NI 43-101 Technical Report

Björkdal Gold Mine, Sweden

Mandalay Resources Corporation

Prepared by:

SLR Consulting (Canada) Ltd.

SLR Project No.: 233.065289.00001

Effective Date:

31 December 2024

Signature Date:

28 March 2025

Revision: 1

Qualified Persons:
Reno Pressacco, M.Sc.(A)., P.Geo., FGC
Richard C. Taylor, MAusIMM, CP
Arunasalam Vathavooran, Ph.D., CEng, FIMMM
Ben Lepley, MESci, CGeol, MIMMM

NI 43-101 Technical Report, Björkdal Gold Mine, Sweden

SLR Project No.: 233.065289.00001

Prepared by
SLR Consulting (Canada) Ltd.
55 University Ave., Suite 501
Toronto, ON M5J 2H7
for
Mandalay Resources Corporation
Björkdalsgruvan AB
SE 934 94 Kåge
Sweden

Effective Date – 31 December 2024
Signature Date – 28 March 2025

Prepared by:
Reno Pressacco, M.Sc.(A), P.Geo., FGC
Richard C. Taylor, MAusIMM, CP
Arunasalam Vathavooran, Ph.D., CEng, FIMMM
Ben Lepley, MESci, CGeol, MIMMM

Peer Reviewed by:
John Makin, MAIG
A. Paul Hampton, P.Eng.
Jason J. Cox, P.Eng.
Deborah A. McCombe, P.Geo.

Approved by:

Project Manager
Ian Weir, P.Eng.

Project Director
David JF Smith, CEng, FIMMM.

Table of Contents

Tables

Figures

1.0 Summary

1.1 Executive Summary

SLR Consulting (Canada) Ltd. (SLR) was retained by Mandalay Resources Corporation (Mandalay) to prepare an independent Technical Report on the Björkdal Gold Mine (Björkdal or the Mine), located in Västerbotten County in northern Sweden. The purpose of this Technical Report is to support the disclosure of Mineral Resources and Mineral Reserves (MRMR) for Björkdal, which includes the Storheden deposit (Storheden), and the satellite Norrberget deposit (Norrberget), located approximately four kilometres east-southeast of the Mine. MRMR are estimated as of 31 December 2024, based on a drill hole database cut-off date of 30 September 2024 for Björkdal and Norrberget. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). SLR has visited the Mine on several occasions, in November 2019, January 2020, November 2022, and, most recently, in November 2024.

In 2024, Björkdal produced gold from an underground mine only, supplemented with stockpile feed, as operations in the open pit mine were suspended in July 2019. Approximately 82% of plant feed was delivered from the underground, with the remainder being drawn from the low-grade stockpile (18%). Total mill feed for 2024 was 1.37 million tonnes (Mt). The average reconciled head grade for 2024 was 1.08 g/t Au. The Björkdal plant uses conventional crushing and grinding, followed by a combination of gravity and flotation processing techniques to recover gold to concentrates which are sold to smelters in Europe. The plant capacity is approximately 3,850 tonnes per day (tpd) and the plant is currently operating at approximately 3,750 tpd. Gold recovery for 2024 averaged approximately 85%, and production totalled approximately 40,800 ounces of gold (oz Au) in saleable concentrates.

The Norrberget Mineral Resource estimate, pit optimisation, pit design, and Mineral Reserve estimate have been updated with a data cut-off date of 30 September 2024. The updated Mineral Resource and Mineral Reserve estimates are effective as at 31 December 2024.

Table 1-1 lists the Mineral Resource estimate for the Mine prepared by SLR with an effective date of 31 December 2024. Mineral Resources are reported inclusive of Mineral Reserves. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM (2014) definitions) were used for the estimate.

Table 1-1: Mineral Resources at the Björkdal Gold Mine and Storheden and Norrberget Deposits as of 31 December 2024

Location	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Measured Mineral Resources				
Björkdal	Björkdal Underground	1,097	2.57	91
Total, Measured		1,097	2.57	91
Indicated Mineral Resources				
Björkdal	Open Pit	4,130	1.61	213
	Björkdal Underground	13,792	2.41	1,069

Location	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
	Stockpile	1,520	0.59	29
Subtotal, Björkdal		*19,442*	*2.10*	*1,311*
Norrberget	Open Pit	221	2.76	20
Total, Measured + Indicated		**20,760**	**2.13**	**1,422**
Inferred Mineral Resources				
Björkdal	Open Pit	6,666	1.09	233
	Björkdal Underground	3,178	2.11	216
	Storheden Underground	1,769	1.74	99
Subtotal, Björkdal		11,613	1.47	548
Norrberget	Open Pit	96	5.36	17
Total, Inferred		**11,709**	**1.50**	**565**

Notes:

1. Björkdal Mineral Resources are estimated using drill hole and sample data as of 30 September 2024 and account for production to 31 December 2024.
2. Norrberget and Storheden Mineral Resources are estimated based on a data cut-off date of 30 September 2024.
3. CIM (2014) definitions and the 2019 CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines were followed for Mineral Resources (CIM 2019).
4. Mineral Resources are inclusive of Mineral Reserves.
5. Mineral Resources are estimated using an average gold price of US$2,500/oz and an exchange rate of 10.35 SEK/US$.
6. High gold assays were capped to 30 g/t Au for the Björkdal open pit mine.
7. High gold assays for the underground mine were capped at 60 g/t Au for the first search pass and 40 g/t Au for subsequent passes.
8. High gold assays at Norrberget were capped at 24 g/t Au.
9. Interpolation was by inverse distance cubed (ID3) utilising diamond drill, reverse circulation, and chip channel samples.
10. Open pit Mineral Resources are constrained by open pit shells and estimated at a cut-off grade of 0.17 g/t Au for Björkdal and 0.27 g/t Au for Norrberget.
11. Underground Mineral Resources are estimated at a cut-off grade of 0.71 g/t Au.
12. A nominal 2.5 m minimum mining width was used to interpret veins.
13. Reported Mineral Resources are depleted for previously mined underground development and stopes and exclude remnant material.
14. Stockpile Mineral Resources are based upon surveyed volumes supplemented by production data.
15. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
16. Numbers may not add due to rounding.
17. The Independent Qualified Person for the Björkdal, including Storheden, and Norrberget Mineral Resource estimates is Reno Pressacco, M.Sc.(A)., P.Geo., Associate Principal Geologist with SLR, who is a Qualified Person as defined by NI 43-101.

The Qualified Person (QP) is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

Table 1-2 lists the Mineral Reserve estimate for the Björkdal Mine and Norrberget deposit as of 31 December 2024.

Table 1-2: Mineral Reserves at the Björkdal Mine and Norrberget Deposit as of 31 December 2024

Location	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Proven Mineral Reserves				
Björkdal	Underground	956	1.53	47
Total Proven		**956**	**1.53**	**47**
Probable Mineral Reserves				
Björkdal	Underground	5,721	1.59	293
Björkdal	Open Pit	5,325	1.05	180
Norrberget	Open Pit	161	2.72	14
Stockpiles	Stockpiles	1,520	0.59	29
Total Probable		**12,727**	**1.26**	**516**
Total Proven & Probable		**13,683**	**1.28**	**563**

Notes:

1. Björkdal Mineral Reserves are estimated using drill hole and sample data as of 30 September 2024 and depleted for production through 31 December 2024.
2. Norrberget Mineral Reserves are based on a data cut-off date of 30 September 2024.
3. CIM definitions (2014) were followed for Mineral Reserves.
4. Open Pit Mineral Reserves for Björkdal are based on mine designs carried out on an updated resource model, applying a block dilution of 100% at 0.0 g/t Au for blocks above 1.0 g/t Au and 100% at in situ grade for blocks below 1.0 g/t Au but above a cut-off grade of 0.2 g/t Au. The application of these block dilution factors is based on historical reconciliation data from 2018 and 2019. A marginal cut-off grade of 0.2 g/t Au was applied to estimate open pit Mineral Reserves.
5. Open Pit Mineral Reserves for Norrberget are based on 25% dilution at 0.0 g/t Au and a cut-off grade of 0.32 g/t Au.
6. Underground Mineral Reserves are based on mine designs carried out on the updated resource model. Minimum mining widths of 3.1 m for stopes (after dilution) and 4.6 m for development (after dilution) were used. Stope dilution was applied by adding 0.25 m on each side of stopes as well as an additional 25% sidewall over break dilution. Dilution factors of 20% for ore drives and 10% for capital development were applied to the development design widths. Mining extraction was assessed at 95% for contained ounces within stopes and 100% for development. A cut-off grade of 0.85 g/t Au was applied to material mined within stopes. An incremental cut-off grade of 0.2 g/t Au was used for development material.
7. Stockpile Mineral Reserves are based upon surveyed volumes supplemented by production data as of 31 December 2024.
8. Mineral Reserves are estimated using an average long-term gold price of US$2,100/oz for Björkdal and Norrberget, and an exchange rate of 10.35 SEK/US$.
9. Tonnes and contained gold are rounded to the nearest thousand.
10. Totals may not sum due to rounding.
11. The Independent Qualified Person for the Björkdal Mineral Reserve estimate is Rick Taylor, MAusIMM (CP), Associate Principal Mining Engineer with SLR, who is a Qualified Person as defined by NI 43-101.

The QP is not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate.

1.1.1 Conclusions

The mineral processing plant at Björkdal commenced the first full-year operation in 1989. Since that time, it has processed approximately 39.1 Mt of ore to 31 December 2024, to recover a total of approximately 1.66 million ounces of gold (Moz Au) at an average feed grade of 1.49 g/t Au. Both open pit and underground mining methods have been employed on the property.

1.1.1.1 Geology and Mineral Resources

Björkdal:

- At a cut-off grade of 0.17 g/t Au, open pit Measured and Indicated Mineral Resources at Björkdal are estimated to be approximately 4.13 Mt grading 1.61 g/t Au, containing approximately 213,000 oz Au. Open pit Inferred Mineral Resources at Björkdal are estimated to be approximately 6.67 Mt grading 1.09 g/t Au, containing approximately 233,000 oz Au.
- At a cut-off grade 0.71 g/t Au, underground Measured and Indicated Mineral Resources at Björkdal are estimated to be approximately 14.9 Mt grading 2.42 g/t Au, containing approximately 1,160,000 oz Au.
- Stockpile Mineral Resources are estimated to be approximately 1.52 Mt grading 0.59 g/t Au, containing approximately 29,000 oz Au.
- Gold mineralization at the Mine occurs mostly as a large number of steeply dipping, structurally controlled narrow quartz veins that have been identified by drilling and grade control mapping and sampling for a distance of approximately 1,900 m in an east-west direction (along strike), 3,500 m in a north-south direction (across strike), and to a depth of approximately 900 m from surface.
- Ongoing exploration and grade control programs have identified the presence of a number of faults and shears present in the Mine. These programs have shown that the paragenetic relationships of these faults and shears with the gold mineralization is complex. The larger of these structures, the Björkdal shear, has been traced in the Mine from surface to a depth in excess of 500 m.
- As a result of the on-going exploration and development work carried out since 2020, the understanding of the relationship of the gold bearing mineralization with the host rocks and structural features continues to evolve. The newly acquired information suggests that Björkdal fault zone is an important structural feature that separates the host volcanics into two structural blocks. Modelling of the Björkdal fault zone suggests that it closely follows the orientation of the marble unit and serves to truncate the upper limits of the quartz veins in the footwall structural block present in the upper portions of the Mine. In the deeper portions of the Mine, the Björkdal fault zone acts as the lower limits of the quartz veins that are hosted in the hanging wall structural block. As a result, the current view is that a significant degree of displacement may have occurred along the Björkdal fault zone that is on the order of several hundred metres in distance.
- Exploration activities carried out in 2023 and 2024 have been successful in continuing to outline mineralization in the underground mine along the eastern extensions of the Central Zone and Main Zone vein groups. As well, a new set of veins have been identified. These are referred to as either the North Zone Below Marble or the Grenholm zone veins.
- The Björkdal open pit wireframes were based on a nominal 0.3 g/t Au cut-off grade over a minimum of 2.5 m. The underground wireframes were based on a nominal 2.5 m minimum width at a cut-off grade of 0.5 g/t Au. A total of 705 mineralized wireframe models were created for the underground mine and 446 wireframe models were created for the open pit mine.
- The dual capping value approach was continued to be used for estimation of the gold grades contained within the mineralized wireframe models in the underground mine. In

this approach, the composited assays for diamond drill holes (DDH) and reverse circulation (RC) drill holes are capped to values of 60 g/t Au and 40 g/t Au. Two different area of influences are then used when estimating the block grades for each mineralized wireframe. The higher grade capped composites are used within a first pass search ellipse with a 15 m radius, while the lower grade capped composites are used for subsequent estimation passes. A single capping value of 40 g/t Au was applied to the composited samples contained within the chip sample database. A value of 30 g/t Au has been selected as the capping value for the DDH, RC, and chip samples contained within the open pit wireframes. This capping value was also applied to all samples contained within the dilution domain volume.

- All blocks that were located within a mineralization wireframe whose grades were estimated in the first estimation pass were assigned a preliminary classification of Indicated Mineral Resources. Those blocks whose grades were estimated in the second estimation pass were assigned a preliminary classification of Inferred Mineral Resources. No Measured Mineral Resources were assigned at the preliminary classification stage.
- The initial classifications within both the underground and open pit mines were reviewed and manually adjusted so as to ensure that the material in the Indicated category possessed spatial continuity that was defined by at least two drill holes.
- Those blocks located within 15 m of mine workings containing full chip/channel sample coverage were assigned to the Measured Mineral Resource category for selected veins.

Norrberget:

- The primary gold mineralization at Norrberget is contained within bands of veinlets and alteration containing amphibole in a package of interbedded mafic tuffs and volcaniclastics.
- At a cut-off grade of 0.27 g/t Au, open pit Measured and Indicated Mineral Resources at the Norrberget deposit are estimated to be approximately 0.22 Mt grading 2.76 g/t Au, containing approximately 20,000 oz Au. Open pit Inferred Mineral Resources at the Norrberget deposit are estimated to be approximately 0.01 Mt grading 5.36 g/t Au, containing approximately 17,000 oz Au.
- Mineralization wireframes were generated using a 0.4 g/t Au cut-off grade and a two metre minimum horizontal width. The wireframes represented a primary band of continuous mineralization and two limited footwall bands of mineralization.
- The largest mineralization wireframe (domain Nb1) defines gold mineralization along an east-west strike length of approximately 400 m and to a depth of approximately 175 m beneath the surface. The wireframe dips gently towards the north at a dip of approximately 20º to 30º.
- Intercepts within the Norrberget mineralization wireframes were composited to 1.0 m lengths with a minimum sample length of 0.5 m. Composited samples were capped at 24 g/t Au.
- The low number of mineralized samples at Norrberget necessitated the use of inverse distance weighted interpolation rather than the ordinary kriging method.
- All blocks that were located within a mineralization wireframe whose grades were estimated in either the first or second estimation passes were initially assigned a

preliminary classification of Indicated Mineral Resources. Those blocks whose grades were estimated in the third estimation pass were assigned a preliminary classification of Inferred Mineral Resources. Clipping polygons were applied to create a final classification that considered the drill hole spacing and the spatial continuity of the classified material.

Storheden:

- At a cut-off grade of 0.71 g/t Au, Inferred Mineral Resources at the Storheden deposit are estimated to be approximately 1.77 Mt grading 1.74 g/t Au, containing approximately 99,000 oz Au.
- Gold mineralization at the Mine occurs mostly as a large number of steeply dipping, structurally controlled narrow quartz veins that have been identified by drilling for a distance of approximately 1,000 m in an east-west direction (along strike), 1,200 m in a north-south direction (across strike), and to a depth of approximately 450 m from surface.
- The Storheden mineralization wireframes are located in close proximity to the eastern limits of the Björkdal mine, and likely represent the eastward continuation of the veins outlined in hanging wall fault block in the mine. A total of 68 vein wireframe models were constructed.
- A capping value of 15 g/t Au was applied to composited samples.
- Gold grades were estimated using the Inverse Distance, Power 3 interpolation algorithm.
- All estimated blocks at the Storheden deposit were classified into the Inferred Mineral Resource category.

1.1.1.2 Mining and Mineral Reserves

- At a cut-off grade of 0.20 g/t Au, open pit Probable Mineral Reserves at Björkdal are estimated to be approximately 5.33 Mt grading 1.05 g/t Au, containing 180,000 oz Au.
- At a cut-off grade 0.85 g/t Au for stopes and incremental cut-off grade of 0.20 g/t Au for development material, underground Proven and Probable Mineral Reserves at Björkdal are estimated to be approximately 6.68 Mt grading 1.58 g/t Au, containing 340,000 oz Au.
- At Norrberget, there are estimated to be 161,000 tonnes of Probable Mineral Reserves at a grade of 2.72 g/t Au for a total of approximately 14,000 oz Au.
- Stockpile Mineral Reserves are estimated to be approximately 1.52 Mt grading 0.59 g/t Au, containing 29,000 oz Au, at a cut-off grade of 0.20 g/t Au.
- The underground Mineral Reserves at Björkdal are based on a minimum mining width of 3.1 m inclusive of dilution. This comprises a 2.5 m baseline minimum mining width, inclusive of 0.25 m on both hanging wall and footwall, plus an additional 25% dilution to align with recent reconciliation data.
- The current Mineral Reserves for Björkdal support a mine life of over nine years at a production rate of approximately 1.4 million tonnes per annum (Mtpa). Gold production averages approximately 57,000 oz per year over the next nine years. A number of opportunities that could further extend the mine life exist including:

    - Continue upgrading Inferred Mineral Resources to Indicated Mineral Resources, especially at depth to the north and at Storheden.

- The underground mine is scheduled to produce approximately 1,039,000 tonnes of run-of-mine ore during 2025 and an average of approximately 759,000 tonnes of ore over the following seven years. Underground production will reduce and end in year eight (2033) of the current LOM.
- The Björkdal open pit mining operation was suspended in July 2019 and is now scheduled to recommence in 2027. Mining will commence simultaneously in the Main and satellite pits on the periphery of the Main Pit.
- The current mine plan includes the recovery of the crown pillar from the main open pit during the final years of mining. This pillar contains infrastructure servicing the underground operations that will be disrupted by mining of the crown pillar. It also contains a large number of voids from previous underground mining that may cause some operational issues during mining and potentially some highwall stability concerns.
- Mining of the crown pillar and main open pit area will commence with moraine and loose waste rock removal in 2027.
- A PFS, conducted during 2024, showed that there are other, more cost-effective methods of retaining existing in-pit underground access than relocating the existing portals and declines, in order to allow the crown pillar to be mined in parallel with underground options.
- The open pit mining operation will make use of contractors for most of the mining activities. The SLR QP considers that there may be an opportunity to reduce open pit operating costs by converting to a mine-owned fleet when the open pit operation restarts in 2027.
- The low grade stockpile will be used to provide the additional ore needed to allow the mill to operate at full capacity each year. However, this stockpiled material will be fully consumed by 2032 and, all mill feed will be sourced directly from the Björkdal and Norrberget open pits during the final two and a half years of production.
- Due to the variable quality of the material that comprises the low grade stockpiles, grade variations in the planned mill feed are anticipated.
- Structural features such as folding and their impact on metal distribution are still not well understood in some areas, which makes accurate forecasting of grade, dilution, and mining losses a challenge. The QP is of the opinion that some variation from planned, in the short term, is an inevitable consequence of the complexity of the orebody. As a result, historical dilution and recovery reconciliation data is heavily relied upon for mine planning.
- Mining method and stope design is driven primarily by geotechnical considerations. SLR considers it essential that continued attention be given to local and regional rock mechanics issues during future mine design as underground stresses are redistributed. There may, however, be some opportunities in areas of very competent ground to save costs through reduction in the use of shotcrete.
- The nature of the mining method is such that development ore will always represent a significant proportion of the underground tonnage production (approximately 38% from actual 2024 production figures).

- Detailed reconciliation comparing design to actual mined tonnes (using cavity monitoring system [CMS]) and grade from all stopes, is routinely carried out and stope closure notes (reconciliation reports) produced for each stope once mined out. Year end 2024 reconciliation results indicate that diluted stope ore tonnage was under-estimated by approximately 9% and gold content was under-estimated by approximately 19%. Historical reconciliation indicates that dilution averages approximately 30% underground. This is consistent with the slightly more optimistic factors used in the mine design and planning.
- As presently planned, mining of the Norrberget open pit will be carried out by the same contractor employed in the future at the Björkdal open pit. The total mine life for Norrberget is estimated to be approximately twelve months.

1.1.1.3 Processing

- Björkdal has been consistently successful in recovering approximately 87% of the gold, with approximately 68% to 75% of the gold recovered in gravity concentrates (i.e., gravity concentrate, middlings, and Knelson concentrate) and an additional 14% to 20% of the gold recovered in flotation concentrates.
- Preliminary metallurgical tests using samples from Norrberget show that the mineralogy is more complex, and the gold grain sizes are smaller, which requires a finer grind size to achieve liberation. Since the deposit is small, it is not anticipated that modifications to the existing processing plant will be cost effective. Therefore, the data indicates that the average gold recovery for Norrberget will be approximately 75%.
- Historical operating data and the plant performance indicates that the process plant will continue to produce gold concentrates as per the budgets.
- The mill operating mode has been changed from overflow to grate discharge, the plant continues to operate in a consistent manner following the modifications.
- The process plant is appropriately staffed with qualified professionals. The metallurgical accounting and the plant operation has been handled systematically by the process plant team over the past years,

1.1.1.4 Environmental, Permitting, and Social or Community Considerations

- A new operating permit was granted in December 2018 and remains valid for the tailings management facility (TMF) (dam and related water discharge) for ten years and until 5 October 2067 for all other aspects of the operations. The environmental permit allows for mining and a mill throughput of 1.7 Mtpa.
- During 2019, an adjustment was submitted to the environmental permit that was approved in July 2021 which included an increased underground mining permit area and changes in the construction of the K1 tailings dam.
- The quality of tailings seepage / run-off water remains an area of focus with ongoing measures being implemented to continually reduce levels together with continuous monitoring and engagement with the Swedish authorities.
- A compensation agreement for lost grazing land and increased operating costs for the reindeer herders was signed with the Sámi community of Svaipa in April 2017. This agreement is valid for the planned operating life of the Björkdal Mine.

- The Norrberget deposit is not covered by the aforementioned agreement. A new mining concession has been granted that covers Norrberget and is valid until January 2044; however, no permit has yet been granted to commence mining. Mining of Norrberget is planned to take place in 2035.
- The 2018 environmental permit includes a fully funded, closure and reclamation plan. A reclamation account is in place and held by the Swedish authorities. To support the Change permit approval received during 2021, additional funds were required and provided for by Mandalay.

1.1.1.5 Risks

- The Mine has been in production for over 34 years and is a mature operation. In the QPs' opinion, there are no significant risks or uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information, Mineral Resource or Mineral Reserve estimates, or projected economic outcomes.
- Mining of Norrberget requires an environmental permit, which may involve up to four years to prepare an EIA, apply for the permit, stakeholder consultation and approval. This process should be started several years prior to planned commencement of operation to ensure there are no operational delays to mining.

1.1.2 Recommendations

The SLR QPs present the following recommendations:

1.1.2.1 Geology and Mineral Resources

1 Carry out further exploration drilling to search for the eastern limits of the Storheden vein system.

2 Carry out in-fill drilling to upgrade the confidence category of the Storheden deposit.

3 Consider attempting to map the paleotemperature regime, the fluid paths of the Björkdal hydrothermal system, and the use of metal associations as vectoring tools. Potential tools available are listed:

   a) mineral chemistry studies on such tracer minerals as epidote, apatite, zircon, and others,

   b) use of chlorite geothermometer to map out the paleotemperatures,

   c) oxygen-hydrogen isotope values to estimate the water-rock ratios,

   d) whole-core hyperspectral imagery to map out alteration signatures,

   e) Raman spectroscopy on carbonates to map out temperature variations,

   f) whole rock geochemistry within the skarn alteration zones to search for trace metal indicators,

   g) trace metal assays within the basalt-hosted veins to examine the utility of background tellurium or bismuth values as vectors to gold mineralization, and

   h) use of laser ablation – inductively coupled mass spectroscopy studies on pyrite to examine the utility of trace metal concentrations as potential vectoring tools.

4 Complete additional drilling to search for the strike and depth extensions of the gold mineralization found at the Norrberget deposit.

5 Carry out in-fill drilling at the Norrberget deposit to upgrade the confidence category of those portions of the deposit currently classified in the Inferred Mineral Resource category to the Indicated Mineral Resource category.

6 Collect bulk density measurements for the Storheden deposit either on existing remaining drill core, or from samples collected from any future drilling campaigns.

1.1.2.2 Mining and Mineral Reserves

1 Continue ongoing reconciliation and production management work to improve future grade and dilution forecasts.

2 Continue to regularly review the underground support requirements in line with the recent 2023 ITASCA study and report. Potential may exist for some cost savings in areas of more competent ground through a reduction in the use of shotcrete.

3 Continue to evaluate whether identification and cable anchoring of weaker areas in the hanging wall and crowns of stopes could result in better control of stope dilution.

1.1.2.3 Processing

1 Continue to monitor the performance of all unit operations and to optimise plant performance to achieve the highest economic outcome possible.

2 Continue to evaluate historical data and to use the results to estimate future plant gold recovery and operating costs.

3 In future metallurgical tests for Norrberget, use variability samples with a range of head grades from throughout the deposit, using test conditions that evaluate what the metallurgical response will be in the existing processing facility.

4 Collect regular samples from mill feed and cross check the assayed head grades against the back calculated head grades (from the data from tail sample assays).

1.1.2.4 Environmental, Permitting, and Social

1 Commence EIA preparation for Norrberget well in advance to ensure no operational delays for planned 2035 start.

2 Continue to investigate initiatives discussed in the 2023 ESG report, including decarbonisation initiatives to reduce greenhouse gases (GHG) and tailings backfilling.

1.1.2.5 Economic Analysis

This section is not required as the property is currently in production, Mandalay is a producing issuer, and there is no material expansion of current production.

1.2 Technical Summary

1.2.1 Property Description and Location

The Björkdal property is located in Västerbotten County in northern Sweden, at approximately 20°35′26″ E longitude and 64°56′7″ N latitude (WGS84). Björkdal is located approximately 28 km northwest of the municipality of Skellefteå and approximately 750 km north of Stockholm.

The property is accessible via Swedish national road 95 or European highway route E4 followed by all-weather paved roads. On the property, gravel roads link the main site gate entrance to the surface infrastructure.

The nearest airport, located in Skellefteå, has regular daily service to Stockholm.

The Norrberget property is located approximately six kilometres east of the Björkdal Mine and is currently accessible via a forest road.

1.2.2 Land Tenure

Mandalay is a publicly listed company that effectively holds 100% of Björkdal through the Swedish registered companies Björkdalsgruvan AB and its subsidiary Björkdal Exploration AB.

Björkdalsgruvan AB owns 12 mining concessions on the Björkdal property and one mining concession on the Norrberget property. The Norrliden K nr 1 concession is held by Explor Björkdalsgruvan AB. The total area of the mining concessions is approximately 509.12 ha.

The holder of an exploitation concession must pay an annual minerals fee to the landowners of the concession area and to the State. The fee is 0.2% of the average value of the minerals mined from the concession, 0.15% of which is paid to the landowners in proportion to their share of ownership of the concession area. The remaining 0.05% is paid to the State to be used for research and development in the field of sustainable development of mineral resources. The fee is estimated after consideration of the amount of mined ore, the amount of minerals in the ore, and the average price of the mineral during the year or by use of an equivalent value.

1.2.3 History

1.2.3.1 Björkdal

The Björkdal deposit was originally discovered in 1983 by Terra Mining AB (Terra Mining) during a till sampling program which discovered anomalous gold values in the glacial till profile. Anomalous gold values in bedrock were discovered in 1985 and definition drilling began in 1986.

Definition drilling was coincident with metallurgical testing and positive feasibility studies were completed in 1987. Terra Mining commenced mining operations at Björkdal in July 1988. In 1996, Terra Mining was purchased by William Resource Ltd. (William). William continued to operate the mine until the end of June 1999 when it was petitioned into bankruptcy. The assets were bought through public auction in June 2001 by International Gold Exploration, which operated the Mine from September 2001 until 2003 when it was acquired by Minmet plc (Minmet).

In 2006, Gold-Ore Resources Ltd. (Gold-Ore) acquired an option from Minmet to purchase the holding company for the mine. On 31 December 2007, Gold-Ore exercised its option and acquired all the shares of Björkdalsgruvan AB. During exploration and development of the Björkdal Mine, Gold-Ore generated cash flow from gold sales from the operation of the plant at the mine, fed by stockpiled material, open pit mining, and underground development operations, which commenced on a full scale basis in mid-2008. In January 2009, Gold-Ore's management concluded that there were sufficient mineral reserves and resources at Björkdal for at least a five year mine life and declared commercial production.

In May 2012, Elgin Mining Inc. (Elgin) acquired all of the issued and outstanding common shares of Gold-Ore. On 4 June 2014, Mandalay announced that it had entered into an arrangement agreement pursuant to which Mandalay would acquire all the outstanding common shares of Elgin. The transaction was completed on 10 September 2014.

The Mine has produced a total of approximately 1.66 Moz Au since the start of production in 1988.

1.2.3.2 Norrberget

The Norrberget deposit was discovered by COGEMA in 1994 and drilling occurred until 1996. In 1997, COGEMA withdrew from Sweden, and the exploration permits around the Björkdal dome including the Norrberget deposit were taken up by North Atlantic Nickel (NAN).

On September 28, 2007, Gold-Ore purchased exploration permits surrounding the Björkdal property from NAN. The property was acquired by Elgin and subsequently passed to Mandalay through the acquisition process described above.

1.2.4 Geology and Mineralization

The Skellefteå region lies within an ancient cratonic block named the Fennoscandian shield and consists of Paleoproterozoic-aged rocks that host several world-class volcanogenic massive sulphide (VMS) copper, zinc, and lead deposits. Mineralization in the Skellefteå region is focussed within and around the Skellefteå belt, a regionally extensive, northwest trending structural feature 120 km long and 30 km wide, which consists of deformed and metamorphosed Paleoproterozoic-aged volcanic, sedimentary, and igneous rocks. The stratigraphy in the Mine area is divided into two groups, the Skellefte Group (lower division) and the Vargfors Group (upper division). The Björkdal gold deposit is hosted within the upper portions of the Skellefte Group, which is dominated by successions of mafic volcanic flows that are interbedded or intercalated on a large scale with clastic sediments.

Detailed litho-stratigraphic mapping, petrological observations, and geochemical analysis undertaken by Mandalay/Björkdalsgruvan AB, geologists have concluded that host rock geology, metamorphism, and alteration styles are much more complex and variable than previously documented. Previous investigations considered the domal structure in the Björkdal area was a large, massive plutonic-type intermediate intrusion. Mandalay's investigations interpret a variable and complex alteration signature that overprints many different rock-types including pyroclastic, volcano-sedimentary, tuffaceous, extrusive-volcanic (andesitic to basaltic compositions), sub-volcanic intrusive (andesitic compositions), and sedimentary (silici-clastics, shales and carbonates) lithologies. Common alteration and metasomatic styles include silicification, carbonatization, calc-silicate (actinolite) alteration, albitization, chloritization, potassic (biotite and K-feldspar), epidotization, pyritization, tourmalinization. Various skarn-type alteration assemblages were also noted in areas where a calcareous host rock is present (including actinolite, tremolite, pyroxene, and minor garnet). While alteration and metasomatic zonation of these various styles is present, the spatial distribution has not clearly been defined. It was considered that a major control on the alteration zonation appears to be host rock lithology (protolith composition) and proximity to major fluid driven heat sources (i.e., hydrothermal systems).

The lowest succession found at the Mine and in the surrounding area consists of a unit of volcaniclastic sandstones and conglomerates, interbedded with lavas, ignimbrites, tuffs, bedded sandstone, and mudstone/shales. A large sub-volcanic intrusion (interpreted as an andesitic laccolith) locally intrudes this volcanic succession in the south and southwestern margins of the current open pit but has not yet been encountered elsewhere within the Mine area.

