TECHNICAL REPORT

Bleka Property, Vestfold og Telemark County, Norway (59.61° N Latitude, 8.59° E Longitude)

~ Technical Report for the Bleka Property prepared for~

Sienna Resources Incorporated

2905-700 West Georgia Street

Vancouver, British Columbia, Canada

V7Y1C6

~prepared by~

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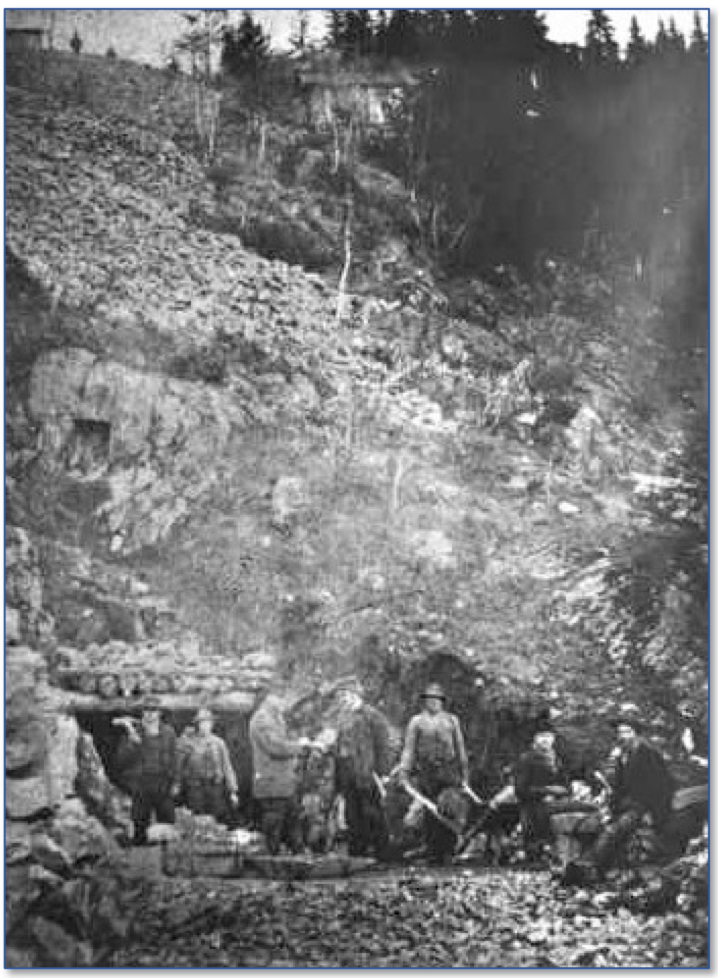
Effective Date: April 26th 2021

Signing Date: May 24th, 2021



Frontispiece: *Entrance to the Bleka gold mine ca. 1890. (Source: hjartdalsbygda.no)*

SIGNATURE PAGE

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Amanda Scott, FAusIMM

Malå, Sweden

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SCOTT GEOLOGICAL

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1. EXECUTIVE SUMMARY

1.1. Overview & Ownership

Sienna Resources Inc. (Sienna) is a public Canadian exploration company with head offices in Vancouver, Canada (TSXV: SIE, OTC: SNNAF, FSE: A1XCQ0) which has recently acquired two exploration properties in Norway, including the Bleka Property and the Vekselmyr Property; the Bleka Property is the subject of this Technical Report. Sienna acquired the properties from Eurasian Minerals Sweden AB (EMSAB) in August 2020; EMSAB is a wholly owned Swedish subsidiary of EMX Royalty Corporation (EMX). Under the Option Agreement (Agreement), Sienna can earn a 100% interest in the Bleka and Vekselmyr Properties in Norway, subject to 3% net smelter return (NSR) royalty interests retained by EMX, by:

- Issuing an additional 500,000 shares of Sienna to EMX within 5 days upon exchange approval.
- Spending a minimum of C$250,000 per year on exploration on the Properties over the next two years.
- Reimbursing EMX for its acquisition costs and expenses related to the Bleka and Vekselmyr Properties.
- Issuing 1,500,000 additional shares of Sienna to EMX at the end of the two-year option period.

If Sienna satisfies the earn-in conditions of the Agreement and elects to acquire the Properties, EMX will receive annual advance royalty (AAR) payments of US$25,000 for each property commencing on the first anniversary of the option exercise date, with each AAR payment increasing by USD$5,000 per year until reaching a cap of USD$75,000 per year. Under certain conditions, 0.5% of the 3% NSR royalties retained by EMX can be repurchased by Sienna.

The acquisition of the Properties is the result of an execution of an amendment to Sienna's Option Agreement with EMX, originally signed in December 2017 for the Slättberg nickel-copper-cobalt-PGE (Ni-Cu-Co-PGE) Property in southern Sweden. The amendment adds EMX's Bleka and Vekselmyr Properties in southern Norway to the Option Agreement, whereby Sienna will enter a two-year option period to acquire 100% interest in the Properties by satisfying work commitments and making payments of cash and equity to EMX, with EMX retaining 3% NSR royalty interests.

Since the acquisition by Sienna in August 2020, the exploration has been managed and executed in-country by EMSAB.

1.2. Location & Permit Overview

The Bleka Property comprises eight contiguous granted exploration permits (Bleka 1-8) located in the Hjartdal and Seljord Municipalities of Vestfold og Telemark County in the Kingdom of Norway (Norway). The property is centred at 59.61° N Latitude, 8.59° E Longitude (ETRS TM Zone 33N: 6625199N, 138902E), approximately 160km west-southwest of the Norwegian capital city of Oslo and 80km west-southwest of the town of Kongsberg. The combined total area of the Bleka Property is approximately 8,000ha and as of the effective date of this report, ownership of the exploration permits is held by EMX through their wholly owned subsidiary, EMSAB. Subject to regulatory approval, EMSAB will transfer title of the Bleka permits to Sienna.

BS Norway Ltd owns a single exploration permit (Blika 3) that abuts the northern boundary of Sienna's Bleka 3 permit in the northwest of the property.

1.3. Regional Geology

The Bleka Property is located within the Telemark Block of the Southwest Scandinavian Domain (SSD) within the Fennoscandian Shield. The SSD is bordered in the east by the ca.1400km long, 1850-1650Ma Transscandinavian Igneous Belt (TIB), consisting mainly of alkali-calcic granitoids and their volcanic equivalents, as well as minor mafic rocks. The SSD comprises 6 distinct blocks (Eastern Segment, Idefjorden Block, Kongsberg-Marstrand Block, Bamble-Lillesand Block, Telemark Block and the Hardangervidda-Rogaland Block) which are separated from the Svecofennian Province by a tectonic zone referred to as the Protogine Zone. The lithological blocks are, in most cases, separated by major deformation zones and the SSD has a magmatic and metamorphic evolution ranging from >1.6Ga to 0.9Ga with the last metamorphic event related to the Sveconorwegian Orogeny taking place at 1.1Ga.

The Telemark Block consists of a well preserved volcanic-sedimentary suite in the north, called the Telemark Supracrustals, and gneisses in the south, called the Vrådal gneiss complex. The Telemark Supracrustals form a well-preserved, Mesoproterozoic supracrustal succession approximately 10km thick, metamorphosed under low-grade greenschist-amphibolite facies (Brewer & Atkin 1987; Atkin & Brewer 1990, as cited in Lamminen, J., 2011). The Telemark supracrustal rocks consist of two main successions, the lower Vestfjorddalen Supergroup deposited between c.1510-1347Ma and the overlying Sveconorwegian (Grenvillian) Sequences deposited between c.1170-1010Ma and separated by the major Sub-Svinsaga Unconformity. (Lamminen, J., 2011)

The Vestfjorddalen Supergroup (Rjukan rift basin) consists of two groups:

i. the older Rjukan Group, comprising continental felsic volcanics of the Tuddal Formation (ca. 1.512Ga, Bingen et al., 2005, as cited in Köykkä, J., 2010), and the 2km thick sequence of the volcanic-sedimentary

Vemork Formation (ca. ≤1.495Ga, Laajoki & Corfu, 2007, as cited in Köykkä, J., 2010), characterized mainly by mafic volcanism.

ii. the 5km thick sedimentary Vindeggen Group (≥1.35Ga, Corfu & Laajoki, 2008, as cited in Köykkä, J., 2010). The lowermost unit of the Vindeggen Group is called the Heddersvatnet Formation and it is dominated by conglomerate and sandstone. The Heddersvatnet Formation is overlain by the quartz-sandstone dominated Gausta Formation. The Rjukan and Vindeggen Groups are separated by the sub-Heddersvatnet unconformity.

Gold occurs as several different ore types in the Fennoscandian Shield ranging in age from Late Archaean to Late Proterozoic. Several shear-related gold-bearing quartz veins have been recognized in the SSD on both sides of the Permian Oslo Palaeorift. The veins cut through the main foliation in the host rocks and an age of ca. 1.0Ga has been obtained from a Pb-Pb galena isochron in the Värmskog-Vänern area by Johansson 1985, as cited in Gaál, G., et al., 1990. Furthermore, a U-Pb age of 0.96Ga on pitchblende from the Långvattnet (Härserud) Au-Mo-W-Bi- Te-U deposit (Chyssler and Kresten 1979; Hammergren 1980, as cited in Gaál, G., et al., 1990) agrees well with the ages obtained on the Bohus granite (0.89Ga) and their associated pegmatites (1.06-0.88Ga), which indicate a close temporal relationship between emplacement of the late granites, development of the shear structures and ore-forming processes in this area. Two ore-bearing districts can be recognized in the SSD (Gaál, G., et al.,1990):

- Mjøsa-Vänern District: This district comprises the historic gold mines at Eidsvoll, Norway and Harnäs, Sweden, several abandoned Cu-Au-Ag-Bi-W deposits farther southeast in Sweden such as Glava and, the lead-silver veins at Värmskog.
- Telemark District: The only deposit in this district to have been investigated in some detail is Bleka in the Telemark area, Norway. These gabbro-hosted quartz veins are associated with shear zones and alterations, and native gold, chalcopyrite, pyrite and various bismuth minerals have been identified (S. Jensen, personal communication 1989, as cited in Gaál, G., et al., 1990). Other gold-bearing veins in this district include Haukum, Haukedal, Hisø and Romelien. (Gaál, G., et al., 1990)

1.4. Property Geology

The geology of the Hjartdal/Bleka area is dominated by a prominent north-northeast/south-southwest trending anticlinal fold structure (Bleka Anticline), which in its core, exposes felsic volcanics of the Tuddal Formation (Rjukan Group) and at the flanks exposes quartzites, schists and conglomerates of the Vindeggen Group. The rocks of the Rjukan and Vindeggen Groups have been intruded by thick mafic sills and dykes referred to as the Svartdal and Kasin Metagabbros and which host the gold-bismuth bearing quartz veins in the area. The Svartdal and Kasin Metagabbros intruded into the Vindeggen Quartzite at approximately 1145 +3/-2Ma; the Svartdal Metagabbro hosts the Bleka and Espeli Vein Swarms whereas the Kasin Metagabbro hosts the Blengsdalen and Gjuv occurrences. The metagabbros are altered to lower greenschist facies metamorphism due to deformation that resulted from the Sveconorwegian Orogeny (1.05 – 0.9 Ga) (Lamminen, J., 2011).

1.5. Deposit Type

Historic records and modern observations indicate that all known zones of gold-bismuth-tungsten mineralization at the Bleka Property are related to the 'orogenic gold' class of deposits. This class of deposit includes some of the largest gold deposits and districts in the world (e.g., Kalgoorlie in Australia, Timmins in Ontario, and Ashanti in Ghana). Their name reflects the recognition that these deposits have temporal and spatial associations with late stages of orogenesis (Dubé, B., et al., 2007; Goldfarb, R.J., et al., 2005; Goldfarb, R.J., et al., 2001; Groves, D.I., et al., 1998). Formation of most orogenic gold mineralization was concentrated during the time intervals of 2.8 to 2.55Ga (Archean), 2.1 to 1.8Ga (Early Proterozoic) and 600 to 50Ma (Phanerozoic); these periods coincide with major orogenic events. An important subtype of orogenic gold deposits is dominantly hosted by mafic metamorphic rocks in granite-greenstone terranes and is referred to here as greenstone-hosted orogenic gold.

Greenstone-hosted orogenic gold deposits are structurally controlled, complex epigenetic deposits that are hosted in deformed and regionally metamorphosed terranes. They consist of simple to complex networks of gold-bearing, laminated quartz-carbonate fault-fill veins in moderately to steeply dipping, compressional brittle-ductile shear zones and faults, with locally associated extensional veins and hydrothermal breccias. They are dominantly hosted by mafic metamorphic rocks of greenschist to locally lower amphibolite facies and formed at intermediate depths (5-10km). The relative timing of mineralization is syn- to late-deformation and typically post-peak greenschist-facies or syn-peak amphibolite facies metamorphism. They are typically formed from low salinity, H_2O-CO_2-rich hydrothermal fluids with typically anomalous concentrations of CH_4, N_2, K, and S.

Gold is mainly confined to the quartz-carbonate vein networks but may also be present in significant amounts within iron-rich sulphidized wallrock. Greenstone-hosted orogenic gold deposits were formed during compressional to transpressional deformation processes at convergent plate margins in accretionary and collisional orogens. Orogenic gold systems are typically associated with deep-crustal fault zones that usually mark the convergent margins between major lithological blocks, such as volcano-plutonic and sedimentary domains. Large gold camps are commonly associated with curvatures, flexures, and dilational jogs along major compressional fault zones which have created dilational zones that increase migration of hydrothermal fluids. Ore shoots can be localized by dilational jogs or various intersections between a structural element (e.g., a fault, shear or vein) and a favourable lithological unit, such as a competent gabbroic sill, an iron formation or a particularly reactive rock, or by the intersection between different structural elements active at the time of vein formation. Individual vein thickness varies from just a few cm to over 10m, even though entire deposits may be wider than 1km and extend along strike for as much as 2 to 5km.

The main ore mineral is native gold that occurs with, in order of decreasing abundance, pyrite, pyrrhotite, and chalcopyrite, along with trace amounts of molybdenite and telluride in some deposits. The main gangue minerals are quartz and carbonate (calcite, dolomite, ankerite, and siderite), with variable amounts of white mica, chlorite, tourmaline and, locally, scheelite. Gold-bearing veins are typically enveloped by alteration halos that, in greenschist-facies rocks, grade outwards from iron-carbonate + sericite + sulphide (pyrite ± arsenopyrite) assemblages to various amounts of chlorite, calcite and, locally, magnetite. Hydrothermal assemblages associated with gold mineralization in amphibolite-facies rocks include biotite, amphibole, pyrite, pyrrhotite, and arsenopyrite, and, at higher grades, biotite/phlogopite, diopside, garnet, pyrrhotite and/or arsenopyrite, with variable proportions of feldspar, calcite, and clinozoisite. The variations in alteration styles have been interpreted as a direct reflection of the depth of formation of the deposits (Dubé, B., et al., 2007).

1.6. Property Mineralization

The exact emplacement setting and timing of the mineralized quartz veins and associated hydrothermal alteration in the Hjartdal/Bleka area is not known but they are considered to be shear-related and likely formed during the waning stages of the Sveconorwegian Orogeny as they have not endured the same level of deformation and metamorphism as the host metagabbros. Similarly, the source of the gold-bearing fluids is also unclear but Dahlgren, S., 2015 postulated that as late granitic plutons exist locally towards the east of the property area, similar deep-seated plutons located below the veins could have supplied the high-temperature hydrothermal fluids.

The Bleka-type Au-Bi-W-Cu mineralization occurs in quartz-ankerite-tourmaline veins ± calcite, dolomite, epidote, muscovite and chlorite. The ore minerals, which in general constitute approximately 1%, but occasionally up to several percent, comprise chalcopyrite-pyrite ± bismuthinite, Bi-sulfosalts, gold, galena and scheelite. (Harpøth, O., et al., 1984)

Pronounced zonal hydrothermal alteration is associated with the Bleka Main Vein (BMV); the most intense alteration is a greisen-like, quartz-albite alteration which has converted the amphibolite wallrock into a pale, leucocratic rock dominated by albite, muscovite, rutile, tourmaline and quartz.

The current polygenetic mineralization model postulated by Wilberg, R., 2020 accounts for the wide range of gold-bearing rocks observed in the BMV and suggests that the fluid environment covers a wide range of temperature conditions resulting from a gradual cooling of the system:

i. Quartz-Albite Alteration: Pre-mineralization, hydrothermal event.
ii. Quartz-Ankerite Veining: Discrete veins with substantial, associated carbonate-chlorite alteration halos, and the introduction of sulphur, allowing the precipitation of abundant pyrite. This stage may have permeated along pre-existing fractures, thus overprinting earlier feldspar alteration zones, or along new fractures, causing only carbonate alteration halos to develop.
iii. Quartz-Cu-Bi-sulphide Veining: Emplaced into existing and new fractures.
iv. Gold Mineralization: Associated with the late-stage quartz-Cu-Bi-sulphide veining event above.

Fluid inclusion studies by Sørensen, J.P.L., 1991, with samples from the Bleka, Espeli, Barstad and Nystaul occurrences, demonstrated that fluids in the Bleka Goldfield have a complex history of changing composition, mixing and cooling that may be critical for the formation of extensive gold mineralization.

1.7. History

Gold was discovered at Bleka around 1880 by a local farmer and French company Compagnie des Mines de Bamble carried out mining sporadically during the period ~1880-1916. The mine was re-opened in ca. 1933 by Bleka Gruber AS who produced a flotation concentrate containing gold, bismuthinite and chalcopyrite which was sold for metallurgical treatment in Hamburg, Germany and also a shaking table concentrate which was roasted and poured on site and sold to the Bank of Norway. Production ceased in 1940 due a lack of fuel during the Second World War. During the Second World War, the German authorities re-evaluated the deposit with respect to its gold, and not least, its bismuth potential, a strategic metal in aircraft production although mining never recommenced. In 1957, the mine`s laboratories and archives were destroyed by fire, and much valuable information, in the form of data and maps was lost.

Approximately 165 kg Au, 300 kg Ag, 25t Bi and 80t Cu at estimated grades of 36g/t Au, 67g/t Ag, 0,55% Bi and 1,78% Cu was produced from the Bleka mine from approximately 1800m^3 from two main underground stopes. (Petersen, J.S., 1996). The author has visited the Bleka mine but has not reviewed the historic mineral resources or historic production figures at the property. The mineralization at Bleka may or may not be indicative of the type of mineralization elsewhere at the Bleka Property and is provided solely to illustrate the type of mineralization that could exist at the Bleka Property.

Since the mines' closure in 1940, exploration at Bleka and surrounding areas has been completed by several exploration companies although exploration work has largely been limited to mapping, rock-grab sampling, stream sediment sampling and magnetic and VLF geophysical surveying and no drilling has occurred within the property. Detailed mapping and stream sediment sampling completed by Norsk Hydro AS in 1984 identified the Espeli vein swarm located 2.5km northwest of Bleka and also identified several distinct stream sediment anomalous areas, in particular along strike of Bleka in the Heggeli-Bisminuten-Gjuv area.

1.8. Exploration

EMSAB has completed a limited amount of early-stage exploration at the Bleka Property since acquiring the property in early 2020 with exploration work including rock-grab sampling, geological mapping and reconnaissance and Ionic Leach™ sampling for a total expenditure of approximately USD$34,500.

The Ionic Leach™ sampling proved difficult due to the poor soil conditions resulting from the high-altitude, glaciated terrane and a total of only 32 samples were collected before the sampling programme was abandoned. Two lines of samples were collected over a distinct structural lineament identified from Lidar imagery and both gold and bismuth values were elevated over the trace of the structure.

A total of 109 rock-grab samples (10 of which are QAQC samples) have been collected to date from outcrop, subcrop, historic trenches, mine adits and from historic mullock dumps across the Bleka Property. Overall, the gold values were quite low with a maximum assay of 1.60g/t Au returned from mullock dump material from the northern vein at the Blengsdalen occurrence. The anomalous gold samples did however show fairly consistent coincident Au-Ag-Bi-Cu-Pb-S-Sb-W anomalism. Tungsten anomalism appears to be mainly associated with the BMV, with a peak assay of 5960ppm W returned from a quartz vein located above the entrance to Adit A.

1.9. Interpretations & Conclusions

The gold-bismuth bearing quartz-tourmaline-carbonate veins at the Bleka Property were likely emplaced in their metagabbro host rocks along east-northeast-west-southwest dextral shear faults resulting from east-southeast-west-northwest max compression during north-south to north-northeast/south-southwest folding during the Sveconorwegian Orogen. Major ore lenses appear to be located in areas where max tension and dilation occurs e.g. merging en echelon vein segments. Pronounced hydrothermal alteration envelops characterize the mineralization and also, together with the mineral assemblage of the veins, indicate the high temperature nature of the veins. In summary, the location of the Bleka-type veins is a result of regional tectonics combined with favourable host rock lithology, whereas the high temperature nature and to some degree the mineral assemblage, is possibly controlled by the intrusion of underlying granite.

Review of historical data and personal examination of four (Bleka, Blengsdalen, Espeli and Gjuv) mineralized prospects within the Bleka Property during the author's field visit confirm the existence of shear-hosted, orogenic gold mineralization at the property. The Bleka mine operated intermittently from ca. 1880 to 1940 producing primarily gold concentrates. Evidence of trenching was observed at the Blengsdalen and Gjuv prospects. Based on the observations of the author and as a result of the data and literature review, significant and widespread gold-bismuth mineralization is present across the Bleka Property.

The presence of multiple mineralized prospects (at least 8) including the historic Bleka gold mine within the Bleka Property together with significant Au-Ag-Bi-Cu-W anomalism from both historic rock-grab sampling and recent (EMSAB, 2020) rock-grab and limited Ionic Leach™ sampling should be considered a favourable indicator for continued exploration on the property.

1.10. Recommendations

Based on the results of the author's inspection of the Bleka Property and review of available records, a 12- month, two-phase exploration strategy is recommended for the Bleka Property, whereby the second phase of exploration is dependent on the success of the first phase of exploration. The next phase of exploration at the Bleka Property is estimated to cost C$57,000.00 and an additional phase two round of diamond drilling is estimated to cost C$442,500.00.

