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NI 43-101 TECHNICAL REPORT AND MINERAL RESOURCE ESTIMATE ON THE BARSELE PROPERTY

Project Location :
Latitude 65°02' north and longitude 17°30' east,
Västerbotten Län (County), northern Sweden

Prepared for

Barsele Minerals Corp.
Suite 1130 - 1055 W. Hastings Street
Vancouver, BC Canada V6E 2E9

Prepared by:

Carl Pelletier, P.Geo.
Pierre-Luc Richard, P.Geo.

InnovExplo Inc.
Val-d'Or / Longueuil (Québec)

Effective Date: February 15, 2018
Signature Date: April 12, 2018

SIGNATURE PAGE

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(Original signed and sealed)
Carl Pelletier, P.Geo.
InnovExplo Inc.
Val-d'Or (Québec)

Signed at Val-d'Or on April 12th, 2018

(Original signed and sealed)
Pierre-Luc Richard, P.Geo.
InnovExplo Inc.
Longueuil (Québec)

Signed at Longueuil on April 12th, 2018

CERTIFICATE OF AUTHOR – CARL PELLETIER, P. GEO.

I, Carl Pelletier, P. Geo, B.Sc (OGQ No. 384, APGO No. 1713, APEGBC, no. 43167) do hereby certify that:

1. At the issuance of the report titled "NI43-101 Technical Report and Mineral Resource Estimate on the Barsele Property", I am a Consulting Geologist of InnovExplo Inc., 560 3e Avenue, Val-d'Or, Québec, Canada, J9P 1S4.
2. I graduated with a Bachelor's degree in Geology (B.Sc.) from Université du Québec à Montréal (Montréal, Québec) in 1992, and I initiated a Master's degree at the same university for which I completed the course program but not the thesis.
3. I am a member of the Ordre des Géologues du Québec (OGQ, no. 384), the Association of Professional Geoscientists of Ontario (APGO, no. 1713), the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC, no. 43167) and of the Canadian Institute of Mines (CIM).
4. My relevant experience includes a total of 26 years since my graduation from university. My mining expertise has been acquired in the Silidor, Sleeping Giant, Bousquet II, Sigma-Lamaque and Beaufor mines, whereas my exploration experience has been acquired with Cambior Inc. and McWatters Mining Inc. I have been a consulting geologist for InnovExplo Inc. since February 2004.
5. I have read the definition of a qualified person ("QP") set out in Regulation 43 101/National Instrument 43 101 ("NI 43 101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43 101) and past relevant work experience, I fulfill the requirements to be a QP for the purposes of NI 43 101.
6. I am co-author and share responsibility for section 12 and I am the author and take responsibility for sections 1 to 11, 13 and 27 of the technical report entitled "NI43-101 Technical Report and Mineral Resource Estimate on the Barsele Property" (the "Technical Report"), effective date of February 15, 2018 and signature date of April 12th, 2018. prepared for Barsele Minerals Corp.
7. I never visit the property.
8. I have had no prior involvement with the property.
9. I am not aware of any material fact or material change with respect to the subject matter of the Report that is not reflected in the Report, the omission to disclose which would make the Report misleading.
10. I am independent of the issuer applying all of the tests in section 1.5 of NI 43 101.
11. I have read NI 43 101 respecting standards of disclosure for mineral projects and Form 43 101F1, and the items of the Report, for which I was responsible, have been prepared in accordance with that instrument and form.

Signed this 12th day of April 2018 in Val-d'Or, Québec.

Carl Pelletier (Original signed and sealed)

Carl Pelletier, P.Geo. (OGQ No. 384, APGO No. 1713, APEGBC, no. 43167)
InnovExplo Inc.

CERTIFICATE OF AUTHOR – PIERRE-LUC RICHARD

I, Pierre-Luc Richard, M.Sc., P.Geo. (OGQ No. 1119; APGO No. 1714), do hereby certify that:

1. I carried out this assignment as a geologist for InnovExplo Inc. – Consulting Firm in Mines and Exploration, 560, 3e Avenue, Val-d'Or, Québec, Canada, J9P 1S4.
2. I graduated with a Bachelor's degree in geology from the Université du Québec à Montreal (Montreal, Québec) in 2004. In addition, I obtained an M.Sc. from the Université du Québec à Chicoutimi (Chicoutimi, Québec) in 2012.
3. I am a member in good standing of the Ordre des Géologues du Québec (OGQ licence No. 1119), and the Association of Professional Geoscientists of Ontario (APGO licence No. 1714).
4. I have worked in the mining industry for more than 10 years. My exploration expertise has been acquired with Richmont Mines Inc., the Ministry of Natural Resources of Québec (Geology Branch), and numerous exploration companies through InnovExplo. My mining expertise was acquired at the Beaufor mine and several other producers through InnovExplo. I managed numerous technical reports, resource estimates and audits. I have been a geological consultant for InnovExplo Inc. since February 2007 and I currently hold the Director of Geology position.
5. I have read the definition of "qualified person" set out in Regulation 43-101 / National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am co-author of sections 12of the technical report entitled "NI 43-101 TECHNICAL REPORT AND MINERAL RESOURCE ESTIMATE ON THE BARSELE PROPERTY", prepared for Barsele Minerals Corp. The effective date of the report is February 15, 2018, and the signature date is April 12th, 2018.
7. I visited the property that is the subject of the Technical Report from August 28 to August 30, 2017.
8. I have had no prior involvement with the property.
9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission of which would make the Technical Report misleading.
10. I am independent of the issuer applying all the tests in section 1.5 of NI 43-101.
11. I have read NI 43-101 Respecting Standards of Disclosure for Mineral projects and Form 43-101F1, and the items for which I am a qualified person in this Technical Report have been prepared in accordance with that regulation and form.

Dated this 12th day of April 2018, in the city of Longueuil (Québec)

(Original signed and sealed)

Pierre-Luc Richard, P.Geo.
InnovExplo Inc.

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1 SUMMARY

1.1 Introduction

Barsele Minerals Corp. ("Barsele Minerals" or the "issuer") commissioned InnovExplo Inc. ("InnovExplo") to prepare a mineral resource estimate for the Barsele deposit and a supporting Form 43-101F1 Technical Report on the Barsele Property (the "Property" or the "Project") in accordance with Canadian Securities Administrators' National Instrument 43-101 Respecting Standards of Disclosure for Mineral Projects ("NI 43-101"). The mandate was assigned by Mr. Art Freeze, P.Geo., Director for Barsele Minerals.

InnovExplo is an independent mining and exploration consulting firm based in Val-d'Or (Québec).

Agnico Eagle Mines Limited ("AEM") currently operates the Barsele Project in Sweden under a joint venture with Barsele Minerals. AEM owns 55% of the Project and Barsele Minerals the remaining 45%. AEM can earn an additional 15% by completing a pre-feasibility study.

This Technical Report was prepared by Carl Pelletier, P.Geo. (InnovExplo). and Pierre-Luc Richard, P.Geo. (InnovExplo).

The authors believe the information used to prepare this Technical Report and to formulate its conclusions and recommendations is valid and appropriate considering the status of the Project and the purpose for which this Technical Report is prepared. The authors, by virtue of their technical review of the Project's potential, affirm that the work program and recommendations herein comply with NI 43-101 and CIM Definition Standards for Mineral Resources and Mineral Reserves ("CIM Definition Standards").

1.2 Property Description and Location

The Barsele gold project (the "Project" or the "Property") is situated in Barsele, a small town of the Västerbotten Län (County) in northern Sweden. It is located approximatively 20 kilometres east-southeast from the town of Storuman. At the regional scale, Barsele lies 200 kilometres northwest of Umeå (population of 120 000), the administrative headquarters of the county, and approximatively 630 kilometres north of Stockholm. The geographic coordinates of the Project are latitude 65°02' north and longitude 17°30' east (UTM coordinates 614969E, 7221117N SWEREF99 TM; Fig. 4.1).

The Project currently consists of one block of 15 granted exploration permits staked by electronic map designation ("map-designated cells") and two exploitation concessions, for an aggregate area of 28519.78 hectares (285.20 km^2).

1.3 Geology

The Barsele Project is located within Paleoproterozoic supracrustal and associated intrusive rocks of the Fennoscandian Shield. Bedrock in the district consists of volcanic and sedimentary rocks associated to the Svecofennian domain and intrusive rocks that were deformed and metamorphosed simultaneously during the Svecokarelian orogeny. The lowest stratigraphic unit in the district consists of metasedimentary and intercalated volcanic rocks of the Bothnian Supergroup, the inferred basement to the mainly felsic volcanic rocks of the Skellefte. The Skellefte Group is overlain in the Skellefte district, by a dominantly sedimentary unit called the Vargfors Group. Early orogenic rocks are suggested to be co-magmatic with the volcanic rocks of the Skellefte Group. Younger phases of intrusives are assigned to the Perthite-Monzonite suite and post-date the deposition of the volcanic rocks. In the south, west and in-between Skellefte and Stensele districts, the Skellefte, Vargfors and Bothnian Groups are all truncated by large intrusions late- to post-Svecokarelian GSDG-type (also referred to as Revsund-type) intrusive rocks of the Transscandinavian Igneous Belt (Kathol and Weihed, 2005).

The project area is located at the intersection of the Skellefte-belt and the Gold line metallogenic trend in Sweden, a northwest-southeast geochemical gold anomaly detected in a regional till survey, now with numerous known Au deposits and producing mines. The project area covers a sequence of metasedimentary and volcanic rocks of the Proterozoic Svecofennian system. The volcanics are more specifically referred to as the Härnö Formation. The metasedimentary rocks consist of metamorphosed greywackes and pelites and sporadic conglomerates. The volcanic rocks of the Härnö Formation consist of felsic, intermediate and mafic volcanics, including pillow lavas and pyroclastics, probably deposited in a back-arc setting.

There are three main phases of granitoid intrusions in the region which are referred to as early, middle and post with respect to the Svecofenian orogeny. The early orogenic granitoids are the most important from a mineralization perspective and comprise a calc-alkaline suite of predominantly tonalites with lesser volumes of granodiorite, which were emplaced prior to the main phases of Svecofennian metamorphism and deformation. An early orogenic granodiorite is the host rock of the Central Zone mineralization at Barsele. In detail, at least seven separate intrusive pulses have been identified at the Central and Avan zones including late and post-mineralization dykes. The granodiorite exhibits a well-developed S2 penetrative foliation which is cut by ductile shear zones, faults, fractures and dilational quartz and quartz-carbonate sulphide veining. The granodiorite is quartz-feldspar phyric and is composed of sericitized plagioclase, quartz, biotite and lesser K-feldspar. The highly fractured granodiorite ranges in width from 200 m to 500 m with a strike-extent in excess of 8 km. The intrusion bends from an east-west orientation in the east to a northwest trend in the west, where 3 major zones of Au mineralization have been identified: Central, Avan & Skiråsen Zones.

The gold-rich volcanic-hosted, semi-massive to massive sulphide style of mineralization at the Norra Zone is quite distinct from the mesothermal intrusive-hosted gold mineralization of the Central and Avan zones. The Norra Zone occurs within a lens of felsic metavolcanics and pelitic sediments of the Härnö Formation. The lithologies consist of a WNW-trending, steeply-dipping sequence of dacitic to rhyolitic flows, felsic volcaniclastics and fine-grained tuffs. The mineralized host-lithology appears to be a quartz-phyric volcaniclastic unit. Alteration is characterized by a network of veinlets and discontinuous patches of sulphides, chlorite and carbonate. The host rock is cut by felsic and mafic intrusions which are probably sills. It is likely that intrusions range in timing from pre- to syn to post sulphide mineralization (Keyser, 2004).

1.4 Mineralization

Mineralization varies among the zones on the Property. Two distinct mineralized areas have been explored on the Barsele concessions: CAS (the Central, Avan and Skiråsen zones) and Norra.

CAS Zones

Gold mineralization in the CAS is predominantly within the granodiorite (GD-II). The Central and Skiråsen zones have a combined strike length of 1.6 kilometres, consisting of 21 lodes (12 in Central and 9 in Skiråsen) and that can be followed to a depth of 700 metres with an average horizontal thickness of 20 m. The Avan Zone consist of 14 lodes over 800 metres along strike and 700 metres at depth with an average thickness average of 9.5 m (Agnico Eagle and Barsele, 2017). There are two types of mineralization in the Central Zone:

1) Low to moderate-grade orogenic or mesothermal intrusive-hosted gold associated with networks of thin quartz-tourmaline and quartz-calcite-aresenopyrite veins.

2) High grade gold-silver-lead-zinc mineralization hostd by syntechtonic quartz-sulfide veins (grading up to 50 g/t gold or higher).

Gold occurs as native metal alloyed with silver and demonstrates a general association with arsenopyrite also occurring with pyrrhotite, calcite, chlorite and biotite. Base metal content of the deposit is typically low, although gold is seen to occur with sphalerite, galena, chalcopyrite and scheelite. Sulphide, carbonate and quartz-tourmaline veinlets are locally mineralized. The host-granodiorite contains probably less than 2% disseminated fine-grained sulphides occurring as arsenopyrite, pyrrhotite and pyrite (Barry et al., 2006).

Norra Zone

The Norra Zone is a volcanic-hosted massive sulfide (VMS) regionally referred to as Skellefte-style. The main mineralized body is approximately 300 metres along strike and 5 to 50 meters in width. Gold is associated with the basal semi-massive arsenopyrite, pyrrhotite, chalcopyrite, galena, and sphalerite mineralization within a sequence of sheared felsic volcanics, foliated pyritic shales and pelitic sediments. Gold is probably remobilized and likely enriched by a later overprinting epithermal phase of mineralization.

1.5 Status of Exploration and Drilling

Exploration work has been conducted on the Barsele Project since June 30, 2015. The work has included till sampling, trenching, stripping, geophysical compilation, structural and environmental studies and drilling.

Till Sampling

Bottom of till (BOT) sampling programs have been done on the Project since 2016. A total of 415 sampling sites have been sampled in that time. In 2017, AEM collected 3075 samples on 389 sites.

Trenching

GeoVista AB carried out structural mapping and structural analysis in a newly exposed trench. The information was collected by the author of the report during a two-day visit to the site in September 29-30, 2015 (Bauer, 2015). In late summer-early fall 2017 a second trench was dug on the Central Zone oriented NW-SE, connecting to and expanding the 2015 trench. Preliminary observations on the new trench were reported in the 2017 summary report (Agnico Eagle, 2017a).

Geophysics

From 2015 to February 2016, GeoVista carry out data collection, compilation, and the organization and evaluation of geophysical and other data covering the Barsele Project, followed by geophysical geointerpretation and targeting. The aim of the study was to compile and evaluate historical geophysical work by previous operators at the Barsele Project, and then identify potential mineralized targets and target areas (Isaksson et al., 2016). A Titan-24 geophysical survey (IP chargeability, DC resistivity, MT resistivity) was carried over the Knr1 exploitation concession and adjacent exploration claims in 2016.

Structural studies

Bauer and Imaña (2017) produced a local-scale structural framework for the gold mineralization on the Barsele Project to incorporate a kinematic temporal model related to quartz-vein emplacement. The study included using previous drill core and assays, field mapping results from the 2003-2007 and 2016 field campaigns and previous geophysical data.

Other relevant work

Spectral imaging was done on 1,382 metres of drill core at the Central Zone in 2015 as well as a preliminary petrographic study on gold and sulphides from the Project in 2017. Samples were taken from the Avan, Central and Skiråsen deposits to investigate the mode of occurrence of free gold as well as sulphide petrography in samples with varying gold grades and sulphide associations.

Drilling

Since the 2015 joint venture, a total of 90,526 metres have been drilled corresponding to 197 holes. In the last two years alone, under the joint venture agreement, AEM has drilled more than half (55%) of the cumulative length of all core drilling on the Barsele Project since 1981. In 2015-2016, AEM performed parameter logging in some holes on the Central Zone. The technique indicates a good spatial correlation between increased IP effect, low resistivity and the combined occurrences of gold and sulphides.

All exploration, drilling and analytical work conducted by through the JV partnership between AEM and Barsele Minerals has followed industry standard procedures and includes quality assurance/quality control (QA/QC) protocols.

1.6 Mineral Processing and Metallurgical Testing

In 1992, Terra Mining completed several copper and zinc flotation tests from a large bulk sample of Norra mineralization (sample size unknown) at the Boliden plant. The conclusions derived from this test are from Noren and Bolin (1992) as presented in Giroux et al. (2015).

In 1995, Anamet Services in Bristol, England carried out mineralogical and preliminary metallurgical test work on a 1,000-kilogram split of a 100-ton bulk sample of mineralized rock excavated from a trench at the northwestern part of the Barsele Central Zone (Reynolds, 1996). The average head-grade of the sample was 5.1 g/t Au and 4.3 g/t Ag, and therefore significantly higher in grade and may not be representative of the Barsele Central Zone as a whole.

In 2004, Northland sent drill core pulp samples from the Barsele Property to ALS Chemex Vancouver for accelerated cyanide leach determination and in 2005 to Omac Laboratories of Galway, Ireland. The results indicated an average cyanide soluble recovery of 93.5 and 92% respectively. In addition, three bottle roll tests were conducted on prepared core by Kappes Cassidy with an 86 indicated average recovery of 87%, and seven specific gravity determinations were completed by Golder and Associates on whole core from the Property with resultd ranging from 2.71 to 2.75.

In 2017 AEM conducted tests on Master Composite (MC) and individual ore zones. Test work was conducted internally with the AEM Centre of Services and development (CSD). First of all, the optimal conditions were developed with the master composite and then it was applied to each zone. The standard test procedure, which includes gravity concentration follow by cyanide leach of gravity tails and gravity concentrate. A global gold recovery of 92.6 % has been estimated for the process. This value is based on assumptions made about the testwork results. The gold dissolution obtained in the test performed with the chosen flowsheet is applied individually on gravity concentrate and tailings streams. A gravity recovery of 60 % is used at industrial scale. Finally, a 99.5 % gold adsorption efficiency is estimated to account for liquid losses.

1.7 Mineral Resource Estimate

The Barsele Deposit Mineral Resource Estimate (the “MRE”) was prepared by Carl Pelletier, P.Geo., using all available information.
The resource area measures 2,650 metres along strike and up to 375 metres wide. Although resources are found down to 850 metres, the bulk of the resource is contained in the first 600 metres from surface. The MRE was based on a compilation of historical and recent diamond drill holes. Wireframed mineralized zones provided by AEM were used after being reviewed by InnovExplo.

The mineral resources are not mineral reserves as they have no demonstrable economic viability. The result of this study is a single underground mineral resource estimate for three mineralized zones (Avan, Central and Skiråsen). The estimate is categorized as Indicated and Inferred resources based on data density, search ellipse criteria, drill hole density and specific interpolation parameters. The effective date of the estimate is February 15, 2018 based on the compilation status and cut-off grade parameters. The estimate follows CIM Definition Standards.

Based on the results of the mineral resource estimate and a detailed review of all pertinent information, InnovExplo concluded the following:

- Geological and grade continuity have been demonstrated for three gold-bearing zones on the Property;
- The bulk of the resource is located in the first 600 metres from the surface;
- Using a cut-off grade of 1.75 g/t Au, the Indicated Resources amount to 2,399,000 tonnes at 2.50 g/t Au for 193,000 ounces of gold, and Inferred Resources amount to 15,279,000 tonnes at 2.91 g/t Au for 1,427,000 ounces of gold.
- It is likely that additional diamond drilling would upgrade some of the Inferred Resources to Indicated Resources.
- It is likely that additional diamond drilling would identify more resources down-plunge and in the vicinity of known mineralization.

Table 1.1 displays the results of the In Situ Barsele Deposit Mineral Resource Estimate at the official 1.75 g/t Au cut-off grade.

Barsele Deposit Mineral Resource Estimate at a 1.75 g/t Au cut-off grade (Table 14.8)

Classification	Tonnage	Grade (g/t)	Ounces
Indicated	2 399 000	2.50	193 000
Inferred	15 279 000	2.91	1 427 000

Mineral Resource Estimate notes:

1. *The independent and qualified person for the mineral resource estimate, as defined by NI 43-101 is Carl Pelletier, P.Geo., of InnovExplo Inc., and the effective date is February 15, 2018.*
2. *These mineral resources are not mineral reserves as they do not have demonstrated economic viability. The quantity and grade of the reported Inferred Resources are uncertain in nature and there has been insufficient exploration to define them as Indicated or Measured; it is uncertain if further exploration will result in an upgrade.*
3. *Resources are presented undiluted and in situ for an underground scenario and are considered to have reasonable prospects for economic extraction.*
4. *The underground resource estimate is reported at 1.75 g/t Au cut-off. The cut-off grade was calculated using the following parameters: mining cost = USD 45.00; processing cost = USD 15.00; G&A = USD 8.00; refining and selling costs = USD 10.00; gold price: USD 1,300 (1-year trailing average); and metallurgical recovery = 92.6%. The cut-off grade should be re-evaluated in light of future prevailing market conditions (metal prices, exchange rate, mining cost, etc.).*
5. *The estimate encompasses 47 gold-bearing zones each defined by individual wireframes with a minimum true thickness of 2 metres.*
6. *The mineral resource estimate is categorized as Indicated and Inferred. The Inferred mineral resource category is only defined within the areas where the drill spacing is less than 100 metres and shows reasonable geological and grade continuity. The Indicated category is only defined within the areas where the drill spacing is less than 25 metres. Clipping boundaries were used for classification based on those criteria.*
7. *The mineral resource estimate was prepared using GEOVIA GEMS 6.8. The estimate is based on 270 surface diamond drill holes (99,343 metres). With rare local exceptions having no material impact on the resource, a minimum true thickness of 2.0 metres was applied, using the gold grade of the adjacent material when assayed, or a value of zero when not assayed.*
8. *High grade capping was done on composite data and established on a per corridor basis for gold (g/t Au): low-grade mineralized envelope = 8; high-grade gold-bearing zones: Skiråsen = 45; Central = 40; Avan = 15. Capping grade selection is supported by statistical analysis.*
9. *Density values were applied based on lithology. All mineral zones were assigned 2.73 g/cm^3*
10. *Grade model compositing was done on drill hole intersections falling within the mineralized zones (composite = 2.0 m with adjusted length from 1.0 m to 3.0 m, if needed).*
11. *Grade model resource estimation was evaluated from drill hole data using an Ordinary Kriging interpolation method on a block model using a block size of 10 metres x 3 metres x 5 metres.*

12. *Calculations used metric units (metres, tonnes, gram per tonne). Metal contents are presented in troy ounces (tonne x grade / 31.10348).*
13. *The number of metric tons was rounded to the nearest thousand. Any discrepancies in the totals are due to rounding errors.*
14. *CIM definitions and guidelines for mineral resources have been followed.*
15. *InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issue not reported in this Technical Report, that could materially affect the Mineral Resource Estimate.*

1.8 Exploration Potential

Based on the results of the MRE and a detailed review of all pertinent information, InnovExplo concluded the following:

- The Norra Zone is currently considered an exploration target that requires additional drilling before it can be modelled and interpolated;
- There are several opportunities to add additional resources by drilling the depth extensions of the ore shoot originating in the resource area and the lateral extensions of the currently identified zones; and
- A property-scale compilation and target generation program should be completed.

1.9 Interpretation and Conclusions

The objective of the mandate was to prepare a mineral resource estimate for the Barsele deposit and a supporting NI 43-101 Technical Report on the Barsele Property.

The authors consider the MRE to be reliable and based on quality data, reasonable hypotheses and parameters that follow CIM Definition Standards.

InnovExplo considers the MRE to be well supported. It allows the Project to proceed with the recommended drilling program on the Property.

1.10 Recommendations

Based on the results of the MRE, InnovExplo recommends additional exploration/delineation drilling and geological interpretation to gain a better understanding of the deposit before updating the current MRE.

In Phase 1, InnovExplo recommends addressing the following technical aspects of the Project:

- Exploration drilling.

In Phase 2, InnovExplo recommends addressing the following technical aspects of the Project (contingent upon the success of Phase 1).

- Update of litho-structural/mineralization models for the Barsele deposit;
- Metallurgical tests;
- Engineering studies;
- Additional exploration drilling;
- Updated NI 43-101 mineral resource estimate for the Barsele deposit;
- Maiden NI 43-101 mineral resource estimate for the Norra Zone.

InnovExplo has prepared a cost estimate for the recommended exploration program. Items from the second phase of the proposed work plan are contingent upon the success of the first phase.

The estimated cost for Phase 1, which would include the abovementioned technical recommendations, is approximately USD 6,900,000 (including 15% for contingencies). The estimated cost for Phase 2 is approximately USD 7,820,000 (including 15% for contingencies). The grand total is USD 14,720,000 (including 15% for contingencies).

InnovExplo is of the opinion that the recommended work program and proposed expenditures are appropriate and well thought out. InnovExplo believes the proposed budget reasonably reflects the type and scope of the contemplated activities. Table 26.1 presents the estimated costs for the various phases of the recommended exploration program.

2 INTRODUCTION

Barsele Minerals Corp. ("Barsele Minerals" or the "issuer") commissioned InnovExplo Inc. ("InnovExplo") to prepare a mineral resource estimate for the Barsele deposit and a supporting Form 43-101F1 Technical Report on the Barsele Property (the "Property" or the "Project") in accordance with Canadian Securities Administrators' National Instrument 43-101 Respecting Standards of Disclosure for Mineral Projects ("NI 43-101"). The mandate was assigned by Mr. Art Freeze, P.Geo., Director for Barsele Minerals.

InnovExplo is an independent mining and exploration consulting firm based in Val-d'Or (Québec).

2.1 Issuer

The executive head office, registered office and principal place of business of the issuer is located at 1055 W. Hastings Street (Suite 1130), Vancouver, British Columbia, Canada, V6E 2E9.

The issuer's common shares are listed on the TSX Venture Exchange (TSXV) under the symbol "BME".

Agnico Eagle Mines Limited ("AEM") currently operates the Barsele Project in Sweden under a joint venture with Barsele Minerals. AEM owns 55% of the Project and Barsele Minerals the remaining 45%. AEM can earn an additional 15% by completing a pre-feasibility study.

2.2 Principal Sources of Information

As part of the mandate, the authors reviewed the following with respect to the Barsele Property: mining titles and their status; agreements and technical data supplied by the issuer (or its agents); public sources of relevant technical information; and the issuer's filings on SEDAR.

Some of the geological and/or technical reports for the Barsele Property or projects in its vicinity were prepared before the implementation of NI 43-101 in 2001. The authors of such reports appear to have been qualified and the information prepared according to standards that were acceptable to the exploration community at the time. In some cases, however, the data are incomplete and do not fully meet the current requirements of NI 43-101. InnovExplo has no known reason to believe that any of the information used to prepare this Technical Report is invalid or contains misrepresentations. The authors have sourced the information for this Technical Report from the collection of reports listed in Item 27.

InnovExplo conducted a review and appraisal of the information used to prepare this Technical Report, including its conclusions and recommendations. InnovExplo believes this information is valid and appropriate considering the status of the Project and the purpose for which the Technical Report is prepared.

The authors do not have, nor have they previously had, any material interest in the issuer or its related entities. The relationship with the issuer is solely a professional association between the issuer and the independent consultants. The Technical

Report was prepared in return for fees based upon agreed commercial rates, and the payment of these fees is in no way contingent on the results of the Technical Report.

2.3 Qualified Persons

The qualified and independent persons ("QPs") for the Technical Report, as defined by NI 43-101, are as follows:

- Carl Pelletier, P.Geo, (OGQ No. 384), Co-President Founder;
- Pierre-Luc Richard, P.Geo. (OGQ No. 1119), Director of Geology (InnovExplo).

The list below presents the sections of the Technical Report for which each QP was responsible:

- Carl Pelletier: Author of sections 1 to 11 and 13 to 27 and co-author of sections 12;
- Pierre-Luc Richard: co-author of sections 12.

2.4 Inspection of the Property

Pierre-Luc Richard, P.Geo., visited the Barsele Property from August 28 to August 30, 2017. He was accompanied by Arthur Freeze, P.Geo., representing Barsele Minerals.

2.5 Effective Date

The effective date of the Technical Report is February 15, 2018.

2.6 Abbreviations, Units and Currencies

A list of abbreviations used in this report is provided in Table 2.1. All currency amounts are stated in Canadian Dollars ($, $C, CAD), American dollars ($US, USD) or Swedish Krona (SEK). Quantities are stated in metric units as per standard Canadian and international practice, including tonnes (t) and gram per ton (g/t) (Table 2.1).

Table 2.1 – List of abbreviations

Abbreviation or Symbol	Unit or Term
%	Percent
°C	Degree Celsius
µm	Micron (micrometre)
43-101	National Instrument 43-101 (Regulation 43-101 in Québec)
AA	Atomic absorption
Ag	Silver
As	Arsenic
Au	Gold
Au-VMS	Gold-rich volcanogenic massive sulphide
Ba	Barium
CAD, C$	Canadian dollar
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CIM Definition Standards	CIM Definition Standards for Mineral Resources and Mineral Reserves
cm	Centimetre
cm^3	Cubic centimetre
CRM	Certified reference material

Abbreviation or Symbol	Unit or Term
CSA	Canadian Securities Administrators
Cu	Copper
DDH	Diamond drill hole
EM	Electromagnetics
ERT	Electrical resistivity tomography
Ga	Billion years
g/cm^3	Gram per cubic centimetre
g/t	Gram per metric ton (tonne)
GRG	Gravity recoverable gold
ha	Hectare
ICP-MS	Inductively coupled plasma mass spectroscopy
ID2	Inverse distance squared
IEC	International Electrotechnical Commission
IP	Induced polarization
IRGS	Intrusion-related gold system
ISO	International Organization for Standardization
JV	Joint venture
JVA	Joint venture agreement
kg	Kilogram
km	Kilometre
km^2	Square kilometre
LA-ICP-MIS	Laser ablation inductively coupled plasma mass spectrometry
M	Million
m	Metre
m^2	Square metre
m^3	Cubic metre
Ma	Million years
masl	Metres above mean sea level
MKB	Swedish environmental impact statement
MLA	Mineral liberation analyzer
mm	Millimetre
Mo	Molybdenum
MRE	Mineral resource estimate
MS	Mass spectrometry
MT	Magneto-telluric
Mt	Million metric tons (tonnes)
Nb	Niobium
NI 43-101	National Instrument 43-101 (Regulation 43-101 in Québec)
NN	Nearest neighbour
NSR	Net smelter return
OK	Ordinary kriging
oz	Troy ounce
QA/QC	Quality assurance/quality control
QP	Qualified person (as defined in National Instrument 43-101)
RC	Reverse circulation (drilling)
S	Sulphur
Sb	Antimony
SD	Standard deviation
SEK	Swedish Krona
SG	Specific gravity
SGU	Geological Survey of Sweden
t	Metric ton (tonne) (1,000 kg)
TDEM	Time-domain electromagnetics
TDIP	Time-domain induced polarization
Tl	Thallium
ton	Short ton (2,000 lbs)

Abbreviation or Symbol	Unit or Term
UCoG	Underground cut-off grade
US$, USD	American dollar
UTM	Universal Transverse Mercator coordinate system
VLF	Very low frequency
VMS	Volcanogenic massive sulphide
W	Tungsten
Zn	Zinc

Table 2.2 – Conversion factors for measurements

Imperial Unit	Multiplied by	Metric Unit
1 inch	25.4	mm
1 foot	0.3048	m
1 acre	0.405	ha
1 ounce (troy)	31.1035	g
1 pound (avdp)	0.4535	kg
1 ton (short)	0.9072	t
1 ounce (troy) / ton (short)	34.2857	g/t

3 RELIANCE ON OTHER EXPERTS

The QPs relied on the following sources for information outside their field of expertise or beyond the scope of the current mandate:

- The issuer supplied information about mining titles, option agreements, royalty agreements, environmental liabilities and permits. Neither the QPs nor InnovExplo are qualified to express any legal opinion with respect to property titles or current ownership and possible litigation. This disclaimer applies to sections 4.2 to 4.7 of this report.
- Patrick Frenette, P.Eng., and Josiane Caron, P.Eng., both of InnovExplo, supplied the MRE cut-off grade parameters.
- Venetia Bodycomb, M.Sc., of Vee Geoservices provided critical and linguistic editing of a draft of this report.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Barsele gold project (the "Project" or the "Property") is situated in Barsele, a small town of the Västerbotten Län (County) in northern Sweden. It is located approximatively 20 kilometres east-southeast from the town of Storuman. At the regional scale, Barsele lies 200 kilometres northwest of Umeå (population of 120 000), the administrative headquarters of the county, and approximatively 630 kilometres north of Stockholm. The geographic coordinates of the Project are latitude 65°02' north and longitude 17°30' east (UTM coordinates 614969E, 7221117N SWEREF99 TM; Fig. 4.1).

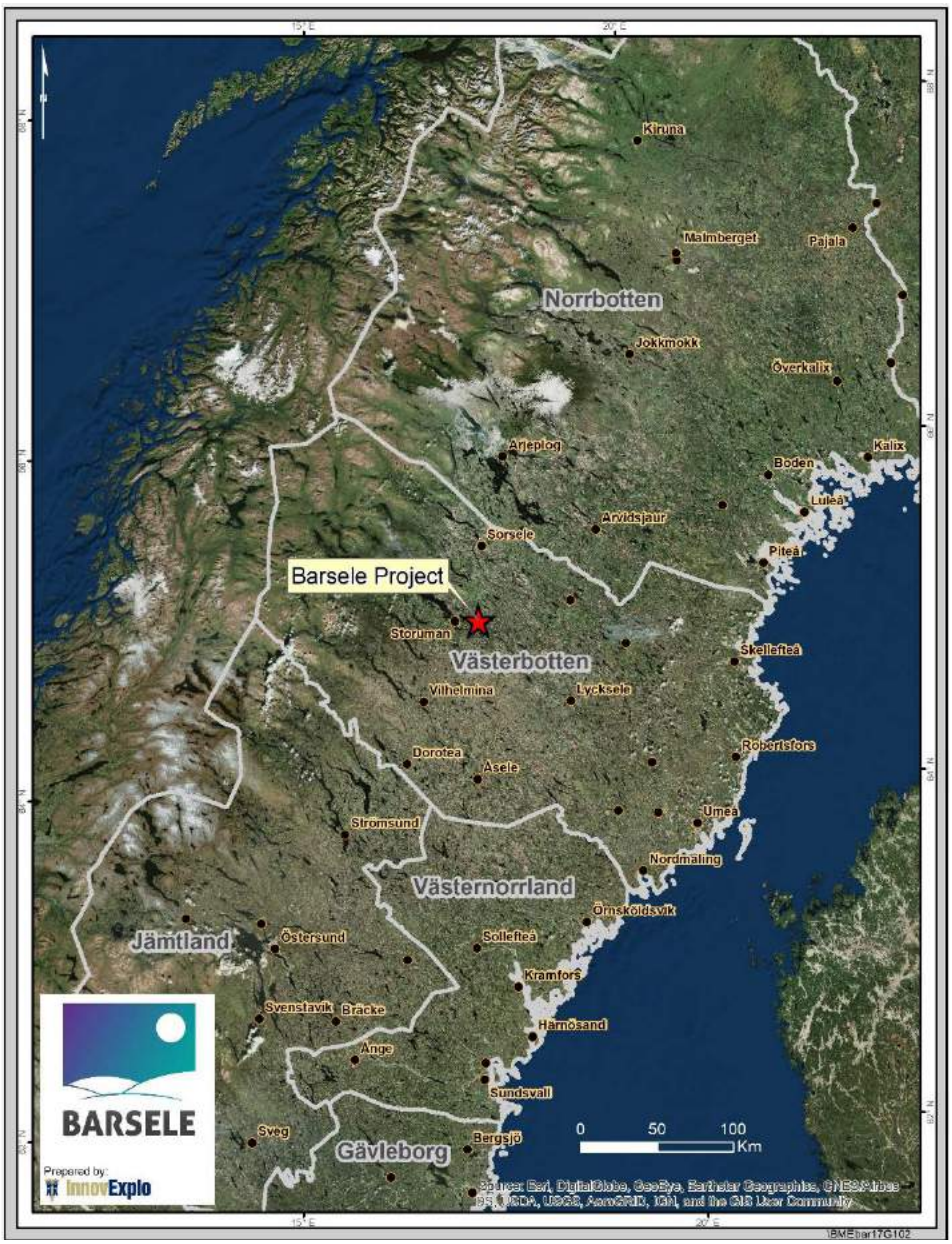


Figure 4.1 – Location of the Barsele gold property

The approximate centroid of the Barsele Property is UTM coordinates: 614969E and 7221117N, SWEREF99 TM.

4.2 Statements regarding Swedish Mining Law

Most of the following information of this chapter was taken from the Geological Survey of Sweden (SGU, 2006). Additional sources are cited accordingly. According to Giroux et al. (2015), the underlying title to mineral resources in Sweden is held by the Crown, administered by the Chief Mining Inspectorate. Sweden introduced a modern minerals policy in July 1992 (*Minerals Act* 1991:45) allowing for and governing exploration and extraction of “concession minerals” (base and precious metals, industrial minerals and hydrocarbons). Before 1992, exploration and mining were controlled by the State. The *Minerals Act* applies to exploration and exploitation on land regardless of surface ownership (surface and minerals are severed). Exploration and mining can only be carried out by the holders of exploration permits and exploitation concessions, respectively, as described below (SGU, 2006). There is no distinction between Swedish residents and non-residents holding exploration permits and exploitation concessions, however work must be carried out through a registered Swedish branch office (*Act* 1992: 160 and Ordinance 1992:308). An exploration permit or exploitation concession is transferrable with the consent of the Mining Inspectorate.

Swedish mineral policy and mineral titles are considered safe and secure by international standards. In addition, the Swedish government offers fiscal incentives to mining and exploration companies. The mining industry is an important job creator in northern Sweden and consequently the Swedish government makes significant contributions towards mine infrastructure and the salaries and wages of Swedish citizens hired by mining companies. The interest and importance of mining in Sweden has helped ensure that there are plenty of well-trained and experienced people in the mining industry.

4.2.1 Exploration Permit

An exploration permit is granted for a specific area where there is some likelihood of a successful discovery being made. It should be of suitable shape and size and no larger than may be assumed can be explored by the permit-holder in an appropriate manner. Within a distance of 1,000 metres from an exploitation concession with a mine in operation an exploration permit must only be granted to the concession-holder.

If mining operations do not commence within three years from the granting of the concession, exploration permits can be issued until the mining activity begins. An exploration permit is valid for a period of three years from the date of issue. After that, on application, it may be extended by another period of up to a maximum of three years if suitable exploration has been carried out within the area. The same is valid if the permit-holder has plausible excuses for exploration not yet having been carried out but nonetheless shows it likely that the area will be explored during the period referred to in the application. In exceptional cases the period of validity of the permit may be further extended but for no more than a total of four years and in extreme cases, by a further maximum of five years. This means that the longest possible valid period for any one permit is 15 years.

When an exploration permit has expired, an application will not be considered for the same area or part of it during the first year after the permit was terminated. If special reasons apply, the Mining Inspector may allow an exception to be made from that provision.

Exploration and exploitation cannot be carried out in national parks. Such activities are also seldom permitted in other areas such as: closer than 30 metres to a publicly owned transportation infrastructure, within 200 metres of any inhabited building, in churchyard or other burial grounds, etc.

Before exploration work begins the permit-holder has to set up a working plan. The plan shall contain a description of the work planned, a timetable and an assessment of the impact on private rights and public interests. The plan shall be communicated to all landowners and other parties affected. A working plan will enter into force if there are no objections. It will also enter into force if the applicant and the objecting party can agree on the plan. If they cannot agree, the matter can be tried by the Mining Inspector, who in some cases can set up conditions for the exploration work. The explorer has to submit security for the compensation of damage and encroachment from exploration work. Before any work can start the sum of security has to be guaranteed.

Permits titled “Prohibited” reflect a level of exploration work below the obligation value under Swedish mineral title law. After a permit has been declared lapsed from insufficient exploration or development activity there is a period of one year where no one can apply for a permit in the lapsed permit areas and no work can be carried out on the prohibited permit areas by anyone. After the “prohibited year”, the permits become available for relocation. Generally, permits located within a group of valid permits are offered to the surrounding permit holder first. This has been the case for the prohibited permits for “surrounded lapsed” areas on the Barsele Project.

4.2.2 Exploitation Concession

A concession is valid for a definite area, which is decided on the basis of the extent of the deposit, the purpose of the concession and other circumstances. A concession shall be granted if:

- A mineral deposit has been found which can probably be exploited economically
- The location and nature of the deposit does not make it inappropriate that the applicant is granted the concession requested

The *Environmental Code* (1998:808) shall be applicable in matters concerning the granting of a concession, which means, among other things, that an environmental impact statement (a *miljökonsekvensbeskrivning* or “MKB”) shall be contained in an application for a concession.

An exploitation concession is granted for a period of 25 years. The concession period is extended by ten years at a time without application if regular exploitation is in progress when the period of validity expires. A shorter period may be decided at the request of the concession-holder.

A legal proceeding for designation of land is held at the request and cost of the concession-holder (see *Minerals Act,* Chapter 9, Section 20.) This determines the land within the concession area that the concession-holder may use for exploitation of the mineral deposit. A decision is also taken regarding the land, within or outside the concession area, which the concession-holder may use for activities related to the exploitation. In this connection the nature of the activity shall be stated. When an exploitation concession is terminated, the concession-holder shall, at that date, forfeit the right to land assigned to him.

4.2.3 Taxes and other Fees

Apart from the normal corporate tax, currently 22%, since 2013, there are no additional special tax regulations which apply to mining. On June 20, 2017, the Swedish Government announced a memorandum proposing important changes to corporate taxation. The new proposition would reduce the corporate income tax rate from 22% to 20%. If accepted, the new propositions would enter into force on July 1, 2018 (Hultman et al., 2017). When mining is active, the holder of an exploration concession pays the landowners of the concession area an annual minerals fee of 0.15% of the value of the minerals mined and an additional 0.05% to the State (SGU, 2006).