A unit of massive, crystalline marble sharply overlies these lower volcanic and clastic units. Overlying the crystalline marble is a thin pyroclastic unit (characterized by abundant “fiamme” clasts), which is then abruptly overlain by a basaltic lava containing abundant amygdules (defined by actinolite and carbonate in-fill). Above this basalt, the stratigraphy appears to become increasingly marine in genesis, with the overlying units consisting of laminated and interbedded tuffs and mudstone (basaltic geochemical composition), finely laminated mudstones and siltstone, and poorly sorted sandstone. Gradationally overlying these clastic sediments is a monotonous series of graphitic and pyritic shale (pyrite is often altered to pyrrhotite), interbedded with poorly sorted siltstone and sandstone with minor course-sand/grit beds. Partial Bouma sequences are observed within the more clastic intervals of this upper shale succession.

Alteration at Björkdal typically consists of silicification and albitization of the wall rock that extend outwards up to one metre from the vein walls. Areas of intense silicification and albitization are observed to have completely recrystallized the wall rock in some cases. Disseminated actinolite, chlorite, sericite, and pyrite, with lesser amounts of epidote, pyroxene, garnet, and sphene occur within these vein wall alteration halos.

In areas of the mine where the most intense alteration is in contact with the Björkdal marble unit, strong skarnification can be observed. This skarnified marble unit consists of silica, chlorite, amphibole, actinolite, hornblende, pyroxene, and clinopyroxene. Gold mineralization in these areas is related to silica-pyrrhotite-actinolite clotted disseminations with diameters of one to two centimetres.

The main type of mineralization found in the Björkdal gold system is dominated by vertical to sub-vertical dipping quartz-filled veins. Common accessory minerals contained within these veins are (in approximate order of occurrence): tourmaline, calcite, biotite, pyrite, pyrrhotite, actinolite, scheelite, chalcopyrite, bismuth-tellurides (pilsenite (Bi_4Te_3) and tsumoite (BiTe)), gold, and electrum. Gold mineralization is most closely related to the bismuth-telluride minerals and is also more reliably encountered in veins with high abundances of pyrrhotite, pyrite, scheelite, and/or chalcopyrite.

In general, veins of pure quartz and free of the accessory minerals listed above are generally quite poor hosts for significant quantities of gold mineralization. As such, the informal terminology of “clean veins” and “dirty veins” has been adopted at the mine site to quickly describe vein-fill characteristics. Structural analysis of these two distinct vein-fill types from the Main Zone -325 and -340 levels suggests that the “clean” veins will more often strike between 030° and 040° from true north, while the “dirty”, inclusion-rich veins are more likely to strike between 050° and 090° from true north. This structural-geochemical relationship suggests that vein development in the Björkdal deposit occurred as more than a single “vein-forming” event, and that the fluids responsible for the vein-fill and mineralization were evolving with time.

At Norrberget, the mineralization is stratabound within an interbedded altered volcaniclastic package that sits unconformably below a 30 m to 40 m thick marble unit. Gold mineralization has been observed up to 50 m below this contact. The mineralization is primarily associated with amphibole-albite alteration bands and veinlets. The gold is very fine grained and rarely visible. Where gold grains have been observed, they are found to be on the boundary or in the interstitial material between grains. High grade gold is mostly found in areas with low to no pyrite.

1.2.5 Exploration Status

For the period of September 2014 to September 2024, Mandalay completed a total of approximately 516,934 m of core drilling from surface-based and underground stations at the Björkdal Mine. Drilling in 2023 and 2024 focused on delineating the strike and dip limits of the Aurora Zone, defining the northern extent of mineralization, and confirming the relatively higher-grade mineralization at depth along the mine's eastern flank. Additionally, a new domain, the North Zone below the marble, also referred to as the Grenholm Zone, was discovered, leading 2024 exploration efforts to concentrate on defining its mineralization.

The drilling programs were successful in extending the known limits of the Aurora Zone, and for outlining the limits of the relatively higher grade mineralization at depth, along the mines eastern flank. Drilling north of the mine has identified auriferous veining approximately 300 m from the Aurora Zone, both above and below the marble horizon. The mineralization potential beyond the limits of the drilling completed to-date has not been evaluated.

There is a high likelihood of further discoveries in the Björkdal area, as deposit models currently being formulated and tested by Mandalay geologists are proving successful and much of the held ground remains either unexplored or under-explored.

1.2.6 Mineral Resource Estimate

1.2.6.1 Björkdal

SLR reviewed data for Björkdal and has independently prepared Mineral Resource estimates using a drill hole database with a cut-off date of 30 September 2024. The Mineral Resource estimate has an effective date of 31 December 2024 Mineral Resources were estimated for open pit, underground, and stockpile areas.

Mandalay built individual mineralized wireframes separately for open pit and underground domains. The open pit wireframes were based on a nominal 0.3 g/t Au cut-off value over a minimum of 2.5 m. The underground wireframes were based on a nominal 2.5 m minimum width at a cut-off value of 0.5 g/t Au. The open pit mineralized wireframe models were grouped into five separate areas and a total of 446 individual wireframe models were created for the open pit mine. A total of 705 individual wireframe models were created for the underground mine.

Mandalay elected to maintain a dual capping value approach for estimation of the gold grades contained within the mineralized wireframe models in the underground mine. In this approach, the composited assays for diamond drill holes and RC drill holes are capped to values of 60 g/t Au and 40 g/t Au. A value of 30 g/t Au has been selected as the capping value for the diamond drill hole, RC drill hole, and chip samples contained within the open pit wireframes. This capping value was also applied to all samples contained within the dilution domain volume.

An upright, non-rotated, sub-blocked block model was constructed to model the mineralization in the underground and open pit mines together. Gold grades were estimated into the blocks by means of inverse distance cubed (ID3) interpolation algorithm. A total of three interpolation passes were carried out to estimate the grades in the underground block model. A two-pass search strategy was applied to estimate the grades in the open pit block model. A single-pass estimation strategy was applied when estimating the grades for the dilution domain in the open pit mine block model.

Separate cut-off grades were developed for reporting of the underground and open pit Mineral Resources. Each cut-off grade was developed using the January to September 2024 actual cost information along with a gold price of US$2,500 per ounce and an exchange rate of 10.35

SEK/US$. The cut-off grade for reporting of Mineral Resources was determined to be 0.71 g/t Au within the underground mine and 0.17 g/t Au for the open pit mine.

A similar workflow was applied for preparation of the Mineral Resource estimate for the Storheden deposit, located immediately east of the eastern limits of the Björkdal Mine. A total of 68 mineralization wireframes were created for the Storheden deposit.

SLR classified the Mineral Resources for the Björkdal Mine into either the Measured, Indicated, or Inferred categories based on drill hole spacing, grade continuity, proximity to mine workings, and reliability of data. All material contained within the stockpile areas was classified into the Indicated Mineral Resource category. All Mineral Resources for the Storheden deposit were classified into the Inferred Mineral Resource category.

1.2.6.2 Norrberget

The Mineral Resource estimates for the Norrberget deposit were updated to reflect the positive results of drilling carried out in 2023 and 2024. The cut-off date for the drill hole database is 30 September 2024.

Three mineralized domains for Norrberget were created using a wireframe threshold grade of approximately 0.40 g/t Au cut-off grade that was a minimum of two metres in horizontal width. The largest mineralization wireframe (domain Nb1) defines gold mineralization along an east-west strike length of approximately 400 m and to a depth of approximately 175 m beneath the surface. The wireframe dips gently towards the north at a dip of approximately 20º to 30º. The strike and depth limits of the mineralization have not been determined by drilling.

The conceptual operational scenario envisions that mineralized material would be extracted by means of a small open pit mine at with the material being transported to the Björkdal processing plant for recovery of the gold. A single upright, non-rotated, sub-blocked block model was constructed to model the mineralization in the potential underground and open pit mines together.

Cut-off grades have been updated using the January to September 2024 actual cost information from Björkdal along with a gold price of US$2,500 per ounce and an exchange rate of 10.35 SEK/US$. The cut-off grade for reporting of open pit Mineral Resources for Norrberget was determined to be 0.27 g/t Au.

Mineral Resources were estimated within a constraining open pit shell.

The Mineral Resources are classified into either the Indicated or Inferred categories based on drill hole spacing, grade continuity, and reliability of data.

1.2.7 Mineral Reserve Estimate

Open pit and underground Mineral Reserve estimates with an effective date of 31 December 2024 were prepared by Mandalay, and audited and accepted by the SLR QP, using mine designs based on the updated Mineral Resource model.

1.2.7.1 Björkdal

The underground Mineral Reserve estimate was based on a minimum mining width of 3.10 m for stopes (after dilution) and 4.60 m for development. Zero grade dilution was applied by adding 0.25 m on each side of stopes and an additional 25% for overbreak dilution.

An overall dilution factor of 20% was applied to ore drives and 10% to capital development design widths. The resulting overall planned stope dilution averages just under 30%. Mining extraction was assessed at 95% for ore tonnes and corresponding contained ounces within stopes and 100% for development. For stopes, a cut-off grade of 0.85 g/t Au was applied, while for development material, an incremental cut-off grade of 0.20 g/t Au was used.

For the Björkdal open pit, potential pits were evaluated via pit optimisation. A selective mining unit (SMU) of 5 m x 2.5 m x 2.5 m was used in the block model and was re-blocked to 5 m x 5 m x 5 m to improve processing time. Based on historical reconciliation data for the Björkdal open pit, a tonnage dilution factor of 100% at in situ grade was applied for blocks between 0.20 g/t Au and 1.0 g/t Au. For blocks above 1.0 g/t Au within the Björkdal open pit, compiled reconciliation data of the open pit high grade and low grade ore supports the use of a block dilution of 100% at zero grade. Based on the results of several pit optimisation runs, the majority of ore tonnage is located in the crown pillar along the north wall of the pit, with the balance located in a number of smaller satellite pits lying to the southeast outside of the main Björkdal pit.

1.2.7.2 Norrberget

Additional drilling and resource modelling of the Norrberget deposit was carried out during 2023 and 2024. The Mineral Reserves estimate has been updated to account for the recent Resource model update, increases in the gold price, and operating costs effecting the cut-off grade.

For updating the Norrberget open pit Mineral Reserves estimate, potential pits were evaluated using the Lerchs-Grossmann pit optimisation algorithm and a regularised block size of 6 m x 4 m x 4 m.

As no production has occurred within the Norrberget open pit, local reconciled dilution and extraction factors were not available. Therefore, a dilution factor of 25% and an extraction factor of 100% were nominally assigned based on reconciled production data from mining the shallow dipping structures at the Björkdal open pit.

The updated cut-off grade for reporting of Mineral Reserves for Norrberget was determined to be 0.32 g/t Au.

1.2.8 Mining

1.2.8.1 Björkdal

The Björkdal open pit ceased production in July 2019 as the processing of the low grade stockpile generated more value than the continued mining of the open pit. Mandalay intends on restarting open pit mining operations in 2027 ahead of underground Mineral Reserves becoming depleted in 2033, however, the restart of the open pit could be delayed further with additional Reserve additions to underground.

The underground mining method used at Björkdal is longhole stoping with a sub-level spacing of 15 m to 20 m, depending on the zone. Cross-cuts are established perpendicular to the vein system. Veins are then developed by drifting on each sub-level from the cross-cut. All pre-production vein, cross-cut, and ramp development is drilled and blasted using conventional trackless mining equipment.

The current mill capacity constraints limit the total Björkdal production capacity to 1.4 Mtpa. The average planned underground mine production rate is approximately 1.05 Mtpa until the Björkdal Main Pit recommences operations after which underground production will reduce to approximately 700 kt per annum. A further 0.35 Mtpa of ore is rehandled from the low-grade stockpile, for a planned average throughput rate of 1.4 Mtpa.

During the final twelve months of production, all mill feed will come from the Björkdal open pit extension and the Norrberget pit.

1.2.8.2 Norrberget

The Norrberget open pit will be mined by a contractor with trucks and shovels, as part of the larger Björkdal contract. It is planned to commence mining at Norrberget in 2035, when ore from the Björkdal Main Pit begins to tail off.

The Norrberget mining is integrated into the end of the Björkdal open pit schedule to minimize potential production shortfalls and to provide added flexibility to the deliverable mill feed. Norrberget will provide a further 161,000 tonnes to the mill over twelve months. Stripping of overburden is scheduled to commence at the beginning of 2035, with ore being mined in the same year.

1.2.9 Mineral Processing

The mineral processing plant at Björkdal commenced operation in 1989. Since that time, it has processed more than 39.0 Mt of ore from open pit and underground sources and produced approximately 1.66 Moz Au. Currently, the concentrator throughput is 1.4 Mtpa and the overall gold recovery is 88.3%, of which approximately 72% is obtained from the gravity processes and 18% from flotation.

The concentrator includes primary, secondary, and tertiary crushing, primary and secondary grinding, a series of gravity concentration steps, regrinding, and flotation to produce three gravity concentrates and a flotation concentrate.

The ore from the Norrberget deposit has more complex mineralogy than the mineralogy at Björkdal. Preliminary metallurgical tests show that the gold recovery in the existing plant will be at least 15% lower than the gold recovery for Björkdal ore.

The Tailings Management Facility (TMF) is located in an area of gently undulating relief approximately 1.5 km north of the processing plant and comprises three separate zones, The Western Area, the Central sand cone, and the Eastern Area. The Eastern Area consists of the Eastern dam, the K1 dam, and the K2 dam.

The Eastern and K1 dams have both reached capacity. The K2 clearing pond in the far east of the TMF, still has capacity. To the west, the southern section of the Western Barrier Dam was raised by 1.2 m during the summer of 2022 and provided tailings capacity in this area into the summer of 2024.

The raising of the K1 Dam is being carried out in two stages. The Stage 1 raise, initiated during 2020, was completed in November 2023. Stage 2 is scheduled to be completed during 2026. At the planned plant throughput of 1.4 Mtpa, this will provide sufficient tailings storage capacity up to and including 2030. The Company is investigating the possibility of backfilling tailings into the inactive open pits to avoid additional TMF expansions between 2030 and the life of mine (currently 2035).

1.2.10 Environmental, Permitting and Social Considerations

All operations are fully permitted and in compliance with Swedish environmental and health and safety legislation. A new operating permit (M 771-17) was granted in December 2018 and remains valid for ten years from the date of issue for the TMF at which point a new permit will be required. The permit remains valid until 05 October 2067 for all other aspects of the operations.

The environmental permit allows for expansion of the TMF for a mill throughput of 1.7 Mtpa.

Permit applications required for the extension of the ongoing underground mine and raise of Dam K1 have all been granted.

An annual environmental report is submitted to the authorities in Sweden for approval. The report summarises compliance to the terms stated in the environmental permits and water usage permit.

The 2018 environmental permit includes an updated closure and reclamation plan. Mandalay presently has US$4.3 million (SEK 48.1 million) in a secured reclamation account held by the Swedish authorities.

1.2.11 Capital and Operating Costs

The majority of the capital cost estimates contained in this Technical Report are based on quantities generated from the open pit and underground development requirements and data provided by Björkdal.

A summary of capital requirements anticipated over the LOM is summarized in Table 1-3.

Table 1-3: Capital Cost Summary

Description	Value (US$000)
Sustaining Capital Fixed Assets	81,400
Capital Development Underground	61,000
Pre-Strip Open Pit	81,100
Sustaining Exploration	700
Total Sustaining Capital	**224,200**
Growth Capital	2,000
Total LOM Capital Expenditure	**226,200**

Sustaining capital is broadly divided between three areas: spending on fixed assets, ongoing underground development, and open pit pre-stripping. Costs are estimated based on actual cost history at Björkdal.

The fixed asset estimate includes provision for equipment replacement; maintenance of the underground ventilation, electrical distribution, and mine water management systems; equipment replacement in the process plant and the replacement of items associated with tailings disposal, water treatment, and other general items.

The majority of the growth capital reported relates to expenses for expansion of tailing dams and exploration drilling and comes directly from the 2025 budget.

Operating costs for the LOM plan are shown below in Table 1-4.

Table 1-4: Life of Mine Operating Costs

Description	LOM (US$000)	Annual Average (US$000)	Unit Cost (US$/t processed)
Mining and Rehandle	283,030	27,613	20.68
Processing	126,160	12,308	9.22
G&A	114,800	11,200	8.39
Total Operating Cost	**523,990**	**51,121**	**38.29**

2.0 Introduction

SLR Consulting (Canada) Ltd. (SLR) was retained by Mandalay Resources Corporation (Mandalay) to prepare an independent Technical Report on the Björkdal Gold Mine (Björkdal or the Mine), located in Västerbotten County in northern Sweden. The purpose of this Technical Report is to support the disclosure of Mineral Resources and Mineral Reserves (MRMR) for Björkdal, which includes the Storheden deposit (Storheden), and the satellite Norrberget deposit (Norrberget), located approximately six kilometres east of the Mine. MRMR are estimated as of 31 December 2024, based on a drill hole database cut-off date of 30 September 2024 for Björkdal and Norrberget. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

In 2024, Björkdal produced gold from an underground mine only, supplemented with stockpile feed, as operations in the open pit mine were suspended in July 2019. Approximately 82% of plant feed for 2024 was delivered from the underground, with the balance drawn from the low grade stockpiles (18%). Total mill feed for 2024 was approximately 1.37 million tonnes (Mt). The average reconciled head grade for 2024 was 1.08 g/t Au. The Björkdal plant uses conventional crushing and grinding, followed by a combination of gravity and flotation processing techniques to recover gold to concentrates which are sold to smelters in Europe. The plant capacity is 3,850 tonnes per day (tpd) and the plant is currently operating at approximately 3,750 tpd. Gold recovery for 2024 averaged approximately 85%, and production totalled approximately 40,800 ounces (oz) of saleable gold.

The 2017 Pre-Feasibility Study (PFS) for Norrberget envisions an open pit mining operation feeding the existing Björkdal plant. No changes have been made to the underlying assumptions for the Norrberget PFS since the last Technical Report dated 31 March 2023 (SLR 2023).

Mandalay is a publicly listed Canadian mining company that holds 100% of Björkdal through its wholly-owned subsidiaries in Sweden. Mandalay's other operating mine is located in Australia (Costerfield).

2.1 Sources of Information

A site visit to Björkdal and the Norrberget Project site was carried out by Reno Pressacco, M.Sc.(A), P.Geo., SLR Associate Principal Geologist, and Richard C. Taylor, MAusIMM, CP, SLR Associate Principal Mining Engineer from 8 to 9 November 2022. Mr. Pressacco and Mr. Taylor visited all of the Björkdal open pit and underground operations, the processing plant, and surface infrastructure including the assay laboratory.

Arun Vathavooran, SLR Consulting Metallurgist and Process Engineer, PhD CEng, FIMMM, and Ben Lepley, MESci, CGeol, MIMMM, SLR Environmental, Social and Governance (ESG) Consultant conducted a site visit on 20 November 2024. During the site visit, the SLR representatives were given a tour of the main operational areas of interest in the main Björkdal site. This included the processing plant, tailings facilities, and water discharge point.

The report was prepared by Reno Pressacco, Arun Vathavooran, Richard C. Taylor, and Ben Lepley, all of whom are independent Qualified Persons (QP) as defined by NI 43-101.

The QP responsibilities are summarized in Table 2-1.

Table 2-1: Qualified Persons and Responsibilities

QP, Designation, Title	Responsible for
Reno Pressacco, M.Sc.(A), P.Geo, FCG, Associate Principal Geologist	Sections 4 to 12, 14.1, 14,2.1 to 14.2.11, 14.2.13 to 14.2.15, 14.3.1 to 14.3.9, 14.3.11 to 14.3.13, 14.4.1 to 14.4.9, 14.4.11 to 14.4.13, 23, and 24 and shares responsibility for Sections 1, 25, 26, and 27
Richard C. Taylor, MAusIMM, CP, Associate Principal Mining Engineer	14.2.12, 14.3.10, 14.4.10, 15, 16, 18, 19, 21, and 22, and shares responsibility for Sections 1, 25, 26, and 27
Arun Vathavooran, PhD CEng, FIMMM, Consulting Metallurgist and Process Engineer	13 and 17, and shares responsibility for Sections 1, 25, 26, and 27
Ben Lepley, MESci, CGeol, MIMMM, ESG Consultant	20, and shares responsibility for Sections 1, 25, 26, and 27

Discussions in relation to the year-end 2024 MRMR estimates were held with personnel from Mandalay:

- Ms. Åsa Corin, Björkdal General Manager
- Mr. Jose Javier Santabarbara, Björkdal Geology Manager
- Ms. Helena Moosberg-Bustnes, Björkdal Plant Manager
- Mr. Christer Bohman, Björkdal Laboratory Chief
- Mr. Aodhan Barrett, Björkdal Resource Geologist
- Mr. Pieter Brocx, Björkdal Database Geologist
- Mr. Samuel Miller, Björkdal Exploration Manager
- Mr. Ali Beyglou, Björkdal Technical Services Manager
- Mr. Dawid Wrobel, Björkdal Strategic Planning Engineer
- Mrs. Lena Printzell, Björkdal Environmental Manager

The documentation reviewed, and other sources of information, are listed at the end of this Technical Report in Section 27 References.

2.2 List of Abbreviations

Units of measurement used in this Technical Report conform to the metric system. All currency in this Technical Report is US dollars (US$) unless otherwise noted.

μ	micron
μg	microgram
a	annum
A	ampere
bbl	barrels
Btu	British thermal units
°C	degree Celsius
C$	Canadian dollars
cal	calorie
cfm	cubic feet per minute
cm	centimetre
cm^2	square centimetre
d	day
dia	diameter
dmt	dry metric tonne
dwt	dead-weight ton
°F	degree Fahrenheit
ft	foot
ft^2	square foot
ft^3	cubic foot
ft/s	foot per second
g	gram
G	giga (billion)
Gal	Imperial gallon
g/L	gram per litre
Gpm	Imperial gallons per minute
g/t	gram per tonne
gr/ft^3	grain per cubic foot
gr/m^3	grain per cubic metre
ha	hectare
hp	horsepower
hr	hour
Hz	hertz
in.	inch
in^2	square inch
J	joule
k	kilo (thousand)
kcal	kilocalorie
kg	kilogram
km	kilometre
km^2	square kilometre
km/h	kilometre per hour
kPa	kilopascal
kVA	kilovolt-amperes
kW	kilowatt
kWh	kilowatt-hour
L	litre
lb	pound
L/s	litres per second
m	metre
M	mega (million); molar
m^2	square metre
m^3	cubic metre
MASL	metres above sea level
m^3/h	cubic metres per hour
mi	mile
min	minute
μm	micrometre
mm	millimetre
mph	miles per hour
MVA	megavolt-amperes
MW	megawatt
MWh	megawatt-hour
oz	Troy ounce (31.1035g)
oz/st, opt	ounce per short ton
ppb	part per billion
ppm	part per million
psia	pound per square inch absolute
psig	pound per square inch gauge
RL	relative elevation
s	second
st	short ton
stpa	short ton per year
stpd	short ton per day
t	metric tonne
tpa	metric tonne per year
tpd	metric tonne per day
US$	United States dollar
USg	United States gallon
USgpm	US gallon per minute
V	volt
W	watt
wmt	wet metric tonne
wt%	weight percent
yd^3	cubic yard
yr	year

3.0 Reliance on Other Experts

This Technical Report has been prepared by SLR for Mandalay. The information, conclusions, opinions, and estimates contained herein are based on:

1. Information available to SLR at the time of preparation of this Technical Report, and
2. Assumptions, conditions, and qualifications as set forth in this Technical Report.

For the purpose of this Technical Report, the SLR QP has relied on ownership information provided by Mandalay on February 19, 2025, in Sections 1 and 4 of this Technical Report. The SLR QP has not researched property title or mineral rights for the Mine and expresses no opinion as to the ownership status of the property.

The SLR QP has relied on Mandalay for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from the Mine, in Section 4 of this Technical Report.

Except for the purposes legislated under provincial securities laws, any use of this Technical Report by any third party is at that party's sole risk.

4.0 Property Description and Location

The Björkdal property is located in Västerbotten County in northern Sweden, at approximately 20°35′26″ E longitude and 64°56′7″ N latitude (WGS84). In the Swedish coordinate system used for government maps (SWEREF 99) the Björkdal property is located at approximately X: 7212941 and Y: 764003. The Norrberget property is located approximately six kilometres east of the Mine. The Mine is situated approximately 28 km northwest of the municipality of Skellefteå and approximately 750 km north of Stockholm (Figure 4-1).

4.1 Swedish Mining Laws and Regulations

The Minerals Act (1991:45) came into force on 1 July 1992. The Mining Inspectorate of Sweden (Bergsstaten) is the agency responsible for decisions concerning permits for exploration (exploration permits) and mining (exploitation concessions). The Mining Inspectorate also carries out inspections of mines and provides information on mineral legislation and prospecting in Sweden.

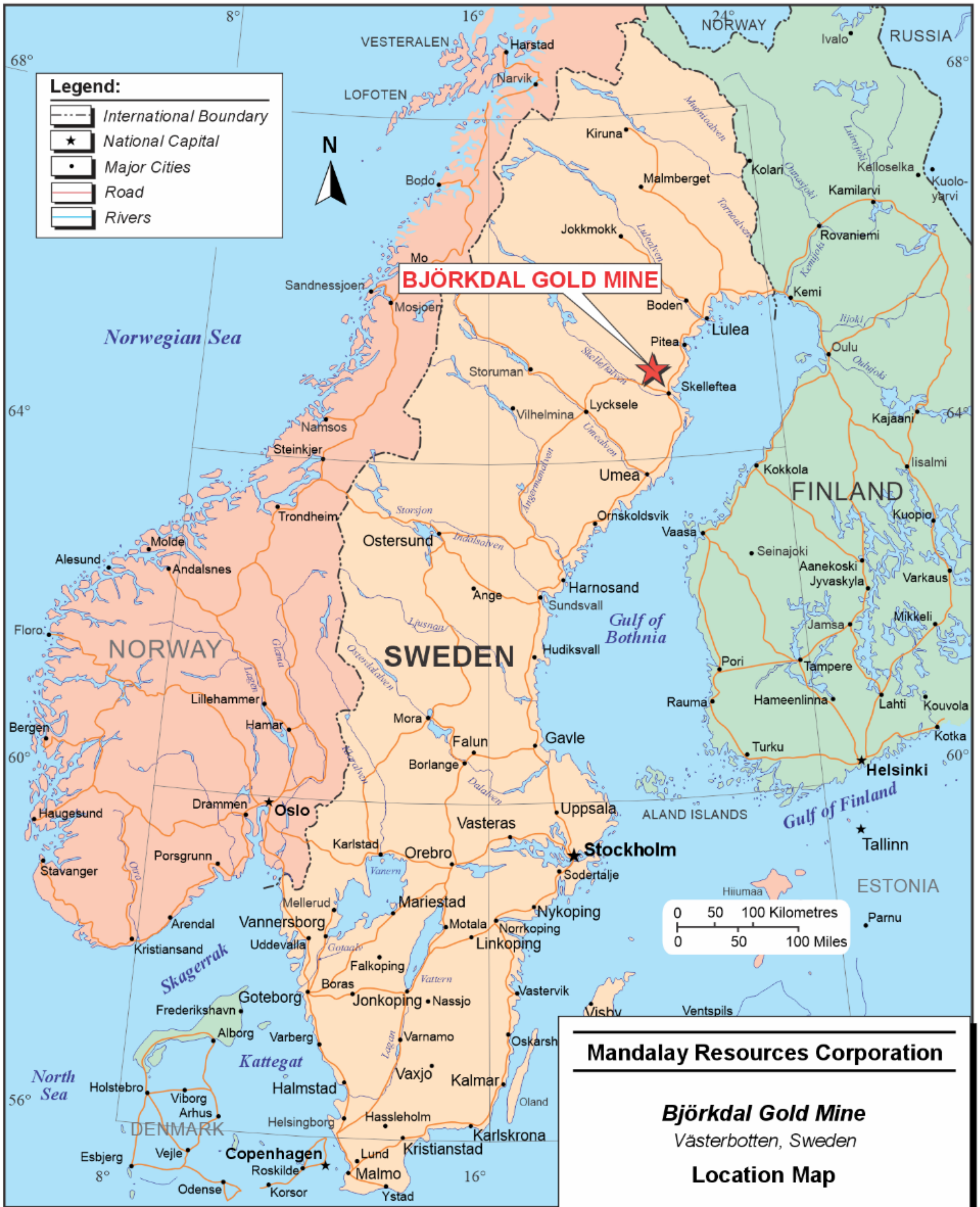
On 11 June 2014, the Swedish Parliament amended the provisions of the Minerals Act (1991:45) governing exploration works. As per this bill, exploration permit holders are required to provide more detailed information about their exploration works.

An exploration permit does not give the right to undertake exploration work in contravention of any environmental regulations applying to the area. Applications for exemption are normally submitted to the County Administration Board (Länsstyrelsen).

Acts and regulations governing exploration work include:

- Minerals Act (1991:45)
- Mineral Ordinance (1992:285)
- Environmental Code (1998:808)
- Work Environment Act (1977:1160)
- Work Environment Ordinance (1977:1166)
- Work Environment Authority's Statute Book (AFS)
- Off-Road Driving Act (1975:1313)
- Off-Road Driving Ordinance (1978:594)
- Forest Conservation Act (1979:429)
- Forest Conservation Ordinance (1993:1096)
- Heritage Conservation Act (1988:950)
- Heritage Conservation Ordinance (1988:1188)
- Protection Act (2010:305)

Figure 4-1: Location Map



Source: SLR 2025.

4.2 Property Ownership and Land Tenure

Mandalay is a publicly listed company that effectively holds 100% of Björkdal through the Swedish registered companies Björkdalsgruvan AB and its subsidiary Björkdal Exploration AB.

Björkdalsgruvan AB owns 12 mining concessions on the Björkdal property and one mining concession on the Norrberget property. The Norrliden K nr 1 concession is held by Explor Björkdalsgruvan AB. The total area of the mining concessions is approximately 509.12 ha.

The mining and exploration concessions are listed in Table 4-1 and Table 4-2, respectively, and their locations are shown in Figure 4-2.

Table 4-1: Mining Concessions Status as at 19 February 2025

Mining Concessions		
Permit Name	**Size (ha)**	**Expiry Date**
Häbbersfors K nr 1	98.69	January 1, 2031
Häbbersfors K nr 2	34.88	February 2, 2035
Häbbersfors K nr 3	18.89	April 29, 2027
Häbbersfors K nr 4	5.00	November 21, 2025
Häbbersfors K nr 5	21.83	March 6, 2034
Häbbersfors K nr 6	23.49	April 24, 2038
Häbbersfors K nr 7	32.11	January 17, 2042
Norrberget K nr 1	25.28	January 25, 2044
Nylund K nr 1	73.47	January 30, 2043
Storheden K nr 1	61.27	November 8, 2043
Norrliden K nr 1 (1)	18.51	January 1, 2032
Kvarnforsliden K nr 1	6.74	March 9, 2046
Kvarnforsliden K nr 2	33.09	July 12, 2048
Kvarnforsliden K nr 3	55.89	February 13, 2050
Total	**509.12**	

Note.

