and mafic/ultramafic domains are more similar. The three lithological domains have therefore been combined for all further purposes of statistical and geostatistical analysis.

Table 14.5.1_1
Summary statistics low grade domains for 3m composites of uncut gold grade (g/t)

Domain	Count	Minimum	Maximum	Mean	Std. Dev.	Variance	CV
Black shale	54	0.005	4.906	0.41	0.823	0.677	2.006
Felsic sediment	959	0.005	28.667	1.504	2.16	4.665	1.436
Mafic/ultramafic	2459	0.001	57.203	1.913	3.531	12.465	1.845

Summary descriptive statistics were generated for the combined lithological domains (Table 14.5.3_1). The grade distribution is reasonably typical for gold deposits of this style and shows a positive skew or near lognormal behaviour (Figure 14.5.1_1). The histogram indicates a bimodal distribution with a potential subordinate low grade population present. The coefficient of variation (CV - calculated by dividing the standard deviation by the mean grade) is only moderate, indicating any potential high outlier grades that do not significantly contribute to the total metal.

Figure 14.5.1_1
Log histogram of uncut gold grade



14.5.2 High Grade Outlier Analysis

A high grade outlier analysis has been undertaken for the 3m composite gold grades. A comparison analysis was also undertaken on the raw samples however negligible differences were observed and all further statistical analysis relates to the 3m composites. The effects of the highest-grade composites on the mean grade and standard deviation of the gold dataset for each of the estimation domains have been investigated by compiling and reviewing statistical plots (histograms and probability plots). The resultant plots were reviewed together with probability plots of the sample populations and an upper cut for each dataset was chosen coinciding with a pronounced inflection or increase in the variance of the data. An upper cut was chosen at 30g/t Au however this is considered extremely minimal as it only affects 4 composites and has resulted in a 0.8% reduction in mean grade. Further analysis of top cut variability indicates a 1.5% reduction in the mean if a top cut is performed prior to compositing. Top cut statistics are presented in Table 14.5.3_1.

Composite data was viewed in 3D to determine the clustering or otherwise of these highest grades observed in each domain to assess the appropriateness of the high-grade cut. Clustering of the highest grades in one or more areas may indicate that the grades do not require cutting.

14.5.3 Cell Declustering Analysis

Visual inspection of the available datasets for each of the estimation domains indicated some clustering of the data within higher grade regions of the deposit. Data clustering often occurs when drilling campaigns selectively target higher grade regions of the deposit, resulting in an artificially high mean grade in many cases. Declustering was therefore completed to remove any effects of preferential sampling of high grade areas that may have occurred.

Cell declustering was completed with weights determined as 1/n, with "n" representing the number of data in each cell. Declustered composite statistics are presented in Table 14.5.13_1. As expected, the declustered mean grades are significantly less than the raw composite mean grades due to the data configuration issues discussed above.

Table 14.5.3_1
Summary statistics 3m composites gold grade (g/t)

Domain	Count	Minimum	Maximum	Mean	Std. Dev.	Variance	CV
Au ppm	3,472	0.001	57.203	**1.777**	3.192	10.19	1.796
Au ppm cut	3,472	0.001	30	**1.762**	3.01	9.059	1.708
Au ppm, declustered	3,472	0.001	57.203	**1.4373**	3.1187	9.727	2.170
Au ppm cut, declustered	3,472	0.001	30	**1.4126**	2.79	7.785	1.975
Au ppm, sample cut before compositing	3,466	0.005	21.7	**1.75**	2.71	7.383	1.55

14.5.4 Multiple Indicator Kriging Cutoffs and Indicator Class Statistics

Indicator Kriging cutoffs or indicator bins were selected for estimation by MIK. Cutoffs were based upon population distributions and metal proportions above and below the mean composite value of the proposed cutoff bins. Conditional statistics for data within each domain grouping to be estimated by Multiple Indicator Kriging are listed in Table 14.5.4_1. A total of 17 cutoffs were applied to each Domain Group for estimation via MIK. Top cuts have not been applied for the purposes of conditional statistics calculation.

Table 14.5.4_1
Ikkari Gold Deposit
Indicator class statistics

High Grade Group		
Grade Threshold (Au g/t)	Probability Threshold	Class Mean (Au g/t)
0.08	0.188	0.0285
0.2	0.291	0.1345
0.35	0.378	0.2738
0.5	0.443	0.4200
0.65	0.508	0.5689
0.86	0.562	0.7431
1.1	0.611	0.9702
1.35	0.661	1.2217
1.65	0.705	1.5028
2	0.743	1.8136
2.35	0.780	2.1739
2.85	0.816	2.5845
3.5	0.853	3.1615
4.3	0.887	3.8936
5.4	0.919	4.7622
7.6	0.951	6.3858
11	0.980	9.0061
Max	Max	17.3014

14.6 Variography

14.6.1 Introduction

Variography is used to describe the spatial variability or correlation of an attribute (gold, silver etc.). The spatial variability is traditionally measured by means of a variogram, which is generated by determining the averaged squared difference of data points at a nominated distance (h), or lag (Srivastava and Isaacs, 1989). The averaged squared difference (variogram or γ(h)) for each lag distance is plotted on a bivariate plot, where the X-axis is the lag distance and the Y-axis represents the average squared differences (γ(h)) for the nominated lag distance.

Several types of variogram calculations are employed to determine the directions of the continuity of the mineralisation:

Traditional variograms are calculated from the raw assay values:

- Log-transformed variography involves a logarithmic transformation of the assay data.
- Gaussian variograms are based on the results after declustering and a transformation to a Normal distribution.
- Pairwise-relative variograms attempt to 'normalise' the variogram by dividing the variogram value for each pair by their squared mean value.
- Correlograms are 'standardised' by the variance calculated from the sample values that contribute to each lag.

Fan variography involves the graphical representation of spatial trends by calculating a range of variograms in a selected plane and contouring the variogram values. The result is a contour map of the grade continuity within the domain.

The variography was calculated and modelled in the geostatistical software, Isatis. The rotations are tabulated as dip and dip direction of major, semi-major and minor axes of continuity. Modelled variograms were generally shown to have moderate to good structure and were used throughout the MIK estimation and the change of support process.

14.6.2 Ikkari Variography

Grade and indicator variography was generated to enable grade estimation via MIK and change of support analysis to be completed. In addition, Gaussian variograms were also examined as part of the change of support process. Indicator thresholds for Domain groups to be estimated via MIK had variograms modelled with every third variogram typically modelled. Variograms not modelled have had their parameters interpolated based on the bounding modelled variograms.

Interpreted anisotropy directions correspond well with the modelled geology and overall geometry of the interpreted domain. All grade variography has been based on the back-transformed Gaussian variograms. A common feature of all the grade variography is the relatively long overall ranges, especially for the first modelled structure, and the dominance of the overall variance by the nugget and the first sill. This outcome can be expected in cases like Ikkari where much of the data is dominated by relatively wide spaced drilling.

Indicator variography for the MIK estimation domain is presented in Tables 14.6.2_1. The modelled grade variogram is presented in Figure 14.6.2_1.

Figure 14.6.2_1
Ikkari Gold Deposit - Grade variogram

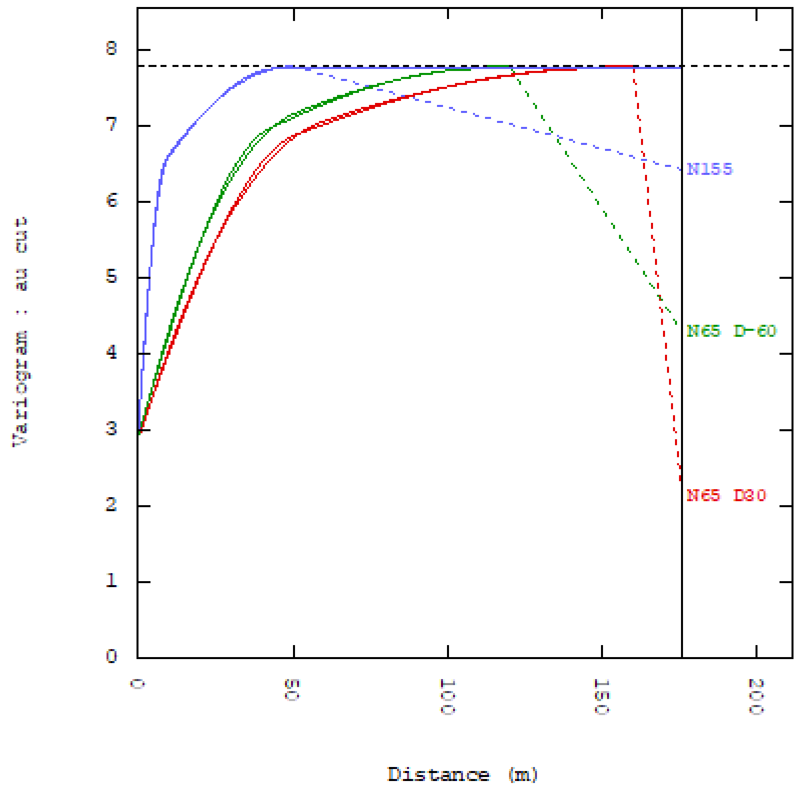


Table 14.6.2_1
Ikkari Gold Deposit
Domain group high grade - Indicator variogram models Au g/t

Grade Variable or Indicator Threshold	Nugget (C0)	Rotation (dip→dip dir)			Structure 1				Structure 2			
		Major	Semi Major	Minor	Relative Sill 1 (C1)	Range (m)			Relative Sill 2 (C2)	Range (m)		
						Major	Semi Major	Minor		Major	Semi Major	Minor
Grade Variogram	2.92	-30→065	60→245	0→155	3.09	50	42	9	1.74	147	111	45
0.08(1)	0.0329	-30→065	60→245	0→155	0.0789	60	50	10	0.0427	250	160	50
0.20(1)	0.0439	-30→065	60→245	0→155	0.1053	60	50	10	0.0571	250	160	50
0.35	0.0500	-30→065	60→245	0→155	0.1200	60	50	10	0.0650	250	160	50
0.50(2)	0.0551	-30→065	60→245	0→155	0.1243	60	48	10	0.0673	250	153	50
0.65(2)	0.0585	-30→065	60→245	0→155	0.1241	60	47	10	0.0672	250	147	50
0.86	0.0600	-30→065	60→245	0→155	0.1200	60	45	10	0.0650	250	140	50
1.10(3)	0.0636	-30→065	60→245	0→155	0.1131	60	43	10	0.0611	233	133	45
1.35(3)	0.0650	-30→065	60→245	0→155	0.1033	60	42	10	0.0557	217	127	40
1.65	0.0650	-30→065	60→245	0→155	0.0930	60	40	10	0.0500	200	120	35
2.00(4)	0.0633	-30→065	60→245	0→155	0.0825	57	40	10	0.0451	193	117	32
2.35(4)	0.0599	-30→065	60→245	0→155	0.0714	53	40	10	0.0397	187	113	28
2.85	0.0550	-30→065	60→245	0→155	0.0600	50	40	10	0.0340	180	110	25
3.5(5)	0.0468	-30→065	60→245	0→155	0.0503	50	40	9	0.0286	180	110	24
4.3(5)	0.0377	-30→065	60→245	0→155	0.0399	50	40	9	0.0228	180	110	23
5.4	0.0280	-30→065	60→245	0→155	0.0292	50	40	8	0.0168	180	110	22
7.6(6)	0.0176	-30→065	60→245	0→155	0.0184	50	40	8	0.0106	180	110	22
11.0(6)	0.0074	-30→065	60→245	0→155	0.0077	50	40	8	0.0044	180	110	22

Note: 1) Assumed model based on 0.35 Au g/t variogram model
2) Assumed model based on 0.35 Au g/t and 0.86 Au g/t variogram models
3) Assumed model based on 0.86 Au g/t and 1.65 Au g/t variogram models
4) Assumed model based on 1.65 Au g/t and 2.85 Au g/t variogram model
5) Assumed model based on 2.85 Au g/t and 5.4 Au g/t variogram model
6) Assumed model based on 5.4 Au g/t variogram model

14.7 Block Modelling

A 3-D block model was created in the local mine grid using Vulcan mining software. The parent block size was selected on the basis of the average drill spacing together with consideration of potential mining parameters. A parent cell size of 40mE by 20mN by 20mRL which was sub-blocked down to 10mE by 25mN by 5mRL (to ensure adequate volume representation). The models covered all the interpreted mineralisation zones and included suitable additional waste material to allow later mining engineering studies. Block coding was completed on the basis of the block centroid, wherein a centroid falling within any wireframe was coded with the wireframe solid attribute. The block model is unrotated.

The main block model parameters are summarised below in Tables 14.7_1. Variables were coded into the block models to enable multiple indicator kriging and ordinary kriging estimation and subsequent MIK change of support and grade tonnage reporting. A visual review of the wireframe solids and the block model indicated correct flagging of the block model. Additionally, a check was made of coded volume versus wireframe volume which confirmed the above.

14.8 Bulk Density Data

A dry bulk density database has been supplied containing a total of 4,481 data. All density measurements have been systematically taken by Rupert Resources as part of their ongoing core processing operations.

Table 14.7_1
Ikkari Gold Deposit
Block model parameters

	Northing (Y)	Easting (X)	RL (Z)
Min. Coordinates	453,700	7,496,400	-300
Extent	1,080	560	560
Block size (m)	20	40	20
Sub Block size (m)	5	10	5
Rotation (° around axis)	0	0	65

Rupert have calculated dry bulk densities on the basis of the weight in water method. Density readings have been taken on whole drill core and are distributed across all areas of the deposit. Based on the geological model, statistical analysis demonstrates that across the deposit, different lithologies have different densities. Summary statistics subdivided by lithology are presented in Table 14.8_1. Negligible differences have been noted per lithology based on the sub-division into mineralised and unmineralised portions and therefore bulk densities have been applied to the block model based on mean grades per lithology. Additionally, overburden has been applied an arbitrary valued of 1.8t/m^3 as no direct readings are available.

Table 14.8_1 Ikkari Gold Deposit Density statistics							
Company	Count	Minimum	Maximum	Mean	Std. Dev.	Variance	CV
Gabbro	309	2.18	3.74	2.836	0.172	0.03	0.061
Black shale	251	2.14	3.89	2.756	0.16	0.026	0.058
Felsic sediments	659	2.37	3.83	2.745	0.073	0.005	0.027
Mafic/ultramafic	3,179	1.79	6.82	2.878	0.159	0.025	0.055
Quartzite	79	2.65	3.83	2.729	0.129	0.017	0.047

14.9 Grade Estimation

14.9.1 Introduction

Multiple Indicator Kriging (MIK) was applied to grade estimation at the Ikkari deposit, within the defined indicator mineralisation shell. The minor domains forming a low grade halo to the main mineralised domains were estimated via ordinary kriging (OK). Estimation was completed in the mining package Vulcan using the GSLib geostatistical software while geostatistical change of support parameters were developed in Isatis geostatistical software. MIK is considered a robust estimation methodology for grade estimates for gold deposits such as Ikkari where high levels of short scale variability are present. MIK grade estimation with change of support has been applied to produce 'recoverable' gold estimates targeting a selective mining unit (SMU) of 10mE x 5mN x 5mRL.

14.9.2 The Multiple Indicator Kriging Method

The MIK technique is implemented by completing a series of Ordinary Kriging ("OK") estimates of binary transformed data. A composite sample, which is equal to or above a nominated cutoff or threshold, is assigned a value of 1, with those below the nominated indicator threshold being assigned a value of 0. The indicator estimates, with a range between 0 and 1, represent the probability the point will exceed the indicator cutoff grade. The probability of the points exceeding a cutoff can also be considered broadly equivalent to the proportion of a nominated block that will exceed the nominated cutoff grade.

The estimation of a complete series of indicator cutoffs allows the reconstitution of the local histogram or conditional cumulative distribution function ("ccdf") for the estimated point. Based on the ccdf, local or block properties, such as the block mean and proportion (tonnes) above or below a nominated cutoff grade can be investigated.