Current application and exploration fees are nominal. An application fee of SEK 500 (USD 60) and the same amount for every additional two square kilometres is payable when applying for an exploration permit. An exploration fee of SEK 2,000 (USD 238) per square kilometer is charged for the first three-year period, rising to SEK 2,100 (USD 250) per square kilometer, per year, for a second three-year period, and SEK 5,000 (USD 596) per square kilometer, per year, applying to further extensions. Exploration and application fees are paid in advance for the exploration period and extended periods to the Mining Inspectorates Office. The application fee for an exploitation concession is SEK 80,000 (USD 9,540) for each concession area regardless of the number of hectares (exchange rates as of early December 2017).

4.3 Exploration and Exploitation Title Status

Title status for the Project was supplied by Art Freeze, Director of Barsele Minerals. InnovExplo verified the status of all exploration permits and exploitation concessions using the mineral permit map in Map Viewer, an online geological information tool from the Geological Survey of Sweden ("SGU") at the following address https://apps.sgu.se/kartvisare/kartvisare-mineralrattigheter.html. Furthermore, the latest GIS data was sent from the SGU on March 6, 2018 to complete the verification. Table 4.1 shows the titles status as of that date.

The Project currently consists of one block of 15 granted exploration permits staked by electronic map designation ("map-designated cells") and two exploitation concessions, for an aggregate area of 28519.78 hectares (285.20 km^2; Fig. 4.2). Thirteen exploration permits are registered in in the name of Gunnarn Mining AB and two in the name of Agnico Eagle Sweden AB. Applications have been submitted for eight exploration permits for an area of 18,481.66 hectare (184.8 km^2): four registered in the name of Agnico Eagle Sweden AB and four in the name of Gunnarn Mining AB. The remaining five applied exploration permits are already in the name of Gunnarn Mining AB. A detailed list of mining titles, ownership and expiration dates is provided in Table 4.1.

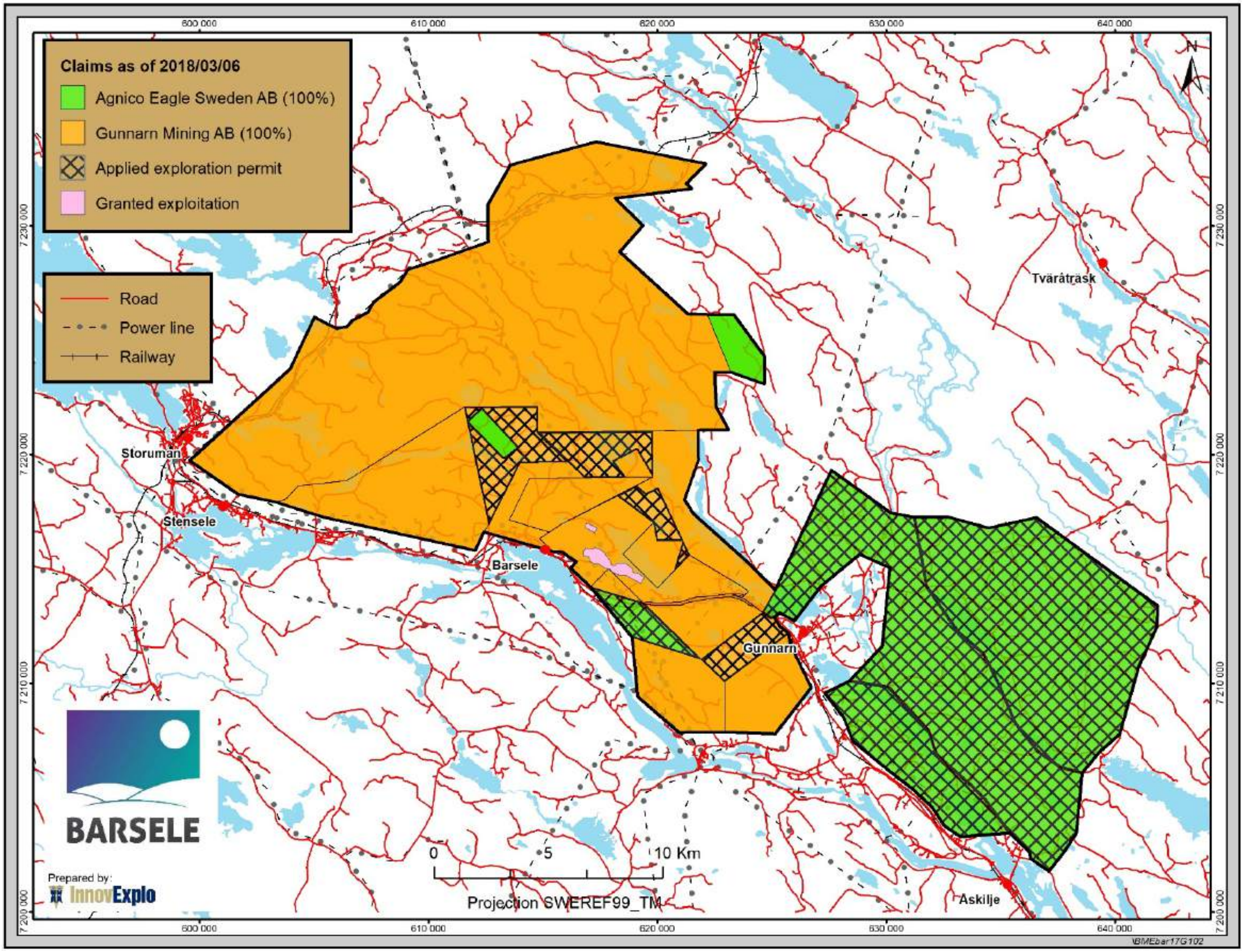


Figure 4.2 – Location of the Barsele Project exploration permit and exploitation concession titles.

Table 4.1 – Title status of the Barsele Project as of March 6, 2018.

Valid Permits								
Status	**NAME**	**AREA**	**APPL_DATE**	**VALIDFROM**	**VALIDTO**	**COUNTY**	**MAP**	**OWNERS**
Granted	Gunnarn nr 110	369.13	2010-12-08	2011-09-09	2020-09-09	Västerbotten	23HSO	Gunnarn Mining AB (100.00%)
Granted	Gunnarn nr 116	119.50	2010-12-08	2011-09-05	2020-09-05	Västerbotten	23HSO	Gunnarn Mining AB (100.00%)
Granted	Gunnarn nr 116 A	1259.71	2010-12-23	2011-09-07	2020-09-07	Västerbotten	23HSO	Gunnarn Mining AB (100.00%)
Granted	Gunnarn nr 22	805.39	2009-07-03	2009-10-06	2018-10-06	Västerbotten	23HSO	Gunnarn Mining AB (100.00%)
Granted	Gunnarn nr 26	118.05	2015-02-10	2015-04-21	2018-04-21	Västerbotten	23H	Gunnarn Mining AB (100.00%)
Granted	Gunnarn nr 27	1459.47	2015-02-11	2015-04-21	2018-04-21	Västerbotten	23H	Gunnarn Mining AB (100.00%)
Granted	Gunnarn nr 28	707.40	2015-02-11	2015-04-21	2018-04-21	Västerbotten	23H	Gunnarn Mining AB (100.00%)
Granted	Gunnarn nr 29	61.19	2016-01-15	2016-03-10	2019-03-10	Västerbotten	23H	Gunnarn Mining AB (100.00%)
Granted	Gunnarn nr 30	2750.02	2017-01-19	2017-05-11	2020-05-11	Västerbotten	23H	Gunnarn Mining AB (100.00%)
Granted	Gunnarn nr 32	176.39	2017-10-10	2017-12-12	2020-12-12	Västerbotten	23H	Agnico Eagle Sweden AB (100.00%)
Granted	Gunnarn nr 33	411.98	2017-10-10	2017-12-12	2020-12-12	Västerbotten	23H	Agnico Eagle Sweden AB (100.00%)
Granted	Gunnarn nr 68	518.94	2010-12-08	2011-07-14	2020-07-14	Västerbotten	23HSO, 23HSV	Gunnarn Mining AB (100.00%)
Granted	Risberget nr 2	1066.45	2010-10-07	2011-06-27	2020-06-27	Västerbotten	23HSO	Gunnarn Mining AB (100.00%)
Granted	Risberget nr 4	1178.00	2010-10-07	2011-06-27	2020-06-27	Västerbotten	23HSO	Gunnarn Mining AB (100.00%)
Granted	Storuman nr 1	17383.67	2011-01-13	2011-09-19	2020-09-19	Västerbotten	23HNO, 23HNV, 23HSO, 23HSV	Gunnarn Mining AB (100.00%)
Applied Permits								
	NAME	**AREA**	**APPL_DATE**	**VALIDFROM**	**VALIDTO**	**COUNTY**	**MAP**	**OWNERS**
Applied	Gunnarn nr 23	895.91	2017-11-24	2014-12-16	2017-12-16	Västerbotten	23H	Gunnarn Mining AB (100.00%)
Applied	Gunnarn nr 24	680.07	2017-11-17	2014-11-17	2017-11-17	Västerbotten	23H	Gunnarn Mining AB (100.00%)
Applied	Gunnarn nr 25	323.46	2017-11-23	2014-11-26	2017-11-26	Västerbotten	23H	Gunnarn Mining AB (100.00%)
Applied	Gunnarn nr 31	1916.17	2017-10-13			Västerbotten	23H	Agnico Eagle Sweden AB (100.00%)
Applied	Gunnarn nr 34	6730.13	2017-10-13			Västerbotten	23H, 23I	Agnico Eagle Sweden AB (100.00%)
Applied	Gunnarn nr 35	7005.42	2017-10-13			Västerbotten	23H, 23I	Agnico Eagle Sweden AB (100.00%)
Applied	Gunnarn nr 36	440.23	2018-01-24			Västerbotten	23H	Agnico Eagle Sweden AB (100.00%)
Applied	Risberget nr 5	490.27	2017-11-23	2014-11-24	2017-11-24	Västerbotten	23H	Gunnarn Mining AB (100.00%)
Concessions Permits								
	NAME	**AREA**	**APPL_DATE**	**VALIDFROM**	**VALIDTO**	**COUNTY**	**MAP**	**OWNERS**
Granted	Barsele K nr 1	123.24	1999-01-25	2007-06-21	2032-06-21	Västerbotten	23HSO	Gunnarn Mining AB (100.00%)
Granted	Barsele K nr 2	11.25	1999-02-02	2007-06-21	2032-06-21	Västerbotten	23HSO	Gunnarn Mining AB (100.00%)

4.4 Acquisition of the Barsele Project

On September 25, 2015, Orex Minerals Inc. ("Orex") and Barsele Minerals announced completion of the spin-out of Orex's interest in the Barsele Project. The previously announced plan of arrangement (the "Arrangement") pursuant to which all of the common shares of Barsele (the "Barsele Shares") were distributed (the "Spinout") to the shareholders of Orex (the "Orex Shareholders"). Immediately prior to the Spinout, Orex transferred its 45% interest in the Barsele Project, CAD500,000 in cash and all of Orex's right, title and interest in and to, and all of its benefits and obligations under, the joint venture agreement (the "JV Agreement") dated June 11, 2015 between Orex, Agnico Eagle Sweden AB ("AE Sweden") and certain other parties. Orex retained all of the other assets held by Orex immediately prior to the Arrangement.

Under the Arrangement, each common share of Orex (an "Old Orex Share") outstanding immediately before the effective time of the Arrangement (the "Effective Time") was exchanged for one new common share of Orex (a "New Orex Share") and one Barsele Share. Also, under the Arrangement, outstanding options and warrants of Orex to purchase Old Orex Shares were exchanged for options and warrants, respectively, of both Orex and Barsele Minerals to purchase New Orex Shares and Barsele Shares, as applicable. As a result of the Arrangement, existing Orex Shareholders maintained their interest in Orex and obtained a proportionate interest in Barsele by receiving all of the issued and outstanding New Orex Shares and Barsele Shares immediately upon completion of the Arrangement.

The Supreme Court of British Columbia issued a final order approving the Arrangement on September 24, 2015 and the Arrangement became effective on September 25, 2015.

In connection with the assignment of the JV Agreement to Barsele Minerals under the Spinout, Orex was released from substantially all of its obligations under the JV Agreement, other than liabilities arising in respect of conduct that occurred prior to the assignment and Orex's obligations to provide its proportionate share of funds to Gunnarn Mining AB ("Gunnarn Mining"), the company that holds the Barsele Project, to satisfy environmental and other obligations of Gunnarn Mining that arose out of activities conducted prior to such assignment.

4.5 Previous agreements and encumbrances

On March 22, 2011, the final agreement to acquire the Barsele Project has been signed with Northland Resources S.A. ("Northland"; TSX:NAU, OSE:NAUR) on March 22, 2011, replacing the Letter of Intent previously announced October 27, 2010. Northland will receive a total of USD 5 million in cash over two years from signing, and USD 3.5 million worth of Orex shares to be issued over a period of four years from signing of the Final Agreement. Orex has also guaranteed a minimum USD 3 million to be spent on the Barsele Project in the first two years. Finally, Northland will retain a 2% NSR, which can be purchased at any time by Orex for USD 4 million in cash

There are no other known royalties, back-in rights, payments or other agreements and encumbrances to the property.

On October 3, 2013, Northland and Orex agreed to amend their agreement as follows:

(a) The USD 2 million cash payment which was to be paid on April 29, 2013 would be satisfied by the payment of USD 250,000 and the issuance of 3.5 million common shares of Orex to Northland at a deemed price of USD 0.50 per common share (the "Cash Payment Shares");
(b) The remaining two share payments under the agreement would be accelerated and would be satisfied by the issuance of 4 million common shares of Orex to Northland at a deemed price of USD 0.50 per common share (the "Share Payment Shares");
(c) Orex would issue the Cash Payment Shares and the Share Payment Shares (totaling 7.5 million common shares of Orex) to Northland upon receipt of TSX Venture Exchange approval of these amendments.

Orex has confirmed that these payments were made prior to October 21, 2013 and that as a result Orex obtained a 100% interest in the Project.

On June 11, 2015, Agnico Eagle Mines Limited ("AEM"), through its indirect, wholly-owned subsidiary Agnico Eagle Sweden AB ("AE Sweden"), acquired a 55% interest in Gunnarn Mining in consideration of an initial payment to Orex of USD 6 million. An additional USD 2 million will be payable by AE Sweden, or by AEM on AE Sweden's behalf, to Orex in cash or common shares of AEM at AE Sweden's election on each of the first and second anniversaries of the closing of the transaction.

As part of the transaction and in accordance with the terms of a joint venture agreement dated June 11, 2015 (the "JVA") between Orex, Gunnarn Mining, AEM and AE Sweden, AE Sweden has committed to spend USD 7 million on Project expenditures over three years. Pursuant to the JVA, if AEM or AE Sweden prepares a pre-feasibility study on the Project and contributes it to Gunnarn Mining, AE Sweden's interest in Gunnarn Mining will increase to 70% and Orex's interest in Gunnarn Mining will be reduced to 30%. Until such pre-feasibility study is contributed to Gunnarn Mining by AEM or AE Sweden, all costs and expenses of Gunnarn Mining will be for the account of AE Sweden and, following the completion of such pre-feasibility study, all costs and expenses of Gunnarn Mining will be shared by AE Sweden and Orex in accordance with their proportionate interest in Gunnarn Mining.

Pursuant to the transaction, Orex was also granted a 2% NSR on production from the Project, which may be repurchased by AEM at any time for USD 5 million.

4.6 Permits

Before exploration work begins, the permit holder must set up a working plan (plan of operations). The plan shall contain a description of the work planned, a timetable, and an assessment of the impact on private rights and public interests. The plan shall be communicated to the landowners, the holder of any special right who is affected, the municipality and the county administrative board. The plan shall be concurrently submitted to the Mining Inspector. If the exploration work is to be performed in a reindeer herding district, a valid plan of operations must also be sent to Sametinget (the Sami Parliament).

A working plan will enter into force if there are no objections, or, if the applicant and objecting party can agree on a plan. Objections to the contents of the plan shall be made in writing and shall reach the permit holder within three weeks of the plan being served. If the applicant and objecting party cannot agree, the matter can be tried by the Mining Inspector, who can set up the conditions of the exploration work.

The time period for obtaining a plan of operations is normally less than six weeks. Airborne surveys and other non-surface disturbance activities do not require a formal plan or individual landowner contact but must be posted in a local newspaper or filed with the news service.

The explorer shall submit security for compensation of damage and encroachment from exploration work. Before any work can commence the sum of security must be guaranteed. Such compensation is set by guidelines established by the Mining Inspectorates Office. In the case of Barsele, compensation is generally awarded to the landowners for any timber or seedlings that are damaged or removed during drilling and trenching operations. The amount of compensation is considered nominal.

4.7 Environment

To the extent known, the Barsele Project is in compliance with the Swedish environmental regulations and standards and has no environmental liabilities. All Canadian based mining companies and exploration professionals are expected by the public and their professional associations to use best practices to ensure minimal damage to the environment.

Migratory trails and resting places for reindeers are present in the exploration permits and exploitation concession Knr2 and pass near exploitation concession Knr1 (Fig. 4.3). Reindeer herding is a traditional way of life for some of the Sami people.

AEM and the Sami village council hold meetings when necessary and have been working together in the best interest of both.

InnovExplo's opinion is that the relation between Sami citizens and AEM is good.

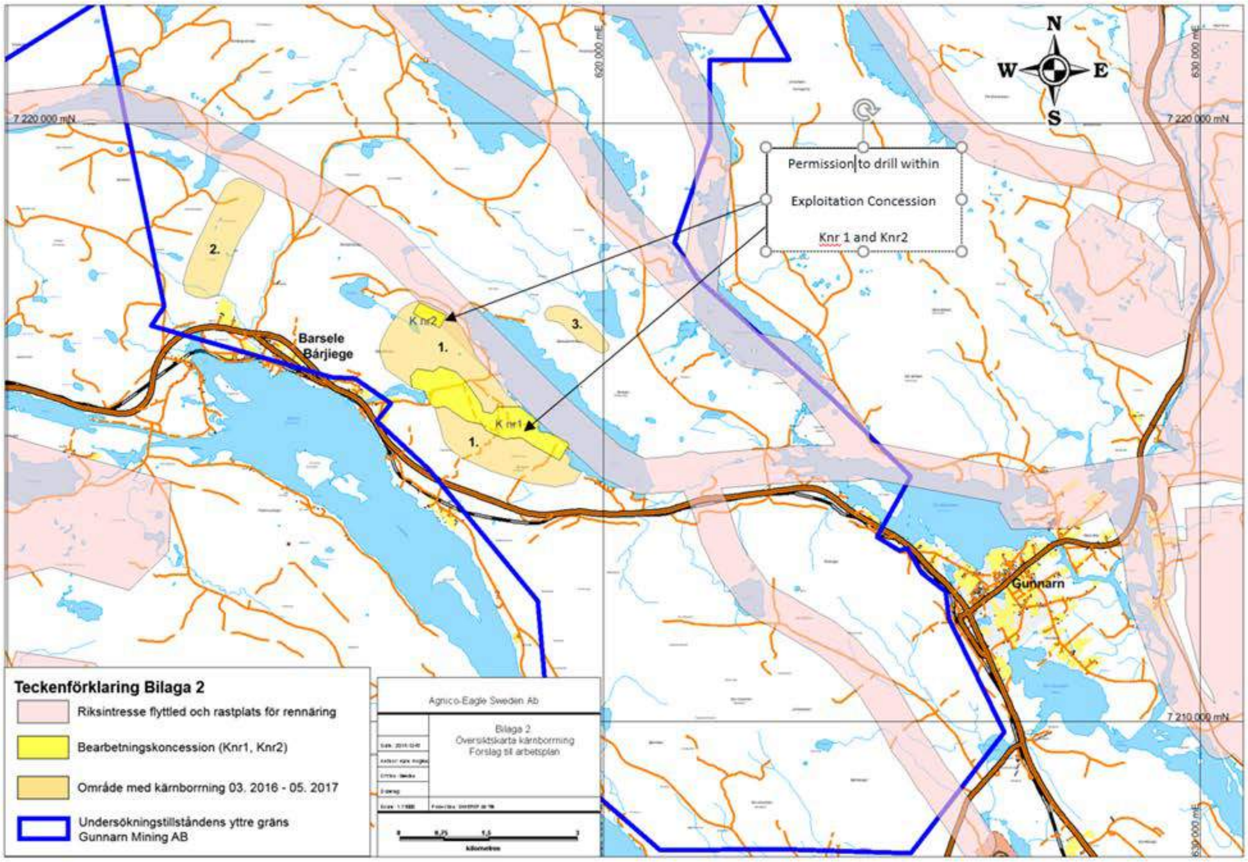


Figure 4.3 – Paths and resting places used by reindeers on the Barsele Project (Agnico Eagle and Barsele, 2017)

4.8 Comments on Item 4

InnovExplo is not aware of any other significant factors and risks that may affect access, ownership, or the right or ability to perform the proposed work program on the Property.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

Access from the town of Storuman (population 2,200) to the village of Barsele is via Highway E-12 (20 km east-southeast; Figure 5.1), where a secondary road to the east leads to the project area (2 km). Highway E-12 is a principal transnational corridor linking Mo i Rana on the west coast of Norway to Umeå in Sweden on the Gulf of Bothnia where there is a ferry service to Vaasa in Finland. The project area is crossed by several forestry and drill access roads.

There are regularly scheduled flights from Stockholm's Arlanda international airport to the nearby cities of Lycksele (80 km to the southeast), Umea (210 km to the southeast) and Luleå (315 km to the east). Although operational, there are no longer regularly scheduled flights to Storuman's Gunnarn Airport. This airport is 12 km southeast of the property (modified from Giroux et al., 2015).

5.2 Climate

The region of Barsele experiences a continental subarctic climate according to the Köppen-Geiger climate classification. The climate is characterized by a long cold winter season with short clear days and little precipitation. Summers are short and cool to mild. Climate data from the nearest weather station in Forsvick (10 km west), indicate that daily average temperatures range from -13 °C in January to 13 °C in July (Weatherbase, 2017). The average amount of precipitation for the year in Forsvick is 485 millimetres. The month with the most precipitation on average is July with 76.2 millimetres. The month with the least precipitation on average is February with an average 20.3 millimetres. Despite the region's northern latitude, the climate is relatively mild compared to other places of similar latitude due to the warming effect of the Gulf Stream. Snow cover is from mid-November to early-May with highest average in February and March with 57 and 56 centimetres, respectively (SMHI, 2017).

Exploration work can be performed year around except for spring thaw during late April. There is some limitation to field work in the winter when daylight hours are diminished (between 4 to 4.5 h in December) but drilling can continue throughout the winter. There are a number of operating mines in the region that maintain full production throughout the year.

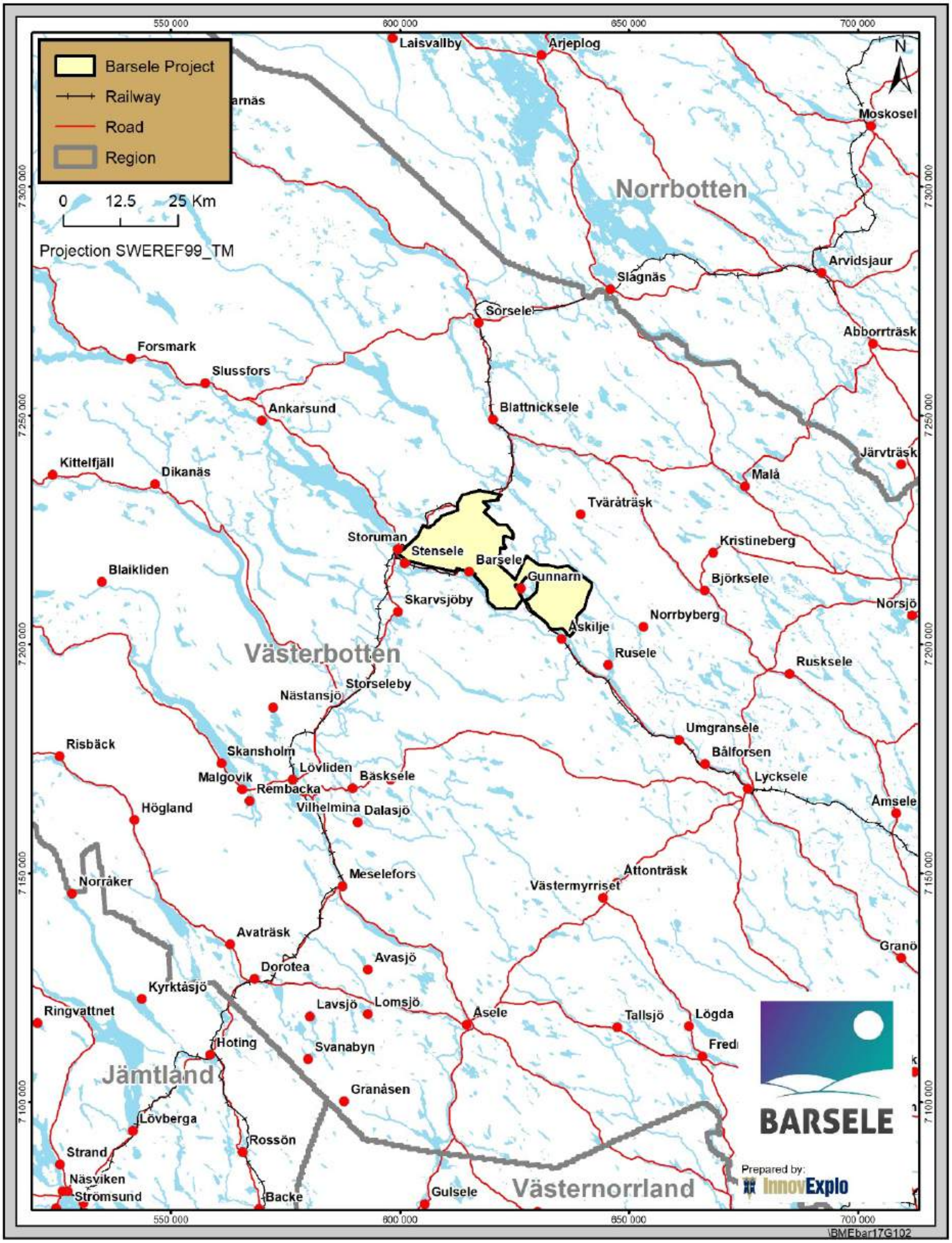


Figure 5.1 – Topography and accessibility of the Barsele Project and surrounding region

5.3 Local Resources

The towns of Storuman and Lycksele (1-hour drive southeast, population 8,500) have sufficient services to accommodate mineral exploration and development programs. Storuman is at the crossroads of two major highways, E-12 and E-45, and both towns have regular scheduled freight, bus and rail service. The town of Storuman has hotels, restaurants and other support services and lies only 20 kilometres away from the main working area. The SGU has a regional office in the town of Malå approximately 100 kilometres drive east of the Project (Giroux et al., 2015). Furthermore, ALS Minerals operates a commercial sample preparation laboratory Malå and MS-Analytical operates one in Storuman. The region has a couple of active gold and base metal mines and therefore has a ready supply of experienced mine and mill workers.

5.4 Infrastructure

A major high-voltage electrical transmission line runs through the Avan and Norra project area. Hydroelectric power is generated locally in Storuman at the Grundfors hydroelectrical power plant, located 10 kilometres southeast of the Project. Hydroelectric power in the region is considered relatively inexpensive for commercial use.

There is enough space on the property for a future tailings management facility and ancillary infrastructure. There is ample water for processing.

5.5 Physiography

The Barsele Project has an extensive cover of Pleistocene glacial sediments ranging from 0 to 20 metres thick, but mostly under 10 metres deep (Fig. 5.2). Outcrops are scarce (less than 10%) and are limited to ridges and deeply incised drainage channels (Giroux et al., 2015). Most of the area is covered by mixed forests of pine, spruce, alder and birch with sporadic clearings of low-growing shrubs and bushes. About 50% of the area has been logged and is actively managed for silviculture.

The overall trend of the low ridges in the area is NW-SE with maximum peak elevations of about 570 masl. The lake near the exploitation concession is at 290 masl. The elevation of major lakes on the Property varies between about 360 and 270 masl. Drainage is toward the southeast and part of the Umeälven drainage basin.

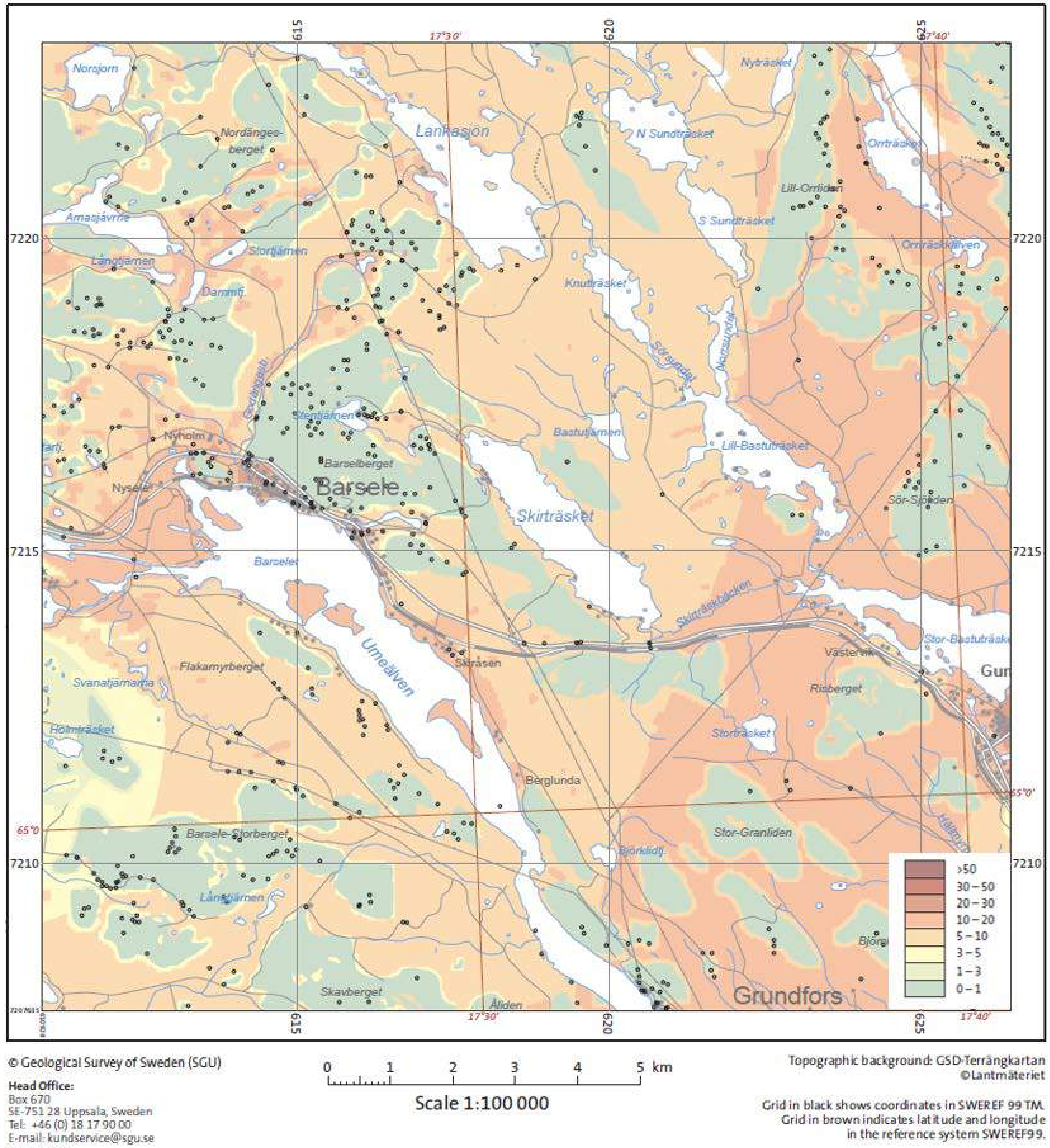


Figure 5.2 – Thickness of surficial deposits over bedrock (SGU, 2017)

6 HISTORY

The following information on the history of the Barsele Project area is mostly taken from two technical reports: Giroux et al. (2015) and Barry et al. (2006).

All mineral exploration in Sweden was State-controlled prior to 1993. Systematic exploration started in 1920 in the valley of the Skellefteå River. The world-class Boliden polymetallic deposit was discovered shortly afterwards in 1924. The Boliden deposit produced some 4 Moz of gold from ore averaging 15 g/t Au. The gold at Boliden is combined with significant quantities of copper, zinc and silver (Sunblad, 2003).

In 1980, two geologists, Christer Löfgren and Stephan Bååth founded Terra Mining and initiated a countywide, reconnaissance, geochemical till sampling program focused primarily on gold. In 1983, Terra's exploration culminated with the discovery of the Björkdal gold deposit. Terra required project financing to bring Björkdal into production, and in 1985 Norsk Hydro became a major shareholder together with Svetab, the latter evolved into Euroventures Nordica in 1986. Björkdal which is located 150 kilometres east of Barsele went into commercial production in 1988 and became Europe's largest gold mine during the 1990s.

6.1 1981 Exploration Program – Swedish Geological Survey

The earliest recorded exploration in the Barsele area was in 1981, six holes for a total length of 695 metres were drilled. The owner of the property at that time is not known by InnovExplo (possibly Terra Mining). In 1986, the SGU (Sweden's geological survey) completed two drill holes on the Tattartjärnliden prospect.

6.2 1988-1998 – Terra Mining

By 1988, Terra's regional till sampling program at Barsele had identified anomalous gold concentrations both in surface and basal till. In 1989, drilling of till anomalies identified bedrock gold mineralization in what later became known as the "Barsele Central Zone".

Terra completed increasingly more detailed till-geochemistry surveys culminating in the discovery of an additional six mineralized occurrences by 1995 established by follow-up drilling. Between 1989 and 1998, Terra collected a total of 10,533 soil samples on ground now covered by the Barsele group of exploration concessions. In an area extensively mantled with glacial till, none of the new discoveries were exposed at the surface. Terra excavated trenches at the Norra, Avan and Central zones exposing the bedrock and providing valuable information on the style of mineralization and controlling structures.

Terra followed up these encouraging exploration results by drill-testing priority targets within geochemical anomalous zones. From 1989 to 1997, Terra contracted the drilling of 319 diamond and reverse circulation (RC) percussion drill holes for a total of 28,876 metres, which led to the delineation of the Norra, Avan, Central, Skiråsen, Skirträskbacken and Risberget zones. During this time, Terra also completed preliminary metallurgical testing and resource estimations.

In 1995, Terra contracted Anamet Services to conduct mineralogical and preliminary metallurgical testwork on a 1-tonne bulk sample of mineralized rock excavated from a trench in the northwestern part of the Central Zone (Reynolds, 1996).

In 1998, Terra Mining calculated a resource estimation for the Central, Norra, Avan and Skiråsen zones based on 6,616 metres of percussion drilling and 11,721 metres of core drilling (Pearson, 1998). The estimated resource based on a cutoff grade of 0.75 g/t Au is shown in Table 6.1.

Table 6.1 – Terra Mining 1998 resource estimate (Barry et al., 2006).

Category	Zones	Tonnes (millions)	Grade (g/t Au)	Contained (oz)
Indicated	Central, Norra and Avan	3.56	1.8	207,000
Inferred	Central and Skiråsen	5.92	1.8	342,000

These "resources" are historical in nature and should not be relied upon. They predated NI 43-101 and CIM Definition Standards, and more drilling and geological information have become available since the estimate. Additionally, assumptions used to determine cut-off grades have likely changed since that time. Consequently, these "resources" cannot be considered as current. They are included in this section for illustrative purposes only and should not be disclosed out of context.

In 1998, Terra Mining ceased trading after their unfavourable assessment of the potential economic viability of mining low-grade gold resources during a sustained and significant period of lower gold prices. In the same year, a British resource company called William Resources Ltd, together with Dormant Properties AB and International Gold Exploration AB, acquired all of Terra's assets. Williams Resources did not carry out any further exploration work.

6.3 2003-2004 – MinMet

In 2003, MinMet acquired all of Terra's former assets, including the Björkdal gold mine and the Barsele gold project. In 2003, MinMet drilled seven holes at Barsele, four in the Central Zone and three in the Norra Zone, for a total of 1,045 metres. At the time, there had been no drilling at the Norra Zone since 1994. Boliden was contracted by MinMet to carry out a combined total field magnetic and electromagnetic survey (EM) over the Norra Zone. The magnetic survey covered an area of 2.5 square kilometers and was completed on 51.6 kilometres of NE-SW grid lines spaced 50 metres apart. The EM survey was conducted within the same grid area on 26.7 kilometres of grid lines spaced 100 metres apart. The surveys generated 1,362 EM survey points and 2,632 magnetic survey points.

6.4 2004-2010 – Northland Resources Inc.

On November 3, 2004, Northland Resources entered into two option agreements to separately acquire 60% interests in the Barsele and contiguous Norra gold projects. At the annual general meeting of North American Gold held on July 12, 2005, the shareholders approved a change of the company's name to Northland Resources Inc. (for simplicity, this section uses the name "Northland" regardless of the date of the work). On May 10, 2006, Northland acquired a 100% equity control of the Barsele Gold Property.

Working under a “Heads of Agreement”, Northland drilled 30 diamond drill holes totalling 4,988 metres on the Barsele and Norra projects during the 2004 field season. Of the 30 holes, 10 predominantly infill diamond-core holes were drilled in the Central Zone, 17 targeted the westward strike-extension of mineralization in the Norra Zone, and the final three tested the Skiråsen Zone. In 2004, a total 2,311 metres of core were drilled in the Central and Skiråsen zones and 2,677 metres were drilled in the Norra Zone.
In addition to drilling, Northland contracted Boliden to conduct a Mise-à-la-Masse (downhole conductivity/resistivity) survey on four Norra drill holes, a gravity survey north of the Norra deposit and an IP survey in the Risberget area. Geovista, a Swedish geophysical team, completed a comprehensive geophysical interpretation using regional, private and public geophysical information.

In 2005, Northland drilled 21 holes on the Barsele Project. Thirteen in-fill holes were drilled on the Central Zone for a total of 2,447 metres; six of these were reverse circulation and the other seven were 76-millimetre diameter core holes. Eight additional core holes totalling 862 metres were drilled at Norra to test the westward extension of mineralization.

Two Northland resource estimates were prepared by Bart Stryhas in 2005 and 2006. Both were audited by CAM who reported that they were compliant with NI 43-101 and published them in two separate 43-101 reports dated April 15, 2005 and April 12, 2006 (Barry et al., 2006).

Tables 6.2 and 6.3 provide a breakdown of the April 2006 resource estimate by category.

Table 6.2 – Northland 2006 indicated resource estimate for the Barsele-Norra Project at a cut-off of 0.8 g/t Au.

Barsele Project Indicated Resources			
Zone	Indicated Resources		
	Tonnes	Grade Au g/t	Contained Onces
Norra	193,038	2.90	17,987
Avan	1,306,125	1.49	62,701
Central	4,531,872	1.79	261,246
Skiråsen	534,147	1.50	25,815
Barsele/Norra	6,565,182	1.74	367,749

Table 6.3 – Northland 2006 inferred resource estimate for the Barsele-Norra Project at a cut-off of 0.8 g/t Au.

Barsele Project Inferred Resources			
Zone	Inferred Resources		
	Tonnes	Grade Au g/t	Contained Onces
Norra	61,487	2.76	5,451
Avan	2,629,699	1.61	136,458
Central	3,549,812	1.76	200,411
Skiråsen	1,190,103	1.47	56,310
Barsele/Norra	7,431,101	1.67	398,630

On May 26, 2006, Northland acquired a 100% interest in the combined Barsele and Norra projects. Golder and Associates completed the Barsele environmental impact statement (MKB) and submitted this and other documentation on December 27, 2006 to the Mining Inspectorate and County Administration Board as part of the application process to convert the CAS (Central, Avan and Skiråsen) and Norra resource areas to exploitation concession status. The Barsele Knr1 and Knr2 concessions were subsequently awarded on June 21, 2007.

After the NI 43-101 resource estimate of April 2006, work performed by Northland included the drilling of 22 core holes in the Central Zone for a total length of 3,927 metres and seven exploration drill holes totalling 1,403 metres. The exploration holes targeted coincident magnetic anomalies and EM conductors in an area between the Norra and Avan resource areas. In addition to drilling, Northland conducted the following: trenching and a geophysical downhole conductivity survey of a high-grade gold-polymetallic quartz-sulphide occurrence in the Central Zone; a bottom of till sampling program consisting of 942 samples on outside resource targets; and reconnaissance prospecting and mapping of approximately 70 square kilometres, including the collection of 638 rock chip and float samples.

6.5 2010-2015 – Orex Minerals Inc.

On October 27, 2010, Orex Minerals Inc. ("Orex") signed a binding Letter of Intent (BLOI) to acquire a 100% interest in the Barsele Project subject to certain conditions previously described in this report. On March 22, 2011, Orex signed an agreement with Northland to purchase all of the issued and outstanding shares of Gunnarn Mining. The primary asset of Gunnarn Mining is the Barsele Project. Both agreements were approved by the regulators at the TSX Venture Exchange on April 29, 2011.

In 2011, an NI 43-101 mineral resource was calculated based on the historical data amassed before the 2011 drilling program. The resource estimate is shown in Tables 6.4 and 6.5.