1. Concession held by Explor Björkdalsgruvan AB

Table 4-2: Exploration Concessions Status as at 19 February 2025

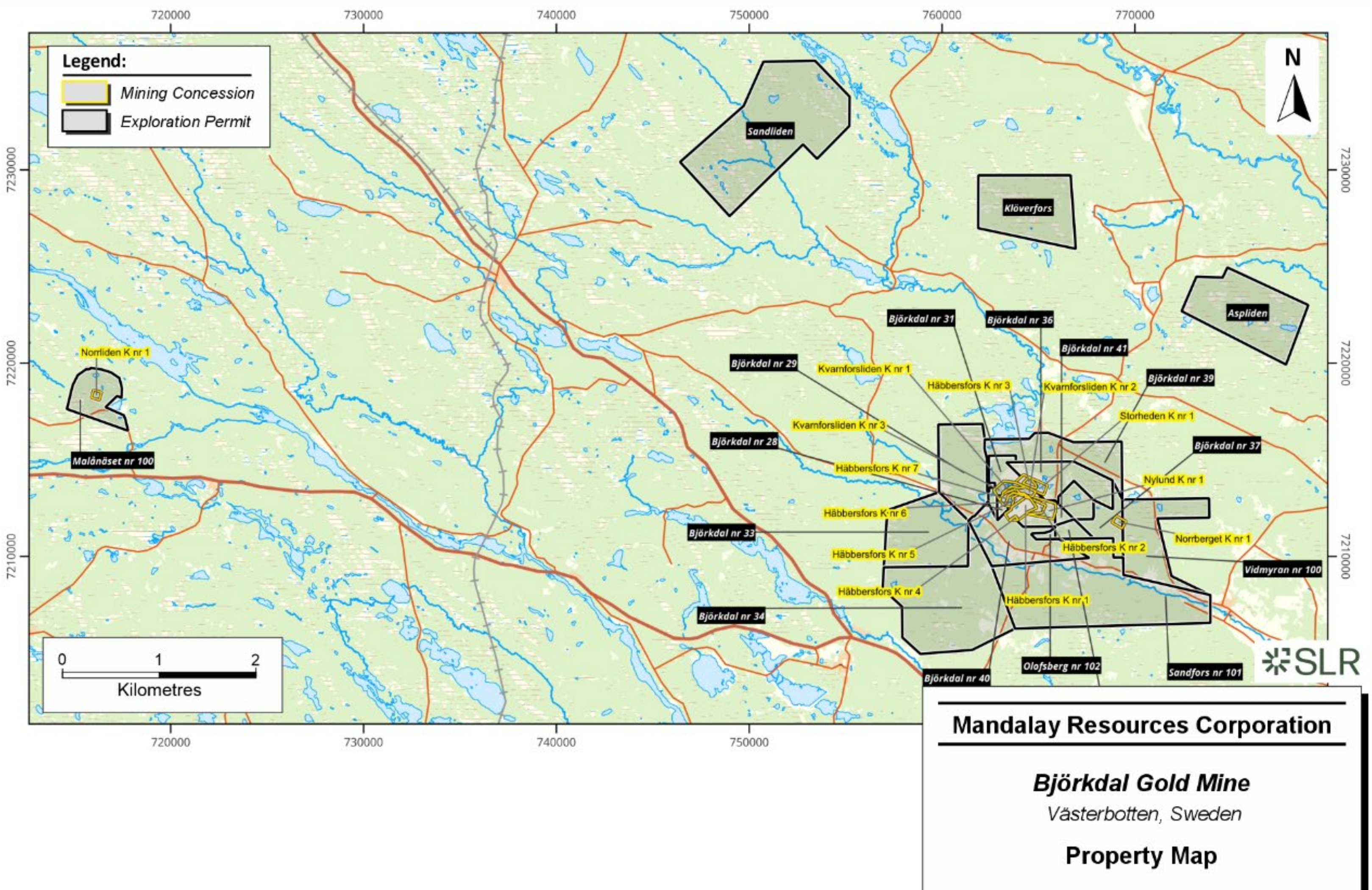
Permit Name	Size (ha)	Expiry Date
Aspliden	1,787.32	February 08, 2027
Björkdal nr 28	39.53	October 14, 2025
Björkdal nr 29	1073.89	November 30, 2027
Björkdal nr 31	449.07	November 07, 2026

Permit Name	Size (ha)	Expiry Date
Björkdal nr 33	1,409.35	October 19, 2025
Björkdal nr 34	2,520.16	November 09, 2025
Björkdal nr 35	135.43	October 17, 2026
Björkdal nr 36	670.40	April 10, 2027
Björkdal nr 37	378.45	August 28, 2027
Björkdal nr 39	978.45	November 05, 2026
Björkdal nr 40	967.36	September 01, 2027
Björkdal nr 41	62.73	April 27, 2026
Klöverfors	1,603.51	August 15, 2027
Lillträsket nr 3	246.59	October 17, 2026
Malånäset nr 100(1)	591.84	March 20, 2025
Olofsberg nr 102	42.79	June 04, 2025
Sandfors nr 101	3,267.82	June 09, 2027
Sandliden	3,568.37	April 17, 2027
Vidmyran nr 100	1,197.50	March 10, 2025
Total	**20,990.54**	

Notes:

1. As of the issue date of this report, this concession has expired.

Figure 4-2: Property Map



Source: Mandalay 2025.

4.2.1 Exploitation (Mining) Concessions

The Björkdal deposit is located on the Häbbersfors exploitation (mining) concessions. Key facts related to mining concessions are:

- A mining concession is valid for 25 years based on an application fee.
- Concession period can be extended for ten years at a time without special application if regular exploitation operations are in progress when the period of validity expires.
- In order to apply for a new mining concession, the exploration permit needs to contain an Indicated Resource.

4.2.2 Exploration Permits

Obligations to retain exploration permits include:

- An application fee of SEK500, or approximately US$56, per every 2,000 ha area.
- After an initial permit fee for first approval (SEK20/ha area fee for years 1-3) retention requires further permit fees. Permits that are more mature attract increased fees such that the first extension is 21 SEK/ha/year (years 4-6), second extension 50 SEK/ha/year (years 7-10) and third extension 100 SEK/ha/year (years 11-15).
- Active exploration activities must take place continuously in order to be granted a permit extension.
- Compensation for damage and encroachment to landowners upon completion of the operation.

Mandalay's exploration fees for 2024 totalled approximately SEK1,332,800, or approximately US$148,100.

4.3 Surface Usage/Land Lease

Mandalay has indicated to SLR that all surface rights required for the Björkdal mining concessions have been designated to the Company. Some of the land is owned by Mandalay, while some is still owned by landowners with long-term surface leases held by the Company. If the Mine activity were to shut down for some reason, the surface rights would be returned to the landowners after the completion of reclamation work.

Björkdal is located in reindeer habitat belonging to the Sámi village Mausjaur in the west and to the Sámi village Svaipa in the east. The habitats have winter grazing areas in the vicinity of the Mine. There are no current issues with the indigenous Sámi population.

No surface rights for mining have been acquired at the Norrberget deposit.

4.4 Environmental Liabilities and Permitting

Mandalay reports that Björkdal is fully permitted in accordance with Swedish environmental and health and safety legislation. The latest environmental permit was issued in December 2018 and is in good standing. The permit is valid for 10 years and allows for expansion of the tailings management facility (TMF) for a mill throughput of 1.7 Mtpa. A mining permit is included in the environmental permit. During 2019, an adjustment to the environmental permit, which included an increased underground mining permit area and changes in the construction of the K1 tailings dam, was submitted and approved in July 2021.

4.5 Royalties, Back-in Rights, Payments, or Other Encumbrances

The holder of an exploitation concession must pay an annual minerals fee to the landowners of the concession area and to the State. The fee is 0.2% of the average value of the minerals mined from the concession, 0.15% of which is paid to the landowners in proportion to their share of ownership of the concession area. The remaining 0.05% is paid to the State to be used for research and development in the field of sustainable development of mineral resources. The fee is estimated after consideration of the amount of mined ore, the amount of minerals in the ore, and the average price of the mineral during the year or by use of an equivalent value.

4.6 Discussion

The SLR QP is not aware of any environmental liabilities on the property and Mandalay has confirmed that it is in possession of, or in the process of obtaining, all required permits to conduct the proposed work on the property. The SLR QP is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property. Prior to mining at Norrberget, environmental permits and agreements with the local Sámi village will be required.

5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

The Björkdal property is located approximately 40 km by road northwest of the municipality of Skellefteå (population of approximately 73,000) and is accessible via Swedish national road 95 or European highway route E4 followed by all-weather paved roads. Norrberget is located approximately six kilometres east of the Mine and is accessible via a forest road.

On the Björkdal property, gravel roads link the main site gate entrance to the surface infrastructure. Gravity concentrates are trucked from the Mine to Skellefteå where the product is loaded onto ships for delivery to smelting customers in Europe. Sulphide flotation concentrates are trucked to nearby processing facilities at Boliden's Rönnskär smelter. The nearest airport, located in Skellefteå, has regular daily service to Stockholm.

5.2 Climate

This area of Sweden has a subarctic climate with mild summers and cold snowy winters. The climate is, however, moderated by proximity to the Gulf Stream, so that while winters are cold, they are much less so than winters at similar latitudes in other parts of the world. The average low temperature for January is -14°C. The short summers are also reasonably warm for latitudes near the Arctic Circle. The average daily high temperature in July is 19°C, although, in recent years, temperatures above 30°C have been recorded.

Yearly precipitation is low at less than 600 mm, with August being the wettest month at over 71 mm. Precipitation is quite low near the coast, but snow may lie on the ground for up to five months. Due to its high latitude, July is typified by an average of 21 hours of daylight while the average for December is four. Climatic conditions do not affect Björkdal's or Norrberget's exploration activities, and the Mine and processing operations are able to operate throughout the year.

5.3 Local Resources

The Västerbotten region has a long history of mining activity and Skellefteå is an industrial town. The region is home to several competence centres and two universities with the bulk of Sweden's academic and vocational units related to mining, metallurgy, and geology located within a radius of 130 km. The region includes a number of specialized companies, suppliers, and contractors linked to the mining industry including world-class manufacturers of mining equipment and machinery. Both experienced and general labour is readily available within the region. Björkdal has had success in hiring experienced staff and personnel with good mining expertise. The Mine enjoys the support of local communities as mining is accepted as a socially responsible and necessary contributor to the local economy.

5.4 Infrastructure

5.4.1 Björkdal

The Mine site hosts extensive surface and underground infrastructure, including the following:

- Well-kept gravel site roads,

- An administrative building consisting of office space, kitchen facilities,
- Modular buildings with office space for contactors, changing rooms, and mine dry mess,
- An open pit mine with ramp access to the underground operations,
- An underground mine consisting of ramps and sub-levels,
- Raw ore stockpile facility containing a number of 5,000 t to 25,000 t capacity raw ore stockpiles,
- Primary jaw crushing facility with 400 t coarse ore stockpile,
- Secondary crushing facility,
- 5,000 t fine ore stockpile and reclaim facility,
- 4,000 tpd mill, gravity gold plant, and flotation plant,
- An internal metallurgical assay laboratory,
- Company and contractor maintenance facilities,
- A core logging facility with covered storage, sample preparation laboratory, and grade control assay laboratory,
- 250 ha TMF,
- Fresh water supply and storage,
- Water treatment plant,
- Explosive magazine and mixing facilities,
- Storage facilities for chemical reagents and bulk supplies,
- An off-site covered core storage facility, and
- Swedish grid electrical power.

5.4.2 Norrberget

Currently, there is no infrastructure at the Norrberget deposit other than forest access roads, currently used for forestry and hunting access to the surrounding area, and exploration drill pads. Water for drilling is obtained from surface streams or pumped from previous drill holes.

In the QP's opinion, there are sufficient surface rights for mining operations and related infrastructure for the Björkdal mine.

5.5 Physiography

The Björkdal property is located at an average elevation of 140 MASL. The terrain around Björkdal is relatively subdued with low hills and numerous shallow lakes. Glacial till forms the main soil cover over the area. The vegetation around Björkdal is dominated by managed forests of spruce and birch with some areas of cultivated land.

6.0 History

6.1 Prior Ownership

6.1.1 Björkdal

The Björkdal deposit was originally discovered in 1983 by Terra Mining AB (Terra Mining) during a till sampling program which discovered anomalous gold values in the glacial till profile. Anomalous gold values in bedrock were discovered in 1985 and a definition drilling program began in early 1986.

The definition drilling program included a metallurgical test work program, and a feasibility study was completed in May 1987. The feasibility study returned a positive outcome and Terra Mining commenced mining operations at Björkdal in July 1988 by means of open pit mining. In 1996, Terra Mining was purchased by William Resource Ltd. (William). William continued to operate the Mine until the end of June 1999, when the operation was closed due to low gold prices. The assets were bought through public auction in June 2001 by International Gold Exploration, which operated the Mine from September 2001 until 2003 when it was acquired by Minmet plc (Minmet).

In 2006, Gold-Ore Resources Ltd. (Gold-Ore) acquired an option from Minmet to purchase the Mine. On 31 December 2007, Gold-Ore exercised its option and acquired all the shares of Björkdalsgruvan AB. During exploration and development of the Mine, Gold-Ore generated cash flow from gold sales from the operation of the plant at the mine, fed by stockpiled material and open pit mining of new material as it became available. Underground development operations commenced on a full scale in mid-2008. In January 2009, Gold-Ore's management concluded that there were sufficient Mineral Reserves and Mineral Resources at the Mine for at least a five year mine life and declared commercial production.

In May 2012, Elgin Mining Inc. (Elgin) acquired all of the issued and outstanding common shares of Gold-Ore. Gold-Ore's common shares were delisted from the TSX and Elgin graduated from a TSX Venture listed company to a TSX listed company.

On 4 June 2014, Mandalay announced that it had entered into an arrangement agreement pursuant to which Mandalay would acquire all the outstanding common shares of Elgin. The transaction was completed on 10 September 2014.

6.1.2 Norrberget

The Norrberget deposit was discovered by COGEMA in 1994 and drilling occurred until 1996. In 1997, COGEMA withdrew from Sweden and disposed of all assets in the region. The exploration permits around the Björkdal dome and covering the Norrberget deposit were taken up by North Atlantic Nickel (NAN).

On 28 September 2007, Gold-Ore purchased exploration permits surrounding the Björkdal property from NAN. The property was then acquired by Elgin and subsequently passed to Mandalay through the acquisition process described above.

6.2 Previous Mineral Resource and Mineral Reserve Estimates

A detailed description of the MRMR estimates prepared by Minmet, Gold-Ore, and Elgin was presented in previous Technical Reports by RPA (2015, 2017, and 2018) and is not reproduced here. The previous year-end estimates of MRMR were prepared by RPA (now SLR) for

Mandalay in 2014, 2016, 2017, 2018, 2019, 2020, and 2022. Mining Plus prepared the MRMR estimates for 2021. A summary of the evolution of the Measured and Indicated Mineral Resources for the Björkdal Property is presented in Figure 6-1. An illustration of the cumulative Proven and Probable Reserve totals, along with depletion for the Björkdal Property is presented in Figure 6-2.

Figure 6-1: Summary of the Evolution of the Measured and Indicated Mineral Resources

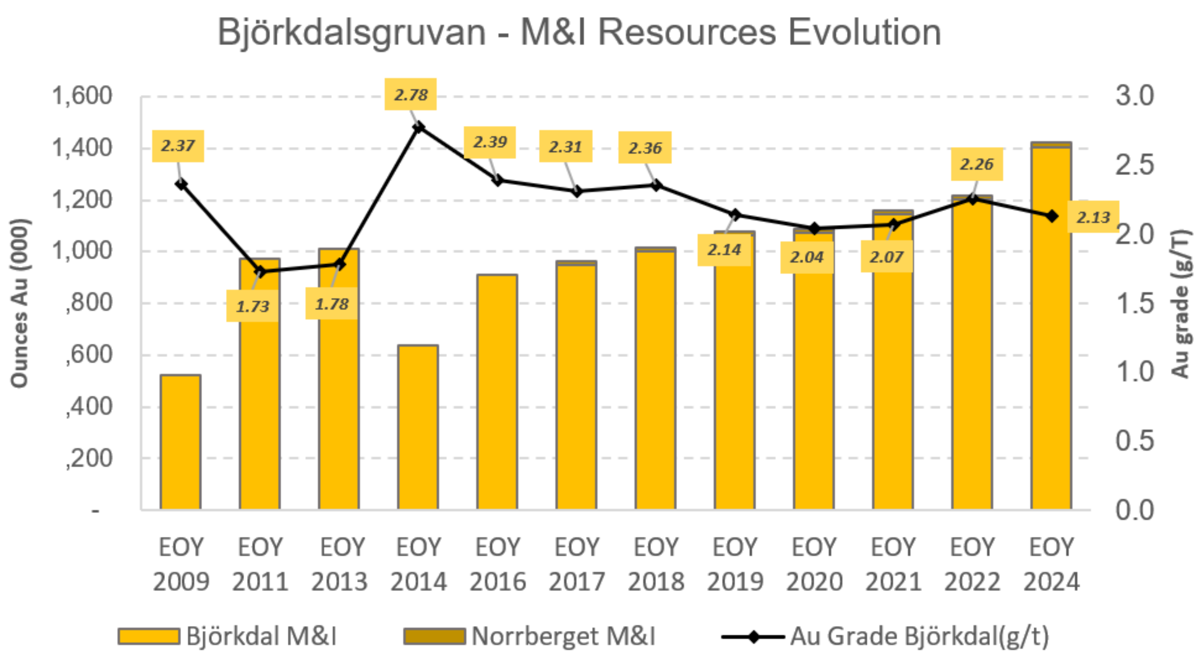
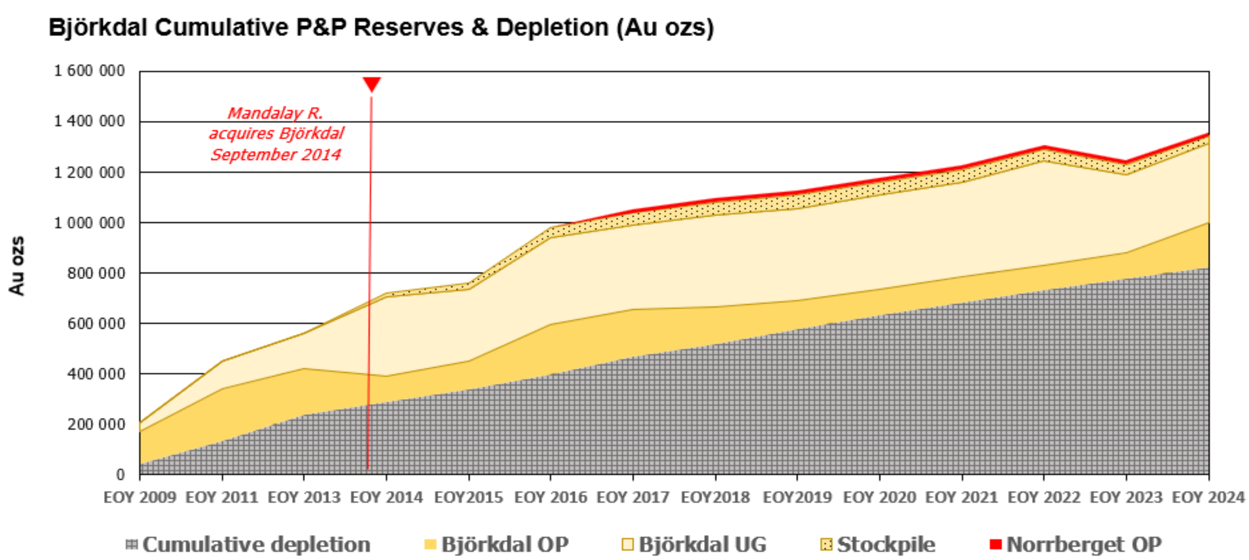


Figure 6-2: Cumulative Proven and Probable Reserves and Depletion Over Time



MRMR estimates completed for prior years are presented in SLR (2023), Mining Plus (2022), SLR (2021), RPA (2020), RPA (2019), RPA (2018), and RPA (2017). A summary of the Mineral Resource estimates for the Björkdal property as of 31 December 2022 is presented in Table 6-1. A summary of the Mineral Reserve estimates for the Björkdal property as of 31 December 2022 is presented in Table 6-2. These MRMR estimates are superseded by the current estimates contained in Sections 14 and 15, respectively, of this Technical Report.

Table 6-1: Mineral Resources at the Björkdal Mine and Norrberget Deposit as of 31 December 2022

Location	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Measured Mineral Resources				
Björkdal	Open Pit	-	-	-
	Underground	526	2.39	40
	Sub-total, Measured	**526**	**2.39**	**40**
Indicated Mineral Resources				
Björkdal	Open Pit	2,533	2.31	188
	Underground	11,084	2.60	926
	Stockpile	2,357	0.60	45
	Sub-total	**15,974**	**2.26**	**1,159**
Norrberget	Open Pit	191	2.93	18
	Sub-total, Indicated	**16,165**	**2.27**	**18**
Measured + Indicated				
Björkdal	Open Pit	2,533	2.39	40
	Underground	11,610	2.59	966
	Stockpile	2,357	0.60	45
	Sub-total	**16,500**	**1.98**	**1,051**
Norrberget	Open Pit	191	2.93	18
Total, M+I		**16,691**	**1.99**	**1,069**
Inferred Mineral Resources				
Björkdal	Open Pit	3,032	1.46	142
	Underground	1,815	2.10	123
	Subtotal	**4,847**	**1.70**	**265**
Norrberget	Open Pit	8	3.21	1
Total, Inferred		**4,855**	**1.70**	**266**

Notes:

1. Björkdal Mineral Resources are estimated using drill hole and sample data as of 30 September 2022 and depleted for production through 31 December 2022.
2. Norrberget Mineral Resources are estimated using drill hole and sample data as of 30 September 2017.
3. CIM (2014) definitions were followed for Mineral Resources.
4. Mineral Resources are inclusive of Mineral Reserves.
5. Mineral Resources are estimated using an average gold price of $1,750/oz and an exchange rate of 9.3 SEK/US$.
6. High gold assays for the Björkdal were capped to 30 g/t for the open pit. The high grade assays for the underground mine were capped at 60 g/t Au for the first search pass and 40 g/t Au for subsequent passes.
7. High gold assays at Norrberget were capped at 24 g/t Au.
8. Interpolation was by Inverse Distance cubed (ID^3) utilizing diamond drill, reverse circulation, and chip channel samples.
9. Open pit Mineral Resources are estimated at a cut-off grade of 0.36 g/t Au for Björkdal and 0.42 g/t Au for Norrberget and constrained by resource pit surfaces.
10. Björkdal underground Mineral Resources are estimated at a cut-off grade of 0.82 g/t Au.
11. A nominal 2.5 metres minimum mining width was used to interpret the Björkdal veins using diamond drill, reverse circulation, and underground chip sampling.
12. The Reported Mineral Resource is depleted for previously mined underground development and stopes.
13. Stockpile Mineral Resources are based upon surveyed volumes supplemented by production data.
14. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
15. Numbers may not add due to rounding.

Table 6-2: Mineral Reserves at the Björkdal Mine and Norrberget Deposit as of 31 December 2022

Location	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Proven Mineral Reserves				
	Underground	661	1.61	34
Probable Mineral Reserves				
Björkdal	Open Pit	2,816	1.12	101
	Underground	5,617	2.10	379
Norrberget	Open Pit	170	2.74	15
Stockpile	Stockpile	2,357	0.60	45
Total, Proven + Probable		**11,622**	**1.54**	**574**

Notes:

1. Mineral Reserves are estimated using drill hole and sample data as of 30 September 2022 and depleted for production through 31 December 2022.
2. Norrberget Mineral Reserves are estimated using data as of 30 September 2017.
3. CIM (2014) definitions were followed for Mineral Reserves.
4. Open Pit Mineral Reserves are based on mine designs carried out on an updated resource model, applying a block dilution of 100% at 0.0 g/t Au for blocks above 1.0 g/t and 100% at in-situ grade for blocks between 0.39 g/t and 1.0 g/t. The application of these block dilution factors is based on historical reconciliation data from 2018 and 2019. A marginal cut-off grade of 0.39 g/t Au was applied to estimate open pit Mineral Reserves.
5. Underground Mineral Reserves are based on mine designs carried out on a 2022 updated resource model. Minimum mining widths of 4.07 m for stopes (after dilution) and 4.75 m for development were used. Stope dilution was applied by adding 0.6 m on each side of stopes as well as an additional 10% overbreak dilution. An overall dilution factor of 25% was added to development designs. Mining extraction was assessed at 95% for contained ounces within stopes and 100% for development. A cut-off grade of 1.00 g/t Au was applied to material mined within stopes. An incremental cut-off grade of 0.46 g/t Au was used for development material.
6. Stockpile Mineral Resources are based upon surveyed volumes supplemented by production data.
7. Mineral Reserves are estimated using an average long-term gold price of US$1,600/oz for Björkdal and Norrberget, US$1,300/oz for Norrberget, and an exchange rate of 9.3 SEK/US$.

8. Tonnes and contained gold are rounded to the nearest thousand.
9. Totals may appear different from the sum of their components due to rounding.

6.3 Past Production

6.3.1 Björkdal

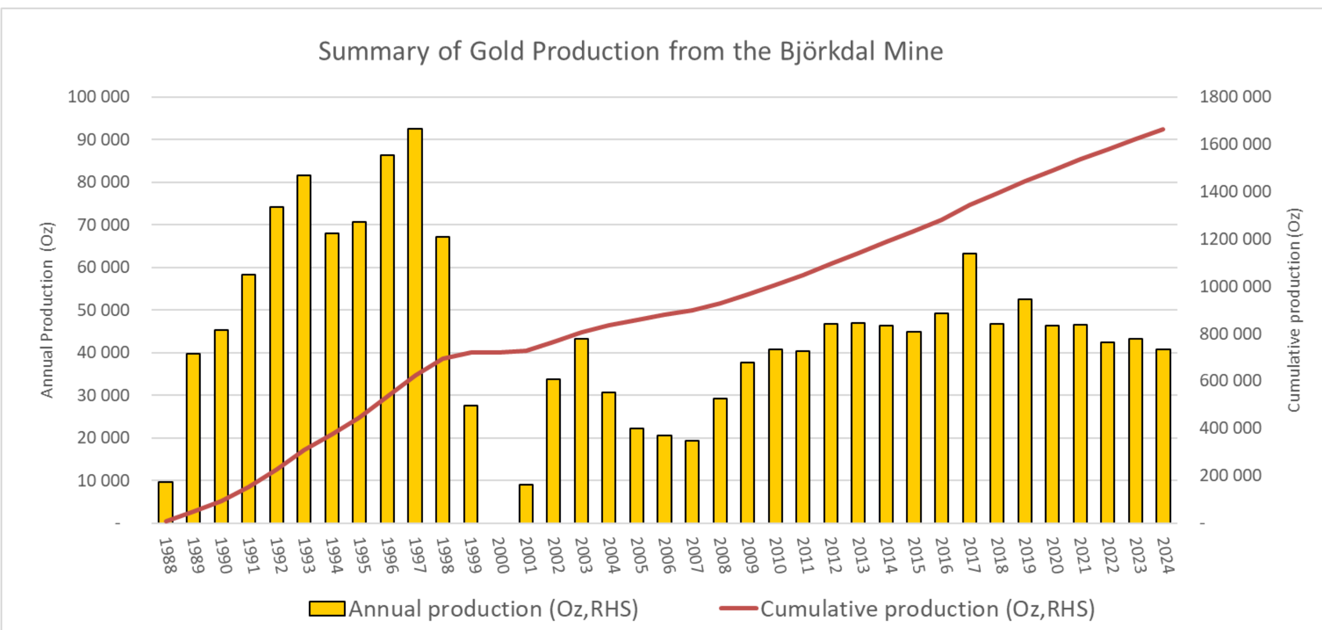
The Mine has a long history of gold production. Table 6-3 shows Björkdal's annual gold production since 1988 in tabular form while Figure 6-3 presents the Mine's production history in graphical form.

Table 6-3: Björkdal Annual Gold Production (1988 to 2024)

Year	Production (kt)	Feed Grade (g/t Au)	Recovery (%)	Production (oz Au)
1988	148	2.29	89.1	9,683
1989	475	2.86	90.9	39,727
1990	613	2.56	89.9	45,350
1991	765	2.64	89.8	58,270
1992	872	2.94	89.9	74,133
1993	840	3.33	90.7	81,549
1994	877	2.62	92.0	67,980
1995	1,157	2.11	90.0	70,646
1996	1,276	2.31	91.0	86,210
1997	1,288	2.49	89.6	92,416
1998	1,317	1.77	89.7	67,227
1999	635	1.50	89.8	27,500
2000	-	-	-	-
2001	303	1.09	84.1	8,922
2002	1,190	1.02	86.4	33,723
2003	1,198	1.30	86.4	43,274
2004	1,194	0.94	85.0	30,665
2005	1,197	0.68	84.7	22,172
2006	1,210	0.61	86.8	20,591
2007	1,109	0.63	85.5	19,214
2008	1,170	0.89	87.5	29,288
2009	1,064	1.24	88.4	37,568
2010	1,155	1.23	89.0	40,729
2011	1,215	1.17	88.6	40,358
2012	1,385	1.20	87.8	46,808

Year	Production (kt)	Feed Grade (g/t Au)	Recovery (%)	Production (oz Au)
2013	1,261	1.32	87.8	46,941
2014	1,318	1.24	88.2	46,292
2015	1,303	1.22	88.1	44,920
2016	1,289	1.35	87.9	49,140
2017	1,262	1.75	89.1	63,186
2018	1,249	1.29	90.0	46,662
2019	1,289	1.43	88.8	52,514
2020	1,320	1.24	87.7	46,289
2021	1,260	1.31	87.8	46,438
2022	1,249	1.20	87.5	42,336
2023	1,239	1.25	86.8	43,294
2024	1,370	1.08	85.4	40,754
Total	**39,062**	**1.49**	**88.76**	**1,662,769**

Figure 6-3: Summary of Gold Production from the Björkdal Mine



6.3.2 Norrberget and Storheden

There has been no production from the Norrberget or Storheden deposits.

7.0 Geological Setting and Mineralization

The following discussion and figures were provided by Mr. Samuel Miller, Mandalay, Björkdalsgruvan Senior Exploration Geologist.

7.1 Regional Geology

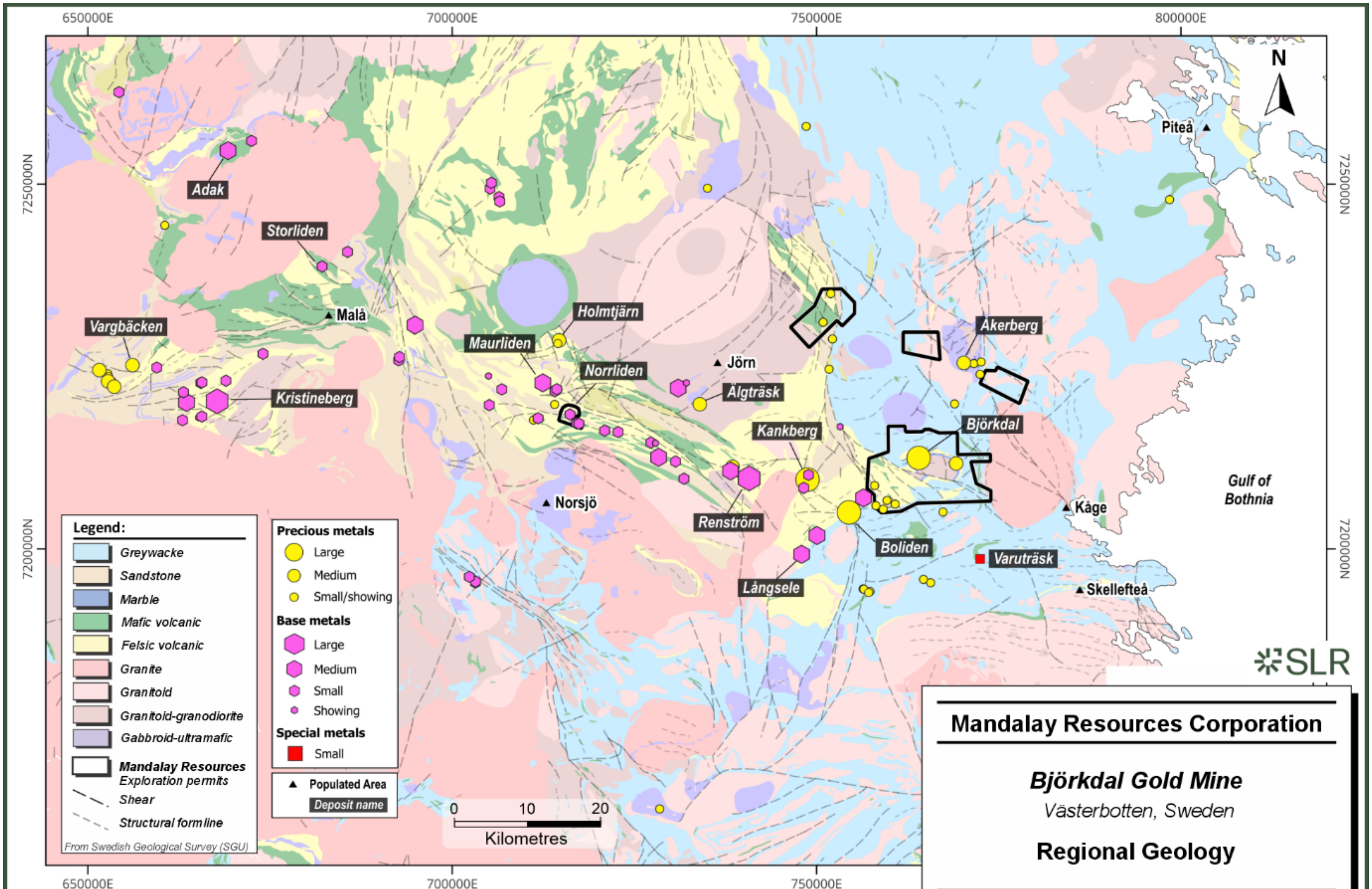
The Skellefteå region consists of Paleoproterozoic-aged rocks that host several world-class volcanogenic massive sulphide (VMS) copper, zinc, and lead deposits that have been worked for nearly a century. The Skellefteå district lies within a large and ancient cratonic block named the Fennoscandian shield. The Fennoscandian shield spans much of Finland and northwestern Russia, extending further westward throughout Sweden and Norway.