2. INTRODUCTION & TERMS OF REFERENCE

2.1. Introduction & Terms of Reference

Scott Geological AB ("SGAB") has been engaged by Sienna Resources Incorporated (Sienna) to provide a Technical Report on Sienna's Bleka mineral asset located in Norway in order to satisfy its disclosure requirements under Canadian securities laws and the TSX-V in connection with its agreement with EMX Royalty Corporation (EMX) on the Bleka Property. SGAB has been engaged by Sienna to examine the Bleka Property in the field and to review all exploration information available on the property and to make recommendations for further exploration, if warranted. This report has been prepared based on personal observations, on data and reports supplied by Eurasian Minerals Sweden AB (EMSAB) and Sienna, publicly available scientific literature and on geological publications from the Norwegian Geological Survey (NGU). A complete list of references is provided in Section 27.

The author and independent Qualified Person for this report is Ms Amanda Scott who is a geological professional with 16 years' experience in mineral exploration in Australia and Scandinavia. Ms Scott is a full-time employee of Scott Geological AB and is a Fellow of the Australian Institute of Mining and Metallurgy (Membership No.990895). The author visited and examined the Bleka Property on the 5-6th of October 2020 and has reviewed the information contained in this report and takes responsibility for the content and accuracy as required under the meaning of National Instrument 43-101 ("NI 43-101").

2.2. Units & List of Abbreviations

All units are reported in the Système Internationale d'Unités (SI) as utilised by the international mining industries, including: metric tonnes (tons, t), million metric tonnes (Mt), kilograms (kg) and grams (g) for weight; kilometres (km), metres (m), centimetres (cm), millimetres (mm) or microns (μm) for distance; cubic metres (m^3), litres (l), millilitres (ml) or cubic centimetres (cm^3) for volume; square kilometres (km^2) or hectares (ha) for area; degrees Celsius (°C) for temperature; weight percent (wt %) for metal grades; parts per million (ppm), parts per billion (ppb), percent (%) or grams per tonne (g/t) are used to express metal content and tonnes per cubic metre (t/m^3) for density.

Abbreviation	Explanation
SGAB	Scott Geological AB
Sienna	Sienna Resources Incorporated
EMSAB	Eurasian Minerals Sweden AB
EMX	EMX Royalty Corporation
NSR	Net Smelter Royalty
NGU	Norwegian Geological Survey
DMF	Norwegian Directorate for Mineral Management
NFD	Nærings- og fiskeridepartementet Norwegian Ministry of Trade & Industry
NBPS	NGU National Drillcore and Sample Centre
EU	European Union
EFTA	European Free Trade Agreement
EEA	European Economic Area
N	North
E	East
S	South
W	West
NE	North-East
SE	South-East
SW	South-West
NW	North-West
WGS84	World Geodetic System 1984
ETRS TM Z33	European Terrestrial Reference System 1989, Zone 33 Northern Hemisphere
UTM	Universal Transverse Mercator Coordinate System
GPS	Global Positioning System
NOK (kr)	Norwegian Kronor (Currency)
C$	Canadian Dollar (Currency)
USD$	United States Dollar (Currency)
IP	Induced Polarisation (Geophysical Method)
EM	Electromagnetic (Geophysical Method)
VTEM	Versatile Time Domain Electromagnetics (Geophysical Method)
FLEM	Fixed-Loop Electromagnetics (Geophysical Method)
MLEM	Moving-Loop Electromagnetics (Geophysical Method)
VLF	Very Low Frequency (Geophysical Method)
UVM	Upper Volcanic Member
MVM	Middle Volcanic Member
LVM	Lower Volcanic Member

MORB	Mid-Ocean Ridge Basalt
WPB	Within-Plate Basalt
BIF	Banded-Iron Formation
IOCG	Iron-Ore Copper Gold
PGE	Platinum Group Elements
QAQC	Quality Assurance/Quality Control
Cfc	Subpolar Oceanic Climate
Ga	Giga-annum (billion years ago)
Ma	Mega-annum (million years ago)
VMS	Volcanogenic Massive Sulphide
SI	Magnetic Susceptibility
hz	Hertz (Unit of Frequency)
TMI	Total Magnetic Intensity (Magnetics)
RTP	Reverse To Pole (Magnetics)
ICP-MS	Inductively Coupled Plasma Mass Spectrometry
TSX-V	TSX Venture Exchange
masl	Metres Above Sea Level
mbsl	Metres Below Sea Level
lkm	Line-kilometres

2.3. Sources of Information

The descriptions of the geology, mineralization and exploration are taken from various academic sources, archived NGU reports and the more recent technical presentations and memos prepared by EMSAB and Sienna. The conclusions of this report rely on data available from the project data provided by EMSAB and Sienna as well as that publicly available in other published reports as sourced from various companies, which have conducted exploration and or development activities on similar style deposits. Where applicable, the source is noted in the text of this report and a list of references is provided in Section 27 of this report. The information provided to SGAB appears to have been gathered by reputable institutions and having reviewed the information, SGAB has no reason to doubt its authenticity.

SGAB has reviewed and analysed data provided by EMSAB and Sienna and has drawn their own conclusions therefrom. Reliance has been primarily placed directly on the historical property data collected by the Norwegian Geological Survey (NGU) and SGAB has conducted an independent site visit. While exercising all reasonable diligence in checking, confirming and testing it, the author has relied primarily upon the historical exploration data, as well as the more recent exploration data acquired by EMSAB, as provided by EMASB and Sienna to prepare this report.

Based upon the authors site visit and review of all data and information, the Bleka Property is considered to be at an early stage of exploration and the author takes responsibility for all the data and information herein.

3. RELIANCE ON OTHER EXPERTS

SGAB has not researched title to the Bleka Property and SGAB does not express any opinion in connection with title. However, a copy of an independent permit status report for the Bleka Property was prepared by Mr. David Ettner of GeoDE Consult AS and dated 30th of November 2020 and provided to SGAB for review by the author; a copy is provided in the Appendix to this report. In Section 4.0, the author has relied upon personal communications (Holzäpfel, J., October 6, 2020) from EMSAB as to information received from the Norwegian Ministry of Mines regarding the status of potential environmental liability associated with historic mining.

4. PROPERTY DESCRIPTION AND LOCATION

4.1. Property Description & Location

The Bleka Property comprises eight contiguous granted exploration permits (Bleka 1-8) located in the Hjartdal and Seljord Municipalities of Vestfold og Telemark County in the Kingdom of Norway (Norway). The property is centred at 59.61° N Latitude, 8.59° E Longitude (ETRS TM Zone 33N: 6625199N, 138902E), approximately 160km west-southwest of the Norwegian capital city of Oslo and 80km west-southwest of the town of Kongsberg. The property location is shown in Figure 1.

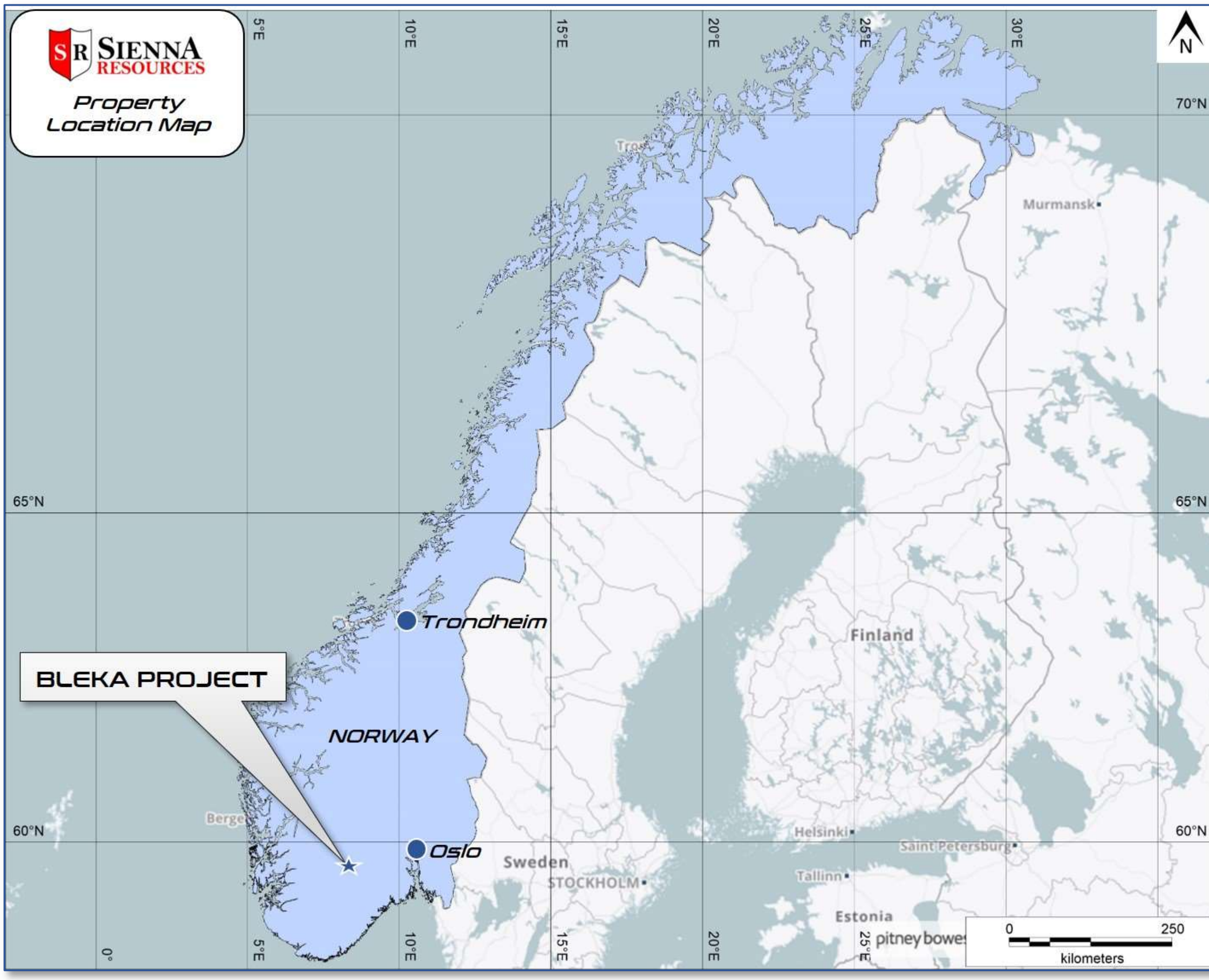

Figure 1: *Bleka Property location map. (SGAB, Nov 2020)*

4.2. Property Tenure

Sienna is a public Canadian exploration company with head offices in Vancouver, Canada (TSXV: SIE, OTC: SNNAF, FSE: A1XCQ0) which has recently acquired two exploration properties in Norway, including the Bleka Property and the Vekselmyr Property; the Bleka Property is the subject of this Technical Report. Sienna acquired the properties from EMSAB in August 2020; EMSAB is a wholly owned Swedish subsidiary of EMX. Under the Agreement, Sienna can earn a 100% interest in the Bleka and Vekselmyr Properties in Norway, subject to 3% net smelter return (NSR) royalty interests retained by EMX.

The combined total area of the Bleka Property is approximately 8,000ha and as of the effective date of this report, ownership of the exploration permits is held by EMX through their wholly owned subsidiary, EMSAB. Subject to regulatory approval, EMSAB will transfer title of the Bleka permits to Sienna.

The Bleka (1-8) permits were applied for over vacant ground by EMASB on the 8th of January 2020 and granted by the Norwegian Directorate of Mining (DMF) on the 14th of February 2020.

BS Norway Ltd owns a single exploration permit (Blika 3) that abuts the northern boundary of Sienna's Bleka 3 permit in the northwest of the property.

Since the acquisition by Sienna in August 2020, the exploration has been managed and executed in-country by EMSAB.

The Bleka Property permits are listed in Table 1 along with their permit ID number, grant date, expiry date and owner name.

Permit Name	Permit ID	Area (ha)	Grant Date	Expiry Date	Owner
Bleka 1	0054/2020	1000	14/02/2020	14/02/2027	Eurasian Minerals Sweden AB
Bleka 2	0055/2020	1000	14/02/2020	14/02/2027	Eurasian Minerals Sweden AB
Bleka 3	0056/2020	1000	14/02/2020	14/02/2027	Eurasian Minerals Sweden AB

Bleka 4	0057/2020	1000	14/02/2020	14/02/2027	Eurasian Minerals Sweden AB
Bleka 5	0058/2020	1000	14/02/2020	14/02/2027	Eurasian Minerals Sweden AB
Bleka 6	0059/2020	1000	14/02/2020	14/02/2027	Eurasian Minerals Sweden AB
Bleka 7	0060/2020	1000	14/02/2020	14/02/2027	Eurasian Minerals Sweden AB
Bleka 8	0061/2020	1000	14/02/2020	14/02/2027	Eurasian Minerals Sweden AB

Table 1: *Tenure information for the Bleka Property.*

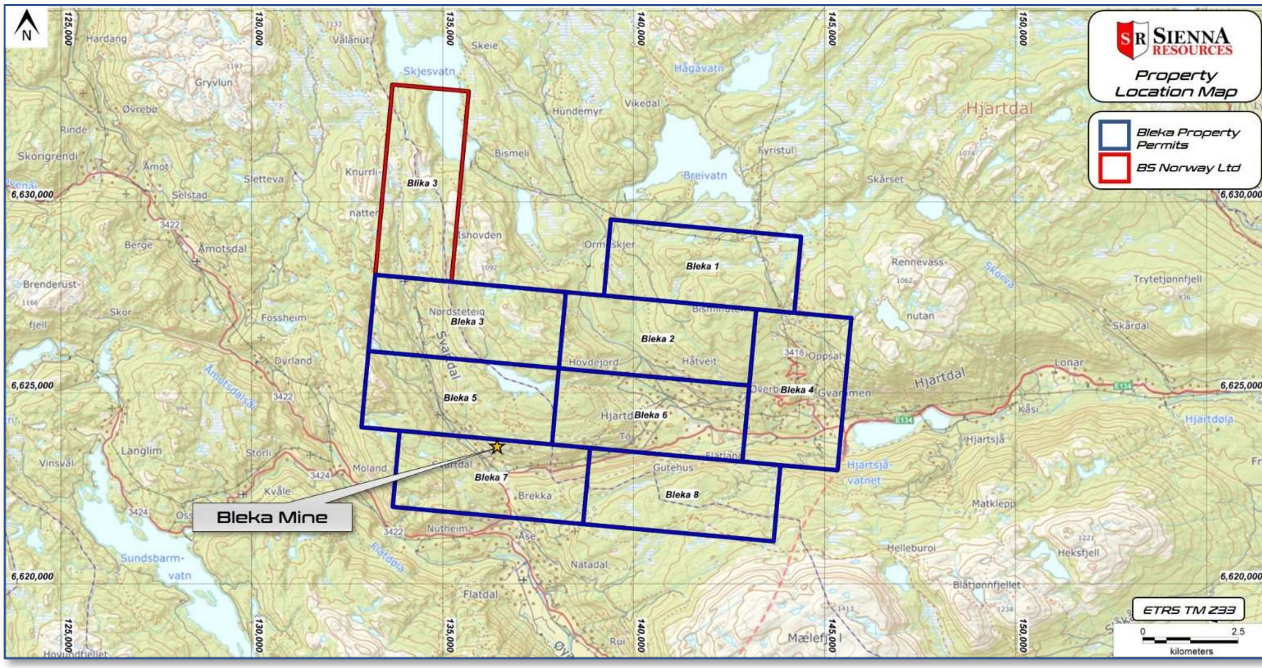

Figure 2: *Permit location map for the Bleka Property. (SGAB, Dec 2020, permit data from http://geo.ngu.no/kart/bergrettigheter/)*

4.3. Norwegian Mining Laws and Regulations

4.3.1. Mining Inspectorate & Minerals Act

The Norwegian Direktoratet for Mineralforvaltning (DMF) is a state administrative body under the Nærings- og fiskeridepartementet (NFD) or Ministry of Trade and Industry. DMF administers the Norwegian Act on the Acquisition and Extraction of Mineral Resources (Minerals Act) and the Mining Scheme for Svalbard. Among other things, DMF is also responsible for securing and reducing environmental consequences from old mines that have fallen back to the state, where the Ministry of Trade and Industry has ownership or managerial responsibility.

The Norwegian government has developed a national strategy for the minerals industry, in which the document states that the government's objective is that "[g]rowth in the industry shall be strengthened by means of a continued commitment to mapping of mineral deposits, access to information about mineral resources in Norway, better resource planning, a continued development of the mineral agencies and access to knowledge and a competent workforce" (NFD, 2013). The strategy includes over fifty measures, focused around the following strategic areas: mapping mineral resources, investment and access to capital, education and expertise, research and development, safeguarding environmental concerns, reputation, social responsibility and the local community, a predictable framework for mineral operations in Norway, subsea mineral resources, and mineral activities in areas where there are Sami interests.

The Minerals Act was adopted in 2009, replacing five earlier laws. The current Minerals Act was evaluated in 2018 and showed that there is a need to assess changes in several areas of the Act. Work on these changes has begun following a two-stage process:

i. The preparation of a consultation note to put in place quickly simplifications and improvements in more limited areas of the Act; the consultation deadline was the 23rd of September 2020.
ii. The establishment of a committee that will study some of the larger, complex and more fundamental issues with the Act; the committee will submit its recommendation on the 1st of December 2021.

Norway is not a member of the European Union (EU) but is closely associated through membership of the European Free Trade Association (EFTA) and thereby the European Economic Area (EEA). Norwegian environmental legislation is however, very much influenced by the EU.

4.3.2. Exploration Permits

An exploration permit is defined by the Norwegian government as a right to explore for state-owned minerals within a defined area for the validity of the permit; state-owned minerals are defined as:

i. metals with a specific gravity of 5 grammes/cm^3 or greater, including chromium, manganese, molybdenum, niobium, vanadium, iron, nickel, copper, zinc, silver, gold, cobalt, lead, platinum, tin, zinc, zirconium, tungsten, uranium, cadmium and thorium, and ores of such metals. Alluvial gold, however, does not fall within the definition;

ii. the metals titanium and arsenic, and ores of these and;

iii. pyrrhotite and pyrite.

An exploration permit is subject to an annual renewal fee of 10NOK per hectare (ha) for the second and third calendar years of ownership, 30NOK per ha per year for the fourth and fifth years and 50NOK per ha per year for the sixth and seventh years of ownership. The permit expires at the end of the seventh year of ownership unless a specific exemption is granted by the Norwegian government. An exploration permit also gives priority to an extraction permit. To be granted an extraction permit for state-owned minerals, the applicant needs to show that there is a reliable chance that extraction can be done in an economically feasible manner. An extraction permit costs 10,000NOK, cannot be larger than 1km² and can be extended in 10-year intervals. The annual permit fee is 100NOK per ha per year.

Non-disturbing exploration (basic prospecting, fossicking, chip sampling etc.) does not require a specific work permit; exceptions to this rule explicitly mentioned in the Act are the protected nature areas around Oslo, cultivated lands, industrial or military areas, areas close to temporary or permanent residences or to public facilities, and abandoned mining areas. Exploration in these areas may be allowed upon agreement with the landowner, land user or relevant authority.

EMSAB has obtained the relevant permission from the DMF to conduct non-disturbing exploration around the abandoned mining areas, industrial areas and areas close to temporary or permanent residences within the Bleka Property, similarly EMSAB's permit and landowner manager Mr. David Ettner of GeoDE Consult AS contacted the affected landowners and notified them of the proposed non-disturbing activities.

Disturbing exploration does however, require consent from the landowner and land user and a specific work permit to be obtained. The work permit application needs to include details of the applicant, details of the geographic area to be sampled, and reason and methodology of sampling; additional details of the work permit requirements can be found at on the DMF website at: https://dirmin.no/soknad-om-tillatelse-til-proveuttak. Notification to the DMF of specific work plans are required no later than three weeks before work initiates. In addition to the work permit notifications, exploration companies are required to obtain an 'off-road' permit if the proposed exploration work requires equipment, machinery or vehicles to travel 'off-road'. The 'off-road' permits are applied for through the local municipality who subsequently notifies and obtains approval from the affected landowners; this permit process normally take 6-8 weeks. If objections to the 'off-road' permit are made by landowners, the exploration company can seek to have the DMF settle the matter to obtain access to the area to be explored.

EMSAB has not yet submitted a work permit application or 'off-road' permit for the planned disturbing exploration work (drilling) at the Bleka Property. A work permit application will be prepared for the disturbing work (drilling) at the conclusion of the non-disturbing work when detailed drill planning will occur.

4.3.3. Taxes, Duties & Royalties

Mining companies (limited companies) pay corporation tax under the same rules as every other company. Accordingly, there are no special taxation rules for such companies. Corporate tax rates are currently 22% (2020).

Companies conducting mining activities are required to pay an annual fee of 0.5% of the sales value of that which is extracted to the landowner. The fee for each year shall fall due for payment on 31 March of the following year. If there are several landowners in the extraction area, the fee shall be divided among them in proportion to the land owned by each of them in the extraction area.

One notable tax in Norway is the municipal property tax. It is voluntary for municipalities to adopt the tax, and they enjoy a certain degree of freedom in design. It may cover all real estate in the municipality or be limited to business premises. Annual tax levels may vary between 0.2 and 0.7% of the taxable fiscal value of the property.

4.4. Material Agreements

Sienna Resources Inc. (Sienna) is a public Canadian exploration company with head offices in Vancouver, Canada (TSXV: SIE, OTC: SNNAF, FSE: A1XCQ0) which has recently acquired two exploration properties in Norway, including the Bleka Property and the Vekselmyr Property; the Bleka Property is the subject of this Technical Report. Sienna acquired the properties from Eurasian Minerals Sweden AB (EMSAB) in August 2020; EMSAB is a wholly owned Swedish subsidiary of EMX Royalty Corporation (EMX). Under the Option Agreement

(Agreement), Sienna can earn a 100% interest in the Bleka and Vekselmyr Properties in Norway, subject to 3% net smelter return (NSR) royalty interests retained by EMX, by:

- Issuing an additional 500,000 shares of Sienna to EMX within 5 days upon exchange approval.
- Spending a minimum of C$250,000 per year on exploration on the Properties over the next two years.
- Reimbursing EMX for its acquisition costs and expenses related to the Bleka and Vekselmyr Properties.
- Issuing 1,500,000 additional shares of Sienna to EMX at the end of the two-year option period.