Post MIK Processing - E-Type Estimates

The E-type estimate provides an estimate for the grade of the total block or bulk-mining scenario. This is achieved by discretising the calculated ccdf for each block into a nominated number of intervals and interpolating between the given points with a selected function (e.g. the linear, power or hyperbolic model) or by applying intra-class mean grades. The sum of all these weighted interpolated points or mean grades enables an average whole block grade to be determined.

The following example shows the determination of an E-type estimate for a block containing three indicator cutoffs.

The indicator cutoffs and associated probabilities calculated are shown in Table 14.9.2_1.

Table 14.9.2_1
Ikkari Gold Deposit
Indicator cutoff and probability

Indicator	Cutoff Grade Au g/t	Indicator Probability (cumulative)
minimum grade *	0	0.00 **
indicator 1	1	0.40
indicator 2	2	0.65
indicator 3	3	0.85
maximum grade *	4	1.00 **

Note: * Cutoff grades determined by the user.
** Indicator probability is assumed at the minimum and maximum cutoff.

The whole block grade can now be determined in this block with the following parameters used for the purposes of the interpolation:

- Number of discretisation intervals: 4.
- Linear extrapolation between all points (median grade between nominated cutoffs).

The worked example is then calculated with the following steps:

- Interval 1 (0-1g/t Au) median grade x probability/proportion attributed to the interval (0.5g/t Au x 0.40 = 0.200).
- Interval 2 (1 - 2g/t Au) median grade x proportion (1.5g/t Au x 0.25 = 0.375).
- Interval 3 (2 - 3g/t Au) median grade x proportion (2.5g/t Au x 0.20 = 0.500).
- Interval 4 (3 - 4g/t Au) median grade x proportion (3.5g/t Au x 0.15 = 0.525).
- Calculate total grade average all calculated intervals ((0.2+0.375+0.500+0.525)/1) = 1.60g/t Au.

It is also possible from this example to calculate the proportion and grade above a nominated cutoff (e.g. 2g/t - at sample support or complete selectivity). The following steps would be undertaken to calculate the tonnes and grade at sample selectivity using a 2g/t cutoff:

- Interval 3 (2 - 3g/t Au) median grade x proportion (2.5g/t Au x 0.20 = 0.500).
- Interval 4 (3 - 4g/t Au) median grade x proportion (3.5g/t Au x 0.15 = 0.525).
- Calculate total grade average all calculated intervals ((0.500+0.525)/0.35) = 2.93g/t Au with 0.35% of the block above the cutoff.

The effect of using a non-linear model to interpolate between cutoffs is to shift the grade weighting associated with that cutoff away from the median. The intra-class means based on the cut composite data have been used to reconstitute the ccdf and produce block statistics.

It is noted, however, that the calculation of the E-type estimate and complete selectivity often does not allow mine planning to the level of selectivity which is proposed for production. To achieve an estimate which reflects the levels of mining selectivity envisaged, a selective mining unit ("SMU") correction is often applied to the calculated ccdf.

Support Correction (Selective Mining Unit Estimation)

A range of techniques are known to produce a support correction and therefore allow for selective mining unit emulation. The common features of the support correction are:

- Maintenance of the mean grade of the histogram (E-type mean).
- Adjustment of the histogram variance by a variance adjustment factor (the 'f' factor).

The variance adjustment factor, used to reduce the histogram or ccdf variance, can be calculated using the variogram model. The variance adjustment factor is often modified to account for the likely grade control approach or 'information effect'.

In simplest terms, the variance adjustment factor takes into account the known relationship derived from the dispersion variance.

Total variance = variance of samples within blocks + variance between blocks.

The variance adjustment factor is calculated as the ratio of the variance between the blocks and the variance of the samples within the blocks, with a small ratio (e.g. 0.10) indicating a large adjustment of the ccdf variance and large ratio (e.g. 0.80) representing a small shift in the ccdf.

Two simple support corrections that are available include the Affine and Indirect Lognormal correction, which are both based on the permanence of distribution. The discrete Gaussian model is often applied to global change of support studies and has been generated on the composite dataset as a comparison. The indirect lognormal correction was applied to the MIK grade estimates.

Indirect Lognormal Correction

The indirect lognormal correction can be implemented by adjusting the quantiles (indicator cutoffs) of the ccdf with the variance adjustment factor so that the adjusted ccdf represents the statistical characteristics of the block volume of interest.

This is implemented with the following formula:

$$q' = a \times q^{b}$$

q = quantile of distribution.

q' = quantile of the variance-reduced distribution.

where the coefficients a and b, are given by the following formula:

$$a = \sqrt{\frac{m}{f.\,CV^2 + 1}} \left[\sqrt{\frac{CV^2 + 1}{M}} \right]$$

$$b = \sqrt{\frac{\ln (f.\,CV^2 + 1)}{\ln (CV^2 + 1)}}$$

m = mean of distribution.

f = variance adjustment factor .

CV = coefficient of variation.

At the completion of the quantile adjustments, grades and tonnages (probabilities are then considered a pseudo-tonnage proportion of the blocks) at a nominated cutoff grade can be calculated using the methodology described above (E-type). The indirect lognormal correction, as applied to Ikkari, is the best suited of the common adjustments applied to MIK to produce selective mining estimates for positively skewed distributions.

14.9.3 Multiple Indicator Kriging Parameters

MIK estimates were completed using the indicator variogram models (Section 14.6), and a set of ancillary parameters controlling the source and selection of composite data. The sample search parameters were defined based on the variography and the data spacing, and a series of sample search tests performed in Isatis geostatistical software. A total of 17 indicator thresholds were estimated for all estimation domains (Table 14.5.4_1).

The sample search parameters for the MIK estimations are provided in Table 14.9.3_1. A combination of soft domain boundaries was used for the estimation throughout to reflect continuity between domains or otherwise. A three-pass estimation strategy (where required) was applied to each domain, applying a progressively expanded and less restrictive sample search to the successive estimation pass, and only considering blocks not previously assigned an estimate. Parent cell estimations (20mE by 10mN by 10mRL) were applied throughout and discretisation was applied on the basis of 3X by 3Y by 2RL for 18 discretisation points per block.

Table 14.9.3_1
Ikkari Gold Deposit
MIK sample search criteria

Domain	Pass	Sample Search Orientation (dip/dip direction°)			Sample Search Distance (m)			Numbers of 3m Composites			% Blocks Estimated
		Major	Semi Major	Minor	Major	Semi Major	Minor	Min.	Max.	Max Per Drillhole	
100	Pass 1	0→65	50→335	40→1555	300	240	90	24	36	6	77
	Pass 2	0→65	50→335	40→1555	900	720	270	24	36	6	100
200	Pass 1	30→65	60→245	0→155	125	100	40	24	36	6	70
	Pass 2	30→65	60→245	0→155	300	240	90	24	36	6	100

14.9.4 Change of Support

Applying the modelled variography, variance adjustment factors were calculated for to emulate a 10mE x 5mN x 5mRL selective mining unit ("SMU") via the indirect lognormal change of support. The intra-class composite mean grades were used in calculating the whole block and SMU grades. The change of support study also included the calculation of the theoretical global change of support via the discrete Gaussian change of support model.

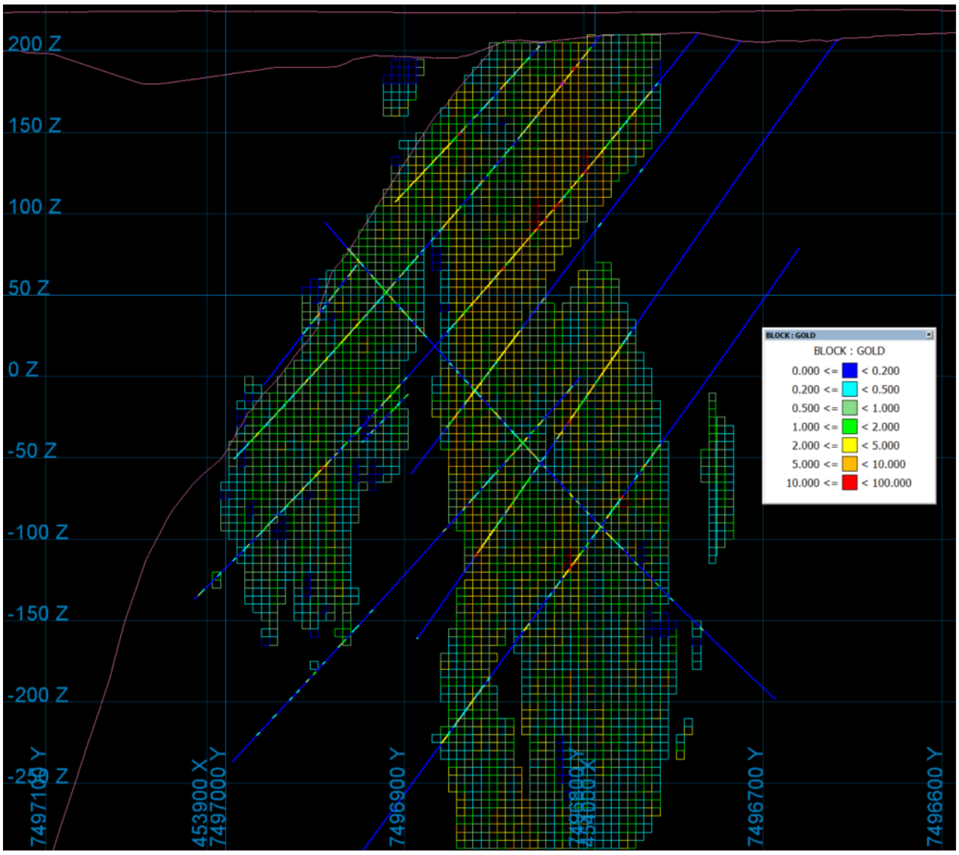
An 'information effect' factor is commonly applied to the originally derived panel-to-block variance ratios to determine the final variance adjustment ratio. The goal of incorporating information effect is to calculate results taking into account that mining takes place based on grade control information. There will still be a quantifiable error associated with this data and it is this error we want to incorporate. This is achieved in practice by running a test kriging estimation of an SMU using grade control data (the results required to incorporate this option in the change of support do not depend on the assay data so the grade control data can be hypothetical). The incorporation of the information effect is commonly found to be negligible, however can have a significant effect in some cases. In this case, the information effect factor was found to have a minor effect and has been incorporated in the calculation.

The variance adjustment ratios as applied to all mineralised domains was 0.15.

14.9.5 Grade Localisation

MIK grade estimates are generated in large blocks or panels (in the case of Ikkari, 40mE x 20mN x 20mRL) and are inherently not intuitive to review. Post processing of these MIK estimates aims to simplify the presentation by producing a single SMU dimension block grade where the distribution of the grades in the panel matches that of the distribution in the SMU's. The MIK panel grades have been localised to SMU dimension blocks in Isatis software. The SMU dimension was 10mE x 5mN x 5mRL. Validation of the results indicates a near identical distribution and the resultant model has been accepted. A typical section is presented below (Figure 14.9.5_1).

Figure 14.9.5_1
Typical sectional view displaying localised Au grades



14.9.6 Estimate Validation

All relevant statistical information was recorded to enable validation and review of the MIK estimates. The recorded information included:

- Number of samples used per block estimate.
- Number of drillholes from which samples selected.
- Average distance to samples per block estimate and distance to nearest sample.
- Estimation flag to determine in which estimation pass a block was estimated.

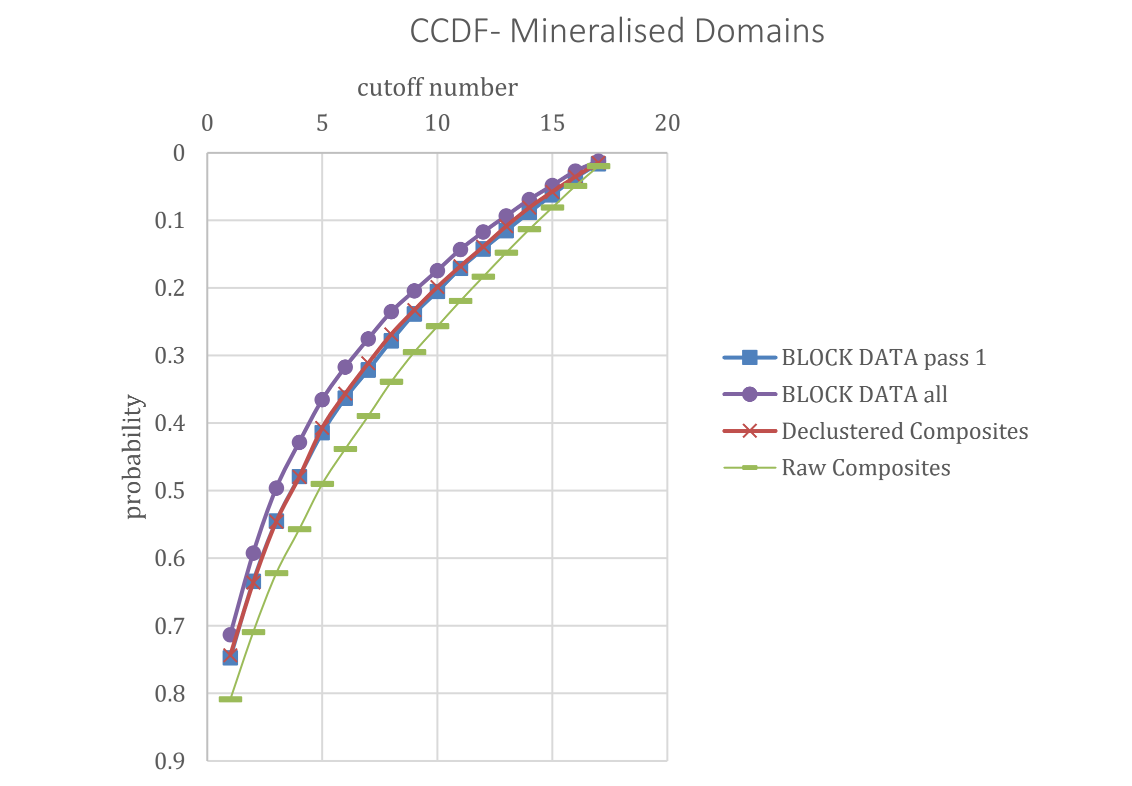
Number of drillholes from which composite data were used to complete the block estimate.

The estimates were reviewed visually and statistically prior to being accepted. The review included the following activities:

- Comparison of the E-type estimate versus the mean of the composite dataset, including weighting where appropriate to account for data clustering.
- Comparison of the reconstituted cumulative conditional distribution functions of the estimated blocks (indicator kriging) versus the input composite data (Figure 14.9.6_1).
- Production of swath plots comparing input composite grades versus block grades (Figure 14.9.6_2)
- Visual checks of cross sections, long sections, and plans.

Alternate estimates including OK estimates into varying parent cell size blocks.

Figure 14.9.6_1
CCDF Validation



Alternative MIK estimates were also completed to test the sensitivity of the reported model to the selected MIK interpolation parameters. An insignificant amount of variation in overall grade was noted in the case of the alternative estimates, with comparable mean block grades and a negligible change from the accepted MIK grade estimate.

Finally, alternative estimation methodologies of ordinary kriging and inverse distance squared were completed on a like for like basis to examine for variance between the methods. Whilst comparable whole block grades were achieved, at higher cutoff grades the reported tonnes and grades were biased high and low respectively. This is due to the ability of the change of support to emulate a practical mining selectivity dimension while the ID2 and OK methods can only enable reporting at the parent cell dimension at which the estimate is undertaken.