Mineralization in the Skellefteå region is focussed within and around a regionally extensive, west to northwest trending structural feature named the Skellefteå belt (Figure 7-1). The Skellefteå belt is 120 km long and 30 km wide and consists of deformed and metamorphosed volcanic, sedimentary, and igneous rocks that are all Paleoproterozoic in age. Deformation and metamorphism are attributed to the Paleoproterozoic-aged Svecokarelian orogeny that occurred around 1.88 to 1.8 Ga. Metamorphism associated with the Svecokarelian orogeny ranges in intensity from greenschist to amphibolite facies.

7.1.1 Regional Stratigraphy

The stratigraphy of the Skellefteå area consists of Paleoproterozoic-aged volcanic, volcanoclastic, and sedimentary rocks. The stratigraphy is divided into two large litho-stratigraphic groupings that are named the Skellefte Group (lower division) and the Vargfors Group (upper division) as defined by Allen et al. (1997). The Skellefte Group is dominated by extrusive volcanic successions that are interbedded/intercalated on a large scale with clastic sediments, with volcanic rock-types within the Skellefte Group classified as rhyolite, dacite, andesite, and basalt rock-types. Sedimentary lithologies consist of black coloured pyritic mudstone and shale, volcanoclastic rocks, breccia conglomerates, and minor carbonates.

Figure 7-1: Regional Geology



Source: Mandalay Resources Corporation 2025.

The overlying Vargfors Group is dominated by clastic sedimentary rocks with lesser mudstone and carbonates, sporadically interbedded with thin volcanic successions. The lower portions of the Vargfors Group consist of abundant conglomerate and sedimentary breccia. Locally, rare carbonate beds are observed interbedded within these conglomerates, while the finer-grained siliciclastics may contain a carbonate-rich matrix. Total stratigraphic thickness of the entire Skellefte and Vargfors groups is in the order of seven kilometres (three and four kilometres, respectively; Allen et al., 1997).

The stratigraphic successions are locally intruded by igneous rocks thought to belong to the Jörn granitoid suite. Relative ages of these intrusive bodies are constrained through radiometric dating and field relationships indicate a contemporaneous emplacement age with the volcanic rocks belonging to the Skellefte Group, with lithic intrusive clasts found within the overlying Vargfors Group (Lundberg, 1980; Clauson, 1985; Wilson et al., 1987). Compositions of these intrusive rocks of the Jörn granitoid suite range considerably from felsic to mafic with end-member compositions respectively represented by gabbros and granites.

7.1.2 Regional Structure

The rocks of the Skellefteå belt are observed to have undergone two major shortening events and metamorphism during the Svecokarelian orogeny. The first of the major shortening events resulted in folding and shearing; folding consists of vertical to upright isoclinal folds with east to northeast striking axial planes, while shear zones are oriented sub-parallel to the axial planes of the folds. The later shortening event produced structures mainly dominated by shearing, with only minor folding coaxially overprinting the earlier generation of folding (Weihed et al., 2003).

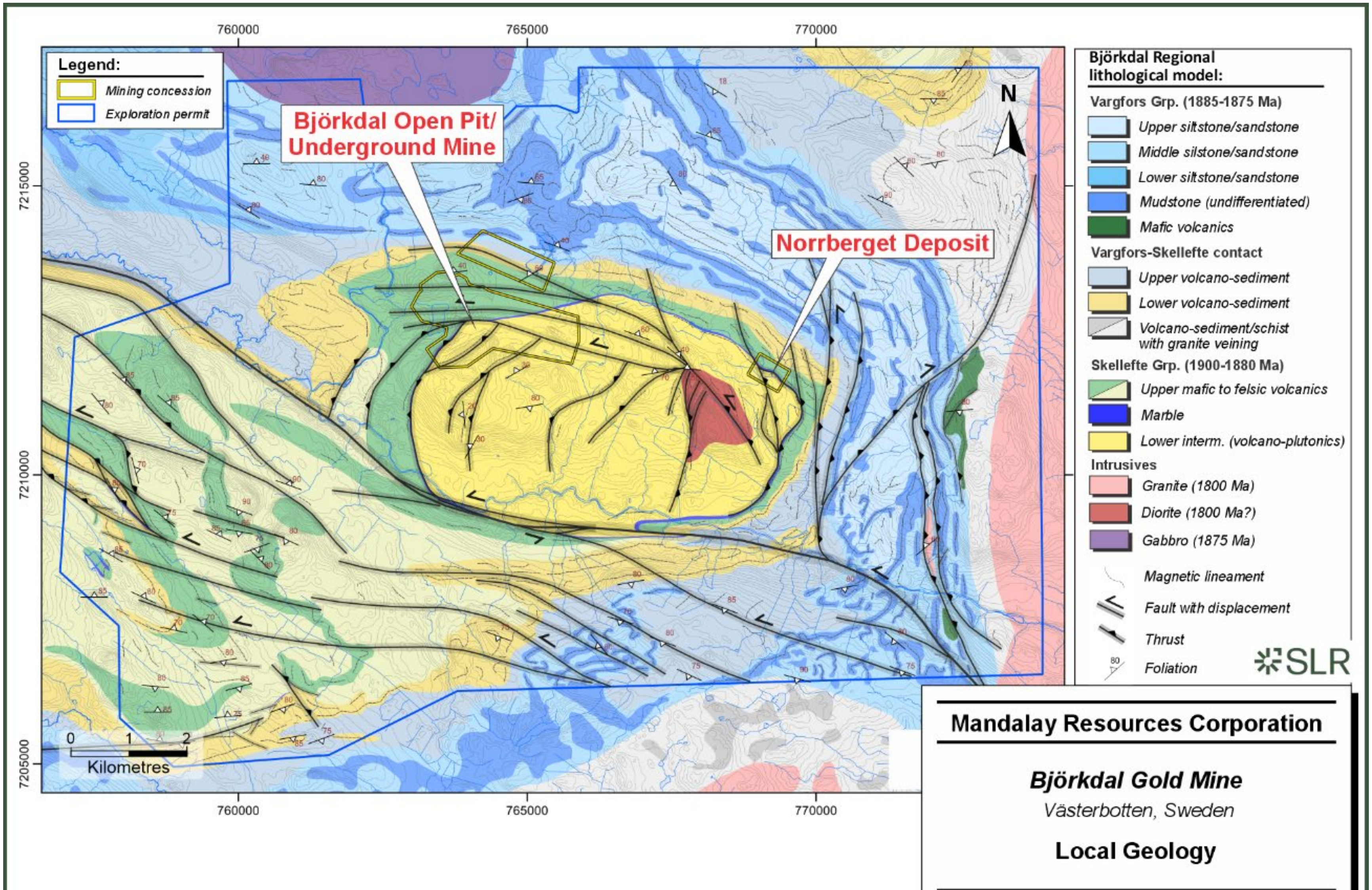
7.2 Project Geology

Existing literature on the geological setting of the Björkdal gold deposit describes auriferous veins hosted within the outer margin of a large quartz-monzodiorite or tonalitic intrusion that is surrounded by supra-crustal rocks. The contact between the intrusion and surrounding rocks is represented by a “major thrust duplex”, which also serves to truncate the mineralized vein-system (Bergström and Weihed in Kathol and Weihed, 2005, and references within). Radiometric dating of zircons extracted from the Björkdal host rocks (Lundström and Anthal, 2000) return ages of 1,905 Ma (although many zircon forming events are apparently observed) that are considered to represent the emplacement age of the intrusion. The oldest intrusive rocks within the Skellefteå district are the Jörn granitoids which are documented to post-date the Björkdal intrusive rocks dating between 1,890 and 1,870 Ma (Kathol et al., in Kathol and Weihed, 2005). The 1,905 Ma emplacement age corresponds to the reported depositional age of the Bothnian Basin sediments in which the Björkdal intrusion is hosted (Claesson and Lundqvist, 1995). Therefore, the formational interpretations of geological features in the Björkdal area (such as Björkdal dome) do not really align well with the regional chronological framework presented in literature. The property-scale geological setting is presented in Figure 7-2.

7.2.1 Local Geology

Detailed litho-stratigraphic mapping, petrological observations, and geochemical analysis undertaken by Mandalay/Björkdalsgruvan AB geologists have concluded that host rock geology, metamorphism, and alteration styles are much more complex and variable than previously documented. Previous investigations considered the domal structure in the Björkdal area to be a large, massive plutonic-type intermediate intrusion. Mandalay’s investigations interpret a variable and complex alteration signature that overprints many different rock-types including pyroclastic, volcano-sedimentary, tuffaceous, extrusive-volcanic (andesitic to basaltic compositions), sub-volcanic intrusive (andesitic compositions), and sedimentary (silici-clastics, shales and carbonates) lithologies. Common alteration and metasomatic styles include silicification, carbonatization, calc-silicate (actinolite) alteration, albitization, chloritization, potassic (biotite and K-feldspar), epidotization, pyritization, tourmalinization. Various skarn-type alteration assemblages were also noted in areas where a calcareous host rock is present (including actinolite, tremolite, pyroxene, and minor garnet). While alteration and metasomatic zonation of these various styles is present, the spatial distribution has not clearly been defined. It was considered that a major control on the alteration zonation appears to be host rock lithology (protolith composition) and proximity to major fluid driven heat sources (i.e., hydrothermal systems).

Figure 7-2: Property Geology



Source: Mandalay Resources Corporation 2024.

7.2.2 Local Stratigraphy

A litho-stratigraphic column of geologic units observed in the Björkdal area is presented in Figure 7-3. The lowest succession found at the Mine and in the surrounding area consists of a unit of volcaniclastic sandstones and conglomerates, interbedded with lavas, ignimbrites, tuffs, bedded sandstone, and mudstone/shales. A large sub-volcanic intrusion (interpreted as an andesitic laccolith) locally intrudes this volcanic succession in the south and southwestern margins of the current open pit but has not yet been encountered elsewhere within the Mine area.

A unit of massive, crystalline marble sharply overlies these lower volcanic and clastic units. Overlying the crystalline marble is a thin pyroclastic unit (characterized by abundant “fiamme” clasts), which is then abruptly overlain by a basaltic lava containing abundant amygdules (defined by actinolite and carbonate in-fill). Above this basalt, the stratigraphy appears to become increasingly marine in genesis, with the overlying units consisting of laminated and interbedded tuffs and mudstone (basaltic geochemical composition), finely laminated mudstones and siltstone, and poorly sorted sandstone. Gradationally overlying these clastic sediments is a monotonous series of graphitic and pyritic shale (pyrite is often altered to pyrrhotite), interbedded with poorly sorted siltstone and sandstone with minor course-sand/grit beds. Partial Bouma sequences are observed within the more clastic intervals of this upper shale succession.

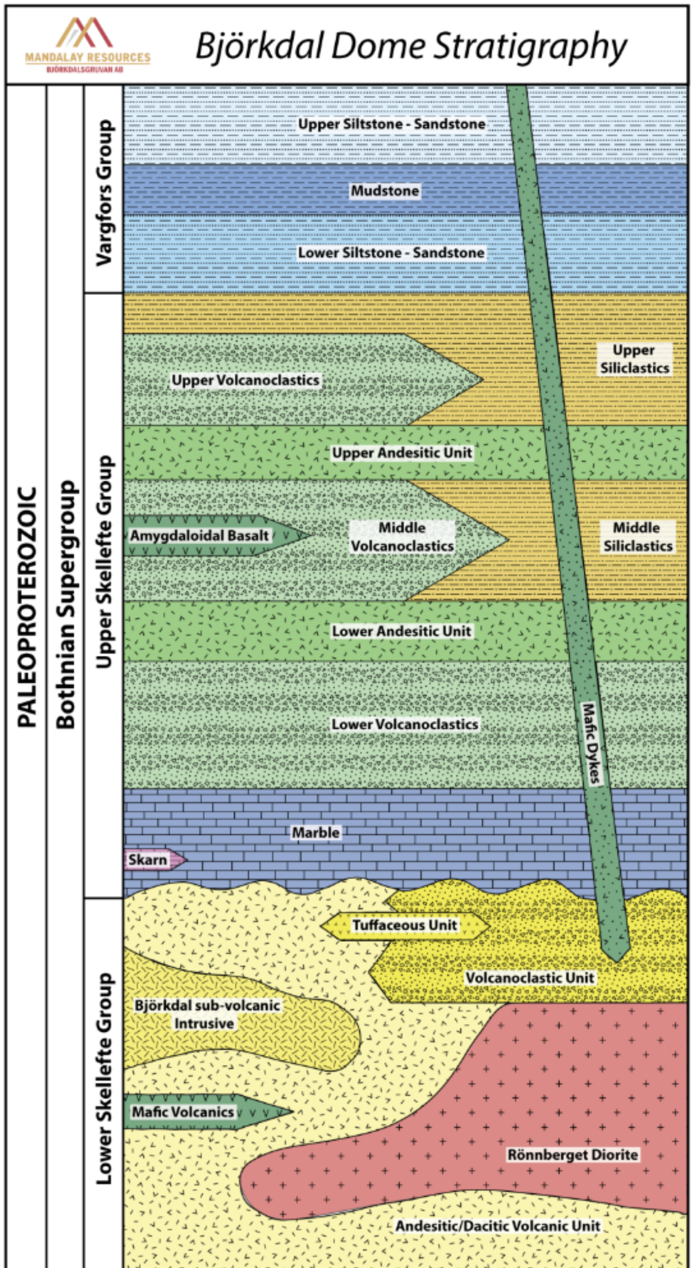
The local stratigraphy at the Mine is related with the upper and lower portions of the Skellefte and Vargfors groups, respectively (as defined in Allen et al., 1997). The units present below the upper contact of the crystalline marble are interpreted to correlate with the upper portions of the Skellefte Group. These carbonate units are interpreted to represent the eastward, deeper-water, lateral-equivalent of Kautsky’s (1957) “Menstäsk conglomerate”, described as consisting of lime-cemented marine conglomerate and sedimentary breccia. As such, the upper contact of this calcareous unit is here defined as an approximate stratigraphic position of the Skellefte-Vargfors Group boundary.

7.2.3 Alteration

Alteration assemblages at Björkdal can be varied and complex with both regional and local scale alteration systems observed. The regional-scale alteration can be loosely defined on the presence of key minerals such as albite, epidote, and K-feldspar. While silica, carbonate, actinolite, chlorite, and biotite are often more abundant than albite, epidote, and K-feldspar, they are very widespread and too abundant to be used to define any clear spatial zonation.

The alteration zonation around the Björkdal structural dome can be generally described as follows: the southern portions are dominated by significant K-feldspar assemblages, the northern portion is dominated by albite, and part of the central to north-central portion of the dome contains noticeable amounts of epidote (Figure 7-4). The genetic and chronological relationships between the gold mineralization and alteration are unclear, however, known gold mineralization has much more intensive associated silicification, particularly in areas of faulting and shearing, suggesting a close relationship between alteration intensity and gold mineralization.

Figure 7-3: Björkdal Stratigraphy



Mandalay Resources Corporation

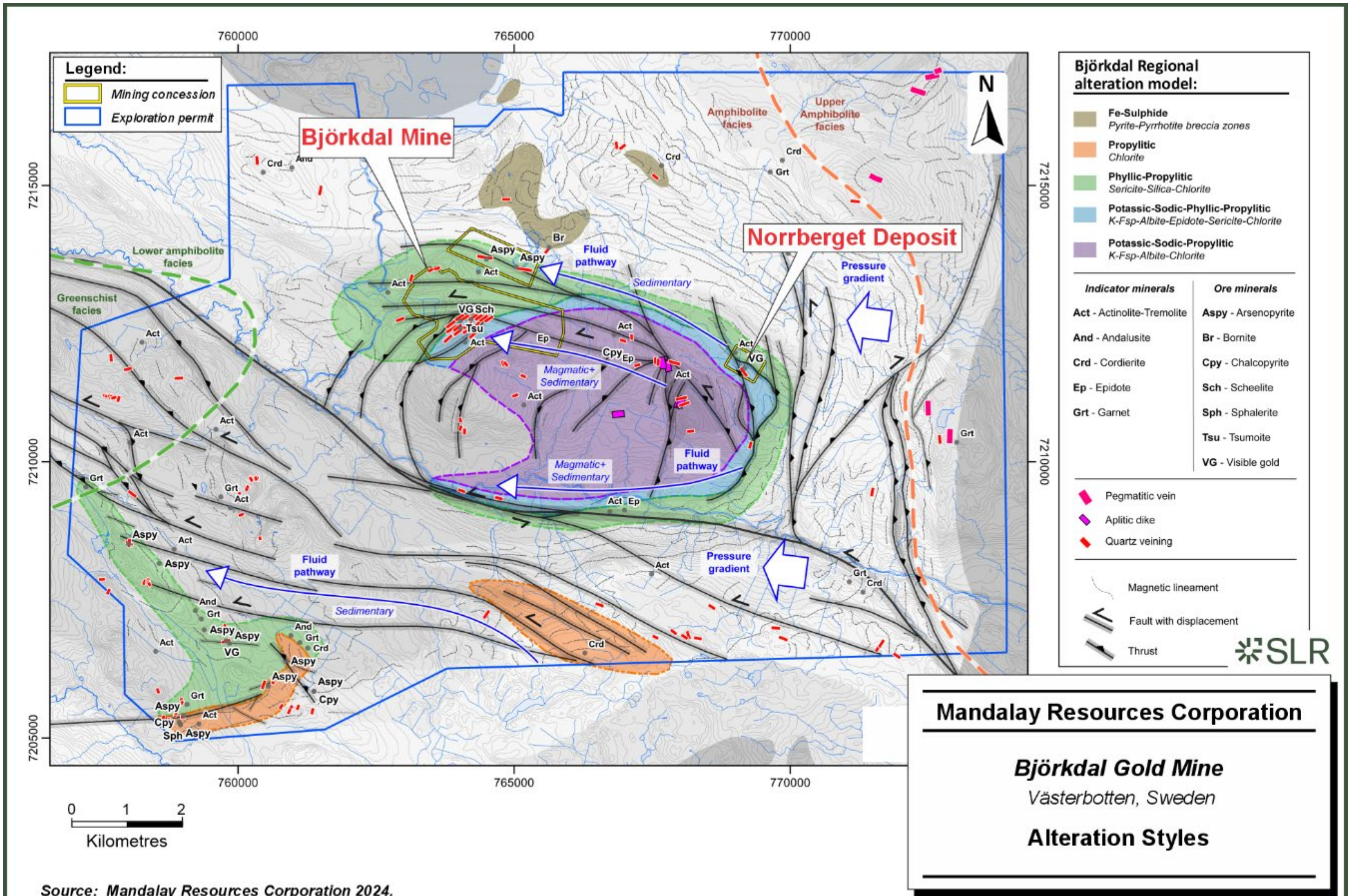
Björkdal Gold Mine

Västerbotten, Sweden

Björkdal Stratigraphy

Source: Mandalay Resources Corporation 2024.

Figure 7-4: Regional Alteration Model



Source: Mandalay Resources Corporation 2024.

Alteration at Björkdal typically consists of silicification and albitization of the wall rock that extend outwards up to one metre from the vein walls. Areas of intense silicification and albitization are observed to have completely recrystallized the wall rock in some cases. Disseminated actinolite, chlorite, sericite, and pyrite, with lesser amounts of epidote, pyroxene, garnet, and sphene occur within these vein wall alteration halos.

In areas of the Mine where the most intense alteration is in contact with the Björkdal marble unit, strong skarnification can be observed. This skarnified marble unit consists of silica, chlorite, amphibole, actinolite, hornblende, pyroxene, and clinopyroxene. Gold mineralization in these areas is related to silica-pyrrhotite-actinolite clotted disseminations with diameters of one to two centimetres.

7.2.4 Mineralogy

The main type of mineralization found in the Björkdal gold system is dominated by vertical to sub-vertical dipping quartz-filled veins. Common accessory minerals contained within these veins are (in approximate order of occurrence): tourmaline, calcite, biotite, pyrite, pyrrhotite, actinolite, scheelite, chalcopyrite, bismuth-tellurides (pilsenite (Bi_4Te_3) and tsumoite (BiTe)), gold, and electrum. Gold mineralization is most closely related to the bismuth-telluride minerals and is also more reliably encountered in veins with high abundances of pyrrhotite, pyrite, scheelite, and/or chalcopyrite.

In general, veins of pure quartz and free of the accessory minerals listed above are generally quite poor hosts for significant quantities of gold mineralization. As such, the informal terminology of “clean veins” and “dirty veins” has been adopted at the mine site to quickly describe vein-fill characteristics. Structural analysis of these two distinct vein-fill types from the Main Zone -325 and -340 levels suggests that the “clean” veins will more often strike between 030° and 040° from true north, while the “dirty”, inclusion-rich veins are more likely to strike between 050° and 090° from true north. This structural-geochemical relationship suggests that vein development in the Björkdal deposit occurred as more than a single “vein-forming” event, and that the fluids responsible for the vein-fill and mineralization were evolving with time.

7.2.5 Local Structure

The local structure of the Björkdal deposit is dominated by a number of shallow, north to northeast-dipping brittle-ductile faults and shears. The dominant structure, which can be traced along the full length of the Mine, is referred to as the Björkdal shear (Figure 7-5). The majority of the kinematic indicators identified along these structures appear to be dominantly oblique strike slip. The brittle structures consist of fault-gouge that has undergone sporadic re-healing and “cementation” by carbonate, silica, and sericite. Brittle-ductile structures have a highly-sheared fabric and/or rotated and boudinaged quartz veins (Figure 7-6) that may include masses of very weakly foliated biotite. This latter set of structures can be significantly mineralized in gold in economic quantities. The temporal relationship between mineralized quartz veins and the structures appears complex, with numerous cross cutting relationships, suggesting multiple phases of deformation throughout the emplacement of the mineralization.

Figure 7-5: Stereonet Plots (Poles to Planes) of Shears and Brittle Faults

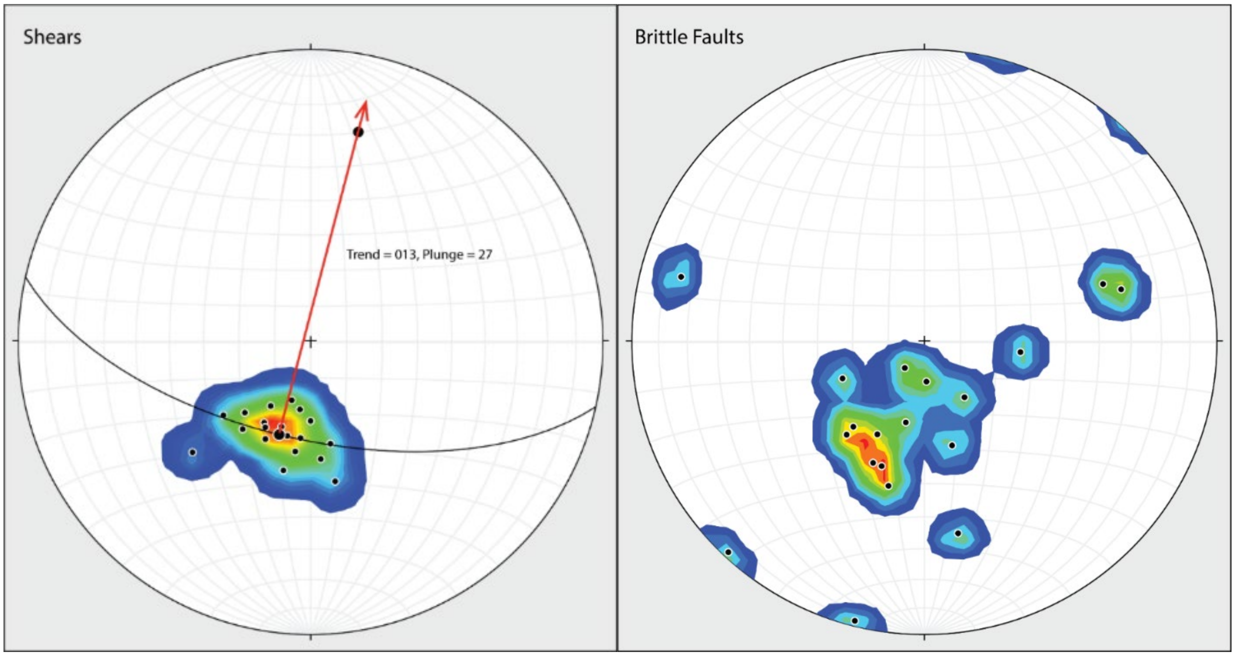
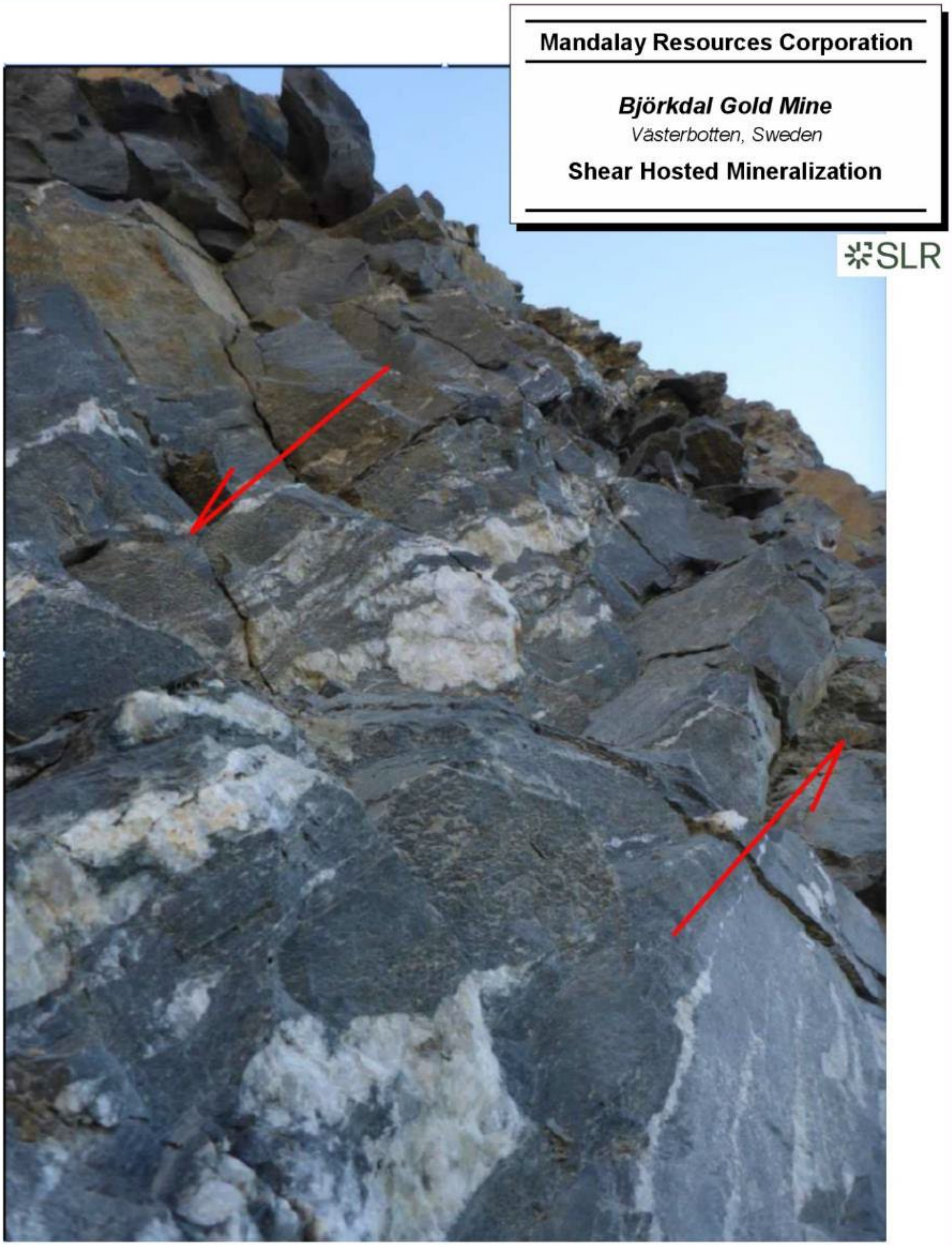


Figure 7-6: Shear Hosted Mineralization



Source: Mandalay Resources Corporation 2024.

7.3 Mineralization

7.3.1 Björkdal

7.3.1.1 Gold Mineralization

The Björkdal gold deposit is a lode-style, sheeted vein deposit hosted within the upper portions of the Skellefte Group sediments. To date, the deposit has been outlined along a strike length of approximately 1,800 m, across a width of approximately 3,500 m, and from surface to a depth of approximately 900 m. Gold is found within quartz veins that range in thickness from less than a centimetre to more than several decimetres. These veins are usually observed with vertical to sub-vertical dips and strike orientations between azimuth 000° and azimuth 090°, with the majority of veins striking between azimuth 030° and 060° (true north). Veining is locally structurally complex, with many cross-veining features observed and thin mineralized quartz veinlets in the wall rocks proximal to the main quartz veins (Figure 7-7).

Gold-rich quartz veins are most often associated with the presence of minor quantities of sulphide minerals such as pyrite, pyrrhotite, marcasite, and chalcopyrite. Associated non-sulphide minerals include actinolite, tourmaline, and biotite. Scheelite and bismuth-telluride compounds (i.e., tellurobismuthite and tsumoite) are also commonly found within the gold-rich quartz veins and are both excellent indicators of gold mineralization.

Gold occurs dominantly as free gold, however, gold mineralization is also associated with bismuth-telluride minerals, electrum, and pyroxenes. Silver is seen as a minor by-product of the Björkdal processing plant, however, very little is known about its deportment within the deposit, although it is assumed to be associated with electrum in the mineralization.