If Sienna satisfies the earn-in conditions of the Agreement and elects to acquire the Properties, EMX will receive annual advance royalty (AAR) payments of USD$25,000 for each property commencing on the first anniversary of the option exercise date, with each AAR payment increasing by USD$5,000 per year until reaching a cap of USD$75,000 per year. Under certain conditions, 0.5% of the 3% NSR royalties retained by EMX can be repurchased by Sienna.

The acquisition of the Properties is the result of an execution of an amendment to Sienna's Option Agreement with EMX, originally signed in December 2017 for the Slättberg nickel-copper-cobalt-PGE (Ni-Cu-Co-PGE) Property in southern Sweden. The amendment adds EMX's Bleka and Vekselmyr Properties in southern Norway to the Option Agreement, whereby Sienna will enter a two-year option period to acquire 100% interest in the Properties by satisfying work commitments and making payments of cash and equity to EMX, with EMX retaining 3% NSR royalty interests.

As of the effective date of this report, ownership of the exploration permits is held by EMX through their wholly owned subsidiary, EMSAB. Subject to regulatory approval, EMSAB will transfer title of the Bleka permits to Sienna.

4.5. Other Significant Factors or Risks

Historic mining operations at the Bleka Property have left several adits, waste dumps and buildings on the property (see Figure 4).

The Norwegian State's responsibility for the rehabilitation of historic mines and mining activities has its background in the provisions of the 'right of recourse' legislation (Hjemfallsretten) within the previous Industrial Licensing Act (Industrikonsesjonsloven) whereby the mines and associated plots were transferred to the state at the end of the licence period. NFD is currently responsible for the reclaimed properties with discontinued mining operations that are still owned by the state. (https://dirmin.no/tema/miljotiltak)

For privately owned properties with discontinued mining operations, the environmental liability is first and foremost borne by the owner and/or operator of the business that operated the mine, in the case where the mines are so old as to be no liable business owner or operator, the environmental liability is borne by the owner of the property, not the mineral rights' holder. In order for the landowner not to be held liable, it must be considered unreasonably burdensome for the landowner to implement measures (Pollution Control Act (Forurensningslove), §7).

As such, Sienna does not inherit any legacy environmental liabilities located within the Bleka Property, despite this, it recommended that Sienna initiate discussions with the DMF in relation to the historic mining operations located within the Bleka Property. Any environmental damage as a result of Sienna's own exploration (or eventual mining activities) are the sole responsibility of Sienna as set out in Sections 50, 52 and 55 of the current Minerals Act.

There are two nature reserves located within the Bleka Property:

i. Ambjørndalen Nature Reserve

ii. Oppsaljuvet Nature Reserve

The nature reserves have individual restrictions and exemptions including vehicle movement restrictions and may include restrictions on exploration and mining activities; it is recommended that a detailed consultation with the Norwegian Environmental Agency be completed prior to commencing exploration activities.

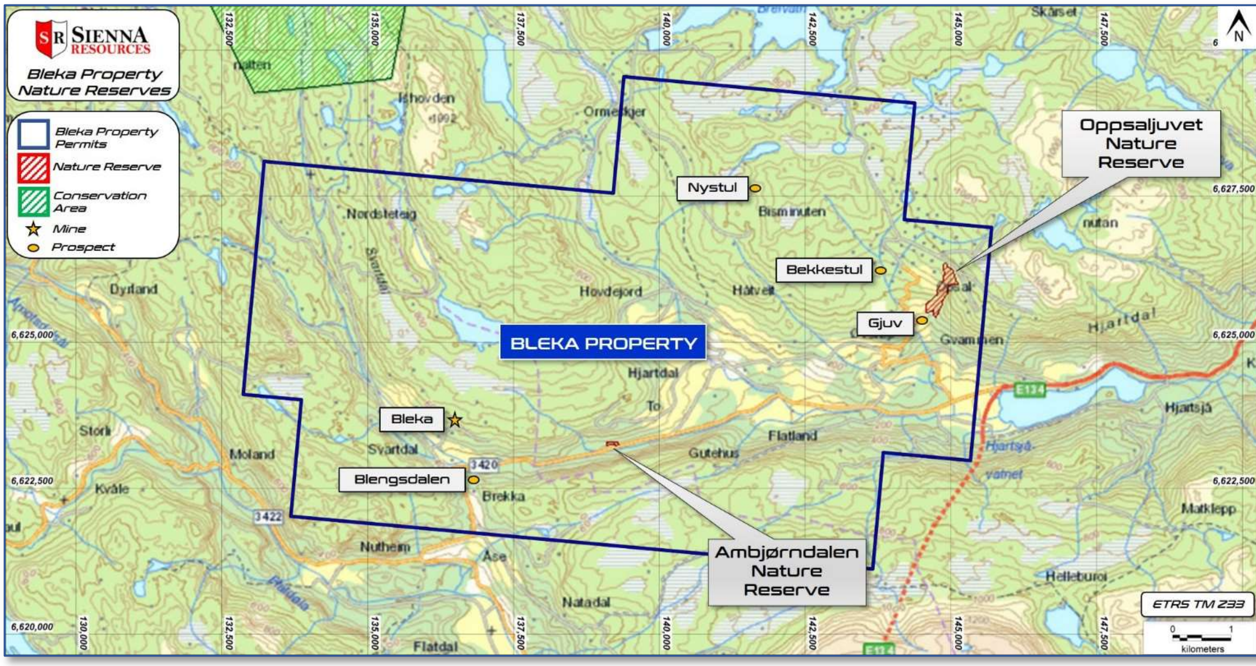

__Figure 3:__ Location of nature reserves within the Bleka Property. (SGAB, Dec 2020, permit data from http://geo.ngu.no/kart/bergrettigheter/)

To the author's knowledge, no formal consultation with landowners within the Bleka Property has yet been conducted. Upon completion of preliminary work permits, it will be the responsibility of Sienna to contact and engage with landowners holding surface rights should that work meet the definition of damage of significant importance as defined by Norwegian law.

The author is not aware of any other royalties, back-in rights, payments or other agreements and encumbrances to which the property is subject other than royalty described in Section 4.5 above and the compulsory royalties on possible future mineral production due to the affected landowners/s described in Section 4.4.3 above.

The author is not aware of any other factors which may affect access, title, or the right or ability to perform work on the property.

__Figure 4:__ Historical mining infrastructure from the Bleka Property.

Scott GEOLOGICAL

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

5.1. Accessibility

Access to the Bleka property is primarily via the small village of Flatdal located immediately south of the Bleka property boundary. Flatdal and the Bleka Property can be accessed by highway (E18, E134) and sealed roads from Oslo (population 1,019,513 in 2019), a distance of 166km. The closest airport with daily national and international flights is located in Oslo. The nearest railway from Oslo, services the town of Notodden, located approximately 50km to the east of the Bleka Property by road.

Other parts of the property can be accessed via both paved and well-maintained gravel roads. Overall, the road network is such that no point on the property is more than a few kilometres from road access except for the area within permit Bleka 8 which has limited road access.

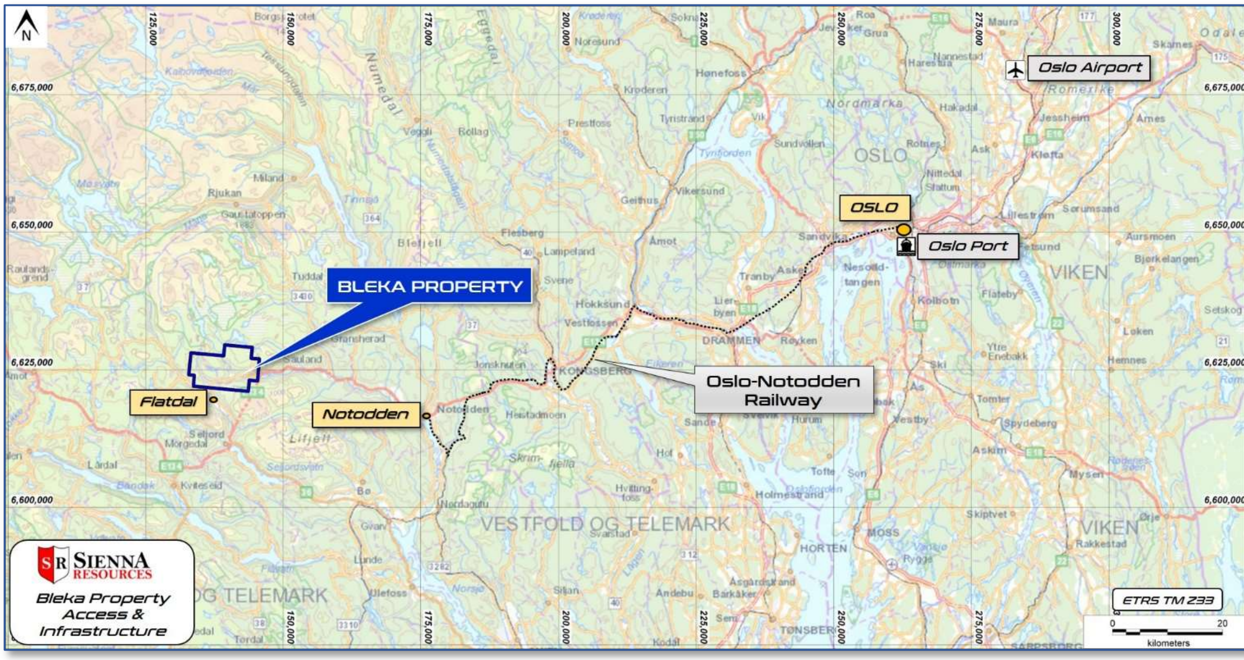

__Figure 5:__ Bleka Property access and local infrastructure. (SGAB, Dec 2020, permit data from http://geo.ngu.no/kart/bergrettigheter/)

5.2. Local Resources & Infrastructure

Sauland is the municipal seat of Hjartdal Kommun and is located 20km east of the Bleka Property; the business community in the municipality is linked to agriculture, tourism and craft services. Sauland offers a range of services including doctor's office and medical centre, hospital, police station, library, bank, fuel station, school, kindergarten and grocery store. The village of Flatdal offers a limited range of services, including fuel and groceries. Accommodation with restaurant (https://www.nordbopensjonat.no) is located within the eastern part of the property near the turn-off to the Mælefjell Tunnel and several privately-owned establishments are available to rent via Airbnb (https://www.airbnb.com). It is expected that unskilled labour for any work programs can be sourced from the local communities.

Oslo airport (located 205km east-northeast of the Bleka Property) has multiple domestic and international flights daily, and the city is well integrated into both the rail and highway networks. It is expected that a pool of both unskilled and skilled labour relating to the mining industry are to be found there.

Norway enjoys high security of electricity supply, and the continuity of supply is close to 99,99% in years without extreme weather events and has the highest share of electricity produced from renewable sources in Europe, and the lowest emissions from the power sector. The state transmission operator is Statnett, who is responsible for operating the national grid system in Norway. Skagerak Energi AS is responsible for local power production and distribution in the Bleka Property area. Several smaller (22kV) grids cross the Bleka Property area, the 145kV Hjartdal-Grønvolfoss grid is located immediately east of the Bleka Property and the 300kV Tokke-Flesaker grid passes through the town of Seljord located 16km to the south of the Bleka Property. A small (<1MW) hydropower station and associated dams, tunnels, floodgates and intake points are located within the Bleka Property and the 120MW Hjartdøla hydropower station and associated infrastructure is located on the eastern boundary of the Bleka Property. It is expected that the power needs of any future mining operations can be supplied by this existing infrastructure.

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There are no commercial mineral assay or preparatory laboratories operating in Norway today, the nearest commercial laboratories are located in Sweden and Finland.

It is too early to determine potential tailings storage areas, water sources, potential waste disposal areas, and potential processing plant sites; the potential availability of these sites have not been evaluated as part of this report. However, the footprint of the property is large enough that it is expected that it should be possible to locate suitable sites on the property for such infrastructure in the future.

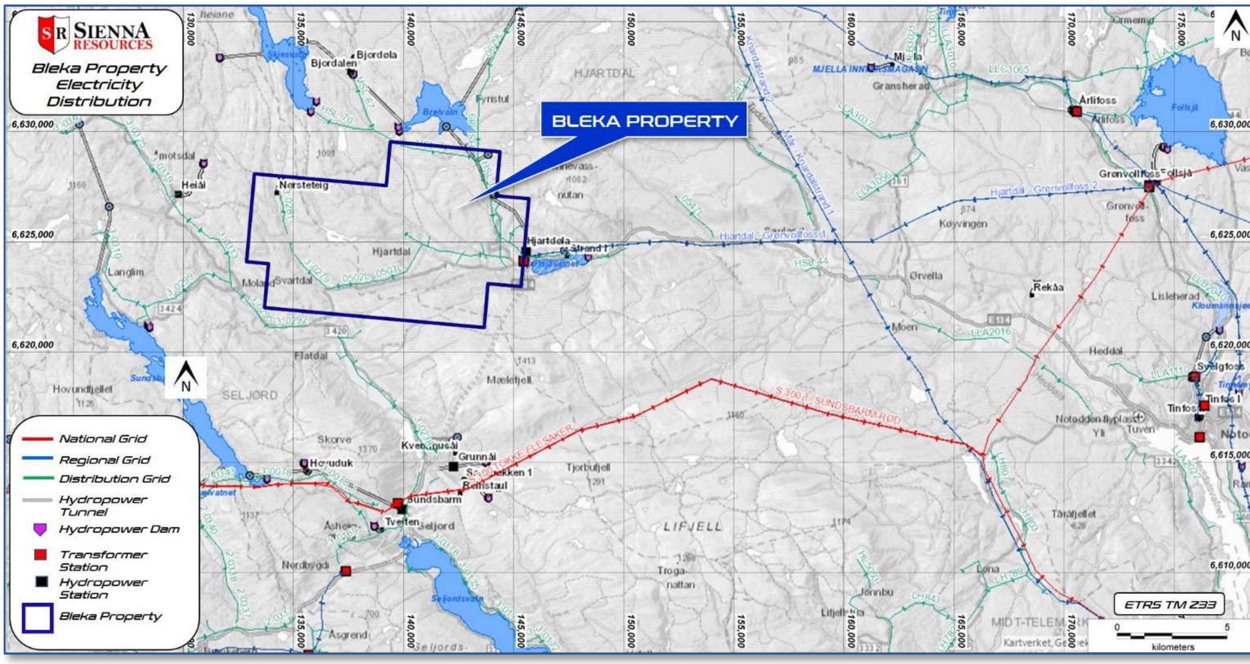

Figure 6: *Electricity distribution within and nearby the Bleka Property. (SGAB, Dec 2020, permit data from http://geo.ngu.no/kart/bergrettigheter/)*

5.3. Physiography & Climate

The Telemark-Vestfold geographical region in southeastern Norway extends from the Hardangervidda mountain plateau (Norway's largest national park) in the north to the Skagerrak coast in the south. Telemark has a varied and scenic landscape, including a rugged coastline, valleys, lakes, hills, mountains and mountain plateaus. Gaustatoppen, located 30km north of the Bleka Property, at 1883masl is the country's highest point.

According to the Köppen climate classification, the municipality of Seljord has a 'humid continental climate' (Dfb) although the climate is better described as cold and temperate, with an annual average temperature at Seljord (located 16km south of the Bleka Property) of 5.5°C. With an average of 15.5°C, July is the warmest month and at -3.8°C on average, January is the coldest month of the year. The driest month is April with 36mm of precipitation and in August, the precipitation reaches its peak, with an average of 95mm, giving an average annual precipitation of 779mm. The region experiences snowfall through the winter months with snow often covering the ground from October to April.

The Bleka Property has an elevation range of ~160masl within the Hjartdal Valley floor and ~1010masl at the peak of Høydalsnuten in the northwest of the property. The Bleka property is located within the *Scandinavian montane birch forests and grasslands tundra* ecoregion. At lower altitudes, the vegetation is typified by a montane birch zone with small (2–5m) mountain downy birch (*Betula pubescens*) above the conifer tree line and some stunted spruce and pine and many lakes and bogs. At higher elevations, low alpine tundra environments dominate with continuous plant cover; dwarf birch and willows up to 1m tall and grasslands, as well as numerous lakes and bogs. At the highest altitudes, is high alpine tundra with very modest vegetation and bare rock, scree, snowfields and glaciers. The treeline within the Bleka Property is located at approximately 900-1000masl, depending on the facing direction of the slope.

Fieldwork within the property is possible from May until late October, while snow may cover areas of higher elevations into late spring or early summer. Drilling operations should be possible year-round, depending on access considerations dictated by snow cover and potentially avalanche risk in areas of steeper topography.

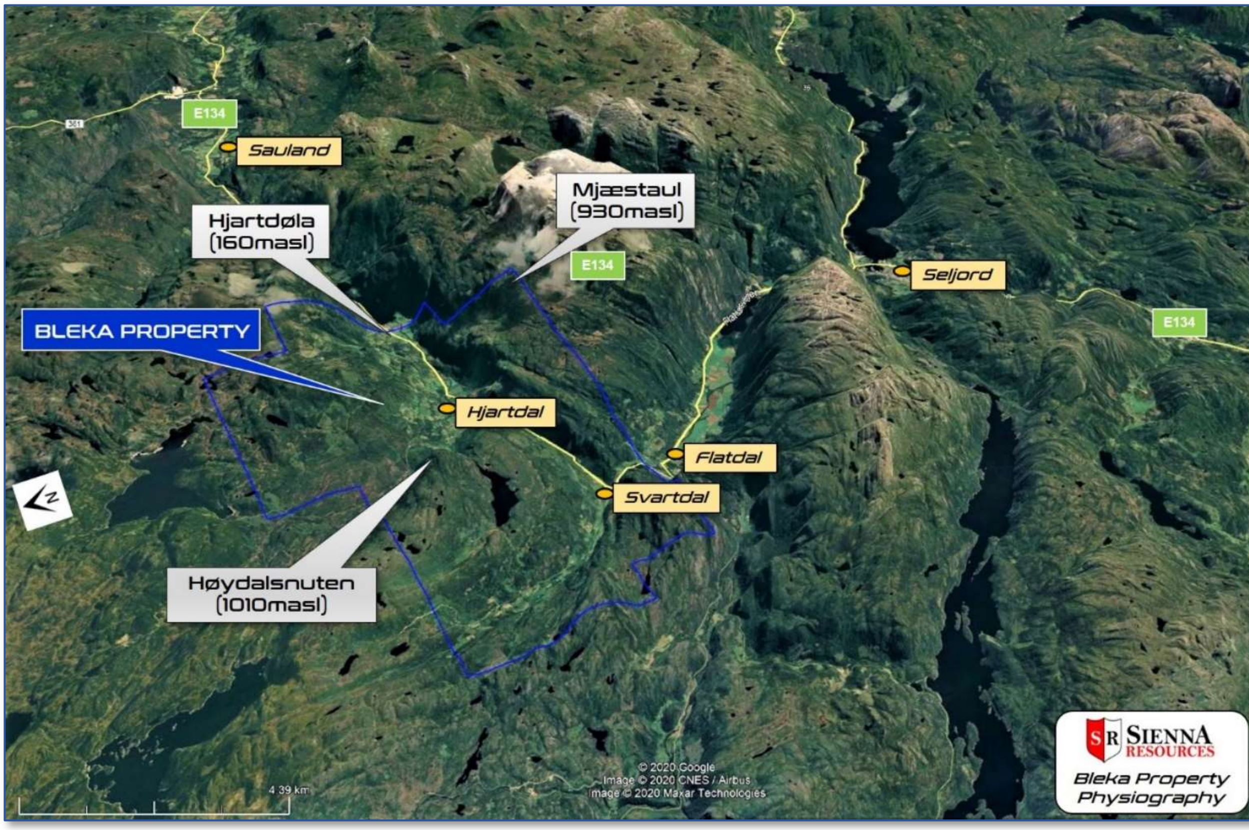

Figure 7: *Physiography of the Bleka Property. (Source imagery: Google Earth)*

6. HISTORY

The following summary is provided by Petersen, J.S., 1996:

Gold was discovered at Bleka around 1880 by a local farmer, Halvor Barstad, who had worked for Compagnie des Mines de Bamble at Ödemarken Verk. The property was sold to the French company for 2000kr and in the following 15 years, production was carried out by up to 80 people (Aasbø, 1974, as cited in Petersen, J.S., 1996). Nearly all the adits and stopes were established during this period and a trench along the main vein was dug for more than 1km. The crude ore was hand sorted on site and sold for processing elsewhere.

Around 1897, the company decided to carry out the ore processing locally and imported a tall iron furnace from France for this purpose. The structure of this oven is still to be seen at the mine site (see Figure 4). However, the smelting was unexpectedly difficult. The high silica-content of the insufficiently purified smelter feed resulted in a melt too viscous for proper separation of the metal and silicate liquids and furthermore, the air fans for the furnace were seriously undersized leading to insufficient reduction of the metals. As a result, the mining activities ceased around 1905 and when the property was subsequently sold in 1916, most of the mining equipment was transferred to other mines in the region (Dalen mine near Seljord).

Around 1933, [the] Bleka mine was temporarily reopened, equipped with new processing equipment including a diesel-powered ball mill, a rake classifier, a Denver shaking table and a small flotation unit. This equipment was installed in the still remaining building between the main adit and the furnace. The flotation concentrate containing gold, bismuthinite and chalcopyrite was sold for metallurgical treatment in Hamburg, [Germany] and a shaking table concentrate was roasted and poured on site and sold to [the] Bank of Norway (Aasbø, 1974, as cited in Petersen, J.S., 1996). The production stopped in 1940 because of [a] lack of diesel fuel and because electrical power was not available in Hjartdal until around 1950.