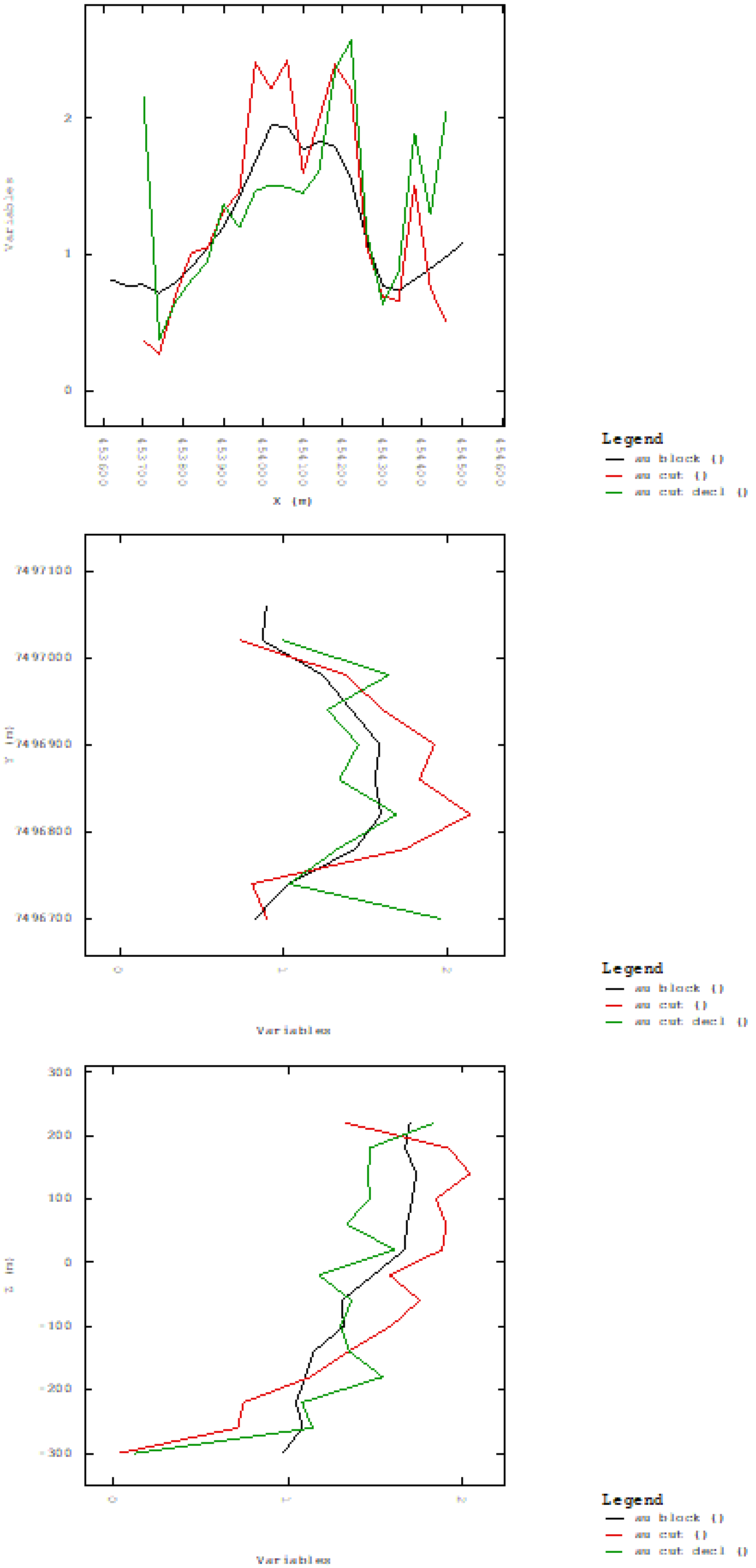
Validation of localised block Au grades has been undertaken by comparing the block mean grades with the relevant composite mean grades (Table 14.9.6_1).

Table 14.9.6_1
Ikkari Gold Deposit
Comparison of block grades with composite mean grades – All data used

Zone	All Composites, (declustered, capped)	All Composites, (declustered, uncapped)	All Composites, (non-decl, capped)	Block Model Grades	% Diff Block Model vs Decl. Mean
100	1.413	1.423	1.762	1.448	2.5%

A good correlation may be drawn between the declustered composite mean grades and the block model mean grade.

Figure 14.9.6_2
Comparison of swath plot grades for input composites



14.9.7 Depletion for Mining Activity

No mining activity has taken place at Ikkari therefore no depletion is applicable.

14.9.8 Resource Classification

The resource categorisation was based on the robustness of the various data sources available, including:

- Geological knowledge and interpretation.
- Variogram models and the ranges of the first structure in multi-structure models.
- Drilling density and orientation.
- Estimation quality statistics.

The resource estimates for the Ikkari Gold Deposit have been classified as Inferred Mineral Resources based on the confidence levels of the key criteria as presented in Table 14.9.8_1.

Table 14.9.8_1_
Ikkari Gold Deposit
Confidence Levels by Key Criteria

Items	Discussion	Confidence
Drilling Techniques	Diamond drilling- Industry Standard approach.	High
Logging	Standard nomenclature has been adopted.	High/Moderate
Drill Sample Recovery	Recoveries are not recorded in entire database but diamond core recoveries assumed acceptable.	High/Moderate
Sub-sampling Techniques and Sample Preparation	Diamond sampling conducted by industry standard techniques.	High
Quality of Assay Data	Appropriate quality control procedures available for work completed by Rupert. They were reviewed and considered to be of industry standard.	Moderate/High
Verification of Sampling and Assaying	Sampling and assaying procedures have been assessed and are considered of appropriate industry standards.	Moderate
Location of Sampling Points	Survey of all collars conducted with accurate survey equipment. Investigation of downhole survey indicates appropriate behaviours.	Moderate/High
Data Density and Distribution	Majority of regions defined at a minimum on a notional 80mE x 40mN drill spacing.	Moderate
Audits or Reviews	N/A	
Database Integrity	Industry standard approach applied by Rupert.	Moderate
Geological Interpretation	Mineralisation controls are moderately well understood. The mineralisation constraints are robust but relatively broad and therefore of moderate confidence. Controls at a local scale commonly uncertain continuity	Moderate
Estimation and Modelling Techniques	Multiple Indicator Kriging is considered to be appropriate given the geological setting and grade distribution.	High
Cutoff Grades	MIK is independent of cutoff grade although the mineralisation constraints were based on a notional 0.3g/t Au lower cutoff grade. A 0.6g/t lower cutoff grade is considered appropriate for reporting within a potential open pit and 1.2g/t lower cutoff grade is considered appropriate for mineralisation that would be mined using underground methods.	Moderate/High
Mining Factors or Assumptions	A 10mE x 5mN x 5mRL SMU emulated for gold. Open pit mining assumed and SMU is conditional on scale assumed. Change of support for Inferred has higher degree of uncertainty due to lack of appropriate close spaced data.	Moderate
Metallurgical Factors or Assumptions	Not applied	N/A
Tonnage Factors (In-situ Bulk Densities)	Sufficient data exists to enable high confidence in the applied density values.	High

14.10 Resource Reporting

The summary total Mineral Resource for the Ikkari Gold Project is provided in Table 14.10_1 below. The Mineral Resource is reported both within an optimised open pit and as a potential underground operation below that. The preferred lower cutoff grade for reporting is 0.6g/t Au for the open pit portion and 1.2g/t Au for the underground. In view of the nature and style of the mineralisation and potential mining approach and method, these are considered appropriate cutoff grades.

Table 14.10_1
Ikkari Gold Deposit
Mineral Resource report (Inferred Resource) - Summary grade tonnage report

	Lower Cutoff Grade (g/t Au)	Tonnes (Mt)	Average Grade (g/t Au)	Gold Metal (Mozs)	Gold Metal (Kg)
Open Pit	0.4	34.44	2.3	2.58	80,200
	0.6	**30.53**	**2.6**	**2.51**	**78,200**
	0.8	27.14	2.8	2.44	75,900
	1.0	24.47	3.0	2.36	66,500
Underground	1.0	23.56	2.1	1.6	49,800
	1.2	**18.80**	**2.4**	**1.44**	**44,600**
	1.3	17.34	2.5	1.38	42,800
	1.5	13.65	2.8	1.21	37,700
Open Pit	0.6	30.53	2.6	2.51	78,200
Underground	1.2	18.80	2.4	1.44	44,600
Total		49.33	2.5	3.95	122,800

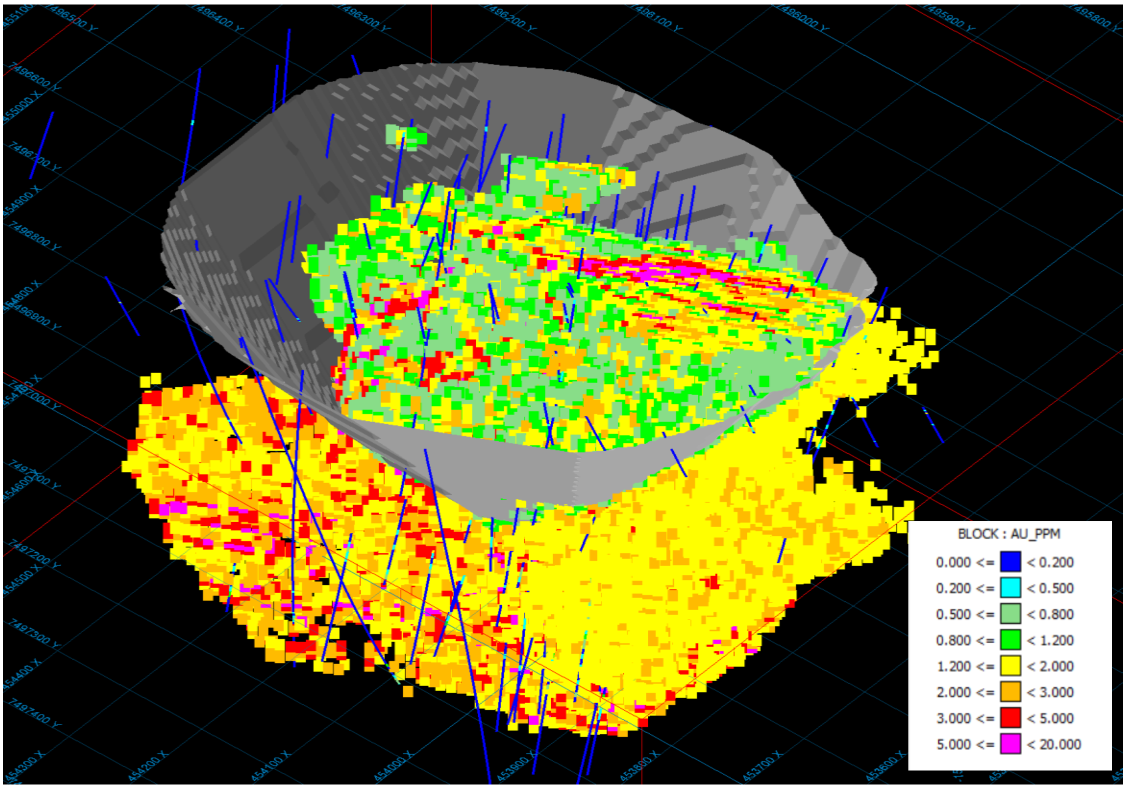
Note: Appropriate rounding has been applied.

An isometric view of the optimised open pit with estimated blocks is presented in Figure 14.10_1, note estimated blocks within the open pit are constrained by 0.6g/t Au and those in the underground portion 1.2g/t Au. It should be noted that mineral resources that are not mineral reserves do not have demonstrated economic viability.

The effective date of this Mineral Resource is 13 September 2021. It is not anticipated that this Mineral Resource estimate will be materially affected, to any extent, by any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors.

The resource model was based on costs from comparable operations and first principles calculations. Estimated operating costs of US$25.2 and US$49.0 for the open pit and underground components respectively include costs for mining, processing, waste management and G&A. Further cost optimisation is to be undertaken in future studies. Based on assumptions of a gold price of USD1430 per ounce and recovery of 92% a mining cutoff of 0.6g/t Au was selected for the open pit component of the resource and 1.2g/t Au for the underground component.

Figure 14.10_1
Estimated blocks with pit shell - OP cutoff 0.6g/t Au and UG 1.2 g/t Au



15. MINERAL RESERVE ESTIMATES

The Mineral Resources stated in this report are classified as Inferred and cannot therefore be used to derive a mineral reserve.

16. MINING METHODS

The resource estimated in this report is classified as Inferred and definitive mining methods have yet to be determined. For the purposes of constraining the Inferred Resource estimate, unoptimised Whittle shells were developed for the open pit using a gold price of USD1430 per ounce, 10% discount rate, and costs from comparable operations and first principle calculations. The open pit selected has a revenue factor of 0.4 and strip ratio of approximately 2.4. Underground mining assumed the same gold price and either sub-level long-hole open-stoping or sub-level caving methods were considered with 30m stope heights. Using the Tatemans Production Rate multiplier a production rate of approximately 3.0Mtpa was considered possible from potential underground mining. Ground conditions are considered favourable for both open pit and underground methods.

17. RECOVERY METHODS

The resource estimated in this report is classified as Inferred and definitive recovery methods have yet to be determined. Preliminary metallurgical testwork indicates Ikkari ore is non-refractory and can be processed using conventional methods and demonstrates potential recovery rates between 94.8% and 99.4%. Given the preliminary nature of the testwork to-date an overall recovery of 92% has been assumed for the basis of preparing this report. Testwork shows waste rock to be non-acid generating with an opportunity for low impact environmental waste management. Further metallurgical testwork is currently underway.

18. PROJECT INFRASTRUCTURE

The resource estimated in this report is classified as Inferred and future project infrastructure demands have yet to be defined.

19. MARKET STUDIES AND CONTRACTS

The resource estimated in this report is classified as Inferred and future concentrate or doré types have yet to be defined. The Project has no contractual or offtake sales agreements in place.

20. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 Environmental Studies and Relevant Environmental Issues

There are no designated protected areas within the Rupert Lapland Project area and the Ikkari deposit impact zone. Tollovuoma-Silmäsvuoma-Nunarvuoma (SAC/SPA, FI1300608, 9 673ha) is the closest Natura 2000 area to Ikkari and is situated more than 8km west of the Ikkari deposit. Kaaresvuoma nature conservation area (ESA302828, SSO120578) is situated more than 7km east of the Ikkari deposit.

The Ikkari project area contains forests, mires, swamps and springs, small streams, and headwaters of small rivers. Environmental baseline data collection at Ikkari began 2017 with water sampling of main streams and rivers. Currently nine sample locations are monitored six times per year. In addition, the following nature studies have been conducted and reported:

- Desktop review of nature values and habitats of exploration area (Eurofins, 2018);
- Moor frog –study of Ikkari & Heinälamminvuoma (Eurofins, 2019);
- Breeding bird line transect censuses (Eurofins, 2019);
- Vegetation survey of exploration areas (Ramboll, 2019); and
- Desktop study of mussels (Eurofins, 2021).

Ongoing environmental studies, expected to be reported during 2021:

- Status of Ikkari water systems (Envineer, 2021);
- Supplementary moor frog study of Ikkari (Envineer, 2021);
- Supplementary bird study of Ikkari (Envineer, 2021);
- Mussel field study (Eurofins, 2021);
- Directive insects (Ophiogomphus Cecilia and Dytiscus latissimus) study (Envineer, 2021);
- Bat study (Envineer, 2021); and
- Otter study (Envineer, 2021).

Nature baseline studies have also been undertaken at the Pahtavaara mine area by Ahma Ympäristö Ltd in 2005, 2006, 2013. There are no protected areas inside the mining area or in the area affected by the mine. Further baseline studies were completed by Eurofins Ltd for the wider Pahtavaara exploration permits in March 2018, covering an area that includes Area 1 and the Ikkari deposit.

20.2 Waste Management

The resource estimated in this report is classified as Inferred and future project waste management demands have yet to be defined.

20.3 Sediment Control

The resource estimated in this report is classified as Inferred and future project waste management demands have yet to be defined.

20.4 Post-Closure Management

The resource estimated in this report is classified as Inferred and future post-closure management demands have yet to be defined.

20.5 Site Monitoring

Environmental baseline data collection at Ikkari began in 2017 with water sampling of main streams and rivers. Currently nine locations are monitored and sampled six times per year.