Table 6.4 – 2011 43-101 mineral resource estimate for the Avan, Central and Skiråsen zones (Giroux and Thornsberry, 2011)

Au Cut-off (g/t)	Zone	Resource Category	Tonnes	Au Grade (g/t)	Contained Ounces Au
0.40	Central	Indicated	10,740,000	1.12	387,000
	Central-Skiråsen	Inferred	10,950,000	0.90	317,000
	Avan	Indicated	670,000	0.81	17,000
		Inferred	20,440,000	0.75	494,000
	TOTAL	**Indicated**	**11,410,000**	**1.10**	**404,000**
		Inferred	**31,390,000**	**0.80**	**811,000**
0.50	Central	Indicated	10,210,000	1.16	381,000
	Central-Skiråsen	Inferred	8,870,000	1.01	288,000
	Avan	Indicated	670,000	0.805	17,000
		Inferred	20,440,000	0.751	494,000
	TOTAL	**Indicated**	**10,880,000**	**1.14**	**398,000**
		Inferred	**29,310,000**	**0.83**	**782,000**
0.60	Central	Indicated	9,530,000	1.20	368,000
	Central-Skiråsen	Inferred	7,350,000	1.11	262,000
	Avan	Indicated	440,000	0.973	14,000
		Inferred	13,690,000	0.876	386,000
	TOTAL	**Indicated**	**9,970,000**	**1.19**	**382,000**
		Inferred	**21,040,000**	**0.96**	**648,000**

Table 6.5 – 2011 43-101 mineral resource estimate for the Norra Zone

Au Cut-off (g/t)	Tonnes> Cut-off (tonnes)	Grade > Cut-off							
		Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	Au Oz	Ag Oz	Cu lbs	Zn lbs
INDICATED									
0.40	140,000	2.46	27.26	0.45	0.66	11,000	123,000	1,389,000	2,037,000
0.50	120,000	2.76	28.38	0.48	0.68	11,000	109,000	1,270,000	1,799,000
0.60	110,000	3.13	30.27	0.53	0.72	11,000	107,000	1,286,000	1,746,000
INFERRED									
0.40	330,000	1.55	12.44	0.26	0.41	16,000	132,000	1,892,000	2,983,000
0.50	320,000	1.59	12.56	0.26	0.42	16,000	129,000	1,835,000	2,964,000
0.60	310,000	1.62	12.69	0.26	0.42	16,000	126,000	1,777,000	2,871,000

In May 2011, Orex completed an airborne survey covering the entire property of 31,687 hectares. The 2,159 line-kilometre airborne survey was helicopter supported with a deep-penetrating TDEM system. A magnetic survey was completed at the same time. Line spacing ranged from 100 to 200 metres. The survey was completed by SkyTEM Surveys ApS of Denmark.

From mid-August to mid-November 2011, Orex contracted Finland-based Suomen Malmi Oy ("SMOY") and Canada-based LeBel Geophysics to perform follow-up ground surveys using the results of the airborne geophysical survey. SMOY carried out the IP surveying to detect the disseminated-style mineralization of the Central, Avan and Skriåsen zones at Barsele where gold mineralization is associated with nonmagnetic intrusive rocks characterized by magnetic lows. Grid locations are shown on Figure 6.1.

VMS targets have been surveyed by LeBel Geophysics using the VLF-EM method, which proved efficient and successful in characterizing the airborne TDEM-generated VMS targets.

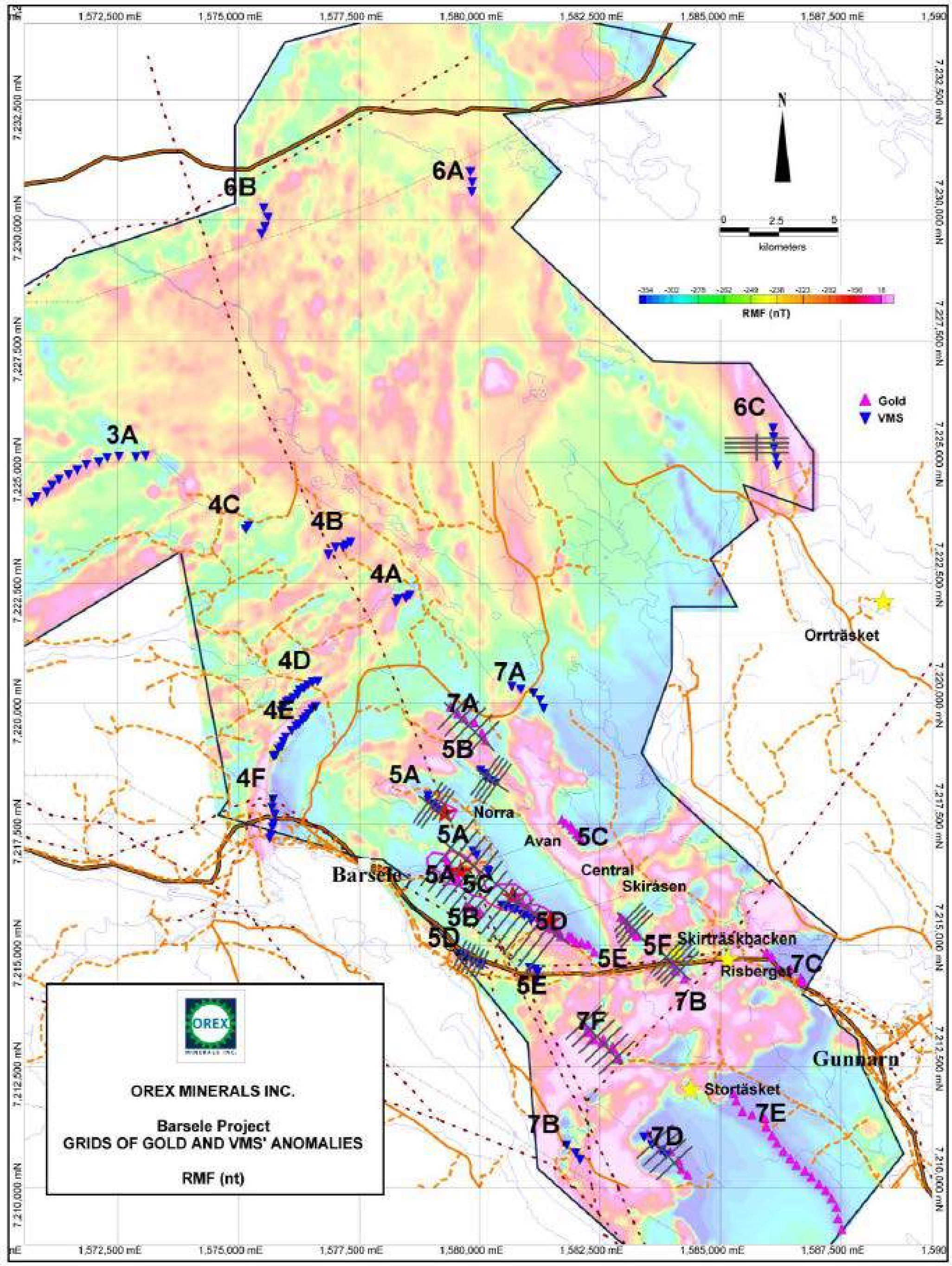


Figure 6.1 – Residual magnetic field (nT) of the Barsele 2011 airborne survey and IP grid locations with interpreted gold and VMS targets included as triangles (source: Orex Minerals Inc.)

In November 2011, Protek Norr AB of Skellefteå Sweden was retained to carry out a diamond drill program at the Barsele gold project. Orex drilled 16 diamond drill holes (NQ2-size) in 2011 and 2012. Twelve were drilled on the Central Zone (5,075 m) and four on the Avan Zone (1,136 m).

In 2012, Orex completed the following work: mapping of rock exposures using prospecting methods, locating or attempting to trace mineralized boulders, rock sampling, and relogging of drill core. The Tattartjärnliden, Näsvattnet and two other target areas generated by the airborne geophysical survey were the focus. A geologist and two summer students did the field work (Alain, et. al., 2012).

In November 2012, a new resource estimate (Table 6.6) was prepared based on the results of the 2011 drilling program (Giroux et al. 2012).

Table 6.7 shows a summary of the historical diamond drilling exploration work since 1981.

Table 6.6 – Summary of the 2012 mineral resource estimates for the Avan, Central and Skiråsen gold zones

Au Cut-off (g/t)	Zone	Resource Category	Tonnes	Au Grade (g/t)	Contained Ounces Au
0.4	Central	Indicated	15,500,000	1.13	563,000
	Central-Skiråsen	Inferred	14,390,000	0.89	413,000
	Avan	Indicated	830,000	0.77	21,000
		Inferred	19,460,000	0.69	433,000
	TOTAL	Indicated	16,470,000	1.12	595,000
		Inferred	34,180,000	0.78	862,000
0.5	Central	Indicated	14,740,000	1.16	552,000
	Central-Skiråsen	Inferred	11,890,000	0.98	376,000
	Avan	Indicated	650,000	0.87	18,000
		Inferred	14,650,000	0.77	363,000
	TOTAL	Indicated	15.390,000	1.15	570,000
		Inferred	26,540,000	0.87	739,000
0.6	Central	Indicated	13,610,000	1.22	532,000
	Central-Skiråsen	Inferred	9.840,000	1.08	340,000
	Avan	Indicated	490,000	0.97	15,000
		Inferred	10.360,000	0.86	287,000
	TOTAL	**Indicated**	**14,100,000**	**1.21**	**547,000**
		Inferred	**20,200,000**	**0.97**	**627,000**

Table 6.7 – Summary of historical diamond drilling exploration work on the Barsele Project

Year	DDH count	Length (m)
1981	6	695
1989	70	5621
1990	76	7616
1991	42	2370
1994	12	1755
1995	68	3900
1996	40	7144
1997	2	310
2003	7	1045
2004	30	4986
2005	21	3309
2006	29	5330
2011	5	1987
2012	11	4224
Total	**419**	**50,292**

6.6 2015 AEM-Barsele Minerals JVA (current)

On June 11, 2015, AEM, through AE Sweden, acquired a 55% interest in Gunnarn Mining. Pursuant to the joint venture agreement (JVA), if AEM or AE Sweden prepares a pre-feasibility study on the Project and submits it to Gunnarn Mining, AE Sweden's interest in Gunnarn Mining will increase to 70% and Orex's interest in Gunnarn Mining will be reduced to 30%.

Pursuant to the transaction, Orex was also granted a 2% NSR on production from the Project, which may be repurchased by AEM at any time for USD 5 million. Then in September 2015, Orex and Barsele completed the spin out of Orex's interest in the Barsele Project and Orex transferred its 45% interest to Barsele Minerals. All relevant work since the JVA was reached is described in items 9 and 10.

6.7 Historical Production

There has been no historical mining production on the Project.

7 GEOLOGICAL SETTING AND MINERALIZATION

The following description of regional and local geology is mostly from the reports by Bauer (2015) and Giroux et al. (2015). Other references are cited accordingly.

7.1 Regional Geology

The Barsele Project is located within Paleoproterozoic supracrustal and associated intrusive rocks of the Fennoscandian Shield (Fig. 7.1). Bedrock in the district consists of 1.96–1.86 Ga volcanic and sedimentary rocks associated to the Svecofennian domain and intrusive rocks that were deformed and metamorphosed simultaneously during the 1.96-1.86 Ga Svecokarelian orogeny (Lundström et al., 1997; Mellqvist et al., 1999; Kathol and Weihed, 2005). The Stensele district is located west of the Skellefte district (Fig. 7.2). North of the district, Paleoproterozoic and reworked Archaean rocks form the Norrbotten craton. South and east of the study area, metasedimentary rocks of the Bothnian Basin occur, and the district represents a kind of transitional zone between those two major tectonic units. The Archaean-Proterozoic boundary north of the Skellefte district has been defined by a shift in ƐNd -signature (Lundqvist et al., 1996; Wikström et al., 1996; Mellqvist et al., 1999) which coincides with a south-dipping seismic reflector interpreted as a northeast-verging thrust surface (BABEL Working Group, 1990).

The lowest stratigraphic unit in the district consists of metasedimentary and intercalated volcanic rocks of the Bothnian Supergroup (Kathol and Weihed, 2005; Skyttä et al., 2012). A metadacite in the Barsele area with an age of 1959±14 Ma (Eliasson et al., 2001) is regarded to form a part of this Supergroup. The Bothnian Supergroup forms the inferred basement to the 1.89-1.88 Ga, mainly felsic volcanic rocks of the Skellefte Group (Allen et al., 1996; Billström and Weihed, 1996; Montelius 2005; Skyttä et al., 2011). The stratigraphic thickness of the Skellefte Group volcanic rocks is approximately 3 kilometres in the northern part of the district (Allen et al., 1996). The Skellefte Group is overlain in the Skellefte district, east of the Stensele area by a 1.88- 1.87 Ga, dominantly sedimentary unit called the Vargfors Group (Allen et al., 1996). Exposure of contact relationships between both groups is generally poor but detailed studies in the Vargfors syncline suggest that varying contact relationships such as primary conformable, discordant and tectonic exist (Allen et al. 1996; Bauer et al. 2011, 2013). Metasedimentary rocks which occur immediately south of the central Skellefte district are regarded to belong to the Vargfors Group due to their similar lithologies. The transition from rocks of the Vargfors Group to metasedimentary rocks of the Bothnian Supergroup to the south of the district is somewhat arbitrarily (Kathol and Weihed, 2005).

The oldest intrusive rocks in the district are early orogenic, 1.89-1.88 Ga granitoids, diorites and gabbros, including the oldest phase (GI) of the so-called Jörn intrusive complex (Wilson et al., 1987; Gonzales Roldan, 2010; Bejgarn et al., 2012) and the Viterliden intrusion (Skyttä et al., 2011). A quartz-monzodiorite in Barsele has been dated at 1880±4 Ma (Eliasson et al., 2001), hence fitting into this group. These early orogenic rocks are suggested to be co-magmatic with the volcanic rocks of the Skellefte Group. Younger phases of intrusives are assigned to the Perthite-Monzonite suite (Witschard, 1984), which formed between 1.88 and 1.86 Ga (Bejgarn et al., 2012) and post-date the deposition of the volcanic rocks. In the south, west and in-between Skellefte and Stensele districts, the Skellefte, Vargfors and Bothnian Groups are all truncated by large intrusions of 1.82-1.78 Ga, late- to post-Svecokarelian GSDG-type (also referred to as Revsund-type) intrusive rocks of the Transscandinavian Igneous Belt (Kathol and Weihed, 2005).

Figure 7.1 – Location of the most significant mines and mining camps in Fennoscandia (Eilu, 2012)

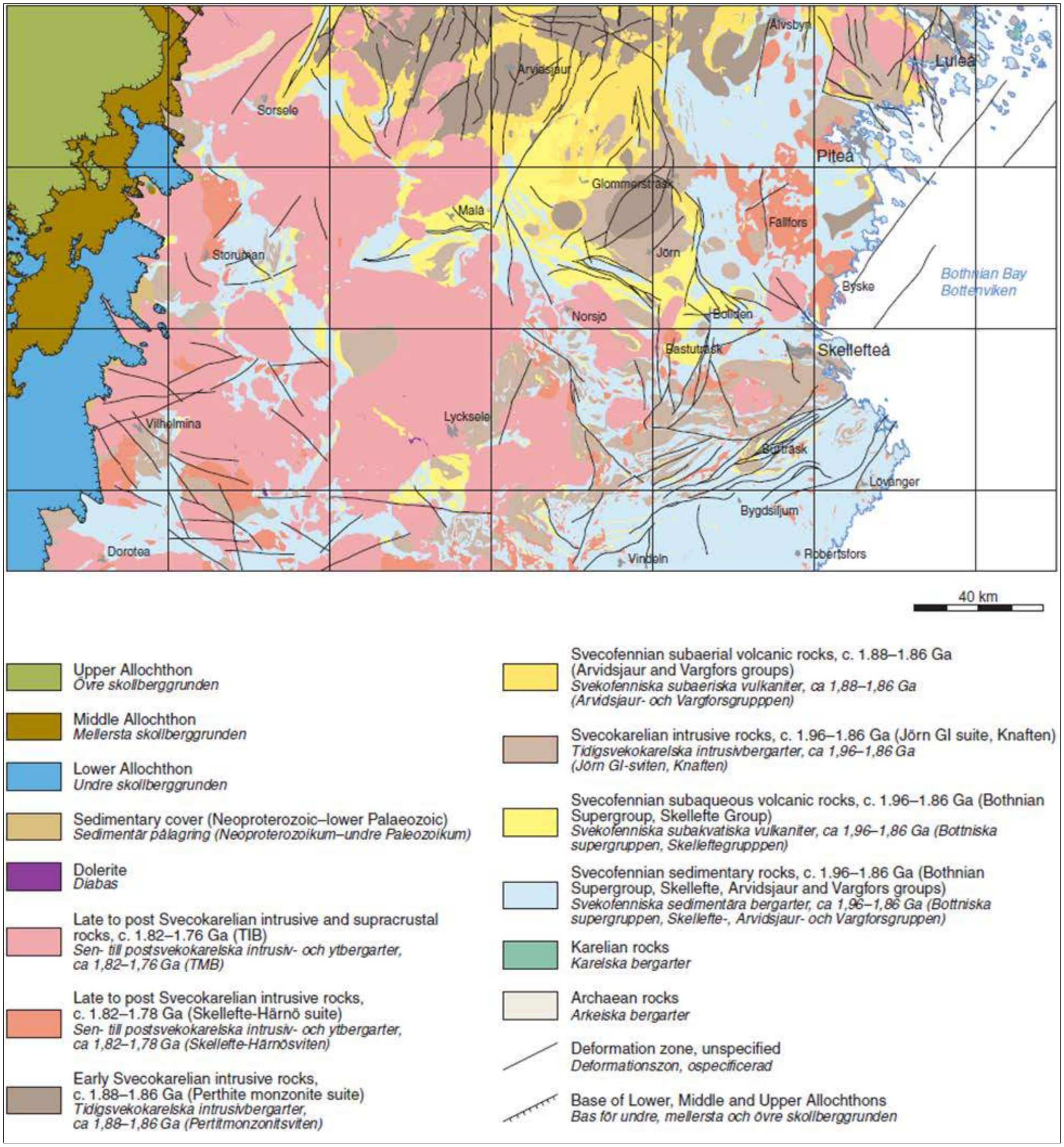


Figure 7.2 – Simplified bedrock map of the Skellefte district and surrounding areas *(Kathol et al., 2005)*

The metallogenic area of the Barsele Project is called the "Gold Line", which is the original name of a geochemical gold anomaly detected in a regional till survey in northern Västerbotten County in the late 1980s. Since then, several gold occurrences and large amounts of As-Au-mineralized boulders have been found in the area. Two mines have been in production: the Blaiken zinc-gold mine (closed in 2007) and the Svartliden gold mine, still in production and located 30 kilometres south-southeast. Most of the gold deposits in the Gold Line metallogenic area are considered orogenic gold deposits.

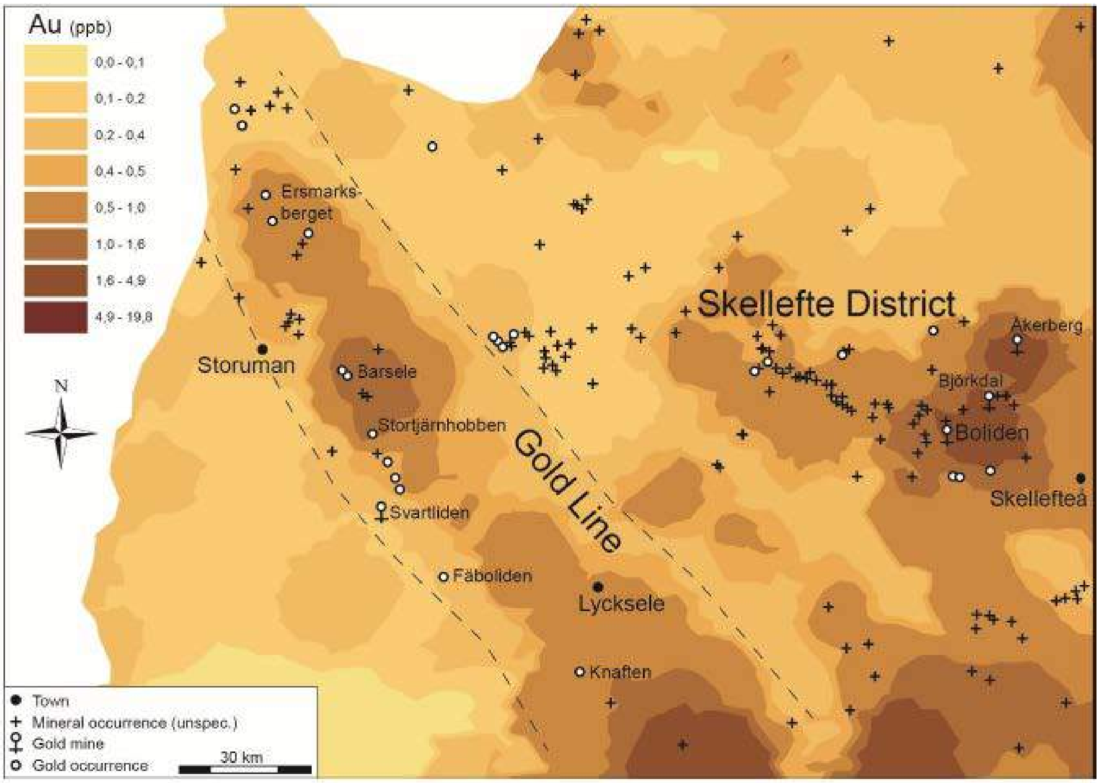


Figure 7.3 – Gold content in till overburden showing the Gold Line and Skellefte District anomalies (Bauer, 2015; modified from Bark, 2008)

The geology of the Gold Line metallogenic area consists of metasedimentary rocks and metabasalts of the Bothnian Supergroup, which was intruded by several phases of granitoids (Kathol and Weihed 2005). The metabasalts were emplaced as sills or submarine lava flows. Pillow lavas, spilites and volcanoclastic breccias are common. Granodiorites intruded at an early stage of the orogeny and were deformed with the supracrustal rocks. Late- to post-orogenic granites (Revsund-type granites) occur as large massifs in the region.

In 2005, the Svartliden gold deposit was put into production. The deposit comprises epigenetic Au and Ag in hydrothermally altered, ductile shear zones that have been metamorphosed to mid-amphibolite facies. Minerals detected in the ore include native silver, native gold, electrum, actinolite, grunerite, diopside, amphibole, pyroxene, lollingite, arsenopyrite, native bismuth and pyrrhotite (Eklund, 2007).

7.2 Barsele Project Geology

Most of the following information concerning the local geology was taken from Barry et al. (2006).

7.2.1 Lithologies

The Project area is extensively covered by glacial overburden; consequently, bedrock exposure is sporadic and limited. Geological interpretations rely heavily on drill-core data and trenches excavated in the Central, Avan and Norra zones. Outside these areas, geological interpretations are much less constrained and heavily reliant on inference from geophysical data. The area straddles the southeast-trending Umeå-River shear zone and parallels this dominant structural fabric, which controls drainage and glacial vectors.

The Project area covers a sequence of metasedimentary and volcanic rocks of the Proterozoic Svecofennian system (Figure 7.4). The volcanics are more specifically referred to as the Härnö Formation. The metasedimentary rocks consist of metamorphosed greywackes and pelites and sporadic conglomerates. The volcanic rocks of the Härnö Formation consist of felsic, intermediate and mafic volcanics, including pillow lavas and pyroclastics, probably deposited in a back-arc setting. Felsic volcanics probably represent a volcanic inlier within the Bothnian Basin, or alternatively, an outlier of the Skellefteå district.

According to Keyser (2004), there are three main phases of granitoid intrusions in the region which are referred to as early, middle and post with respect to the Svecofenian orogeny. The early orogenic granitoids are the most important from a mineralization perspective and comprise a calc-alkaline suite of predominantly tonalites with lesser volumes of granodiorite, which were emplaced prior to the main phases of Svecofennian metamorphism and deformation. An early orogenic granodiorite is the host rock of the Central Zone mineralization at Barsele. In detail, at least seven separate intrusive pulses have been identified at the Central and Avan zones including late and post-mineralization dykes.

Imaña (2016) conducted an immobile element lithogeochemistry and structural review to determine the magmatic affinity, fractionation and igneous protoliths. Figure 7.5 is based on the analysis of 11,811 samples and show the different protolith of the Skiråsen, Central and Avan region. The report concluded that the Barsele vein-hosted gold deposit is associated with several phases of a coarse- to fine-grained granodiorite intrusion. The bulk of the veins with economic interest are located within intrusive phase GD-II. A shear zone transects the GD-II granodiorite body and splits the deposit into two zones: the Central Zone to the north and the Skiråsen Zone to the south. These zones show distinct structural, geochemical and mineralogical patterns that point toward variable tectonic transposition and rotation of different parts of the system. For the Central Zone, it is conceivable that thrust faulted panels were tectonically uplifted along the hanging wall side of the shear under a hypothetical transpressional regime on a dextral strike-slip fault.

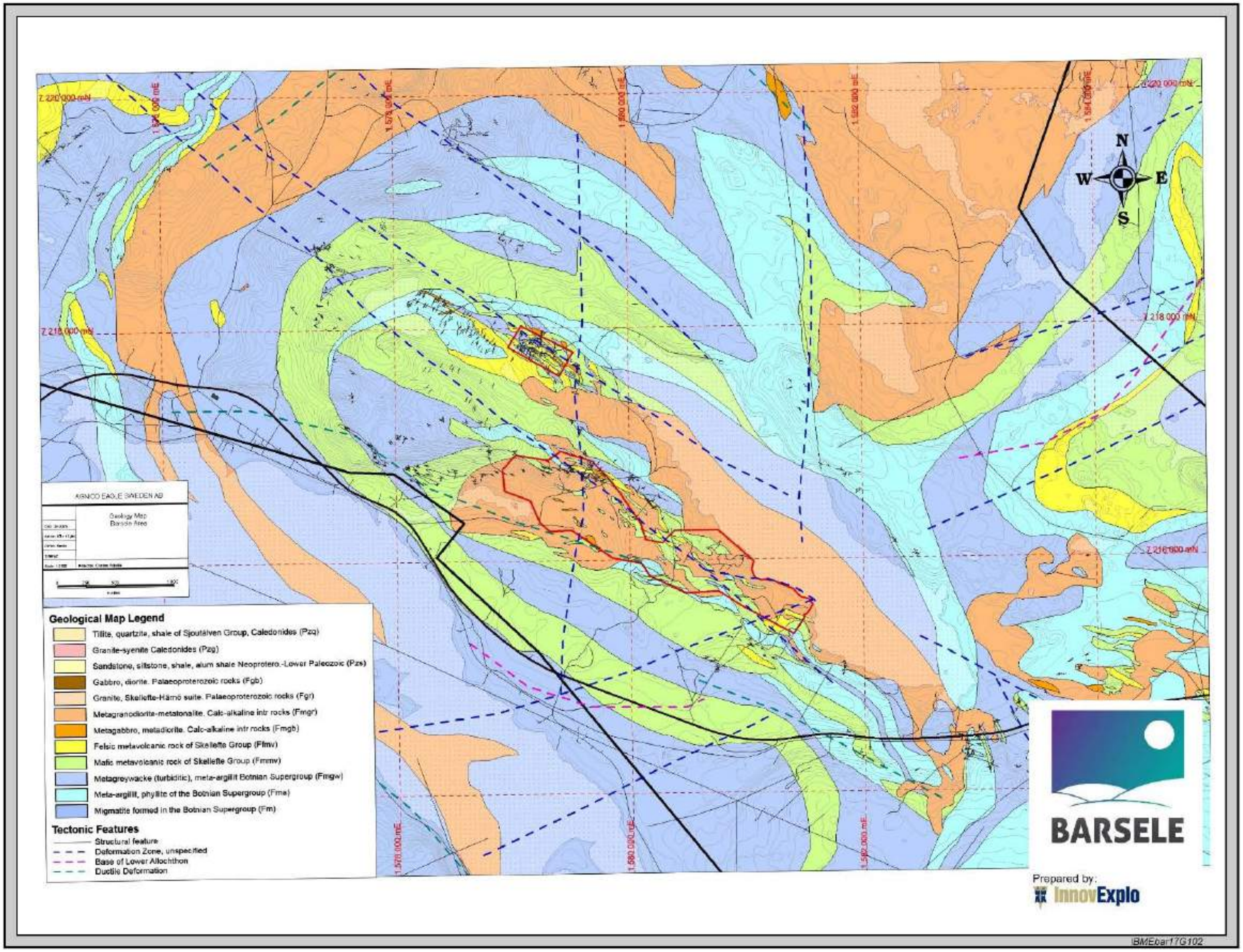


Figure 7.4 – Local geology of the Barsele Project and the surrounding area

Early veining in the deposit contains tourmaline; although this phase is not a significant carrier of gold, it is believed to represent an essential event that contributed to form favourable structural tracts via rock hardening.

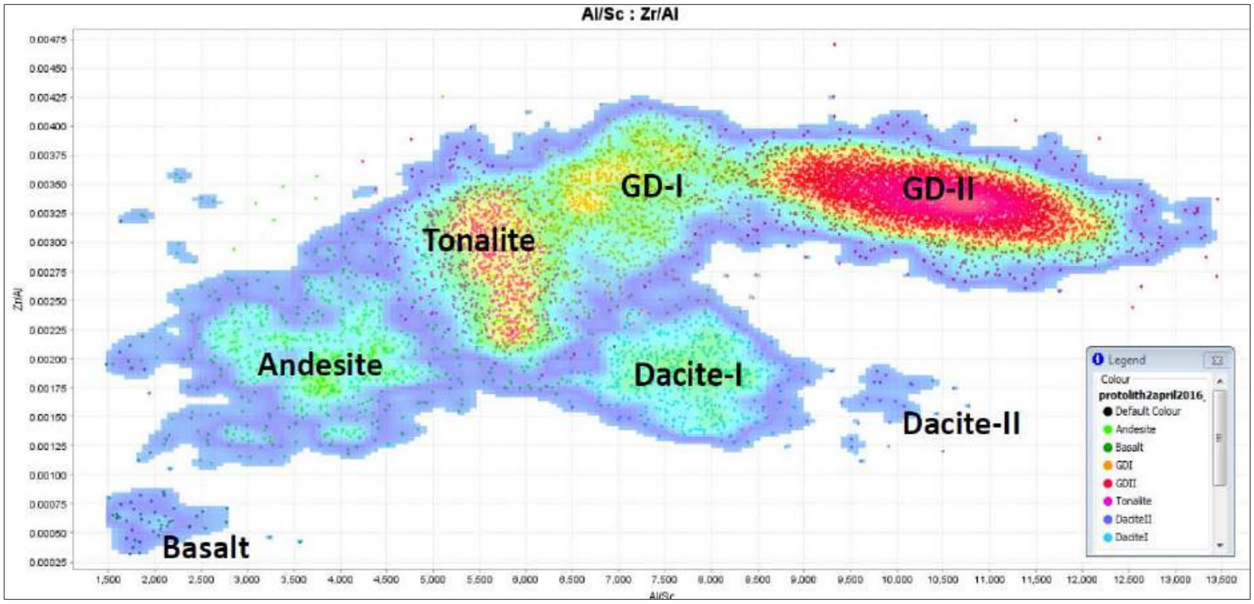


Figure 7.5 – Protolith of the Skiråsen, Central and Avan region based on 11,811 samples Imaña (2016)

The gold-rich volcanic-hosted, semi-massive to massive sulphide style of mineralization at the Norra Zone is quite distinct from the mesothermal intrusive-hosted gold mineralization of the Central and Avan zones. The Norra Zone occurs within a lens of felsic metavolcanics and pelitic sediments of the Härnö Formation. In detail at the outcrop scale, based on trenching, the lithologies consist of a WNW-trending, steeply-dipping sequence of dacitic to rhyolitic flows, felsic volcaniclastics and fine-grained tuffs. The mineralized host-lithology appears to be a quartz-phyric volcaniclastic unit. Alteration is characterized by a network of veinlets and discontinuous patches of sulphides, chlorite and carbonate. The host rock is cut by felsic and mafic intrusions which are probably sills. It is likely that intrusions range in timing from pre- to syn to post sulphide mineralization (Keyser, 2004).

At Norra, there is clear evidence that gold concentration is independent of sulphide intensity within the mineralizing system. Local lenses of dark mudstones, slates and mafic hyaloclastites probably indicate a submarine depositional environment. Late stage faults and shear zones introduce further complexity to the deposit geology.

7.2.2 Structural Elements

The latest structural geological mapping and interpretation was done by Bauer (2015). The study concluded that the Barsele mineralization was affected by poly-phase deformation and remobilization events including several phases of enrichment. An early D1 phase of crustal extension caused hydrothermal activity simultaneously with the emplacement of volcanic and related intrusive rocks. Two overprinting deformation events (D2 and D3) both re-mobilised and enriched the deposit along D2 and D3 high strain zones. (Fig. 7.6).

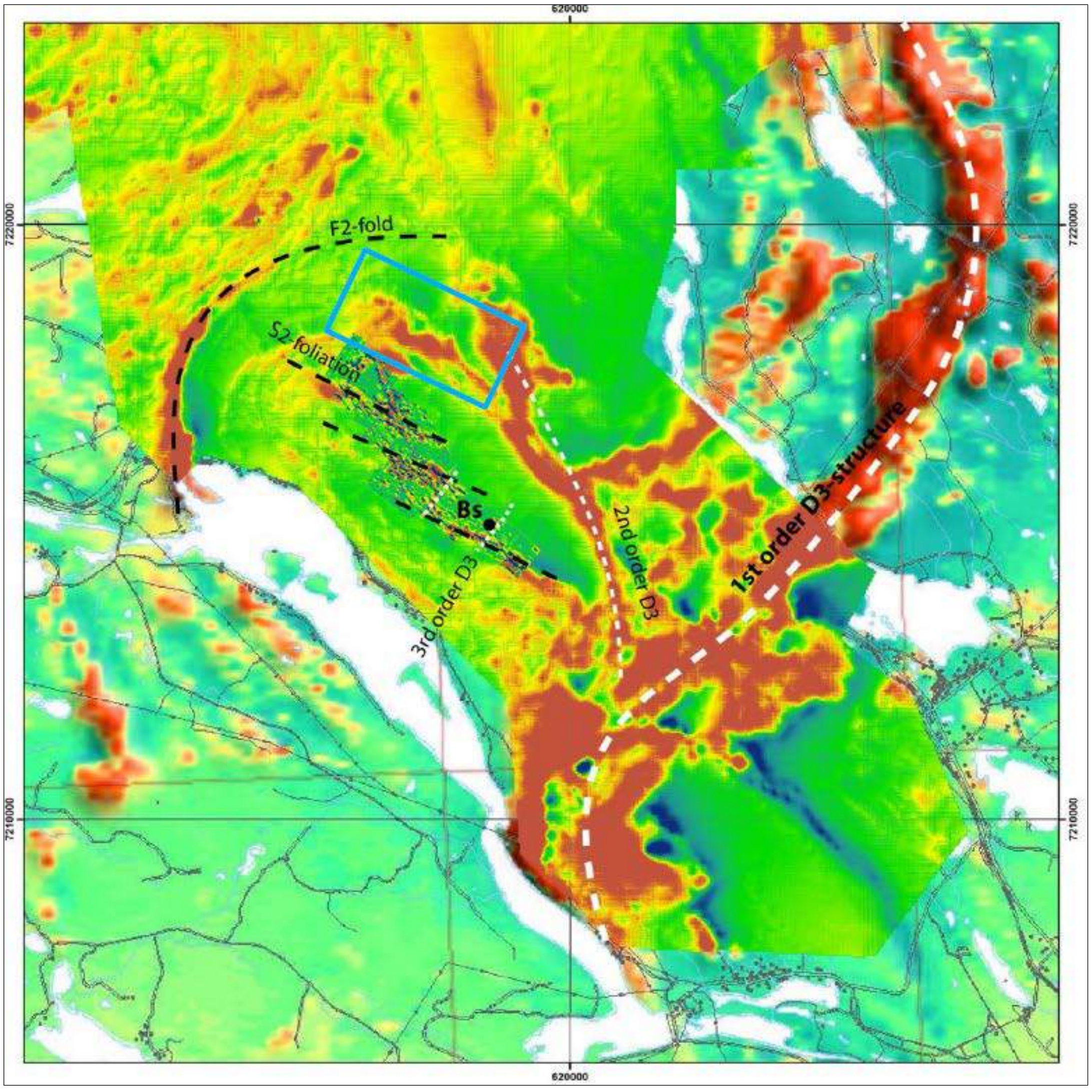


Figure 7.6 – Magnetic anomaly map of the Barsele area showing the tentative relationship between the 1st, 2nd and 3rd order D3 high strain zones (white dashed lines) and the main S2 ductile foliation (black dashed lines) and interpreted F2-folded bedding. Bs= Barsele prospect. Blue rectangle= intersection of interpreted D2 high-strain zones with lower-order D3-structures. Blue to red colours denote low to high magnetic intensity, respectively (Bauer, 2015; modified after Kathol et al., 2005)

According to Bauer and Imaña (2017), compressional deformation has triggered the reactivation of an old shear zone (S2), with brittle interconnected flat and steep fractures (S3) developed in its proximity. Brittle structures (D3) formed as flat-lying panels with reverse, SE-side up kinematics as a response on SE-NW-directed crustal shortening. The angular relation between steep quartz veins and steep fractures or shears is favoring higher gold grades. Quartz veins that form at an angle to pre-existing structures open faster than structures re-using older ones. The steeply dipping (truly tensional) veins are richer in gold than flat veins (thrust induced) veins. Early steeply dipping tourmaline veins are devoid of gold enrichment. The angular relations of quartz veins in relation to the main shear and the fractures suggest that all quartz veins formed within the dextral Riedel-system (Figure 7.7) whereas the quartz veins represent the tensile component (T). The crustal architecture of the Barsele area is the result of one ductile deformation phase (D2) and an overprinting brittle (to semi-brittle) deformation phase (D3).

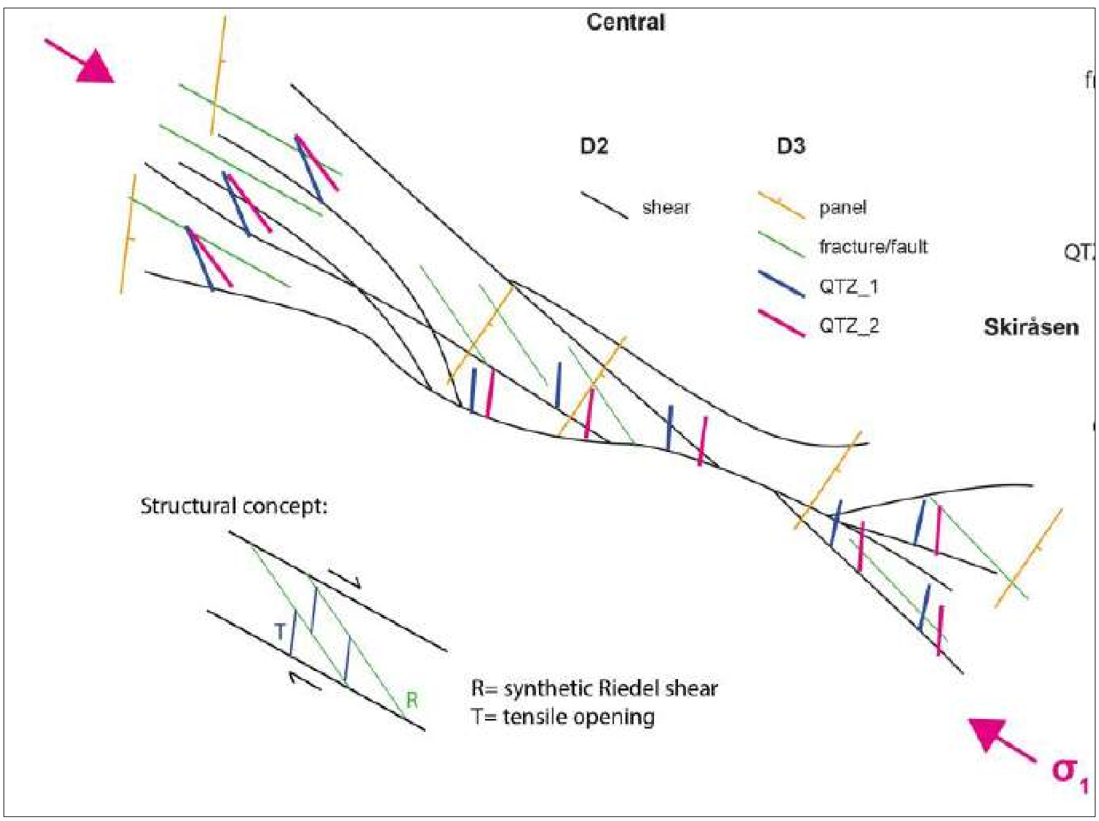


Figure 7.7 – Structural concept and the formation of a Riedel system during D3 deformation (Bauer and Imaña, 2017)

AEM's interpretation is that the intrusion is either a primary shape or the result of crustal shortening during D2 deformation (Figure 7.8). In the former case, the shear zone at Barsele has a syn-extensional D1 origin and the intrusion could have used the already existing structure for emplacement.

If the shear zone formed during D2 deformation, the shear zone could have exploited primary heterogeneities in the intrusion and the intrusion was flattened during compression. The lack of widespread penetrative deformation in the intrusion indicates that the stress was partitioned and preferentially into volcanic enclaves and Fe-Mg portions of the intrusion. The model indicates that the type of deposit for the Skiråsen, Central and Avan zones is an intrusion-hosted orogenic gold deposit.

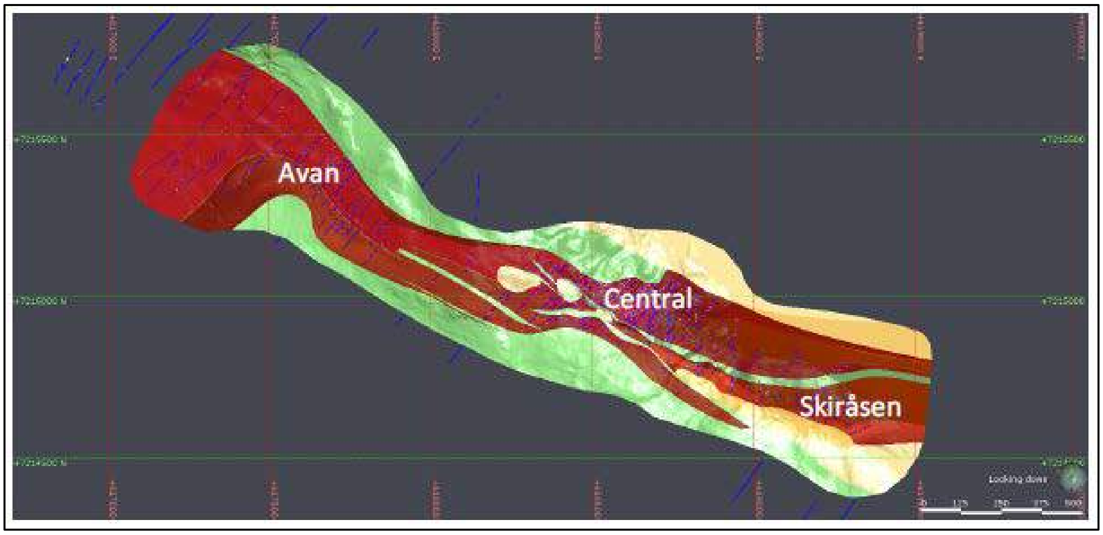


Figure 7.8 – Geological 3D model of the Skiråsen-Central-Avan zones. Based on lithogeochemical classification (Agnico Eagle and Barsele, 2017)

7.2.3 Mineralization

The following discussion is mainly from Imaña (2016) and Giroux et al. (2015) and retains the references therein. Mineralization varies among the zones on the Property. Two distinct mineralized areas have been explored on the Barsele concessions: CAS (the Central, Avan and Skiråsen zones) and Norra.