During the Second World War, the German authorities re-evaluated the deposit with respect to its gold, and not least, its bismuth potential, a strategic metal in aircraft production. A preliminary evaluation indicated reserves of 60,000 t with 0.7% Bi, 0.6% Cu and 11 g/t Au plus 40 g/t Ag (Horvath, 1943, as cited in Petersen, J.S., 1996). Subsequently, an option agreement between Sachsenerz and Bleka Gruber AS was established and a systematic re-evaluation, including minor drilling and blasting in two existing adits along 190m of well mineralized veins, was carried out by the former. These investigations showed that the first estimate had been misleading and based on grab samples only. The new evaluation suggested an average of 0.038% Bi, 0.26% Cu and 1 g/t Au and the *company concluded there was neither basis for Bi- nor Au-production at Bleka (Lauer 1943, Hake 1943a, b, as cited in Petersen, J.S., 1996).*

It must be emphasized here that the German evaluation focussed only on the existing and already exploited part of the mine and no drilling or exploration outside the main vein has been carried out since the mining days. In 1957, the mine`s laboratories and archives were destroyed by fire, and much valuable information, in the form of data and maps was lost.

The discovery of gold at Bleka was done near the location of the main shaft (at level 595 masl) and the first adit (A) was placed at 580masl, adit B at level 560masl, adit C at level 610masl and finally adits D, E and F were established at levels 550, 530 and 525masl respectively. The adits measure ca. 2x1m^2 in cross-section and have an aggregate length of 770m, although the combined length of D and E is only 50m. Adits B, C and F are accessible in most of their length. All adits and stopes are within, or directed towards, a single vein system. A ca. 50m long drift was set perpendicular to the lower part of the main vein at adit F, and here a vertical shaft (now water-filled) with two minor adits was sunk in the 1930`s. Stopes are found only in two areas, between adits F and D, and between adits A and B respectively, each with an area in the vein-parallel plane of about 800-1000m^2. Assuming that most of the production came from these stopes, a volume of ca. 1800m^3 ore was mined to yield the registered life-time production of 165kg Au, 300kg Ag, 25t Bi and 80t Cu. This would imply an average tenor of about 36g/t Au, 67g/t Ag, 0.55% Bi and 1.78% Cu, and indicate that the Bleka was a relatively high-grade deposit.

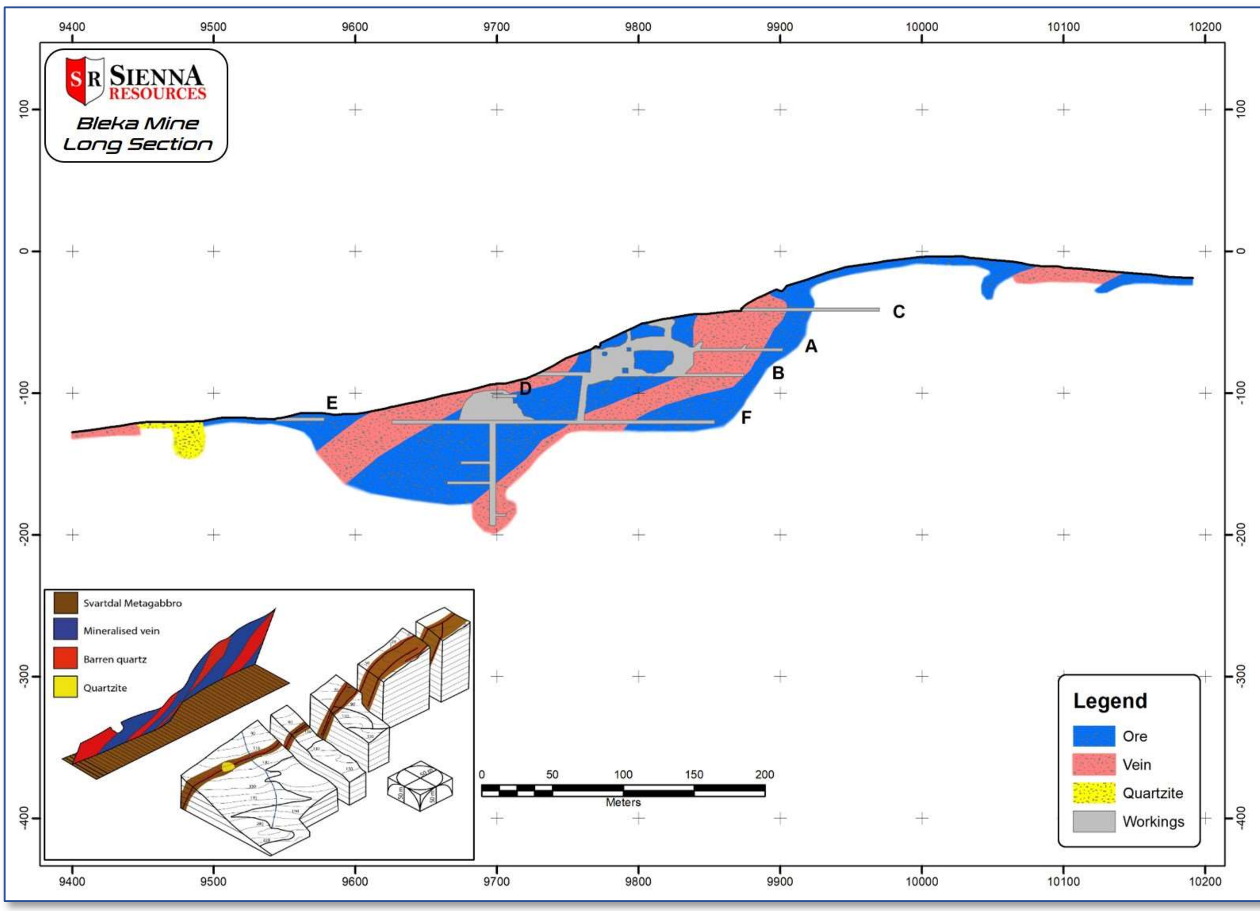

Figure 8: *Long-section of the Bleka mine and inset showing 3D long-sections. (Modified after Metzger, A., 1943. Inset: Bishop, C., 2020)*

Since the mines' closure in 1940, exploration at Bleka and surrounding areas has been completed by several exploration companies although exploration work has largely been limited to mapping, rock-grab sampling, stream sediment sampling and magnetic and VLF geophysical surveying and no drilling has occurred within the property. Detailed mapping and stream sediment sampling completed by Norsk Hydro AS in 1984 identified the Espeli vein swarm located 2.5km northwest of Bleka and also identified several distinct stream sediment anomalous areas, in particular along strike of Bleka in the Heggeli-Bisminuten-Gjuv area.

The historical exploration completed at the Bleka Property is summarised below in Table 2.

Period	Company	Work Completed	Source
1960-1970s	Elkem AS, Orkla Grube AB, Sydvaranger Gruve AS (EOS Project)	A joint venture project between the three mining companies; extent of work completed unknown.	Grammeltvedt, G., (1973)
1981	NGU	Stream sediment sampling of 1:50,000 mapsheet 1614-Flatdal.	Ekremsæter, J., (1982)
1980-1985	Norsk Hydro AS	Regional stream sediment sampling, mapping and rock-grab sampling. Testing of three geophysics methods.	Pedersen, F.D., (1984), Harpøth, Ø., et al, (1984) and Lindberg, P.A., (1985)
	Arco Norway AS	Regional stream sediment sampling, mapping and rock-grab sampling.	Grahl-Madsen, L., (1983)
	Prospektering AS (ASPRO)	Held a claim over the actual Bleka mine during this period although no work was completed.	Gvein, Ø., (1987)
1987-1998	University of Aarhus	Research groups from the Department of Earth Sciences carried-out detailed studies in the Bleka and surrounding area, the work was supervised by Professor Petersen.	Aghabawa, M., (1987), Larsen, J.P.H., (1989), Jensen, S.M., (1990), Jensen, S.L. (1991), Sørensen, J.P.L., (1991), Petersen, J.S. (1993) and Gad, T., (1995)
	Nordic Minerals AS & Mindex ASA	Professor Petersen of the University of Aarhus formed the company Nordic Minerals AS and merged their Bleka assets with Mindex ASA in 1997. During the period 1997-1998, Mindex completed magnetic and VLF geophysical surveys, geological mapping, structural interpretation, rock-grab and soil sampling. A 2600m diamond drilling programme was planned but never completed with the company relinquishing the permits in late 1998.	Jensen, K.S., (1997), Gamst, S., et al, (1998), Røsholt, B., (1998), Wilberg, R., (1998), Witt-Nilsson, P., (1999) and Gonzales, C., (1998)
2011	Telemark County	County geologist, Sven Dahlgren mapped the underground workings at Bleka.	Dahlgren, S (2015)
2012	Novel Mining	No work reported.	
2013	REE Mining	No work reported.	
2018-	BS Norway Ltd	BS Norway Ltd is a sponsored group from the University of Exeter owning a single claim located northwest of the Bleka Property owned by Sienna. Mapping, magnetic and VLF surveying completed.	Bishop, C.S., et al, (2019)

Table 2: *Summary of exploration work completed at or near the Bleka Property post mine closure in 1945. (Modified after Wilberg, R., 2020)*

6.1. Geophysics

In 1984, Norsk Hydro AS trialled three geophysical methods (radiometrics, electromagnetics and magnetics) in 1984 over parts of the Bleka and Espeli (Nystaul) vein swarms. The test profiles showed that only magnetics have a useable response and concluded that magnetics may provide some help in following the veins undercover but that the response was so weak as to have a limited worth for exploration.

In 1989, Larson, J.P., of Nordic Minerals AS completed a limited (13 profiles) ground magnetic survey over the BMV. Analysis of the profile data concluded that the contrast in the response from the two sensors in the Bleka mine area was very small and implied that the magnetic anomaly extends to a considerable depth. (Jensen, K.S., 1997)

In 1997, Mindex ASA completed a ground magnetic survey covering 22.39lkm (20 profiles, spaced 100-200m) over the Bleka/Espeli area and 10.35lkm (10 profiles, spaced 250m) over the Bisminuten (Nystul) area using a G856AX Proton magnetometer at a sample spacing of 10m. The main objective of the surveys was to locate the Au-Bi-Cu bearing quartz vein hosted within the metagabbro. (Jensen, K.S., 1997)

At Bisminuten, the profile spacing was deemed too wide to allow any meaningful correlation. Several high-intensity anomalies (51,000nT) were recorded, some interpreted to be from rhyolite and others from metagabbro. (Jensen, K.S., 1997)

At Bleka, the regional magnetic intensity is approximately 50,200nT which is characteristic of the metagabbro hostrock. The high content of magnetite in the wallrock alteration associated with the vein mineralization gives a susceptibility contrast of approximately 100-400nT, although the magnetic signature of the BMV is far from consistent. At Espeli, the magnetic field intensities vary with only approximately 100nT from a background intensity of 50,200nT, making mapping of the small veins difficult although the main geological features can still be interpreted. (Jensen, K.S., 1997)

In 1998, Mindex AS followed-up the magnetic anomalies generated in 1997 by Jensen, K.S.; the 200m spaced profiles were infilled and produced an almost continuous anomaly traceable up to 3km (including the BMV). In the area located south-southeast of the BMV, a cluster of 6 parallel magnetic anomalies with an east-northeast/west-southwest strike can be traced for 600-1300m. The direction of the strike of the magnetic anomalies is sub-parallel to the BMV. (Wilberg, R., et al., 1998)

The Svartdal Metagabbro contains approximately 1% pyrite, which is unevenly distributed throughout the rock unit. Where shearing and alteration has occurred, the pyrite is altered to magnetite. In the vein structures where pyrite is deposited as an alteration product in the earliest, high temperature phase of mineralization, the pyrite is altered to magnetite in the late, low temperature, phase of mineralization. The bulk deposition of gold mineralization also took place at the late stage of mineralization together with the magnetite. The discontinuities of the magnetic anomalies are interpreted to be areas with low pyrite content. The theoretical timing and mineralogy of the mineralization phases is yet to be verified in the field (Wilberg, R., et al., 1998)

In 1998, Mindex ASA also completed a VLF survey for a total of 7.25lkm (14 profiles). The VLF survey was hampered by several cultural features including powerlines and cattle and sheep fences, nevertheless, several coincident magnetic-VLF anomalies were generated. (Wilberg, R., et al., 1998)

6.2. Geochemistry

NGU completed stream sediment sampling of 1:50,000 mapsheet 1614 (III)-Flatdal during the period June-August 1981. A total of 172 samples were collected from streams that crossed or ran near a drivable road. Two samples were taken at each locality, one sample (A) at least 30m from the road and one (B) at least 40m from the road. The samples were wet-sieved through nylon cloth with mesh size -0.18mm. The fine fraction (-0.18mm) was subsequently analysed. The samples were stored in labelled paper bags and dispatched to NGU where they were dried at ca. 50-80°C and dry-sieved through a nylon cloth with mesh size -0.18mm to remove any lumps. Equal amounts were taken from sample A and B and blended. 1g of the blended sample was treated with 5ml of HNO_3 (1:1) for three hours on an element at 110°C. The solution was then diluted to 20.3mm and centrifuged. The samples were then analysed via an inductively-coupled argon plasma spectrometer for Si, Al, Fe, Ti, Mg, Ca, Na, K, Mn, P, Cu, Zn. Pb, Ni, Co, V, Mo, Cd, Cr, Ba, Sr, Zr, Ag, B, Be, Li, Sc, Ce and La. (Ekremsæter, J., 1982)

As a result of the NGU sampling that identified the Bleka area as anomalous, Norsk Hydro AS claimed the area and in 1983 and 1984 completed stream sediment sampling over an area of 600km^2 between Svartdal and Rjukan for a total of 866 samples. Norsk Hydro AS modified the NGU method described above by sieving material from the faster flowing parts of the streams until 50g of -0.2mm fraction was collected. In addition to the stream sediment sampling, rock-grab samples and pan concentrate (heavy mineral analysis) samples were also collected. (Lindberg, P.A., 1985)

The stream sediment sampling identified a significant anomaly over the Heggeli area and southwest (?, appears southeast in Figure 5, Lindberg, P.A., 1985) of the Gjuv area, both located approximately 6-8km northeast of the Bleka mine. The Heggeli area contains a total of 7 anomalies from within the same drainage system. The anomalous area was followed-up with rock-grab sampling (23 samples), of which 9 returned anomalous gold values of between 36-10,000ppb, all from quartz veins. The geology of the area is complex with rapid alternation between acid volcanics, conglomerates, quartzites, shales and basic sills and lavas. A prominent structure (110-130°) runs through the anomalous area with the quartz veins running parallel to the direction of the main structure. (Lindberg, P.A., 1985)

The Bleka-Blengsdalen-Barstad-Espeli (Nystaul) area was covered with a tight grid of stream sediment samples and 23 pan concentrate samples. The Bleka mine was the only mineralized occurrence that was seen in the stream sediment data. The Espeli (Nystaul) and Blengsdalen mineralization was not identified in the data, although the continuation of the Kasin Metagabbro was reportedly identified with 6 stream sediment anomalies. Analysis of the data by Norsk Hydro AS showed that the pan concentrate sampling produced 3-times as many anomalies compared to the stream sediment sampling in the Bleka area (17% vs. 6%). (Lindberg, P.A., 1985)

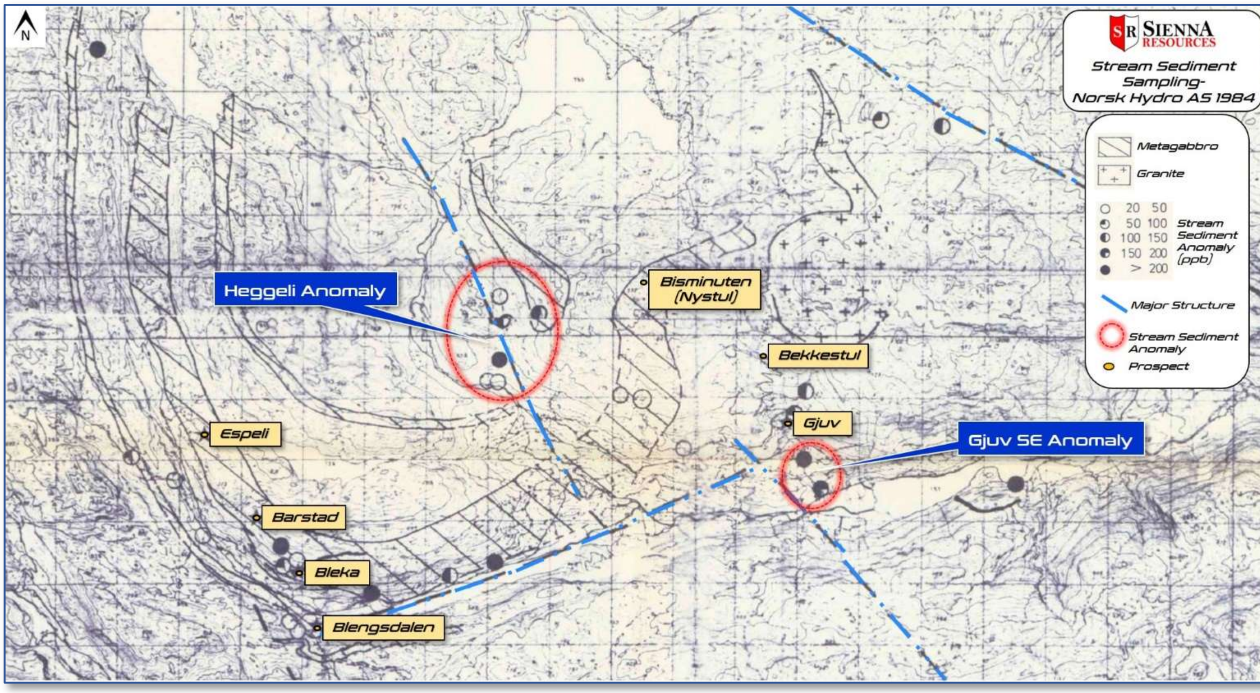

Figure 9: *Stream sediment anomalies from Norsk Hydro AS, 1984. (Modified after Lindberg, P.A., 1985)*

The results of the work completed by Norsk Hydro AS showed:

- The geology of the area is substantially more complex than earlier interpretations gave.
- Au-bearing gold veins/vein swarms are not only hosted within the metagabbros, but also within sediments and acid volcanics.
- Two main types of mineralized veins identified:
    i. Quartz-tourmaline-ankerite-bismuth ± gold striking approximately 080°
    ii. Quartz-magnetite-pyrite-gold, striking 140-160°

  Gold mineralization appears to be most apparent at the juncture between these two vein systems.
- There is a clear vertical zonation within the veins i.e. between the Espeli (Nystaul) and Bleka vein swarms. (Lindberg, P.A., 1985)

In 1998, Mindex ASA completed deep-soil sampling comprising 45 samples collected over 8 profiles. The sampling was targeting magnetic and VLF geophysical anomalies. Each sample was assigned co-ordinates, sample depth (m), magnetic susceptibility and a short geological description. The samples were dispatched to Intertek Testing Services, Bondar Clegg (ITS) in Merseyside, Liverpool UK for preparation prior to being sent to ITS in Vancouver for analysis. The samples were assayed for gold (Au) and a multi-element suite (Ag, Cu, Pb, Zn, Mo, As, Sb and Bi) via fire assay (30g) and atomic emission spectroscopy respectively. In more than 50% of the samples, low-level (6-20ppb) gold was detected. (Wilberg, R., et al., 1998)

In addition to the deep-soil sampling, Mindex ASA also collected and assayed 75 rock-grab samples in 1997 and 90 rock-grab samples in 1998 from across the Bleka area. Samples were dispatched to Omac Laboratories Ltd in Ireland for analysis for Au, Cu, Pb, Zn, Ag, As, Sb, Bi and Mo. (Wilberg, R., et al., 1998)

6.3. Drilling

No drilling has been completed from within or nearby the Bleka Property.

In 1998, Mindex ASA did design a drill programme totalling 2200m, comprising 12 holes ranging from 90-450m. The drillholes were planned to target the BMV, Espeli vein swarm and the Blengsdalen vein occurrences and was scheduled to occur during the 1999 field season but never eventuated. (Wilberg, R., et al., 1998)

7. GEOLOGICAL SETTING & MINERALIZATION

7.1. Regional Geology & Mineralization

The Bleka Property is located within the Telemark Block of the Southwest Scandinavian Domain (SSD) within the Fennoscandian Shield. The Fennoscandian Shield is composed of an Archaean core in the northeast in the Kola Peninsula, Karelia and northeastern Finland and progressively younger Proterozoic crustal domains towards the southwest including the Svecofennian Province, Transscandinavian Igneous Belt (TIB), the Southwest Scandinavian Domain (also known as the Southwestern Gneiss Province or the Sveconorwegian Province or Orogeny) and the Scandinavian Caledonides.