Samples are collected and are sent for analysis by Eurofins Ltd. The results of the analyses are delivered regularly to the supervising authority (the Centre for Economic Development, Transport and Environment of Lapland).

20.6 Permit Requirements, Status of Permit Applications and Bond Requirements

The resource estimated in this report is classified as Inferred and future permit applications are yet to be initiated.

20.7 Applicable Codes

20.7.1 Mining Code

Mining and exploration projects in Finland are subject to the Finland Mining Act (621/2011). The General Provisions of this act are described as follows:

The objective of this Act is to promote mining and organise the use of areas required for it, and exploration, in a socially, economically, and ecologically sustainable manner. In order to fulfil the purpose of the Act, the securing of public and private interests is required, with particular attention to:

1) *the preconditions for engaging in mining activity;*
2) *the legal status of landowners and private parties sustaining damage; and*
3) *the impacts of activities on the environment and land use, and the economic use of natural resources.*

A further objective of the Act is to ensure the municipalities' opportunities to influence decision-making, and the opportunities of individuals to influence decision-making involving them and their living environment. Furthermore, an objective of the Act is to promote the safety of mines and to prevent, decrease, and avert any inconvenience and damage incurred in the activities referred to in this Act, and to ensure liability for damages for the party causing the inconvenience or damage.

20.7.2 Environmental Code

The Mining Act (621/2011) also refers to other legislation for "*decisions on permit issues or other matters hereunder and other activities in accordance with this Act shall comply with, inter alia, the provisions of the Nature Conservation Act (1096/1996), the Environmental Protection Act (86/2000), the Act on the Protection of Wilderness Reserves (62/1991), the Land Use and Building Act (132/1999), the Water Act (264/1961), the Reindeer Husbandry Act (848/1990), the Radiation Act (592/1991), the Nuclear Energy Act (990/1987), the Antiquities Act (295/1963), the Off-Road Traffic Act (1710/1995) and the Dam Safety Act (494/2009)*"

20.7.3 Regulations

Regulations are specified for exploration (Section 51) and mining (Section 52) permits in the Mining Act (621/2011).

Section 51 - Regulations to be included in an exploration permit.

The exploration permit shall specify provisions for the location and borders of the exploration area. The exploration permit shall include the necessary provisions for securing public and private interests concerning the following:

1) *the times and methods of exploration surveys and the equipment and constructions related to exploration;*
2) *measures to diminish harm caused to reindeer herding in a special reindeer herding area;*
3) *wording to ensure that activity under the permit will not endanger the status of the Sami as an indigenous people in the Sami Homeland, or the rights of the Skolts in accordance with the Skolt Act in the Skolt area;*
4) *obligation to report about exploration activities and results;*
5) *post-mining measures and the final deadline for submission of notification concerning these measures;*
6) *the waste management plan for extractive waste and compliance therewith;*
7) *the obligation to report on the exploration work to the appropriate authority overseeing public interests within its line of duty;*
8) *the schedule for decreasing the size of the exploration area;*
9) *collateral in accordance with Chapter 10;*
10) *other terms concerning exploration and use of the exploration area in order to ensure that the activity does not result in any consequence prohibited by this Act 16; AND*
11) *other specifications that are necessary in view of public and private interests and pertaining to the implementation of the conditions of the permit.*

Section 52 - Regulations to be included in a mining permit.

A mining permit shall give provisions for the location and borders of the mining area to be formed and the auxiliary area to the mine, taking the provisions laid down in sections 19 and 47, and the content of the rights of use and other special rights pertaining to the auxiliary area to the mine, into consideration. However, the permit authority may implement such changes in the location and borders of the mining area or auxiliary area to a mine presented in the application as are necessary in consideration of the provisions laid down in this Act. The mining permit shall specify a term within which the mining permit holder shall engage in mining activity or other such preparatory activity that indicates that the permit holder is seriously aiming to initiate actual mining operations. The time limit may be, at maximum, 10 years after the permit becomes legally valid. The mining permit shall include the necessary provisions for securing public and private interests concerning the following:

1) *avoidance or limiting of detrimental impacts of mining activity and addressing of elements necessary to ensure people's health and public safety;*
2) *measures for ensuring that mining activities do not entail obvious wasting of mining minerals or endanger or hamper potential future use of the mine and excavation work there;*
3) *the obligation to report on the extent of exploitation of the deposit and results;*
4) *measures to diminish harm caused to reindeer herding in a special reindeer herding area;*
5) *ensuring that activity under the permit will not endanger the status of the Sami as an indigenous people in the Sami Homeland, or the rights of the Skolts in accordance with the Skolt Act in the Skolt area;*
6) *collateral, in accordance with Chapter 10, associated with mine-closure alongside other obligations related to termination of mining activities and those after termination;*
7) *the deadline to be set for submission of any further specifications related to verifying the permit regulations;*
8) *material on other aspects of activity under the mining permit in order to ensure that the activity does not result in any consequence prohibited by this Act; and*
9) *other specifications that are necessary in view of public and private interests and pertaining to the implementation of the conditions of the permit.*

20.7.4 Environmental Protection Policies and Strategies

Rupert has a corporate social policy, environmental policy, community policy and health and safety policy that have been designed provide a risk management framework for the Project. These documents are available on the Company website. There are no Natura areas or national protected areas on Rupert's current exploration land package.

20.7.5 Rural and Land Development Policies and Strategies

The mining area is part of the Northern Lapland provincial plan, which was ratified by the Government on December 27, 2007. Ikkari lies within a designated area for mining.

20.7.6 International Agreements, Protocols and Conventions

Rupert's activities are currently confined to Finland where local legislation is considered to meet or exceed international best practice.

20.8 Social and Community Related Requirements

North Finland is the traditional area of the indigenous Sámi people. There are no Sámi people, areas or interests in the vicinity of the Rupert Lapland exploration licenses.

Reindeer herding is a common source of livelihood in Lapland. Rupert exploration permits fall within the Sattasniemi Reindeer Herding Area. Rupert has regular interaction with Sattasniemi reindeer herders and annual meetings (in Jan-Feb) to discuss matters concerning the interaction between exploration and reindeer herding and to coordinate each other's activities at the area.

At Ikkari, the nearest reindeer farm, and closest inhabited house, is located some 3.5km to the southwest. Since reindeers are grazing freely, animals are pasturing across the whole exploration area. Sattasniemi reindeer herders have one of their main separation facilities some 3.5km south from the Pahtavaara Mine, adjacent to the mine access road. Reindeers are collected and herded to these stations every autumn.

21. CAPITAL AND OPERATING COSTS

The resource estimated in this report is classified as Inferred and future capital or operating costs have yet to be defined.

22. ECONOMIC ANALYSIS

The resource estimated in this report is classified as Inferred and no economic analysis is available for public disclosure.

23. ADJACENT PROPERTIES

23.1 Introduction

Ikkari is located on the Rupert Lapland exploration project area surrounding the Pahtavaara Mine (Rupert Resources), which was the first mine to be developed in the CLGB belt in 1996. Since then, a number of significant mineral discoveries have been made, namely Suurikuusikko (gold), Kevitsa and Sakatti (both polymetallic base metals deposits). Since 2015, a number of major mining groups have made strategic investments in the region and promising early stage discoveries have been made at Aamurusko and Kutuvuoma (both gold) (Figure 23.1_1). Table 23.1_1 summarises the various deposits.

Figure 23.1_1
Recent activity in Central Lapland

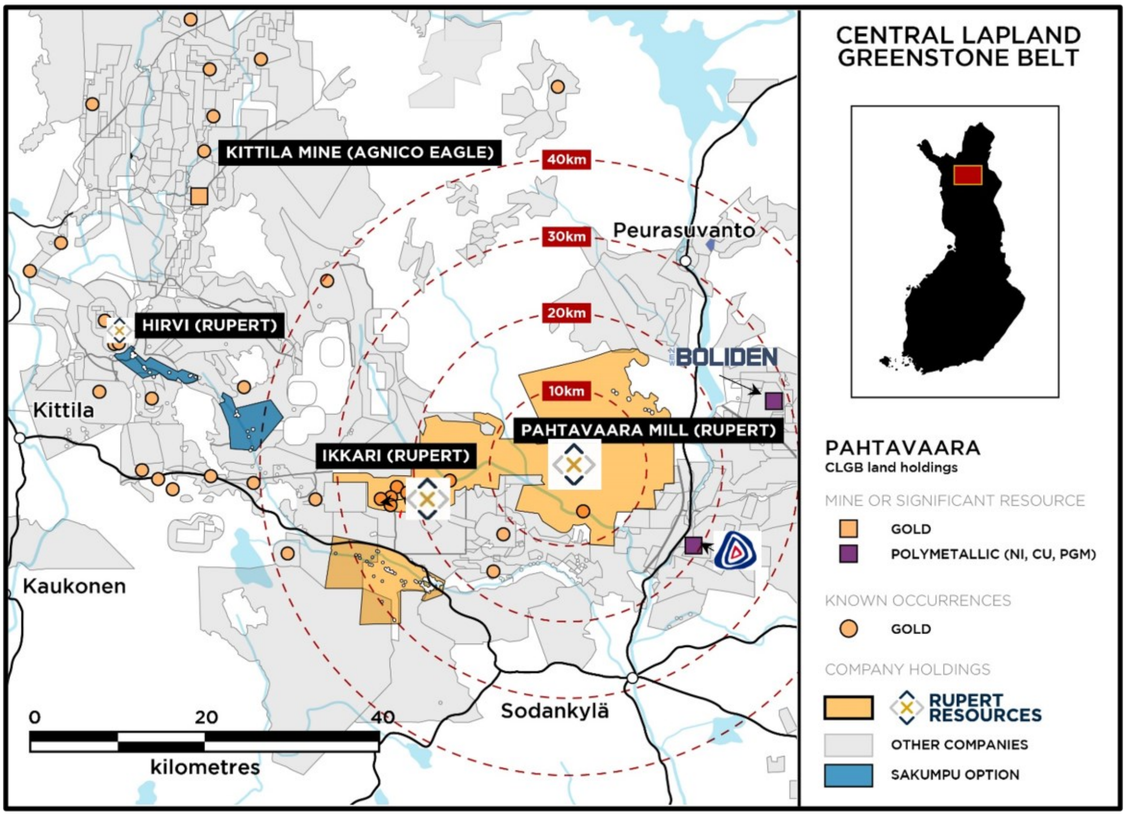


Table 23.1_1
Mineral Reserves and Resources in Central Lapland greenstone belt
(December 2020)

Deposit	Type	Mt	Au (g/t)	Cu (%)	Ni (%)	Co (%)	Pt (%)	Pd (%)
Reserves								
Kevitsa (Boliden)	Proven	70	0.09	0.31	0.19	0.01	0.17	0.11
	Probable	59	0.10	0.33	0.24	0.01	0.20	0.14
Kittila (Agnico Eagle)	Proven	3	4.23					
	Probable	27	4.15					
Resources								
Kevitsa (Boliden) *	Measured	43	0.08	0.29	0.19	0.01	0.18	0.11
	Indicated	132	0.07	0.34	0.23	0.01	0.13	0.07
	Inferred	4	0.03	0.22	0.12	0.01	0.06	0.02
Kittila (Agnico Eagle) *	Measured	5	2.44					
	Indicated	18	2.52					
	Inferred	12	3.77					
Sakatti (Anglo American) *	Indicated	3.5	0.33	3.45	2.47	0.11	0.98	1.18
	Inferred	41	0.33	1.77	0.83	0.04	0.61	0.43

* Mineral Resources are reported exclusive of Mineral Reserves (see references, Boliden 2021; Anglo American plc, 2020; Agnico Eagle 2021)

23.2 Suurikuusikko / Kittilä Mine (Agnico Eagle)

The Kittilä mine is located in the Lapland region of northern Finland, approximately 900km north of Helsinki and 150km north of the Arctic Circle. The Kittilä mine is the largest gold mine in Europe and annually extracts about 1.6 million tonnes of ore, yielding about 7,000 kg of gold. With a mine life estimated through 2034, its proven and probable mineral reserves contain 4.1 million ounces gold (30.4 million tonnes at 4.16g/t gold) as of December 31, 2020. Ore has been mined from underground since 2010 and the mine produced 208,125oz of gold in 2020. The operation is expected to produce about 250,000 ounces of gold in 2021.

The Kittilä property covers 215 square km, stretching 25km along the Suurikuusikko Trend, a major gold-bearing shear zone. The mine area includes a group of six gold deposits along a 4.5km segment of the trend. The largest of the deposits are the Suuri, Roura and Rimpi zones that contain most of the current reserves and resources at Kittilä. The other deposits are the undeveloped Sisar Zone, which is sub-parallel to the Main Zone, as well the Etela and Ketola zones. As part of a major expansion project at Kittilä, the commissioning of the expanded mill with its 25% increase in capacity was completed ahead of schedule in 2020 and the ramp-up towards the design capacity of 2.0 million tonnes per year is ongoing. The sinking of a 1,044-metre deep shaft as part of the expansion project experienced delays due to COVID-19 travel restrictions, and commissioning is now expected to be completed during the first half of 2022. The expansion project is expected to increase the efficiency of the mine and decrease or maintain current operating costs while providing access to the deeper mining horizons. This increased mining rate will be supported by the development of the Sisar Zone and deeper portions of the Main Zone. (source; Agnico Eagle website).

23.3 Kevitsa Mine (Boliden)

Boliden Kevitsa in Sodankylä is one of the biggest open pit mines in Finland. The main products are nickel and copper concentrate and in addition to this also significant amounts of platinum, palladium, gold and cobalt. The Kevitsa open-pit mine in northern Finland was acquired by Boliden in June 2016. The operation, which comprises a mine and a concentrator, went into operation in 2012. In 2020, around 9,186ktonnes of ore were processed into metal concentrates. (source; Boliden website).

23.4 Sakatti Project (Anglo American)

The Sakatti Project is a copper – nickel – PGE deposit that was discovered by Anglo American in 2009 and is one of the richest multi-metal deposits in Europe. The deposit is located 15km north of Sodankylä, and the area is partly located in Viiankiaapa, a protected mire and a Natura 2000 designated area. Anglo American recommenced drilling of the project in the winter of 2016 and announced a maiden resource for the project in 2017. Anglo American commenced a prefeasibility study for the project in early 2017, which was completed in 2019. A total of 166km of drilling had been completed at the project at the end of 2020. An exploration permit and a permit from the Environmental Ministry for the exploration work at Sakatti was awarded during July 2020 enabling a three-year drilling programme, which commenced in November 2020. Environmental and social impact assessment (ESIA) was completed in December 2020 and environmental permitting commenced in January 2021. (source; Anglo American Ore Reserves and Mineral Resources Report 2020)

23.5 Aamurusko Project (Aurion Resources)

In February 2017 Aurion Resources reported the discovery of new, bonanza grade gold mineralisation on its 100% owned Risti Project in Northern Finland. The property is also known as the Aamurusko Project. The initial discovery was a 1150m long by 700m wide area of gold mineralisation with an apparent NE-SW trend that was discovered in late 2016. Here, 133 rock grab samples collected from predominantly large and angular sub-cropping quartz-tourmaline blocks assayed from nil to 1563.5g/t Au, including 36 samples which assayed greater than 31g/t Au (1 ounce per tonne). The average grade of all 133 samples was 74.3g/t Au. Many of these samples contained abundant coarse visible gold. Aurion commenced drilling of Aamurusko in late 2017 and has subsequently identified additional mineralised zones along trend.