7.2.3.1 CAS (Central, Avan and Skiråsen zone)

Gold mineralization in the CAS is predominantly within the granodiorite (GD-II). The Central and Skiråsen zones have a combined strike length of 1.6 kilometres. The combined zones consist of 21 lodes (12 in Central and 9 in Skiråsen) ranging in horizontal thickness from 5 to 37 metres (average of 20 m). The lodes can be followed to a depth of 700 metres. The Avan Zone consist of 14 lodes ranging in horizontal thickness from 3.5 to 26 metres (average of 9.5 m). The lodes can be followed for 800 metres along strike and 700 metres at depth (Agnico Eagle and Orex, 2017).

The Skiråsen Zone contains rock units (GD-SK, Dacite-II and basalt) that do not occur in the Central Zone. Gold mineralization is mainly hosted by QTZ-2 and QTZ-3 veins, whereas QTZ-1 and tourmaline veins are more abundant in the Central Zone. Traces of pyrite are also more commonly observed. The panel like geometry of the vein clusters in the Central Zone is not as evident in the Skiråsen Zone. The Central Zone panels have a pattern of N025/45-55° (direction/dip) and the Skiråsen panels are N005/60-75° (direction/dip) (Imaña (2016)).

Type-1 quartz veins (Qtz-1) are associated to sulphidized altered zones (bleached zones). Type-2 quartz veins (Qtz-2) are quartz-calcite veins, variably sulphidized with chlorite halos. Type-3 quartz veins (Qtz-3) are visible gold-bearing quartz veins characterized by scarce sulphides and limited sulphidization and alteration of the host rock. They contain traces of pyrite and pyrrhotite, and fractures filled with late chlorite and calcite.

Gold occurs as native metal alloyed with silver and demonstrates a general association with arsenopyrite also occurring with pyrrhotite, calcite, chlorite and biotite. Base metal content of the deposit is typically low, although gold is seen to occur with sphalerite, galena, chalcopyrite and scheelite. Sulphide, carbonate and quartz-tourmaline veinlets are locally mineralized. The host-granodiorite contains probably less than 2% disseminated fine-grained sulphides occurring as arsenopyrite, pyrrhotite and pyrite (Barry et al., 2006).

Imaña (2016) concluded that the Barsele vein-hosted gold deposit is associated with several phases of a coarse- to fine-grained granodiorite intrusion. The bulk of the veins with economic interest are located within intrusive phase GD-II.

Early veining in the deposit contains tourmaline. Although this phase is not a significant carrier of gold, it is believed to represent an essential event that contributed to form favourable structural tracts via rock hardening. Qtz-2 type veins are also a minor gold-bearing structure.

The main gold-bearing structures are Qtz-1, Qtz-3 and Qtz-4 type veins. Enrichment of gold is at times associated with W enrichment. A moderate to strong correlation with S, Ag and As is also observed and is linked to specific vein parageneses.

The shear zone that divides the two domains (the Central and Skiråsen zones) is Au- and W-poor, but Zn- and Mn-enriched. Within the shear region, there is a superposition of relatively high grades of Sn and Bi. Thus, the shear is interpreted as having been subjected to several hydrothermal phases at different temperatures. This is most likely to have occurred as the systems cooled down after gold deposition, with telescoping events occurring along fault-shear reactivations during progressive exhumation of the region. These two zones show distinct structural, geochemical and mineralogical patterns that point toward variable tectonic transposition and rotation of different parts of the system. At the Central Zone, it is conceivable that thrust faulted panels were tectonically uplifted along the hanging wall side of the shear under a hypothetical transpressional regime on a dextral strike-slip fault.

The mineralogy, vein patterns and geochemistry at Barsele suggest that ore fluids (veins) and host rocks intrusions could be cogenetic; the lack of accessory magnetite in unaltered granodiorite and the reduced and sulphur deficient sulphide mineralogy in Au-W veins indicates a similar magmatic geochemical affinity. Furthermore, vein formation is principally hosted in GD-II and GD-I.

7.2.3.2 Norra Zone

According to Giroux et al. (2015), massive sulphide mineralization is exposed in two open trenches (14 m x 6 m) in the centre of the drilled zone. The footprint of the main mineralized body at Norra, based on drilling, is some 300 metres in strike-length varying from 5 to 50 metres in width.

The Norra prospect has a complex stratigraphy (Figure 7.9) comprising a variety of volcanic units intercalated within a succession of grey-black mudstone and thin sandstone beds (greywacke). The mudstone-sandstone succession between the volcanic units is interpreted to be marine hemipelagic mudstone with abundant, generally thin, sandstone turbidite beds. These sedimentary rocks were most likely deposited in a deep-sea environment. At the Norra prospect, the mudstone-sandstone succession contains one or more 3- to 30-metre-thick intervals with disseminated, semi-massive and locally massive pyrrhotite-sphalerite mineralization with less common chalcopyrite and galena mineralization. This mineralization is fine-grained, diffusely stratified and variably overprinted by coarser recrystallized pyrrhotite-sphalerite patches and veinlike zones. The fine-grained, massive to diffusely stratified sulphide is interpreted to be stratiform mineralization originally deposited on or just below the sea floor in a deep-water volcanically active basin. The coarser sulphide patches and veins are interpreted to be younger generations of sulphide that were formed by recrystallization and remobilization of the earlier stratiform sulphides during metamorphism and deformation (Allen, 2007).

In addition to this pyrrhotite-sphalerite mineralization, the Norra prospect also contains relics of fine-grained massive arsenopyrite with disseminated to veinlet chalcopyrite. These arsenopyrite-rich patches correspond to some of the highest gold values encountered in the Norra prospect. Furthermore, they are virtually indistinguishable from similar fine-grained arsenopyrite patches and lenses that occur in several of the VMS deposits in the nearby Skellefteå mining district (for example the Boliden, Holmtjärn and Maurliden deposits). In both the Skellefteå district and at Barsele, the patches of fine-grained arsenopyrite are overprinted by subsequent stages of mineralization and consequently appear to represent an early stage of syn-volcanic mineralization (Allen, 2007).

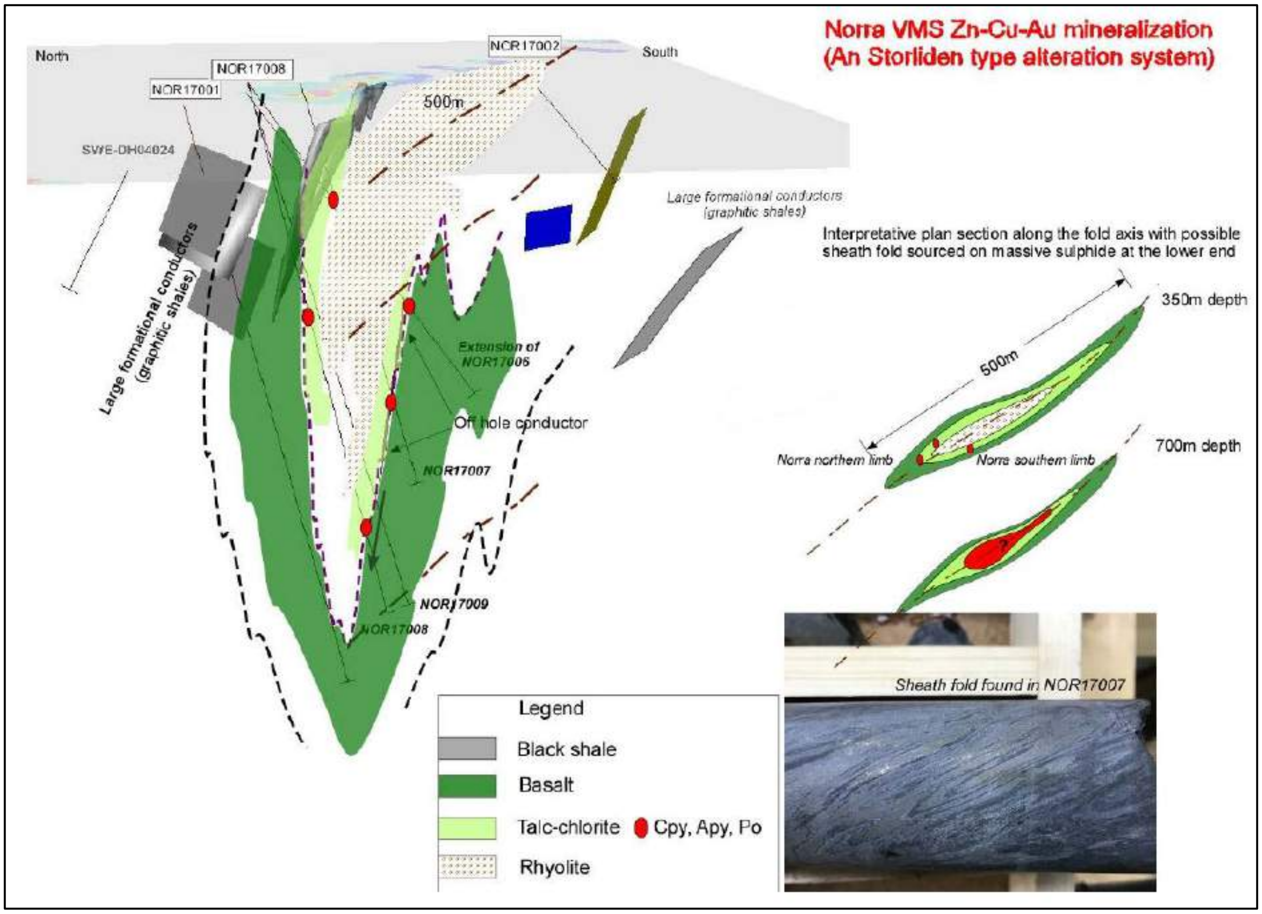


Figure 7.9 – Interpretative section on the Norra Zone (Imaña, 2017)

8 DEPOSIT TYPE

There are three styles of mineralization at the Barsele Project: 1) orogenic intrusive-hosted gold related to the Gold Line (see section 7.1); 2) epithermal gold-rich volcanogenic massive sulphides; and 3) high-grade gold-silver-lead-zinc mineralization hosted by syn-tectonic quartz-sulphide veins.

The Project, with its VMS (Norra) and gold (CAS) deposits, is located at the intersection of the Skellefteå and Gold Line metallogenic trends. Norra would be more similar to the Skellefteå deposits, which are more commonly shallow syngenetic to epithermal gold rich base-metal deposits. The CAS intrusion-hosted gold deposits and associated high-grade veins would be more similar to the Gold Line deposits, which are dominantly deeper mesothermal, structurally-controlled gold mineralization (Giroux et al., 2015).

The shallow volcanic-related Skellefteå mineralization would appear to be unrelated to the intrusive-hosted orogenic-style gold mineralization which forms at considerably deeper levels in the Earth's crust. However, the spatial coincidence of the three styles of mineralization suggests that they may represent a vertical continuum related to a 1.8 Ga igneous intrusive event (Giroux et al., 2015).

8.1 Orogenic Intrusive-Hosted Gold

Metamorphic belts are complex regions where accretion or collision has added to, or thickened, continental crust. Gold-rich deposits can be formed at all stages of orogen evolution, so that evolving metamorphic belts contain diverse gold deposit types that may be juxtaposed or overprint each other (Groves et al. 2003).

The majority of gold deposits in metamorphic terranes are located adjacent to first-order, deep-crustal fault zones, which show complex structural histories and may extend along strike for hundreds of kilometres with widths of as much as a few thousand metres (Goldfarb et al., 2005). Fluid expulsion from crustal metamorphic dehydration along such zones was driven by episodes of major pressure fluctuations during seismic events. Ores formed as simple to complex networks of gold-bearing, laminated quartz-carbonate fault-fill veins of second- and third-order shears and faults, particularly at jogs or changes in strike along the major deformation zones. Mineralization styles vary from stockworks and breccias in shallow, brittle regimes, through laminated crack-seal veins and sigmoidal vein arrays in brittle-ductile crustal regions, to replacement- and disseminated-type orebodies in deeper, ductile environments (Groves et al., 2003). Most orogenic gold deposits occur in greenschist facies rocks, but significant orebodies can be present in lower and higher grade rocks. The mineralization is syn- to late-deformation and typically post-peak metamorphism. They are typically associated with iron-carbonate alteration. Gold is largely confined to the quartz-carbonate vein network but may also be present in significant amounts within iron-rich sulphidized wall-rock selvages or within silicified and sulphide-rich replacement zones (Dubé and Gosselin, 2007). One of the key structural factors for gold mineralization emplacement is the late strike–slip movement event that reactivated earlier-formed structures within the orogeny (Goldfarb et al., 2001).

Generally, veins can be found in any of the rock types present in a given district. However, there are a number of lithological associations which are repeated at the scale of the deposits, and which are partly reflected in the geometric or hydrothermal characteristics of these. Those associations reflect variations in structural and chemical controls exerted by host lithologies on the formation of vein network (Robert, 1996).

Orogenic intrusion-hosted gold deposits occur within the Skellefteå district along the Gold Line (Fig 7.3) in Västerbotten includes a series of gold deposits, mineralized occurrences and gold targets in different geological environments loosely aligned along a regional tectonic zone that stretches from the Caledonian mountains in northwest Västerbotten through the towns of Sorsele, Storuman and Lycksele and onwards towards the Gulf of Bothnia in the southeast. This zone may potentially represent an older rift zone, the age of which could be about 2 Ga. The gold mineralization is primarily associated with arsenopyrite and pyrrhotite. The tonnage of some intrusion-hosted gold deposits can be economically significant in some deposits, such as Björkdal in the eastern part of the Skellefteå district (Barry et al., 2006).

The gold discoveries were made using classic boulder tracing, regional till sampling and then follow-up geophysical surveys and drilling. A number of gold occurrences and deposits in the Gold Line have been discovered by various companies during the past 15 years of active exploration, including: Svartliden (Dragon Mining ASX), Ersmarksberget and Svarttrask (ScanMinina AB), Knaften, Stortjärnhobben, Sandviksträsk and Fäboliden (Lappland Goldminers AB), and Barsele (Orex-Northland) (Giroux et al., 2015).

8.2 Volcanogenic Massive Sulphides

The Norra deposit is a Gold-Rich Volcanogenic Massive Sulphide (Au-VMS) deposit. The following section is slightly modified from Galley et al. (2007) and Franklin et al. (1998).

Volcanogenic massive sulphide deposits typically occur as lenses of polymetallic massive sulphide that form at or near the seafloor in submarine volcanic environments, and are classified according to base metal content, gold content, or host-rock lithology. These deposits types are discovered in submarine volcanic terranes that range in age from 3.4 Ga to actively forming deposits in modern seafloor environments. The most common feature among all types of VMS deposits is that they are formed in extensional tectonic settings, including both oceanic seafloor spreading and arc environments.

As a result of large-scale fluid flow, VMS mining districts are commonly characterized by extensive semi-conformable zones of hydrothermal alteration that intensifies into zones of discordant alteration in the immediate footwall and hanging wall of individual deposits. They form from metal-enriched fluids associated with seafloor hydrothermal convection. VMS deposits are major sources of Zn, Cu, Pb, Ag and Au.

Deposits of the copper-zinc group are within volcanic sequences that are dominated by mafic volcanic rocks, with locally volumetric felsic rocks. Felsic ash-flow tuff beds are usually prominent immediately below the deposits, and felsic domes may immediately underlie or enclose the ore.

Alteration occurs in two distinct zones. Alteration pipes occur immediately below the massive sulphide zones. The pipes are silicified and sericitized; chlorite is subordinate and is most abundant on the periphery of the pipes. Aluminosilicate minerals are prominent. Lower, semiconformable alteration zones occur several hundreds of metres or more below the massive sulphide deposits. This zone contains epidote, actinolite, and quartz.

Pyrite typically constitutes 50-90% of the massive ore, with sphalerite, chalcopyrite, and galena forming about 10%. Deposits formed in deep water contain only sphalerite and chalcopyrite as their principal ore minerals. Those that formed in shallow water contain recoverable galena. Deposits of the copper-zinc group are concordant to semi-conformable massive iron sulphide bodies, commonly underlain by stringer ore.

It is probable that a host of different ore-forming systems were active in the Skellefteå district, including the dominant VMS, epithermal and mesothermal systems. The Skellefteå district contains some 80 distinct VMS deposits and lode gold deposits. The gold contents in the Skellefteå massive sulphide ores are unusually rich in gold, and it is still uncertain whether the gold is a result of simple volcanic hydrothermal processes or if some massive to semi-massive sulphide deposits were epigenetically enriched in gold (Barry et al., 2006).

8.3 High-grade gold-silver-lead-zinc mineralization hosted by syn-tectonic quartz-sulphide veins

According to Giroux et al. (2015), the intersection of a base-metal-rich polymetallic vein associated with higher grades of gold in the western end of the Central Zone in 2006 may provide a clue as to how the VMS and orogenic styles of gold mineralization may be related.

Base metals and gold may have been remobilized during deformation after intrusion of the granodiorite. The granodiorite likely intruded into sulphide-rich shales or a massive sulphide horizon resulting from earlier volcanism. Evidence for such an interpretation are sulphide-rich argillites and felsic volcanics oriented parallel to the core axis of drill hole CNDTH06-012 (Corkery, 2007).

Drill hole logging on the Central area suggests a corresponding geological break along the geophysical anomaly near CNTDH06-012, with lithologies toward the north dominated by andesite porphyry dikes and felsic volcanics, and the south dominated by granodiorite, quartz veins and sulphide bearing metasedimentary argillites. This interpreted structural break may have acted as the main conduit or one of several major feeders for hydrothermally remobilized gold which formed the enveloping lower grade disseminated gold resource.

9 EXPLORATION

Exploration work has been conducted on the Barsele Project since June 30, 2015. The work has included till sampling, trenching, stripping, geophysical compilation, structural and environmental studies. Drilling is also underway and is covered in Item 10.

9.1 Bottom of till sampling

Bottom of till (BOT) sampling programs have been done on the Project since 2016. A total of 415 sampling sites have been sampled in that time. Figure 9.1 presents the lithogeochemical classification of the rock chips taken from the bedrock surface during BOT sampling. In 2017, AEM collected 3075 samples on 389 sites. According to AEM, it is evident from the classification of bedrock samples that the current regional map, which is mostly based on airborne geophysical data and some historical mapping, needs to be updated.

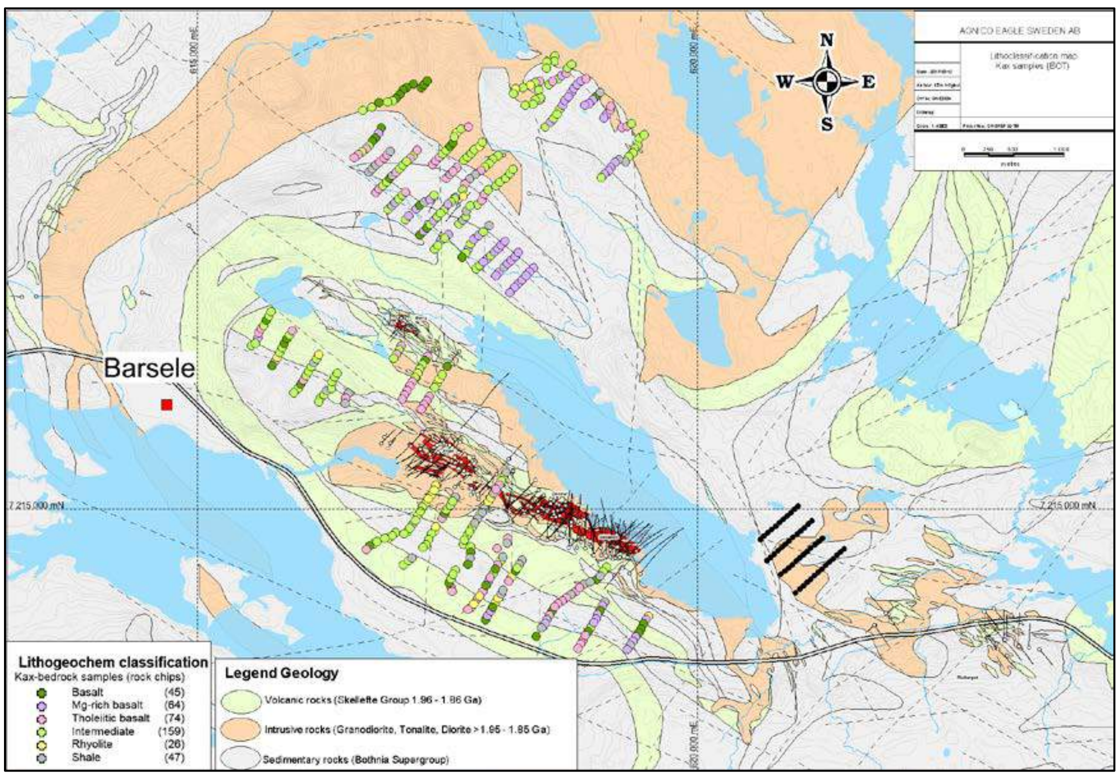


Figure 9.1 – Lithogeochemical classification according to the rock chips from the BOT sampling sites (AEM, 2017c)

9.2 Trenching

In 2015, at the request of Agnico Eagle Finland Oy, GeoVista AB carried out structural mapping and structural analysis in a newly exposed trench. The information was collected by the author of the report during a two-day visit to the site in September 29-30, 2015 (Bauer, 2015).

Mapping of the stripping involved 100 observations at 28 different observation points (Fig. 9.2). The observations related to lithologies, ductile structures, brittle structures, alteration and mineralization. The stripping surface is approximatively 330 square metres.

No lithogeochemical assays are provided in the report; the field-based mapping does not appear to have been supplemented by additional analyses. The 28 different observation points adequately cover the stripped area.

Following an interpretation of the local and regional geology, Bauer (2015) concluded that the Barsele mineralization was affected by polyphase deformation and remobilization events, including several phases of enrichment. An early D1 phase of crustal extension caused hydrothermal activity simultaneously with the emplacement of volcanic and related intrusive rocks. Two overprinting deformation events (D2 and D3) both remobilized and enriched the deposit along D2 and D3 high strain zones.

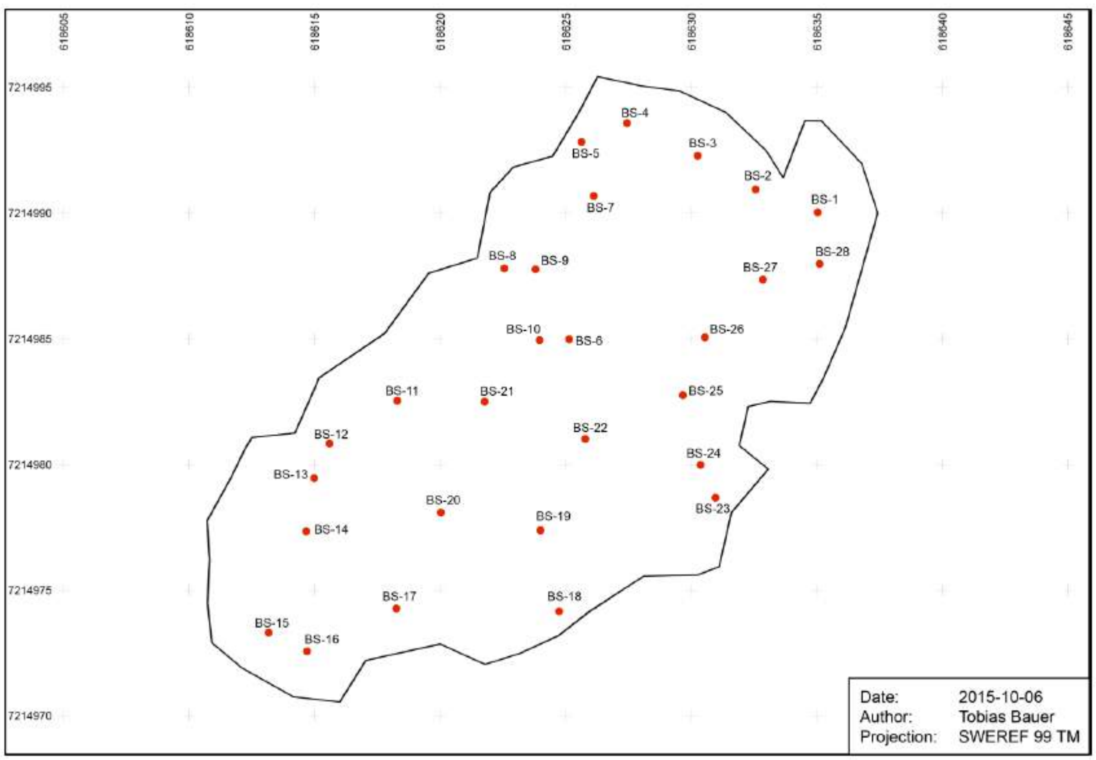


Figure 9.2 – Location of observation points on the 2015 Barsele Trench (Bauer, 2015)

Channelling followed the mapping survey. Channels were cut on a grid-like pattern (Fig 9.3). The east-west channels were spaced 5 metres apart. One channel was oriented NNE-SSW. Twenty-four discrete samples roughly follow a major NNE-SSW thrust on the trench. Channel samples were usually 1 metre long. Table 9.1 presents the channel results.

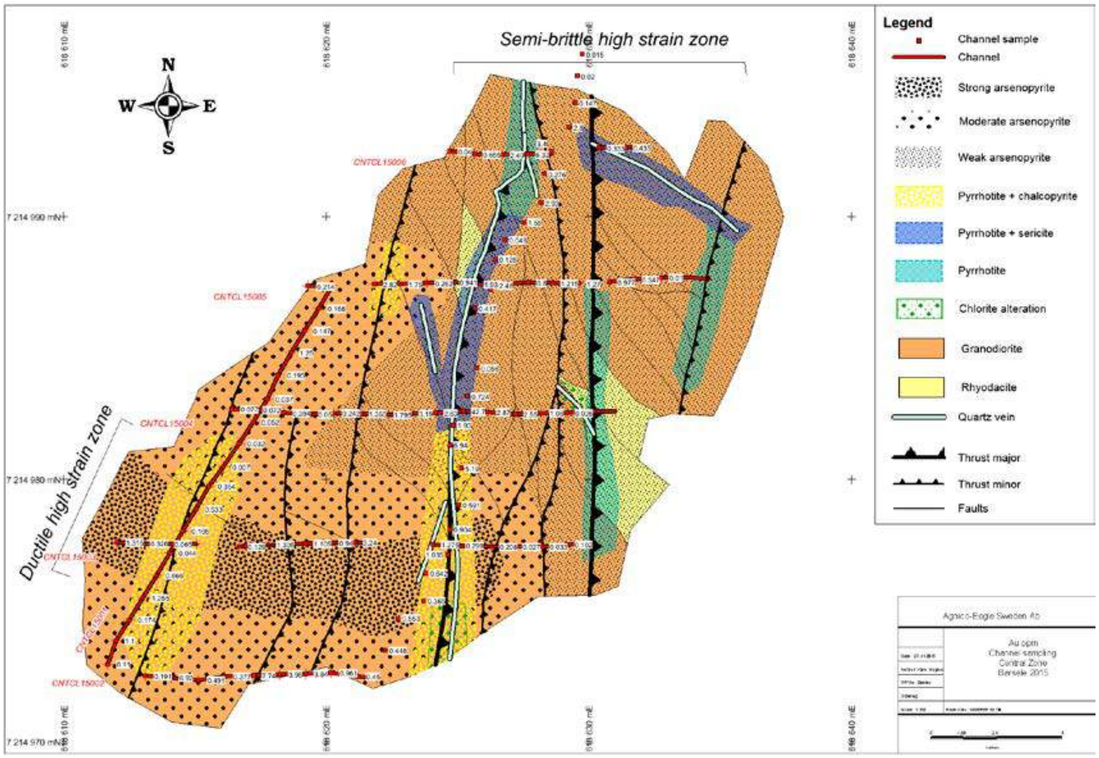


Figure 9.3 – Detailed channel sampling results in the 2015 Barsele Trench (Agnico Eagle and Barsele, 2016)

Table 9.1 – Channel sampling results from the 2015 Barsele Trench

Channel ID	Width (m)	Au ppm
CNTCL15001	17	0.37
CNTCL15002	9	2.77
CNTCL15003	17	0.51
CNTCL15004	14.8	3.99
CNTCL15005	15.3	0.99
CNTCL15006	7.4	1.36
Combined point samples N-S	23	1.38

From August to October 2017, a second trench was dug on the Central Zone oriented NW-SE, connecting to and expanding the 2015 trench (Fig. 9.4). The surface area of the trench is approximatively 670 square metres. Structural mapping of the trench was completed on October 4 by Tobias Bauer. Channel samples were sawed in N-S and W-E directions on a 5 x 5 metre line spacing. A total of 623 channel samples have been analyzed. Average gold grades by area are presented in Table 9.2.

Preliminary observations on the new trench were reported in the 2017 summary report (Agnico Eagle, 2017a). The findings indicate different structural configurations that show higher potential for fluid flow permeability. Such areas can be directly informative of the location of discrete higher-grade gold zones within the deposit. They are reactivated shears (D2) observed in bends and tensional gashes under a mini pull-apart scheme. This could also be responsible for discrete high-grade ore shoots in the Avan area. Reactivated shears (D2) were observed at the intersection of existing quartz veins. Tensional zones are present along the main D3 compressional direction.

Still, according to AEM (Agnico Eagle, 2017a), when flat-lying panels occur with high frequency they tend to release and accommodate all the stress. Therefore, suitable areas for tensional vein formation could be enhanced within areas of more widely spaced panels (low frequency) instead of densely spaced panels (high frequency). Finally, as originally thought, the intersection of all these features may have been the sites of highest permeability for fluid flow.

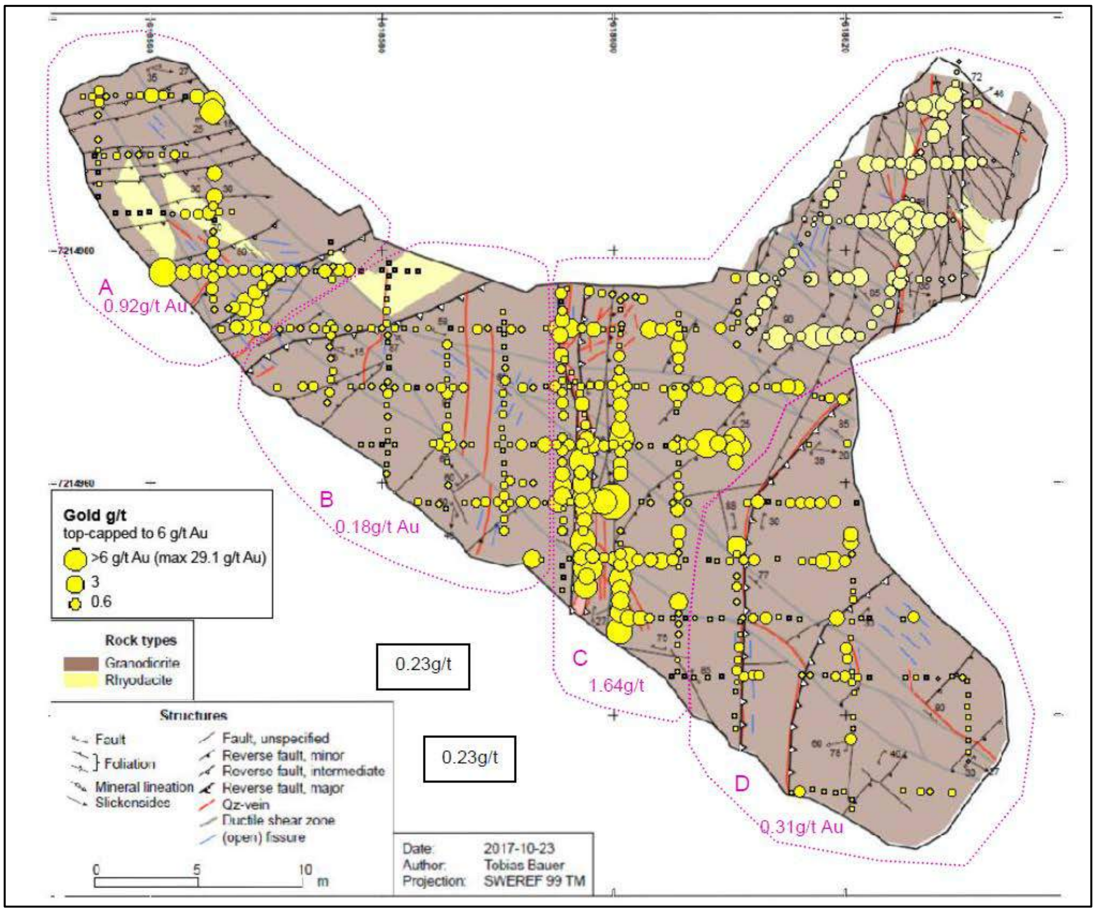


Figure 9.4 – Channel sample results (Au) showing averages for the A to D areas in the expanded 2017 Barsele Trench (Agnico Eagle, 2017c)

Table 9.2 – Average gold grades from the trench areas

Area	Average Au grade (g/t)	Num. of samples
A	0.92	88
B	0.18	134
C	1.64	291
D	0.31	110
Aver. tot.	**1.00**	**623**

9.3 Geophysics

From 2015 to February 2016, Kåre Höglund, Project Manager for Agnico Eagle Sweden, contracted GeoVista to carry out data collection, compilation, and the organization and evaluation of geophysical and other data covering the Barsele Project, followed by geophysical geointerpretation and targeting. The aim of the study was to compile and evaluate historical geophysical work by previous operators at the Barsele Project, and then identify potential mineralized targets and target areas (Isaksson et al., 2016). The major stages of the GeoVista project were:

- Data management comprising acquisition, organizing and evaluation with a clear focus on geophysical data;
- Geophysical reprocessing and geointerpretation have comprised regional to semi-regional processing and a structural and pattern interpretation with the aim to facilitate the identification of exploration targets;
- Targeting, geophysical and combined with other data; and
- Reporting.

The basic study area has been within the SkyTEM airborne geophysical survey 2011, to a large extent coinciding with the present exploration and mining licenses held by Gunnarn Exploration AB (Fig. 9.5). An extension of the area to the east (northeast from Barsele) covering major supracrustal units was decided. The processing, interpretation and targeting work has focused on the Barsele area and its immediate surroundings.

During the data compilation, 31 geophysical main data folders or 82 specific data-sets were identified, acquired, organized, compiled, documented and evaluated. The breakdown is as follows: 14 folders and 17 data-sets for geochemistry, 6 and 38 for geography, and 5 and 26 for geology. Data delivery consisted of 3,173 files in 500 folders, the majority in geophysics.

Aside from general geophysical patterns, some major structures were also identified in gravity, magnetometry and topography, dividing the Stensele district into four major tectonic units. These structures are likely important in understanding mineralization and geology in the region.

The main conclusions of the GeoVista report are:

- The Stensele district shows strong ore potential for gold and base metals and also exhibits very interesting structures with ore potential. In Sweden, the district is clearly anomalous in till geochemistry for Au, As, Zn, W and Li, and possibly Ag, Cu, Pb and Sn.
- Currently available geochemical and rock chemistry data-sets contain multi-element data that can be analyzed using multivariate statistics to better understand the metal and element relations in mineral occurrences, boulders and geochemical anomalies. Mineralization, like Norra for VMS and CAS for Au, could in this way provide statistical models and alteration indices.
- A geochemical method to test targets would be to combine bedrock surface and bottom of till sampling in profiles across a target. However, the survey profile design needs to be adapted for each target, especially if it is expected to be deep-seated.

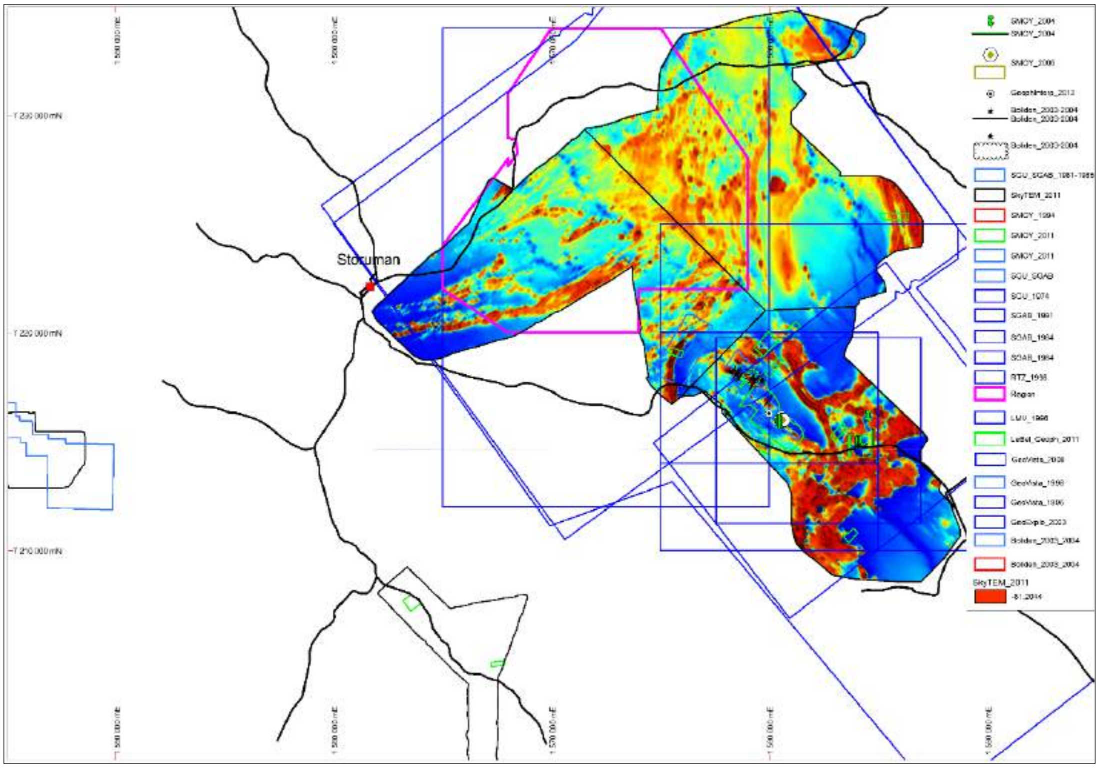


Figure 9.5 – Areas covered by Isaksson et al. (2016).

In 2016, a Titan-24 geophysical survey (IP chargeability, DC resistivity, MT resistivity) was carried over the Knr1 exploitation concession and adjacent exploration claims (Fig. 9.6). The surface covered by the survey is about 10 square kilometres. The survey was done on six parallel lines of 3,100 to 3,200 metres, oriented NNE-SSW (N32°). These lines are perpendicular to the regional trend on the Project. The MT model seems to correlate well with surface geology and the SkyTEM192m maps (Fig. 9.7).