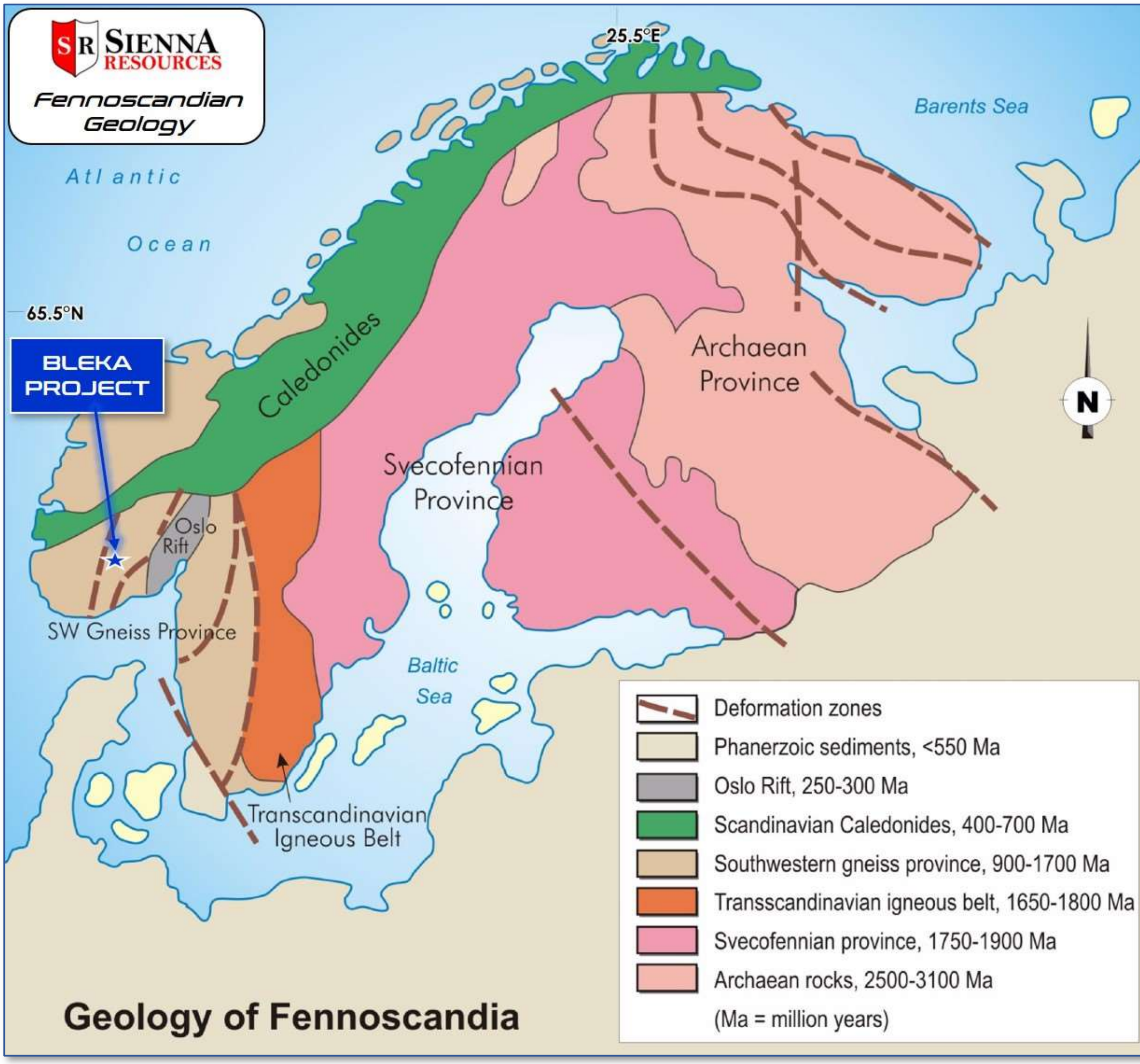

Figure 10: *Schematic diagram of the Fennoscandian geology.*

The SSD is bordered in the east by the ca.1400km long, 1850-1650Ma Transscandinavian Igneous Belt (TIB), consisting mainly of alkali-calcic granitoids and their volcanic equivalents, as well as minor mafic rocks. The TIB is interpreted as a continental magmatic arc, which developed along the north-northwest/south-southeast running central axis of the present day Fennoscandian Shield. The magmas of TIB rocks formed by re-melting older Svecofennian rocks with minor mafic additions (Högdahl et al. 2004, as cited in Lamminen, J., 2011)

The SSD comprises 6 distinct blocks which are separated from the Svecofennian Province by a tectonic zone referred to as the Protogine Zone. The lithological blocks are, in most cases, separated by major deformation zones and the SSD has a magmatic and metamorphic evolution ranging from >1.6Ga to 0.9Ga with the last metamorphic event related to the Sveconorwegian Orogeny taking place at 1.1Ga. Magmatic activity ceased with the intrusion of S-type granites and associated U-rich pegmatites in the Bohus, Østfold, Blomskog and Telemark areas (Killeen and Heier 1974; Wilson and Åkerblom 1982, as cited in Gaál, G., et al., 1990). The 6 tectonic and lithostratigraphic blocks of the SSD are:

i. Eastern Segment
ii. Idefjorden Block
iii. Kongsbergs-Marstrand Block,
iv. Bamble-Lillesand Block
v. Telemark Block
vi. Hardangervidda-Rogaland Block

The Telemark Block consists of a well preserved volcanic-sedimentary suite in the north, called the Telemark Supracrustals, and gneisses in the south, called the Vrådal gneiss complex. The Telemark Supracrustals form a well-preserved, Mesoproterozoic supracrustal succession approximately 10km thick, metamorphosed under low-grade greenschist-amphibolite facies (Brewer & Atkin 1987; Atkin & Brewer 1990, as cited in Lamminen, J., 2011). The Telemark supracrustal rocks consist of two main successions, the lower Vestfjorddalen Supergroup deposited between c.1510-1347Ma and the overlying Sveconorwegian (Grenvillian) Sequences deposited between c.1170-1010Ma and separated by the major Sub-Svinsaga Unconformity. (Lamminen, J., 2011)

The Vestfjorddalen Supergroup (Rjukan rift basin) consists of two groups:

i. the older Rjukan Group, comprising continental felsic volcanics of the Tuddal Formation (ca. 1.512Ga, Bingen et al., 2005, as cited in Köykkä, J., 2010), and the 2km thick sequence of the volcanic-sedimentary Vemork Formation (ca. ≤1.495Ga, Laajoki & Corfu, 2007, as cited in Köykkä, J., 2010), characterized mainly by mafic volcanism.
ii. the 5km thick sedimentary Vindeggen Group (≥1.35Ga, Corfu & Laajoki, 2008, as cited in Köykkä, J., 2010). The lowermost unit of the Vindeggen Group is called the Heddersvatnet Formation and it is dominated by conglomerate and sandstone. The Heddersvatnet Formation is overlain by the quartz-sandstone dominated Gausta Formation. The Rjukan and Vindeggen Groups are separated by the sub-Heddersvatnet unconformity.

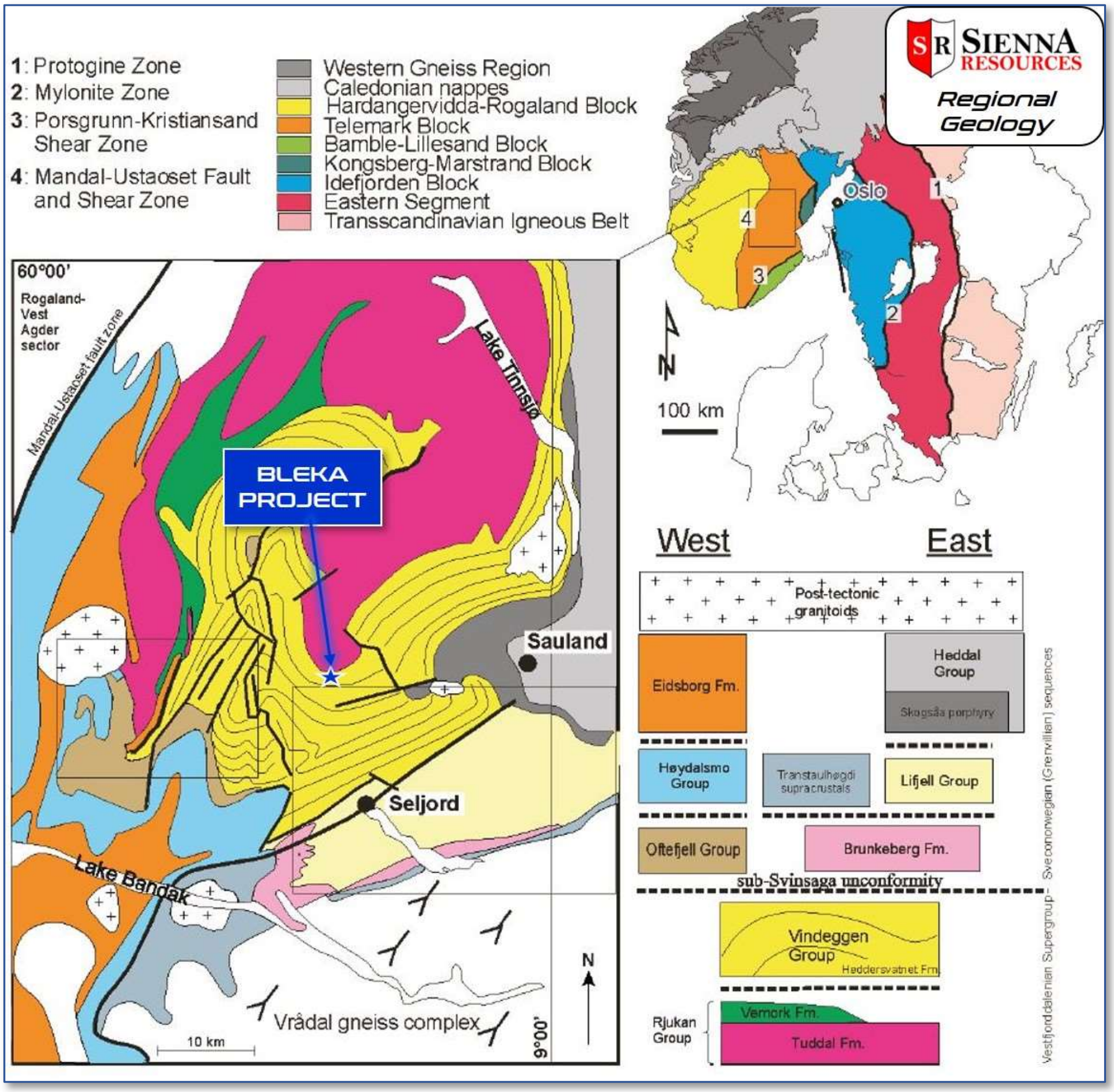

Figure 11: *Geological map of central Telemark. Stratigraphic scheme follows Laajoki et al (2002). Dashed lines are unconformities. (Modified after Lamminen, J., 2011)*

The lithostratigraphy of the Telemark Supracrustals has had a long and contentious history with a number of lithographic and stratigraphic revisions since the area was first mapped in the 1930's. The most controversial problems have been associated with the nature and significance of the lithostratigraphic contacts between the Rjukan and Vindeggen Groups, and between the Tuddal, Vemork and Heddersvatnet Formations.

The Telemark Supracrustals contain several diabase (dolerite) dykes at almost all stratigraphic levels. They are especially abundant in the Vindeggen Group where two have been dated. Near the town of Rjukan, the Hesjåbutind gabbro was dated at 1145 +3/-2Ma by (Dahlgren et al. 1990b, as cited in Lamminen, J., 2011) and near the town of Høydalsmo, the Sandvik diabase was dated at 1347 ± 4Ma by Corfu & Laajoki, 2008, as cited in Lamminen, J., 2011. Both basaltic volcanism and the appearance of a dyke swarm in a region indicate crustal extension. The dykes are commonly oriented parallel to the original bedding, resembling sills, or parallel to the regional structural grain. (Lamminen, J., 2011)

Gold occurs as several different ore types in the Fennoscandian Shield ranging in age from Late Archaean to Late Proterozoic. Until recently, the metal was exploited primarily as a by-product in volcanogenic massive sulphide deposits, but during the 1980's more gold mines were opened than during any other episode in the mining history of northern Europe. The occurrence of gold in the Fennoscandian Shield is reviewed in the context of the major tectonostratigraphic units (Gaál, G., et al., 1990):

- In the Karelian Province, gold is hosted by greenstone belts of the Archean basement complex e.g. at Ilomantsi, eastern Finland. Greenstone belts of the Nordkalott Province, which are interpreted as part of an Early Proterozoic cover sequence, contain gold deposits associated with copper (Bidjovagge, Saattopora and Pahtohavare). Gold is also associated with cobalt in the metasomatically altered Early Proterozoic cover in northeastern Finland (Meurastuksenaho and Juomasuo).

- In the Svecofennian Domain, the major gold deposits were generated during the emplacement of 1.92-1.87Ga old accretional magmatism. These deposits occur in the northeastern part of the Svecofennian Domain, close to the Archean-Proterozoic boundary. They comprise two major types: (a) the porphyry-type and shear-zone gold hosted by tonalite at Tallberg, Laivakangas, Kopsa and Osikonmäiki; (b) as a component of volcanogenic massive sulphide deposits (e.g. Holmtjärn, Boliden and Pyhäsalmi). Other types are: (c) gold-bearing quartz-alumina alteration zones formed during the 1.92-1.87Ga magmatic period (Enåsen); (d) gold in massive sulphide and iron ore deposits in Bergslagen.
- Gold associated with 1.84-1.54Ga granites has been reported from several sites in the Shield, including quartz veins and contact-metasomatic deposits. In addition, shear-zone-related gold deposits post-dating these granites have been identified in southeastern Sweden (Ädelfors).
- In the Sveconorwegian Domain, the gold deposits at Bleka, Eidsvoll, Glava and Harnäs are associated with shear zones which developed penecontemporaneously with the intrusion of late (1.0-0.9Ga) granites (Gaál, G., et al., 1990).

Several shear-related gold-bearing quartz veins have been recognized in the SSD on both sides of the Permian Oslo Palaeorift. The veins cut through the main foliation in the host rocks and an age of ca. 1.0Ga has been obtained from a Pb-Pb galena isochron in the Värmskog-Vänern area by Johansson 1985, as cited in Gaál, G., et al., 1990. Furthermore, a U-Pb age of 0.96Ga on pitchblende from the Långvattnet (Härserud) Au-Mo-W-Bi-Te-U deposit (Chyssler and Kresten 1979; Hammergren 1980, as cited in Gaál, G., et al., 1990) agrees well with the ages obtained on the Bohus granite (0.89Ga) and their associated pegmatites (1.06-0.88Ga), which indicate a close temporal relationship between emplacement of the late granites, development of the shear structures and ore-forming processes in this area. Two ore-bearing districts can be recognized in the SSD (Gaál, G., et al., 1990):

- Mjøsa-Vänern District: This district comprises the historic gold mines at Eidsvoll, Norway and Harnäs, Sweden, several abandoned Cu-Au-Ag-Bi-W deposits farther southeast in Sweden such as Glava and the lead-silver veins at Värmskog.
- Telemark District: The only deposit in this district to have been investigated in some detail is Bleka in the Telemark area, Norway. These gabbro-hosted quartz veins are associated with shear zones and alterations, and native gold, chalcopyrite, pyrite and various bismuth minerals have been identified (S. Jensen, personal communication 1989, as cited in Gaál, G., et al., 1990). Other gold-bearing veins in this district include Haukum, Haukedal, Hisø and Romelien. (Gaál, G., et al., 1990)

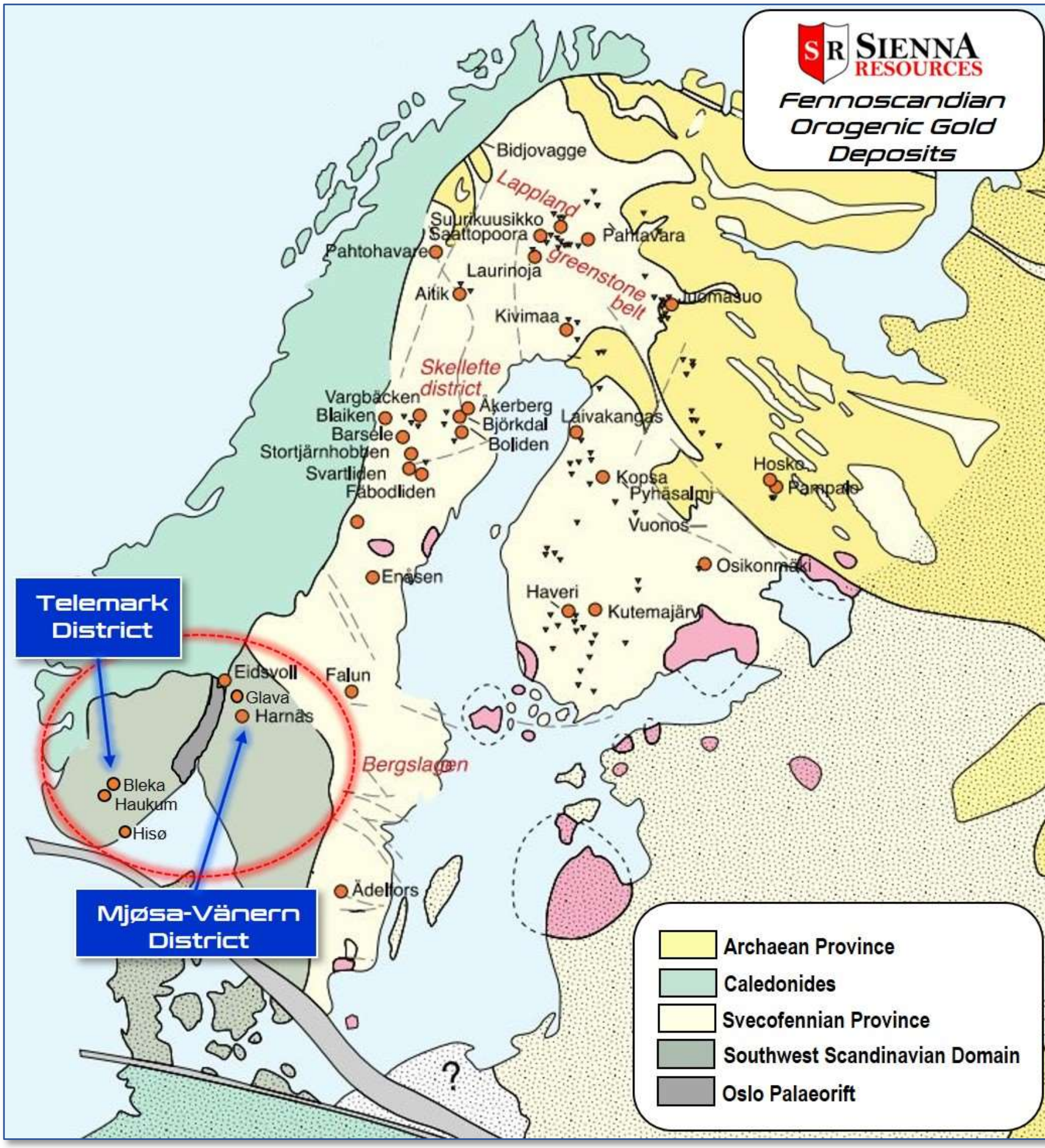

Figure 12: *Simplified geological map of the Fennoscandian Shield with major orogenic gold occurrences. (Modified after Eilu and Weihed., 2005)*

7.2. Property Geology & Mineralization

The geology of the Hjartdal/Bleka area is dominated by a prominent north-northeast/south-southwest trending anticlinal fold structure (Bleka Anticline), which in its core, exposes felsic volcanics of the Tuddal Formation (Rjukan Group) and at the flanks exposes quartzites, schists and conglomerates of the Vindeggen Group. The rocks of the Rjukan and Vindeggen Groups have been intruded by thick mafic sills and dykes referred to as the Svartdal and Kasin Metagabbros and which host the gold-bismuth bearing quartz veins.

The sills, which together with the enclosing sequences of calcareous and siliceous schists and quartzites, have been folded into a steeply southwest-plunging anticline. Subsequent to this deformation, the area was intruded by dykes and small plugs of biotite granite and the area was mesoscopically fractured along three directions: east/west, east-northeast/west-southwest, and northwest/southeast. All these fracture directions have been invaded by hydrothermal fluids, although the east-northeast/west-southwest direction was particularly favourable. The granite plugs/intrusions occur to the northeast and east of the Bleka Property. (Pedersen, F.D., 1984)

The Svartdal and Kasin Metagabbros intruded into the Vindeggen Quartzite at approximately 1145 +3/-2Ma; the Svartdal Metagabbro hosts the Bleka and Espeli Vein Swarms whereas the Kasin Metagabbro hosts the Blengsdalen and Gjuv occurrences. The metagabbros are altered to lower greenschist facies metamorphism due to deformation that resulted from the Sveconorwegian Orogeny (1.05 – 0.9 Ga) (Lamminen, J., 2011).

The exact emplacement setting and timing of the mineralized quartz veins and associated hydrothermal alteration in the Hjartdal/Bleka is not known but they are considered to be shear-related and likely formed during the waning stages of the Sveconorwegian Orogeny as they have not endured the same level of deformation and metamorphism as the host metagabbros. Similarly, the source of the gold-bearing fluids is also unclear but Dahlgren, S., 2015 postulated that as late granitic plutons exist locally towards the east of the property area, similar deep-seated plutons located below the veins could have supplied the high-temperature hydrothermal fluids.