Aamurusko Main consists of gold-bearing quartz veins occurring near the sheared contact between sedimentary rocks and a gabbro intrusion, located on the south side of a steep, prominent ridge glacially up-ice from high-grade boulders. Drilling Highlights from Aamurusko Main include:

- 789.06 g/t Au over 2.90 m (including 3510.00 g/t Au over 0.65 m) from 116.10 m (Drillhole AM18042)
- 42.28 g/t Au over 4.00 m from 40.00 m (Drillhole AM19082)

Aamurusko Northwest (NW) is approximately 600 m northwest of Aamurusko Main target. This target consists of a 10-30 m wide zone of gold-bearing quartz veins within altered and mineralised clastic sedimentary rocks. Drilling has delineated Aamurusko NW to 150 m vertical depth and the target is open to extension. Drilling Highlights from Aamurusko NW include:

- 13.31 g/t Au over 19.54 m (including 22.58 g/t Au over 8.18 m) from 77.64 m (Drillhole AM19095)
- 3.51 g/t Au over 31.12 m from 55.88 m (Drillhole AM19094)

In late 2020, Aurion announced the discovery of multiple new, gold-bearing zones at Launi East Project (8km southeast of their Risti project), which they report is within a 5.5km long corridor parallel to the Sirkka Shear Zone. Many high grade boulder samples have been collected, and initial drill results indicate narrow vein-hosted mineralisation along a trend up to 1km long. The best drill results include 63.90g/t Au over 0.37m, 5.50g/t Au over 0.40m and 3.05g/t Au over 5.30m.

23.6 Outapää Project (Aurion Resources and Kinross)

In February 2018, Aurion Resources reported that it had signed a non-binding letter of intent Kinross Gold Corporation giving Kinross the right to earn up to 70% of the Outa Project which comprises approximately 15,000ha to the west of Pahtavaara.

23.7 Kutuvuoma Project (B2 / Aurion Resources)

Kutuvuoma adjoins Rupert's Lapland Project area on its westmost boundary and operated as a satellite pit for the Pahtavaara mill in the late 1990s.

In August 2015 Aurion entered into a JV agreement whereby B2Gold could earn 75% of the Kutuvuoma Project by spending CAD15million and completing a feasibility study for the Project. In August 2019, B2Gold exercised its option to acquire a 51% interest in the Finland Joint Venture covering approximately 29,000 hectares, which include the Kutuvuoma, Ahvenjärvi and Sinermä projects. Since inception of the agreement, dated January 13, 2016, B2Gold completed over CAN$5 million in exploration expenditures, paid Aurion CAN$50,000 in cash and issued 550,000 B2Gold shares over a four-year period to complete the requirements of the first option. B2Gold is currently earning an additional 19% interest by spending a further CAN$10 million over two years, and, if exercised, an additional 5% interest by completing a feasibility study, for a total of 75%.

In December 2016 Aurion reported the results of the maiden drill program and further drilling by B2Gold has been focused on identifying extensions to the Kutuvuoma resource and attempting to trace the mineralised trend along strike. They interpret over 5km long high-grade gold mineralised target with limited shallow drilling with initial drill results returning up to 11.4g/t Au over 13.3 m.

Most recently, drilling in late 2020 by B2Gold has followed up on base of till anomalies associated with interpreted western strike extensions of the mineralised zones in Area 1 (Rupert Resources). B2Gold's Kutuvuoma East target is located along strike and in between Rupert Resources' Ikkari discovery (3-4.5km to east) and the Kutuvuoma prospect (3.5-5 km to west) and within the metavolcanic and metasedimentary rocks of the Savukoski group near the contact with the sedimentary rocks of the Kumpu group. An initial, widely spaced, five-hole (1,259.1 m) diamond drilling program tested selected geochemical (gold in base of till) and geophysical targets over an area extending 1,300 m in strike length. All drillholes intersected zones with elevated gold (>0.1g/t Au) with mineralised zones encountered in multiple lithologies including ultramafic and mafic volcanic rocks, siltstones, graphitic sediments and in contacts between volcanic rocks and felsic/porphyritic dykes. Gold mineralisation was intersected in all holes (from anomalous to 28.90g/t Au) in the maiden drill program on the Kutuvuoma East target. Aurion/B2Gold interpret the drilling results to indicate that the geological sequence is prospective for gold for at least 8km between Kutuvuoma and Ikkari.

The information in this section that relates to adjacent properties is derived from public domain information and the QP has not been able to verify this information.

24. OTHER RELEVANT DATA AND INFORMATION

24.1 Mineral Resource History

Within the Rupert Lapland Project licence area exists the historic Pahtavaara Mine, which is wholly owned by Rupert Resources (Mining Licences 32921 and KL2013:0001-01, Table 4.2_1, Figure 1.3_1). The Pahtavaara Mine operated between 1996 and 2014 but is currently on care and maintenance. Production peaked at 37,000oz in 1997, and existing mill capacity is over 1,400 tonnes of ore a day. Since acquiring the mine in 2016, Rupert has undertaken over 53,000m of diamond drilling and undertaken a geological modelling exercise using the significant amount of historical drill data and 35km of underground tunnelling that exists for the deposit.

An updated mineral resource for Pahtavaara was published in May 2018 (in accordance with National Instrument 43-101) which reported an Inferred Resource of 4.6Mt grading 3.2g/t Au (474koz), using a 1.5g/t cutoff and is based on an updated geological interpretation of the deposit following a review all available data that has been collected over the past 30 years. Table 24.1_1 summarises the Inferred Mineral Resource at Pahtavaara from 2018.

Table 24.1._1
Pahtavaara Gold Deposit
Inferred Mineral Resource May 2018

Cutoff (g/t Au)	Grade (g/t Au)	Tonnage	Au oz	Au kg
0.5	1.6	14,540,000	756,000	23,500
1.0	2.4	7,980,000	605,000	18,800
1.5	**3.2**	**4,640,000**	**474,000**	**14,700**
2.0	4.0	3,030,000	385,000	12,000
3.0	5.6	1,470,000	264,000	8,200
4.0	7.0	880,000	199,000	6,200
5.0	8.5	560,000	153,000	4,800

The 2018 estimate for Pahtavaara represents a significant uplift in grade and tonnage from the historically disclosed Measured and Indicated Resource of 1.3Mt grading 2.1g/t in Measured and Indicated categories (85koz) and 1.5Mt grading 1.8g/t in Inferred category (84koz) calculated using a 0.5g/t cutoff, prepared in 2014. The 2018 resource included over 50,000m of drilling completed by Rupert up to the end December 2017 along with drilling by the previous owners since the last resource estimate. The drilling confirmed that the Pahtavaara deposit is demonstrably open at depth and along strike. The modelling work also estimated that 441koz has been mined from Pahtavaara historically (consistent with production data from 1996 to 2014) indicating a yield of over 2,000oz/vertical meter for the Pahtavaara Project.

Further work undertaken by Rupert Resources at the Pahtavaara Mine since the 2018 resource, has included an additional 23,000m of drilling, from surface and underground, targeting extensions of mineralised trends along strike and down-plunge. Limited drilling has also been undertaken at near-mine exploration target areas. Subject to receipt of all outstanding assays and metallurgical testwork results an updated NI 43-101 resource report will be completed.

25. INTERPRETATION AND CONCLUSIONS

The Inferred Resource of 51.1Mt grading 2.5g/t Au (3,897,519oz Au) is reported using 0.6g/t Au cutoff for the open pit component and a cutoff of 1.2g/t for the underground component. The estimate is based on an initial geological interpretation of the deposit, following a review of all available data that has been collected over the past 15 months since discovery in April 2020. The resource is based on 36,635m of drilling completed by Rupert from April 2020 up to the end June 2021. The Ikkari deposit is demonstrably open at depth and along strike and drilling continues to test potential extensions of the resource as well as infill drilling to upgrade the resource to the Measured and Indicated classifications.

26. RECOMMENDATIONS

The Ikkari gold deposit is a new discovery by Rupert in early 2020. Ongoing work since then includes almost 40,000m of diamond drilling and resource delineation drilling is ongoing. An Inferred Mineral Resource has been calculated and mineralisation remains open in all directions. Further drilling is expected to increase the footprint of the mineralisation.

The following is recommended:

1) Whilst the current drill spacing of 80m x 60m is providing sufficient data for the inferred estimate, Rupert should continue to infill to 40m x 30m in order to increase the resource to a higher confidence classification. On the basis of the current resource, a further 15,000 - 20,000 metres of drilling would be required.

2) Continue to drill further holes to step out and down from the existing coverage, given that the results demonstrate that the system remains constrained in size by data availability rather than geological constraint. Deeper holes completed to date (not included in this Mineral Resource calculation) suggest that mineralisation may extend at least 300m below the currently defined resource envelope. To expand the foot print to >1000m x 400m x >600m depth, a broader-spaced drill program of ~30,000m would be required.

3) Additional data collection to more fully understand the probability of economic extraction, including geotechnical and hydrogeological information to optimise pit shells.

4) Regional exploration – given the rapid discovery of a system of such scale the prospectivity of the exploration licences of the Rupert Lapland Project area is potentially high and further regional exploration using similar techniques is recommended. Other targets in close proximity to Ikkari indicate potential to be developed into additional resources: Heinä South, Heinä Central and numerous additional base of till (BoT) anomalies remain untested. Furthermore the BoT technique is limited to detecting targets that subcrob beneath till cover and thus the use of alternate techniques to identify "blind" targets should be considered.

An indicative budget for the recommended work outlined is summarised in Table 26.1_1.

Table 26.1._1

Budget - Recommended Work at Ikkari Deposit

Work Program	Estimated Drill Metres	Cost (CAN$)
Ikkari infill drilling	20,000	4,470,000
Ikkari step-out drilling	30,000	6,705,000
Ikkari hydrogeological, geotechnical and preliminary mining studies		995,000
Further metallurgical testwork		100,000
Regional exploration – base of till sampling		745,000
Regional exploration – target drilling	16,000	3,576,000
Total		**16,591,000**

27. REFERENCES

Agnico Eagle. 2021. *Annual Information Form for the year ended December 31, 2020*.

Anglo American plc. 2021. https://finland.angloamerican.com/en/about-sakatti.

Anglo American plc. 2020. *Ore Reserves and Mineral Resources Report 2020*.

Aurion Resources. 2015 to 2021. Various press releases. https://www.aurionresources.com/news/2020/.

Boliden. 2021. *Boliden Summary Report Resources and Reserves, 2020, Kevitsa Mine*, Prepared by Loraine Berthet.

Cook, M. 2021. *Ikkari Deposit – Gold Recovery Testing* (Job number 21-1882), unpublished internal company report.

Davis, B. 2018. *Pahtavaara gold mine, Finland – Comments on Deposit-scale Faults*, unpublished internal company report.

Eilu, P., Pankka, H., Keinänen, V., Kortelainen, V., Niiranen, T. & Pulkkinen, E. 2007. *Characteristics of gold mineralisation in the greenstone belts of northern Finland*. Geological Survey of Finland, Special Paper 44, 57−106.

Groves, D.I., Goldfarb, R.J., Gebre-Mariam, M. 1998. *Orogenic gold deposits: A proposed classification in the context of their crustal distribution and relationship to other gold deposit types*. Ore Geology Reviews 13, 1–28.

Groves, D. & Santosh, M. 2015. *The giant Jiaodong gold province: The key to a unified model for orogenic gold deposits?* Geoscience Frontiers, v. 7.

GTK. 2021. *Mineral Deposit Report. Pahtavaara production history and historical resources*. http://tupa.gtk.fi/karttasovellus/mdae/raportti/376_Pahtavaara.pdf.

Harju, S. 2021. *Preliminary age dating of sedimentary rocks at the Ikkari deposit, Lapland*. Unpublished Master's thesis, University of Oulu.

Korkiakoski, E.A. 1992. *Geology and geochemistry of the metakomatiite-hosted Pahtavaara gold deposit in Sodankylä, Northern Finland, with emphasis on hydrothermal alteration*. Geological Survey of Finland, Bulletin 360, 96.

Niiranen, T., Lahti, I. & Nykänen, V. 2015. T*he Orogenic Gold Potential of the Central Lapland Greenstone Belt, Northern Fennoscandian Shield*, Chapter 10.2 in Mineral Deposits of Finland.

Pulkkinen, E., Ollila, J., Manner, R., Koljonen, T. 1986. *Geochemical exploration for gold in the Sattasvaara komatiite complex, Finnish Lapland*. In: Prospecting in Areas of Glaciated Terrain. Institution of Mining and Metallurgy, London, pp. 129–137.

Selley, D. 2019. *Regional Geology*, unpublished internal company report.

Selley, D. 2020. *Structural, stratigraphic, and mineralisation features of the Heinä Central prospect: a drillcore photograph- and geochemistry-based desktop study*, unpublished internal company report.

Selley, D. 2021. *Lithologic, structural and alteration model for the Ikkari Au deposit*, unpublished internal company report.

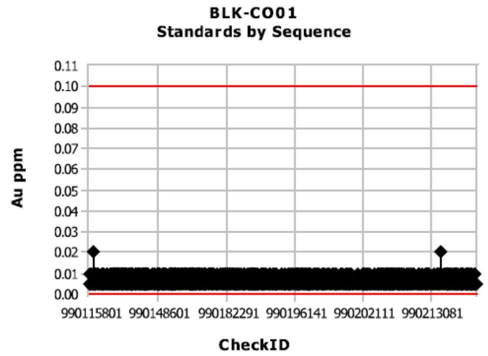
Appendix 1
CRM Control Graphs for CRM submitted by Rupert to ALS

QAQC ON TIME - COMPANY STANDARDS

Reporting Period: 01-Apr-2019 To 30-Jun-2021

ProjectCode(s): HEIN | Prospect(s): IKI
SampleType(s): DH1/4 , DH1/2 | Diameter(s): HQ , NQ2 , WL76

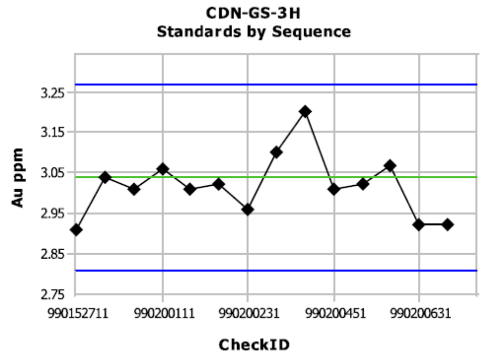
BLK-CO01 (Au_AA26_ppm)



StandardID: BLK-CO01
Name: Au_AA26_ppm
LDL: <0.01
No Standards: 1699
STD Value: 0.01
SD of CRM: -

0
Outside ±3 SD of CRM: 0

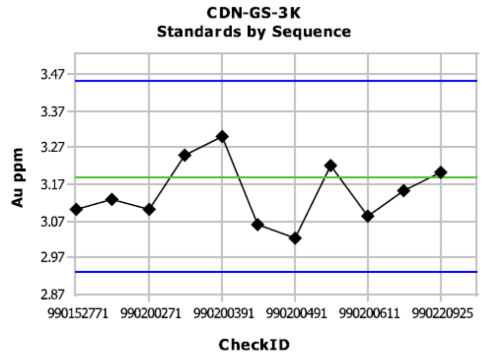
CDN-GS-3H (Au_AA26_ppm)



StandardID: CDN-GS-3H
Name: Au_AA26_ppm
LDL: <0.01
No Standards: 14
STD Value: 3.04
SD of CRM: 0.115

Outside ±2 SD of CRM: 0
Outside ±3 SD of CRM: 0

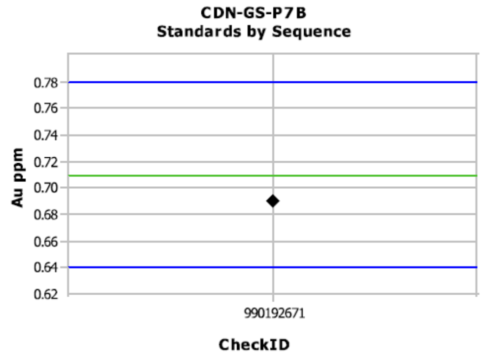
CDN-GS-3K (Au_AA26_ppm)



StandardID: CDN-GS-3K
Name: Au_AA26_ppm
LDL: <0.01
No Standards: 11
STD Value: 3.19
SD of CRM: 0.13

Outside ±2 SD of CRM: 0
Outside ±3 SD of CRM: 0

CDN-GS-P7B (Au_AA26_ppm)