7.3.1.2 Skarn Mineralization

Skarnification occurs commonly within the Mine, especially in the limestone/marble unit where it occurs as discreet patches and lenses. These lenses typically measure 200 m to 400 m along strike, 100 m to 200 m down dip and are usually no more than 10 m thick. However, similar calc-silicate alteration has taken place in areas where local shearing has affected the volcanoclastic host rock. The altered rock texture appears sheared and mottled to a varying degree; locally the rock can have a folded appearance. In places where the skarnification is the strongest, the precursor rock texture has been completely overprinted. The skarnified rock has been divided to prograde and retrograde phases based on their dominant mineralogy. Prograde skarn is light green and is dominated by clinopyroxene patching with partial to complete breakdown of the pyroxene patches to amphiboles (actinolite/tremolite), chlorite, calcite, and, to minor degree, serpentine and talc. The retrograde skarn is finer grained and darker green in colour than the prograde skarn and consists primarily of amphiboles, chlorite, and calcite (Figure 7-8). It is likely that the retrograde skarn represents patches of alteration where the calc-silicification did not progress as far as it did in the prograde skarn. The limestone can also be dolomitic and silicified as well as containing irregular quartz patches, quartz veins, and overprinting calcite veins.

Figure 7-7: Complex Veining Styles Observed Underground

Mandalay Resources Corporation

Björkdal Gold Mine

Västerbotten, Sweden

Complex Veining Styles Observed Underground

Source: Mandalay Resources Corporation 2024.

Figure 7-8: Example of Retrograde Alteration of Lake Zone Skarn

Mandalay Resources Corporation

Björkdal Gold Mine

Västerbotten, Sweden

Prograde and Retrograde Skarn Alteration

Source: SLR 2024.

Shearing is a known mechanism of skarnification. The skarnification here is most likely due to fluid influx where shears and faults interacted with the limestone/marble unit or calcite banded volcanoclastic rocks. The limestone/marble unit is predisposed to accommodate strain and be exploited by structures (both large and smaller scale) due to the rheological difference between the limestone/marble and the surrounding volcanic and volcaniclastic rocks. It is more ductile, prone to folding on varying scales and the calcium carbonate is reactive enough to interact with infiltrating fluids and more importantly, provide calcium for the calc-silicification. The large scale structures are interpreted to function as channels for the fluids that alter the host rocks in the Björkdal area. Where the Björkdal shear or its smaller conjugate faults intersect with the limestone/marble unit, the retrograde skarnification and low grade gold mineralization can occur (Figure 7-9). Where two or more structures interact with each other and the limestone/marble unit, the skarnified lenses consist of prograde skarn and carry higher grades (e.g., Lake Zone north skarn lens).

7.3.1.3 Structural Development of the Mineralization

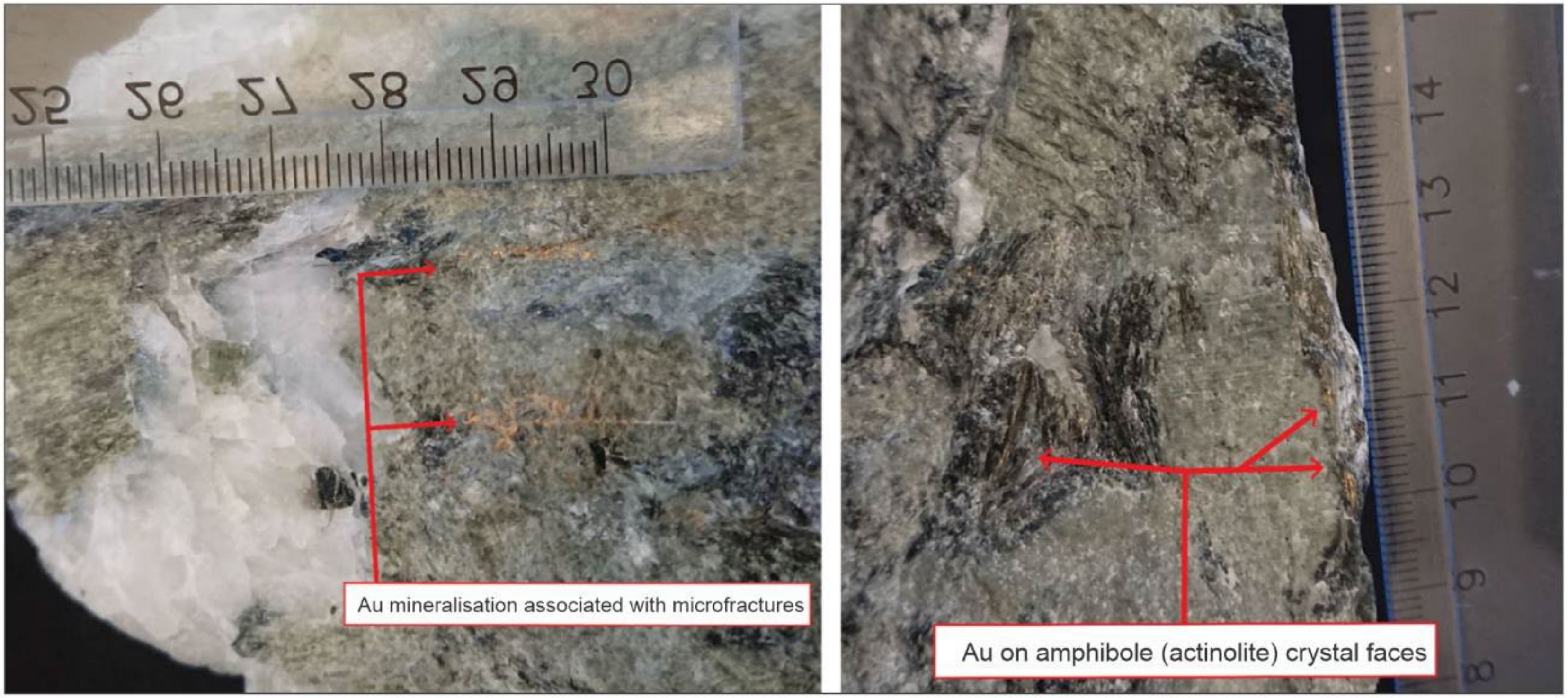
The relationship between mineralized veins and the local structures appears complex with various cross-cutting relationships observed in the Mine suggesting multiple phases of deformation throughout the mineralization emplacement. A total of 25 major, north to northeast (true) dipping, strike-slip shears have been identified within the Björkdal Deposit, with numerous, localized systems observed throughout (Figure 7-10). The majority of the significant gold grades observed within the deposit is hosted in a proximal position (approximately 30 m) to the shear zones.

The most significant structure within the deposit is the Björkdal Shear, which can be traced along the extent of the mine and appears to form part of the larger, regional structural network. The shear is sigmoidal in nature and is observed to “kink” towards the north, allowing for the formation of a high-density fracture horizon above the marble unit. This kinematic evolution, along the strike length of the Shear has caused the relationship to the mineralization to change. In the southern part of the mine, the Shear forms the hanging wall of the mineralization, whereas in the north, the shear appears as the footwall of the mineralization (Figure 7-11). Mandalay’s interpretation considers that the Björkdal Shear may represent a post-mineralization structure that has offset the gold bearing quartz veins into their current orientation by distances that are in the order of 400 m to 600 m.

A detailed kinematic study within the deposit suggests that the smaller, more localized structures are second order structures related to the Björkdal Shear.

Veins in the Björkdal system are generally sub-vertical in dip and strike between 020° and 090° from true north. A subordinate set of veins have a similar sub-vertical dipping but strike in a 330° from true north orientation. All vein sets appear to carry gold mineralization to various extents, with higher grades occurring where veins of different orientations intersect one another. The slip-orientation of slickenside lineations in vein walls (030° to 090° vein set) indicates strike-slip movement that has both sinistral and dextral features present within a single vein.

Figure 7-9: Example of Skarn-Hosted Gold Mineralization



Mandalay Resources Corporation

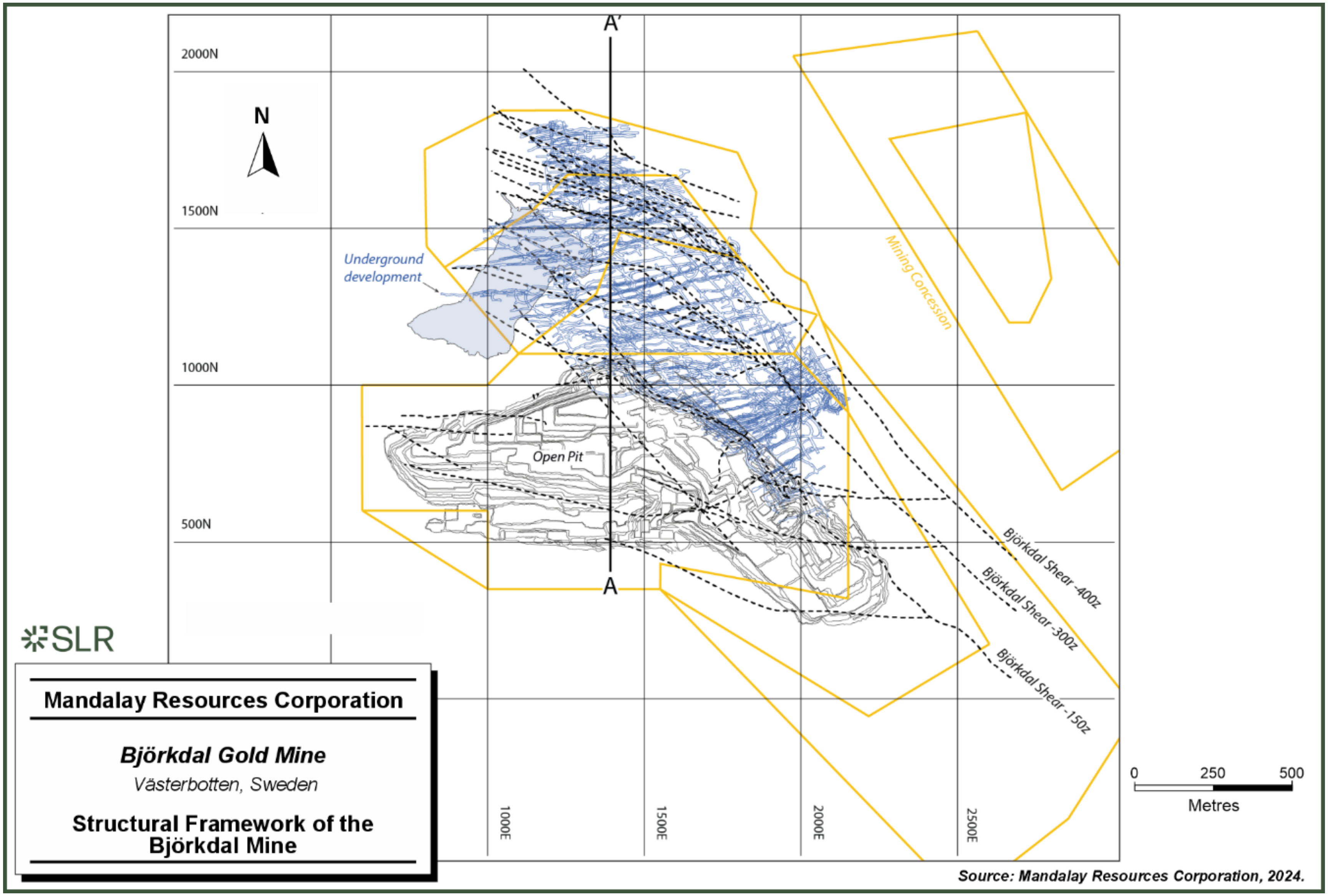
Björkdal Gold Mine

Västerbotten, Sweden

Skarn Hosted Gold Mineralization

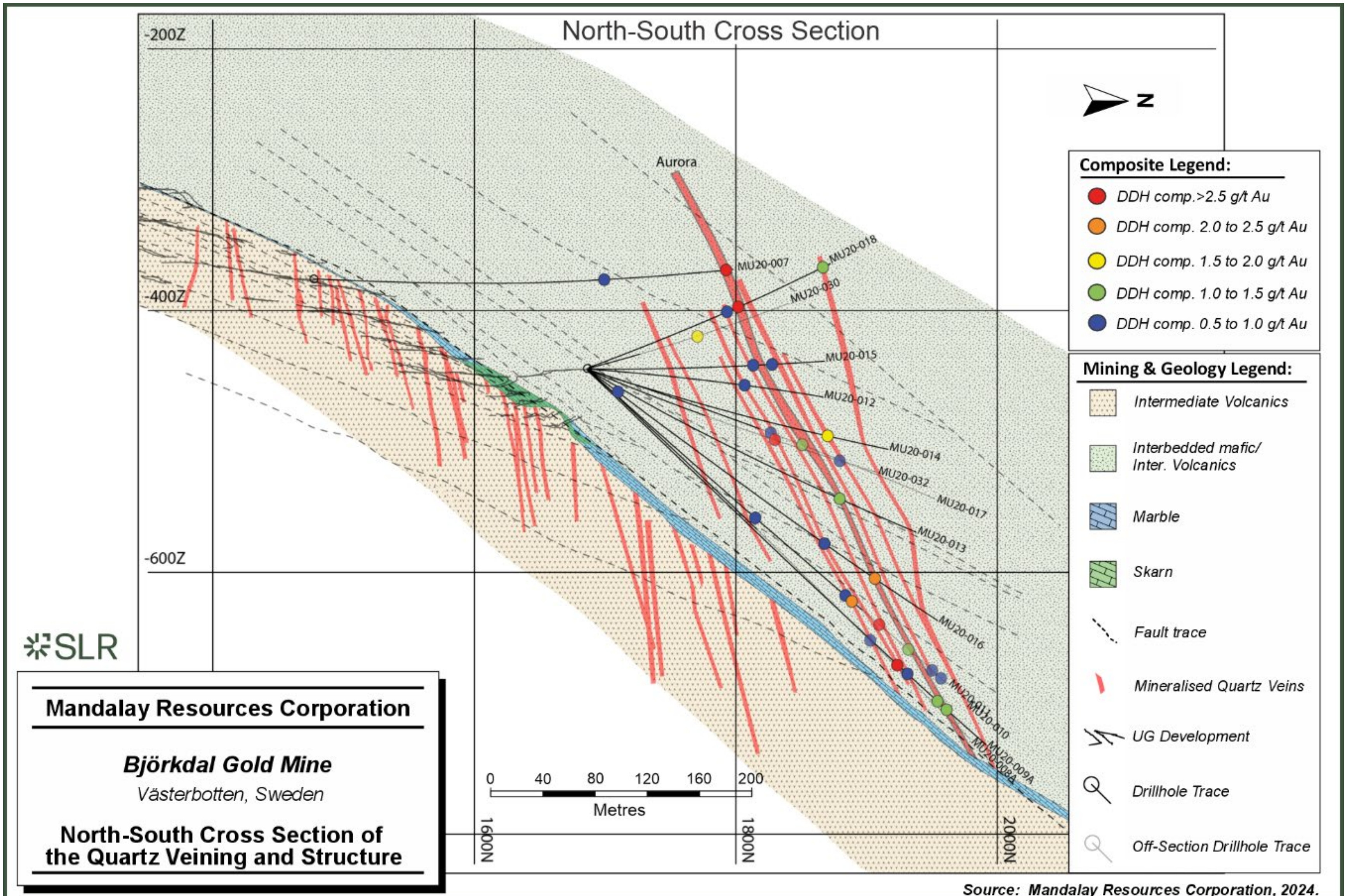
Source: Mandalay Resources Corporation, 2020.

Figure 7-10: Structural Framework of Björkdal Mine



Source: Mandalay Resources Corporation, 2024.

Figure 7-11: North-South Cross Section of the Quartz Veining and Structure



Source: Mandalay Resources Corporation, 2024.

7.3.2 Norrberget

The mineralization at Norrberget is stratabound in nature within an interbedded altered volcaniclastic package that sits unconformably below a 30 m to 40 m thick marble unit. Gold mineralization has been observed up to 50 m below this contact. Gold mineralization is principally hosted in an amphibole-albite alteration bands and is also common where volcaniclastics are interbedded with crystalline tuff units. These alteration bands vary between one centimetre and 50 cm in thickness, are typically fine to medium grained and appear to be sheared. Trace sulphides and minor quartz/carbonate are associated with the bands.

Gold is also associated with the amphibole veinlets with the mafic crystalline tuff associated with carbonate and minor sulphides (Figure 7-12). Lesser amounts of gold can also be found within the heavily silicified volcaniclastics where minor amphibole is observed. Where visible gold can be identified within alteration banding, it is observed to be between or on the contact of grains.

Although veining is common, gold mineralization is rarely associated with the quartz veins. Visible gold has been identified in veins consisting of grey fractured quartz along with amphibole, carbonate, silver, minor chalcopyrite, pyrrhotite, and galena. Veins consisting of quartz, carbonate, and albite with euhedral amphibole crystals can also carry gold mineralization, however, the gold grade is not consistent along them. These veins can be inter-mixed and individual veins can continue for up to 50 m.

Figure 7-12: Example of Norrberget Mineralization in Drill Hole NB23-004. Combined Mineralized Interval Returned an Average Grade of 13.3 g/t Au Along a Core Length of 5.55 m (ETW: 5.22m)

Source: Mandalay 2024a.

Notes:

ETW: Estimated true width

7.3.2.1 Structural Development of the Mineralization

The major controls on the mineralization at Norrberget include the large-scale shear zone that marks the base of the marble unit, the rheological differences between different stratigraphic units, the variation in the lithological and porosity of the volcanic package, and the development of the fluid system that utilised the shear zone.

These large-scale shear zones run extensively through the area along the base of the marble unit that extends beyond the Mine and across the Norrberget deposit. The mineralization occurs principally within a package of heterogeneous volcaniclastics containing interbedded ash falls, flows, and tuffs which have varying composition along with differing porosity and rheological characteristics.

Where the Norrberget volcaniclastics are not sheared, they are packaged conformably between metasedimentary rocks and mafic volcanic rocks above and medium grained subvolcanic intrusions and volcanic rocks below.

7.3.2.2 Alteration

The fluid system is believed to have utilised the shear contact at the base of the marble. A strongly silicified unit sits on top of the volcaniclastics which themselves are sheared throughout with a pervasive amphibole-albite-silica+carbonate alteration assemblage. The contact between the silicified and amphibole altered packages is gradual over a short distance. Lower in the package, K-feldspar/hematite and epidote can be observed, however, the underlying volcanic/subvolcanic rocks are not sheared to the same extent.

The evolution of the fluid system is believed to have first formed a pervasive silica-biotite+actinolite alteration that took advantage of the porous groundmass of the un-altered volcaniclastic package. The variable grain size and large angular fragments observed in drill core of the units below the lower marble contact resulted in a higher porosity and therefore a more substantial level of silicification. When additional shearing along with albite and actinolite alteration fluids were present at a later stage, the more robust silicified units were subjected to less shearing and alteration. This later stage of actinolite and albite alteration (where gold forms along their contacts) occurred primarily within the upper package of interbedded volcaniclastic rocks and crystalline tuffs, which is immediately below the upper pervasively silicified unit. The steeper quartz-amphibole veins, some of which contain gold and associated minerals, utilised the same association as the mineralised altered bands.

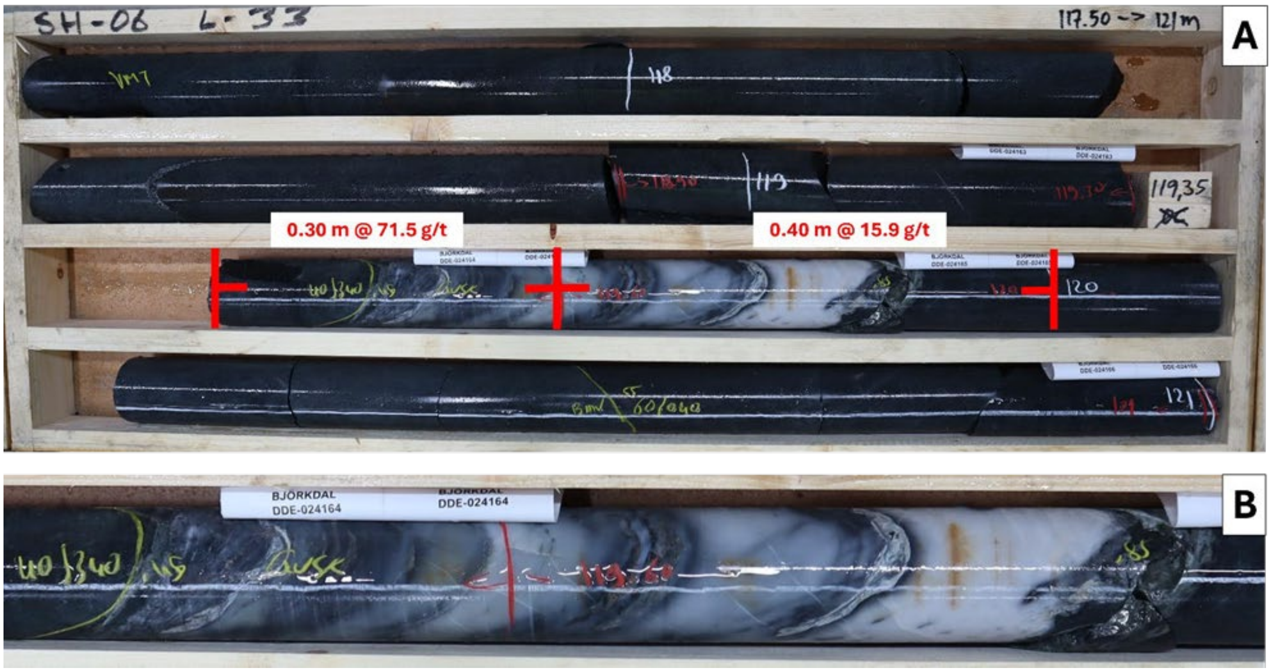
7.3.2.3 Veining

Although not as prevalent as at Björkdal, quartz veining occurs to lesser extents at Norrberget. A significant proportion of the veins occur in a similar orientation to the altered bands with quartz patches being associated with the alteration banding indicating that these are syngenetic to the alteration. A separate set of quartz veins can be observed to cross-cut the predominant fabric at a steeper dip between 65° and 85°, although with variable directions. A small proportion of these can be identified as being gold bearing with a limited selection containing very high grades. The high grade veins do not appear to have similar orientation to one another. The mineralogy of these steeper veins is similar to the shallower veins indicating that they were formed in the latter stages of the same fluid system.

7.3.3 Storheden

The Storheden deposit is located approximately 600 m to the northeast of the Björkdal mine. Mineralization was first identified in the area from “top of bedrock” geochemical drilling in 1987. Subsequently, while percussion drilling had been undertaken on the target that delineated an extensive mineral system, the exploration focus had been on the Björkdal mine, leaving Storheden under-explored. Diamond drilling activities by Mandalay from 2017 onwards has been successful in testing both the strike and depth extensions of the veins. Gold mineralization is observed in drill core to occur predominantly in quartz veins that range in thickness from less than one centimetre to more than several decimetres. Gold-rich quartz veins are often associated with minor quantities of sulphide minerals such as pyrrhotite, pyrite, chalcopyrite, and arsenopyrite. In addition, scheelite, tsumoite, and free gold are commonly observed in the mineralized quartz veins (Figure 7-13 and Figure 7-14). The style of mineralization observed at the Storheden deposit closely resembles that at the Björkdal mine.

Figure 7-13: Example of Storheden Mineralized Interval in DDH SH-06. (A): Intercept Returned an Average Grade of 39.7 g/t Au along a Core Length of 0.70 m (ETW: 0.45 m). (B): Close up View of Mineralized Quartz Vein

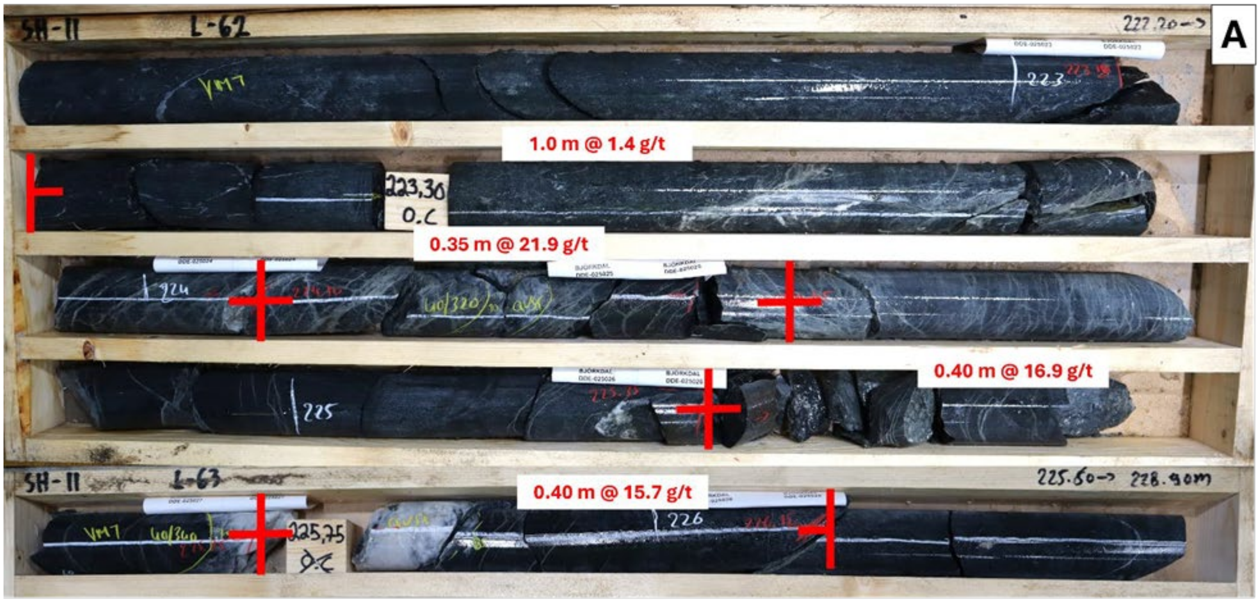


Source: Mandalay 2024b.

Notes:

ETW: Estimated true width

Figure 7-14: Example of Storheden Mineralized Interval in DDH SH-11. Mineralized Interval Returned an Average Grade of 73 g/t Au Along a Core Length of 3.05 m (ETW 1.96 m)



Source: Mandalay 2024b.

Notes:

ETW: Estimated true width

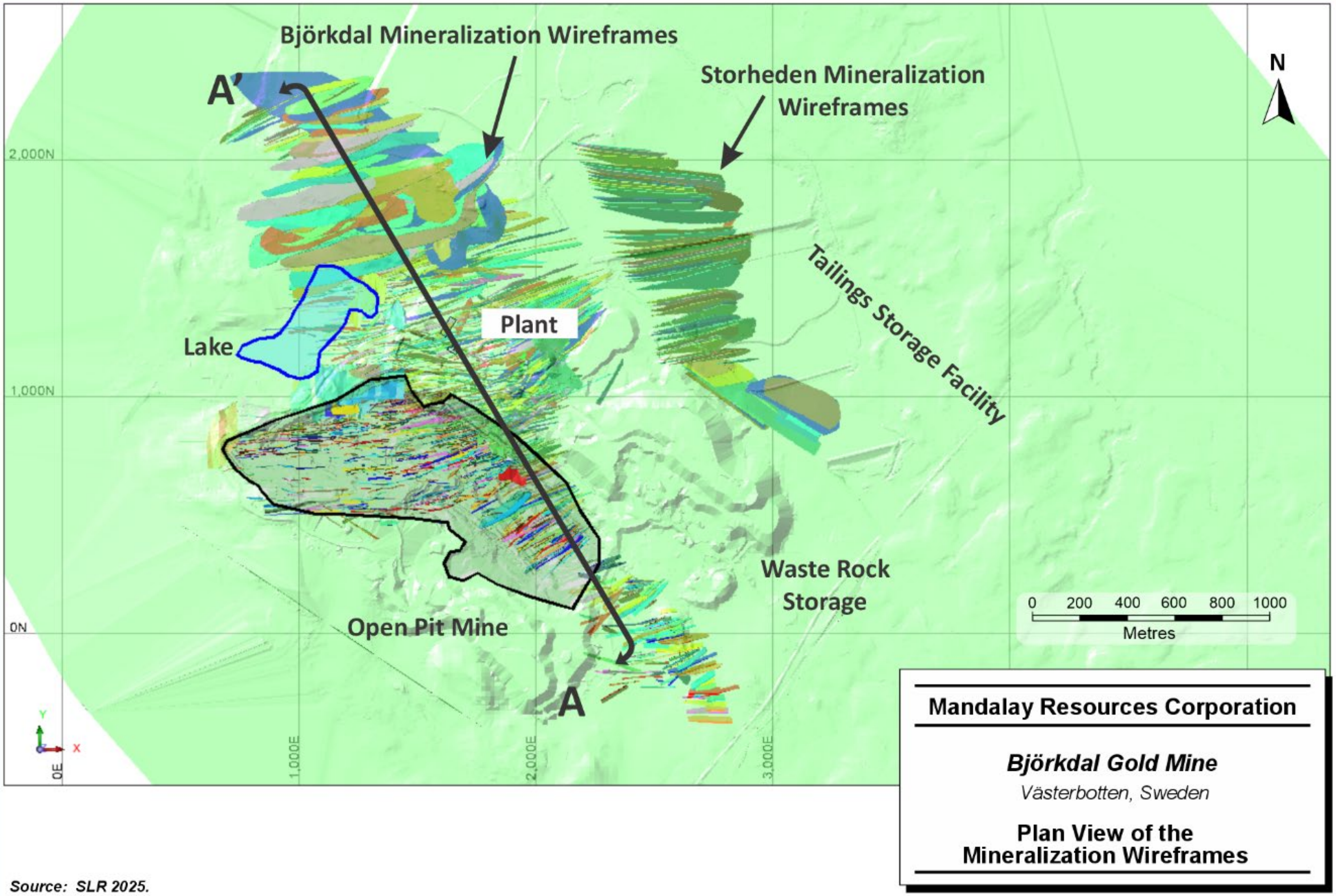
8.0 Deposit Types

8.1 Björkdal and Storheden

The predominant source of ore at Björkdal is contained in a package of anastomosing, sheeted quartz-veins. This epigenetic vein network appears to be structurally controlled and consists of more than one thousand sub-parallel quartz veins that typically strike 030° to 090° from true-north (Figure 8-1, Figure 8-2, and Figure 8-3). Such strong structural-geological influences over geometry of any quartz vein hosted mineralization clearly suggests a strong spatial and temporal relationship with orogenic/tectonic processes (i.e., mesothermal/greenstone gold systems). In contrast, the mineral associations with gold mineralization, and the large alteration signature of the Björkdal area, could alternatively suggest that host depositional mechanisms are responsible for the mineralization at Björkdal as there are some similarities with skarn and/or porphyry systems.