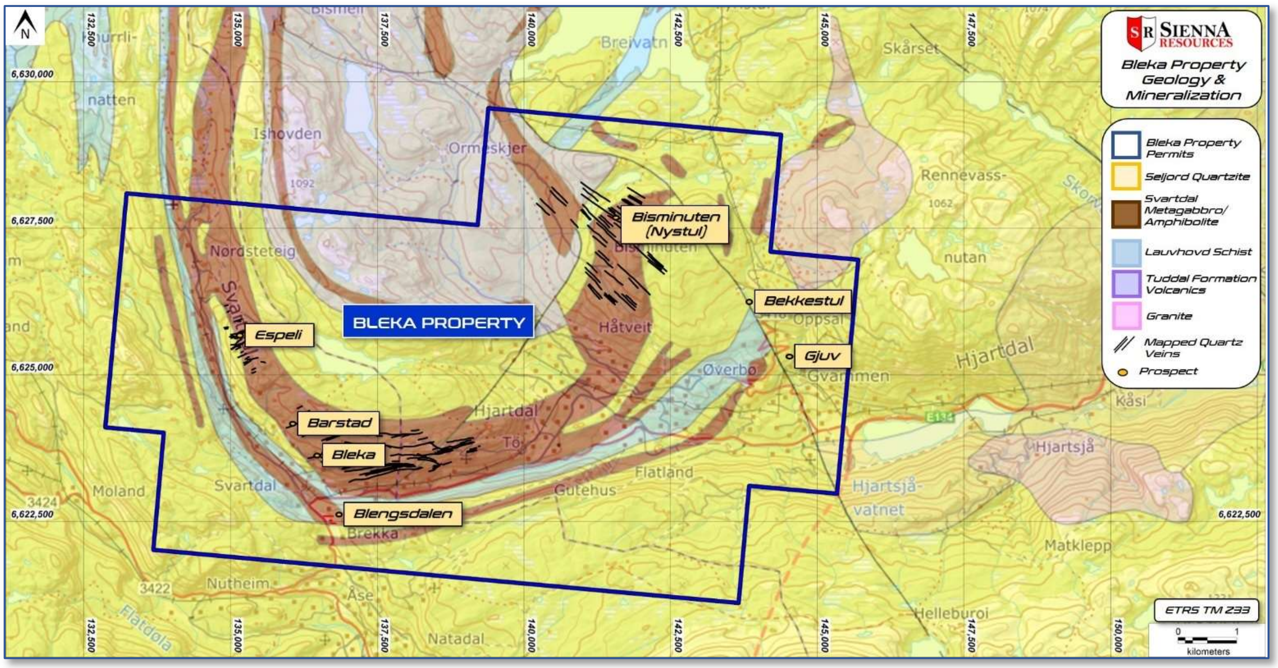

__Figure 13:__ Simplified geological map and mineralized prospect locations. (SGAB, Dec 2020, permit and geology data from http://geo.ngu.no/kart/mineralressurser_mobil/?lang=eng)

7.3. Significant Prospects

7.3.1. Bleka

The Bleka Au-Bi-W-Cu mineralization occurs in quartz-ankerite-tourmaline veins. The Bleka Main Vein (BMV) system extends for at least 1km in a general east-northeast/west-southwest direction and dips about 70° north and comprises two parallel, en echelon quartz-dominated vein sets. The BMV is hosted by the Svartdal Metagabbro (amphibolite), a more than 1km thick sill that was emplaced within the Mesoproterozoic Vindeggen Group (previously Seljord Group) metasediments. (Dahlgren, S., 2015)

The overall exposure of the metagabbro is low (5-10%). The trace of the Bleka Main Vein (BMV) is only mappable due to old trenching of the vein. Today, the BMV is only exposed in a few localities (<10), otherwise it is covered by filled-in material along the old trench or not exposed. The BMV is estimated to exhibit an average surface thickness in the range of 20-25cm over a total length of more than 1km. The main orientation of the BMV is 251°/73°N. (Harpøth, O., et al., 1984)

The BMV comprises quartz-tourmaline-ankerite ± calcite, dolomite, epidote, muscovite and chlorite. The ore minerals, which in general constitute approximately 1%, but occasionally up to several percent, comprise chalcopyrite-pyrite ± bismuthinite, Bi-sulfosalts, gold, galena and scheelite. (Harpøth, O., et al., 1984)

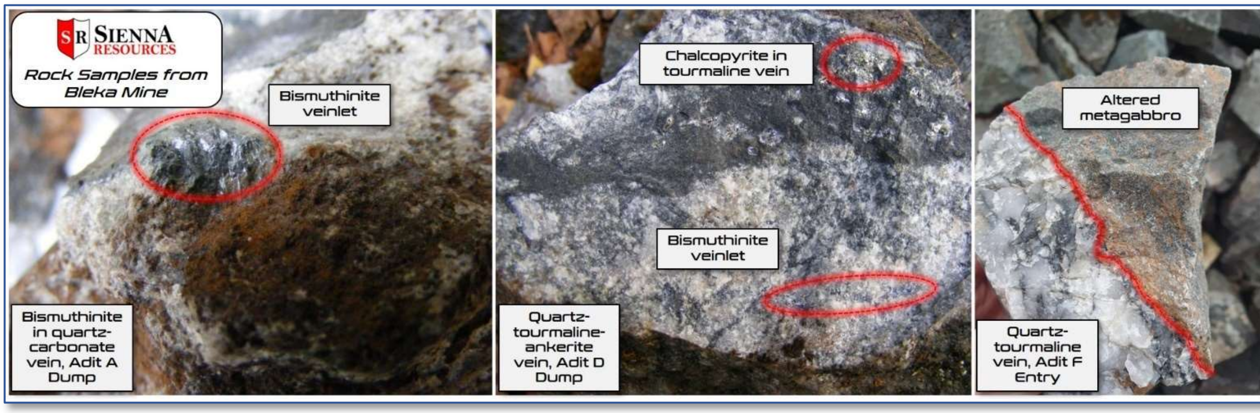

Figure 14: *Photographs of mineralized quartz veins from the Bleka Mine. (Source: SGAB, 2020 and Wilberg, R., 2020)*

Pronounced zonal hydrothermal alteration is associated with the BMV; the most intense alteration is a greisen-like, quartz-albite alteration which has converted the metagabbro wallrock into a pale, leucocratic rock dominated by albite, muscovite, rutile, tourmaline and quartz. At the outer margin of the quartz-albite alteration, the amount of pyrite increases and occurs in coarse tourmaline aggregates in a carbonate-chlorite-enriched alteration zone. This carbonate-chlorite alteration zone may contain up to 20% pyrite, often as mm-sized, euhedral cubes. Amphibole is replaced completely by carbonate, chlorite and biotite. Tourmaline and rutile are important minor phases, the latter occasionally with a characteristic lath-shape, reflecting oxidation of relict ilmenite lamellae. The carbonate content may be as high as 20% and this alteration zone is usually severely weathered, in contrast to the more resistant quartz-albite altered zone. Further away from the vein, in a chloritic alteration zone between unaltered country rock and the carbonate-chlorite altered zone, amphibole is replaced mainly by chlorite and minor pyrite, whilst feldspar is sericitized. In this zone, closely spaced sets of parallel, mm-scale, pervasive calcite veinlets form a very characteristic feature. The most distal alteration signatures are manifested by rutile, appearing at the expense of ilmenite in the host metagabbro. There seems to be fully gradational transitions between the individual alteration zones, which can be seen as a temperature-reaction gradient from the highest temperatures and most complete chemical exchange near the centre, to the lowest temperature and minimum chemical mobility towards the margin. (Wilberg, R., 2020)

The characteristic pinnate carbonate veinlets mentioned above, commonly occur in a zone up to 3-5m from proper veins, and parallel to the contact, may serve as a prospecting aid, as they seem invariably associated with mineralized veins. Whenever approaching the main veins, these calcite veinlets, often weathered out to narrow fissures, appear in abundance and may serve as a valuable mapping guide.

The above alteration sequence can be found in areas of simple veining and constitutes an ideal succession. In many areas however, variably altered zones overprint earlier ones, for example near the main shaft and point-of-discovery, where the quartz-albite zone is cut by a younger quartz-ankerite-tourmaline vein, an intensive carbonate alteration can be seen to overprint the quartz-albite alteration in a zone up to 2m wide. The carbonate alteration is accompanied by extensive development of sericite and microcrystalline quartz. The amount of pyrite is also substantially increased in this alteration halo. This type of overprinting is particularly common in the mine adits and lead to very complex local alteration assemblages. (Wilberg, R., 2020)

Structurally, the vein is complex; it pinches and swells over short distances and locally disappears laterally into a 5-10cm mylonitic fault plane with abundant chlorite and calcite. The shear movement associated with the vein emplacement is clearly dextral and the geometry of the feather joints demonstrates that the shear faulting took place within a brittle-ductile shear regime. (Harpøth, O., et al., 1984)

Harpøth, O., et al., 1984, further postulated that the regional-scale, late folding around north-south to north-northeast/south-southwest axes in the area is a result of east-west to east-southeast/west-northwest max compression with prominent conjugate fault sets opening in northeast-southwest and northwest-southeast directions (see Figure 15A). The observed movement along the two prominent directions is also in agreement with the theoretical movements resulting from east-southeast/west-northwest compression. The northwest-southeast sinistral faults are the better developed of the two conjugate fault directions in the central Telemark area and thus have taken up most of the shear movement. The gold-bismuth bearing quartz-tourmaline-carbonate veins have been emplaced along the northeast-southwest-striking dextral shear zones (faults) where these intersect the mafic sills and dykes in the area (see Figure 15B). The individual dextral shear zones may be developed as shown in Figure 14B, consisting of merging vein segments (fracture segments). From an economic point of view, these areas of merging are very attractive because max tension and dilation occurs in these zones; strong support for this is seen at Bleka where the main ore lenses occur in an area where two en echelon veins merge.

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At a more detailed scale, (see Figure 15C) the veins may exhibit pronounced pinch end swell structures and very characteristic feather fractures arranged parallel to max compression (100°) and perpendicular to max tension. These phenomena are a result of a slightly irregular fault plane and a shear movement in the brittle-ductile regime. At a very detailed scale (see Figure 15D) it can be observed how internal Riedel shear planes often expressed as tourmaline-sulphide veinlets occur in the main quartz vein. Theoretically, a set of late tension gashes should be developed and from the old reports of Kostke, S., 1902 and Lauer, J., 1943 it can be concluded that their observations of late cross-cutting quartz veins with visible gold and bismuth minerals can be related to these tension gashes. Other evidence of this, is observed locally as open-space filling of quartz crystals. (Harpøth, O., et al., 1984)

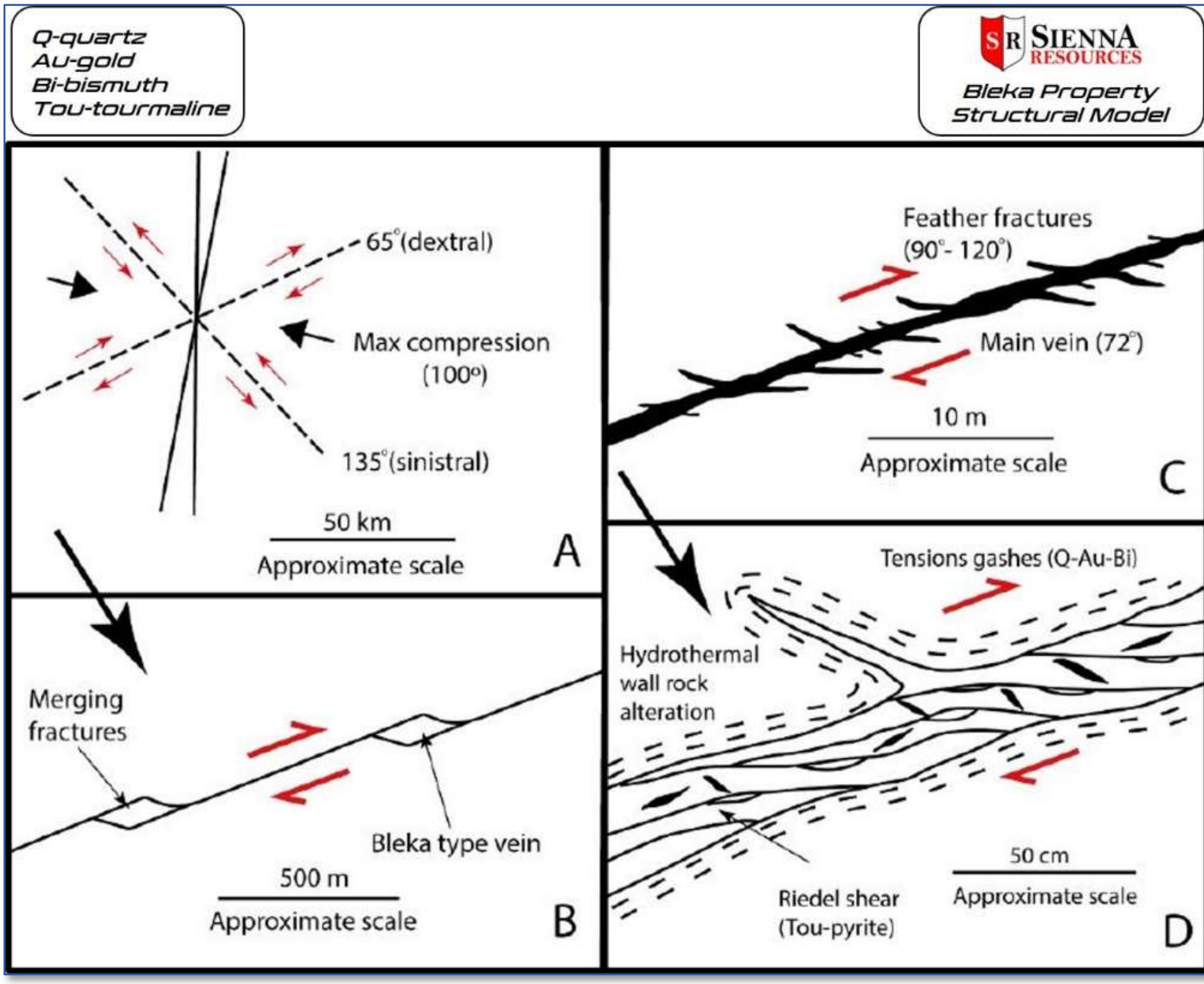

Figure 15: *Conceptual structural model for the formation of the BMV. (Bishop, C., 2020, modified after Harpøth, O., et al., 1984)*

The current polygenetic mineralization model postulated by Wilberg, R., 2020 accounts for the wide range of gold-bearing rocks observed in the BMV and suggests that the fluid environment covers a wide range of temperature conditions resulting from a gradual cooling of the system:

i. Quartz-Albite Alteration: Pre-mineralization, hydrothermal event.
ii. Quartz-Ankerite Veining: Discrete veins with substantial, associated carbonate-chlorite alteration halos, and the introduction of sulphur, allowing the precipitation of abundant pyrite. This stage may have permeated along pre-existing fractures, thus overprinting earlier feldspar alteration zones, or along new fractures, causing only carbonate alteration halos to develop.
iii. Quartz-Cu-Bi-sulphide Veining: Emplaced into existing and new fractures.
iv. Gold Mineralization: Associated with the late-stage quartz-Cu-Bi-sulphide veining event above.

Fluid inclusion studies by Sørensen, J.P.L., 1991, with samples from the Bleka, Espeli, Barstad and Nystaul occurrences, demonstrated that fluids in the Bleka Goldfield have a complex history of changing composition, mixing and cooling that may be critical for the formation of extensive gold mineralization.

Four types of fluid inclusions were recognized, namely:

- Type-I: CO_2-inclusions
- Type-II: mixed CO_2/H_2O-inclusions
- Type-III: H_2O-rich inclusions
- Type-IV: H_2O-inclusions with daughter minerals.

The early CO_2-rich fluids were succeeded by mixed CO_2/H_2O compositions, both with relatively high homogenization temperatures above 250°C and moderate salinities up to 15% NaCl. These fluids were associated with intense carbonate-sericite-alterations of the metagabbro and with the impregnation of pyrite, which predate the main gold mineralization. Inclusions directly associated with the main gold mineralization at Bleka are younger, single-phase H_2O inclusions with low homogenization temperatures around 170°C and salinities varying between saturated (c. 23 % NaCl equivalent) and fresh water. Dilution with fresh water lowers the solubility and cause sudden precipitation of dissolved metals, such as gold. Additionally, as the solubilities of gold as bi-sulphide-complexes are high at temperatures around 270°C and decrease dramatically with falling temperature, high precipitation of gold is expected to occur between the temperatures represented by the early and late fluid inclusions in the Bleka Goldfield system. (Wilberg, R., 2020)

At the northern Espeli occurrence, the vein-quartz contains daughter crystals of both halite (NaCl) and sylvite (KCl), and thus are hypersaline. In other respects, these fluids are similar to those associated with gold at Bleka, where final freezing temperatures of the fluids indicate that the H_2O contains both NaCl and KCl. The density vs. homogenization-temperature relationship for all hydrous inclusions in the district, suggest that they form a simple fluid mixing-trend between highly saline and fresh water and where hypersaline compositions form an extension of this trend, i.e., are products of boiling in the system, only trapped above the boiling horizon at Espeli. The high salinity inclusions at Bleka, associated with gold, thus may represent fluids below the boiling horizon in a KCl-NaCl-H_2O system whereas the hypersaline inclusions at Espeli and Nystaul represent similar fluids above the boiling horizon. As gold values in grab samples on the surface are significantly lower at Espeli and Nystaul than at Bleka, this may suggest that boiling and possibly mixing with fresh (meteoric) may be critical for the deposition of gold in this environment. These results have the important implication that the much larger quartz-vein swarm at Espeli may be mineralized at depth and that there exists a massive precipitation-front in the system below Espeli. Topographically, Espeli is located c. 200m higher than Bleka and this difference in elevation may be significant. (Wilberg, R., 2020)

In general, bismuth seems to be a much more efficient element in delineating mineralized vein systems than gold in the Bleka area (Harpøth, O., et al., 1984), although the recent recognition by Dahlgren, S., 2015, of the abundance of scheelite in the alteration zones of the gold-bearing parts of the BMV system adds an additional geochemical vector in exploring for gold in the Bleka area. Preliminary studies indicate that scheelite was deposited early in the BMV system evolution. Scheelite is associated with several large gold deposits around the world and scheelite is typically deposited from fluids of relatively high temperature adjacent to or near intrusions (skarn, hydrothermal quartz veins etc.) or from fluids of deep-seated origin. Minor granite plutons occur to the east of the BMV system, and a working hypothesis is that similar granites also occur at depth below the vein system and that high temperature hydrothermal solutions were derived from those intrusions. (Dahlgren, S., 2015)

7.3.2. Espeli (Nystaul)

The Espeli occurrence is located approximately 2.5km northwest of the Bleka mine. The Espeli vein swarm is the hitherto largest vein swarm in the Bleka Goldfield with more than 50 quartz veins having been mapped. Geologically, the setting is similar to that of the Bleka area with the exception that Bleka is located near the fold hinge of the regional-scale Bleka Anticline and Espeli is located on the western limb. As a result, the parallel veins at Espeli are oriented (230-250°/60-80°) almost perpendicular to the strike of the Svartdal metagabbro but are parallel to those at Bleka, demonstrating that the veining post-dates the folding and is likely part of the same vein system at Bleka.

The quartz veins at Espeli range in thickness from 0.1-2m, are quartz-rich and often contain significant amounts of tourmaline and varying amounts of ankerite-sericite-pyrite and locally chalcopyrite. The overall sulphide content is lower than that at Bleka with mostly pyrite-chalcopyrite with subordinate bismuthinite and the pronounced hydrothermal alteration is similar to that described above at Bleka. Massive tourmaline veins up to 0.2m are also seen, particularly in the northern area of Espeli. Carbonates seem to occur mainly in the late cross-cutting quartz-carbonate veins. (Petersen, J.S., 1996, Harpøth, O., et al, 1984)

Poor exposures prevent surface mapping of individual veins but several larger veins can be traced for more than 100m and are often accompanied by suites of smaller veins. Veins with diverging gashes, horizontal slickensides and feather or pinnate veins suggest that the fractures in the Espeli area resulted from right-lateral (dextral) shear. In some places, the intensity of pinnate veins is so high that the country rock becomes a quartz breccia. Slickensides with sub-horizontal orientation and with chlorite coatings are often seen in the major veins. (Petersen, J.S., 1996, Harpøth, O., et al, 1984)

Rock-grab sampling by Norsk Hydro AS in 1984 indicated the area around Nystaul-Reiustaulhaugen is distinctly anomalous in Au-Bi although the values are low compared to those of BMV, with 20-210ppb Au and 2-144ppm Bi. Outside of the anomalous area, values for both elements are low. Norsk Hydro AS concluded that the results suggested that the Au-Bi enrichment represents a halo-phenomena to a deep-lying Au-Bi mineralization. (Harpøth, O., et al, 1984)

This conclusion was later supported by fluid inclusion data from both Espeli and Bleka where vein-quartz containing daughter crystals of both halite (NaCl) and sylvite (KCl) were identified and thus hypersaline. The high salinity inclusions at Bleka, associated with gold, thus may represent fluids below the boiling horizon in a KCl-NaCl-H2O system whereas the hypersaline inclusions at Espeli and Nystaul represent similar fluids above the boiling horizon. As gold values in grab samples on the surface are significantly lower at Espeli and Nystaul than at Bleka, this may suggest that boiling and possibly mixing with fresh (meteoric) may be critical for the deposition of gold in this environment. These results have the important implication that the much larger quartz-vein swarm at Espeli may be mineralized at depth and that there exists a massive precipitation-front in the system below Espeli. Topographically, Espeli is located c. 200m higher than Bleka and this difference in elevation may be significant. (Wilberg, R., 2020)

Figure 16: *Outcropping quartz veins from the Espeli Vein Swarm. (SGAB, 2020 and Wilberg, R., 2020)*

7.3.3. Blengsdalen

The Blengsdalen occurrence is located approximately 1km south-southeast of the Bleka mine and comprises two mapped quartz veins, 150m apart, that have been trenched and blasted over a composite length of 50-100m. The geological setting is slightly different from that at Bleka and Espeli; the metagabbro sill hosting the veins is the hornblende-rich Kasin Metagabbro which is a 100-200m wide sill, located stratigraphically above the Svartdal Metagabbro. The Kasin sill has intruded into the Lauvhovd carbonate-rich quartz schists, whereas the Svartdal sill has intruded quartzites, although they are thought to be genetically related to the same intrusive event. (Harpøth, O., et al, 1984)

The northern vein has been trenched and blasted over an east-west length of approximately 50-60m, which today is completely overgrown and filled with garbage, although representative vein material can be found within the overgrown dumps which are located nearby. The vein consists of quartz-ankerite ± tourmaline-chalcopyrite-pyrite-bismuthinite. Wallrock alteration is pronounced. Harpøth, O., et al, 1984, reported 103g/t Au and 1.8g/t Au and Wilberg, R., et al., 1998, reported 13.8g/t Au from dump samples from the northern vein.