StandardID: CDN-GS-P7B
Name: Au_AA26_ppm
LDL: <0.01
No Standards: 1
STD Value: 0.71
SD of CRM: 0.035

Outside ±2 SD of CRM: 0
Outside ±3 SD of CRM: 0

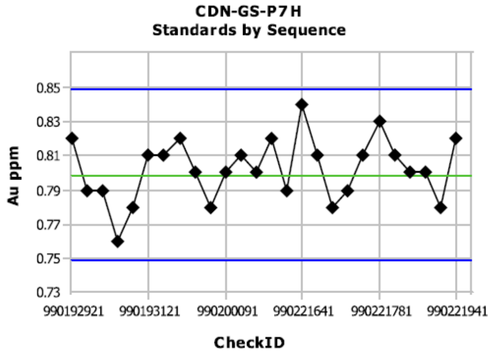
QAQC ON TIME - COMPANY STANDARDS

Reporting Period: 01-Apr-2019 To 30-Jun-2021

ProjectCode(s): HEIN
SampleType(s): DH1/4 , DH1/2

Prospect(s): IKI
Diameter(s): HQ , NQ2 , WL76

CDN-GS-P7H (Au_AA26_ppm)

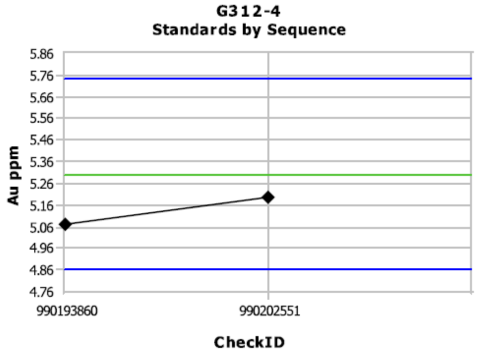


StandardID: CDN-GS-P7H
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 26
STD Value: 0.799
SD of CRM: 0.025

Outside ±2 SD of CRM: 0
Outside ±3 SD of CRM: 0

G312-4 (Au_AA26_ppm)

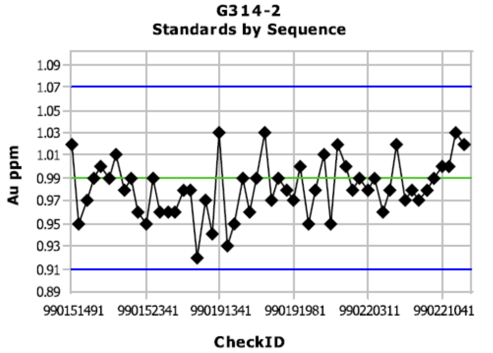


StandardID: G312-4
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 2
STD Value: 5.3
SD of CRM: 0.22

Outside ±2 SD of CRM: 0
Outside ±3 SD of CRM: 0

G314-2 (Au_AA26_ppm)

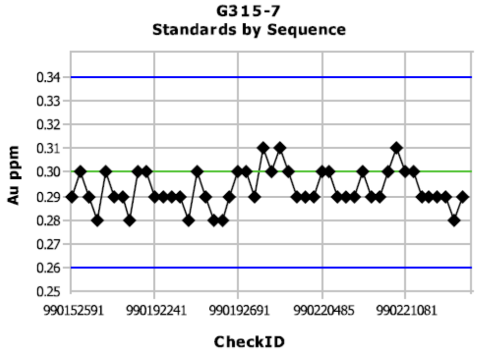


StandardID: G314-2
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 54
STD Value: 0.99
SD of CRM: 0.04

Outside ±2 SD of CRM: 0
Outside ±3 SD of CRM: 0

G315-7 (Au_AA26_ppm)



StandardID: G315-7
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 48
STD Value: 0.3
SD of CRM: 0.02

Outside ±2 SD of CRM: 0
Outside ±3 SD of CRM: 0

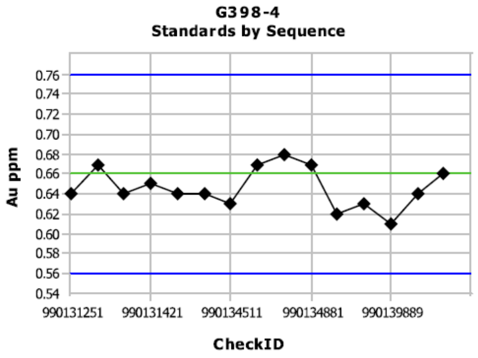
QAQC ON TIME - COMPANY STANDARDS

Reporting Period: 01-Apr-2019 To 30-Jun-2021

ProjectCode(s): HEIN
SampleType(s): DH1/4 , DH1/2

Prospect(s): IKI
Diameter(s): HQ , NQ2 , WL76

G398-4 (Au_AA26_ppm)

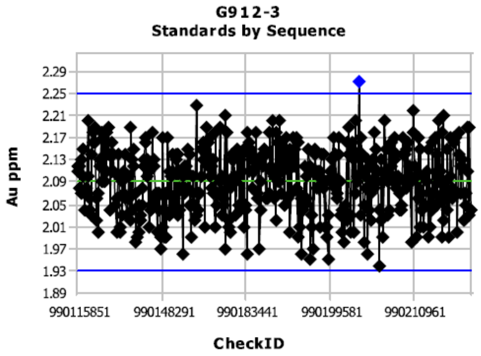


StandardID: G398-4
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 15
STD Value: 0.66
SD of CRM: 0.05

Outside ±2 SD of CRM: 0
Outside ±3 SD of CRM: 0

G912-3 (Au_AA26_ppm)

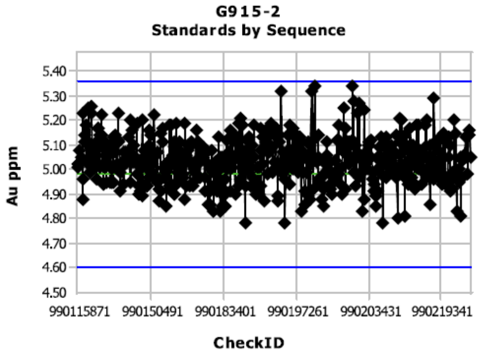


StandardID: G912-3
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 468
STD Value: 2.09
SD of CRM: 0.08

Outside ±2 SD of CRM: 1
Outside ±3 SD of CRM: 0

G915-2 (Au_AA26_ppm)

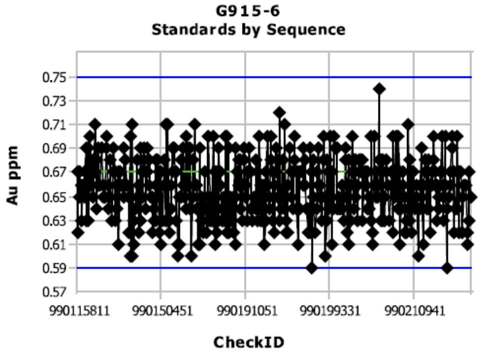


StandardID: G915-2
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 541
STD Value: 4.98
SD of CRM: 0.19

Outside ±2 SD of CRM: 0
Outside ±3 SD of CRM: 0

G915-6 (Au_AA26_ppm)



StandardID: G915-6
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 469
STD Value: 0.67
SD of CRM: 0.04

Outside ±2 SD of CRM: 0
Outside ±3 SD of CRM: 0

QAQC ON TIME - COMPANY STANDARDS

Reporting Period: 01-Apr-2019 To 30-Jun-2021

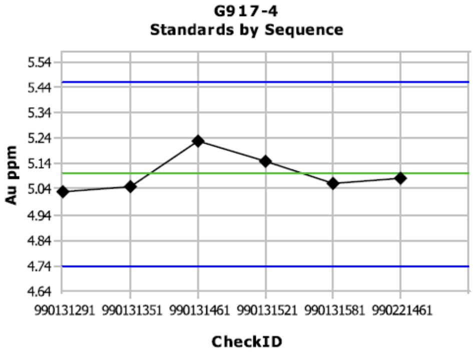
ProjectCode(s): HEIN

Prospect(s): IKI

SampleType(s): DH1/4 , DH1/2

Diameter(s): HQ , NQ2 , WL76

G917-4 (Au_AA26_ppm)



StandardID: G917-4

Name: Au_AA26_ppm

LDL: <0.01

No Standards: 6

STD Value: 5.1

SD of CRM: 0.18

Outside ±2 SD of CRM: 0

Outside ±3 SD of CRM: 0

Appendix 2
ALS Internal Standards and Blanks

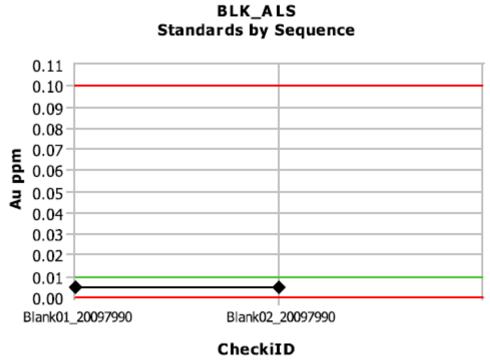
QAQC ON TIME - LAB STANDARDS

Reporting Period: 01-Apr-2019 To 30-Jun-2021

ProjectCode(s): HEIN
SampleType(s): DH1/4 , DH1/2

Prospect(s): IKI
Diameter(s): HQ , NQ2 , WL76

BLK_ALS (Au_AA15_ppm)

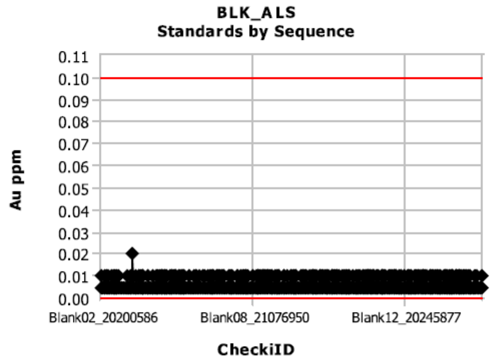


StandardID: BLK_ALS
Name: Au_AA15_ppm
LDL: <0.01

No Standards: 2
STD Value: 0.01
SD of CRM: -

0
Outside 10*LDL: 0

BLK_ALS (Au_AA26_ppm)

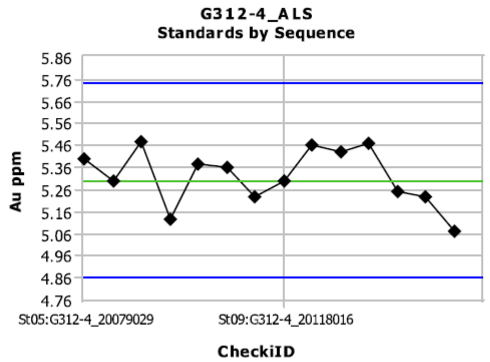


StandardID: BLK_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 1003
STD Value: 0.01
SD of CRM: -

0
Outside 10*LDL: 0

G312-4_ALS (Au_AA26_ppm)

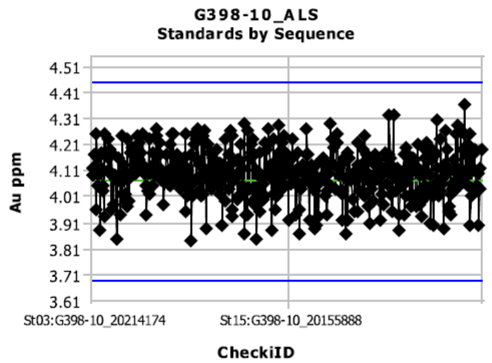


StandardID: G312-4_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 14
STD Value: 5.3
SD of CRM: 0.22

Outside ±2 SD of CRM: 0
Outside acceptable: 0

G398-10_ALS (Au_AA26_ppm)



StandardID: G398-10_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 477
STD Value: 4.07
SD of CRM: 0.19

Outside ±2 SD of CRM: 0
Outside acceptable: 0

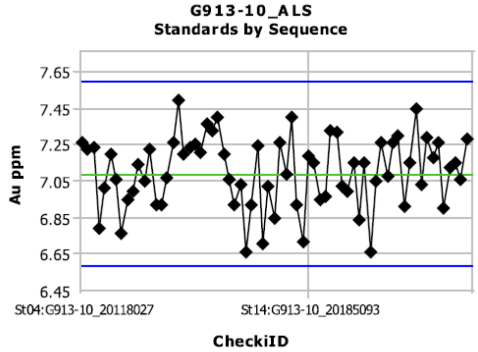
QAQC ON TIME - LAB STANDARDS

Reporting Period: 01-Apr-2019 To 30-Jun-2021

ProjectCode(s): HEIN — Prospect(s): IKI

SampleType(s): DH1/4 , DH1/2 — Diameter(s): HQ , NQ2 , WL76

G913-10_ALS (Au_AA26_ppm)

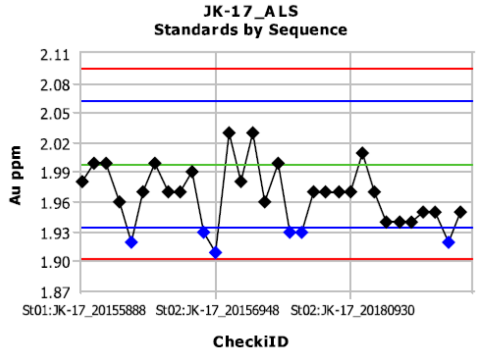


StandardID: G913-10_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 69
STD Value: 7.09
SD of CRM: 0.25

Outside ±2 SD of CRM: 0
Outside acceptable: 0

JK-17_ALS (Au_AA26_ppm)

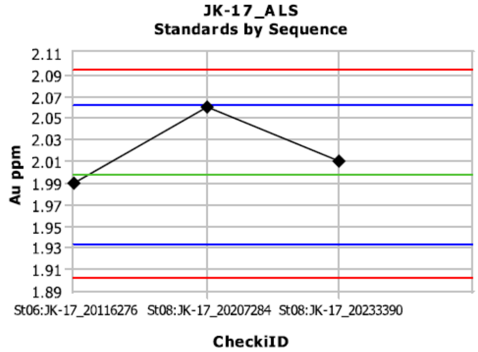


StandardID: JK-17_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 32
STD Value: 1.998
SD of CRM: 0.032

Outside ±2 SD of CRM: 6
Outside acceptable: 0

JK-17_ALS (Au_GRA22_ppm)

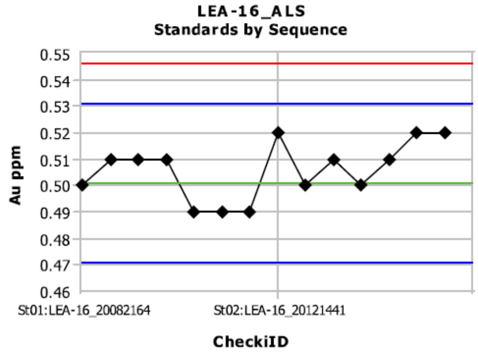


StandardID: JK-17_ALS
Name: Au_GRA22_ppm
LDL: <0.05

No Standards: 3
STD Value: 1.998
SD of CRM: 0.032

Outside ±2 SD of CRM: 0
Outside acceptable: 0

LEA-16_ALS (Au_AA26_ppm)



StandardID: LEA-16_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 14
STD Value: 0.501
SD of CRM: 0.015

Outside ±2 SD of CRM: 0
Outside acceptable: 0

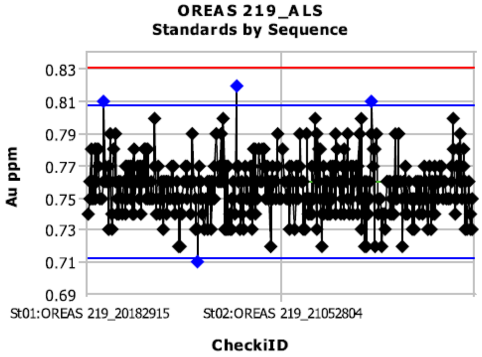
QAQC ON TIME - LAB STANDARDS

Reporting Period: 01-Apr-2019 To 30-Jun-2021

ProjectCode(s): HEIN **Prospect(s):** IKI

SampleType(s): DH1/4 , DH1/2 **Diameter(s):** HQ , NQ2 , WL76

OREAS 219_ALS (Au_AA26_ppm)