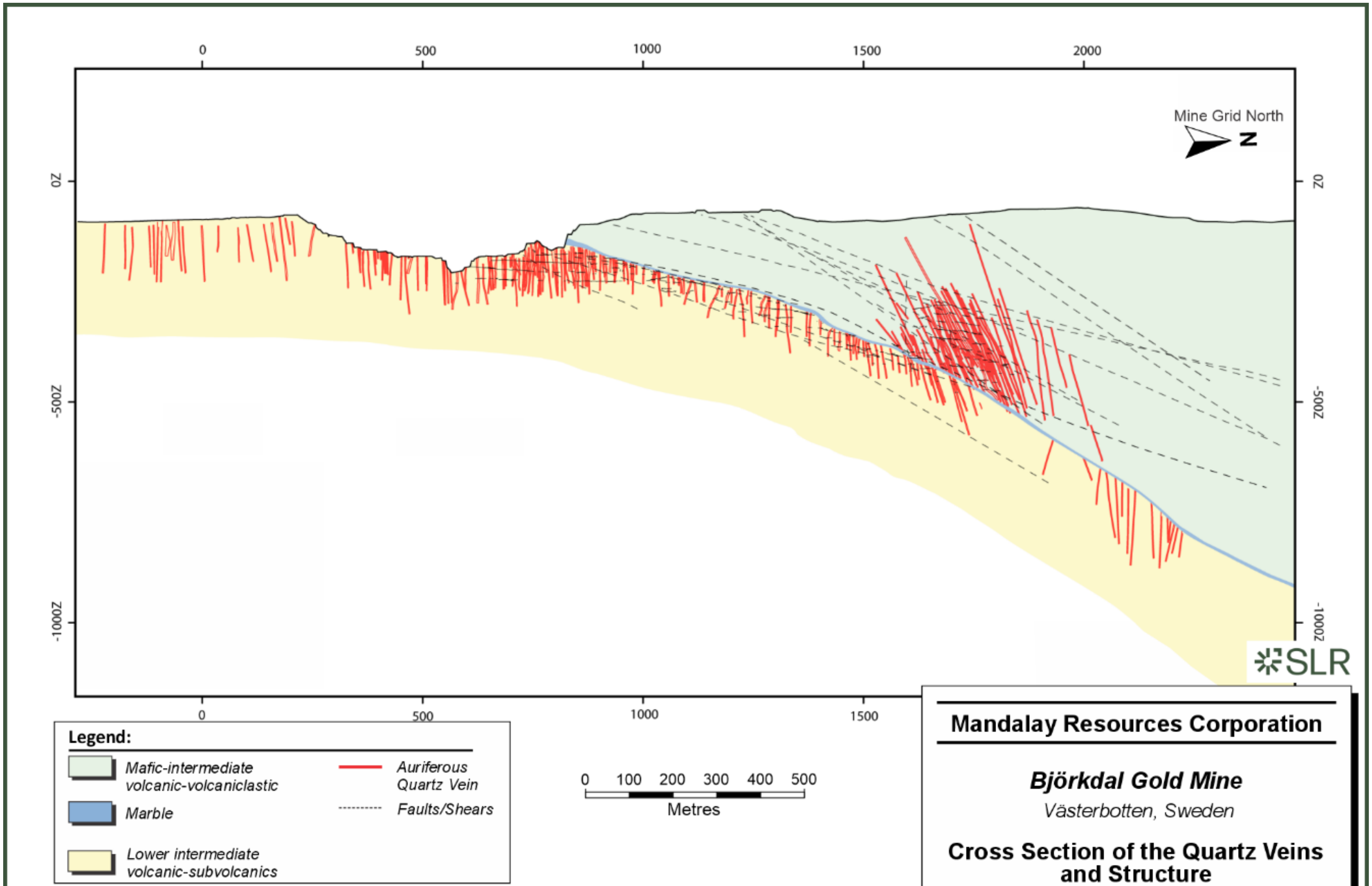
A much smaller, yet prolific source of ore at Björkdal is observed in strongly altered lenses of skarn. Skarnification occurs commonly within the Mine, especially in the limestone/marble unit where it occurs as discreet patches and lenses, these lenses typically measure 200 m to 400 m along strike, 100 m to 200 m down dip and are usually no more than 10 m thick. However, similar calc-silicate alteration has taken place in areas where local shearing has affected the volcanoclastic host rock. The altered rock texture appears sheared and mottled to a varying degree; locally the rock can have a folded appearance. In places where the skarnification is the strongest, the precursor rock texture has been completely overprinted.

Figure 8-1: Plan View of the Mineralization Wireframes



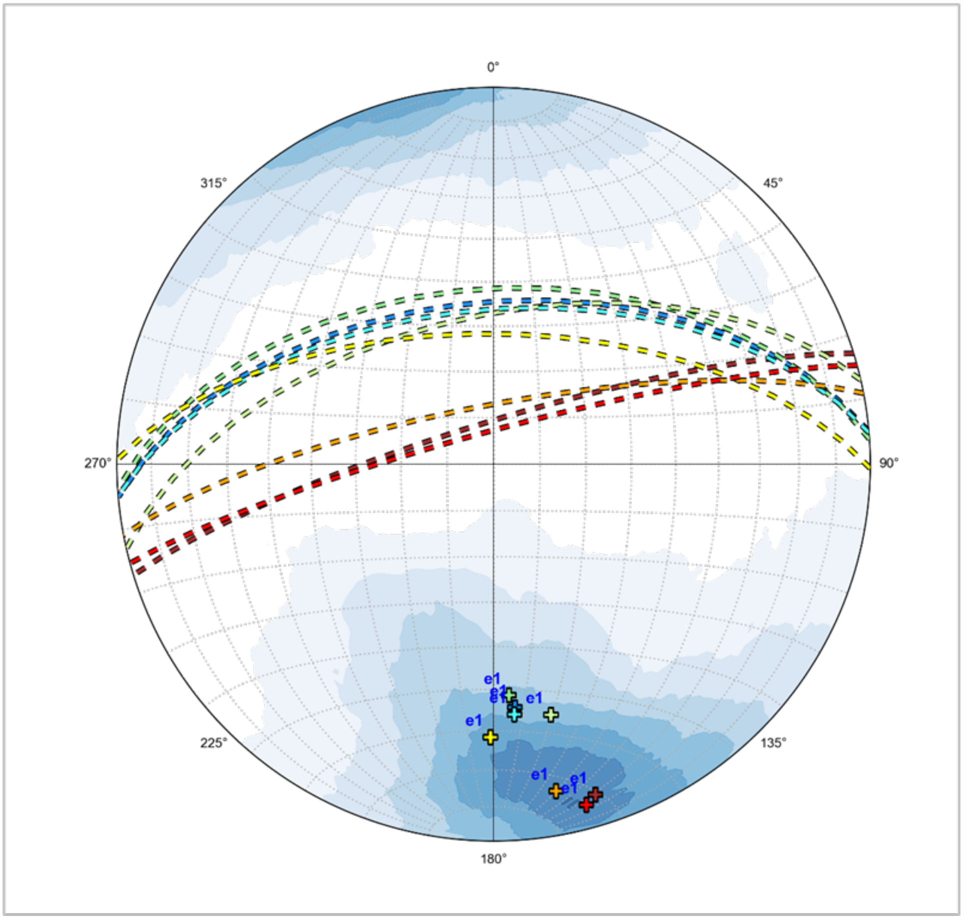
Source: SLR 2025.

Figure 8-2: Cross Section of the Quartz Veins and Structure



Source: Mandalay Resources Corporation 2024.

Figure 8-3: Stereonet Plot of Quartz Veins, Bingham Mean



8.2 Norrberget

Primary mineralization at the Norrberget deposit is observed to be associated with amphibole alteration bands and veinlets, and where mafic tuffs and volcaniclastic rocks are interbedded and in contrast to what is observed at Björkdal (Figure 8-4). The mineralization is preferentially emplaced where there is a structural change to the rock such as at lithological contacts, altered bands and where shearing interacts with the interbedded sequences, due to the changing rheological characteristics of the unit. The abundance of pyrrhotite and pyrite appears to be controlled by specific lithology types within the volcaniclastic package which can indicate a differing redox based upon temperature change and fluid evolution.

The mineralization at Norrberget is limited spatially to 50 m stratigraphically below the lower marble contact, which is believed to be a result of the cooling and redox changes of the fluid as it passes through the units.

The gold is very fine-grained and rarely visible. Where gold grains have been observed, they are found to lie on the boundary or in interstitial material between grains. Elevated gold grades are mostly found in areas with little to no pyrite.

Figure 8-4: Example of Norrberget Mineralization

Mandalay Resources Corporation

Björkdal Gold Mine

Västerbotten, Sweden

Norrberget Mineralization

Source: Mandalay Resources Corporation, 2024.

9.0 Exploration

9.1 Björkdal

SLR reviewed the historical exploration work and found that pre-Mandalay work programs were not well documented. In general, it would appear that no significant regional exploration had taken place since the original Terra Mining ownership (ca. 1983-1999).

Since acquiring the property, Mandalay has carried out geophysical studies in order to identify the "geophysical fingerprint" of Björkdal-style mineralization with the ultimate aim of developing exploration targets beneath the significant till cover that blankets the majority of the Björkdal property. Geological mapping has also been conducted on the limited surface exposure of bedrock over the property, in addition to compiling and assessing all known and relevant documentation and results from various exploration efforts by several past owners of the Mine and the surrounding exploration permits held by Mandalay through Björkdalsgruvan AB (and its subsidiary, Björkdal Exploration AB).

During the summer of 2019, an airborne magnetic survey was completed by Thomson Aviation over the full tenement package in collaboration with Boliden AB. Björkdalsgruvan AB received the raw data from the flyover and Geovista AB processed the results. Raw data consisted of a digital terrain model, levelled radiometric data, and levelled magnetic data. The survey direction was east-west with 50 m line spacing and 500 m tie line spacing. It has been established that areas of significant mineralization have detectable effects on both magnetic (ground magnetics) and electrical (chargeability) properties of the host geology.

9.2 Norrberget

The Norrberget area was extensively drilled from 1994 to 1996 by COGEMA before interest in the prospect declined under subsequent owners. After the area was purchased by Gold-Ore in 2007, some sporadic drilling campaigns were undertaken without significant discoveries being made.

After Mandalay acquired Elgin, a program of relogging and re-assaying the existing core from the prospect was undertaken. This resulted in renewed interest in the area with Mandalay completing diamond drilling and RC drilling programs in 2016, 2017, 2023, and 2024, discussed in Section 10.

9.3 Regional Exploration

9.3.1 2015

During the summer months of 2015, 2,492 m of diamond-core drilling was completed around the greater Björkdal region in order to test a number of geochemical and structural targets. Significant mineralization was intersected in two drill holes, DDE2015-001 and DDE2015-008, in the Storheden and Morbacken areas respectively.

9.3.2 2016

The potential of Storheden area was further tested with 2,136 m of diamond-core drilling and 1,408 m of RC in 2016 and 2017. These drilling programs have confirmed the existence of a mineralized system of shear hosted quartz veins extending below the current site of the TMF.

Target generation completed in 2015 and 2016 consisted of geophysical surveys and reinterpretation of existing geophysical magnetic and electric surveys. These surveys ranged from regional scale airborne surveys to high resolution downhole electric logging and had the objective to establish some geophysical characteristics indicative of mineralized rock systems in the greater Björkdal exploration land package. It has been established that areas of significant mineralization have detectable effects on both magnetic (ground magnetics) and electrical (chargeability) properties of the host geology. As such, these surveys are being incorporated with geochemical and structural geological data with the objective to identify highly prospective ground.

9.3.3 2017

In 2017, ground magnetic surveys and till sampling programs were expanded across high potential areas within the tenement package. Detailed-scale outcrop mapping and sampling was also carried out to further develop the macro-scale understanding of the property's gold bearing potential. A total of 75 till samples, spaced roughly 50 m to 100 m apart, and 65 outcrop samples were taken.

9.3.4 2018

In 2018, two small scale (approximately 5 km^2) ground magnetic surveys were carried out in highly prospective areas within the tenement package. Outcrop mapping and sampling was also carried out in the northern region of the tenement package in order to build upon the continuously growing regional geological model. A total of 40 till samples, spaced roughly 50 m to 100 m apart, and 71 outcrop samples were taken.

9.3.5 2019

During summer 2019, an airborne magnetic survey was completed by Thomson Aviation over the full tenement package in collaboration with Boliden AB as described in Section 9.1.

9.3.6 2020

In 2020, a total of 1,160 m of drilling was completed located approximately two kilometres west of the Mine. The target for this drilling was identified from airborne magnetic data. A further, more extensive campaign of outcrop mapping and sampling was carried out across the entire tenement package, along with a small till sampling program towards the East. The data obtained during this campaign has been incorporated into the regional geological model.

During 2020 an extensive campaign of outcrop mapping and sampling was carried out across the entire tenement package, along with a small till sampling program towards the east.

9.3.7 2021

Complementary to the mapping and sampling campaign, a regional Base of Till drilling campaign was carried out in 2021. Base of Till drilling is a technique widely used in areas that have undergone extensive glaciation. A small, mobile drill machine is used to drill through the surficial till cover, into the bedrock and three samples are taken:

3 At approximately 1 m to 2 m downhole in the C-horizon.

4 At approximately 1 m above the till-bedrock boundary.

5 At approximately 3 m into the bedrock.

A total of 103 holes totalling 1,415 m were completed across three prospective targets within the tenement package. The holes were spaced between 100 m to 200 m apart.

The data obtained during these campaigns has been incorporated into the regional geological model.

No diamond drilling was completed during 2021 with exploration activity comprising Base of Till drilling only.

9.3.8 2022

In 2022, a total of 6,480 m of diamond drilling was completed in two prospective areas, approximately four kilometres east and six kilometres southwest of the Mine. The targets for this drilling were identified through detailed desktop studies using historical data, airborne geophysics, and outcrop mapping/sampling. In addition to diamond drilling, a total of 2,460 m of Base of Till drilling was completed approximately three kilometres to the south and six kilometres southwest of the Mine.

Additionally, a small scale (approximately 9 km^2) ground magnetic survey was carried out in a highly prospective area six kilometres to the southwest of the Mine.

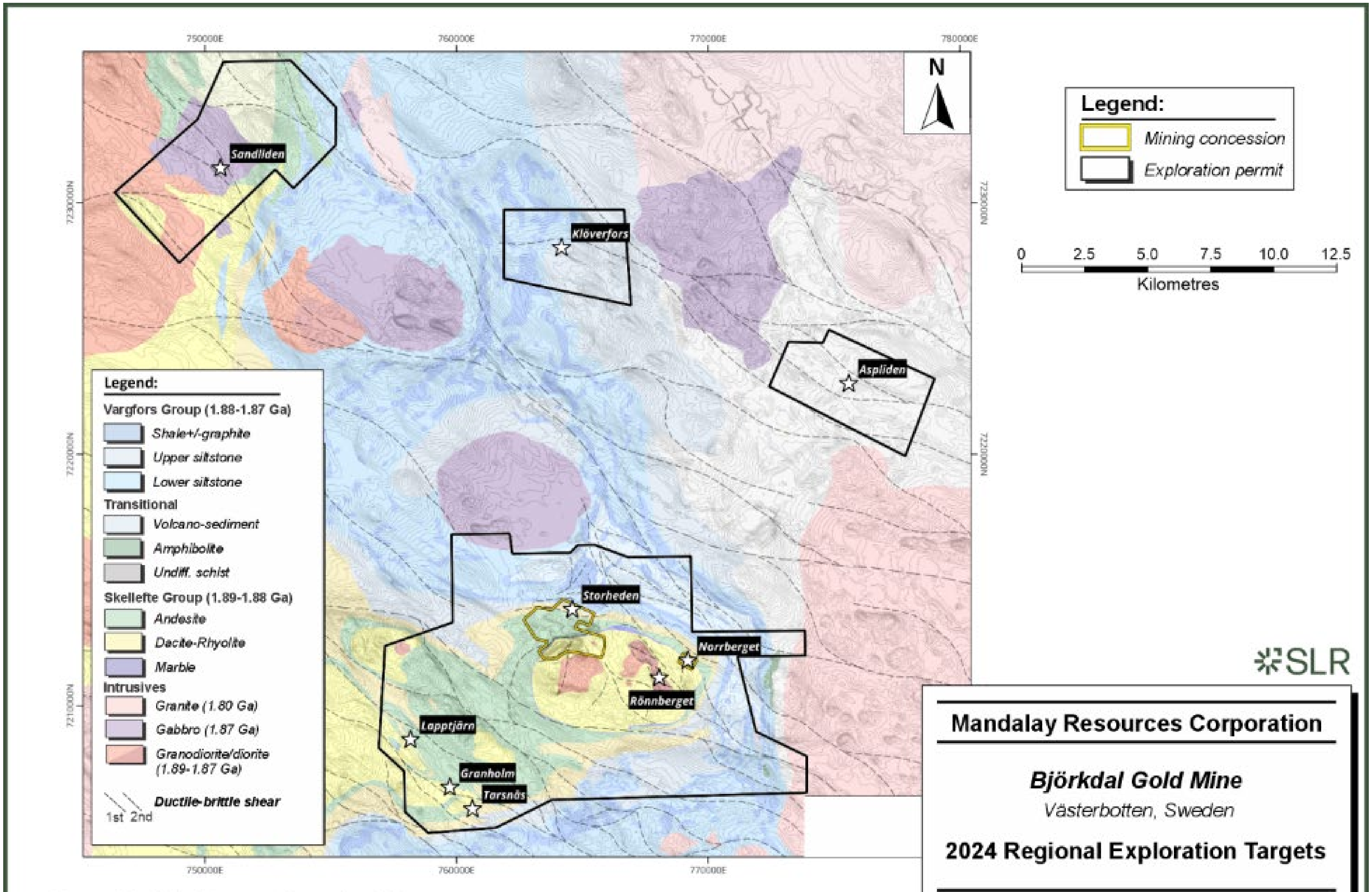
9.3.9 2023 and 2024

In 2023 and 2024, a total of 1,713 m of diamond drilling and 846 m of Base of Till drilling was completed across three targets, approximately six kilometres southwest and twenty kilometres northwest of the mine. The diamond drilling completed in 2023 was a compliment to promising results intercepted in 2022 within a prospective area four kilometres to the southeast of the mine.

Additionally, a small scale (approximately 7 km^2) ground magnetic survey was carried out in a highly prospective area twenty kilometres northwest of the mine.

Exploration drilling was carried out in two drilling campaigns in 2022 and 2023 to evaluate four target areas located approximately six kilometres to the southwest of the mine in addition to targets located to the north of the mine (Figure 9-1). A total of 26 drill holes were completed. At the Lapptjärn prospect, an intercept averaging 5.3 g/t Au along a core length of 7.05 m was returned from a mineralized intersection exhibiting similar characteristics to the gold mineralization found at the Boliden deposit located further to the southwest. At the Granholm prospect, a drill hole returned an average grade of 14.9 g/t Au along a core length of 0.5 m. Full details of the results returned from these exploration programs is presented in Mandalay (2024c).

Figure 9-1: 2024 Regional Exploration Targets



Source: Mandalay Resources Corporation 2024.

9.4 Exploration Potential

9.4.1 Near Mine Exploration Potential

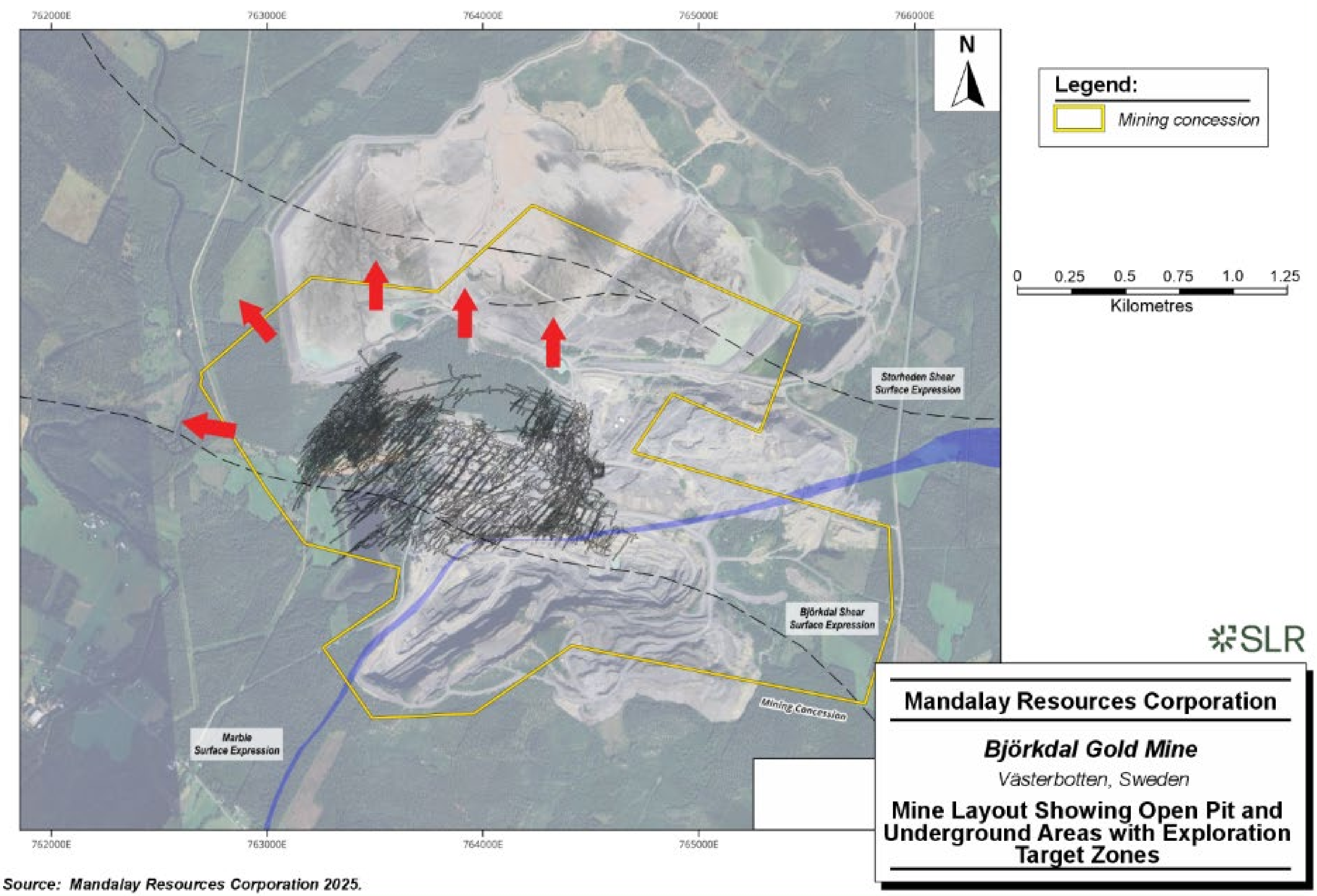
Mineralization at Björkdal remains unconstrained towards the north and east of the current mining operation. Recent drilling results indicate that depth extensions, below the marble, along the eastern extent of the mine are moving progressively towards the northeast. This mineralization appears to be constrained by the Björkdal Shear and the marble horizon.

Toward the north of the existing workings, the mineralization remains open, both above and below the marble horizon. In this region the Björkdal Shear strike orientation changes from northwest-southeast (NW-SE) to west-northwest-southeast (WNW-SE) (Figure 9-2). This change in strike direction has created a flexure zone, with abundant faulting above the marble unit. This flexure zone has allowed the formation of numerous auriferous veins above the historical hanging wall.

Recent drilling completed at the Storheden deposit suggests that these mineralized zones may represent the eastern strike extension of the mineralized vein systems at the main Björkdal mine.

Near mine exploration in 2025 will continue to have a strong focus on extending the mineralization to the north-northeast at depth, both above and below the intersection horizon between the marble and the Björkdal Shear.

Figure 9-2: Mine Layout Showing Open Pit and Underground Areas with Exploration Target Zones



Source: Mandalay Resources Corporation 2025.

9.4.2 Regional Exploration Targets

A number of prospective regional targets have been identified through detailed desktop studies and field mapping/sampling. A campaign of mapping, field sampling, diamond drilling, Base of Till drilling, ground based magnetometry and Induced Polarization (IP) geophysics was carried out to further investigate these highly prospective targets, and generate further targets for investigation. There is a high likelihood of further discoveries in the Björkdal area, as deposit models currently being formulated and tested by Mandalay geologists are proving successful and much of the held ground remains either unexplored or under-explored.

10.0 Drilling

10.1 Björkdal and Storheden

Drilling has been carried out on a periodic basis by various operators as exploration and development progressed at the Mine. The Mineral Resource drill hole database cut-off dates for the year-end 2024 MRMR update was 30 September 2024 and incorporated drill hole and channel sampling information collected by Mandalay. All drill hole and channel sample information collected before September 2014 was completed by previous owners. There are no drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the Mineral Resource estimates.

10.1.1 Historical Drilling

10.1.1.1 1986 to 2004

It is reported that during the period between 1986 and 2004, a total of 901 holes were completed at Björkdal (Table 10-1).

Table 10-1: Summary of Historical Drilling 1986 to 2004 - Björkdal

Drill Hole Type	Number of Drill Holes
Diamond Drill Hole	122
Reverse Circulation	779
Total	**901**

An additional 6,453 historical direct circulation (DC) grade control holes were also drilled for mine planning purposes in the open pit. However, problems were identified with downhole sampling and grade contamination issues in these drill holes. Consequently, these holes have not been used in subsequent Mineral Resource estimates.

10.1.1.2 2006 to 2014

In March 2006, Gold-Ore collared a portal for the Eastern Tunnel at Björkdal. The tunnel was designed to provide access for diamond drill rigs to test for the along-strike extension of the orebody mined in the open pit (northern extension). Drilling from the surface was considered a less attractive option as it required drilling through several hundred metres of country rock until the mineralized zones were intersected. The underground excavation also provided access for mapping, bulk sampling, and some feedstock for the processing plant.

Underground diamond drilling for exploration, development, and grade control was essentially carried out continuously from 2006 to 2014 (Table 10-2). RC drilling was initiated in the open pit in 2010 for grade control purposes.

Table 10-2: Summary of Drilling from 2006 to 2014 - Björkdal

Year	Drill Hole Type	Underground		Open Pit	
		No. of Drill Holes	Metres (m)	No. of Drill Holes	Metres (m)
2006	Core	91	7,954	-	-

Year	Drill Hole Type	Underground		Open Pit	
		No. of Drill Holes	Metres (m)	No. of Drill Holes	Metres (m)
2007	Core	109	10,454	19	3,303
2008	Core	40	2,577	-	-
2009	Core	43	5,892	9	469
2010	Core	30	5,112	37	2,756
	RC	-	-	76	2,978
2011	Core	52	10,271	15	1,325
	RC	-	-	127	3,862
2012	Core	48	8,490	34	4,685
	RC	-	-	258	9,904
2013	Core	42	9,178	14	1,631
	Core (In-fill)	43	2,812	-	-
	RC	-	-	317	10,006
2014	Core	43	9,218	-	-
	Core (In-fill)	23	2,308	-	-
	RC	-	-	225	6,982
	Core	14	3,864	3	622
Total		**578**	**78,130**	**1,134**	**48,523**

10.1.2 Mandalay Drilling 2014 to 2024

Since acquiring ownership, Mandalay has conducted both underground and surface diamond-core and reverse circulation (RC) drilling, both within and near the active production areas, in addition to regional prospects.

A summary of the drilling programs performed by Mandalay from September 2014 to September 2024 is provided in Table 10-3. The locations of the drill holes completed at the Björkdal mine and the Storheden deposit in 2023 and 2024, along with the channel samples collected as part of the grade control program are shown in Figure 10-1.

For the period of September 2014 to September 2024, Mandalay completed a total of approximately 516,934 m of core drilling from surface-based and underground stations at the Björkdal Mine. Drilling in 2023 and 2024 focused on delineating the strike and dip limits of the Aurora Zone, defining the northern extent of mineralization, and confirming the relatively higher-grade mineralization at depth along the mine's eastern flank. Additionally, a new domain, the North Zone below the marble, also referred to as the Grenholm Zone, was discovered, leading 2024 exploration efforts to concentrate on defining its mineralization.

The drilling programs were successful in extending the known limits of the Aurora Zone, and for outlining the limits of the relatively higher grade mineralization, at depth, along the Mine's eastern flank. Drilling north of the Mine has identified auriferous veining approximately 300 m from the Aurora Zone, both above and below the marble horizon. The mineralization potential beyond the limits of the drilling completed to-date has not been evaluated.

Table 10-3: Summary of Drilling Completed from 2014 to 2024 – Björkdal and Storheden

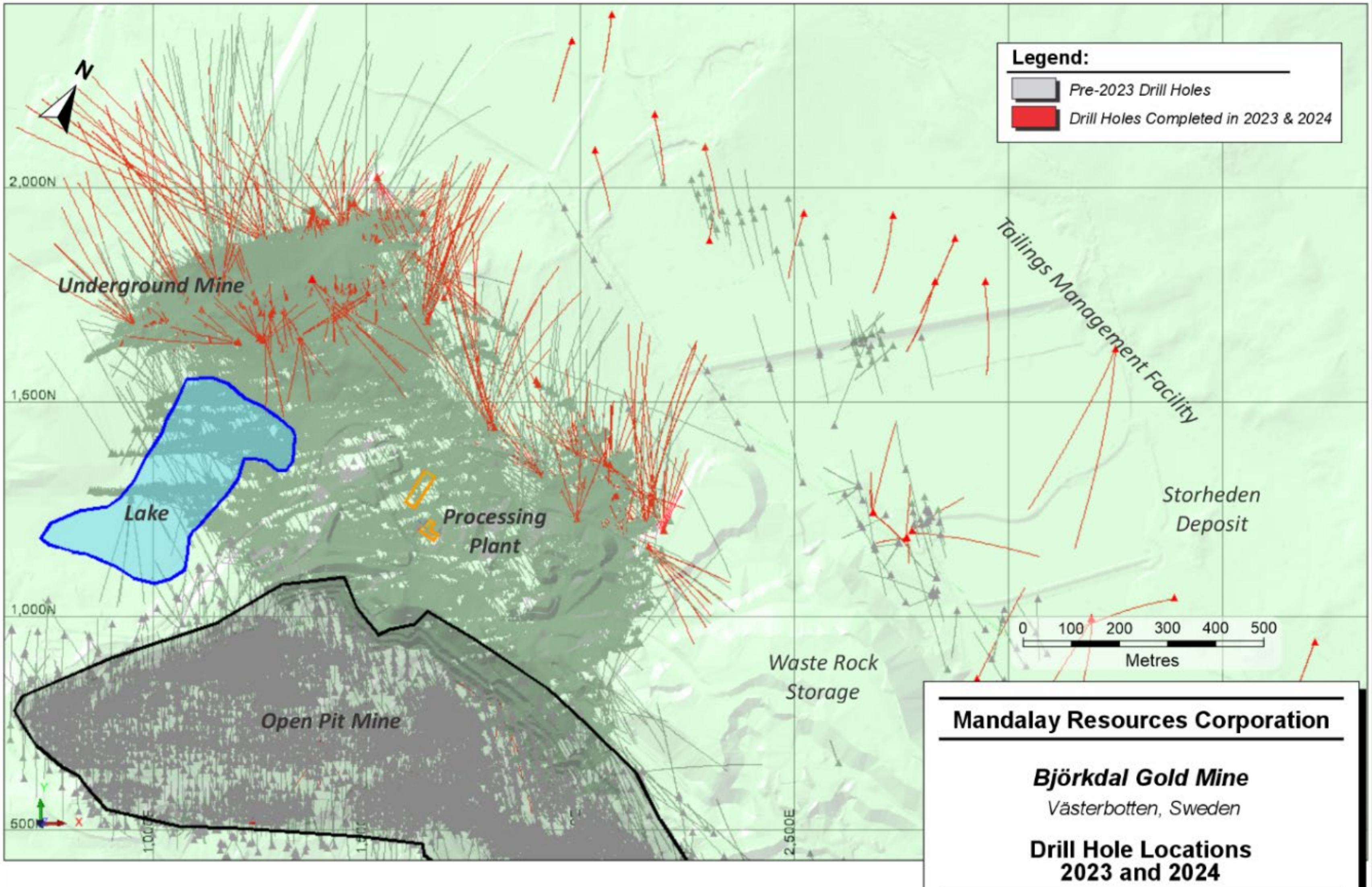
Year	Drill Hole Type	Underground		Open Pit	
		No. of Drill Holes	Metres (m)	No. of Drill Holes	Metres (m)
2014	Core (In-fill)	19	1,614	-	-
	RC	-	-	65	2,103
	Core	12	3,302	5	632
2015	Core (In-fill)	150	11,880	-	-
	RC	-	-	439	13,959
	Core	58	14,151	56	9,145
	Storheden - Core	-	-	2	302
2016	Core (In-fill)	280	32,252	-	-
	RC	-	-	556	28,436
	Core	-	-	13	4,087
	Storheden - Core	-	-	3	2,046
2017	Core (In-fill)	211	23,839	-	-
	RC	-	-	596	24,924
	Core	-	-	13	2,377
	Storheden - Core	-	-	1	90
	Storheden - RC	-	-	12	1,408
2018	Core (In-fill)	211	24,309	-	-
	RC	-	-	621	22,138
	Core	43	9,995	36	5,904
	Storheden - Core	-	-	1	160
2019	Core (In-fill)	143	17,823	-	-
	RC	-	-	194	10,649
	Core	36	9,089	7	1,125
2020	Core (In-fill)	223	26,263	-	-
	Core	41	14,156	8	1,243
2021	Core (In-fill)	250	27,151	-	-
	Core	64	23,815	-	-
2022	Core (In-fill)	184	27,892	-	-
	Core	49	24,797	16	2660

Year	Drill Hole Type	Underground		Open Pit	
		No. of Drill Holes	Metres (m)	No. of Drill Holes	Metres (m)
2023	Core	250	49,670	9	1,577
	Storheden - Core	-	-	22	5,149
2024 [1]	Core	147	28,224	-	-
	Storheden - Core	-	-	14	6,598
Total		**2,371**	**370,222**	**2,689**	**146,712**

Note

1. 2024 drilling includes drill holes completed to 30 September 2024.