The southern vein has been trenched and blasted at several locations over a length of approximately 50-75m. The vein is very irregular, has a similar easterly strike to the northern vein and has an average width of 20cm. The vein consists of quartz-tourmaline-ankerite ± pyrite-chalcopyrite and bismuthinite. The wallrock alteration is very pronounced with extensive brecciation and bleaching as well as pyrite and chalcopyrite impregnation. Harpøth, O., et al, 1984 reported 60ppb Au and 5ppm Bi from a chip sample of the vein and 30ppb Au and 30ppm Bi from the altered wallrock. (Harpøth, O., et al, 1984)

7.3.4. Bisminuten (Nystul)

The Bisminuten (Nystul) occurrence is located approximately 6km northeast of the Bleka mine near the abandoned Nystul farm and consists of a 2-30cm thick quartz vein (286°/86°) with numerous parallel mm-sized carbonate veinlets in the bleached Svartdal metagabbro. Chalcopyrite and bismuthinite occurs in large aggregates, the latter sometimes with a rim of Bi-sulfosalts and native bismuth. Visible gold was found by Jensen, S.M. 1990, in quartz fractures near sulphide aggregates. (Petersen, J.S., 1996, as cited in Wilberg, R., 2020)

The occurrence comprises an old pit (3 x 1.5 x 1.5m) and a small mullock dump. Field inspection by Wilberg, R., 2020, reported the quartz vein being exposed in both the eastern and western walls of the pit and with a width of 2-4cm thick. The vein contains subordinate carbonate along its contacts, and has a central, thin seam of fine-grained tourmaline with disseminated chalcopyrite and pyrite. Bismuthinite was observed in one of the few vein samples in the dump, deposited as a stringer within quartz. (Wilberg, R., 2020)

The strongly bleached wallrock alteration zone is approximately 10-30cm wide. The amphibole is completely altered to chlorite, plagioclase is completely sericitized and ilmenite is altered to rutile. The wallrock also contains disseminated pyrite, tourmaline and carbonate although lacks the characteristic magnetite seen within the BMV. (Jensen, S.M. 1990)

7.3.5. Gjuv

The Gjuv occurrence is located approximately 8km east-northeast of the Bleka mine in Oppsal. The old workings consist of an open pit and a ca. 50m-deep adit below. The quartz-tourmaline ± calcite vein is approximately 0.1-2.5m thick, more than 50m long and trends approximately 200°/020°. The vein has been emplaced along the contact between the Kasin Metagabbro sill and quarzitic country rocks. Bismuthinite is the major ore mineral, but the assemblage includes chalcopyrite, pyrite, galenobismutite, cosalite and gold. (Pedersen, F.D., 1984)

A bulk sample from the Gjuv occurrence with 1.15% ore concentrate, gave 1,260g/t Au and 2,600g/t Ag (Bugge, C., 1935, as cited in Wilberg, R., 2020). The gold/silver ratio of this analysis corresponds closely to the ratio found in ore samples from Bleka and suggests that the Gjuv mineralization fully belongs to the Bleka mineralization suite despite being hosted by the Kasin Metagabbro. The high lead content (19.91% Pb) in this concentrate is ascribed to galenobismutite, which also accounts for a portion of the high silver content. (Wilberg, R., 2020)

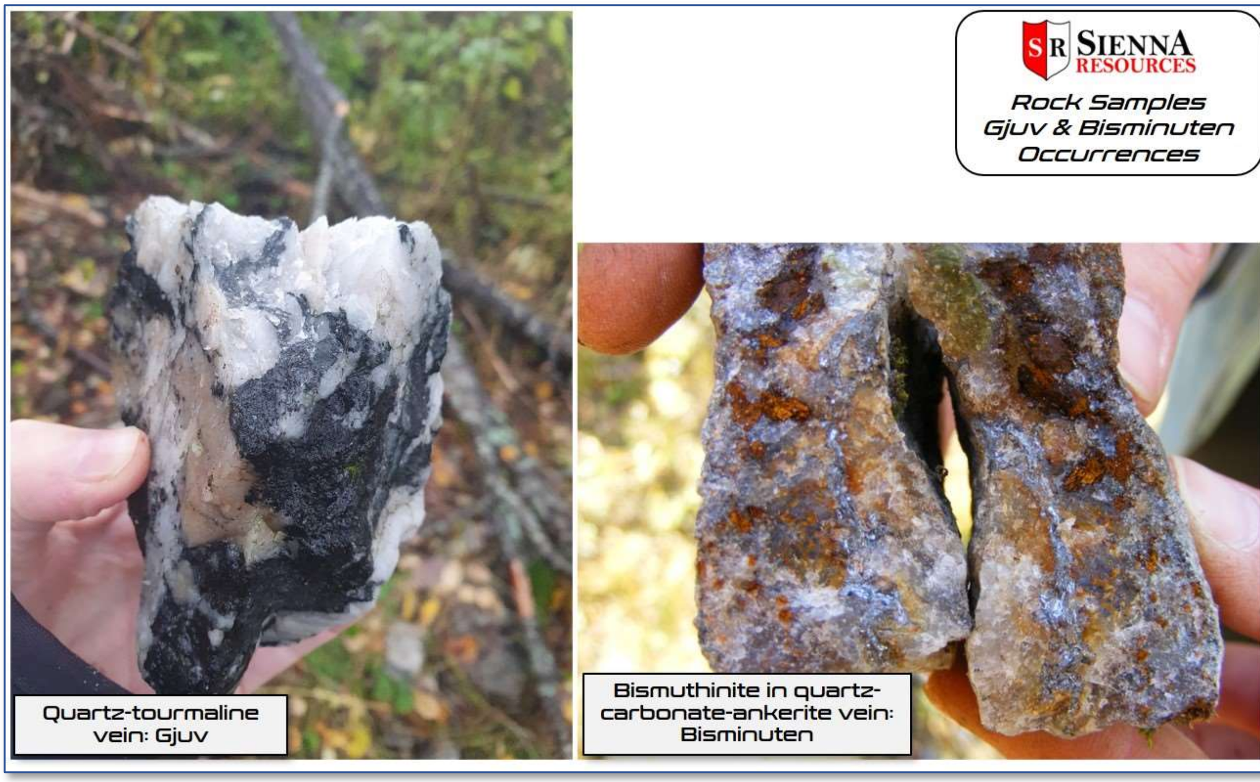

Figure 17: *Rock-grab samples from the Gjuv and Bisminuten occurrences. (SGAB, 2020 and Wilberg, R., 2020)*

8. DEPOSIT TYPES

Historic records and modern observations indicate that all known zones of gold-bismuth-tungsten mineralization at the Bleka Property are related to the 'orogenic gold' class of deposits. This class of deposit includes some of the largest gold deposits and districts in the world (e.g., Kalgoorlie in Australia, Timmins in Ontario, and Ashanti in Ghana). Their name reflects the recognition that these deposits have temporal and spatial associations with late stages of orogenesis (Dubé, B., et al., 2007; Goldfarb, R.J., et al., 2005; Goldfarb, R.J., et al., 2001; Groves, D.I., et al., 1998). Formation of most orogenic gold mineralization was concentrated during the time intervals of 2.8 to 2.55Ga (Archean), 2.1 to 1.8Ga (Early Proterozoic) and 600 to 50Ma (Phanerozoic); these periods coincide with major orogenic events. An important subtype of orogenic gold deposits is dominantly hosted by mafic metamorphic rocks in granite-greenstone terranes and is referred to here as greenstone-hosted orogenic gold.

Greenstone-hosted orogenic gold deposits are structurally controlled, complex epigenetic deposits that are hosted in deformed and regionally metamorphosed terranes. They consist of simple to complex networks of gold-bearing, laminated quartz-carbonate fault-fill veins in moderately to steeply dipping, compressional brittle-ductile shear zones and faults, with locally associated extensional veins and hydrothermal breccias. They are dominantly hosted by mafic metamorphic rocks of greenschist to locally lower amphibolite facies and formed at intermediate depths (5-10km). The relative timing of mineralization is syn- to late-deformation and typically post-peak greenschist-facies or syn-peak amphibolite facies metamorphism. They are typically formed from low salinity, H_2O-CO_2-rich hydrothermal fluids with typically anomalous concentrations of CH_4, N_2, K, and S.

Gold is mainly confined to the quartz-carbonate vein networks but may also be present in significant amounts within iron-rich sulphidized wallrock. Greenstone-hosted orogenic gold deposits were formed during compressional to transpressional deformation processes at convergent plate margins in accretionary and collisional orogens. Orogenic gold systems are typically associated with deep-crustal fault zones that usually mark the convergent margins between major lithological blocks, such as volcano-plutonic and sedimentary domains. Furthermore, some of the largest greenstone-hosted orogenic gold deposits are spatially associated with fluvio-alluvial conglomerate (e.g., Timiskaming Conglomerate) distributed along these crustal fault zones (e.g., Destor Porcupine Fault), suggesting an empirical space-time relationship between large-scale deposits and regional unconformities (Dubé, B., et al., 2007).

Large gold camps are commonly associated with curvatures, flexures, and dilational jogs along major compressional fault zones which have created dilational zones that increase migration of hydrothermal fluids. Ore shoots can be localized by dilational jogs or various intersections between a structural element (e.g., a fault, shear or vein) and a favourable lithological unit, such as a competent gabbroic sill, an iron formation or a particularly reactive rock, or by the intersection between different structural elements active at the time of vein formation. Individual vein thickness varies from just a few cm to over 10m, even though entire deposits may be wider than 1km and extend along strike for as much as 2 to 5km. Some deposits have been economically mined to depths of 1-3km.

The main ore mineral is native gold that occurs with, in order of decreasing abundance, pyrite, pyrrhotite, and chalcopyrite, along with trace amounts of molybdenite and telluride in some deposits. Arsenopyrite commonly represents the main sulphide phase in amphibolite-facies rocks and in deposits hosted by clastic sediments. Sulphide minerals generally constitute less than 10% and typically less than 5% of the volume of the ore bodies and exhibit little vertical zoning. The main gangue minerals are quartz and carbonate (calcite, dolomite, ankerite, and siderite), with variable amounts of white mica, chlorite, tourmaline and, locally, scheelite.

Gold-bearing veins are typically enveloped by alteration halos that, in greenschist-facies rocks, grade outwards from iron-carbonate + sericite + sulphide (pyrite ± arsenopyrite) assemblages to various amounts of chlorite, calcite and, locally, magnetite. The dimensions of these alteration haloes vary with the composition of the host rocks and may envelope entire deposits hosted by mafic and ultramafic rocks. Pervasive chromium or vanadium-rich green micas (fuchsite and roscoelite) and ankerite with zones of quartz-carbonate stockwork are common in sheared ultramafic rocks. Hydrothermal assemblages associated with gold mineralization in amphibolite-facies rocks include biotite, amphibole, pyrite, pyrrhotite, and arsenopyrite, and, at higher grades, biotite/phlogopite, diopside, garnet, pyrrhotite and/or arsenopyrite, with variable proportions of feldspar, calcite, and clinozoisite. The variations in alteration styles have been interpreted as a direct reflection of the depth of formation of the deposits (Dubé, B., et al., 2007).

9. EXPLORATION

Historic exploration at the Bleka Property has been outlined in Section 6.

EMSAB has completed a limited amount of early-stage exploration at the Bleka Property since acquiring the property in early 2020 with exploration work including rock-grab sampling, geological mapping and reconnaissance and Ionic Leach™ sampling (see Figures 18 & 19). A summary of the exploration work completed by EMSAB at the Bleka Property is found in Table 3 below.

Activity	Year	Permit	Approximate Expenditure (USD)	Total
Geological Mapping & Reconnaissance (samples)	2020	Bleka 1-5, 7	$8,000	23
Rock-Grab Sampling (samples)	2020	Bleka 4-5, 7	$23,850	86
Ionic Leach™ Sampling (samples)	2020	Bleka 5	$2,650	32

Table 3: *Table summarising the exploration work completed by EMSAB since acquiring the Bleka property in 2020.*

The approximate total expenditure (excluding permit/licencing costs) completed on the Bleka Property by EMSAB since acquiring the property in 2019 is USD$34,500. This total includes salaries and labour costs and assay costs.

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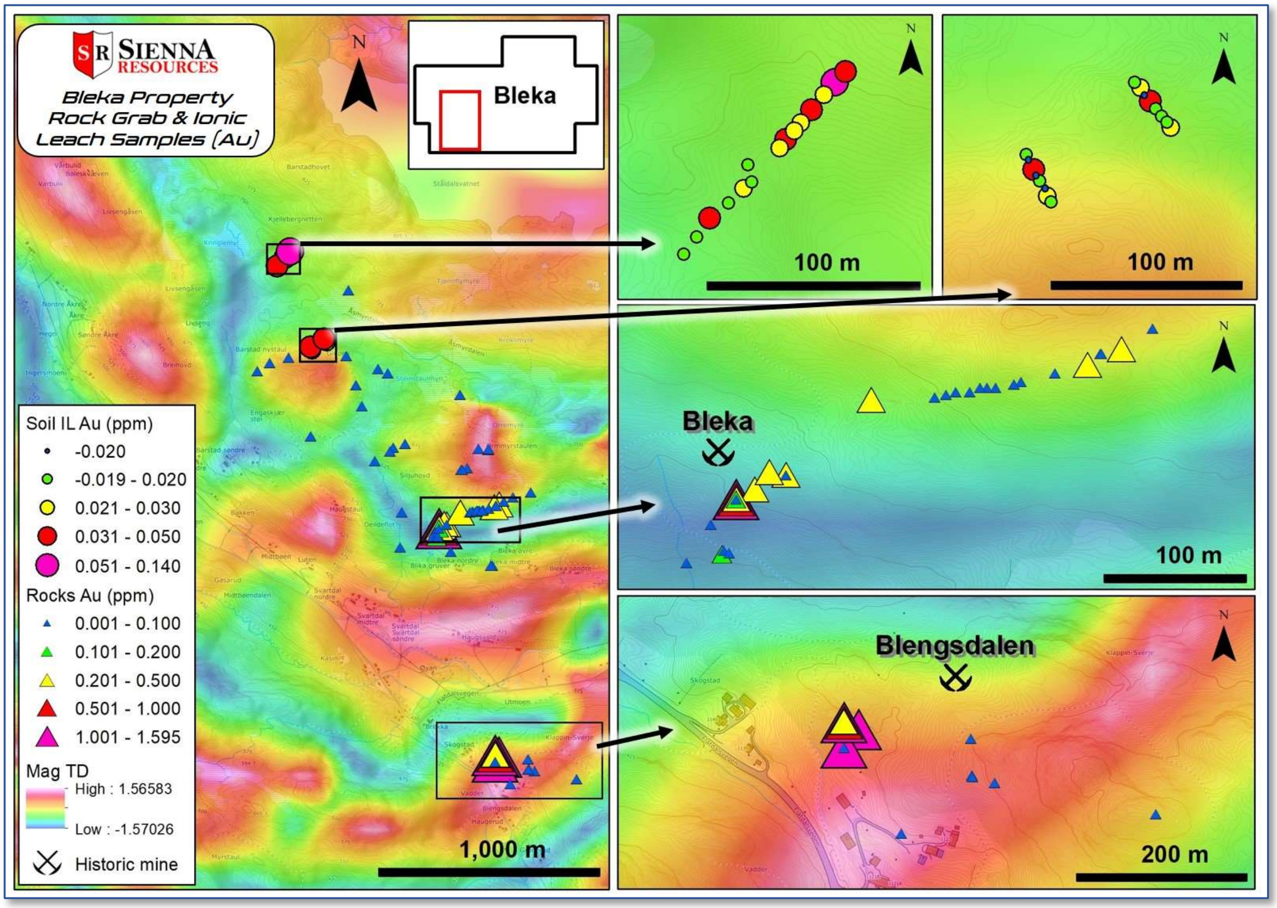


Figure 18: *Rock-grab and Ionic Leach™ samples from the Bleka Property (Au). (Modified after EMSAB, 2020)*

9.1. Geological Mapping & Reconnaissance

In November 2020, a geological mapping and reconnaissance survey was completed at the Bleka Property by geological consultant Mr. Rune Wilberg. The survey consisted of grab-sampling along the BMV, Espeli, Blengsdalen and Bisminuten occurrences where a total of 23 rock-grab samples were collected, although vein material is scarce at the historic dumps, the trenches are largely back-filled and exposures are very limited. In addition to the rock-grab samples, 51 field observation points were also recorded. Possible drill site and rig access routes were investigated in addition to meetings with several key landowners within the Bleka Property.

9.2. Rock Grab Sampling

At the Bleka Property, a total of 86 rock-grab samples (10 of which are QAQC samples) have been collected by EMSAB staff from across the property. The samples were collected from outcrop, subcrop, historic trenches, mine adits and from historic mullock dumps. Overall, the gold values were quite low with a maximum assay of 1.60g/t Au returned from mullock dump material from the northern vein at the Blengsdalen occurrence. The anomalous gold samples did however show fairly consistent coincident Au-Ag-Bi-Cu-Pb-S-Sb-W anomalism. Tungsten anomalism appears to be mainly associated with the BMV, with a peak assay of 5960ppm W returned from a quartz vein located above the entrance to Adit A.

The rock-grab sampling method involves collecting a sample (~0.5-2kg) from either a boulder, mullock, trench, subcrop or outcrop using a large field hammer and placing the sample into a calico fabric sample bag. The sample number is written onto the outside of the calico sample bag. Coordinates and lithological descriptions for each sample are recorded digitally in the field. Rock-grab sampling by its nature tends to be biased towards samples that are obviously altered or mineralized and the results reported are likely to have a bias towards mineralized samples and may not be representative. Rock-grab sampling is used in early-stage work to identify areas of anomalous mineralization for follow-up exploration.

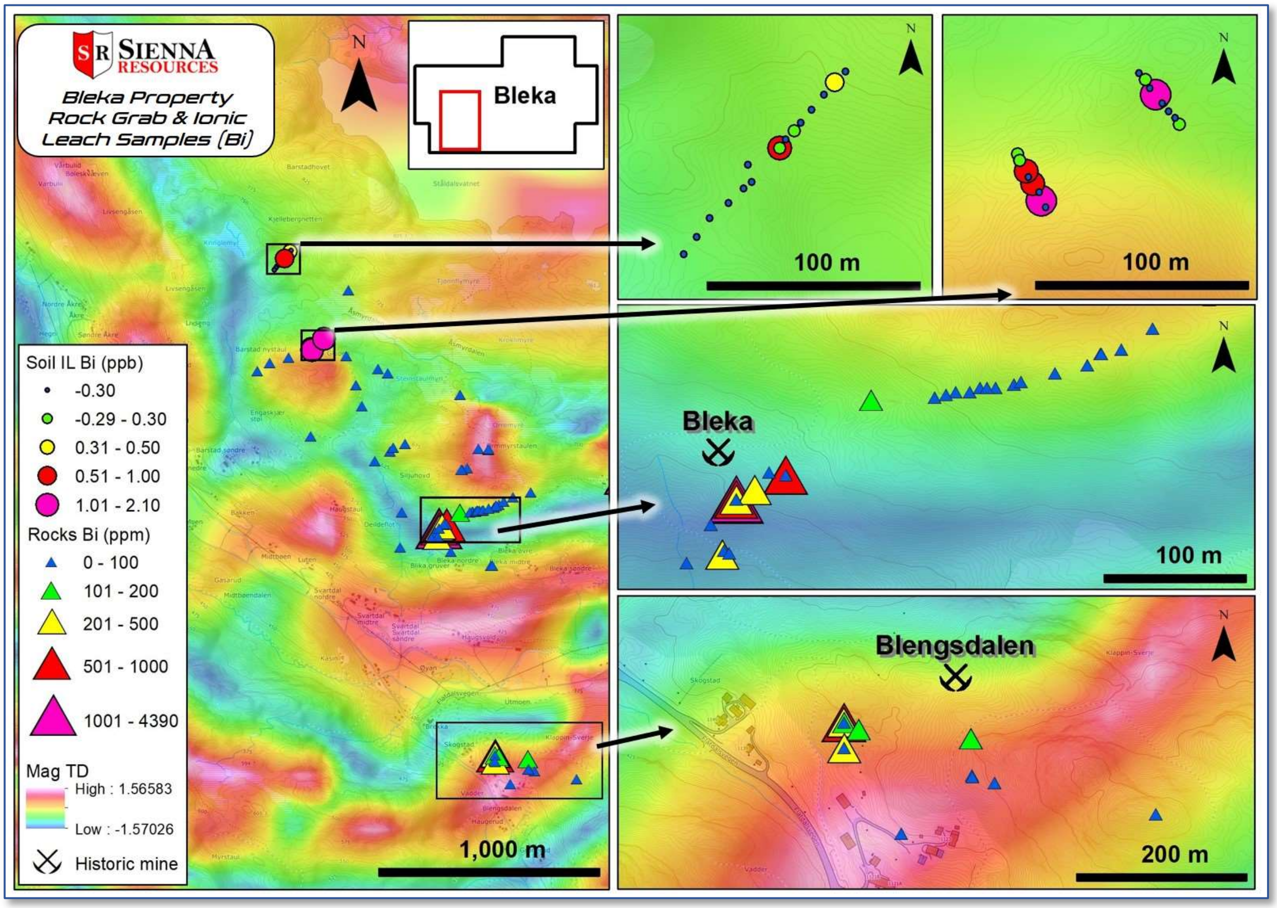


Figure 19: *Rock-grab and Ionic Leach™ samples from the Bleka Property (Bi). (Modified after EMSAB, 2020)*

9.3. Ionic Leach™ Sampling

Ionic Leach™ is an innovative partial extraction technique developed by ALS Global for surface samples that relies on complexing agents to selectively extract and hold ionic species from soil, stream and plant samples in the leachant solution. A 50g sample is used with no pre-treatment; samples are collected directly from the field bags. The lack of drying and sieving significantly reduces the possibility of contamination and processing occurs in a dedicated ionic preparation laboratory. The sample to reagent ratio is 1:1 thereby eliminating dilution prior to analysis. This allows very low detection limits to be achieved. The leachant solution is directly introduced into advanced ICP-MS instrumentation. The ultra-low detection limits at sub-ppb levels routinely achieve 'natural background' levels thereby enhancing 'signal to noise' ratios helping identify often subtle but significant responses from mineralization, geology and alteration that can be diagnostic of numerous mineral systems.

At the Bleka Property, a total of 32 Ionic Leach™ (of which, 1 sample was a duplicate sample) samples have been collected from across the property. Three short profiles were collected over prospective structures identified from Lidar imagery with a sample spacing of approximately 5m. The samples and are considered representative and no sample bias has occurred.

Soil geochemical sampling in high-altitude, glaciated terranes is often difficult and the sampling at Bleka was no exception; the sampling was abandoned after 3 days due to poor soil conditions. Two of the profiles near the Barstad occurrence returned anomalous gold and bismuth values over the trace of the Lidar structure and warrant further investigation.

The raw data is subject to a normalisation process which typically involves determining the first inflection point above the detection limit to obtain the background value of the dataset.