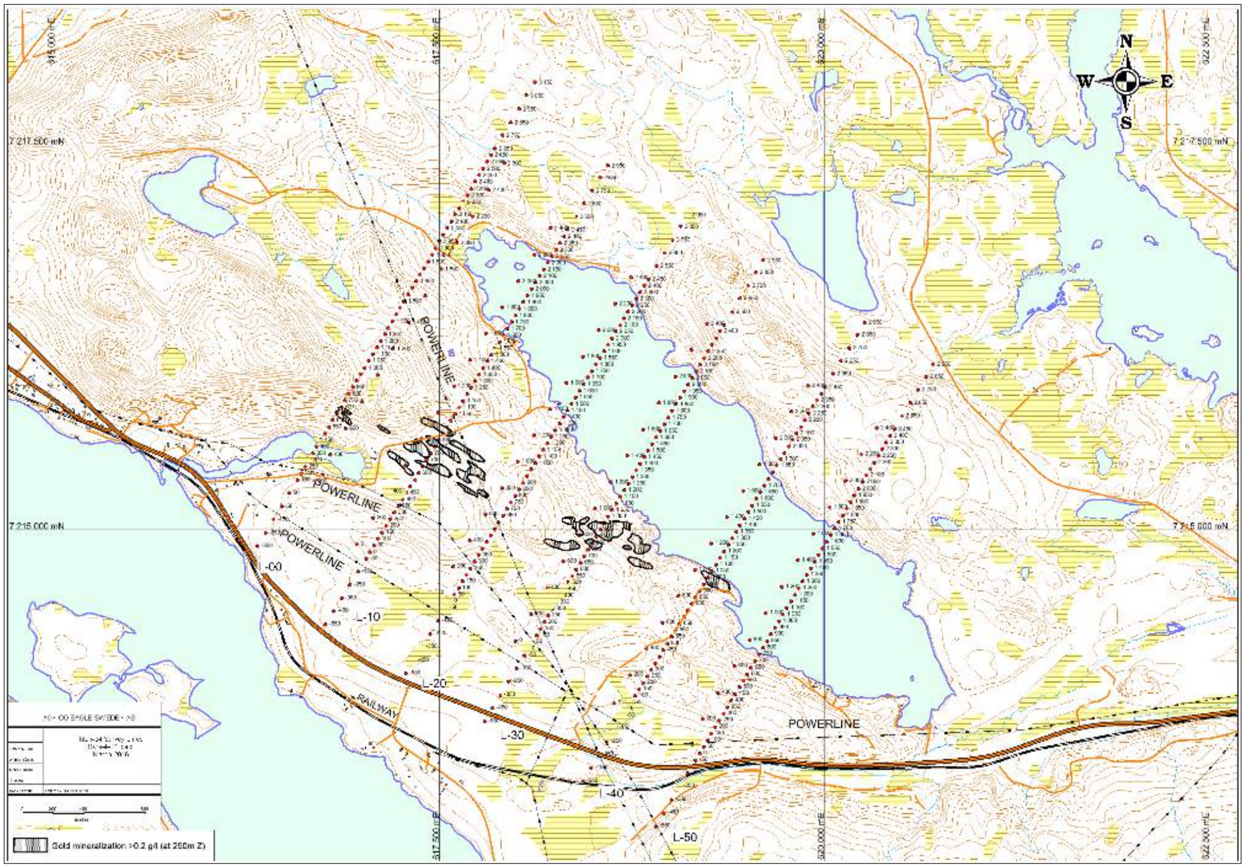


Figure 9.6 – Measurement points of the Titan-24 geophysical survey (Agnico Eagle and Barsele, 2016)

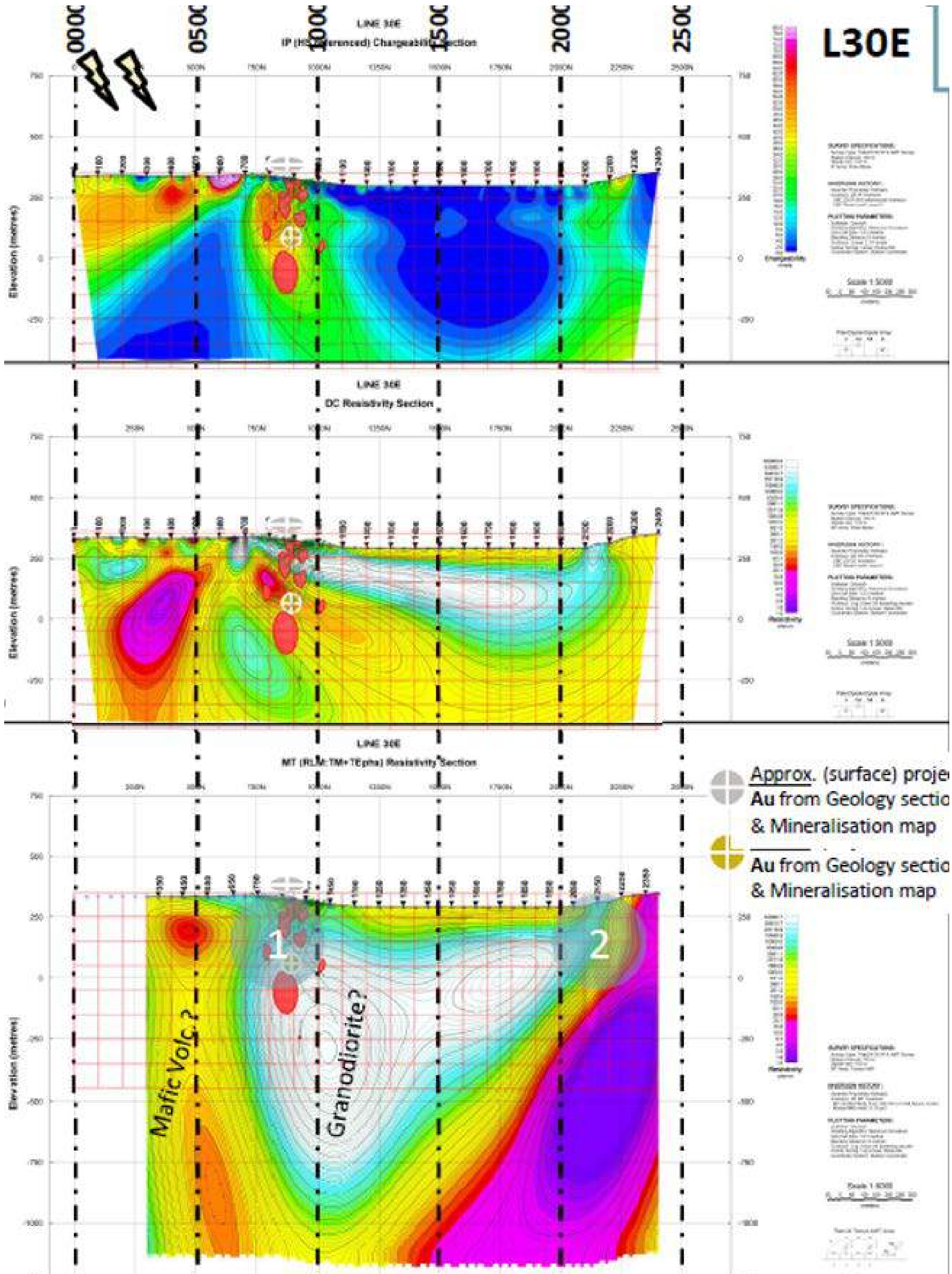


Figure 9.7 – Results of the L30E survey (Agnico Eagle and Barsele, 2016)

9.4 Structural studies

Bauer and Imaña (2017) produced a local-scale structural framework for the gold mineralization on the Barsele Project in order to incorporate a kinematic temporal model related to quartz-vein emplacement. The study is based on the analysis of 3,101 structural measurements from 79 oriented cores drilled by AEM. A geochemical dataset of 29,109 samples was interrogated in order to reconcile structural patterns and metal enrichment. Additionally, field mapping results from the 2003-2007 and 2016 field campaigns comprising approximately 1,500 structural measurements were incorporated where possible and necessary. Ore grades and drill core assays were used to correlate structures with alteration and mineralization. Geophysical data was used for the geometrical interpretation of structures; the data consists of airborne and ground magnetic anomalies, as well as SkyTEM and Titan-24 data to constrain structures on ground and at depth. The study includes a model of the major shear zones in the Barsele area as seen in Figure 9.8.

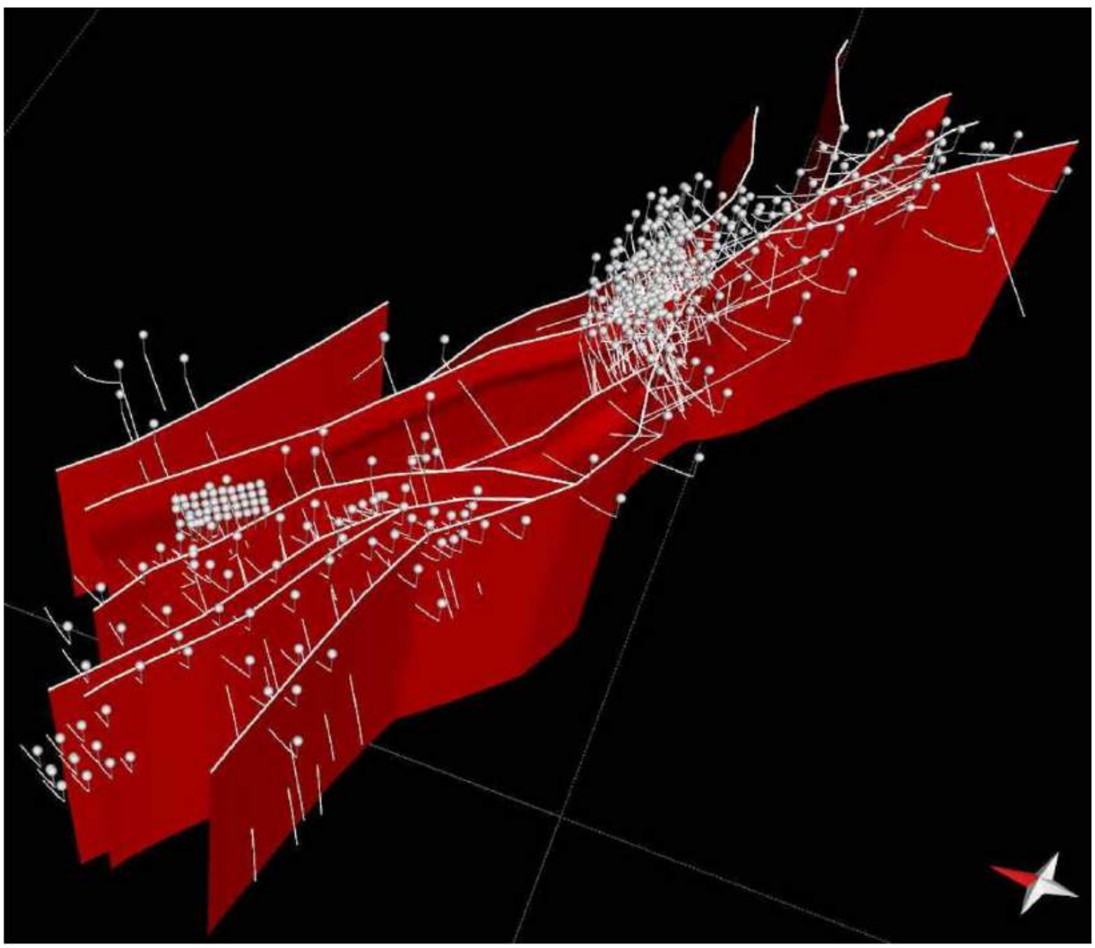


Figure 9.8 – Structural framework model of major shear zones in the Barsele area, including drill hole locations (Bauer and Imaña, 2017)

The most prominent fractures and fault zones were modelled based on areas of high fracture frequency and computed statistics. The result is a series of gently to moderately east-dipping panels and interlinking steeper zones (Fig. 9.9). This is comparable to observations in the trench above the Central Zone (Bauer, 2015). The close relation of fractures and faults and their similar orientation implies a genetic relationship and a formation within the same stress field. The more abundant occurrence of moderately dipping faults compared to fractures shows that strain was partitioned into the moderately dipping structures. This implies also that the moderately dipping structures accommodated more movement than the steeper ones. Consequently, the moderately dipping panels are interpreted as low-angle reverse faults and the steep structures as their tensile components. Tensile structures were observed in the trench above the Central Zone as well as in drill cores.

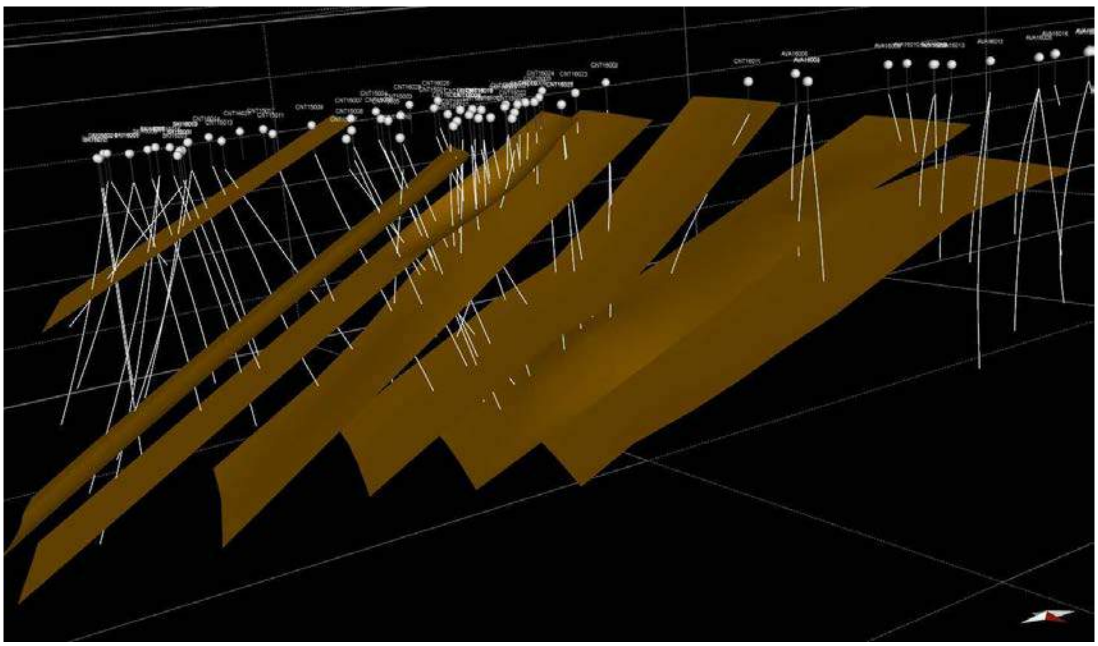


Figure 9.9 – Gently to moderately dipping panels with brittle and semi-brittle fractures and faults (Bauer and Imaña, 2017)

The following summarized conclusions are from Bauer and Imaña (2017).

The crustal architecture of the Barsele area is the result of one ductile deformation phase (D2) and an overprinting brittle (to semi-brittle) deformation phase (D3). The orientation of the shear zones is parallel to the S2-foliation and shows that the shearing results from D2 deformation. From the model it becomes obvious that the shear zones are composed of several individual shear structures, which tend to be more parallel in the central parts and show more deviation in the Avan and Skiråsen areas, hence interpreted as splaying up of the shear zone or horse-tailing.

Several phases containing gold-bearing structures are spatially transposed in the Barsele site suggesting that gold upgrade could have taken place at sites of repeated fluid injection and metal remobilization. Focusing of gold bearing fluids and their deposition are strongly associated to quartz veinlets formed within tensile structures associated to a reverse fault system, interpreted to be the result of stress partition and reactivation of D2 shears during D3 compression.

Additionally, gold grades also appear to be controlled by remobilization of early polymetallic mineralization. High Zn coupled with high base metal, Mo and Au grades and a lack of W suggests that a certain amount of Au was already introduced during the formation of VMS deposits during crustal extension (D1) using the syn-extensional faults as fluid conduits. This mechanism was shown by Bauer et al. (2014) to be responsible for the formation of VMS deposits in the Skellefte district. At the Långdal deposit (Skellefte district), Weihed et al. (2002) concluded that gold in particular was remobilized and enriched during D2 deformation and along major shear zones. Therefore, the reactivation of the syn-extensional faults as ductile shear zones during D2 very likely favored a certain amount of gold enrichment along the main shear in Barsele.

The full extent of the shear zone to the NW and SE has not yet been determined. If the shear zone represents a reactivation of an early deep-rooted syn-extensional D1 structure, this would be a preferred site for structural reactivation and major fluid focusing during later overprinting deformation. Considering the controls mentioned above, it seems logical to consider additional priority areas for exploration along the full extent of the shear structure and other parallel structures.

Areas where shear zones develop wide branching appear to be associated with lower and diffuse gold mineralization; this could be an effect of fluid/grade dilution by creating larger areas affected by tensile fracturing associated with the main structure. However, branching of the shear zone will create less focused phyllosilicate formation with an improvement in rheological competence of the host rock.

9.5 Other relevant work

In 2015, spectral imaging was done on 1,382 metres of drill core. Hyperspectral results indicate broad (>300 m) and intense alteration at the Central Zone. Two of the holes, 11CNT005 and 12CNT008, end in intense alteration. These holes are drilled roughly 200 metres apart. According to Agnico Eagle and Barsele (2016), the hyperspectral data shows consistent sericite composition. At this stage, it is not clear if the sericite seen in the hyprespestral data is due to hydrothermal alteration or metamorphism. The following drill holes were surveyed along their full length:

- 11CNT005; Depth = 424.80 metres;
- 12CNT008; Depth = 379,32 metres;
- 12CNT012; Depth = 577.85 metres.

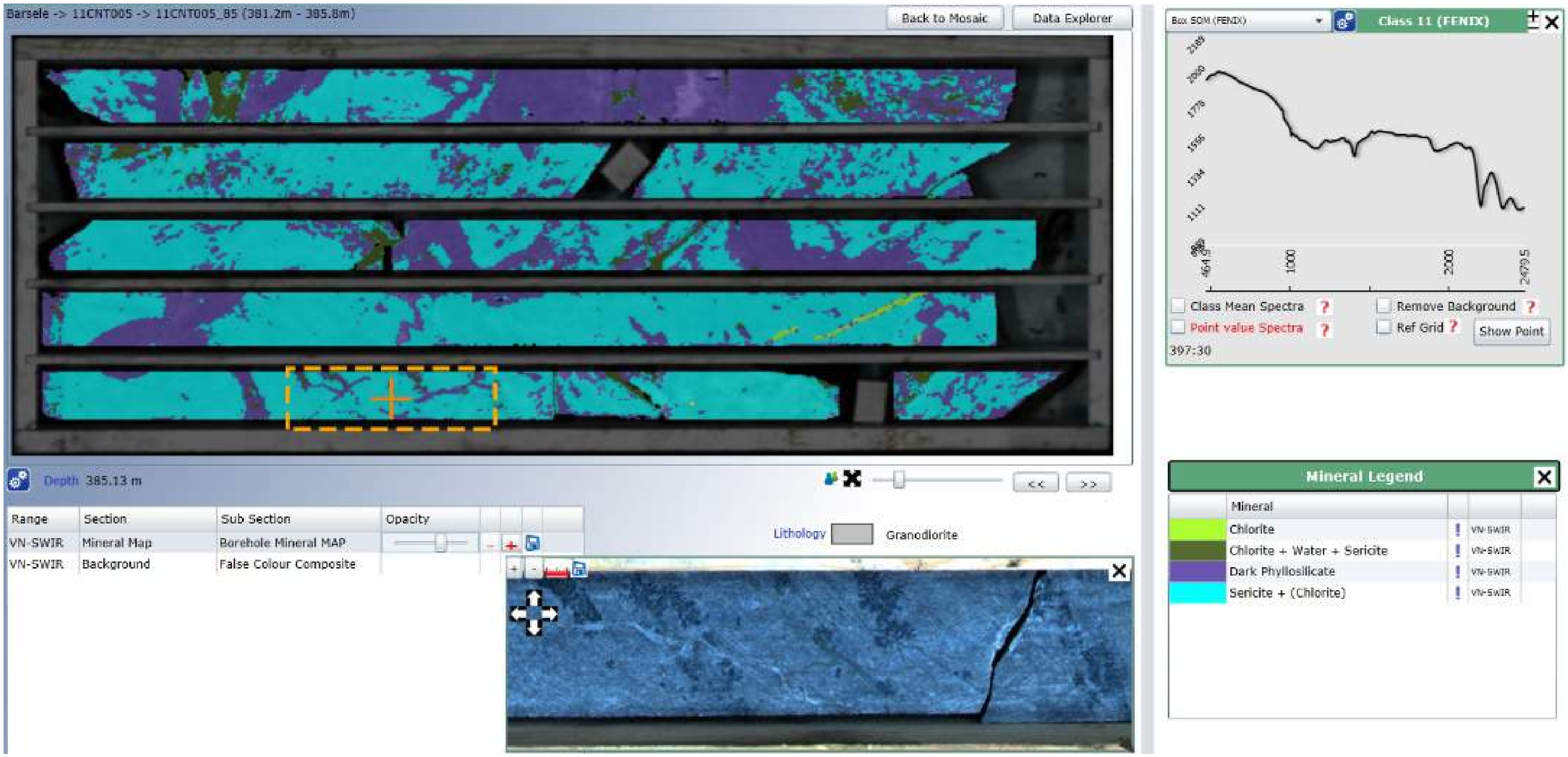


Figure 9.10 – Exemple of intense alteration from spectral imaging done on drill core (Hole 11CNT005, 381.2m to 385.8m)

In 2017, a preliminary petrographic study was conducted by AEM's exploration geologists on gold and sulphides from the Project. Samples were taken from the Avan, Central and Skiråsen deposits to investigate the mode of occurrence of free gold as well as sulphide petrography in samples with varying gold grades and sulphide associations. The study provides the foundation for LA-ICP-MS and MLA work investigating both refractory and free gold deportment at Barsele.

According to the study, arsenopyrite is euhedral (blocky), whether coarse or fine grained. There is evidence for zoned/overgrowth textures in some grains, especially those hosted in veins with a repeated crack-seal texture; but most grains resist acid etching, suggesting that they formed in one event. Brecciated arsenopyrite is also present with polymetallic infill; this may suggest that the polymetallic mineralization formed after the initial stages of formation of the gold deposit or that remobilization occurred. Visible gold is observed disseminated in quartz in quartz veins (e.g., AEAu008) as well as in cracks in arsenopyrite with spatially associated pyrrhotite. A very small amount of free gold occurs in the core of an arsenopyrite grain (e.g., AEAu018), possibly suggesting unmixing from arsenopyrite structure during metamorphism or, depending on the crystal structure, it may have been incorporated during growth. The polymetallic mineralization (sphalerite, chalcopyrite and galena) shows complex intergrowth patterns and is generally present in the form of stringers. Very little pyrite is present and where seen, it appears to be zoned with possible arsenian cores. It is fine to coarse grained.

The conclusions and recommendations of the petrographic study are that the limited amount of pyrite present together with the presence of pyrrhotite admixed from sphalerite as well as the abundance of arsenopyrite suggest that the formational fluids were sulphur deficient. An MLA gold search is proposed for free gold-bearing samples to determine the locking and size of free gold >1 µm. LA-ICP-MS is proposed for arsenopyrite bearing samples grading 0.5 to 1 g/t Au when no free gold is observed and in samples where arsenopyrite hosts small free gold inclusions. This would enable the search for invisible gold in grains <1 µm or refractory within the crystal structure.

10 DRILLING

Since the 2015 joint venture, a total of 90,526 metres have been drilled corresponding to 197 holes (Table 10.1). In the last two years alone, under the joint venture agreement, AEM has drilled more than half (55%) of the cumulative length of all core drilling on the Barsele Project since 1981.

The Barsele drilling program started on October 12, 2015 on the Central Zone. The drilling method was WL-76, which normally has a core diameter of 57.5 millimetres. As of January 23, 2016 (hole SKI16002), the drilling company ADC modified the WL-76 drilling method and the core diameter changed from 57.5 to 56 millimetres. The other drilling company on the Project, KATI Drilling, used ordinary WL-76 drilling gear (57.5 mm). In March 2017, the decision was made to change from WL-76 to NQ2 size drilling. This decision was taken after twinning a WL-76 hole with NQ2 and the statistical evaluation of gold data showed no significant difference in the means of the grades at 95% confidence level, indicating that both drilling methods yield similar gold grade results. Drill hole lengths at Barsele vary between approximately 150 metres and 1,000 metres. Oriented core measurements were taken each 3-metre run. Below a downhole depth of 350 metres, the runs were increased to 6 metres if rock quality was good. A summary of diamond drilling on the Project since 2015 is shown in Table 10.2. Figure 10.1 shows the drill hole locations.

Table 10.1 – Summary of the drilling since 2015

Hole ID	Northing	Easting	Elevation	Length	Core size	Year
CNT15002	7215117	618576	303.53	601	WL-76	2015
CNT15003	7214828	618681	322.33	593	WL-76	2015
CNT15004	7214719	618683	331.32	734	WL-76	2015
CNT15005	7214865	618736	316.57	420	WL-76	2015
CNT15006	7214829	618732	320.38	556	WL-76	2015
CNT15007	7214685	618733	320.78	725	WL-76	2015
CNT15008	7214853	618822	306.37	478	WL-76	2015
CNT15009	7214671	618829	317.14	701	WL-76	2015
CNT15010	7215040	618809	291.22	655	WL-76	2015
CNT15011	7214676	618933	310.3	440	WL-76	2015
CNT15014	7214541	619035	314.6	668	WL-76	2015
CNT15015	7214601	619133	295.85	523	WL-76	2015
CNT15016	7214525	619127	301.7	662	WL-76	2015
CNT15017	7214895	618859	292.69	902	WL-76	2015
SKI15001	7214598	619125	296.01	580	WL-76	2015
AVA16001	7216019	617823	306.79	484	WL-76	2016
AVA16002	7215501	618111	323.85	559	WL-76	2016
AVA16003	7216021	617824	306.59	632	WL-76	2016
AVA16004	7215505	618114	323.83	372	WL-76	2016
AVA16005	7215584	617494	313.28	602	WL-76	2016

Hole ID	Northing	Easting	Elevation	Length	Core size	Year
AVA16006	7215350	617986	329.73	431	WL-76	2016
AVA16007	7215585	617495	313.53	756	WL-76	2016
AVA16008	7215587	617496	313.83	396	WL-76	2016
AVA16009	7215354	617699	320.68	152	WL-76	2016
AVA16010	7215383	617662	318.93	176	WL-76	2016
AVA16011	7215519	617571	311.69	547	WL-76	2016
AVA16012	7215520	617571	311.92	794	WL-76	2016
AVA16013	7215472	617635	314.96	546	WL-56	2016
AVA16014	7215653	617421	312.76	748	WL-56	2016
AVA16015	7215639	617396	311.24	200	WL-76	2016
AVA16016	7215643	617521	315.9	60	WL-76	2016
AVA16017	7215595	617227	311.88	314	WL-76	2016
AVA16018	7215522	617757	321.12	414	WL-76	2016
AVA16019	7215409	617611	315.79	172	WL-76	2016
AVA16020	7215294	617640	310.73	300	WL-76	2016
AVA16021	7215205	617738	314.76	161	WL-76	2016
AVA16022	7215550	617321	305.75	447	WL-76	2016
AVA16023	7215490	617339	303.76	103	WL-76	2016
AVA16024	7215718	616867	314	75	WL-76	2016
CNT15001	7214823	618587	328.01	535	WL-76	2016
CNT15012	7214630	618934	321	113	WL-76	2016
CNT15013	7214613	619033	306.13	600	WL-76	2016
CNT16001	7214874	618126	335.98	523	WL-76	2016
CNT16002	7214874	618126	336.07	674	WL-56	2016
CNT16003	7215000	618513	320.82	86	WL-76	2016
CNT16004	7214987	618599	313.96	152	WL-76	2016
CNT16005	7214980	618404	329.76	200	WL-76	2016
CNT16006	7214988	618600	313.71	277	WL-76	2016
CNT16007	7215059	618591	307.13	253	WL-76	2016
CNT16008	7215012	618440	323.51	110	WL-76	2016
CNT16009	7214999	618455	323.93	90	WL-76	2016
CNT16010	7215042	618611	308.36	176	WL-76	2016
CNT16011	7215376	618151	324.29	651	WL-76	2016
CNT16012	7214999	618639	305.19	203	WL-76	2016
CNT16013	7215038	618674	299.51	227	WL-76	2016
CNT16014	7214939	618624	317.13	266	WL-76	2016
CNT16015	7214922	618580	322.12	313	WL-76	2016
CNT16016	7214948	618564	322.22	176	WL-76	2016
CNT16017	7215132	618455	319.06	633	WL-76	2016
CNT16018	7214978	618560	320.49	152	WL-76	2016

Hole ID	Northing	Easting	Elevation	Length	Core size	Year
CNT16019	7214979	618561	320.49	176	WL-76	2016
CNT16020	7214978	618494	324.01	116	WL-76	2016
CNT16021	7215001	618478	322.45	91	WL-76	2016
CNT16022	7215060	618529	310.67	175	WL-76	2016
CNT16023	7215025	618335	331.86	76	WL-76	2016
CNT16024	7214827	618283	333.65	746	WL-76	2016
CNT16025	7215133	618456	319.01	733	WL-76	2016
CNT16026	7214691	618495	335.37	700	WL-76	2016
CNT16027	7214538	618955	326.93	570	WL-76	2016
CNT16028	7214692	618575	337.7	627	WL-76	2016
CNT16029	7214537	618955	326.97	664	WL-76	2016
CNT16030	7214607	618875	323.81	597	WL-76	2016
CNT16031	7214606	618875	323.81	601	WL-76	2016
CNT16032	7214537	618952	327.29	607	WL-76	2016
KOH16001	7217846	613469	382	251	WL-76	2016
KOH16002	7217875	613419	370	227	WL-76	2016
KOH16003	7217992	613557	370	161	WL-76	2016
KOH16004	7218016	613517	370	188	WL-76	2016
KOH16005	7218247	613705	405	184	WL-76	2016
KOH16006	7217125	613383	313	181	WL-76	2016
KOH16007	7217123	613239	315	173	WL-76	2016
SKI16001	7214516	619223	300.2	557	WL-76	2016
SKI16002	7214411	619250	300.85	899	WL-76	2016
SKI16003	7214738	619189	296.94	486	WL-76	2016
SKI16004	7214424	619245	301.19	395	WL-76	2016
SKI16005	7214516	619221	300.35	645	WL-76	2016
SKI16006	7214505	619155	305.1	788	WL-76	2016
SKI16007	7214505	619155	305.04	882	WL-76	2016
SKI16008	7214519	619179	303.17	551	WL-76	2016
SKI16009	7214532	619083	308.19	516	WL-76	2016
SKI16010	7214531	619085	307.73	739	WL-76	2016
SKI16011	7214522	619300	292.06	501	WL-76	2016
SKI16012	7214521	619300	292.36	688	WL-76	2016
SKI16013	7214522	619301	292.03	553	WL-76	2016
SKI16014	7214359	619319	298.83	880	WL-76	2016
SKI16015	7214521	619301	292	826	WL-76	2016
AVA17001	7215595	617227	311.7	284	WL-76	2017
AVA17002	7215567	617404	306.9	467	WL-76	2017
AVA17003	7215594	617226	311.27	360	WL-76	2017
AVA17004	7215617	617364	314.65	472	WL-76	2017

Hole ID	Northing	Easting	Elevation	Length	Core size	Year
AVA17005	7215622	617368	314.32	345	WL-76	2017
AVA17006	7215673	617621	320.79	260	NQ2	2017
AVA17007	7215728	617349	329.54	626	NQ2	2017
AVA17008	7215521	617572	312.17	201	NQ2	2017
AVA17009	7215519	617570	311.4	705	NQ2	2017
AVA17010	7215728	617349	329.5	741	NQ2	2017
AVA17011	7215482	617540	312.76	467	NQ2	2017
AVA17012	7215692	617443	317.97	850	NQ2	2017
AVA17013	7215481	617747	322.49	550	NQ2	2017
AVA17014	7215445	617716	316.39	244	NQ2	2017
AVA17015	7215221	617571	306.24	296	NQ2	2017
AVA17016	7215204	617718	313.86	170	NQ2	2017
AVA17017	7215172	617756	317.69	230	NQ2	2017
AVA17018	7215147	617801	324.03	231	NQ2	2017
AVA17019	7215101	617807	325.99	305	NQ2	2017
AVA17020	7215655	617462	312.56	175	NQ2	2017
AVA17021	7215655	617463	312.55	125	NQ2	2017
AVA17022	7215565	617609	314.18	803	NQ2	2017
AVA17023	7215404	617782	318.75	290	NQ2	2017
AVA17024	7215141	617728	314.65	324	NQ2	2017
AVA17025	7215630	617129	312.72	467	NQ2	2017
AVA17026	7215016	617791	320.59	663	NQ2	2017
AVA17027	7215466	617577	312.75	203	NQ2	2017
AVA17028	7215465	617575	312.75	276	NQ2	2017
AVA17029	7215608	616902	313.13	197	NQ2	2017
AVA17030	7215588	617497	313.9	152	NQ2	2017
AVA17031	7215663	616926	310.74	266	NQ2	2017
AVA17032	7215585	617495	313.36	831	NQ2	2017
AVA17033	7215656	616836	316.32	299	NQ2	2017
AVA17034	7215771	617245	347.47	707	NQ2	2017
CNT16033	7214614	618715	329	611	WL-76	2017
CNT17001	7215000	618640	305.15	194	NQ2	2017
CNT17002	7215377	618151	324.2	602	WL-76	2017
CNT17003	7214873	618126	335.88	582	WL-76	2017
CNT17004	7214873	618126	335.94	565	WL-76	2017
CNT17005	7215378	618151	324.07	669	WL-76	2017
CNT17006	7215291	618376	308.66	618	WL-76	2017
CNT17007	7215291	618376	308.66	775	WL-76	2017
CNT17008	7215188	618410	313.58	601	NQ2	2017
CNT17009	7214978	618494	324.13	385	NQ2	2017

Hole ID	Northing	Easting	Elevation	Length	Core size	Year
CNT17010	7215188	618410	313.43	777	NQ2	2017
CNT17011	7214824	618588	327.83	436	NQ2	2017
CNT17012	7214692	618496	335.17	627	NQ2	2017
CNT17013	7215134	618457	318.85	576	NQ2	2017
CNT17014	7214692	618496	335.22	725	NQ2	2017
CNT17015	7215135	618457	318.91	765	NQ2	2017
CNT17016	7215384	618151	323.51	602	NQ2	2017
CNT17017	7215121	618615	299.5	512	NQ2	2017
CNT17018	7215121	618615	299.72	660	NQ2	2017
CNT17019	7215120	618615	299.58	450	NQ2	2017
CNT17020	7215098	618530	308.49	749	NQ2	2017
CNT17021	7215075	618675	305.1	626	NQ2	2017
CNT17022	7214706	618412	331.83	710	NQ2	2017
CNT17023	7214694	618498	334.6	244	NQ2	2017
CNT17024	7214707	618412	331.81	587	NQ2	2017
CNT17025	7214696	618501	335.19	595	NQ2	2017
CNT17026	7214615	618715	328.59	898	NQ2	2017
CNT17027	7214719	618873	310.21	680	NQ2	2017
CNT17028	7214615	618715	328.47	1086	NQ2	2017
CNT17029	7214720	618873	309.93	481	NQ2	2017
CNT17030	7214615	618794	323.02	690	NQ2	2017
CNT17031	7215188	618409	313.71	10	NQ2	2017
CNT17032	7214950	618267	334.15	10	NQ2	2017
GOD17001	7217837	614914	350.82	162	NQ	2017
GOD17002	7217163	614444	315.12	140	NQ2	2017
NOR17001	7216575	617617	301.25	345	WL-76	2017
NOR17002	7216991	616925	328.08	482	WL-76	2017
NOR17003	7217274	616234	347.5	193	NQ2	2017
NOR17004	7217950	616601	372	287	NQ2	2017
NOR17005	7217986	616882	371.23	386	NQ2	2017
NOR17006	7216907	617119	319.82	346	NQ2	2017
NOR17007	7216851	617058	344.3	492	NQ2	2017
NOR17008	7216913	617033	339.66	443	NQ2	2017
NOR17009	7216915	617032	339.08	529	NQ2	2017
RIS17001	7213695	623067	294.94	395	NQ2	2017
RIS17002	7213712	623099	293.67	285	NQ2	2017
RIS17003	7213711	623099	293.78	362	NQ2	2017
RIS17004	7213691	623066	295.02	341	NQ2	2017
RIS17005	7213633	623210	296.43	223	NQ2	2017
RIS17006	7213635	623210	296.26	424	NQ2	2017

Hole ID	Northing	Easting	Elevation	Length	Core size	Year
RIS17007	7213657	622990	291.94	354	NQ2	2017
RIS17008	7213608	622993	302.28	370	NQ2	2017
RIS17009	7213962	621883	281.25	491	NQ2	2017
RIS17010	7213963	621883	281.38	252	NQ2	2017
SKI17001	7214518	619221	299.98	525	WL-76	2017
SKI17002	7214353	619427	293.51	744	WL-76	2017
SKI17003	7214520	619301	292.45	772	WL-76	2017
SKI17004	7214518	619221	299.97	645	WL-76	2017
SKI17005	7214515	619178	303.89	595	WL-76	2017
SKI17006	7214539	619035	314.77	584	WL-76	2017
SKI17007	7214524	619127	301.83	484	WL-76	2017
SKI17008	7214613	619033	306.18	702	NQ2	2017
SKI17009	7214613	619033	306.11	924	NQ2	2017
SKI17010	7214600	619124	296.13	344	NQ2	2017
SKI17011	7214600	619125	295.78	604	NQ2	2017
SKI17012	7214628	619200	297.09	132	NQ2	2017
SKI17013	7214614	619032	306.03	650	NQ2	2017

The issuer compiled the database of historical drill holes. InnovExplo georeferenced the holes to determine whether they fell within the Barsele Project but cannot confirm whether the database is complete or accurate without validating the drill survey data.

The following drilling procedure was followed according to the Barsele Minerals website:

- AEM geologists lay out drill hole locations in the field. AEM staff supervise pad construction (and later reclamation), and fore-sight/back-sight markers are set to align the direction of drilling
- Drilling is conducted by ADC Drilling Company of Rovaniemi, Finland, and Kati Drilling of Rautio, Finland. The drills are track-mounted rigs, capable of drilling to 2,000 metres. The diamond drill core is WL76 size, reduced to NQ as depth requires, which provides a large sample as recommended for the testing of precious metal deposits. Oriented core measurements are done every 3 metres.
- Down-hole surveys are conducted at 3 to 5 metre intervals along the drill hole using a GyroSmart or DeviFlex survey device, or similar unit, to measure the azimuth and dip of the hole.
- The driller is responsible for ensuring that the core is placed in boxes in the correct order, and to mark the length on tags after each rod-length of core. This step is examined by the on-duty project geologist.
- After each drill shift, the drillers deliver the core to the AEM core logging facility in the nearby town of Storuman.

Table 10.2 – Summary of diamond drilling exploration work on the Barsele Project

Year	DDH count	Length (m)
2015	15	9238
2016	81	33601
2017	101	47687
Total	**197**	**90,526**

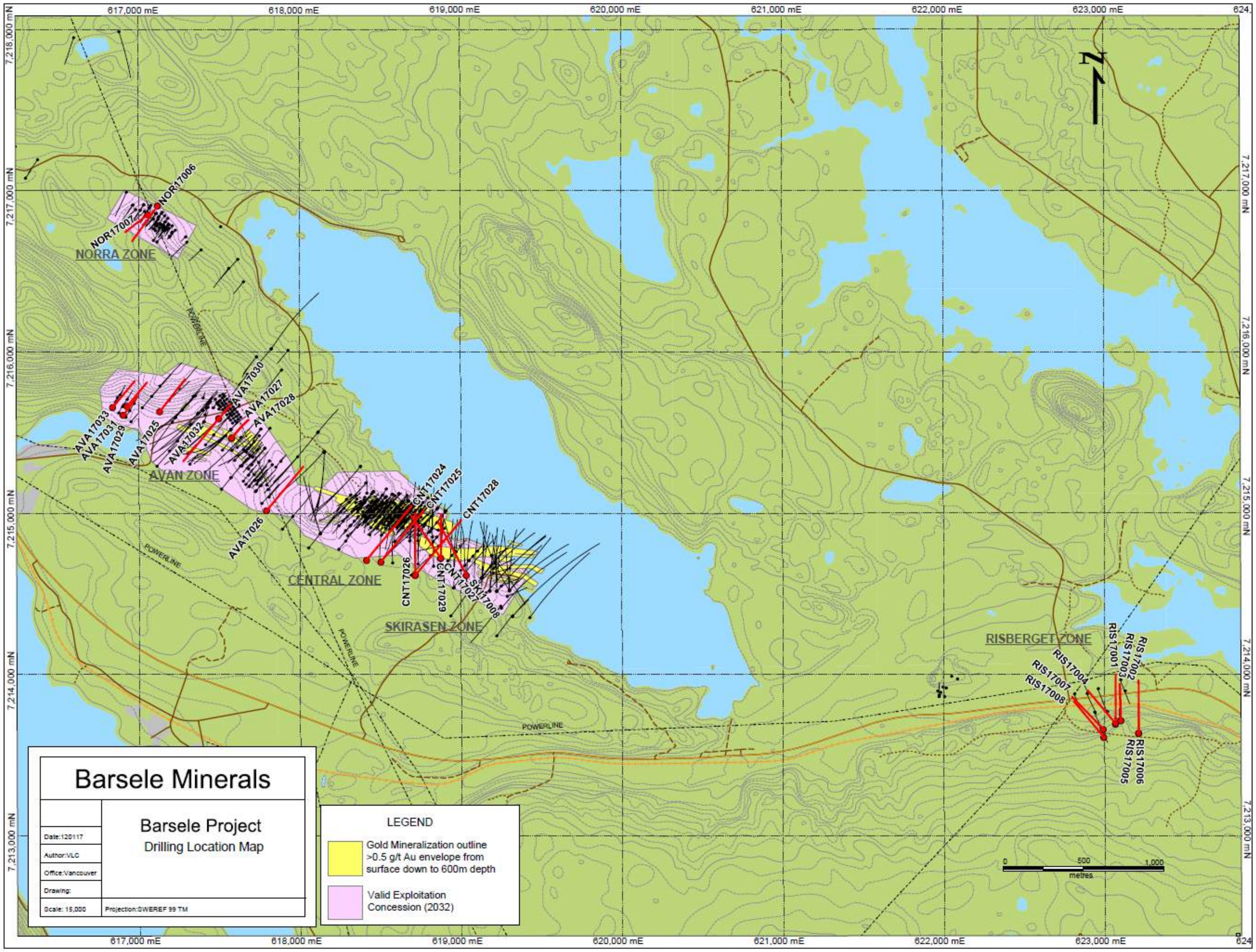


Figure 10.1 – Distribution of drill holes on the Barsele Project in relation to the mineralized zones involved in the current resource estimate (source: AEM)

In 2015-2016, AEM performed parameter logging in some holes on the Central Zone. The technique indicates a good spatial correlation between increased IP effect, low resistivity and the combined occurrences of gold and sulphides.