Figure 10-1: 2023 and 2024 Drill Hole Location Map – Björkdal and Storheden



Source: SLR 2025.

The drilling completed in 2023 and 2024 at the Björkdal Mine was carried out with a focus in two main areas. The first area was a continued focus on the eastern extension of the Main Zone and Lake Zone mineralization that was discovered during the 2021 drilling program, and the eastern extension of the Central Zone. The second area was the continuation of outlining the mineralization contained within the North Zone vein system, located approximately 450 m to the north of the Aurora Zone. The drilling programs also tested for the extensions of the known mineralization in the Aurora Zone.

The drilling focussed on the eastern extensions of the Main Zone, Lake Zone, and Central Zone vein systems was successful in discovering additional vein systems in this area commonly containing visible gold. The drilling was also successful in discovering a new mineralized domain referred to as the Boreal Zone, located between the Aurora and North Zone vein zones.

A selection of the significant intersections returned from the Eastern Extension is provided in Table 10-4 (Mandalay 2023a). Information regarding additional significant intersections obtained from drilling completed by Mandalay in 2023 can be found in Mandalay (2023b).

The drilling completed at the Storheden deposit was successful in demonstrating that the mineralization in this area is likely to represent the eastern strike extension of the mineralized vein system present at the Björkdal Mine, extending the strike length of the known mineralization by approximately 500 m to 700 m. The eastern limits of the Storheden deposit are not defined by drilling.

A selection of the significant intersections returned from the Storheden deposit is provided in Table 10-5 (Mandalay 2024b).

The SLR QP recommends that further exploration drilling be carried out to search for the eastern limits of the Storheden vein system.

The SLR QP also recommends that in-fill drilling be carried out to upgrade the confidence category of the Storheden deposit.

Table 10-4: Summary of 2023 Significant Intersections – Eastern Extension

Drill Hole ID	From (m)	To (m)	Core Length (m)	Estimated True Width (m)	Grade (g/t Au)
MU23-014	48.00	49.00	1.00	0.88	0.80
MU23-014	78.90	79.30	0.40	0.35	4.80
MU23-014	79.80	80.30	0.50	0.43	1.3
MU23-014	97.50	98.00	0.50	0.25	22.20
MU23-014	135.60	136.20	0.60	0.39	5.60
MU23-014	178.00	179.30	1.30	0.84	1.0
MU23-014	183.70	184.50	0.80	0.40	1.60
MU23-014	187.00	188.00	0.80	0.40	1.60
MU23-014	231.35	231.80	0.45	0.34	40.10
MU23-014	248.50	248.90	0.40	0.34	2.50
MU23-014	283.35	283.80	0.45	0.29	3.60
MU23-014	360.00	360.50	0.50	0.47	1.60
MU23-014	380.30	381.35	1.35	0.87	1.50
MU23-015	77.60	78.05	0.45	0.34	88.60
MU23-015	79.40	80.00	0.60	0.52	1.40
MU23-015	82.70	83.20	0.50	0.25	3.30
MU23-015	89.40	90.50	1.10	0.84	1.20
MU23-015	98.00	98.60	0.60	0.39	1.80
MU23-015	133.00	133.50	0.50	0.25	2.10
MU23-015	141.85	142.30	0.45	0.25	2.10
MU23-015	258.00	259.20	1.20	0.60	40.90
MU23-015	261.60	262.00	0.40	0.39	2.00
MU23-015	571.40	572.00	0.60	0.39	1.70
MU23-016	46.00	46.60	0.60	0.39	1.70
MU23-016	70.00	70.40	0.40	0.31	2.30
MU23-016	82.50	83.00	0.50	0.32	9.70
MU23-016	114.70	115.10	0.40	0.26	5.50
MU23-016	125.00	125.35	0.35	0.27	116.80
MU23-016	172.55	173.10	0.55	0.35	1.60
MU23-016	360.90	361.40	0.50	0.32	2.30
MU23-016	487.50	489.00	1.50	0.96	7.50
MU23-017	38.00	41.90	3.90	1.33	1.20

Drill Hole ID	From (m)	To (m)	Core Length (m)	Estimated True Width (m)	Grade (g/t Au)
MU23-017	202.00	203.00	1.00	0.17	16.20
MU23-017	508.90	509.80	0.90	0.75	1.20
MU23-017	530.00	531.00	1.00	0.64	0.90
MU23-017	545.00	546.00	1.00	0.64	1.10
MU23-017	566.00	566.60	0.60	0.10	14.70
MU23-017	594.00	595.00	1.00	0.64	5.40

Table 10-5: Summary of 2024 Significant Intersections – Storheden Deposit

Drill Hole ID	From (m)	To (m)	Core Length (m)	Estimated True Width (m)	Grade (g/t Au)
SH-02	64.75	65.40	0.65	0.56	1.90
SH-02	88.00	88.70	0.70	0.61	5.60
SH-02	92.30	92.85	0.55	0.35	2.10
SH-02	97.85	98.30	0.45	0.39	6.00
SH-02	168.25	169.00	0.75	0.65	0.90
SH-04	70.60	71.25	0.65	0.56	1.10
SH-04	89.95	91.10	1.15	1.00	3.50
SH-04	112.50	113.00	0.50	0.25	7.10
SH-04	171.70	172.45	0.75	0.65	1.60
SH-04	181.10	182.40	1.30	0.84	14.60
SH-05	50.60	51.40	0.80	0.40	1.20
SH-05	96.70	97.20	0.50	0.43	1.90
SH-06	119.30	120.00	0.70	0.45	39.70
SH-06	133.70	134.05	0.35	0.27	1.70
SH-06	136.80	137.25	0.45	0.15	70.20
SH-07	113.10	115.40	2.30	1.15	1.90
SH-08	60.35	60.85	0.50	0.25	1.90
SH-08	74.20	74.80	0.60	0.52	1.00
SH-08	75.70	76.20	0.50	0.43	1.90
SH-09	104.50	108.00	3.50	2.25	3.40
SH-09	132.85	133.30	0.45	0.29	2.10
SH-11	223.10	226.15	3.05	1.96	7.30
SH-11	243.95	244.30	0.35	0.22	5.10

Drill Hole ID	From (m)	To (m)	Core Length (m)	Estimated True Width (m)	Grade (g/t Au)
SH-11	248.50	248.94	0.40	0.31	1.50
SH-18	221.10	222.50	1.40	0.70	1.40
SH-18	231.60	232.50	0.90	0.45	2.70
SH-19	81.30	82.00	0.70	0.45	1.90
SH-19	92.10	93.10	1.00	0.64	1.30
SH-19	142.45	142.80	0.35	0.20	3.10
SH-19	221.70	222.45	0.75	0.43	1.50
SH-19	228.00	228.90	090	0.78	2.20
SH-19	290.35	290.85	0.50	0.43	1.50
SH-20	135.50	136.10	0.60	0.21	5.60
SH-20	140.80	141.30	0.50	0.25	2.10
SH-21	43.50	44.20	0.70	0.66	2.20
SH-21	47.90	48.60	0.70	0.61	1.20
SH-21	83.80	84.35	0.55	0.48	2.70
SH-21	87.20	87.80	0.60	0.34	1.40
SH-21	89.10	89.50	0.40	0.26	33.00
SH-21	118.50	119.10	0.60	0.21	3.30
SH-21	130.70	131.50	0.80	0.66	1.80
SH-22	48.30	49.20	0.90	0.74	3.00
SH-22	64.00	65.75	1.75	1.34	1.80
SH-22	70.00	71.10	1.10	0.84	3.00
SH-22	73.70	74.10	0.40	0.33	4.10
SH-22	109.85	110.20	0.35	0.20	3.20
SH-22	113.00	113.80	0.80	0.66	1.30

Mandalay's exploration and delineation drilling programs have been successful in extending the known limits of the gold mineralization at the Björkdal Mine and the Storheden deposit. They have also been successful in expanding the knowledge and understanding regarding the controls on the location of the gold mineralization discovered to-date. As potential additional exploration tools that may be used to assist in target definition and as additional aids in understanding the controls on the distribution of gold values, the SLR QP recommends that consideration be given to attempting to map the paleotemperature regime, the fluid paths of the Björkdal hydrothermal system, and the use of metal associations as vectoring tools. Potential tools available include the following:

- Mineral chemistry studies on such tracer minerals as epidote, apatite, zircon, and others,
- Use of chlorite geothermometer to map out the paleotemperatures,

- Oxygen-hydrogen isotope values to estimate the water-rock ratios,
- Whole-core hyperspectral imagery to map out alteration signatures,
- Raman spectroscopy on carbonates to map out temperature variations,
- Whole rock geochemistry within the skarn alteration zones to search for trace metal indicators,
- Trace metal assays within the basalt-hosted veins to examine the utility of background tellurium or bismuth values as vectors to gold mineralization, and
- Use of laser ablation – inductively coupled mass spectroscopy studies on pyrite to examine the utility of trace metal concentrations as potential vectoring tools.

10.1.2.1 Diamond Drilling

All underground exploration drilling since September 2014 has been conducted with wireline diamond-core drilling methods by experienced Swedish drilling contractors Protek Norr AB, Styrud Arctic AB, and Drillcon Scandinavia AB. Drilling has been carried out with dedicated underground exploration drill rigs in the Hagby series WL66 and WL76 sizes (50.5 mm and 57.5 mm diameter core, respectively). All drill holes are surveyed with modern computerized gyroscopic tools at hole completion, while also being regularly check-surveyed for unexpected deviation as the drilling progresses using modern multi-shot “camera” downhole tools. Core orientation tools are used on all holes in order for geologists to measure the orientation of all geological structures identified. Contractors work two shifts per day (nine hour shift), seven days per week and average approximately 1,000 m per month.

Surface exploration since September 2014 has been carried out with wireline diamond-core drilling methods by experienced Swedish and Finnish drilling contractors Styrud Arctic AB, Protek Norr AB, Kati OY, Arctic Drilling Company OY, and Northdrill Oy, and experienced international drilling operator Mason & St John, who is based in the UK. Various drilling equipment sizes have been used depending on project needs and are as follows: WL66 (50.5 mm core diameter), NQ2 (50.7 mm core diameter), and WL76 (57.5 mm core diameter). All drill holes are surveyed with modern computerized gyroscopic tools at hole completion, while also being regularly check-surveyed for unexpected deviation as the drilling progresses using modern multi-shot “camera” downhole tools. Core orientation tools are used on all holes in order for geologists to measure the orientation of all geological structures identified. Contractors work two shifts per day (12 hour shift), seven days per week, and average approximately 1,200 m per month. Drill holes that are collared in unconsolidated materials (i.e., soil and till) are cased with traditional methods with either Boart Longyear or Hagby series casing rods and bits.

Due to the degree of silicification and alteration of the deposit and regional geology, rock quality is generally excellent, reflected in core recovery values generally in excess of 95%.

Production (POD-series) and development (DOD-series) optimisation holes are primarily drilled with Mandalay-owned and operated drill rigs and drilling staff. Starting in 2013, in-fill underground diamond drilling programs using WL46 drill string (28.8 mm diameter core) were implemented, the rig has been decommissioned as of May 2018. In March 2016, an Atlas Copco model Diamec U4 data rig was purchased and in April 2020, an Epiroc Diamec U6 data rig was purchased. The rigs are operated by three drillers working single shifts using a WL56/39 drill string (39.0 mm diameter core). They work seven days a week, producing 27 m per shift. During 2021, a fourth shift was added to the U4 rig. These rigs are primarily used for development optimisation.

All drilling is designed and supervised by Mandalay/Björkdalsgruvan geologists. Drill hole layouts are designed with the aid of the GEOVIA Surpac 3D software package.

Drill core is transported to Mandalay's core logging facilities located on the Mine site for processing. The core is examined by trained geologists who prepare a description of the alteration, structure, and mineralization that may have been encountered by the drill hole. The information is entered directly into a computer file at the core shack, which is subsequently uploaded to the master drill hole database.

Logging of drill core is carried out according to Mandalay's Standard Operating Procedure (SOP) GEO 20200331. Logging geologists examine the drill core and mark off any lengths of the core which are judged to hold potential for hosting significant quantities of gold mineralization. The locations of the sample intervals, along with the sample identification number are entered into the computer log of the drill hole and subsequently uploaded to the master drill hole database. The drill core is then photographed by geological technicians before samples are selected of the core for assaying using the entire drill core.

10.1.2.2 Reverse Circulation Drilling

Exploration RC drilling was undertaken during the summer of 2016 in order to quickly provide in-fill information for the Nylund surface deposit. The drilling was undertaken by Mason & St John and Styrud Arctic AB. Drilling was undertaken with a multi-purpose drilling rig equipped with 5.5 in. RC diameter bit on six metre rods (Mason and St John drilling rigs) and 5.5 in. RC diameter bit on three metre rods (Styrud Arctic AB drilling rigs). The holes were surveyed at completion with modern computerized gyroscopic tools. Samples were taken every one metre of drilling where they are split directly out of the cyclone in a riffle-splitter. Two samples were collected; one was sent directly to the laboratory for analysis while the other was sieved and washed in order for geological logging to take place. A booster compressor was used on deeper holes (+150 m hole depth) to maintain dry samples when water ingress increases with depth or water bearing fracture networks were intercepted.

RC drilling has been utilized for grade control in the open pit since 2010 to define the gold bearing quartz veins which can vary in scale from one centimetre to greater than one metre. The standard drill pattern is approximately a 7.5 m by 15 m by 18 m grid where holes are planned to intersect perpendicular to the quartz vein orientation. The number of planned drill holes also depends upon the location of historical drill holes. In the western portion of the Mine, holes are drilled 0°/180° (mine grid) with a dip of -40° and in the eastern part, 330°/150° (mine grid) with a dip of -40°. This is due to the general orientation of mineralized zones (quartz veins) in these respective areas of the surface deposit. Each grade control hole generally covers three or four benches, or approximately 20 m vertical depth for a 32 m long hole. Longer holes (up to 70 m long) are occasionally drilled in order to condemn areas by confirming that they are barren of gold mineralization. These longer holes are surveyed at hole completion in order to ascertain their deviations. Drilling was performed by drill contractors Styrud Arctic AB utilizing a five inch RC diameter bit on three metre rods. Drill cuttings were sampled every one metre via a cyclone. RC drilling was performed year-round.

All RC drill holes were planned by Mandalay/Björkdal geologists using the GEOVIA Surpac 3D software.

No RC drilling was completed during 2023 or 2024.

10.1.2.3 Underground Chip Sampling

Each on-vein development (OVD) face has been mapped, photographed, and sampled since 2015. The geologists first mark up the area to be sampled with spray paint (Figure 10-2) to provide full coverage across the face from one wall to the other. The sampler then uses a hammer and bucket to collect representative samples from shoulder to knee height and across the entire face. While this methodology does not strictly follow a channel sample line, it may in fact better represent the variability within the mineralized zone.

After the sample is taken, the sample number is recorded on the face map, together with the date and name of the OVD. The sample is then placed into a plastic sample bag and closed with a sample tag inside. The bucket is either washed out if water is available or replaced with a clean one, in order to conduct the next sample. A standard and blank is inserted every 50th sample.

The samples are delivered by the sampler directly to the on-site laboratory facility located next to the core processing facility.

The chip sample location marks are either picked up by the mine surveyors using either a Hovermap (laser imaging) scan after sampling or alternatively digitised onto an existing scan that was made prior to shotcreting. On occasion the chip sample location may be digitised by the geologist using the development survey string file in Surpac. The survey file is updated after every cut via a Hovermap scan or a regular total station survey.

Samples are entered into an Excel spreadsheet to calculate a final grade for the cut taken and later into an Access database using Datashed. All chip sample information is entered into the drill hole database as pseudo-drill holes that span the full width of the face of the development heading.

Figure 10-2: Underground Chip Sampling, Aurora Zone

Source: Mandalay 2020.

10.1.2.4 Underground Sludge Sampling

Sludge sampling of the development drill hole cuttings (approximately 70 holes) is carried out for every round of the OVD. Sludge samples are not used for Mineral Resource estimation but are used to assist in stope design, production grade estimates, and reconciliation exercises. The sludge sampling is carried out following the Mandalay Standard Operating Procedure (SOP) GEO20200625 "Instruktion för Provtagning och kartering under jord".

After a round is drilled off, the sampler draws a line, and using a pickaxe, alongside the drilled face, fills about half a bucket with the collected material (approximately 7 kg). To be as representative as possible, the sample is collected throughout the height of the sludge pile. The sample is taken approximately one metre away from the drilled face. When rounds are drilled at +17% gradient, the drill cuttings usually flow away from the face, and when rounds are drilled at a -17% gradient, the drill cuttings flow towards the face. On such occasions, the sampler seeks to find the place where the drill cuttings are "constant" all the way from side to side. Rocks greater than five centimetres in diameter are removed before the cuttings are put in the bucket.

After the sample is taken, the bucket number is recorded, together with the date and name of the drive, on a patch in the bucket. The bucket is transported up from the underground by the sampler and taken to the on-site laboratory.

While the underground sludge sampling is generally not useful due to reliability of the sample collection methods, the results do in fact appear to identify the presence of elevated gold values in the next round.

10.1.3 Surveys

10.1.3.1 Survey Grids

The coordinate system used for daily production operations at Björkdal is the Mine Grid which is in SI units. The Mine Grid is rotated 29.67° west of true north. The 0 RL elevation was based upon the highest point in the vicinity of the Mine ("Quartz Mountain"), an area which is now mined out. All drill hole and channel sample information is collected and entered into the database using the Mine Grid coordinate system.

10.1.3.2 Diamond Drilling

Currently, all diamond drill hole collars are surveyed using either Total Station surveying equipment for underground-based drill holes or Differential Global Positioning System (DGPS) surveying equipment. Downhole surveys are also carried out to record hole azimuth and dip of holes. Exploration drill holes are orientated and single shot surveyed with the Reflex EZ Shot tool as they are being drilled. These are then re-surveyed every three metres with a Gyro Smart downhole surveying tool once the drill hole has been completed.

Prior to 2010, only limited numbers of drill holes were surveyed for their down-hole deviation using a Maxibor instrument. Since 2015, downhole surveys have been carried out using a Reflex Gyro Smart tool surveying every three metres upon completion of the hole. This surveying unit initializes its orientation using a surface-references MEMS-Gyroscope prior to acquiring data measurements.

10.1.3.3 Reverse Circulation Drilling

All RC drill hole collars are surveyed. No downhole surveys were taken for grade control holes less than 70 m in length. All exploration drill holes are surveyed along their full length on completion of drilling.

The open pit grade control technician uses spray paint as well as wooden sticks to mark planned hole locations. The technician adjusts the X and Y positions as there will be differences in planned Z-coordinate and actual ground level. To ensure the correct azimuth, a marked wooden stick is placed approximately seven metres in front of the collar.

Upon completion of drilling, the technician measures the collar and direction of the drill hole with a Trimble TSC3 GPS controller unit. Unannounced visits to the drilling rigs were randomly performed by the supervising geologist during drilling operations to ensure that the dip and azimuth of the drill hole is correct. The azimuth is measured with total station and the reported measured deviations have not been greater than ±1°.

10.1.4 Underground Chip Sampling

All underground channel chip samples are based on surveyed points in relation to the Mine Grid. The Mine Geologist paints up sample locations based on the observed geological or structural features present in the face. The chip sample locations are then turned into pseudo-drill holes for entry into the drilling and sampling database using a pseudo-collar location and calculated azimuth, dip, and length.

Underground surveying is also used to map the trace of vein contacts along the face and back of the sill drifts. This data is incorporated in geological mapping and vein wireframing and is captured in full three-dimensional space into the GEOVIA Surpac software system.

10.2 Norrberget

Drilling at Norrberget has been carried out across three distinct periods in line with the priorities of the previous holders of the exploration concessions. The Mineral Resource drill hole database cut-off date was 30 September 2024. All holes completed before September 2014 were drilled by previous owners. There are no drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the Mineral Resource estimates.

10.2.1 Historical Drilling

10.2.1.1 1994 to 1996 Drilling

The Norrberget deposit was first drilled by COGEMA in 1994 as part of a program investigating the margins of the Björkdal dome and assess the potential for further significant gold deposits in the area. Further diamond drilling campaigns were carried out in 1995 and 1996 to define and extend the potential resource in this area (Table 10-6).

Table 10-6: Summary of Historical Drilling Completed from 1994 to 1996 – Norrberget Deposit

Year	Drill Hole Type	Number of Drill Holes	Metres
1994	Core	16	3,324
1995	Core	32	4,480
1996	Core	35	3,333
Total		**83**	**11,137**

10.2.1.2 2009 to 2014 Drilling

A hiatus in drilling occurred while the exploration concessions were under the ownership of NAN; no significant work was carried out on the deposit between 1997 and 2009. After the regional tenement package was purchased by Gold-Ore, there was renewed interest in the area surrounding Björkdal. Several small diamond drilling campaigns were carried out at Norrberget and the immediate surrounds by Gold-Ore and their successor Elgin between 2009 and 2014 (Table 10-7).

Table 10-7: Summary of Historical Drilling Completed from 2009 to 2014 – Norrberget Deposit

Year	Drill Hole Type	Number of Drill Holes	Metres
2009	Core	11	1,028
2010	Core	1	200
2011	Core	6	1,391
2014	Core	6	1,757
Total		**24**	**4,376**

10.2.1.3 Mandalay Drilling

After the 2014 acquisition of the property by Mandalay, much of the core from previous drilling campaigns was relogged and re-assayed to confirm the accuracy of historical results and test the geological model for the area. In 2016, a diamond drilling program was undertaken to confirm the historical drilling and extend the resource. A small RC drilling campaign took place in the summer of 2017 to in-fill the known mineralization.

A summary of the drilling programs performed by Mandalay from 2015 to September 2017 is provided in Table 10-8.

Table 10-8: Summary of Mandalay Drilling Completed– Norrberget Deposit

Year	Drill Hole Type	Open Pit	
		Number of Drill Holes	Metres
2015	Core	1	182
2016	Core	24	2,542
2017	RC	12	1,400
2023	Core	12	2,077
2024	Core	8	1,627
Total		**57**	**7,828**

10.2.1.4 Diamond Drilling

Diamond drilling at Norrberget since 2016 has been carried out with wireline diamond-core drilling methods by experienced Finnish drilling contractors Oy Kati AB. Drilling equipment has been appropriate to produce core to the WL76 (57.5 mm core diameter) standard. All drill holes were surveyed with modern computerized gyroscopic tools at hole completion, while also being regularly check-surveyed for unexpected deviation as the drilling progresses using modern multi-shot "camera" downhole tools. Core orientation tools were used on all holes in order for geologists to measure the orientation of all geological structures identified. Drill holes that are collared in unconsolidated materials (i.e., soil and till) were cased with traditional methods with either Boart-Longyear, or Hagby series casing rods and bits.

All drilling completed by Mandalay was designed and supervised by Mandalay/Björkdal geologists. Drill hole layouts are designed with the aid of the Surpac 3D software package.

A selection of the significant intersections returned from the Norrberget deposit is provided in Table 10-9. A plan view of the contoured gold grades is provided in Figure 10-3. A plan view of the drill hole locations is provided in Figure 10-4.

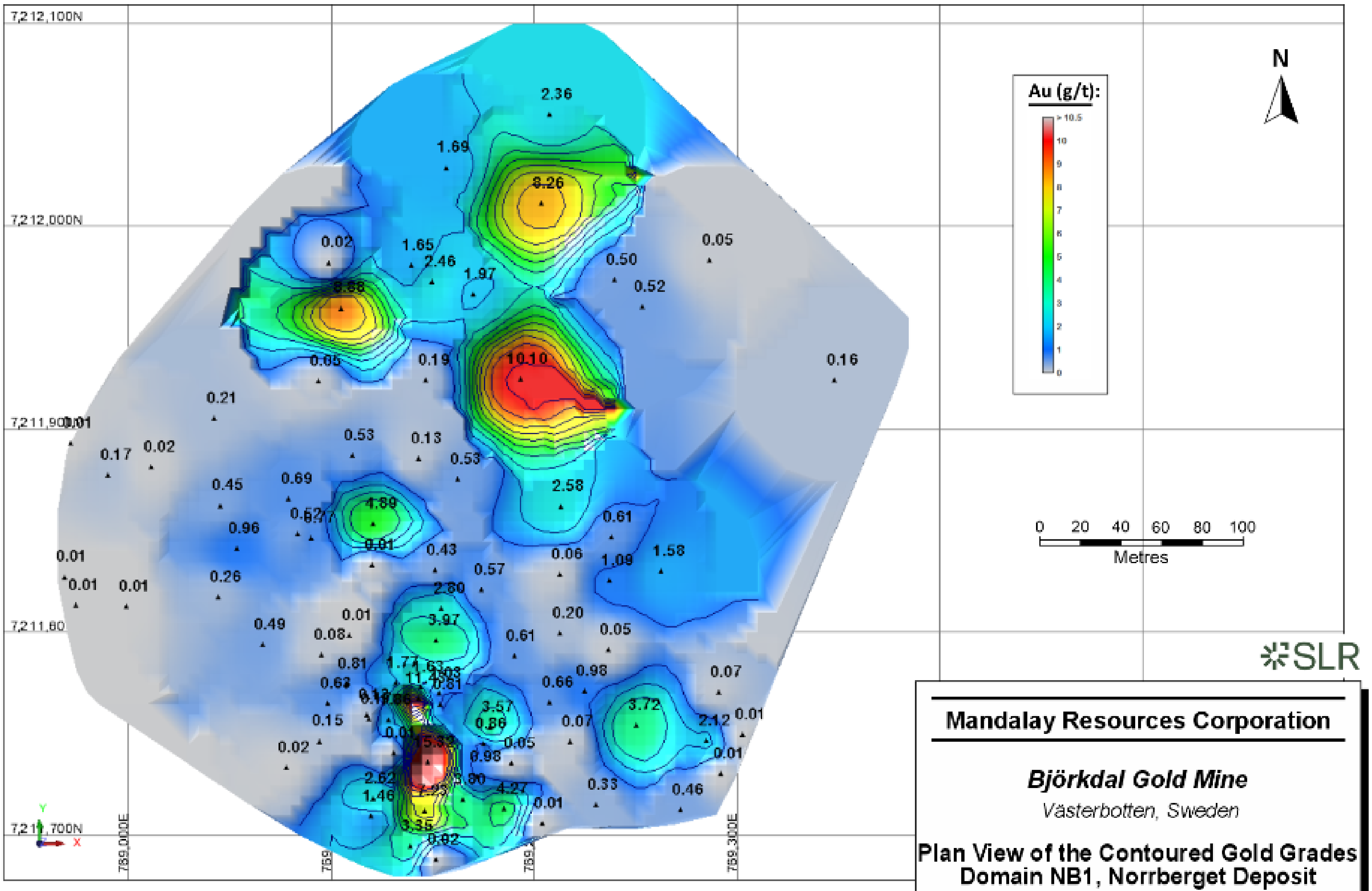
Table 10-9: Summary of 2323 and 2024 Significant Intersections – Norrberget Deposit

Drill Hole ID	From (m)	To (m)	Core Length (m)	Grade (g/t Au)
NB23-004	111.81	117.35	5.54	10.10
NB23-005	134.23	138.7	4.47	1.65
NB23-006	130.67	135.16	4.49	1.97

Drill Hole ID	From (m)	To (m)	Core Length (m)	Grade (g/t Au)
NB23-007	120.81	123.81	3.00	8.8
NB23-008B	143.39	146.18	2.79	2.47
NB24-006	156.59	161.6	5.01	8.26
NB24-007	131.41	135.41	4.00	1.69
NB24-008	182.87	187.73	4.86	2.36

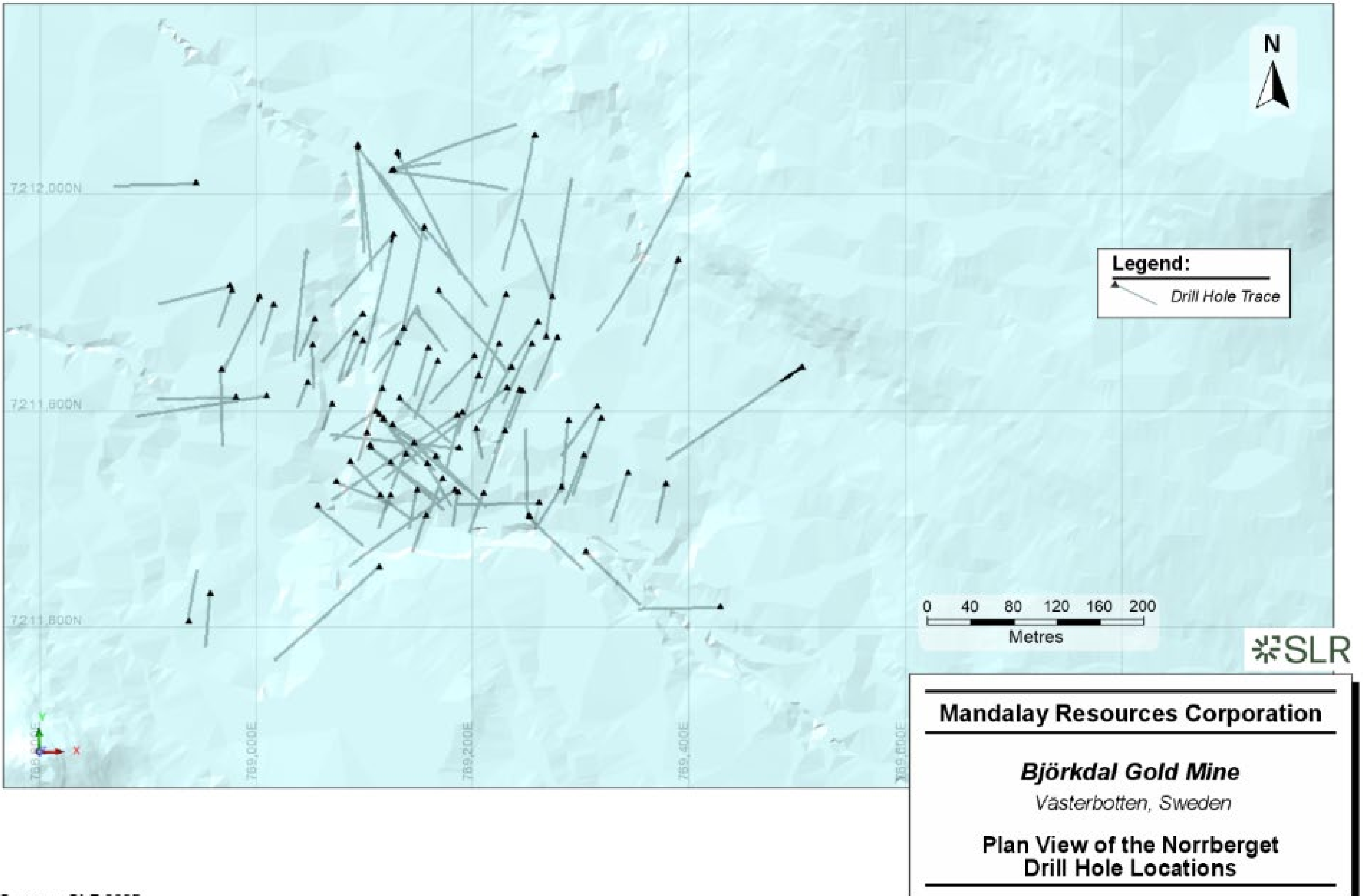
Note: Estimated true widths range from approximately 70% to 90% of the core lengths.