The EMSAB sampling protocol for Ionic Leach™ is as follows:

i. After the survey is planned in GIS, the points need to be exported in GPX and KMZ format to upload on GPS units and field iPads.

ii. The sample material needs to be collected at a constant depth relative to the organic-soil interface. 15cm below the organic layer is where the sample material needs to be collected and not further down than 25cm.

iii. Once the hole is dug, the sides of the hole need to be scraped with a plastic shovel to avoid any potential contamination from the steel shovels.

iv. 100-200g of material need to be collected with a plastic scoop and stored in an air-tight Ziplock bag. A second bag is used for additional protection against spilling. Between bag one and two, a sample tag with a unique sample ID is inserted.

v. Whilst the sample hole is still open, the sample log/description is filled out on the filed iPad (see Figure 20).

vi. The sample hole is then back-filled.

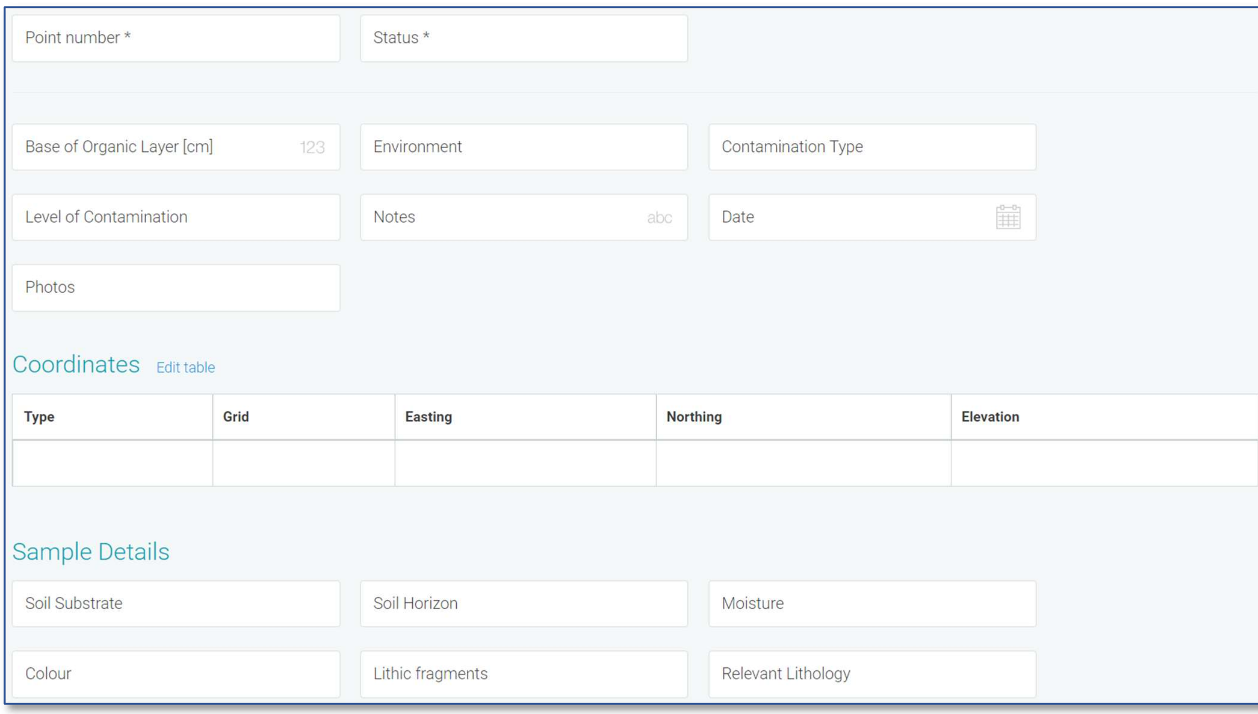
vii. Every 20th sample has to be a field duplicate collected within 1-2m of the first sample site following the same procedures.

viii. At the end of each day all collected samples have to be sorted and accounted for to avoid the loss of samples.

ix. All samples have to be safely stored in a plastic box for transportation out of the field by Sienna/EMSAB personal.

x. Data from the iPad has to be exported and imported into MX-Deposit.

xi. A sample dispatch form is then created using MX-Deposit and the samples are delivered by EMSAB staff to the ALS prep facility in Malå, Sweden prior to being air freighted to ALS Global in Ireland.


Point number *
Status *
Base of Organic Layer [cm] 123
Environment
Contamination Type
Level of Contamination
Notes abc
Date
Photos

Coordinates Edit table

Type	Grid	Easting	Northing	Elevation

Sample Details
Soil Substrate
Soil Horizon
Moisture
Colour
Lithic fragments
Relevant Lithology

Figure 20: *EMSAB template for Ionic Leach™ field sample log/description. (Source: EMSAB).*

10. DRILLING

Sienna has yet to complete any of its own drilling at the Bleka Property. Historical exploration at the Bleka Property has been outlined in Section 6.

11. SAMPLE PREPARATION, ANALYSES & SECURITY

All EMSAB rock-grab and Ionic Leach™ samples have been submitted to the ALS Global prep laboratory facility in Malå, Sweden for sample preparation (in the case of rock-grab samples). The prepped samples are dispatched from ALS Global in Malå to ALS Global in Loughrea, Ireland. ALS Global is an independent geochemical laboratory that meets all requirements of International Standards ISO/IEC 17025:2017 and ISO 9001:2015 and all ALS geochemical hub laboratories are accredited to ISO/IEC 17025:2017 for specific analytical procedures.

EMSAB routinely inserts field duplicates, CRM standards and blanks to all sample batches although there are no suitable CRMs for Ionic Leach™ samples so only duplicate samples are used for that dataset.

For the Bleka rock-grab dataset, 10 samples of the 109 are control samples of which 8 are classified as 'Coarse Gravel' blanks, 1 'Sand' blank and 1 CRM. The CRM is CDN-GS-P2 which is a low-grade (0.2g/t Au) gold CRM produced by CDN Resource Laboratories Ltd, Canada.

EMSAB routinely analyses their own QAQC data as it comes to hand, but they have not run any analysis of the ALS Global QAQC data to date. All EMSAB data is stored in a dedicated geological database whereby rigorous data validation occurs automatically upon entry into the database and where QAQC reports can be produced on-the-fly.

The author has reviewed the results of the rock-grab and Ionic Leach ™ QAQC data and concluded that the EMSAB sampling is of a high quality and acceptable for the purposes of this report. The author notes however, that no duplicate samples have been collected from the rock-grab dataset and the sand blank and CRM have not been assayed for gold. The gold CRM is a Carlin-Style sedimentary-hosted gold CRM which is not overly suitable for a greenstone-hosted orogenic gold property.

There is limited historical data from the Bleka Property. As the quality and reliability of the historic mining and geochemical sampling cannot be adequately assessed by the author of this report beyond the measures described in Section 12, some caution should be applied if using these datasets.

Table 4 summarises the prep and analytical methods used by EMSAB at the Bleka Property.

Sample Type	Laboratory	Prep Method	Sample Size	Analytical Method	Element Suite
Rock Grab Sample	ALS Global	Prep-31	0.5g	ME-MS61	Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, HF, Hg, 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
Rock Grab Sample	ALS Global	Prep-31	30g	PGM-ICP23	Au, Pt, Pd
Rock Grab Sample	ALS Global	Prep-31	Up to 1kg	Au-AA14	Au
Ionic Leach™ Sample	ALS Global	N/A	50g	ME-MS23	Ag, As, Au, Ba, Be, Bi, Br, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Hg, Ho, I, In, La, Li, Lu, Mg, Mn, Mo, Nb, Nd, Ni, Pb, Pd, Pr, Pt, Rb, Re, Sb, Sc, Se, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr

Table 4: *Summary of prep and analytical methods utilised by EMSAB at the Bleka Property.*

12. DATA VERIFICATION

12.1. Data

The majority of the information contained in this report is from publicly available documents and reports regarding the Bleka Property and has been partially verified by the author via a site visit. All information regarding the property's geological setting as well as the scope of historical work falls into this category.

The author has not personally verified the location of any mineral occurrences other than Bleka, Espeli, Blengsdalen and Gjuv. However, at the sites that were personally visited by the author, observations and results of geochemical analysis agree with publicly available information for those sites. The Bleka sites visited by the author show ample evidence for the scope of historic mining and trenching indicated by available records; likewise, mineralogy and geochemical analyses of the rock samples collected by the author correlate with what would be expected from historic records. GPS locations for these samples have been checked against local topographic features and satellite imagery and found to be consistent.

6 rock-grab samples were collected by the author of this report during the site visit from across several of the mineralized prospects. All sample locations were recorded with a handheld GPS unit reported in the WGS84 projection, UTM Zone 32N. See Table 5 for a summary of the author's rock-grab sample assay results.

Sample ID	North	East	Sample Type	Au (ppm)	Ag (ppm)	Bi (ppm)	W (ppm)	Te (ppm)	Description
BLE-JH-20-001	6604908	475255	Outcrop	0	0.1	0.57	1.1	0.025	Chlorite rich rock with sulphides.
BLE-JH-20-002	6604968	475365	Outcrop	0	0.02	0.16	0.5	0.025	Dark green massive amphibolite with disseminated sulphides.
BLE-JH-20-003	6604977	475338	Pit	0	0.01	0.11	4.7	0.025	Historic pit. White milky quartz vein with tourmaline and ankerite within altered amphibolite host rock.
BLE-JH-20-004	6604975	475339	Pit	0	0.01	0.05	5.6	0.025	Altered amphibolite host rock with disseminated sulphides.
BLE-JH-20-005	6608077	473227	Outcrop	0	0.02	0.21	0.5	0.025	Gabbroic texture. Slightly yellowish feldspar? Abundant (5-10%) slightly bluish metallic mineral not magnetic.
BLE-JH-20-006	6608466	482646	Pit	0.01	0.13	1675	0.4	4.71	Rusty quartz vein from historic pit.

Table 5: *Summary of rock-grab samples collected by the author from the Bleka Property. Coordinates are WGS84/ UTM 32N. Assays via PGM-ICP23 and ME-MS61 at ALS Global.*

The analytical data (laboratory files/certificates) acquired by EMSAB has been checked by the author; a cursory spot check comparing the lab certificates to the data stored in the master Excel spreadsheet was completed and, in all cases, (20 spot checks across rock-grab and Ionic Leach ™ samples) the data matched. The author has also reviewed the EMSAB QAQC data and similarly did not identify any obvious issues and the data is considered reliable.

Based upon a review of the historic and current data by the author and the site visit, the newly obtained and historic data is judged to be of sufficient quality for the purposes of this report.

12.2. Site Visit

A site visit of the Bleka Property was completed by the author on the 5-6th of October 2020, which included visiting the Bleka mine and the Espeli, Blengsdalen and Gjuv occurrences.

13. MINERAL PROCESSING & METALLTURGICAL TESTING

A brief summary of the Bleka mining and processing operations is provided in Section 6.

No mineral processing or metallurgical testwork has been completed on samples collected by EMSAB from the Bleka Property.

14. MINERAL RESOURCE ESTIMATES

No estimates of mineral resources or mineral reserves have been made for the Bleka Property.

23. ADJACENT PROPERTIES

There are currently no other material adjoining or adjacent properties to the Bleka Property, however, BS Norway Ltd owns a single exploration permit (Blika 3) that abuts the northern boundary of the Bleka 3 permit in the northwest of the property where mapping and magnetic and VLF surveying has reportedly been completed, the results of which are unknown.

24. OTHER RELEVANT DATA & INFORMATION

The author is not aware of any other relevant data or information necessary to make this report understandable and not misleading.

25. INTERPRETATIONS & CONCLUSIONS

The gold-bismuth bearing quartz-tourmaline-carbonate veins at the Bleka Property were emplaced in their metagabbro host rocks along east-northeast/west-southwest dextral shear faults resulting from east-southeast/west-northwest max compression during north-south to north-northeast/south-southwest folding during the Sveconorwegian Orogen. Major ore lenses appear to be located in areas where max tension and dilation occurs e.g. merging en echelon vein segments. Pronounced hydrothermal alteration envelops characterize the mineralization and also, together with the mineral assemblage of the veins, indicate the high temperature nature of the veins. In summary, the location of the Bleka-type veins is a result of regional tectonics combined with favourable host rock lithology, whereas the high temperature nature and to some degree the mineral assemblage, is possibly controlled by the intrusion of underlying granite.

Review of historical data and personal examination of four (Bleka, Blengsdalen, Espeli and Gjuv) mineralized prospects within the Bleka Property during the author's field visit confirm the existence of shear-hosted, orogenic gold mineralization at the property. The Bleka mine operated intermittently from ca. 1880 to 1940 producing primarily gold concentrates. Evidence of trenching was observed at the Blengsdalen and Gjuv prospects. Based on the observations of the author and as a result of the data and literature review, significant and widespread gold-bismuth mineralization is present across the Bleka Property.

The presence of multiple mineralized prospects (at least 8) including the historic Bleka gold mine within the Bleka Property together with significant Au-Ag-Bi-Cu-W anomalism from both historic rock-grab sampling and recent (EMSAB, 2020) rock-grab and limited Ionic Leach™ sampling should be considered a favourable indicator for continued exploration on the property.

The cessation of mining operations in the early 20th century at the Bleka mine should not be considered to be overly negative as zero drilling has been completed within the Bleka mine area or the property as a whole and depth extensions to the ore lodes below the historically mined depths is considered high. Sites of historic trenching should also therefore be considered especially favourable exploration targets for modern work, in particular reconnaissance drilling.

Whilst the Bleka area has explored over a period of more than 100 years, the Bleka Property is still considered to be a very early-stage exploration property. The bulk of the historical exploration was completed during the 1980-1990's and was largely limited to stream sediment sampling, rock grab sampling and limited ground magnetic and VLF surveying. Drilling has not been completed at the Bleka Property.

Work by previous operators, both industry and academic, confirms that both the Svartdal and Kasin Metagabbros are, host to and prospective for, gold-bismuth-bearing quartz vein mineralization and significant strike lengths of both are located within the Bleka Property. Norsk Hydro AS's reports of mineralized quartz veins hosted in felsic volcanics and sediments in the Heggeli area located northeast of the Bleka mine need to be followed-up as this could open up a new exploration opportunity at the Bleka Property. Due to the high-grade nature of the known ore lenses and due to the significant size of the Espeli vein swarm, compared to that of Bleka, the economic potential at Espeli is considered high. Furthermore, a bismuth halo is observed in the northern end of the Espeli vein swarm, possibly indicative of a deeper-lying (200-300m below present surface) bold-bismuth mineralization, consequently the Espeli vein swarm is considered a prime drilling target at the Bleka Property.

A thorough and comprehensive understanding of the ore paragenesis and possible topographical zonation of the ore system at the Bleka Property will be the key driver for exploration success at the Bleka Property.

In summary, it is concluded that the exploration work which has been conducted on the property over the last century suggests that the potential exists for significant mineralized zones to exist at many of the mineralized prospects within the Bleka Property. Whilst work on the property is still quite early stage and potential economic viability cannot yet be commented upon, current results and historical data are sufficiently encouraging to recommend additional exploration work be conducted on the Bleka Property.

26. RECOMMENDATIONS

Based on the results of the author's inspection of the Bleka Property and review of available records, a 12-month, two-phase exploration strategy is recommended for the Bleka Property, whereby the second phase of exploration is dependent on the success of the first phase of exploration.

Phase 1:

i. Complete a detailed magnetic (drone) survey over the Bleka-Espeli areas. Complete processing and interpretation of data.
ii. Continuation of geological mapping and rock-grab sampling across areas of prospectivity deduced from the 2020 field season.
iii. Review of the available geological, geochemical and geophysical data to complete a preliminary interpretation and target generation for the Bleka Property, with the aim of delineating diamond drilling targets.

Phase 2:

i. Complete targeting diamond drilling over targets generated as a result of Phase 1 activities. An initial program of ~1500m of diamond drilling is recommended to test the targets to emerge from the aforementioned targeting exercise.

A proposed budget is outlined below in Table 5; all monies are in Canadian dollars:

Phase 1				
Exploration Activity	**Unit**	**Unit Cost**	**Total Units**	**Cost ($CAD)**
Drone Magnetic Survey	km^2	$1,350.00	15	$20,250.00
Geophysics Processing & Interpretation	day	$1,500.00	2	$3000.00
Geological Mapping	day	$1,500.00	3	$4,500.00
Rock-Grab Sampling	sample	$165.00	150	$24,750.00
Project Interpretation & Target Generation	day	$1,500.00	3	$4,500.00
SUB-TOTAL				**$57,000.00**
Phase 2				
Exploration Activity	**Unit**	**Unit Cost**	**Total Units**	**Cost ($CAD)**
Diamond Drilling	metres	$295.00	1500	$442,500.00
SUB-TOTAL				**$442,500.00**
TOTAL				**$499,500.00**

Table 6: *Two-phase exploration budget for the Bleka Property.*

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28. CERTIFICATE OF AUTHOR

I, Amanda Scott, BSc. Geology, FAusIMM., do hereby certify that:

1. I am Principal Consultant of Scott Geological AB, Smultronstigen 9, 93931, Malå, Sweden.
2. I graduated with a B.Sc. Degree in Geology from the University of Victoria, Wellington in 2003.
3. I am and have been registered as a Member of the Australasian Institute of Mining and Metallurgy since 2008. I became a Fellow of the Australasian Institute of Mining and Metallurgy in September 2020 (FAusIMM 990895).
4. I have worked as a geologist for 16 years since my graduation from University and have experience with exploration for, and the evaluation of, gold deposits of various types, including orogenic and sediment-hosted, VMS deposits, magmatic Ni-Cu-PGE deposits, BIF-hosted, skarn and apatite iron ore deposits, magmatic Ti-V deposits, graphite deposits, hard-rock lithium and IOCG Cu-Au-Co deposits throughout Australia and Scandinavia.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my current membership level with an affiliation with a professional association (as defined in NI 43-101), I fulfil the requirements to be a "Qualified Person" for the purposes of NI 43-101.
6. I, as a "Qualified Person" for the purposes of NI 43-101, take responsibility for all sections of the Technical Report titled "Technical Report for the Bleka Property, Norway", with an effective date of April 26th 2021 (the "Technical Report"). I visited the Bleka Property on the 5-6th of October, 2020 and can verify the Property, mineralization and the infrastructure at the Property.
7. At the effective date of the Technical Report, To the best of my knowledge, information and belief, the Technical Report contains all relevant scientific and technical information that is required to be disclosed, to make the Technical Report not misleading.
8. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
9. I am independent of the issuer, the vendor and the Property applying all of the tests in section 1.5 of both NI 43-101 and Companion Policy 43-101CP.
10. I have not had any prior involvement with the Property that is the subject of the Technical Report.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Signing Date: May 24th, 2021

Malå, Sweden

29. APPENDICES

29.1. Permit Status Report

Report

GeoDE Consult AS
Geologi- og miljørådgivning

Prosjekt:	**Eurasian Minerals Sweden AB – Bleka Project**
Tema:	**Mineral investigation rights**
Skrevet av:	David C. Ettner
Dato:	30.11.2020

Geode Consult AS
Org. nr. 994 551 000

Pb 97
N-1378 NESBRU

Purpose

This report is prepared by Geode Consult AS for Eurasian Minerals Sweden AB, and presents information relevant for the validity of the mineral investigation permits at the Bleka project, Norway.

Geode Consult AS consents that this report may be made public.

Independence

Geode Consult AS is an independent company providing geological, environmental, and CSR services. The company is registered in Norway, and based in Asker, Norway.

Geode Consult AS does not have an interest in Eurasian Minerals Sweden AB, its associated companies or the mineral investigation permits listed in this report.

Geode Consult AS has provided geological, permitting and CSR consulting services to Eurasian Minerals Sweden AB and its associated companies. The preparation of this is supplied to Eurasian Minerals Sweden AB as a paid consulting service.

Responsibility of information contained in this report

Geode Consult AS has independently collected information provided in this report.

Geode Consult AS does not assume any responsibility for the information provided by the Norwegian Directorate of Mining database.

Dates in this report are presented in the Norwegian format “day.month.year”.

Permits, potential conflicts and restrictions

The 8 exploration permits owned by Eurasian Minerals Sweden AB are presented in table 1. The total area of each claim is 10000000 m^2. It should be noted that the database for the Norwegian Directorate of Mining database presents most of these claims with a slightly larger size. According to the Norwegian Directorate of Mining this is a calculation error because the database calculates the area in UTM 33.

A neighboring exploration permit, Blika 3 0049-1/2016, is owned by BS Norway Ltd. This borders to the Bleka 3 0056/2020 permit, but presents no conflict.

A small nature reserve, Ambjørndalen, is located within Bleka 8 exploration permit. No other nature preserves are registered in the claim area.

No other permit conflicts were identified that would restrict exploration if carried out in accordance with Norwegian law, which would include:

- Norwegian Mineral Act (*Mineralloven*)
- The Planning and Building Act (*Plan- og bygningsloven*)
- Act relating to the management of biological, geological and landscape diversity (*Naturmangfoldloven*)
- The Pollution Control act (*Forurensningsloven*)
- The Cultural Heritage Act (*Kulturminneloven*)
- Act Relating to Motor Traffic on Uncultivated Land and in Watercourses (*Motorferdselloven*)
- The Land Act (*Jordlova*)
- The Water Resources Act (*Vannressursloven*)

Litigation

Geode Consult AS is not aware of any litigation related to Eurasian Minerals Sweden´s Bleka permits.

Table 1: Permits owned by Eurasian Minerals Sweden AB

Permit Name	Permit number	Size m^2	Date granted	Known permit conflicts
Bleka 1	0054/2020	10000000	14.02.2020	
Bleka 2	0055/2020	10000000	14.02.2020	
Bleka 3	0056/2020	10000000	14.02.2020	
Bleka 4	0057/2020	10000000	14.02.2020	
Bleka 5	0058/2020	10000000	14.02.2020	
Bleka 6	0059/2020	10000000	14.02.2020	
Bleka 7	0060/2020	10000000	14.02.2020	
Bleka 8	0061/2020	10000000	14.02.2020	Ambjørndalen nature reserve