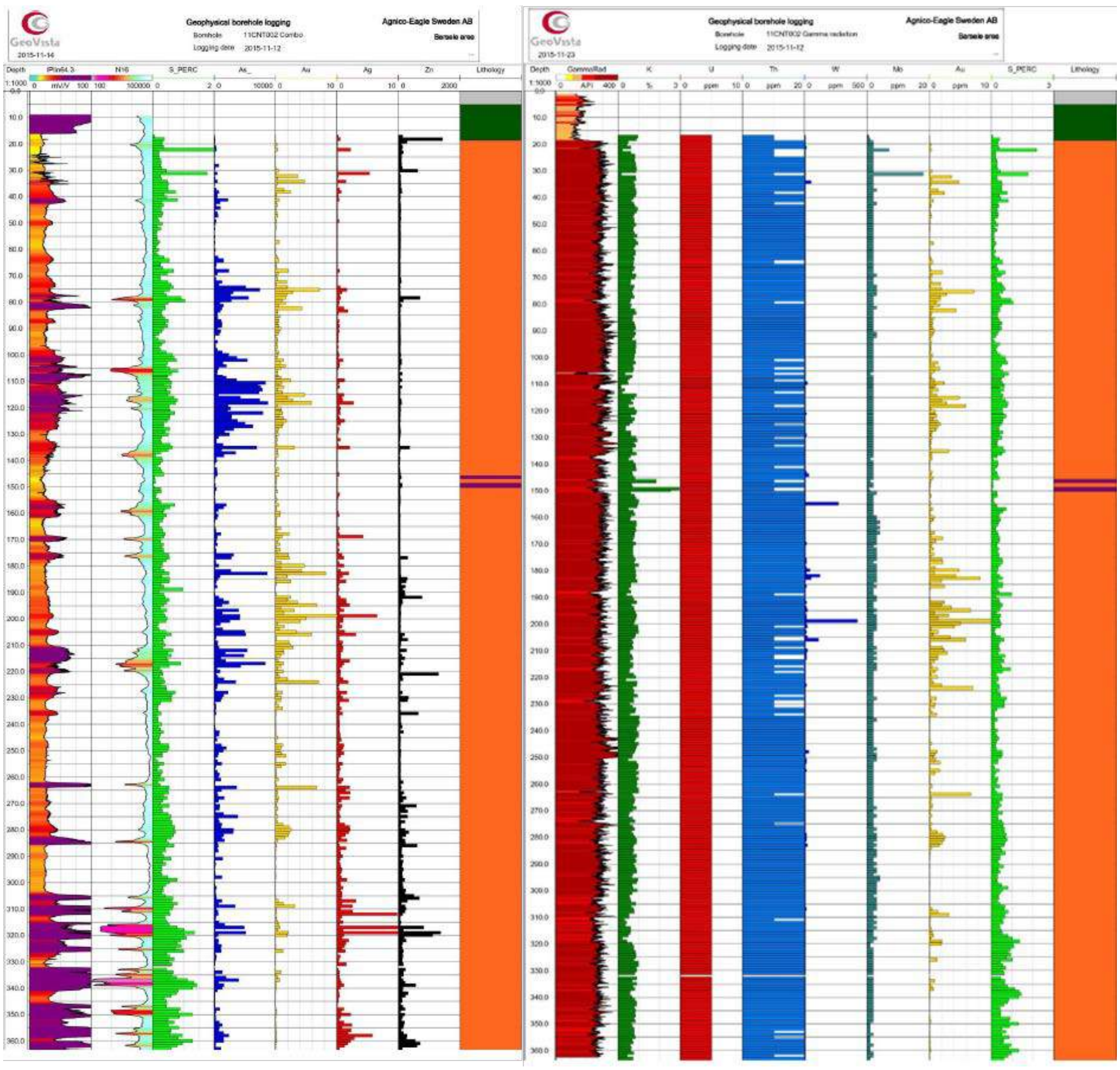


Figure 10.2 – Parameter logging results (Agnico Eagle, 2016)

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 Drilling Program

The drilling program at the Barsele Project started on the Central Zone on October 12, 2015. Since the 2015 joint venture, a total of 90,526 metres have been drilled corresponding to 197 holes

11.2 Core Handling, Sampling and Security

11.2.1 At the core logging facility

The following procedure was followed (Barsele Minerals website):

- After each drill shift, the drillers deliver the core to the AEM core logging facility in the nearby town of Storuman.
- Boxes are then laid out on logging tables and checked to make sure that the core is continuous and in the right order in each box. Core boxes are cleaned at this stage to remove drill grease.
- Measurements of core between rod-length tags are taken to determine drill core recovery percentages.
- Oriented core is routinely done at the start of each rod run. If oriented marks are present on the core then the core is aligned in a 4-metre core tray holder so the oriented mark can be drawn along with the shorter arrow lines indicating downhole direction. It is always the down/lower side of the core that is marked.
- Different rock quality sections are marked on the core boxes. The proportions of core fragments shorter than 10 centimetres in length are determined for each section to obtain an RQD value. The total length of fragments shorter than 10 centimetres is recorded, the number of naturally occurring fractures in each section are calculated and if core loss occurs this is also entered into the RQD log that automatically calculates the RQD value for the section. While this information will not be used in the exploration stage, it will be valuable information for future mine design indicating where competent ground & broken ground conditions can be expected.
- All core boxes are then clearly labelled with "from" and "to" lengths in metres.
- Geological logging of core is conducted and sample positions are marked to conform with lithological/alteration changes. Sample numbers are written on the core boxes corresponding to pre-printed sample tags for each sample interval.
- A photographic record, both dry and wet, is made of every core box and digitally uploaded to an FTP site for examination.
- Samples are moved to the testing table for determination of specific gravity. An SG value is determined for every rock type, plus samples with high sulphide content. This information is used when determining tonnage.

11.2.2 Sample preparation

- AEM personnel move the core boxes from the logging facility to the core sample preparation area of Met Solve Analytical Services (“MS Analytical”) in Storuman. MS Analytical is responsible for core cutting. Diamond saw blade cutters are used to cut the core in half.

- Strong rock sample bags are labelled with sample numbers on the outside with the sample tags inserted inside, then half the core is placed in its respective sample bag.
- Commercial geostandard samples, blank sample of barren rock or duplicate sample (core and pulp), are inserted every 10th sample as an analytical check for laboratory batches. These geostandards represent a range of values for gold.
- Sample bags are then closed and inserted in large wooden shipping crates. These crates are labelled with the batch number and company name, with laboratory instruction sheet placed in crate #1 of the sampling batch.
- The remaining half of the drill core is transported to a secure core storage facility.
- AEM personnel move the crates with the half core samples from the MS Analytical core sample preparation area in Storuman and transport them to the ALS Laboratory in Malå.
- From this point onward, ALS takes responsibility for the samples. The Malå lab is where the samples are crushed and a sub-sample is pulverized. The pulverized pulp is placed in kraft sample bags and the un-pulverized portions are returned to original sample bags.
- ALS ships the remainder of the crushed samples, referred to as "sample rejects", back to Storuman for storage. The sample rejects are thus available for re-testing when required. The sample pulps are shipped to ALS Minerals in Roşia Montană, Romania for gold analysis, and to Loughrea, Ireland for ICP analysis (rarely for gold analysis).
- In Roşia Montană, Romania, gold is tested by fire assay, with an AAS or gravimetric finish depending on grade (Au-AA24 and Au-GRA22). Each method has a lower and upper calibration range for which results are accurately determined
- In Ireland, the sample pulps are analyzed by ICP-MS (ME-MS61) for 48 elements.
- Samples returning grades above the method limit are assayed with over-limit method ME-062 for Ag, Cu, Pb, and Zn.
- About 10% of assays are also sent to MS Analytical in Langley, British Columbia (Canada) for secondary laboratory check assays.

11.2.3 QA/QC and database compilation at Barsele Minerals in Sweden

- Results are tabulated on spreadsheets and e-mailed to AEM geologists. Originals of the assay certificates are sent as PDF documents and the certificates are printed out and stored at location in Storuman.
- Upon receiving completed analytical results, geologists then extract the duplicate and standard samples for examination of expected values versus tested values.
- The spreadsheet information for drill hole samples is then matched with sampling intervals and geological observations for interpretation.
- Results of the merged data are then sent to AEM management, along with a statement of the QA/QC acceptability of the analytical batch for inclusion into the project database.
- Once verified by AEM, Barsele Minerals management periodically prepares news releases to publicly disclose 43-101 compliant drilling data. A QP signs-off on news releases containing technical data.

11.3 Analytical methods (ALS Minerals and MS Analytical)

Table 11.1 lists the methods used for the Project at the primary laboratory, ALS Minerals (Table 11.1).

Table 11.1 – ALS analytical methods

Preparation	
WEI-21	Received Sample Weight
CRU-QC	Crushing QC test
PUL-QC	Pulverizing QC Test
DRY-21	High temperature drying of wet samples in drying oven
LOG-22	Log sample in tracking system, barcode and weight
Log-24	Pulp login – Rcd w/o BarCode
CRU-31	Fine crushing -70% <2mm
SPL-21	Split sample using riffle splitter.
PUL-32b	Pulverizing 1kg sample to >95% passing 75µm
Assay method	
Au-AA24	Au Fire Assay – AA on 50g ; above **3** ppm Au Fire Assay – Gravimetric
Au-GRA22	Au by fire assay and gravimetric finish. 50g nominal sample weight
ME-MS61	48 element for acid ICP-MS (four acid digestion)
ME-O62	Default over limit methods for Ag-OG62, Cu-OG62, Pb-OG62, Zn-OG62
ME-ICP41	35 element Aqua Regia ICP-AES
ME-0G46	Default over limit methods for Ag-OG46, Cu-OG46, Pb-OG46, Zn-OG46
(OA-GRA08	Specific gravity of core sample)

Two different multi-element options, ME-MS61 or ME-ICP41, can be used with their associated over-limit methods. ME-MS61 and ME-O62 are known as the SWED-Edh1 package, and ME-ICP41 and ME-OG46 are the SWED-Edh2 package.

Table 11.2 shows the methods used for the Barsele check-assay at the secondary laboratory, MS Analytical Services (Table 11.2).

Table 11.2 – MS-Analytical Services analytical methods

Preparation	
PLG-100	Log sample received as pulp
Assay method	
FAS-121	Au (0.005-10ppm) by fire assay (50g nominal sample weight), aqua regia digest and analysis by AAS.
FAS-425	Overlimit analysis – Au (0.5-1000ppm) by fire assay (50g nominal sample weight) and gravimetric finish. Used for Au overlimits >3ppm from method FAS-121.

The pulps are also homogenized at either the ALS preparation laboratory in Piteå or the MS Analytical preparation laboratory in Storuman before sending a 150 g split of the pulp sample to MS Analytical for the check-assay.

11.4 Laboratories Accreditation and Certification

The International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) form the specialized system for worldwide standardization. ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories sets out the criteria for laboratories wishing to demonstrate that they are technically competent, operating an effective quality system, and able to generate technically valid calibration and test results. The standard forms the basis for the accreditation of competence of laboratories by accreditation bodies. ISO 9001 applies to management support, procedures, internal audits and corrective actions. It provides a framework for existing quality functions and procedures.

For the drilling program, the ALS Minerals sample preparation facilities (Roşia Montană and Loughrea) were used. Both facilities received ISO/IEC 17025:2017 accreditation. Both laboratories are commercial laboratories independent of Barsele Minerals and neither has an interest in the Project.

11.5 Quality Control and Quality Assurance (QA/QC)

The drill core quality control program established by Agnico-Eagle includes the insertion of blanks, standards (certified reference material) and duplicates in the flow stream of core samples. QA/QC sample locations are predetermined.

QA/QC reference samples are numbered with same core sample ID series (e.g., for Barsele SEEXD). Standards have been used since the start of the project in October 2015. One of three different gold standards: low-, moderate- and high grade or one blank sample has been inserted every tenth sample. Since mid-December 2015 (since batch E15535), a duplicate is also inserted into the sample sequence. Since September 13, 2016 (batch E16583) a field duplicate is taken every 30th sample and sent for assaying. This field duplicate sample gets its own sample number and is the ¼ core sample of the previous sample, leaving a ¼ core as a reference sample in the core box instead of ½ core. Only gold is assayed on field duplicates, no multi-element suites.

Every 30th sample is a field duplicate and each 10th sample in between is either one of three standards a blank sample or a duplicate (DUP) which is a coarse reject duplicate from the previous sample (mother sample).

ALS puts in two standards and three duplicates for every 35 sample runs. Check assay samples are done if any of these in-house standards fails or if some other deviations are observed such as individual high-grade sample occur or if contamination is suspected.

The tolerance levels used by ALS are:

- Au-AA24: 10% and 6% for the CRM (certified reference material).
- ME-MS61: 10% for each element except for Ba (15%), Cu (7%), Sb (15%), Tl (15%), W (15%) and the same tolerance levels for the CRMs.

11.5.1 Blank and Certified Reference Materials (Standards)

Blank and commercial standards have been used at the Project since October 2015 (Table 11.3). The blank rock material originates from an olivine diabase quarry from Finland. The composition has been studied (June 2012) by the Geological survey of Finland and 10 new samples were sent to Actlabs in Finland for assaying in September 2015. All samples returned gold grades below detection limit <5 ppb Au (report A15-08133). The fist-sized rocks from the quarry are packed in a numbered sample bag together with an AE Sweden barcoded sample tag. Contamination is monitored by the routine insertion of barren sample (the “blank”) that goes through the same sample preparation and analytical procedures as the core samples. The blanks are submitted with samples for crushing and pulverizing to determine if there has been contamination or sample cross-contamination in preparation. Elevated values for blanks may also indicate sources of contamination in the fire assay procedure (contaminated reagents or crucibles) or sample solution carry-over during instrumental finish. Of the 1221 analyzed blank samples, four returned a value outside the accepted range. One sample returned a value corresponding to the expected range of the high grade standard, so it may have been misidentified.

For gold mineralization, three different CRMs are used. and for VMS-type mineralization, three other CRMs are usedThe CRM used for VMS-type mineralization is certified for five elements: Au, Ag, Cu, Pb and Zn.

InnovExplo has validated the results for blanks and CRM used by AEM since 2016 for drilling program on the Barsele Project, for a total of 4907 standards inserted, only 75 as failed for 98.5% passing the quality control.

InnovExplo is of the opinion that AEM’sQC procedure of using blanks to monitor contamination in drilling programs since 2015 is valid and the data reliable.

11.5.2 Duplicates

11.5.2.1 Coarse-reject duplicates

Coarse-reject duplicate samples are prepared from original samples by splitting the crushed sample to two equal samples, which are then pulverized and analyzed separately. Duplicate samples were introduced on February 15, 2016 to the QA/QC protocol. Since then, a total of 973 coarse-reject samples has been assayed. Repeatability has been good with an $R^2 = 0.962$ (Figure 11.1).

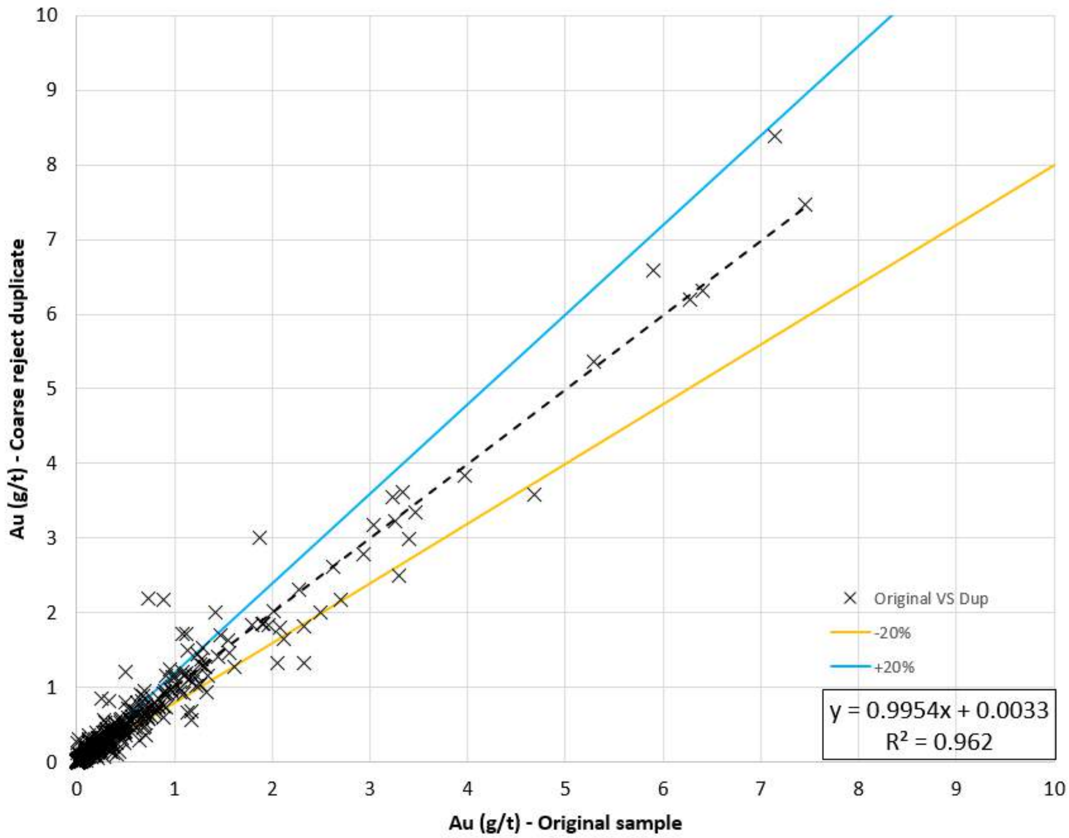


Figure 11.1 – Linear graph comparing original samples and coarse duplicates samples (n=973) from February 15, 2016 to November 13, 2017

11.5.2.2 Field duplicates

Field duplicate sample are taken every 30th sample and sent for assaying since September 13, 2016 (batch E16583). Since then, a total of 1,780 field duplicate samples have been assayed. Repeatability has been moderate, $R^2 = 0.6571$. This field duplicate sample gets its own sample number and is ¼ core sample of the previous sample. That means that ¼ core is left as a reference sample in the core box instead of ½ core. According to AE Sweden, the lower R^2 value and the difference in basic statistics can be expected in field duplicates since the Barsele deposit contains free visible gold (Figure 11.2). InnovExplo agrees with that statement. The moderate repeatability shows that gold distribution in the core is heterogenous.

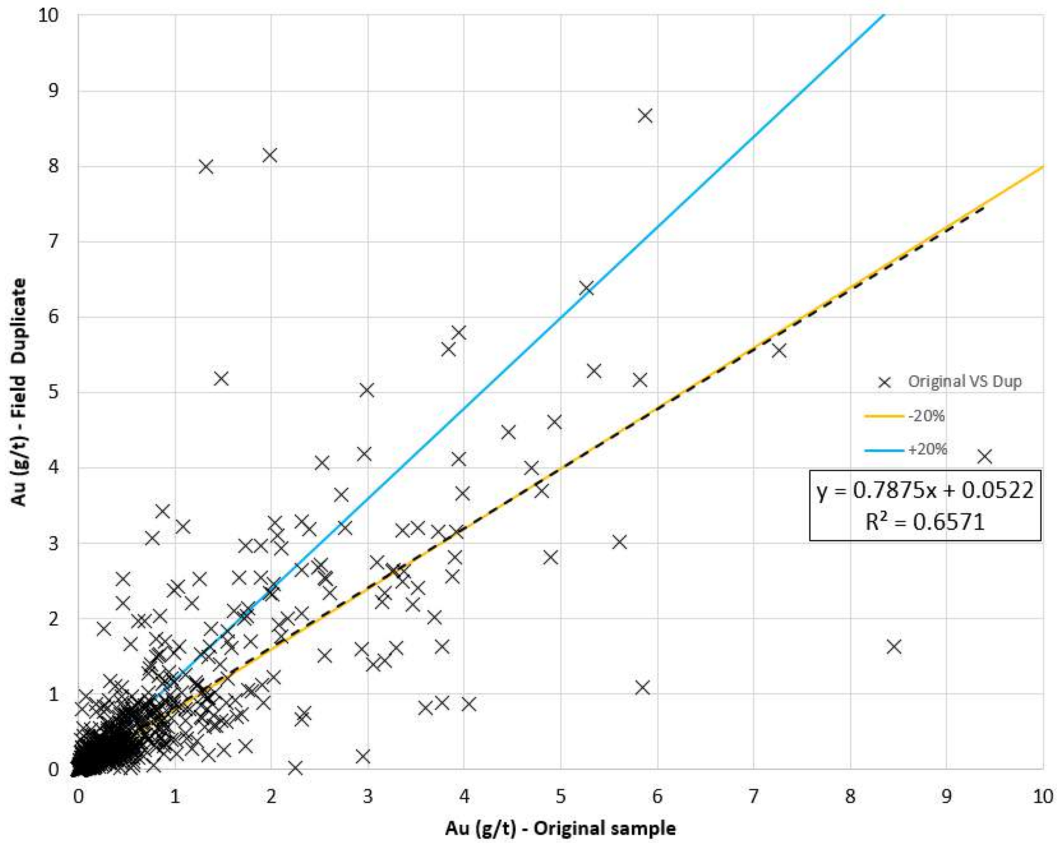


Figure 11.2 – Linear graph comparing original samples and field duplicates (n=1780) from September 13, 2016 to November 13, 2017

11.5.3 Check assays

Check assays are part of Agnico Eagle's QA/QC protocol. For the period from July 1, 2017 to November 13, 2017, a total of 2,295 samples analyzed by the AA24 method (including standards, blanks and duplicates; 2,153 if these are excluded) were sent to the secondary laboratory (MS Analytical) for check assays (Figure 11.3). A total of 50 samples from the GRA22 method were sent to MS Analytical (Figure 11.4).

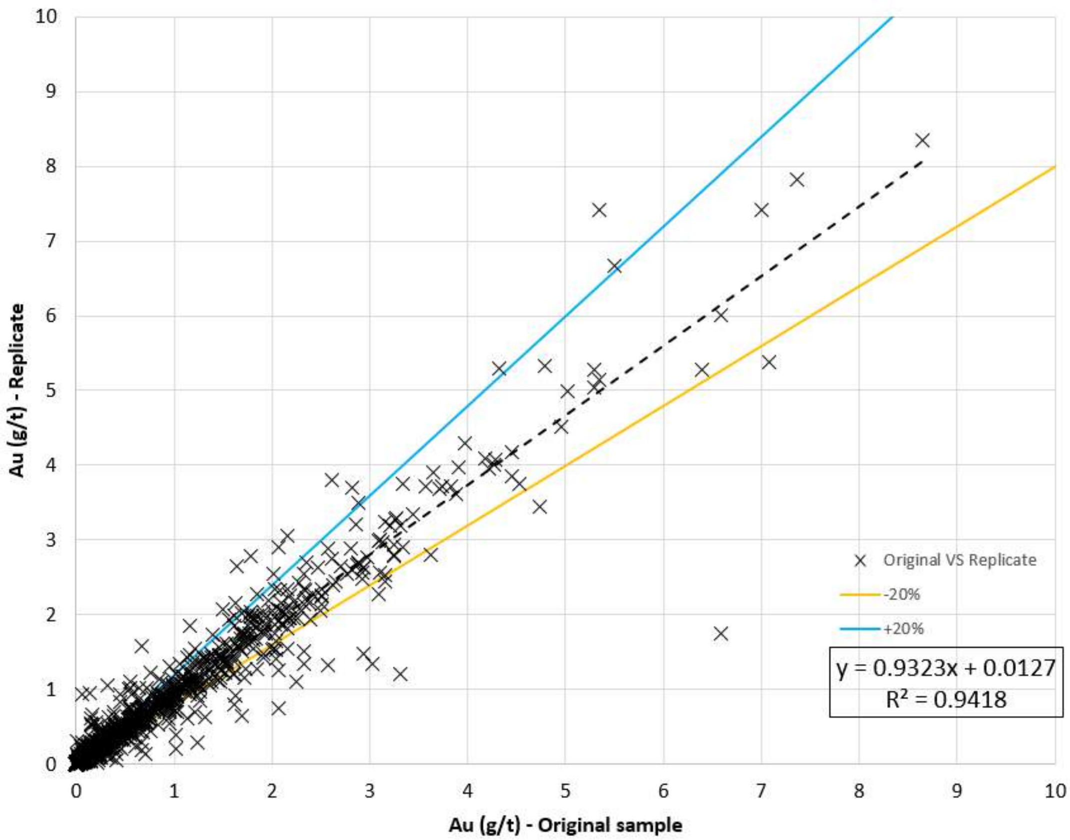


Figure 11.3 – Linear graph comparing original (ALS) and replicate assays (MS Analytical) (n=2153) from July 1, 2017 to November 13, 2017 (R^2=0.9418, AA24 method)

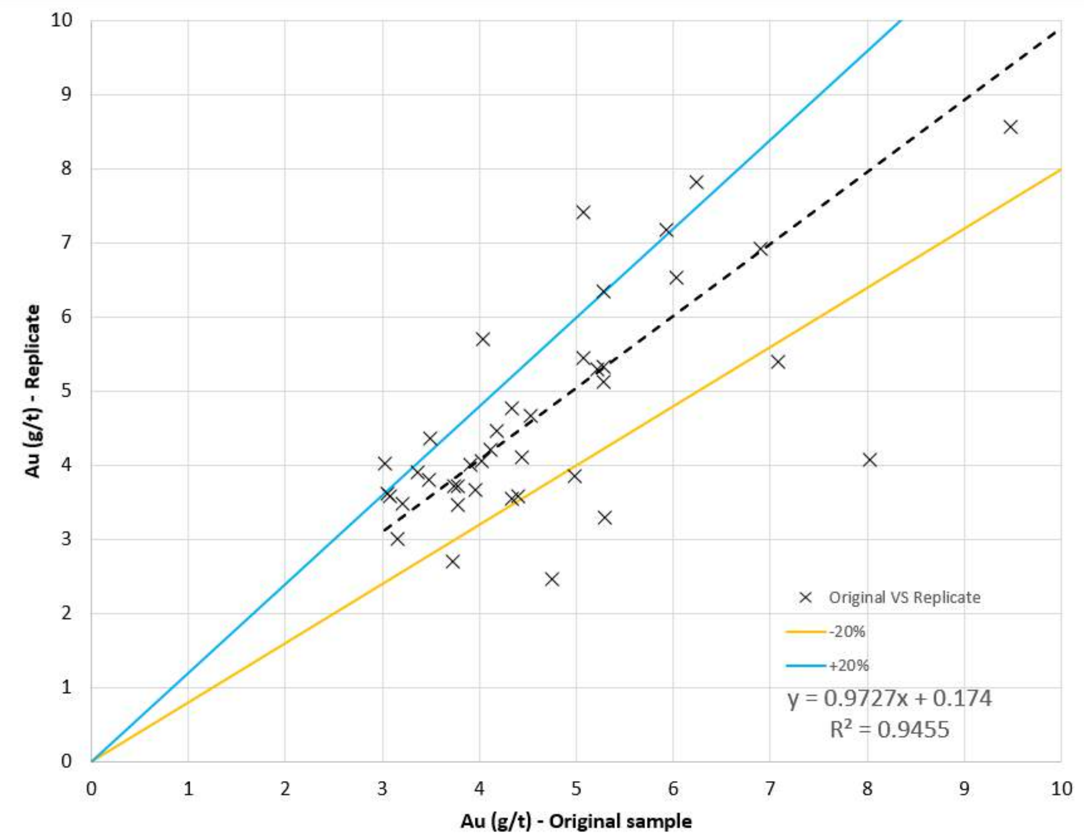


Figure 11.4 – Linear graph comparing original (ALS) and replicate assays (MS-Analytical) (n=50) from July 1, 2017 to November 13, 2017 (R^2=0.9455, GRA22 method)

11.5.4 Agnico Eagle Sweden QA/QC review

Control charts are created in Fusion when the geologist imports the assay results. If any of the standards or the blank results fail (outside ±2SD), these are logged into a table named “Failed-batches”. The geologist reports this to project manager, Kåre Höglund, who decides on a case-by-case basis if any action is to be taken; e.g., a) no action is needed; b) part of the batch is re-assayed; or c) the entire batch is re-assayed. If two or more standards in a batch are clearly outside ±2SD, then selected parts of the batch or the entire batch are re-assayed if no other logical explanation is found to the outliers.

11.6 Comments

InnovExplo reviewed the sample preparation, security protocols and analytical procedure, as well as the insertion rates and performance of blanks, standards and duplicates pairs, and concluded that the observed failure rates are within expected ranges and that no significant assay biases were present.

In InnovExplo’s opinion, the procedures followed at the Barsele Project conform to industry practices and the quality of the assay data is sufficiently adequate and acceptable to support a mineral resource estimate.

12 DATA VERIFICATION

Barsele Minerals provided the diamond drill hole database for the MRE (see Item 14).

Data verification was performed on 314 of the 581 drill holes in the resource area, including all 270 used for the MRE. The database was validated, with emphasis on the recent 2016 and 2017 drilling programs.

The verification includes a review of collar locations, logs, assay certificates, QA/QC protocols, downhole surveys and lithology intervals.

The co-author, Pierre-Luc Richard, P.Geo., M.Sc., visited the property from August 28 to August 30, 2017, accompanied by Art Freeze, P.Geo. for Barsele Minerals. AEM employees were present during the site visit. During the site visit, the co-author examined the logging facilities, reviewed the drill core and collar locations, and held many discussions with on-site geologists and technicians. Some of the data validation took place before and after the site visit.

12.1.1 Diamond drilling

Every collar on the deposit was professionally surveyed.

Drilling was underway when the author visited the site (Figure 12.1).

The author was able to confirm the location of many casings using a handheld GPS during the site visit. Good accuracy was obtained when the onsite readings were compared to the coordinates in the GEMS database (Fig. 12.2). The database collar locations are considered adequate and reliable.

Figure 12.1 – Photograph of drill rig visited by the author during the site visit

Figure 12.2 – Examples of onsite collar location verification

12.1.2 Downhole Survey

Downhole surveys were available for 270 of the 314 holes subject to data verification. The most recent drill holes (2015-2017) had DeviFlex and DeviShot multi-shots taken every 3, 4 or 5 metres. For drilling programs before 2015, measurements were generally taken every 4 metres.

The information for all drill holes in the database was mathematically reviewed to identify anomalies and visual checks were performed on 100% of the downhole surveys. Very few modifications were made to the database, which is considered valid and reliable.

12.1.3 Sampling and Assaying Procedures

The author reviewed several mineralized core sections while visiting the core storage facility in the vicinity of the property (Figures 12.3 and 12.4). All core boxes were labelled and properly stored in a building rented for this purpose. Sample tags, placed at the beginning of each sample, were still present in the boxes. Marks on the box were also found, indicating sample intervals. It was possible to validate sample numbers and confirm the presence of mineralization for samples collected from mineralized zone. QA/QC samples were clearly identified.

Figure 12.3 – Photographs of onsite core and assay certificate records that were consulted during the author's review

Figure 12.4 – Building used for core logging and storage in the vicinity of the Barsele Property

The author reviewed the entire path taken by the drill core, from the drill rig to the logging and sampling facility, it was deemed adequate. Core sample lengths were also reviewed.

12.1.4 Assays

InnovExplo was granted access to the assay certificates for all requested drill holes. Very few errors were noted in the database, and these were considered minor and of the type normally encountered in a project database.

None of the observed errors would affect the integrity of the database and it is considered to be of very good overall quality. InnovExplo considers the database for the Project to be valid and reliable.

12.1.5 Voids

No underground or open-pit historical depletions are present on the Project.

12.2 Conclusion

Overall, the authors are of the opinion that the data validation process demonstrates the validity of the database. The database is of sufficient quality to be used for a resource estimate.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

The information on the test work done before the JV with AEM presented in this section was obtained from the June 2015 NI 43-101 report by Giroux et al. (2015

In 1992, Terra Mining completed a number of copper and zinc flotation tests from a large bulk sample of Norra mineralization (sample size unknown) at the Boliden plant. The specific gravity used in the Norra model was derived from this bulk-test conducted by Boliden for Terra Mining in 1992. The conclusions derived from this test are from Noren and Bolin (1992) as presented in Giroux et al. (2015):

- A copper concentrate with a grade of 16.5% Cu and a copper recovery of 78% is possible to produce. The gold recovery to this concentrate is low (32%) and at the same time there is a selectivity problem towards arsenopyrite. The selectivity copper-arsenopyrite is improved when dextrin is added in the flotation.
- A zinc concentrate with a grade of 50% Zn grade and a zinc recovery of 75% is possible. The low zinc grade is caused by co-floating arsenopyrite.
- The results for gold indicate that a high percentage of gold content is included in arsenopyrite and thereby difficult to recover with good economy.

The Norra V-HMS style of mineralization is not the primary focus of future exploration programs.

As far as InnovExplo is aware, the only other mineralogical or metallurgical studies before 2004 are summarized in a report by Barry et al. (2006) and reproduced in Giroux et al. (2015):

In 1995, Anamet Services in Bristol, England carried out mineralogical and preliminary metallurgical testwork on a 1,000-kilogram split of a 100-ton bulk sample of mineralized rock [collected by Terra Mining personnel] excavated from a trench at the northwestern part of the Barsele Central Zone (Reynolds, 1996).

The gold mineralization predominantly consists of particles of electrum (natural alloy of gold and silver), ranging up to 160 microns but rarely exceeding 15 microns. Most of the electrum is present along grain boundaries within phyllosilicate-rich concentrations consisting of chlorite, biotite and sericite.

Refractory gold content was about 8 percent by weight, mostly consisting of tiny inclusions of electrum encapsulated in arsenopyrite. Knelson gravity concentrator tests were not successful in generating satisfactory recoveries to produce commercially viable gold-concentrates. Energy requirements for grinding the mineralized material are predicted to be high – the Bond work index (Wi) determination carried out on minus 3.35-millimetre (mm) material yielded a Wi value of 14.5 kilowatt-hour/tonne.

Direct cyanidation of samples wet ground to 80 percent passing 170 microns and 62 microns (after leaching for 24 hours) yielded gold dissolutions of 85.9 percent and 92.9 percent, respectively. Calculated cyanide consumptions were 0.84 kilograms/tonne (kg/t) and 1.41 kg/t, respectively.

Direct cyanidation of samples crushed to pass 5.56 mm, 3.35 mm and 2.00 mm yielded gold dissolutions of 52.9 percent, 66.1 percent and 72 percent after 72 hours; calculated cyanide consumptions were 0.55 kg/t, 0.69 kg/t and 1.42 kg/t.

The average head-grade of the sample was 5.1 g/t Au and 4.3 g/t Ag, and therefore significantly higher in grade and may not be representative of the Barsele Central Zone as a whole.

In 2004, as part of their QA/QC, Northland sent 21 drill core pulp samples from the Barsele Property, ranging in value from 1.12 g/t Au to 6.49 g/t Au, to ALS Chemex Vancouver for accelerated cyanide leach determination. The results indicated an average cyanide soluble recovery of 93.5%. An additional 11 pulp samples from the Property, ranging in value from 1.10 to 14.08 g/t Au, were analyzed by a similar method in 2005 by Omac Laboratories of Galway, Ireland. Results were similar, indicating 92% cyanide soluble recovery. Three bottle roll tests were conducted on prepared core by Kappes Cassidy in 2004 with an 86 indicated average recovery of 87%. Seven specific gravity determinations were completed by Golder and Associates on whole core from the Property in 2004. The results ranged from 2.71 to 2.75 with an arithmetic average of 2.73.

In 2017 AEM conducted tests on Master Composite (MC) and individual ore zones. The following text is extract from an internal AEM memorandum. Test work was conducted internally with the AEM Centre of Services and Development (CSD). First of all, the optimal conditions were developed with the master composite and then it was applied to each zone. The standard test procedure, which includes gravity concentration follow by cyanide leach of gravity tails and gravity concentrate.

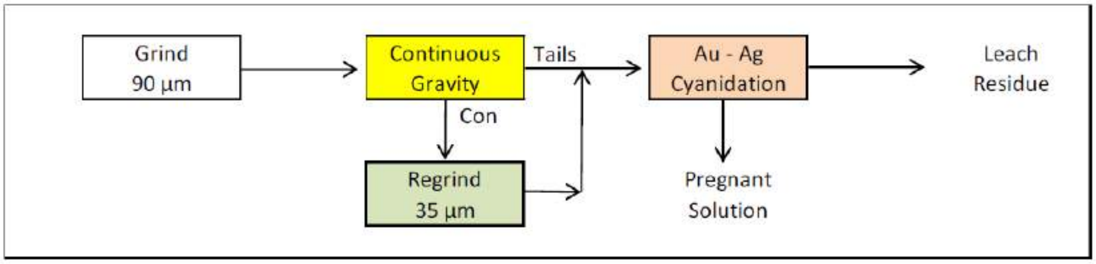
Three process flowsheets were tested in phase II in the evaluation of gold recovery from the Barsele master composite sample:

- Option 1: Whole ore leach;
- Option 2: Flotation followed by cyanidation of the flotation concentrate and flotation tailings;
- Option 3: Gravity gold recovery followed by cyanidation of the gravity tailings
- Barsele.

Process	Grind size P80 µm	Calculated head grade g/t	Normalized extraction %	Cyanide consumption kg/t	Lime consumption kg/t	Tail grade g/t
Whole rock cyanidation	76	1.86	92.5	0.13	0.35	0.137
Whole rock cyanidation	85	1.68	91.5	0.12	0.49	0.153
Whole rock cyanidation	144	1.96	88.0	0.04	0.42	0.217
Flottation and cyanidation	150	1.68	90.2	0.84	0.49	0.178
Continuous gravity and cyanidation	150	1.92	92.5	0.51	0.54	0.136
Continuous gravity and cyanidation	90	1.70	94.2	0.57	0.38	0.106

Barsele mineralization is sensitive to grind size. The optimal/economical grind size is 80% passing 90 microns.

The selected flowsheet (option 3) includes a pre-concentration step to produce a concentrate from the gravity process follow by regrinding the concentrate finer than 80% passing 35 microns to improve gold extraction. The gravity tailings are cyanide leach.



A global gold recovery of 92.6 % has been estimated for the process. This value is based on assumptions made about the testwork results. The gold dissolution obtained in the test performed with the chosen flowsheet is applied individually on gravity concentrate and tailings streams. A gravity recovery of 60 % is used at industrial scale. Finally, a 99.5 % gold adsorption efficiency is estimated to account for liquid losses.

Product	Weight	Assays		Recovery	
	%	Au g/t	Ag g/t	% Au	% Ag
MILL FEED	***100.0***	***2.15***	***1.00***	***100.0***	***100.0***
GRAVITY CONC	***8.40***	***15.4***	***10.0***	60.0	84.0
GRAVITY CONC LEACHING				57.8	75.6
GRAVITY CONC LEACH RESIDUE	8.40	0.55	1.00	2.2	8.4
GRAVITY TAILS	91.6	0.94	0.17	40.0	16.0
GRAVITY TAILS LEACHING				35.2	10.4
GRAVITY TAILS LEACH RESIDUE	91.6	0.11	0.06	4.8	5.6
FINAL TAILS	100.0	0.16	0.31	7.4	31.2
PRECIOUS METAL				92.6	68.8

14 MINERAL RESOURCE ESTIMATES

The Barsele Deposit Mineral Resource Estimate (the "MRE") was prepared by Carl Pelletier, P.Geo., using all available information. The MRE was prepared as part of a mandate assigned by Barsele Minerals.

The resource area measures 2,650 metres along strike and up to 375 metres wide. Although resources are found down to 850 metres, the bulk of the resource is located in the first 600 metres from surface. The MRE was based on a compilation of historical and recent diamond drill holes. Wireframed mineralized zones provided by AEM were used after being reviewed by InnovExplo.

The mineral resources herein are not mineral reserves as they have no demonstrable economic viability. The result of this study is a single MRE for three mineralized zones (Avan, Central Skiråsen). The estimate includes Indicated and Inferred resources for an underground scenario. The effective date of the estimate is February 15, 2018, based on the compilation status and cut-off grade parameters.

Historical resources estimates are presented in Table 14.1 for comparative purposes only.

Table 14.1 – Historical mineral resource estimates on the Barsele Property

Company	Release Date	Cut-off grade (g/t)	Category	Tonnes	Grade Au (g/t)	Ounces (Au)
Terra Mining	1998	0.75	Indicated	3 560 000	1.80	207 000
			Inferred	5 920 000	1.80	342 000
Northland	April 2005	0.80	Indicated	5 177 000	1.75	290 800
			Inferred	6 623 000	1.64	348 200
Northland	April 2006	0.80	Indicated	6 565 000	1.74	367 750
			Inferred	7 431 000	1.67	398 630
Orex Minerals	March 2011	0.40	Indicated	11 550 000	1.12	415 000
			Inferred	31 720 000	0.81	827 000
Orex Minerals	November 2012	0.60	Indicated	14 210 000	1.22	558 000
			Inferred	20 510 000	0.98	643 000
Agnico Eagle	February 2017	0.41 (open-pit)	Indicated	-	-	-
		1.21 (underground)	Inferred	21 717 000	1.72	1 202 000

14.1 Drill Hole Database

The GEMS diamond drill hole database provided by Barsele Minerals contains 690 surface diamond drill holes. Of these, a subset of 581 holes was identified in the resource area (Figs. 14.1 and 14.2). As part of the current mandate, all 581 holes were compiled and validated before the estimate was initiated, which led to 207 (15,319 m) being discarded for various reasons (doubts about collar location, downhole survey measurements, assay results, type of hole, etc.). The validation process identified all holes intersecting mineralized zones, yielding a final resource database of 270 holes for 99,342 metres of core drilled between 1989 and 2017.

All 270 holes contain lithological descriptions taken from drill core logs. The 270 drill holes cover the strike-length of the deposit at a variable drill spacing ranging from 15 to 75 metres (mostly below 50 m).

In addition to the basic tables of raw data, the GEMS database includes several tables of wireframe solid intersections and the calculated drill hole composites required for statistical evaluation and resource block modelling.

InnovExplo's data verification included a site visit to the Barsele Project and a review of the logging and core storage facilities. It also included a review of selected core intervals, drill hole collar locations, assays, the QA/QC program, downhole surveys, and the descriptions of lithologies, alteration and structures.