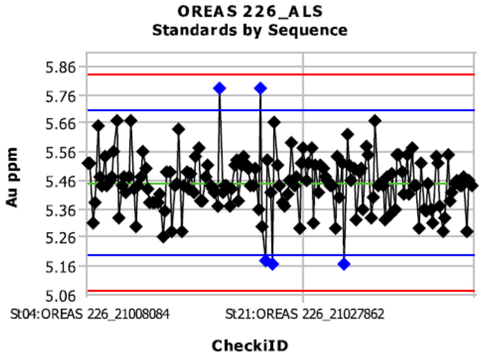


StandardID: OREAS 219_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 440
STD Value: 0.76
SD of CRM: 0.024

Outside ±2 SD of CRM: 4
Outside acceptable: 0

OREAS 226_ALS (Au_AA26_ppm)

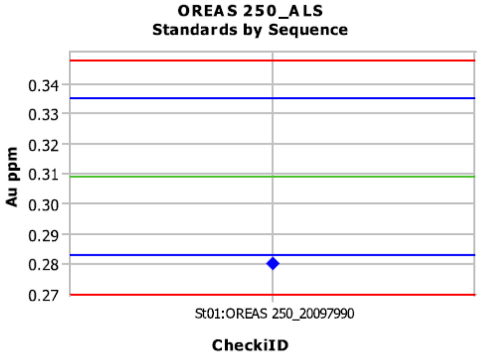


StandardID: OREAS 226_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 161
STD Value: 5.45
SD of CRM: 0.126

Outside ±2 SD of CRM: 5
Outside acceptable: 0

OREAS 250_ALS (Au_AA15_ppm)

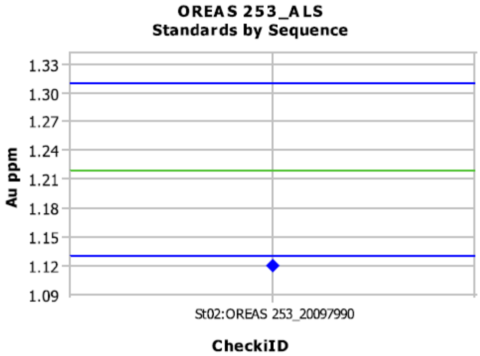


StandardID: OREAS 250_ALS
Name: Au_AA15_ppm
LDL: <0.01

No Standards: 1
STD Value: 0.309
SD of CRM: 0.013

Outside ±2 SD of CRM: 1
Outside acceptable: 0

OREAS 253_ALS (Au_AA15_ppm)



StandardID: OREAS 253_ALS
Name: Au_AA15_ppm
LDL: <0.01

No Standards: 1
STD Value: 1.22
SD of CRM: 0.045

Outside ±2 SD of CRM: 1
Outside acceptable: 0

QAQC ON TIME - LAB STANDARDS

Reporting Period: 01-Apr-2019 To 30-Jun-2021

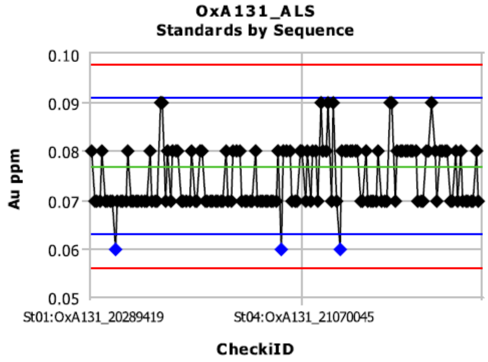
ProjectCode(s): HEIN

SampleType(s): DH1/4 , DH1/2

Prospect(s): IKI

Diameter(s): HQ , NQ2 , WL76

OxA131_ALS (Au_AA26_ppm)

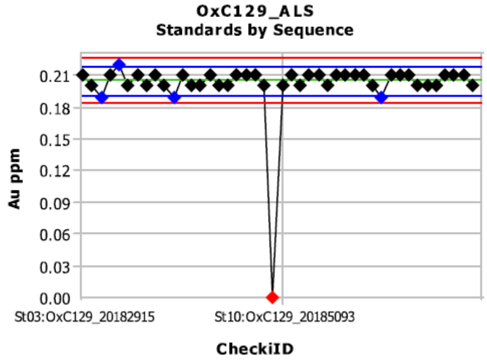


StandardID: OxA131_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 148
STD Value: 0.077
SD of CRM: 0.007

Outside ±2 SD of CRM: 3
Outside acceptable: 0

OxC129_ALS (Au_AA26_ppm)

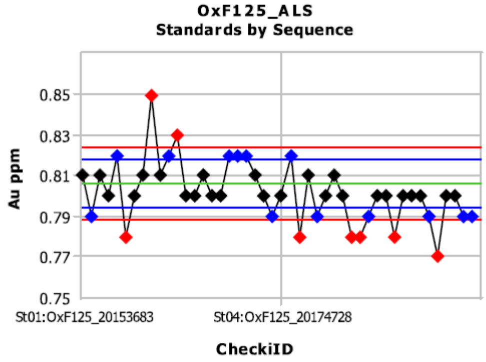


StandardID: OxC129_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 44
STD Value: 0.205
SD of CRM: 0.007

Outside ±2 SD of CRM: 5
Outside acceptable: 1

OxF125_ALS (Au_AA26_ppm)

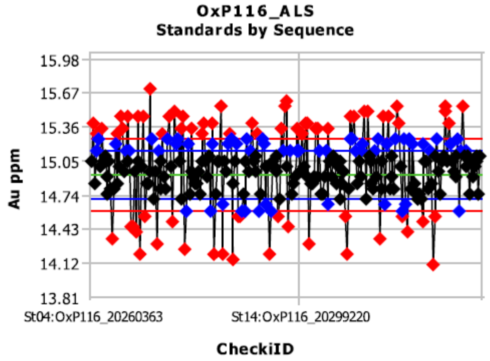


StandardID: OxF125_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 46
STD Value: 0.806
SD of CRM: 0.006

Outside ±2 SD of CRM: 21
Outside acceptable: 8

OxP116_ALS (Au_AA26_ppm)



StandardID: OxP116_ALS
Name: Au_AA26_ppm
LDL: <0.01

No Standards: 263
STD Value: 14.92
SD of CRM: 0.11

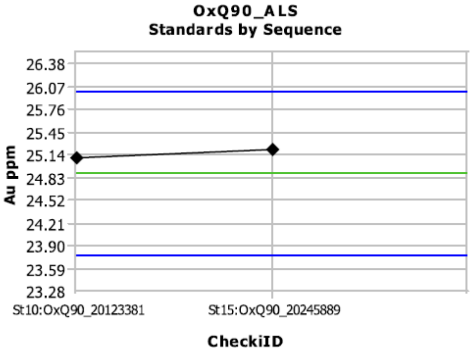
Outside ±2 SD of CRM: 128
Outside acceptable: 71

QAQC ON TIME - LAB STANDARDS

Reporting Period: 01-Apr-2019 To 30-Jun-2021

ProjectCode(s):	HEIN	Prospect(s):	IKI
SampleType(s):	DH1/4 , DH1/2	Diameter(s):	HQ , NQ2 , WL76

OxQ90_ALS (Au_GRA22_ppm)



StandardID: OxQ90_ALS
Name: Au_GRA22_ppm
LDL: <0.05

No Standards: 2
STD Value: 24.88
SD of CRM: 0.56

Outside ±2 SD of CRM: 0
Outside acceptable: 0

Appendix 3
Sample Pairs submitted to ALS

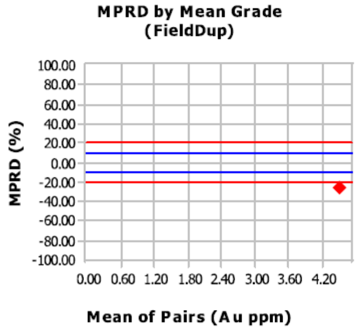
QAQC ON TIME - PAIRED DATA

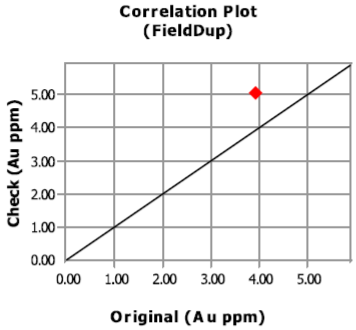
Reporting Period: 01-Apr-2019 To 30-Jun-2021

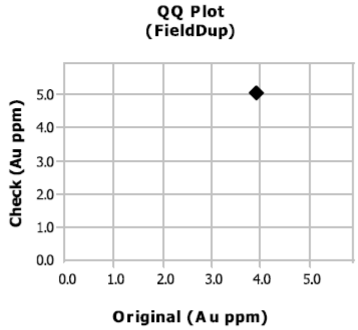
ProjectCode(s):	HEIN	**Prospect(s):**	IKI
SampleType(s):	DH1/4 , DH1/2	**Diameter(s):**	HQ , NQ2 , WL76

FIELDDUP (Au_AA26D_ppm)

	Original	Check		Original	Check	Pairs					
Min:	3.93	5.07	**Max:**	3.93	5.07	**Total No Pairs:**	1	**No <Threshold:**	0	**No >Threshold:**	1
Mean:	3.93	5.07	**Median:**	3.93	5.07	**LDL:**	<0.01	**CC:**	0	**Outside ±10%:**	1/100%
SD:	0	0	**CV:**	0	0	**AMPRD %:**	25.3	**Bias:**	0.29	**Outside ±20%:**	1/100%

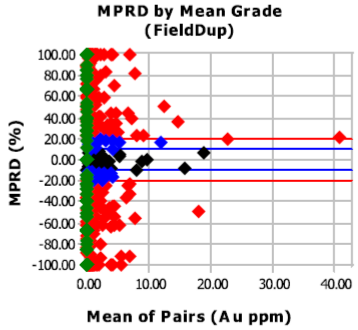


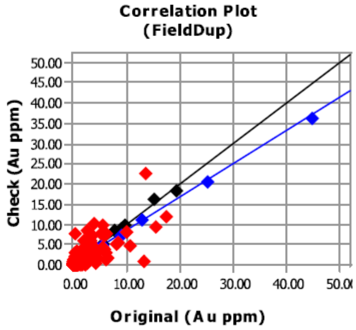


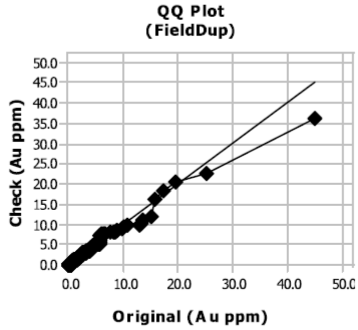


FIELDDUP (Au_AA26_ppm)

	Original	Check		Original	Check	Pairs					
Min:	0.005	0.01	**Max:**	45	36.2	**Total No Pairs:**	1655	**No <Threshold:**	1236	**No >Threshold:**	419
Mean:	1.62	1.58	**Median:**	0.47	0.49	**LDL:**	<0.01	**CC:**	0.9036	**Outside ±10%:**	371/88.5%
SD:	3.51	3.18	**CV:**	2.16	2.02	**AMPRD %:**	65.9	**Bias:**	-0.03	**Outside ±20%:**	335/80%

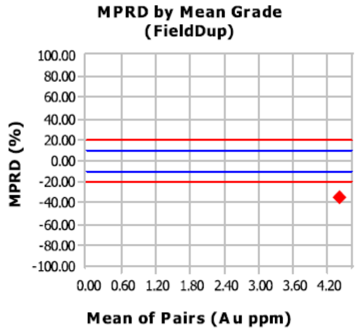


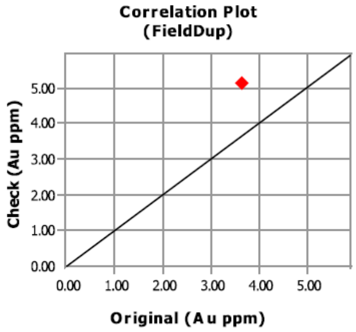


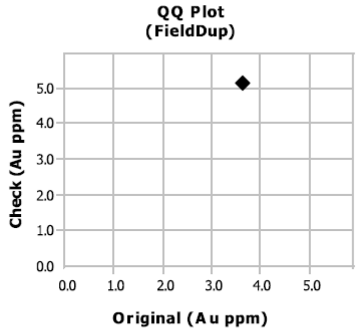


FIELDDUP (Au_SCR24_minus_ppm)

	Original	Check		Original	Check	Pairs					
Min:	3.64	5.15	**Max:**	3.64	5.15	**Total No Pairs:**	1	**No <Threshold:**	0	**No >Threshold:**	1
Mean:	3.64	5.15	**Median:**	3.64	5.15	**LDL:**	<0.05	**CC:**	0	**Outside ±10%:**	1/100%
SD:	0	0	**CV:**	0	0	**AMPRD %:**	34.4	**Bias:**	0.41	**Outside ±20%:**	1/100%







QAQC ON TIME - PAIRED DATA

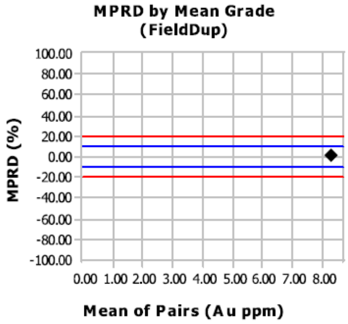
Reporting Period: 01-Apr-2019 To 30-Jun-2021

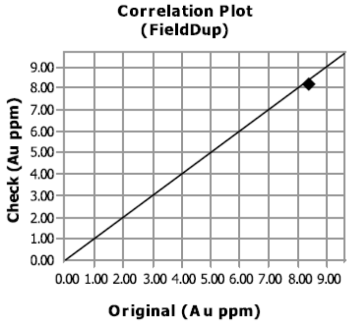
ProjectCode(s): HEIN | Prospect(s): IKI

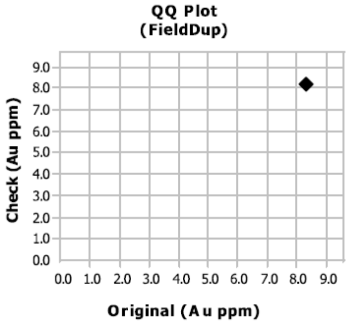
SampleType(s): DH1/4 , DH1/2 | Diameter(s): HQ , NQ2 , WL76

FIELDDUP (Au_SCR24_plus_ppm)

	Original	Check		Original	Check	Pairs					
Min:	8.35	8.2	Max:	8.35	8.2	Total No Pairs:	1	No <Threshold:	0	No >Threshold:	1
Mean:	8.35	8.2	Median:	8.35	8.2	LDL:	<0.05	CC:	0	Outside ±10%:	0/0%
SD:	0	0	CV:	0	0	AMPRD %:	1.8	Bias:	-0.02	Outside ±20%:	0/0%

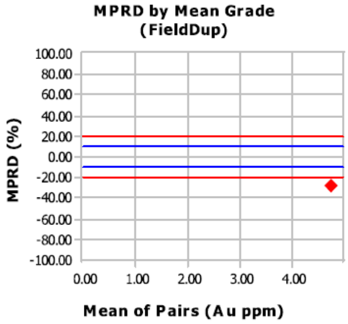


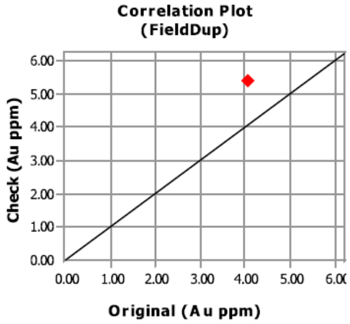


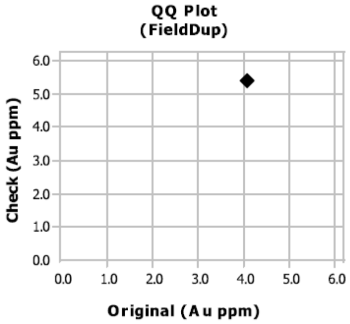


FIELDDUP (Au_SCR24_tot_ppm)