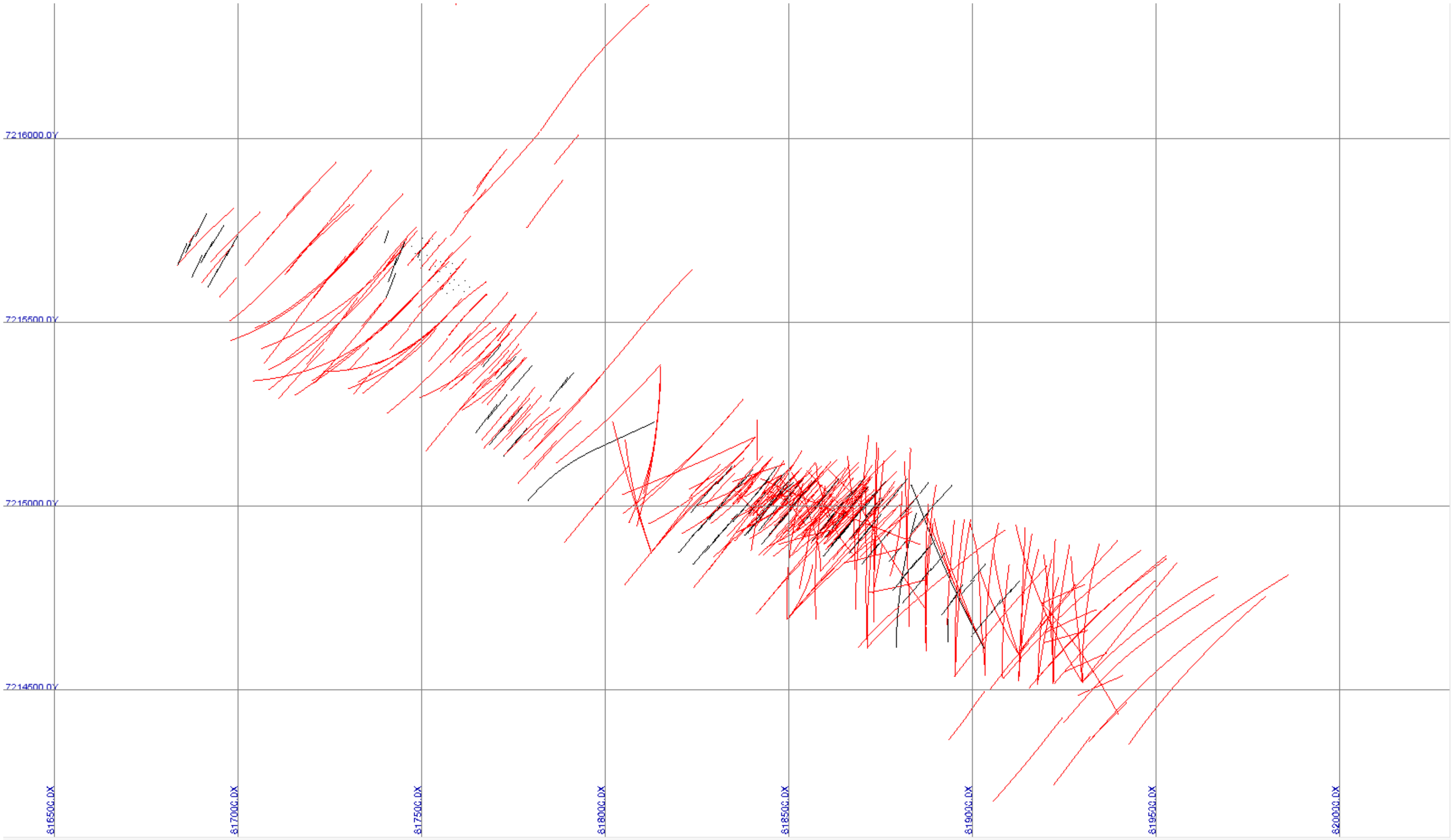


Figure 14.1 – Surface plan view of the Barsele drill hole database used for the resource estimate (red = 270 DDH used for the MRE; black = 207 rejected DDH).

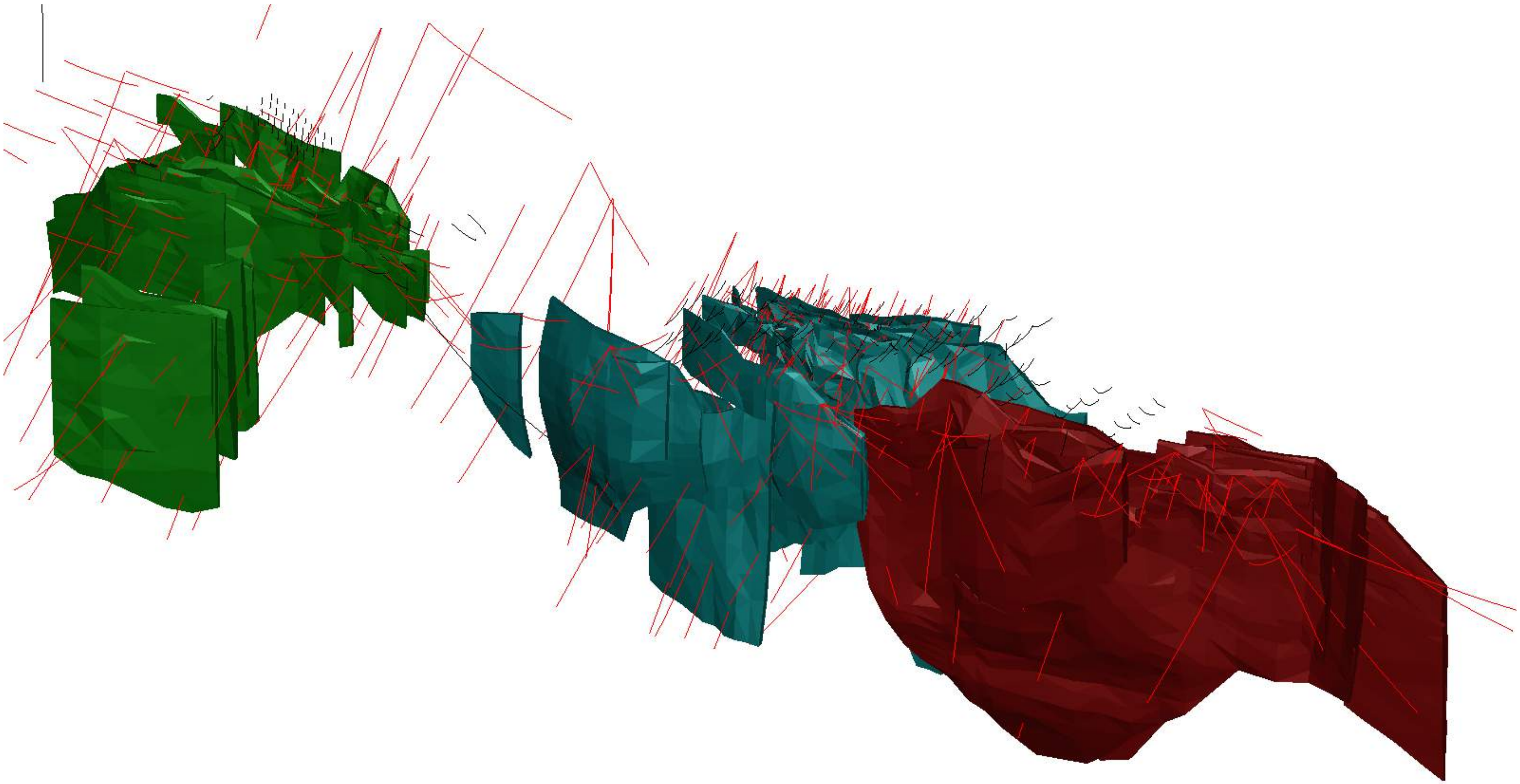


Figure 14.2 – 3D plan view of the Barsele drill hole database used for the resource estimate (red = 270 DDH used for the MRE; black = 207 rejected DDH). Coloured shapes are the mineralized zones.

14.2 Interpretation of Mineralized Zones

In order to conduct accurate resource modelling of the deposit, the mineralized-zone wireframe model was based on the drill hole database. The model comprises 47 solids that honour the drill hole database. The mineralized solids were provided by AEM and accepted after being reviewed by InnovExplo. AEM used Leapfrog to generate the mineralized solids.

Two surfaces were also created to define topography and overburden. These surfaces were generated from drill hole descriptions and survey information provided by Barsele Minerals.

Figure 14.3 presents a 3D view of the mineralized solids.

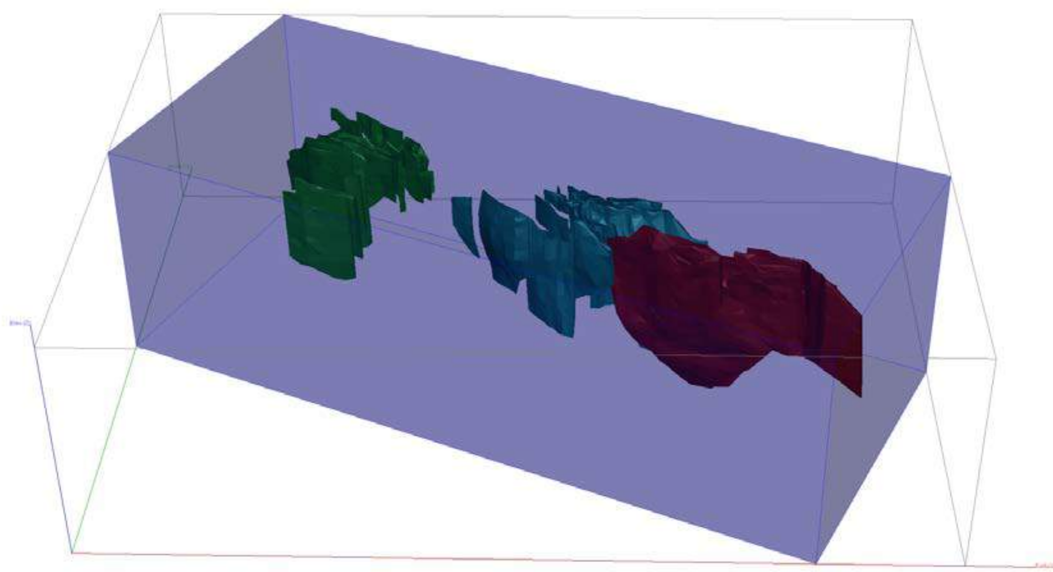


Figure 14.3 – 3D view of the mineralized model for the Barsele deposit, looking north with a slight plunge.

14.3 Compositing

In order to minimize any bias introduced by variable sample lengths, the DDH assays were composited.

For geological and statistical reasons, a 2-metre ("2m") composite, with an allowable spread of 1 to 3 metres, was selected for the Barsele deposit.

A total of 35,199 composites were generated. A grade of 0.00 g/t Au was assigned to missing sample intervals. Table 14.2 shows the basic statistics for composites by grouped zones (Avan, Central, Skiråsen).

Table 14.2 – Summary statistics for the composites

Dataset	Block Code	Metal	# of Composites	Max (g/t)	Mean (g/t)	Standard Deviation	Coefficient of Variation
Avan	6000-series	Au (g/t)	1 441	37.62	0.85	1.77	2.09
Central	4000-series	Au (g/t)	6 944	55.29	1.04	1.96	1.88
Skirasen	2000-series	Au (g/t)	2 960	126.53	1.28	3.92	3.07
Dilution Envelope	600	Au (g/t)	24 854	57.21	0.16	0.74	4.51

14.4 High Grade Capping

Basic univariate statistics were performed on composite datasets for each mineralized zone.

The following criteria were used to decide whether or not capping was warranted, and to determine the threshold when warranted:

- If the quantity of metal contained in the last decile is above 40%, capping is warranted; if below 40%, the uncapped dataset may be used;
- No more than 10% of the overall contained metal must be contained within the first 1% of the highest-grade samples;
- The probability plot of grade distribution must not show abnormal breaks or scattered points outside of the main distribution curve; and
- The log normal distribution of grades must not show any erratic grade bins nor distanced values from the main population.

Table 14.3 presents a summary of the statistical analysis for each dataset. Figures 14.4 to 14.7 show graphs supporting the capping threshold decisions for the Avan, Central, and Skiråsen zones. Figure 14.6 show graphs supporting the capping threshold decisions for the dilution envelope.

Table 14.3 – Summary statistics for the composites by dataset

Dataset	Block Code	Metal	# of Samples	Max (g/t)	Uncut Mean (g/t)	High Grade Capping (g/t)	Cut Mean (g/t)	# of Samples Cut	% of Samples Cut	% Metal Factor Loss	Coefficient of Variation
Avan	6000-series	Au (g/t)	1 441	37.62	0.85	15.00	0.83	2	0.14%	2.10%	1.81
Central	4000-series	Au (g/t)	6 944	55.29	1.04	40.00	1.04	1	0.01%	0.21%	1.84
Skirasen	2000-series	Au (g/t)	2 960	126.53	1.28	45.00	1.24	4	0.14%	2.55%	2.53
Dilution Envelope	600	Au (g/t)	24 854	57.21	0.16	8.00	0.16	14	0.06%	5.40%	2.24

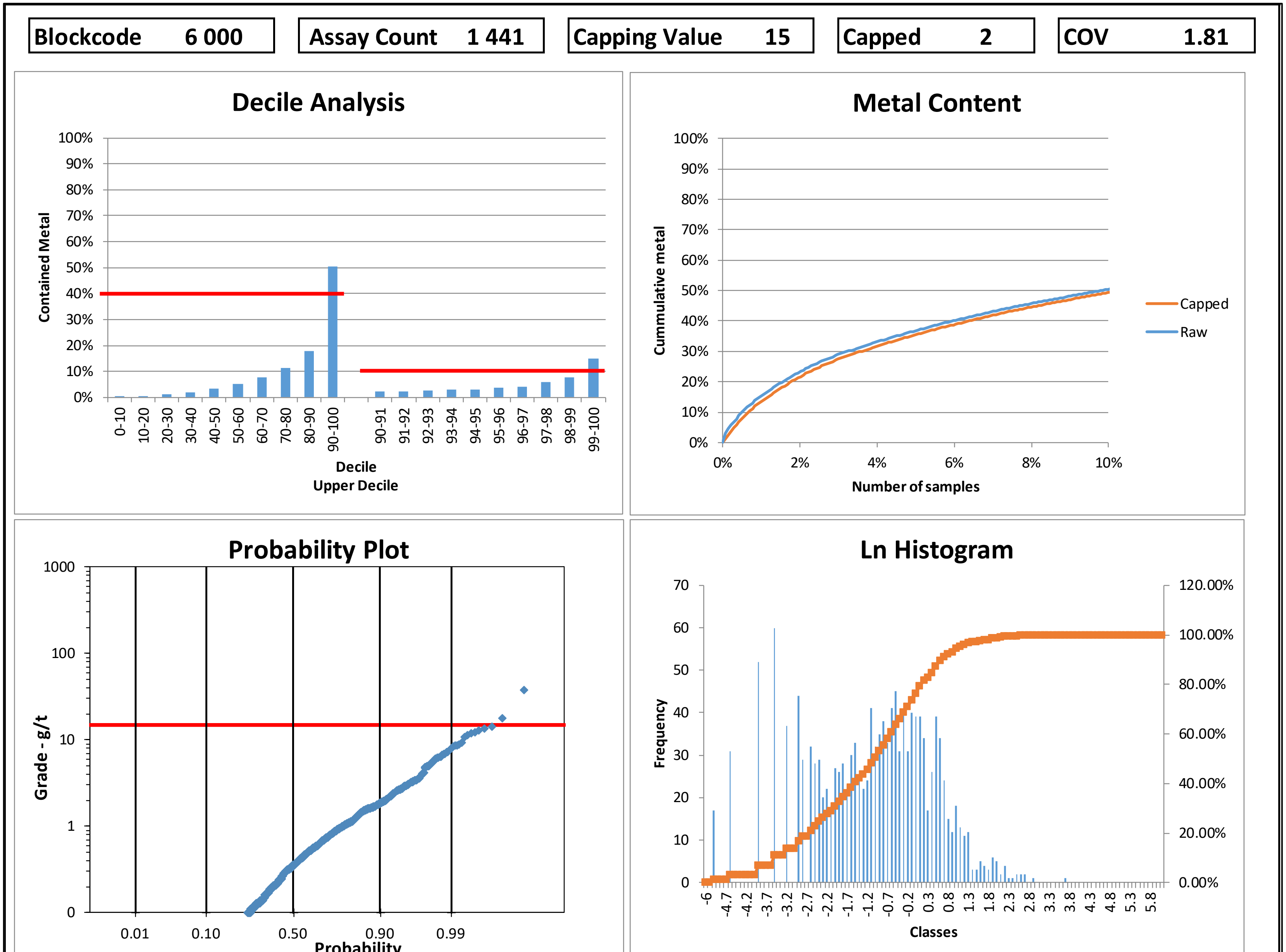


Figure 14.4 – Graphs supporting a capping grade of 15 g/t Au for the Avan Zone

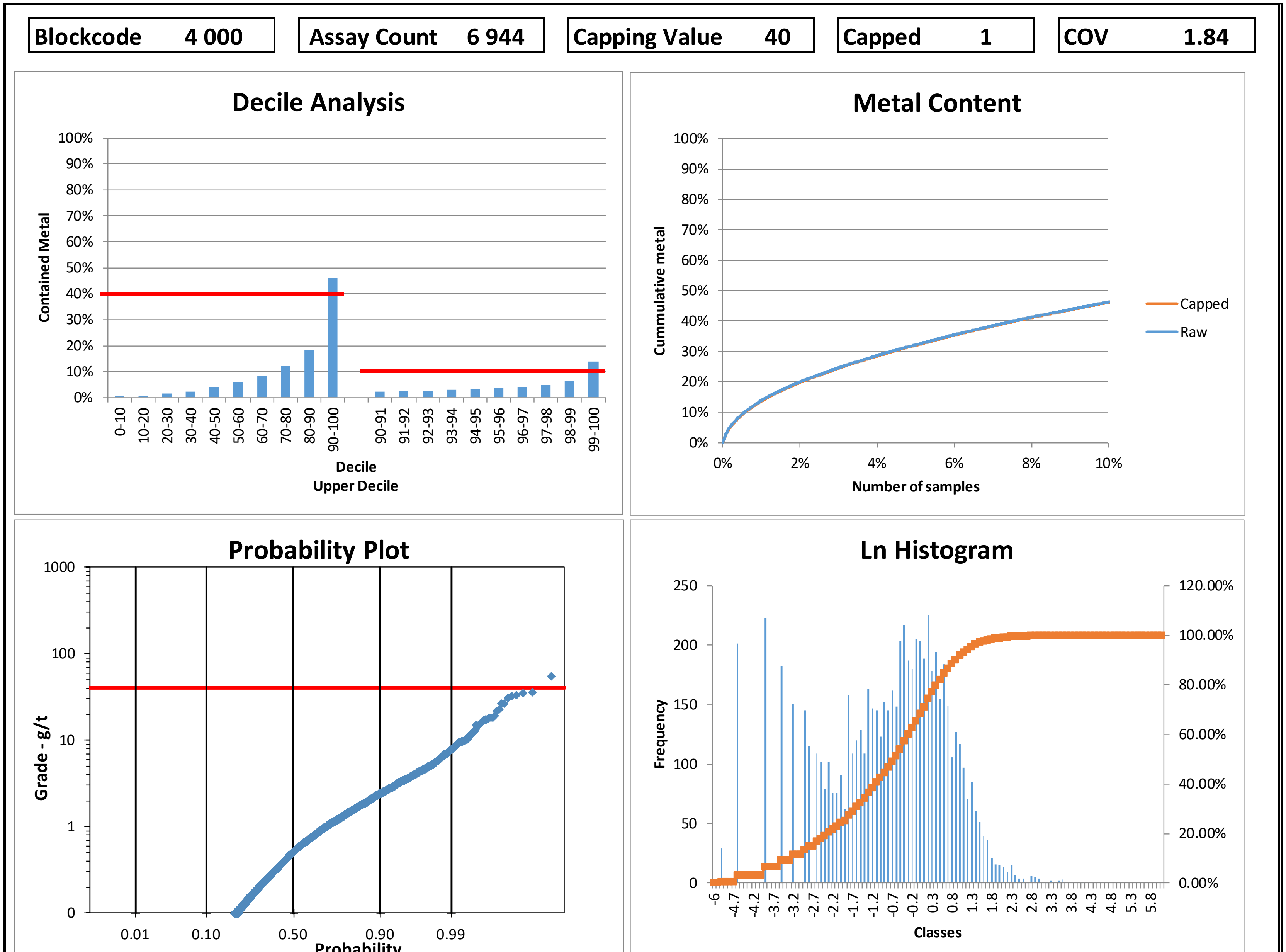


Figure 14.5 – Graphs supporting a capping grade of 40 g/t Au for the Central Zone

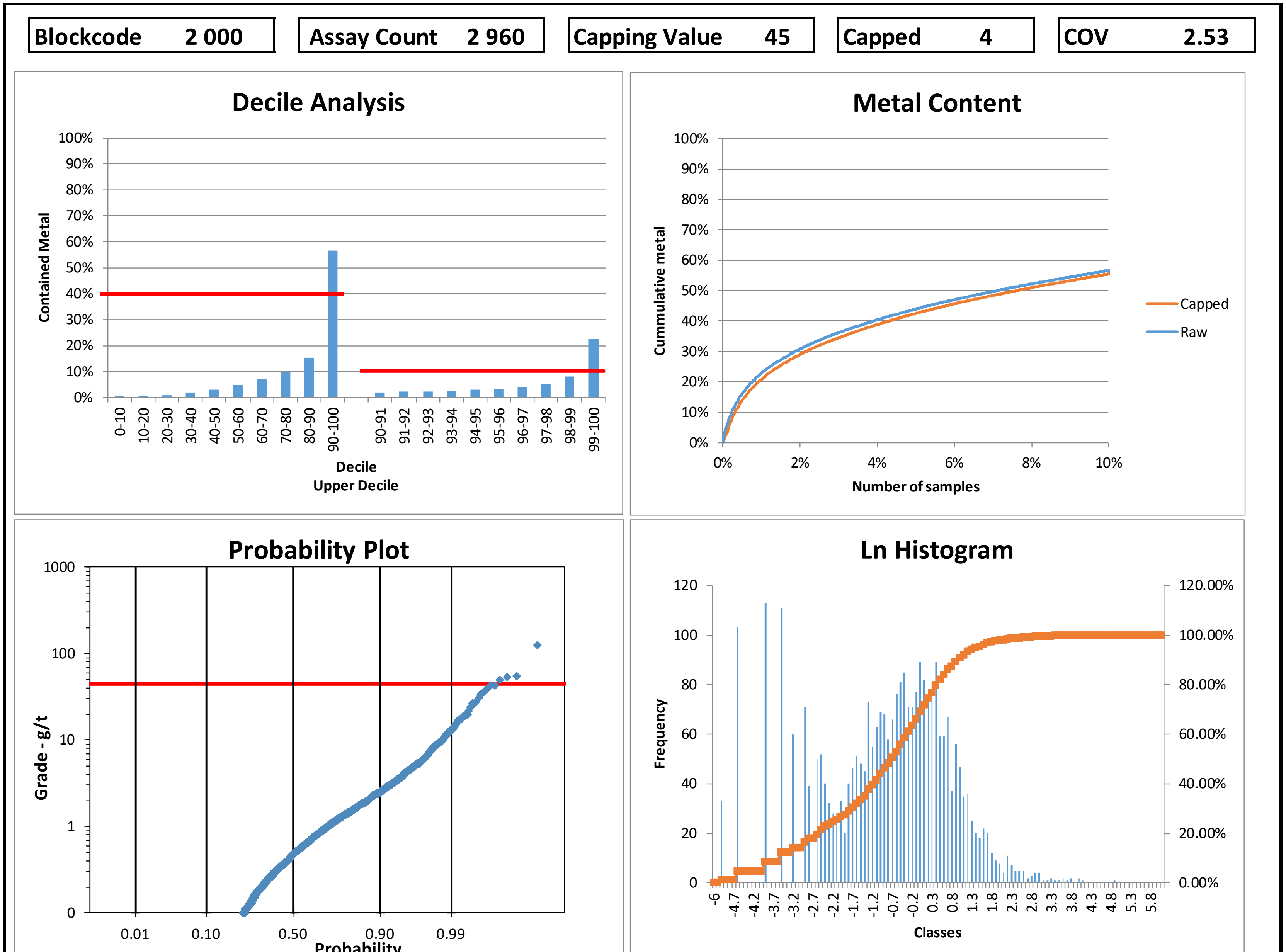


Figure 14.6 – Graphs supporting a capping grade of 45 g/t Au for the Skiråsen Zone

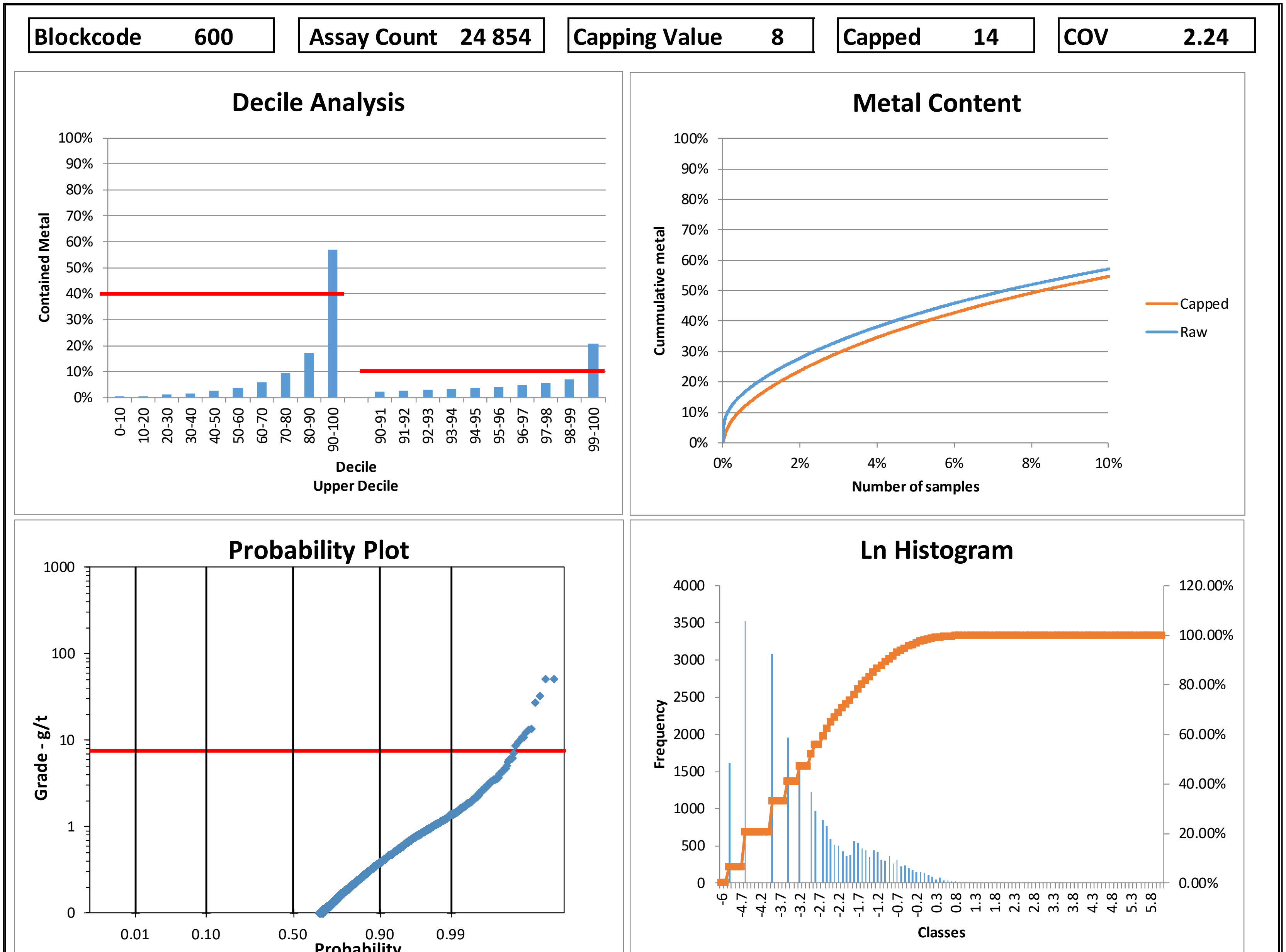


Figure 14.7 – Graphs supporting a capping grade of 8 g/t Au for the dilution envelope

14.5 Density

Densities are used to calculate tonnages from the volume estimates in the resource-grade block model.

Based on limited information, InnovExplo used a fixed value based on lithology solids. The average of all samples found within said solids was used resulting in the following values (g/cm^3):

- Andesite: 2.76;
- Granodiorite: 2.76;
- Altered Granodiorite: 2.73;
- Mafic Dykes: 2.87;
- Metavolcanics: 2.85;
- Tonalite: 2.74;
- Volcanics: 2.76.

It is noteworthy to mention that mineralized zones are contained within the altered granodiorite, therefore, a density of 2.73 g/cm^3 was used. Overburden was attributed a density of 2.00 g/cm^3.

14.6 Block Model

A block model was established for the purpose of the current MRE. The block model covers an area sufficient to host an open pit, if necessary. The model has been pushed down to a depth of approximately 1,000 metres below surface. The block model was rotated. The block dimensions reflect the sizes of the mineralized zones and plausible mining methods. Table 14.4 provides the properties of the block model.

Table 14.4 – Block model properties

Properties	X (Columns)	Y (Rows)	Z (Levels)
Origin coordinates (UTM NAD83)	616,400	7,215,200	400
Block size	10	3	5
Number of blocks	335	475	210
Block model extent (m)	3350	1425	1050
Rotation	-25		

All blocks with more than 0.001% of their volume falling within a selected solid were assigned the corresponding solid block code in their respective folder. A percent block model was generated, reflecting the proportion of each block inside every solid (i.e., individual mineralized zones, individual lithological domains, the overburden and the country rock).

Table 14.5 provides details about the naming convention for the corresponding GEMS solids, as well as the rock codes and block codes assigned to each individual solid. The multi-folder percent block model thus generated was used for the mineral resource estimation.

Table 14.5 – Block model naming convention and codes

Workspace	Description	Rockcode	GEMS Triangulation Name			Precedence
			NAME1	NAME2	NAME3	
Zones	Mineralized Zone (Skirasen)	2100	Zones	2100	F180123	3
	Mineralized Zone (Skirasen)	2150	Zones	2150_Clip	F180123	3
	Mineralized Zone (Skirasen)	2200	Zones	2200_Clip	F180123	3
	Mineralized Zone (Skirasen)	2250	Zones	2250_Clip	F180123	3
	Mineralized Zone (Skirasen)	2300	Zones	2300_Clip	F180123	3
	Mineralized Zone (Skirasen)	2350	Zones	2350	F180123	3
	Mineralized Zone (Skirasen)	2375	Zones	2375	F180123	3
	Mineralized Zone (Skirasen)	2400	Zones	2400	F180123	3
	Mineralized Zone (Skirasen)	2450	Zones	2450	F180123	3
	Mineralized Zone (Skirasen)	2500	Zones	2500	F180123	3
	Mineralized Zone (Skirasen)	2550	Zones	2550	F180123	3
	Mineralized Zone (Skirasen)	2600	Zones	2600	F180123	3
	Mineralized Zone (Central)	4050	Zones	4050	F180123	3
	Mineralized Zone (Central)	4075	Zones	4075	F180123	3
	Mineralized Zone (Central)	4100	Zones	4100	F180123	3
	Mineralized Zone (Central)	4125	Zones	4125	F180123	3
	Mineralized Zone (Central)	4150	Zones	4150	F180123	3
	Mineralized Zone (Central)	4200	Zones	4200	F180123	3
	Mineralized Zone (Central)	4250	Zones	4250_Clip	F180123	3
	Mineralized Zone (Central)	4300	Zones	4300	F180123	3
	Mineralized Zone (Central)	4350	Zones	4350_Clip	F180123	3
	Mineralized Zone (Central)	4400	Zones	4400_Clip	F180123	3
	Mineralized Zone (Central)	4500	Zones	4500_Clip	F180123	3
	Mineralized Zone (Central)	4550	Zones	4550	F180123	3
	Mineralized Zone (Central)	4600	Zones	4600_Clip	F180123	3
	Mineralized Zone (Central)	4650	Zones	4650_Clip	F180123	3
	Mineralized Zone (Central)	4700	Zones	4700_Clip	F180123	3
	Mineralized Zone (Avan)	6040	Zones	6040	F180123	3
	Mineralized Zone (Avan)	6050	Zones	6050	F180123	3
	Mineralized Zone (Avan)	6100	Zones	6100	F180123	3
	Mineralized Zone (Avan)	6130	Zones	6130	F180123	3
	Mineralized Zone (Avan)	6150	Zones	6150	F180123	3
	Mineralized Zone (Avan)	6175	Zones	6175	F180123	3
	Mineralized Zone (Avan)	6185	Zones	6185	F180123	3
	Mineralized Zone (Avan)	6250	Zones	6250	F180123	3
	Mineralized Zone (Avan)	6350	Zones	6350	F180123	3
	Mineralized Zone (Avan)	6400	Zones	6400	F180123	3
	Mineralized Zone (Avan)	6450	Zones	6450	F180123	3
	Mineralized Zone (Avan)	6500	Zones	6500_Clip	F180123	3
	Mineralized Zone (Avan)	6550	Zones	6550	F180123	3
	Mineralized Zone (Avan)	6600	Zones	6600_Clip	F180123	3
	Mineralized Zone (Avan)	6620	Zones	6620	F180123	3
	Mineralized Zone (Avan)	6650	Zones	6650	F180123	3
	Mineralized Zone (Avan)	6700	Zones	6700	F180123	3
	Mineralized Zone (Avan)	6750	Zones	6750	F180123	3
	Mineralized Zone (Avan)	6800	Zones	6800	F180123	3
	Mineralized Zone (Avan)	6850	Zones	6850_Clip	F180123	3
Waste	Granodiorite	601	Granodiorite	Clip	F180131	50
	Metavolcanics	650	Metavolcanics	Clip	F180131	50
	Tonalite	670	Tonalite	Clip	F180131	50
	Volcanics	651	Volcanics	Clip	F180131	50
OVB	Overburden	50	Solid	OB	F180130	1
LowGrade	Altered Granodiorite (Dilution)	600	GDII	Clip	F180131	4
Dykes	Andesite	610	Andesite	Clip	F180131	50
	Mafic Dyke	700	Mafic Dyke	Clip	F180131	50

14.7 Variography and Search Ellipsoids

Three-dimensional directional variography was completed on capped composites for all grouped domains (Avan, Central, Skiråsen, dilution envelope). The study was carried out in Supervisor software. The 3D directional-specific investigations yielded the best-fit model along an orientation that corresponds to the strike and dip of the mineralized zones.

Figures 14.8 to 14.10 show examples of the variography study for the Avan, Central and Skiråsen zones respectively.

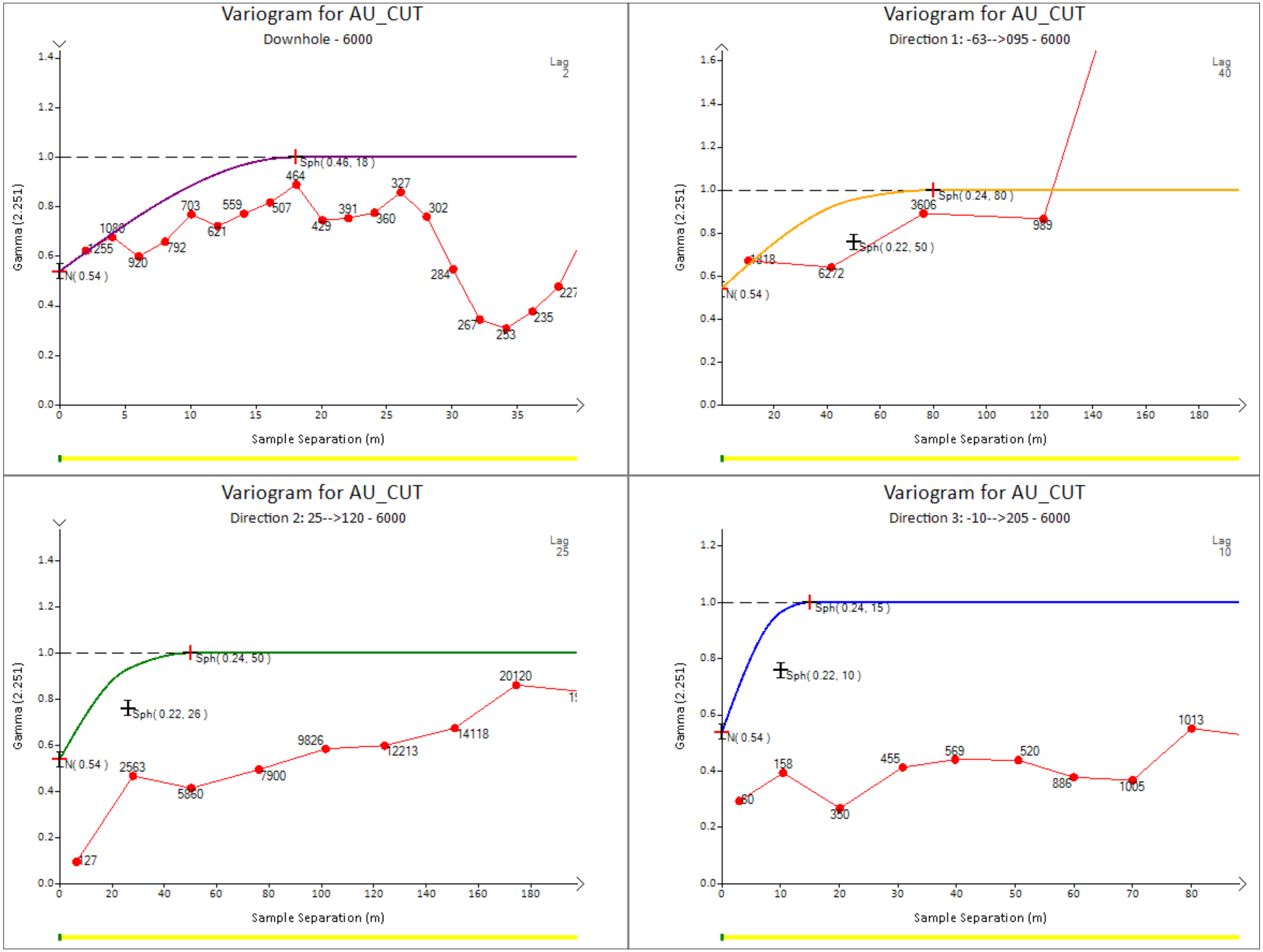


Figure 14.8 – Example of variography study for Avan

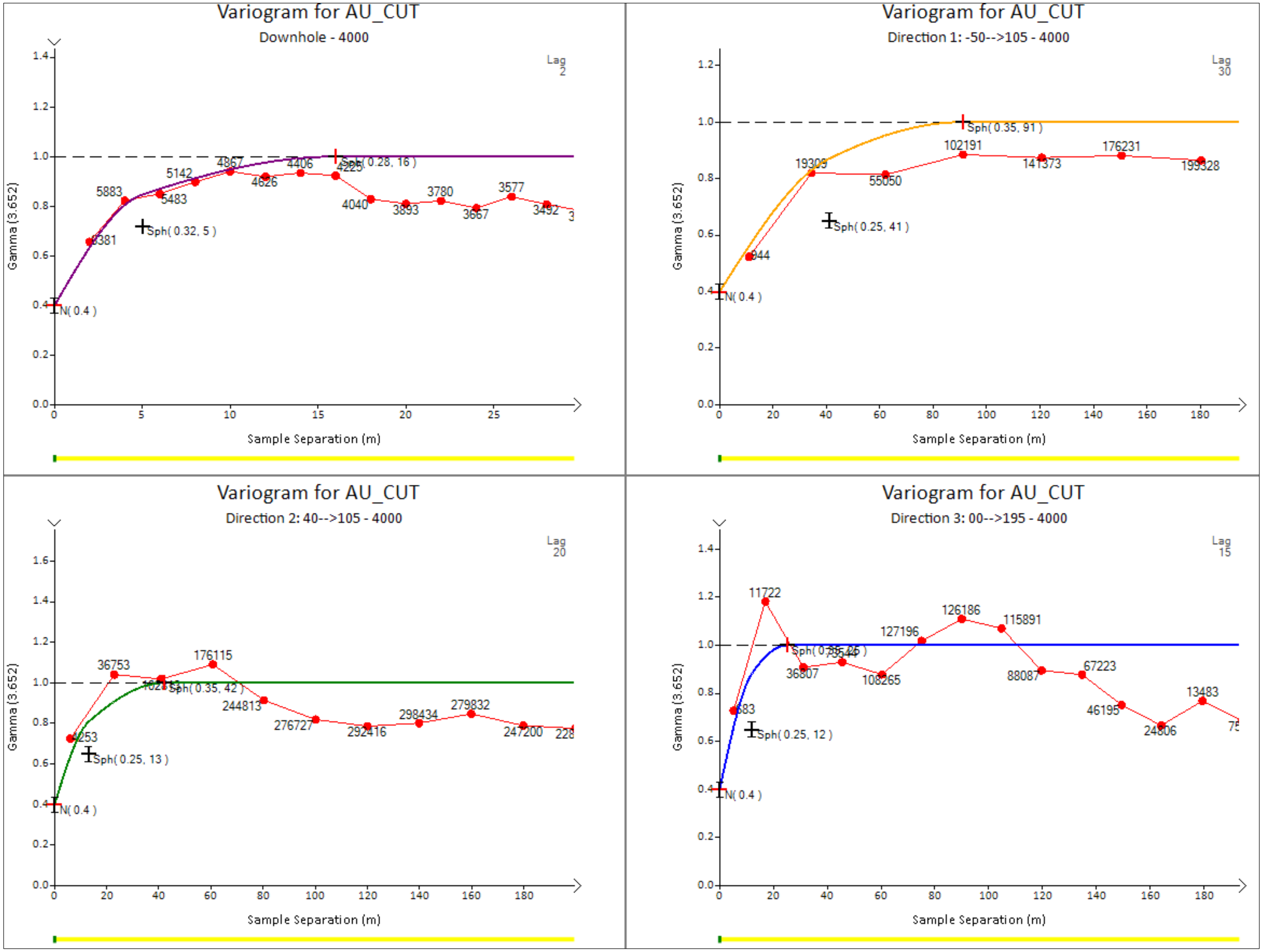


Figure 14.9 – Example of variography study for Central

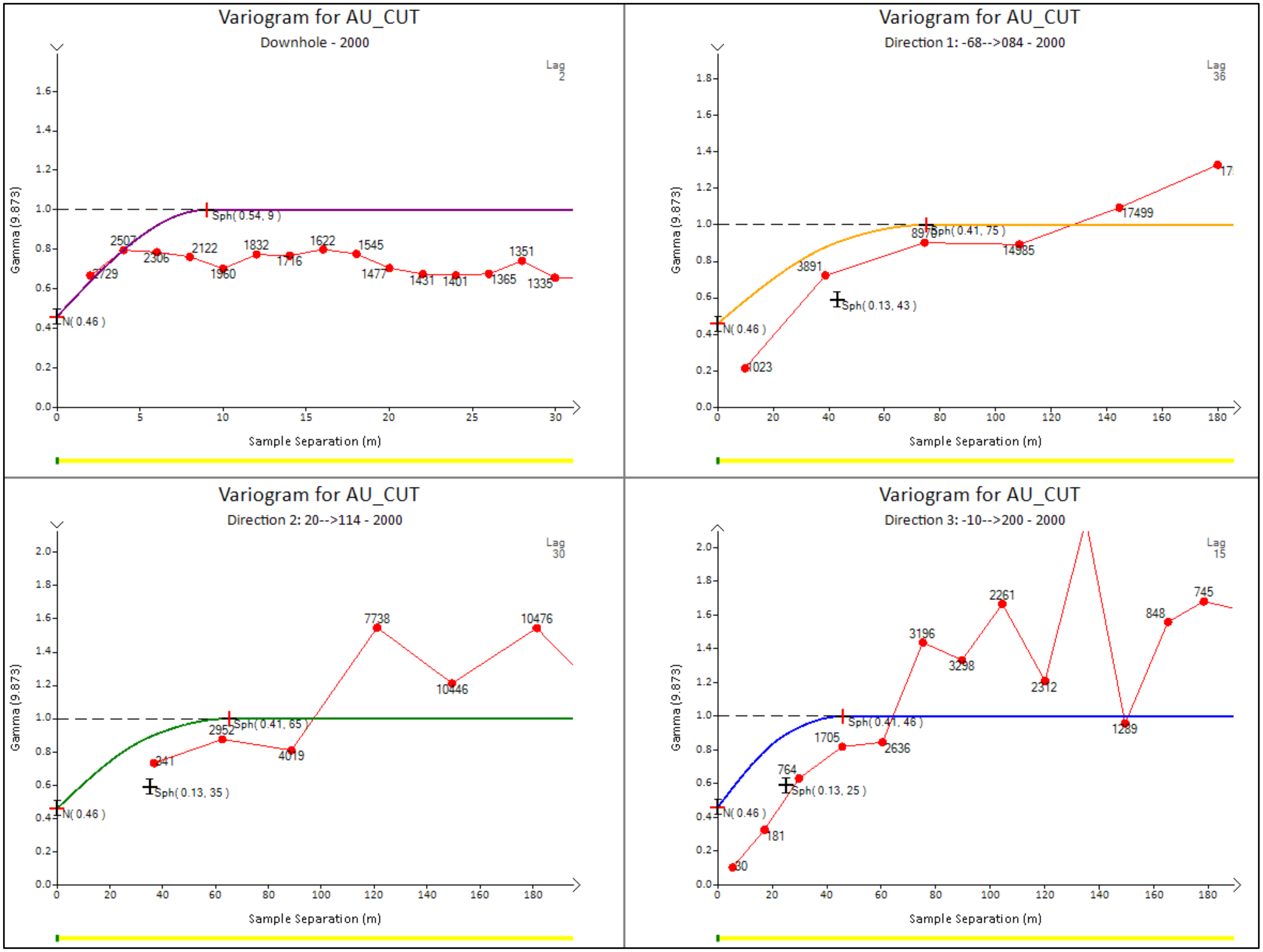


Figure 14.10 – Example of variography study for Skiråsen

Three ellipsoids were built from the results of the variography study for each domain. These correspond to: a) the variography results; b) 1.5x the variography results; and c) 2x the variography results.

Figures 14.11 to 14.13 show the variography ellipsoids for the Avan Central, and Skiråsen zones on different views.

Tables 14.6 summarizes the parameters of the final ellipsoids used for the interpolation.

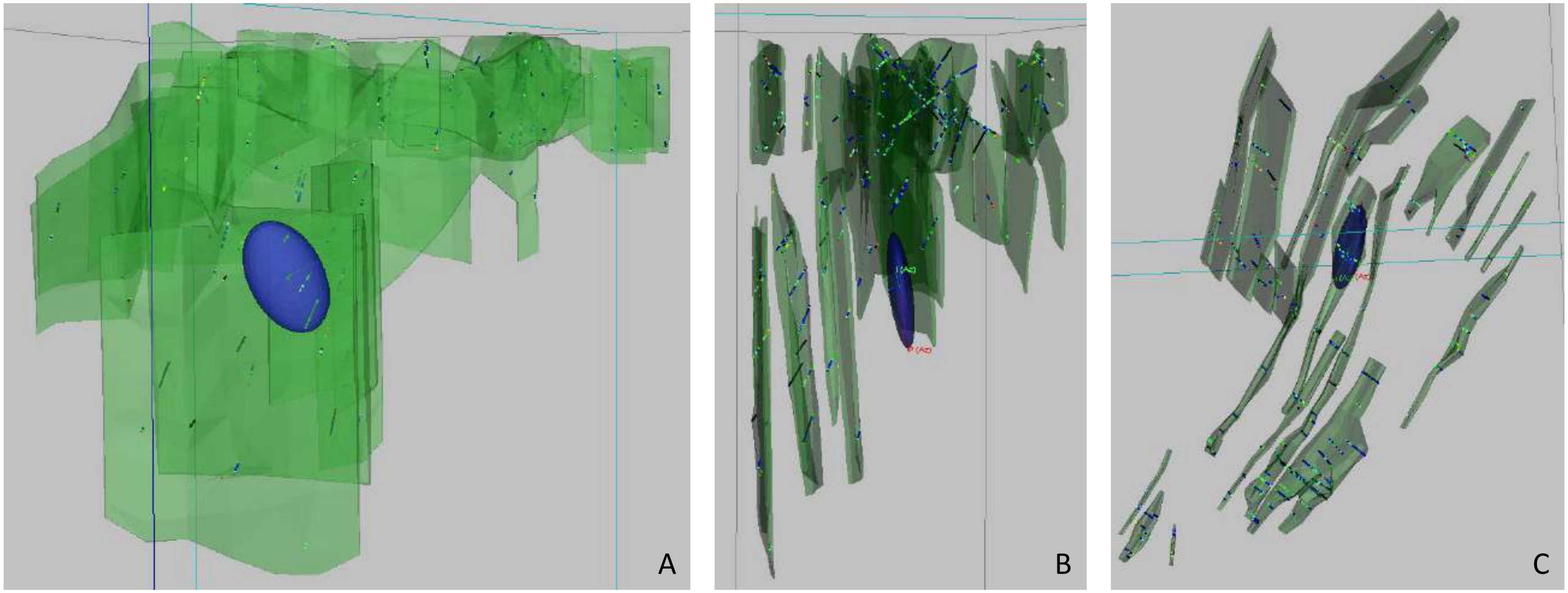


Figure 14.11 – Different views of Avan showing the ellipsoid obtained from the variography study: A) 3D longitudinal view; B) 3D section view; C) 3D plan view.

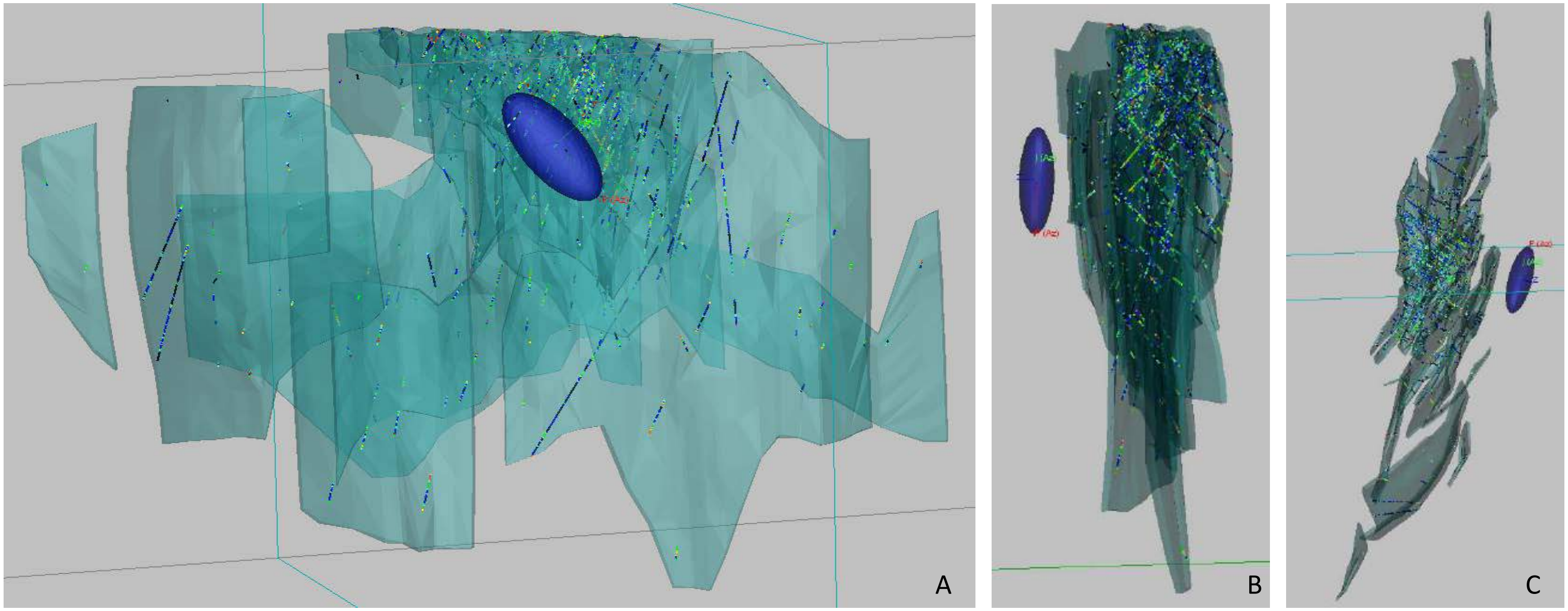


Figure 14.12 – Different views of Central showing the ellipsoid obtained from the variography study: A) 3D longitudinal view; B) 3D section view; C) 3D plan view.

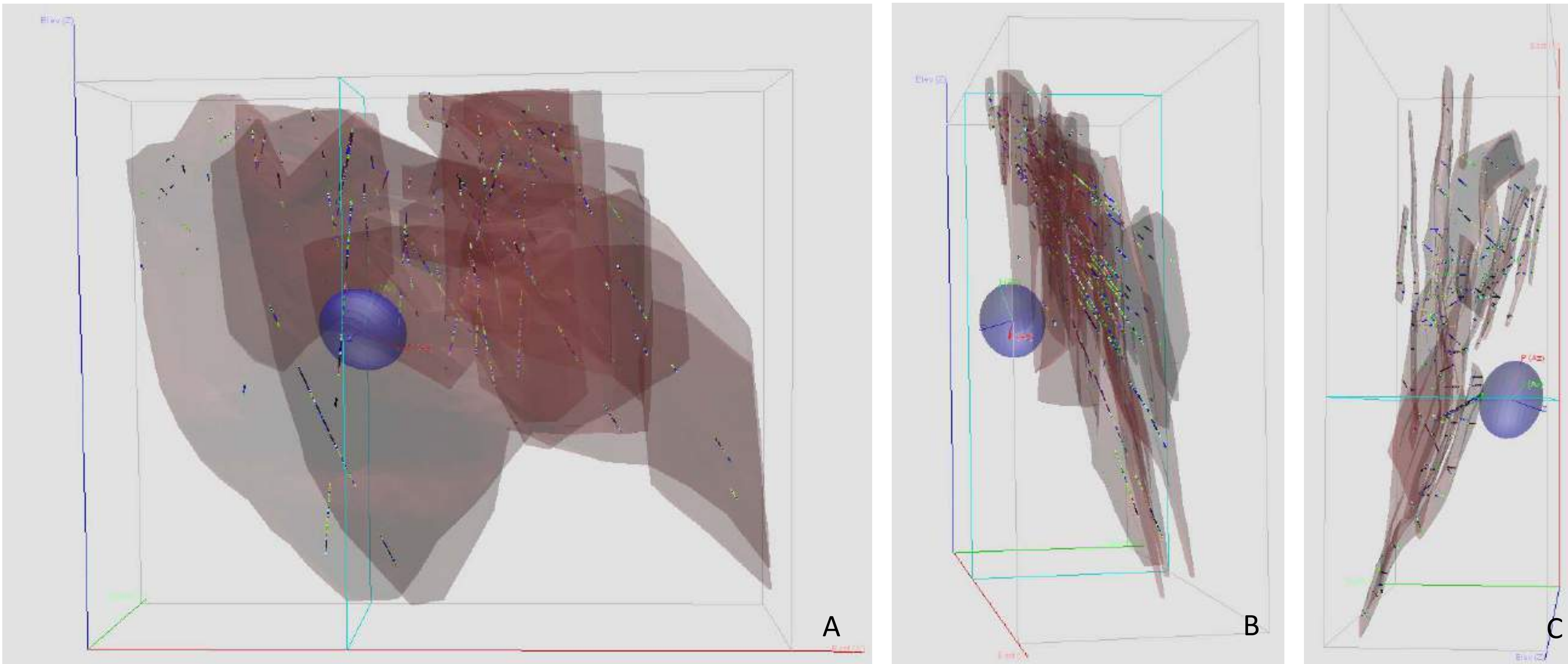


Figure 14.13 – Different views of Skiråsen showing the ellipsoid obtained from the variography study: A) 3D longitudinal view; B) 3D section view; C) 3D plan view

Table 14.6 – Search ellipsoid parameters

Zone	Blockcode	Ellipsoid	ORIENTATION			RANGES			General Parameters		
			Azimuth (Gems)	Dip (Gems)	Azimuth (Gems)	X (m)	Y (m)	Z (m)	Min Composites	Max Composites	Minimum DDH
Avan	6000-series	Pass 1	94.575	-63.194	119.629	80	50	25	4	12	2
		Pass 2	94.575	-63.194	119.629	120	75	37.5	4	12	2
		Pass 3	94.575	-63.194	119.629	160	100	50	3	12	2
Central	4000-series	Pass 1	105.000	-50.000	105.000	75	40	25	4	12	2
		Pass 2	105.000	-50.000	105.000	112.5	60	37.5	4	12	2
		Pass 3	105.000	-50.000	105.000	150	80	50	3	12	2
Skirasen	2000-series	Pass 1	84.494	-67.731	113.616	75	65	45	4	12	2
		Pass 2	84.494	-67.731	113.616	112.5	97.5	67.5	4	12	2
		Pass 3	84.494	-67.731	113.616	150	130	90	3	12	2
Dilution Envelope	600	Pass 1	93.886	-47.937	141.485	60	60	20	4	12	2
		Pass 2	93.886	-47.937	141.485	90	90	30	4	12	2
		Pass 3	93.886	-47.937	141.485	120	120	40	3	12	2

14.8 Grade Interpolation

The variography study provided the parameters to interpolate the grade model. The interpolation was run on a point area workspace extracted from the composite dataset.

The composite points were assigned block codes corresponding to the mineralized zone in which they occur. The interpolation profiles specify a single composite block code for each mineralized-zone solid, thus establishing hard boundaries between the mineralized zones and preventing block grades from being estimated using sample points with different block codes than the block being estimated.

The interpolation profiles were customized to estimate grades separately for each of the mineralized subzones (n=47). Three interpolation methods were investigated (ID2, OK, NN). The Ordinary Kriging (OK) method was selected for the final resource estimation as it better honours the grade distribution in the Barsele deposit.

Three passes were defined: the Pass 1 ellipsoid radiuses were established using the variography results; the Pass 2 ellipsoid radiuses were 1.5x the variography results; and Pass 3 ellipsoid radiuses were 2x the variography results. Pass 2 interpolated the blocks that were not interpolated during Pass 1 and Pass 3 interpolated the blocks that were not interpolated during passes 1 and 2.

Parameters used to interpolate gold during Pass 1:

- 1x the variography range results;
- Minimum 4 composites;
- Maximum 12 composites;
- Minimum 2 holes.

Parameters used to interpolate gold during Pass 2:

- 1.5x the variography range results;
- Minimum 4 composites;
- Maximum 12 composites;
- Minimum 2 holes.

Parameters used to interpolate gold during Pass 3:

- 2x variography range results;
- Minimum 3 composites;
- Maximum 12 composites;
- Minimum 2 holes.

14.9 Resource Categories

14.9.1 Mineral resource classification definition

The resource classification definitions used for this report are those published by the Canadian Institute of Mining, Metallurgy and Petroleum in their document "*CIM Definition Standards for Mineral Resources and Reserves*".

Measured Mineral Resource: that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

Indicated Mineral Resource: that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

Inferred Mineral Resource: that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.

14.9.2 Mineral resource classification

All interpolated blocks were assigned to the potential category during the creation of the grade block model. Subsequent reclassification to either Indicated or Inferred category was based on the criteria below.

For a block to be reclassified to the Inferred category, it had to meet all the conditions below:

- Blocks showing geological and grade continuity;
- Blocks from well defined mineralized zones only;
- Blocks interpolated by a minimum of two holes; and
- Blocks in areas where drill spacing is no more than 100 metres.

For a block to be reclassified to the Indicated category, it had to meet all the conditions below:

- Blocks showing geological and grade continuity;
- Blocks from well defined mineralized zones only;
- Blocks interpolated by a minimum of two holes; and
- Blocks in areas where drill spacing is no more than 25 metres.

A series of outline rings (clipping boundaries) were created in longitudinal views using the criteria described above, but also keeping in mind that a significant cluster of blocks is necessary to obtain a resource. Within the Indicated resource outlines, some Inferred blocks were upgraded to the Indicated category, whereas outside these outlines, some Indicated blocks were downgraded to Inferred. The author is of the opinion that this was a necessary step to homogenize (smooth out) the resource volumes in each category, and to avoid isolated blocks from being included in the Indicated and Measured categories.

14.10 Cut-off Grade

14.11 Cut-off Parameters

Mineral Resources were compiled using a minimum cut-off grade of 1.75 g/t Au for underground potential. Parameters used to determine such cut-off are presented below.

Other cut-off grade results were also compiled, but for comparative purposes only. The cut-off grade must be re-evaluated in light of prevailing market conditions and other factors, such as gold price, exchange rate, mining method, related costs, etc.

14.11.1 Parameters for determination of underground resource cut-off

The calculation of the underground cut-off grade (UCoG) was based on the parameters presented in
Table 14.7.

Table 14.7 – Underground cut-off grade estimation input parameters

Parameters	Value
Gold price (USD/oz)	1,300
Selling cost (USD/oz)	5.00
Mining cost (USD/t mined)	45.00
G&A cost (USD/t milled)	8.00
Metallurgic recovery	92.6%
Processing cost (USD/t milled)	15.00
Calculated cut-off grade (g/t Au)	**1.76**

1. The gold price represents the rounded 1-year trading average on February 15, 2018.
2. A selling cost of 5 CAD/oz was considered, based on similar projects.
3. The mining and G&A costs are based on similar projects.
4. The metallurgic recovery was established according to the press release "Barsele Metallurgical Test Results Indicate a Global Gold Recovery of Approximately 92 Percent", published by the issuer on October 19, 2017, and on internal documents belonging to the issuer.
5. The processing cost is based on similar projects.

Using the parameters shown in the table above, a UCoG (UCoG) of 1.76 g/t Au was calculated as follows:

$$UCoG = \frac{(\text{Mining cost+Processing cost+G\&A cost}) * 31.1035}{(Gold\ price - selling\ cost) * \text{Metallurgic recovery\%}}$$

The Underground Resource Estimate uses a rounded value of 1.75 g/t Au for the underground cut-off grade.

14.12 Mineral Resource Estimate

The current mineral resource estimate is categorized as Indicated and Inferred resources based on data density, search ellipse criteria, drill hole density and interpolation parameters. The estimate follows CIM Definition Standards.

Table 14.8 displays the results of the In Situ Barsele Deposit Mineral Resource Estimate at the official 1.75 g/t Au cut-off grade. Table 14.9 presents the official in-situ resource and sensitivity at other cut-off scenarios. The reader should be cautioned that the figures in Table 14.9 should not be misinterpreted as a mineral resource statement. Tonnage and grade estimates are reported at different cut-off grades only to demonstrate the sensitivity of the resource model to the selection of a reporting cut-off grade.

Figure 14.14 shows the grade distribution of the Barsele deposit above the selected 1.75 g/t Au cut-off grade, and Figure 14.15 shows the category distribution above the selected 1.75 g/t Au cut-off grade.

Table 14.8 – Barsele Deposit Mineral Resource Estimate at a 1.75 g/t Au cut-off grade

Classification	Tonnage	Grade (g/t)	Ounces
Indicated	2 399 000	2.50	193 000
Inferred	15 279 000	2.91	1 427 000

Mineral Resource Estimate notes:

1. *The independent and qualified person for the mineral resource estimate, as defined by NI 43-101, is Carl Pelletier, P.Geo., of InnovExplo Inc., and the effective date is February 15, 2018.*
2. *These mineral resources are not mineral reserves as they do not have demonstrated economic viability. The quantity and grade of the reported Inferred Resources are uncertain in nature and there has been insufficient exploration to define them as Indicated or Measured; it is uncertain if further exploration will result in an upgrade.*
3. *Resources are presented undiluted and in situ for an underground scenario and are considered to have reasonable prospects for economic extraction.*
4. *The underground resource estimate is reported at 1.75 g/t Au cut-off. The cut-off grade was calculated using the following parameters: mining cost = USD 45.00; processing cost = USD 15.00; G&A = USD 8.00; refining and selling costs = USD 10.00; gold price: USD 1,300 (1-year trailing average); and metallurgical recovery = 92.6%. The cut-off grade should be re-evaluated in light of future prevailing market conditions (metal prices, exchange rate, mining cost, etc.).*
5. *The estimate encompasses 47 gold-bearing zones each defined by individual wireframes with a minimum true thickness of 2 metres.*
6. *The mineral resource estimate is categorized as Indicated and Inferred. The Inferred mineral resource category is only defined within the areas where the drill spacing is less than 100 metres and shows reasonable geological and grade continuity. The Indicated category is only defined within the areas where the drill spacing is less than 25 metres. Clipping boundaries were used for classification based on those criteria.*
7. *The mineral resource estimate was prepared using GEOVIA GEMS 6.8. The estimate is based on 270 surface diamond drill holes (99,343 metres). With rare local exceptions having no material impact on the resource, a minimum true thickness of 2.0 metres was applied, using the gold grade of the adjacent material when assayed, or a value of zero when not assayed.*
8. *High grade capping was done on composite data and established on a per corridor basis for gold (g/t Au): low-grade mineralized envelope = 8; high-grade gold-bearing zones: Skiråsen = 45; Central = 40; Avan = 15. Capping grade selection is supported by statistical analysis.*
9. *Density values were applied based on lithology. All mineral zones were assigned 2.73 g/cm^3*
10. *Grade model compositing was done on drill hole intersections falling within the mineralized zones (composite = 2.0 m with adjusted length from 1.0 m to 3.0 m, if needed).*

11. *Grade model resource estimation was evaluated from drill hole data using an Ordinary Kriging interpolation method on a block model using a block size of 10 metres x 3 metres x 5 metres.*
12. *Calculations used metric units (metres, tonnes, gram per tonne). Metal contents are presented in troy ounces (tonne x grade / 31.10348).*
13. *The number of metric tons was rounded to the nearest thousand. Any discrepancies in the totals are due to rounding errors.*
14. *CIM definitions and guidelines for mineral resources have been followed.*
15. *InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issue not reported in this Technical Report, that could materially affect the Mineral Resource Estimate.*

Table 14.9 – Barsele Deposit Mineral Resource Estimate at a 1.75 g/t Au cut-off grade and sensitivity at other cut-off scenarios.

Inferred (Underground Resources)			
Cut-off Grade	Tonnage	Au Cut	Ounces
>4.00	2 113 000	6.04	410 000
>3.00	4 180 000	4.74	637 000
>2.00	11 396 000	3.26	1 194 000
>1.90	12 766 000	3.12	1 280 000
>1.80	14 405 000	2.97	1 377 000
>1.75	15 279 000	2.91	1 427 000
>1.70	16 253 000	2.83	1 481 000
>1.60	18 389 000	2.70	1 594 000
>1.50	20 647 000	2.57	1 707 000
>1.40	23 136 000	2.45	1 823 000
>1.30	25 884 000	2.33	1 942 000
>1.20	28 862 000	2.22	2 062 000

Indicated (Underground Resources)			
Cut-off Grade	Tonnage	Au Cut	Ounces
>4.00	155 000	5.28	26 000
>3.00	420 000	4.09	55 000
>2.00	1 637 000	2.80	147 000
>1.90	1 910 000	2.68	164 000
>1.80	2 220 000	2.56	183 000
>1.75	2 399 000	2.50	193 000
>1.70	2 605 000	2.44	204 000
>1.60	3 097 000	2.31	231 000
>1.50	3 718 000	2.19	261 000
>1.40	4 510 000	2.06	298 000
>1.30	5 356 000	1.95	335 000
>1.20	6 336 000	1.84	374 000

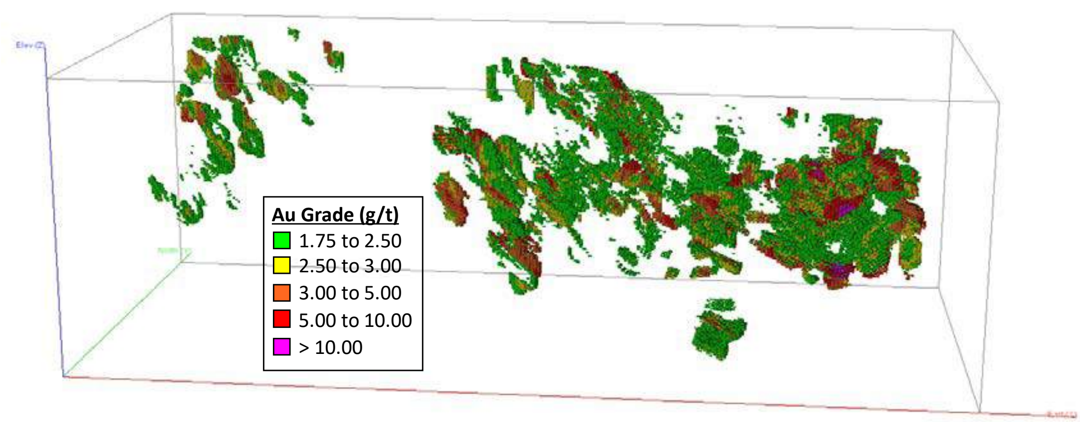


Figure 14.14 – Grade distribution above the selected 1.75 g/t Au cut-off grade

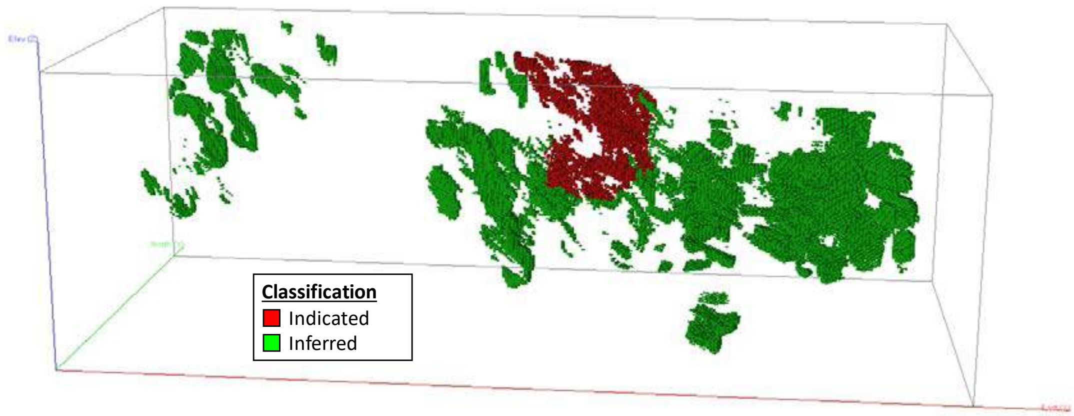


Figure 14.15 – Category distribution above the selected 1.75 g/t Au cut-off grade

15 MINERAL RESERVE ESTIMATES

Not applicable at this current stage.

16 MINING METHODS

Not applicable at this current stage.

17 RECOVERY METHODS

Not applicable at this current stage.

18 PROJECT INFRASTRUCTURE

Not applicable at this current stage.

19 MARKET STUDIES AND CONTRACTS

Not applicable at this current stage.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Not applicable at this current stage.

21 CAPITAL AND OPERATING COSTS

Not applicable at this current stage.

22 ECONOMIC ANALYSIS

Not applicable at this current stage.

23 ADJACENT PROPERTIES

There are no known mineral deposits on properties directly adjacent to the Barsele Project, although there are numerous mineral occurrences of different types: base metal sulphides, tungsten and molybdenum, and gold. Deposits and mines in the region of the project area bear geological similarities to the Norra and CAS (Central, Avan and Skiråsen) mineralized areas, which are summarized in Item 7 (see Figure 7.3). At a distance of 17 kilometres northwest of the Project, a 171,000-tonne zinc mine (Svärtträsk) was in operation in 2006-2007. In the opposite direction, 30 kilometres south-southeast of the Project, the Svartliden mine produced 3.18 Mt at 4.05 g/t Au (Dragon Mining, 2018). The Svartliden mine is considered an skarn deposit. The adjacent properties of the Project are shown in Figure 23.1.

23.1 Erris Resources Sweden

Erris Resources Sweden have two properties adjacent to the Project: Gunnarbacken (6,592.72 ha) to the northwest and Orrträsket (3,995.77 ha) to the east. Erris Resources has not publicly disclosed any diamond drilling reports for these properties.

23.2 Eurasian Minerals Sweden

Eurasian Minerals owns three properties adjacent to the Project: Blåbärliden (3,806.45 ha), Paubäcken Norra (4,446,95 ha) and Paubäcken (12,276.71 ha). These properties are located respectively north, south and southeast of the Project.

23.3 Aurion Resources

Aurion Resources holds 13 exploration titles in the area around the Project. The Flakamyranand Property (3,357.40 ha) is immediately adjacent to the Project.

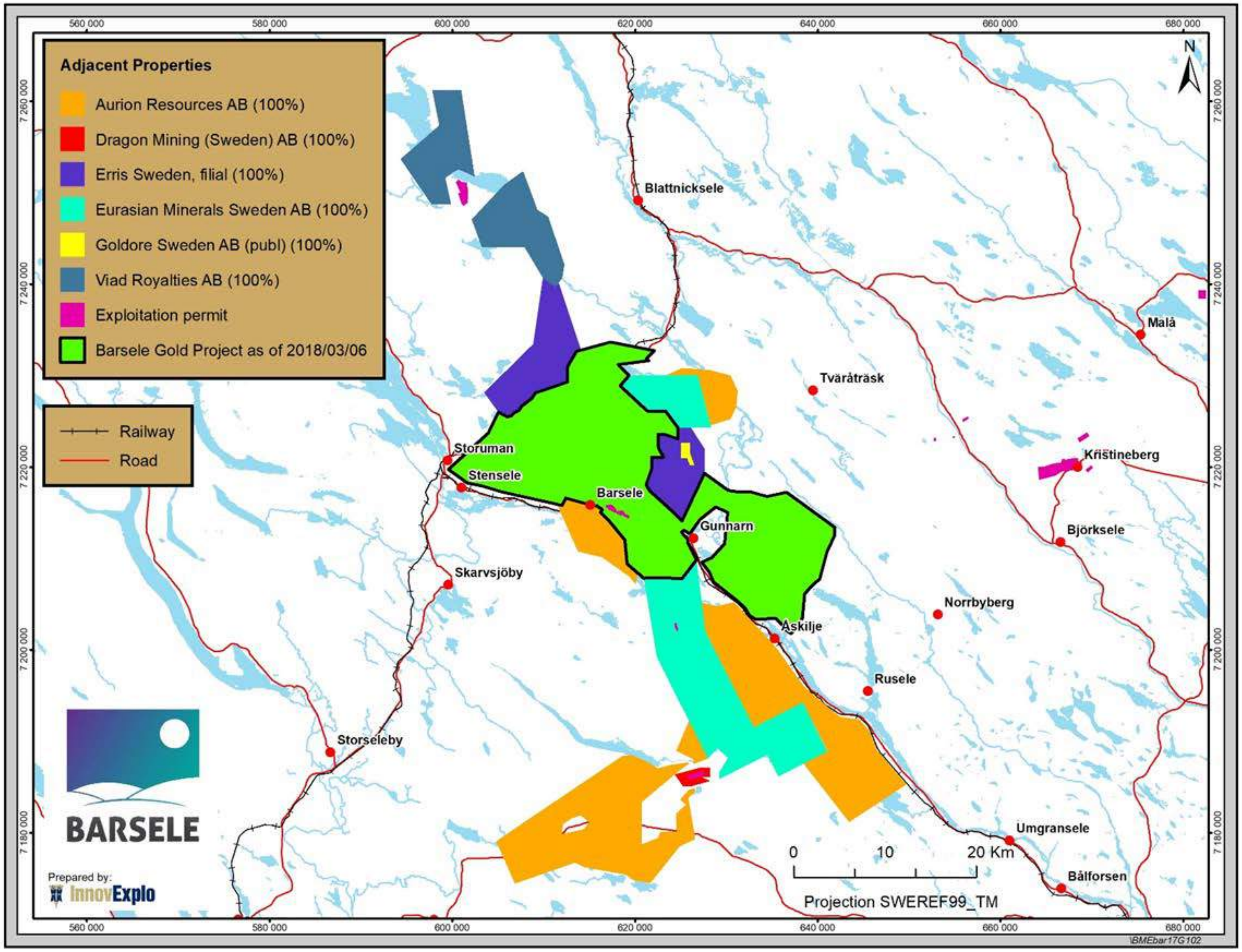


Figure 23.1 – Adjacent properties to the Barsele Project

24 OTHER RELEVANT DATA AND INFORMATION

All relevant data and information regarding the Property have been disclosed under the relevant sections of this report.

25 INTERPRETATION AND CONCLUSIONS

25.1 Interpretation

25.1.1 Objectives

The objective of the mandate was to prepare a mineral resource estimate for the Barsele deposit and a supporting NI 43-101 Technical Report.

25.1.2 Mineral Resource Estimate

The authors consider the Barsele Deposit Mineral Resource Estimate (the "MRE") to be reliable and based on quality data, reasonable hypotheses and parameters that follow CIM Definition Standards.

The MRE was prepared by Carl Pelletier, P.Geo., using all available information. The effective date is February 15, 2018.

The resource area measures 2,650 metres along strike and up to 375 metres wide. Although resources are found down to 850 metres, the bulk of the resource is located in the first 600 metres from surface. The MRE was based on a compilation of historical and recent diamond drill holes. Wireframed mineralized zones provided by AEM were used after being reviewed by InnovExplo.

The resource estimate is categorized as Indicated and Inferred based on data density, search ellipse criteria, drill hole density and interpolation parameters.

InnovExplo concluded the following using the results of the MRE and a detailed review of all pertinent information:

- Geological and grade continuity have been demonstrated for three gold-bearing zones on the Property;
- The bulk of the resource is located in the first 600 metres from surface;
- Using a cut-off grade of 1.75 g/t Au, the Indicated Resources amount to 2,399,000 tonnes at 2.50 g/t Au for 193,000 ounces of gold, and Inferred Resources amount to 15,279,000 tonnes at 2.91 g/t Au for 1,427,000 ounces of gold;
- It is likely that additional diamond drilling would upgrade some of the Inferred Resources to Indicated Resources; and
- It is likely that additional diamond drilling would identify more resources down-plunge and in the vicinity of known mineralization.

25.1.3 Exploration Potential

Following a detailed review of all pertinent information, InnovExplo concluded the following:

- The Norra Zone is currently considered an exploration target that requires additional drilling before it can be modelled and interpolated;
- There are several opportunities to add additional resources by drilling the depth extensions of the ore shoot originating in the resource area and the lateral extensions of the currently identified zones; and

At this stage, it is reasonable to believe that somewhere between 10 and 15 Mt at grades between 2.5 and 3.0 g/t Au may be added by drilling the extensions of currently defined mineralized zones. The reader should be cautioned that this exploration target is not a mineral resource estimate and is conceptual in nature. There has been insufficient exploration to define this as a mineral resource, and it is uncertain if further exploration will result in the exploration target being delineated as a mineral resource.

The basis for the 10-15 Mt tonnage and 2.5 to 3.0 g/t Au grade range for the exploration target includes the following:

- Three mineralized zones have been identified on the property and are the subject of the MRE in this Technical Report. Collectively, these three zones are open vertically and have a sufficient footprint to potentially host additional mineralization.
- It is assumed that these mineralized zones will have similar width and continuity in their vertical extensions. This is supported by the fact that the bulk of the current MRE is found within the first 600 vertical metres and some drill holes encountered mineralization down to 850 metres. Drilling the gaps between some of the zones is also considered in this assumption.
- The grade range is considered reasonable based on the current MRE.

25.1.4 Risks and Opportunities

Table 25.1 identifies the significant internal risks, potential impacts and possible risk mitigation measures that could affect the future economic outcome of the Project. The list does not include the external risks that apply to all mining projects (e.g., changes in metal prices, exchange rates, availability of investment capital, change in government regulations, etc.). Significant opportunities that could improve the economics, timing and permitting are identified in Table 25.2. Further information and study is required before these opportunities can be included in the project economics.

Table 25.1 – Risks for the Barsele Project

Risk	Potential Impact	Possible Risk Mitigation
Metallurgical recoveries	Recovery might differ negatively from what is currently being assumed	Conduct additional metallurgical tests
social issues	Delay of the Project's social acceptance, and thus a delay in the schedule.	Hold meetings with stakeholders early during project development to address major issues and elaborate mitigation measures

Table 25.2 – Opportunities for the Barsele Project

Opportunities	Explanation	Potential benefit
Exploration potential	Potential for additional discoveries at depth and around the deposit by drilling	Potential to increase resources
Open-pit scenario	An open-pit scenario approach could be evaluated if conditions allow for it	Potential for more ounces using a lower cut-off grade
Metallurgical recoveries	Recovery might be better than what is currently being assumed	Potential to increase resources and improve project viability

25.2 Conclusions

InnovExplo concludes that the Barsele Deposit Mineral Resource Estimate is well supported and allows the Project to proceed with the recommended additional drilling on the Barsele Property.

26 RECOMMENDATIONS

Based on the results of the MRE, InnovExplo recommends additional exploration/delineation drilling and geological interpretation to gain a better understanding of the deposit before updating the mineral resource estimate.

26.1 Phase 1

In Phase 1, InnovExplo recommends addressing the following technical aspects of the Project:

Exploration drilling

Several targets (structures, geochemical anomalies, geophysical anomalies) remain untested on the property. Exploration drilling on identified targets can potentially add new resources. Approximately 40,000 metres should be dedicated as follows: 20,000 metres on vertical extensions of currently identified shoots, 10,000 metres on lateral extensions, and 10,000 metres on additional targets over the entire Property.

26.2 Phase 2

In Phase 2, InnovExplo recommends addressing the following technical aspects of the Project (contingent upon the success of Phase 1).

Update of litho-structural/mineralization models for the Barsele deposit

InnovExplo recommends updating the litho-structural and mineralization models using the additional drilling results from Phase 1.

Metallurgical tests

InnovExplo recommends using the updated litho-structural/mineralization models to select areas for additional tests. The tests should continue to confirm the results of the test work conducted internally by Agnico-Eagle and to confirm the assumptions made about the test work results of the selected scenario.

Engineering studies

InnovExplo recommends engineering studies, such as rock mechanics. Such studies should provide sufficient information to address open pit slope angles (if applicable) as well as stope and pillar dimensions.

Additional exploration drilling

Assuming a positive outcome for the Phase 1 Exploration drilling program, a provision of approximately 40,000 metres of delineation drilling should be considered. The objective would be to continue investigating any potential lateral and depth extensions of identified ore zones.

NI 43-101 MRE update on the Barsele deposit and PEA

InnovExplo recommends updating the mineral resource estimate after completing the drilling program, the update to the litho-structural/mineralization models, and the engineering studies. This update should be used in the preparation of a PEA.

Maiden NI 43-101 MRE on the Norra Zone

InnovExplo recommends initiating a mineral resource estimate on the Norra Zone, and on any other deposit on the Property that reaches a stage warranting resource estimation.

26.3 Cost estimate for recommended programs

InnovExplo has prepared a cost estimate for the recommended exploration program. Items from Phase 2 of the proposed work plan are contingent upon the success of Phase 1.

The estimated cost for Phase 1, which would include the abovementioned technical recommendations, is approximately USD 6,900,000 (including 15% for contingencies). The estimated cost for Phase 2 is approximately USD 7,820,000 (including 15% for contingencies). The grand total is USD 14,720,000 (including 15% for contingencies).

InnovExplo is of the opinion that the recommended work program and proposed expenditures are appropriate and well thought out. InnovExplo believes that the proposed budget reasonably reflects the type and scope of the contemplated activities. Table 26.1 presents the estimated costs for the various phases of the recommended exploration program.

Table 26.1 – Estimated costs for the recommended work program

Phase 1 - Work Program		Budget (USD)	
		Description	**Cost (USD)**
1a	Exploration drilling - vertical extensions of identified shoots	20,000 m	$ 3,000,000
1b	Exploration drilling - lateral extensions of identified shoots	10,000 m	$ 1,500,000
1c	Exploration drilling – regional targets on the Property	10,000 m	$ 1,500,000
	Contingencies (~ 15%)		$ 900,000
	Phase 1 subtotal		**$ 6,900,000**

Phase 2 - Work Program		Budget	
		Description	**Cost (USD)**
2a	Update of litho-structural/mineralization models		$ 50,000
2b	Metallurgical tests		$ 250,000
2c	Engineering studies		$ 250,000
2d	Additional exploration drilling	40,000 m	$ 6,000,000
2e	*MRE update on the Barsele deposit and PEA*		$ 150,000
2f	Maiden MRE on the Norra Zone		$ 100,000
	Contingencies (~ 15%)		$ 1,020,000
	Phase 1 subtotal		**$ 7,820,000**

TOTAL (Phase 1 and Phase 2) **USD 14,720,000**

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