	Original	Check		Original	Check	Pairs					
Min:	4.07	5.41	Max:	4.07	5.41	Total No Pairs:	1	No <Threshold:	0	No >Threshold:	1
Mean:	4.07	5.41	Median:	4.07	5.41	LDL:	<0.05	CC:	0	Outside ±10%:	1/100%
SD:	0	0	CV:	0	0	AMPRD %:	28.3	Bias:	0.33	Outside ±20%:	1/100%

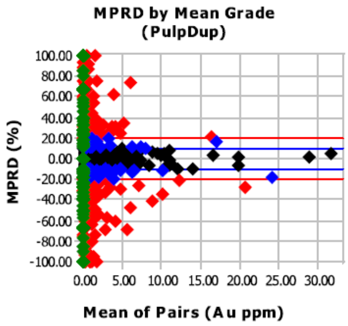


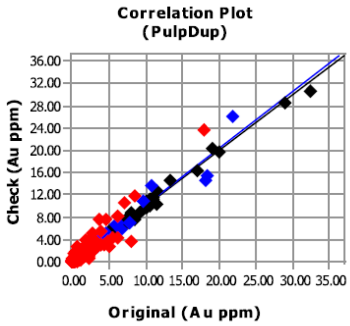


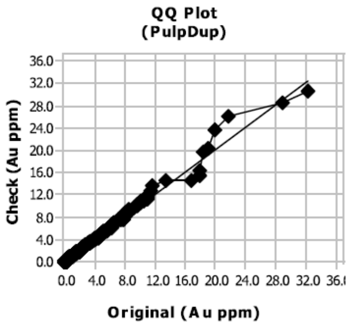


PULPDUP (Au_AA26_ppm)

	Original	Check		Original	Check	Pairs					
Min:	0.02	0.005	Max:	32.4	30.7	Total No Pairs:	1663	No <Threshold:	1158	No >Threshold:	505
Mean:	2	2.06	Median:	0.69	0.69	LDL:	<0.01	CC:	0.9825	Outside ±10%:	302/59.8%
SD:	3.57	3.67	CV:	1.78	1.78	AMPRD %:	24.7	Bias:	0.03	Outside ±20%:	210/41.6%







QAQC ON TIME - PAIRED DATA

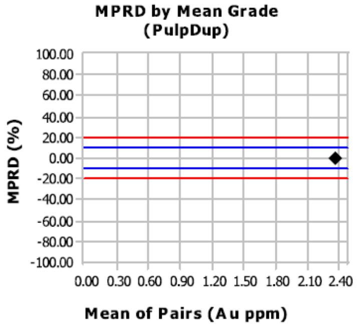
Reporting Period: 01-Apr-2019 To 30-Jun-2021

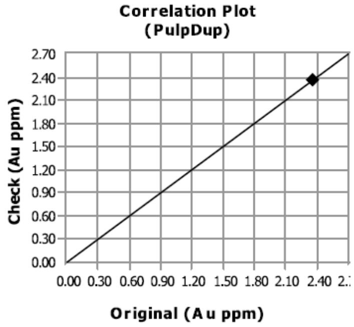
ProjectCode(s): HEIN **Prospect(s):** IKI

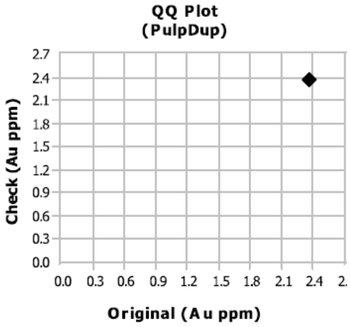
SampleType(s): DH1/4 , DH1/2 **Diameter(s):** HQ , NQ2 , WL76

PULPDUP (Au_SCR24_minus_ppm)

	Original	Check		Original	Check	Pairs					
Min:	2.36	2.36	**Max:**	2.36	2.36	**Total No Pairs:**	1	**No <Threshold:**	0	**No >Threshold:**	1
Mean:	2.36	2.36	**Median:**	2.36	2.36	**LDL:**	<0.05	**CC:**	0	**Outside ±10%:**	0/0%
SD:	0	0	**CV:**	0	0	**AMPRD %:**	0	**Bias:**	0	**Outside ±20%:**	0/0%

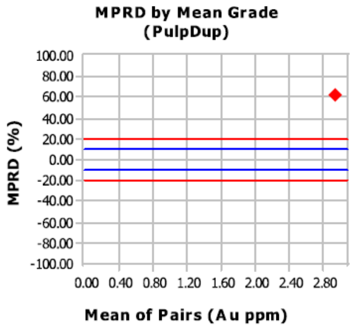


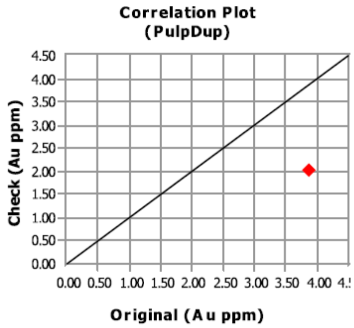


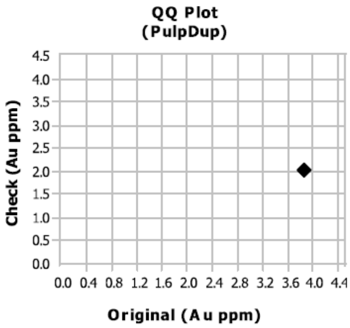


PULPDUP (Au_SCR24_plus_ppm)

	Original	Check		Original	Check	Pairs					
Min:	3.86	2.02	**Max:**	3.86	2.02	**Total No Pairs:**	1	**No <Threshold:**	0	**No >Threshold:**	1
Mean:	3.86	2.02	**Median:**	3.86	2.02	**LDL:**	<0.05	**CC:**	0	**Outside ±10%:**	1/100%
SD:	0	0	**CV:**	0	0	**AMPRD %:**	62.6	**Bias:**	-0.48	**Outside ±20%:**	1/100%

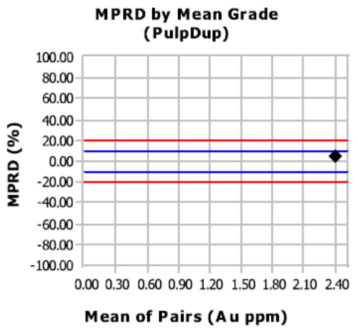


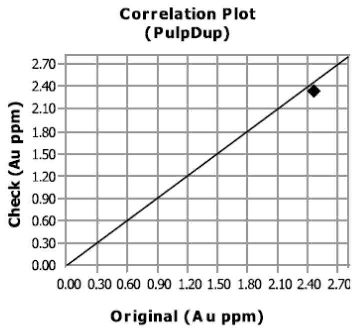


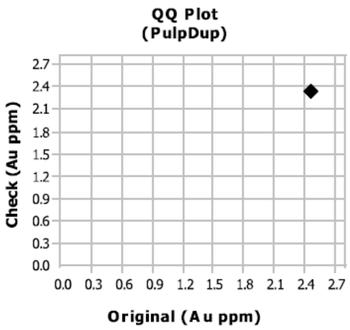


PULPDUP (Au_SCR24_tot_ppm)

	Original	Check		Original	Check	Pairs					
Min:	2.46	2.34	**Max:**	2.46	2.34	**Total No Pairs:**	1	**No <Threshold:**	0	**No >Threshold:**	1
Mean:	2.46	2.34	**Median:**	2.46	2.34	**LDL:**	<0.05	**CC:**	0	**Outside ±10%:**	0/0%
SD:	0	0	**CV:**	0	0	**AMPRD %:**	5	**Bias:**	-0.05	**Outside ±20%:**	0/0%







QAQC ON TIME - PAIRED DATA

Reporting Period: 01-Apr-2019 To 30-Jun-2021

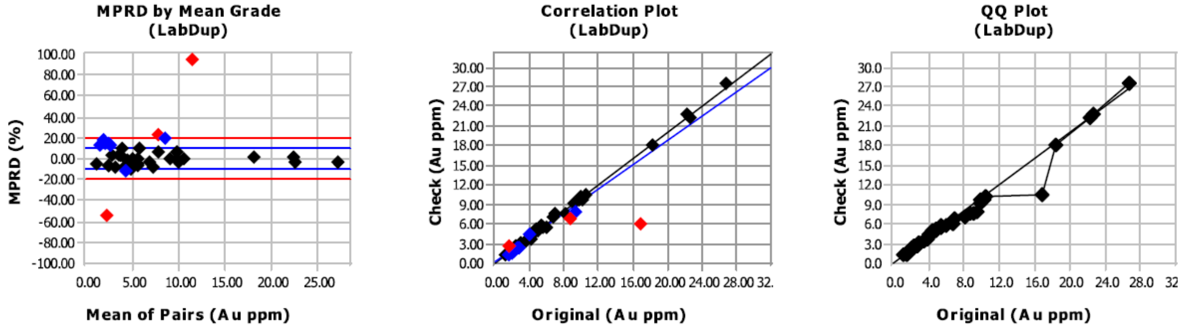
ProjectCode(s): HEIN | Prospect(s): IKI

SampleType(s): DH1/4 , DH1/2 | Diameter(s): HQ , NQ2 , WL76

LABDUP (Au_705P_ppm)

	Original	Check		Original	Check
Min:	1.137	1.195	Max:	26.82	27.6
Mean:	7.14	6.84	Median:	4.86	5.07
SD:	6.18	6.02	CV:	0.87	0.88

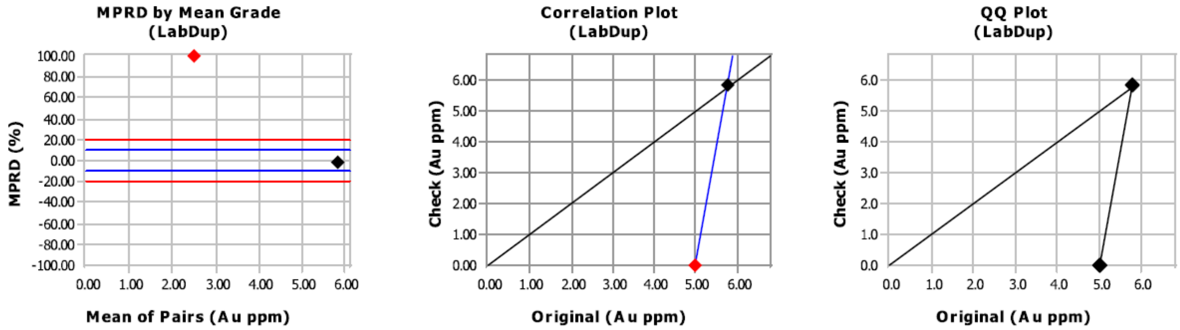
Pairs					
Total No Pairs:	40	No <Threshold:	0	No >Threshold:	40
LDL:	<0.005	CC:	0.9572	Outside ±10%:	10/25%
AMPRD %:	10.2	Bias:	-0.04	Outside ±20%:	3/7.5%



LABDUP (Au_AA15_ppm)

	Original	Check		Original	Check
Min:	5	0	Max:	5.79	5.86
Mean:	5.4	2.93	Median:	5.4	2.93
SD:	0.56	4.14	CV:	0.1	1.41

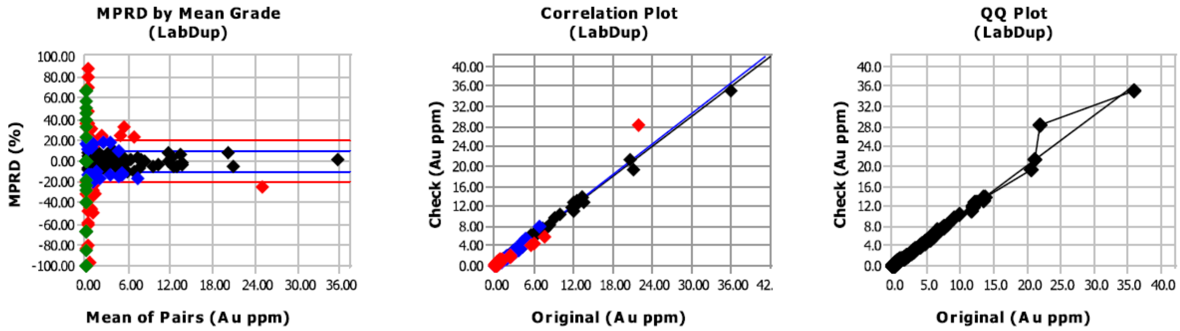
Pairs					
Total No Pairs:	2	No <Threshold:	0	No >Threshold:	2
LDL:	<0.01	CC:	1	Outside ±10%:	1/50%
AMPRD %:	100.6	Bias:	-0.46	Outside ±20%:	1/50%



LABDUP (Au_AA26D_ppm)

	Original	Check		Original	Check
Min:	0.07	0.07	Max:	36	35.2
Mean:	3.28	3.31	Median:	1.13	1.23
SD:	5.02	5.15	CV:	1.53	1.56

Pairs					
Total No Pairs:	191	No <Threshold:	46	No >Threshold:	145
LDL:	<0.01	CC:	0.9922	Outside ±10%:	76/52.4%
AMPRD %:	17.5	Bias:	0.01	Outside ±20%:	49/33.8%



QAQC ON TIME - PAIRED DATA

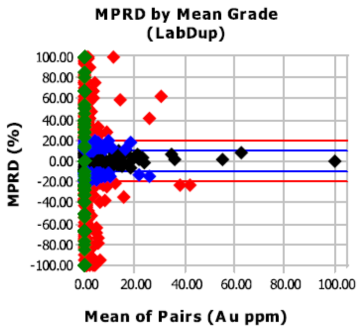
Reporting Period: 01-Apr-2019 To 30-Jun-2021

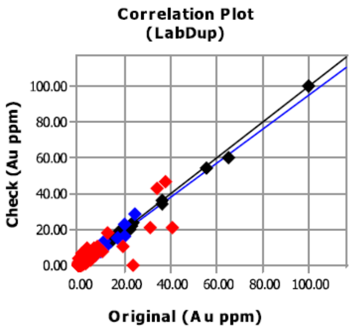
ProjectCode(s): HEIN — Prospect(s): IKI

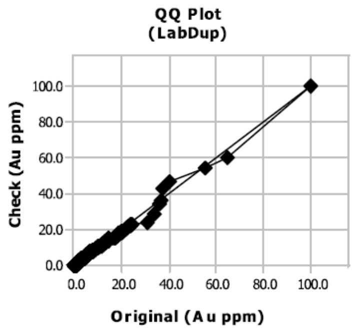
SampleType(s): DH1/4 , DH1/2 — Diameter(s): HQ , NQ2 , WL76

LABDUP (Au_AA26_ppm)

	Original	Check		Original	Check	Pairs					
Min:	0.03	0	Max:	100	100	Total No Pairs:	1751	No <Threshold:	1005	No >Threshold:	746
Mean:	2.97	2.95	Median:	0.85	0.94	LDL:	<0.01	CC:	0.9735	Outside ±10%:	464/62.2%
SD:	6.69	6.55	CV:	2.26	2.22	AMPRD %:	26.1	Bias:	-0.01	Outside ±20%:	317/42.5%







LABDUP (Au_GRA22_ppm)

	Original	Check		Original	Check	Pairs					
Min:	107	86.7	Max:	127	126	Total No Pairs:	4	No <Threshold:	0	No >Threshold:	4
Mean:	115.5	109.55	Median:	114	112.75	LDL:	<0.05	CC:	0.9019	Outside ±10%:	1/25%
SD:	8.36	16.68	CV:	0.07	0.15	AMPRD %:	6.7	Bias:	-0.05	Outside ±20%:	1/25%