Figure 10-3: Plan View of the Contoured Gold Grades, Domain NB1, Norrberget Deposit



Source: SLR 2025.

Figure 10-4: Plan View of the Norrberget Drill Hole Locations



Source: SLR 2025.

10.2.1.5 Reverse Circulation Drilling

Exploration RC drilling was undertaken at Norrberget during the summer of 2017 in order to quickly provide in-fill information for the deposit. The drilling was undertaken by an experienced international drilling operator, Mason & St John, based in the UK. Drilling was undertaken with a multi-purpose drilling rig equipped with 5.5 in. RC diameter bit on six metre rods. The holes were surveyed at completion with modern computerized gyroscopic tools. Samples were taken every one metre of drilling where they are split directly out of the cyclone in a riffle-splitter. Two samples were collected; with one sent directly to the laboratory for analysis while the other is sieved and washed in order for geological logging to take place. A booster compressor was used on deeper holes (+150 m hole depth) to maintain dry samples when water ingress increases with depth, or water bearing fracture networks were intercepted.

All RC drill holes are planned by Mandalay/Björkdal geologists using the GEOVIA Surpac 3D software.

10.2.2 Surveys

10.2.2.1 Survey Grids

The coordinate system used at Norrberget is SWEREF99, the official Swedish reference system.

10.2.2.2 Diamond Drilling

All diamond drill hole collars were surveyed using DGPS surveying equipment. Downhole surveys were also carried out to record hole azimuth and dip of holes. Exploration drill holes were orientated using a Reflex EZ Shot tool. Their down-hole deviations were determined using the EZ Shot single shot survey tool as they were being drilled. Their final down-hole deviations were measured every three metres using a Gyro Smart downhole surveying tool.

Prior to 2010, only limited numbers of drill holes were downhole surveyed using a Maxibor instrument. From 2015 onwards, downhole surveys were carried out using a Gyro Smart surveying tool at a spacing of every three metres upon completion of the hole.

10.2.2.3 Reverse Circulation Drilling

All RC drill hole collars are surveyed. All holes are surveyed along the full length of hole, at completion with modern computerized gyroscopic tools.

11.0 Sample Preparation, Analyses, and Security

Samples from Björkdal and Norrberget are prepared and analyzed at CRS Laboratories Oy (CRS), an independent laboratory located in Kempele, Finland and with a subsidiary laboratory on-site at Björkdal. CRS is certified according to ISO 9001:2008 and accredited by FINAS Finnish Accreditation Service, ISO 17025:2017 (T342), and is independent of Mandalay. Samples are also analyzed by ALS Minerals, an independent, ISO-accredited laboratory located in Piteå, Sweden, which also is independent of Mandalay. The ALS Minerals laboratory (ALS Piteå) is accredited by SWEDAC for several analytical methods (reg nr 2030) and compliant with international standard ISO 17025.

Whole core samples and RC samples are sent directly to the laboratories for sample preparation and assaying. Assaying is conducted utilizing the Pulverize and Leach (PAL) PAL1000 test machine. Quality assurance and quality control (QA/QC) included the use of standard reference samples, blanks, duplicates, repeats, and internal laboratory quality assurance procedures. It is understood by Björkdal personnel that the PAL method reports the cyanide soluble portion of gold within a sample. Checks have been conducted on residue material remaining after PAL assaying to confirm the completeness of the digestion stage and the transfer of gold to solution. The checks typically demonstrate that Björkdal mineralised material behaves well with this method and returns residue values of between 0.6 to 1% of the reported gold assay value.

Underground chip and sludge samples were collected by geological technicians and delivered directly to the on-site laboratory. The on-site laboratory, which utilizes a PAL1000 unit, was established in June 2016 and was run by Minlab AB, a subsidiary of CRS, until April 2018. From May 2018 until April 2020 the on-site laboratory was run by ALS Minerals. Since May 2020, the on-site laboratory has been run by Minlab AB.

Underground sludge samples have been submitted to the site laboratory for analysis for production purposes, however these assay results have not been used in the Mineral Resource Estimation. The Mandalay SOPs are applied to Björkdal, Storheden, and Norrberget sample preparation, analyses, and security.

11.1 Diamond Drill Core Sampling

The standard sampling procedure is documented in Mandalay's SOP GEO 20200527. This SOP requires diamond drill rig personnel to place the recovered drill core into wooden trays labelled at the drill site with the drill hole number and meterage values. End-of-run meterage markers are placed in the core tray between the end and start of each recovered drill run. For underground drilling, the core trays are placed on a pallet containing up to 12 boxes, strapped, and then brought up to surface where they are delivered to the Björkdal on-site core processing facility. During surface drilling operations, the core is delivered each day to the Björkdal on-site core processing facility by the drilling company.

Upon receipt, the boxes are sorted out sequentially by hole number and the core is oriented in the box. Then the core is cleaned with fresh water, measured to check meterage and each core box gets marked with meterage values. Any discrepancies are reported back to the drill foreman for confirmation.

The geologist generally logs twelve boxes at a time. The core is visually inspected, logged for rock quality designation (RQD), structure, lithology, alteration, and sampling, where samples are separated and bounded by geological contact such as lithological, alteration, and veining contacts. Criteria for sampling include the following:

- All veins are sampled (quartz, carbonate, sulphides, tourmaline, calc-silicates, etc.). Sampling intervals either side of the veined material are taken based on geology and are typically between 0.30 m and 1.2 m in length.
- Lithological and alteration contacts.
- All faults.
- Highly fractured or altered segments and other geologically interesting intervals such as abundant sulphides.

Core logging data captured is entered directly into a local GeoSpark master database. The database software ensures that entered data is restricted to a valid range of accepted codes. Geological data collected includes:

- Lithology:
  - Rock code grain size, foliation, texture name and texture intensity fields, and general description.
- Alteration:
  - Types and degree of alteration.
- Veining:
  - Descriptions of visible minerals observed (i.e., sulphides, visible gold, tsumoite, tourmaline, etc.) are made only for quartz veins ≥ 5 cm in width as well as the number of veins in the interval.
  - For veins less than 5 cm in width, this information is captured by an entry in the structural table using a zero width.
- Structures:
  - Type of structure (for example, bedding, foliation, fault, vein, etc.).
  - Measuring data from oriented core.
- Geotechnical:
  - Calculation of RQD for a maximum length of one metre.

After every table of boxes is logged, digital photographs of wet drill core are taken. These are stored on the Björkdal file server.

Sample tags are placed in the boxes before taking a photograph to make sure they do not move before sampling. The minimum sample length varies from 15 cm for WL66 and NQ2 core to 30 cm for WL46 (drill rig decommissioned in 2018) and WL 56 core to ensure reasonable minimum sample weights. The maximum sample length is 1.2 m.

A geological technician samples the whole core (unless the drill core is WL76 in which case it is halved and then sampled), carefully breaking the core with a hammer at the sample locations. The samples are placed into plastic bags with a sample tag and sample number written on each bag with a permanent marker pen. The plastic bags are twisted closed and sealed with a zip tie. The sample is then placed into a wooden palletized box which contains a Fabrene bailer bag for transport to a laboratory.

The Björkdal analytical quality control program includes insertion of blanks and standards into the sample stream in accordance with SOP GEO202003126 "Rutin för Standards, blanks och duplikater". The protocol calls for blanks to be inserted in the sample stream at a rate of approximately one in 20 samples and after every sample containing visible gold. A 500 g blank sample is used. Blank material is obtained from a dimension stone outlet that sourced the rock from a granite quarry in Finland. The blank material, although not obtained from a commercial supplier, has been assayed more than 7,000 times with grades not reporting above the detection limit. The company remains confident that the supplied blank material is suitable for use as a QA/QC check in sample batches as it contains no gold or silver grades.

Björkdal inserts 100 g certified reference material (CRM) samples at a rate of one in a 20 sample batch. Björkdal purchased the bulk CRMs from Geostats Pty Ltd, Western Australia. The geological technician weighs and bags CRM at the sample preparation laboratory (SPL). The blanks and CRMs are inserted into the bailer bags stream prior to shipment. Once full, the bailer bag is tied shut with security tags, and thick plastic is then draped and stapled shut over the top of the box in order to protect it from the elements during loading and transport.

The SLR QP recommends that, considering the good performance record of the sample preparation and analytical protocols over the past years, the insertion frequency of blank and CRM materials be reduced for those samples processed through the on-site laboratory. The insertion frequency for blank and CRM materials should be retained for any samples sent to off-site laboratories.

11.2 Diamond Drill Core Sample Preparation and Analysis

Prior to April 2018, the majority of the samples were assayed by CRS in Kempele, Finland, which is independent of Mandalay. CRS is certified according to ISO 9001:2008 and accredited by FINAS Finnish Accreditation Service, ISO 17025:2017 (T342). CRS collaborates with MSALABS in Canada and acts as their representative in Finland. MSALABS are certified according to ISO 9001:2008 and their laboratory in Vancouver, Canada, is also accredited by IAS according to ISO 17025:2017 (TL-736). CRS' main laboratory is located in Kempele, Finland, directly east of Björkdal across the Baltic Sea (or approximately 410 miles by road).

In April 2018, ALS Minerals took over operation of the on-site laboratory in Björkdal from Minlab AB (CRS) and carried out analyses until May 2020. Since May 2020 operation of the Björkdal on-site laboratory has been carried out by Minlab AB (CRS). The on-site laboratory mainly analyses grade control samples such as chip samples and sludge samples, but also drill core samples from development and production optimisation drilling.

Samples collected from exploration drilling programs are analyzed by CRS at their laboratory facilities located in Kempele, Finland.

11.2.1 Sample Preparation

11.2.1.1 CRS Procedures – prior to April 2018

- The sample preparation procedures carried out consist of the following:
- Weighing (received weight) and listing preparation of received samples.
- Drying of wet samples in drying ovens.
- Crushing of samples until >80% < 2 mm. The crusher is cleaned with pressurized air after every sample and cleaned with blank stones between batches.

- Splitting to 500 g subsample with rotating sample divider for PAL1000. The sampler divider is cleaned with pressurized air between every sample. There are two duplicate split samples in a PAL1000 pulverization run.
- Analysis by PAL1000 analytical method.

11.2.1.2 ALS Procedures – April 2018 to May 2020

ALS Piteå is an accredited laboratory in accordance with the International Standard ISO/IEC 17025:2005. The ALS sample preparation facility in Piteå has internal standard procedures and quality controls for sample preparation in place to ensure that samples are prepared in compliance with industry standards. The laboratory also has a digital Laboratory Information Management System (LIMS).

The sample preparation procedures carried out on Björkdal's diamond drill core samples at the Piteå facility consisted of the following:

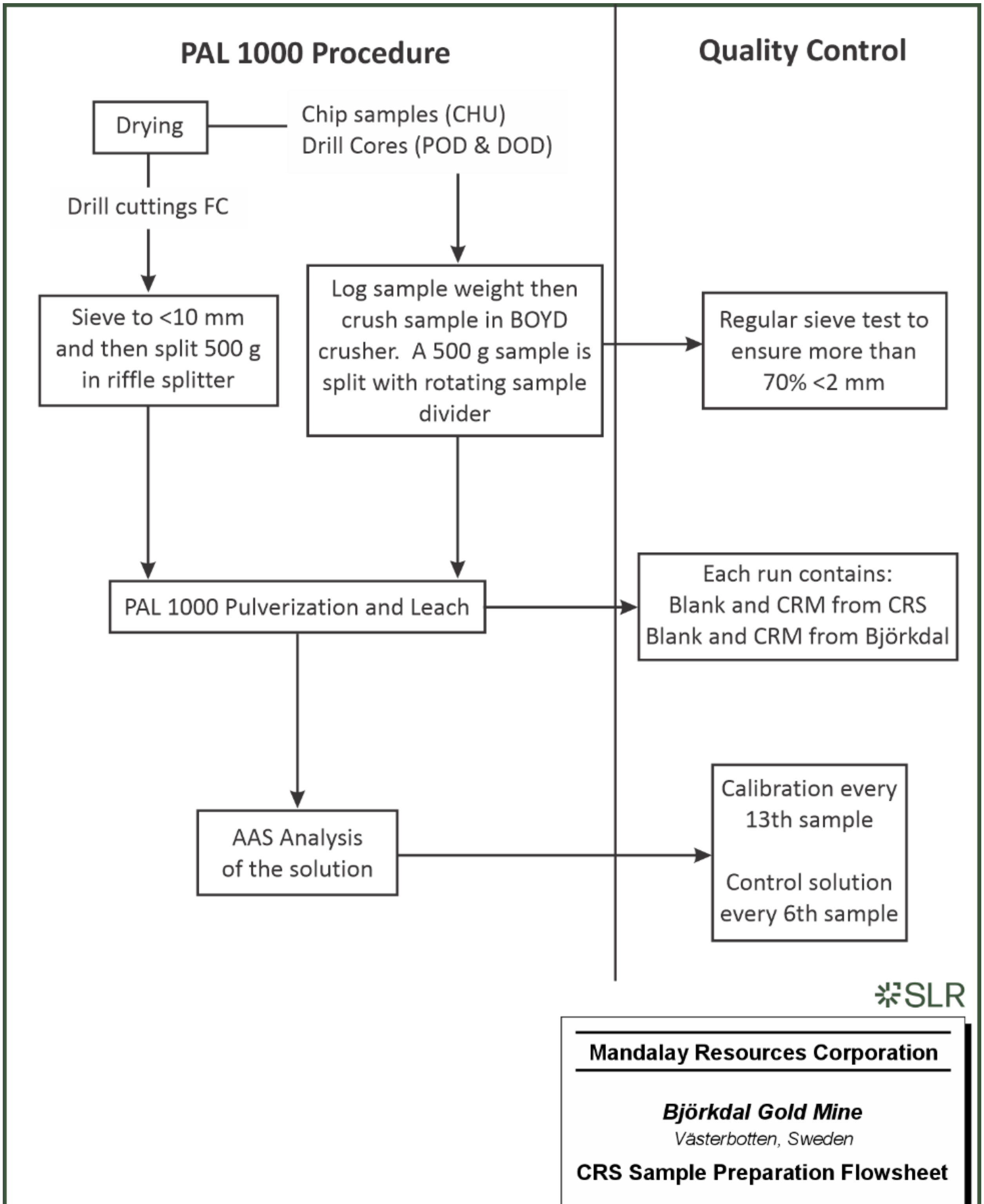
- Logging each sample upon arrival in the LIMS system and attaching a bar code label.
- Drying of wet samples in drying ovens.
- Fine crushing of samples to better than 70% of the sample passing two millimetres.
- Splitting sample using rotary splitter.
- Pulverizing a sample split of up to 1,500 g to better than 85% of the sample passing 75 µm.

11.2.1.3 CRS Procedures – May 2020 to Current

The majority of drill core is analyzed at the CRS laboratory in Kempele, Finland, using PAL1000 with an atomic absorption spectroscopy (AAS) finish (Figure 11-1). The PAL1000 analysis method has a lower detection limit of 0.05 g/t Au and an upper detection limit of 300 g/t Au, or a lower limit of 0.01 g/t Au if the gold from the sample solution is extracted into Di-Isobutyl Ketone (DIBK) prior to the AAS-read, which is the usual method for exploration core analysis.

The PAL1000 machine contains 52 steel pots, each having the maximum capacity of 1,000 g sample, 1,000 mL water, and grinding media (steel balls). Samples are completely pulverized, typically to 90% passing (P_{90}) <75 µm, and simultaneously leached with cyanide.

Figure 11-1: CRS Sample Preparation Flowchart



Source: SLR 2024.

11.2.2 Sample Analysis

11.2.2.1 CRS – May 2020 to current

The PAL1000 analysis is performed according to the following steps:

1 The 500 g sample is placed in a numbered plastic sample container.

2 The sample is inserted into the PAL1000 machine jars together with a cyanide pill and 500 mL of water.

3 The jars are sealed, and the machine is run for 1.5 hours.

4 10 mL of fluid is extracted from the jars with a single use pipette into a numbered single-use test-tube in a rack. The single use pipette is discarded after use.

5 The rack with the test-tubes is moved to the AAS machine.

6 Analysis of the solution is performed by AAS.

Blank tests are performed in every PAL run throughout the process in order to rule out the possibility of contamination in any of the various analysis steps. Blanks are inserted both by the laboratory following their own internal QA/QC and by Björkdal personnel in the sample stream, according to SOP GEO 202003126_"Rutin för Standards, blanks och duplikater". The AAS analysis is calibrated every 13th sample with standard solutions of known gold grades and checked every 6th sample with a standard solution. After the completion of AAS analysis and the laboratory introduced QA/QC has passed, the PAL machine can be cleaned with water.

11.3 Reverse Circulation Sample Preparation and Analysis

11.3.1 Sample Preparation

Exploration RC drilling consists of 5.5 in. diameter RC holes that are sampled every metre. Drill cuttings are dropped out of the cyclone though a large riffle splitter at the completion of a one metre drilling interval. Two samples are collected, one sample of approximately three to four kilograms in a single calico bag (sample split), and a further sample of 20 kg or more collected in a large green nylon bag (sample residual). Field duplicates are taken from the cone splitter when required. Both bags have sample numbers written on them, and a ticket number is placed inside each bag. The calico bag samples are placed within a boxed pallet for transport directly to the laboratory, while the larger nylon bags are neatly placed in an ordered row for later chip sampling from a site geologist.

The RC chips are sieved, washed, and placed in chip-trays for later lithological, alteration, and mineralogy (i.e., quartz, carbonate, sulphide, etc.) logging. Data from logging is entered directly into the GeoSpark master database program. Standards and blanks are alternately inserted approximately every 20 samples into small, sealed plastic bags, and then within numbered calico bags (with their corresponding numbered sample tag) and inserted among the samples that are placed within the boxed pallet.

When required, RC grade control drilling in the open pit consists of five inch diameter holes with one metre samples on approximately 15 m spacing with 7.5 m in-fill spacing where possible. Drill cuttings are divided by a rotary splitter and collected in calico bags and a sample tag is added after removal from the drilling rig. The amount of sample collected is approximately three to four kilograms. The drillers then take a further sample, sieve it so the fine content is removed, and place it in an RC Lithology Sample Tray. The RC chips are then logged in the same way as the exploration RC samples. No RC-drilling has taken place in the open pit since August 2019.

Samples that are placed in a large, boxed pallet are transported to the on-site laboratory. At the on-site laboratory, the RC samples are poured on a metal tray and dried at 90°C until the samples are dry (approximately 24 hours). The samples are then placed in numbered plastic bags. The blanks and CRMs are inserted into the bailer bags prior to shipment at a rate of one standard and one blank sample for each hole. Once full, the bailer bag is secured with a security zip tie.

11.3.2 Sample Analysis

Historically, RC samples were sent to ALS Piteå for LeachWELL assaying. In 2014, Björkdal sent a limited number of RC samples to the Svartliden Mine Laboratory (Svartliden), located approximately 200 km west of Björkdal. Between 2015 and 2019, RC samples from grade control drilling were assayed at the on-site laboratory using PAL1000 equipment. No RC-drilling has taken place since August 2019.

The PAL1000 machine contains 52 steel pots, each having the maximum capacity of 1,000 g sample, 1,000 mL water, and grinding media (steel balls). Samples are completely pulverized by adding steel balls to the pots (typically to more than 90% < 75 µm) and simultaneously leached with cyanide. The solution is analyzed for gold by AAS. Assay limits range from a lower method detection limit of 0.05 g/t Au to an upper method detection limit of 300 g/t Au.

Check assaying is conducted to evaluate the level of precision, accuracy, and analytical errors that may be present at the primary assay laboratory.

Samples are reanalyzed if the results of the quality control for a batch are deemed unsatisfactory (i.e., more than three standard deviations from the expected value). All RC rejects are stored for one year after all assays have been received, checked, and inserted into the master database (GeoSpark Source) by the database geologist. After one year, 90% of the rejects are discarded.

All RC data is reviewed and then stored in the secure network GeoSpark drill hole database system. The SLR QP recommends that standard protocols and written procedures for QA/QC review be implemented by a designated Database Manager.

11.4 Chip and Sludge Sample Preparation Procedures

11.4.1 Chip Sample Preparation

The in-mine chip samples are prepared and analyzed at the Björkdal on-site assay laboratory. Chip samples are generally approximately five kilograms in weight, are poured onto a tray and dried at 100°C until the sample is dry (approximately three hours). The entire sample is then crushed in a jaw crusher until 70% of the material is less than two millimetres. The jaw crusher is cleaned with blank stones and pressurized air after every sample. The sample is then split into a 500 g subsample with a rotary splitter and the leftover amount of sample is archived. After one year, 90% of the rejects are discarded. The rotary splitter is cleaned with pressurized air after every sample. The samples are placed into numbered plastic pints and moved over to the laboratory.

11.4.2 Sludge Sample Preparation

The in-mine sludge samples are prepared and analyzed at the Björkdal on-site assay laboratory. The collected drill cutting sample is poured on a tray and dried at 100°C until the sample is dry (approximately six hours). While the gold contents of mine sludge samples are measured for production planning purposes, these results are not used for Mineral Resource estimation.

The sample is split into a 500 g subsample with a rotary splitter and the left over sample is archived. After one year, 90% of the rejects are discarded. The rotary splitter bins are cleaned with compressed air after each sample. Samples are then placed into numbered plastic bags and moved over to the laboratory.

11.4.3 Chip and Sludge Sample Analysis

Assaying of the in-mine chip and sludge samples is conducted at the Björkdal on-site laboratory using the PAL1000 method. Samples are completely pulverized (typically to more than 90% < 75 µm) and simultaneously leached with cyanide. The solution is analyzed for gold by AAS. Assay limits range from a lower method detection limit of 0.05 g/t Au to an upper method detection limit of 300 g/t Au.

Check assaying is done to evaluate the level of precision, accuracy, and analytical errors that may be present at the primary assay laboratory.

Samples are reanalyzed if the results of the quality control for a batch are deemed unsatisfactory (i.e., more than three standard deviations from the expected value). The samples are assayed using PAL1000 cyanide leaching, and the jars are cleaned with quartz sand and water after every run. Two CRMs, two duplicates, and a blank sample are inserted in every run.

The following standard procedures are undertaken for mine chip and sludge samples at the Björkdal on-site laboratory:

1 The 500 g sample is placed in a numbered plastic sample pint.
2 The sample is inserted into the PAL1000 machine jars together with a cyanide pill and 500 mL of water.
3 The jars are sealed, and the machine run for 1.5 hours.
4 10 mL of fluid is extracted from the jars with an auto-pipette into a numbered single-use test-tube in a rack. The tip on the autopipette is changed regularly and always cleaned with water.
5 The rack with the test-tubes is moved to the AAS-machine.
6 Analysis of the solution is performed by AAS.

Blank tests are run daily throughout the process in order to rule out the possibility of contamination in any of the various analysis steps. The AAS analysis is calibrated before each measurement with standard solutions containing known gold grades. Once all the QA/QC has passed and the assays have been reported, the PAL machine is thoroughly cleaned with water.

11.5 Quality Assurance and Quality Control Results

No QA/QC data is available for historical drilling prior to 2004. RC drilling for grade control purposes carried out from 2006 to 2013 and assayed at ALS did not include any QA/QC insertions into the sample stream. From 2013 to 2014, standard and blank samples were inserted into the sample stream with one blank and one standard sample inserted per RC drill hole. In 2014, RC samples were sent to the uncertified CRS and Svartliden laboratories.

A full description of the details and results of the QA/QC programs carried out prior to Mandalay's acquisition of the Mine in 2014 can be found in RPA (2015).

11.5.1 Blank and Standard Reference Materials

Following Mandalay's acquisition of the Mine in 2014, the QA/QC protocols were updated to include the regular insertion of blanks and multiple standards within each 20 sample batch. A blank sample was also inserted after every sample containing visible gold.

The following review of the QA/QC sample results includes:

- Regional exploration drilling data
- Underground and near-mine surface Exploration drilling data
- Grade control data from 2015 and January to December 2024

A summary of the QA/QC samples taken from 2015 to 30 December 2024 is provided in Table 11-1.

Table 11-1: Summary of QA/QC Sampling

Year	Blanks	Standards	Other	Total
2015	114	538	-	652
2016	1,832	2,456	233	4,521
2017	1,936	2,525	222	4,683
2018	1,992	2,724	243	4,959
2019	2,392	2,348	167	4,907
2020	3,263	3,149	-	6,412
2021	3,234	3,337	-	6,571
2022	2,861	2,960	-	5,821
2023	2,716	2,788	189	5,693
2024 [1]	2,239	2,010	144	4,393

Note:

1. Statistics for 2024 are up to September 30.

Mandalay manages the results of the QA/QC program by compiling all of the results from the blank samples and CRMs into an Excel spreadsheet where the grades of the sample in question are compared to the second and third standard deviation results.

Starting in 2016, control charts are also prepared by the laboratory on a routine basis during the normal course reporting of the analytical results from the PAL assays. As the PAL process reports the recovered portion of the gold within any given sample, a comparison of the PAL results with the stated recommended value of a CRM is not valid. Rather, the control charts for the CRMs are slightly modified to report and compare the cyanide-leachable portion of a CRM to the stated value of the certified standard (Figure 11-2). The results from the blank samples are graphically presented using conventional scatter plots (Figure 11-3). SLR examined the results of the CRM and blank samples processed in 2023 and 2024 and found that the QA/QC program has produced acceptable results, with the failure rate, as measured using a three standard deviation threshold, being less than 5% for the blank and standard reference materials. No material issues were identified.

If any CRM assays are found to exceed three standard deviations from the recommended values, the database system prevents the associated assays from being entered into the assay table and places that batch of samples into a quarantine file for review and investigation. From experience, many of the out-of-range samples have been found to be the result of either the inserting of an incorrect CRM, or a mis-labelling of the CRM. For the remaining cases, or if a blank sample exceeds a value of either 0.10 g/t Au (twice the detection limits of the PAL assay method for mine samples) or 0.05 g/t Au (five times the detection limit of the Fire Assay method for exploration samples), the laboratory is requested to re-assay that batch of samples.

Figure 11-2: Sample Control Chart for Certified Reference Standard G319-5, 1 January 2023 to 30 December 2024

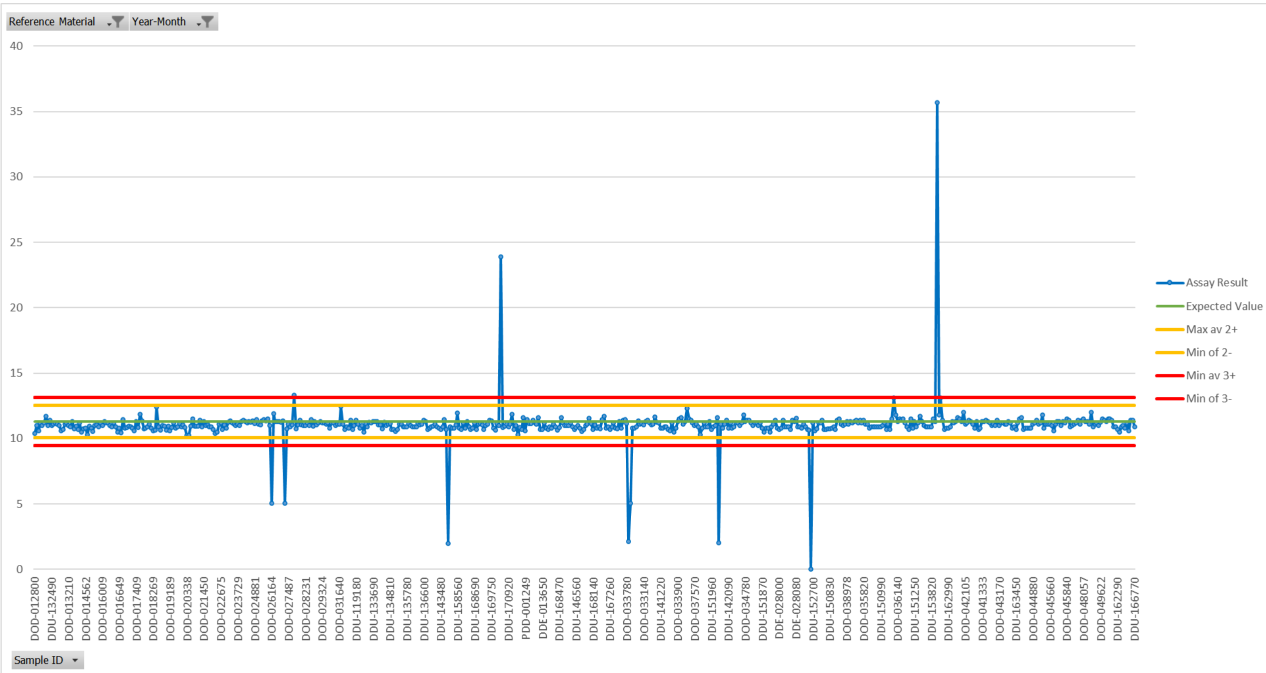
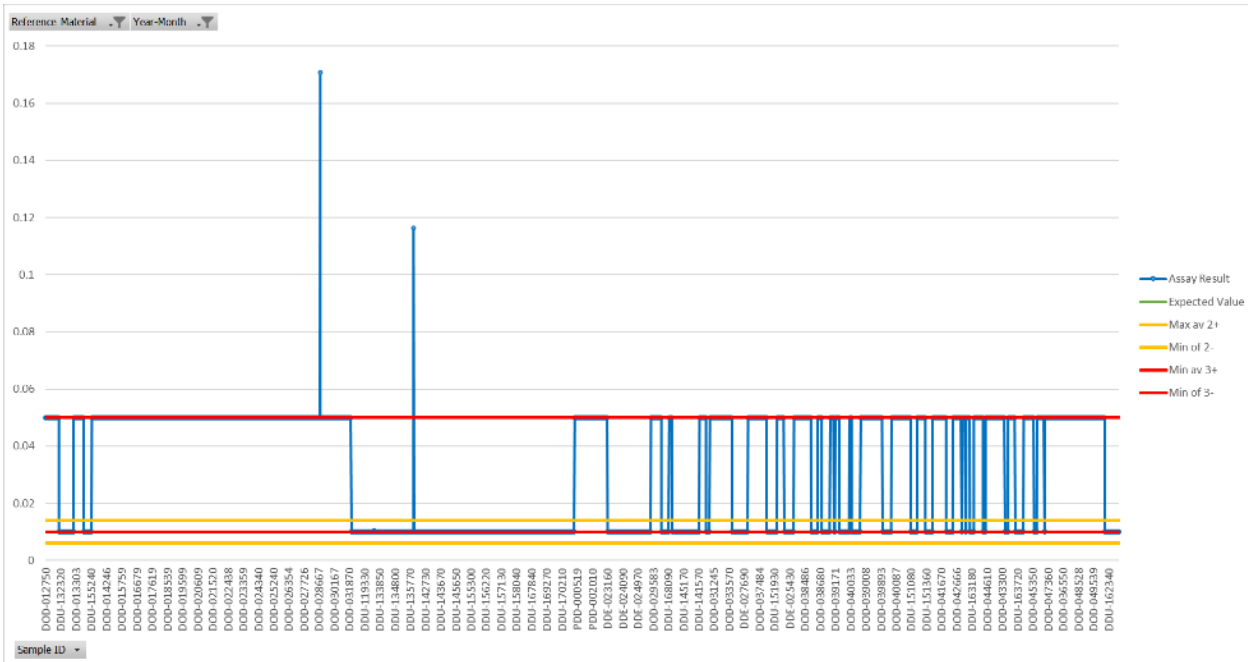


Figure 11-3: Sample Control Chart for Blanks, 1 January 2023 to December 31 2024



11.5.2 Duplicate Samples

A total of 189 reject duplicate assays have been completed in 2023 and a total of 144 reject duplicate assays in 2024 by CRS laboratory for gold. The duplicates are assayed as separate samples in different batches from both exploration drill core samples and mine face/wall channel samples.

Scatter plots of the reject duplicate results are presented in Figure 11-4 and Figure 11-5. No clear, consistent bias between the original and duplicate is observed.

Figure 11-4: Duplicate Reject Sample Results 2023

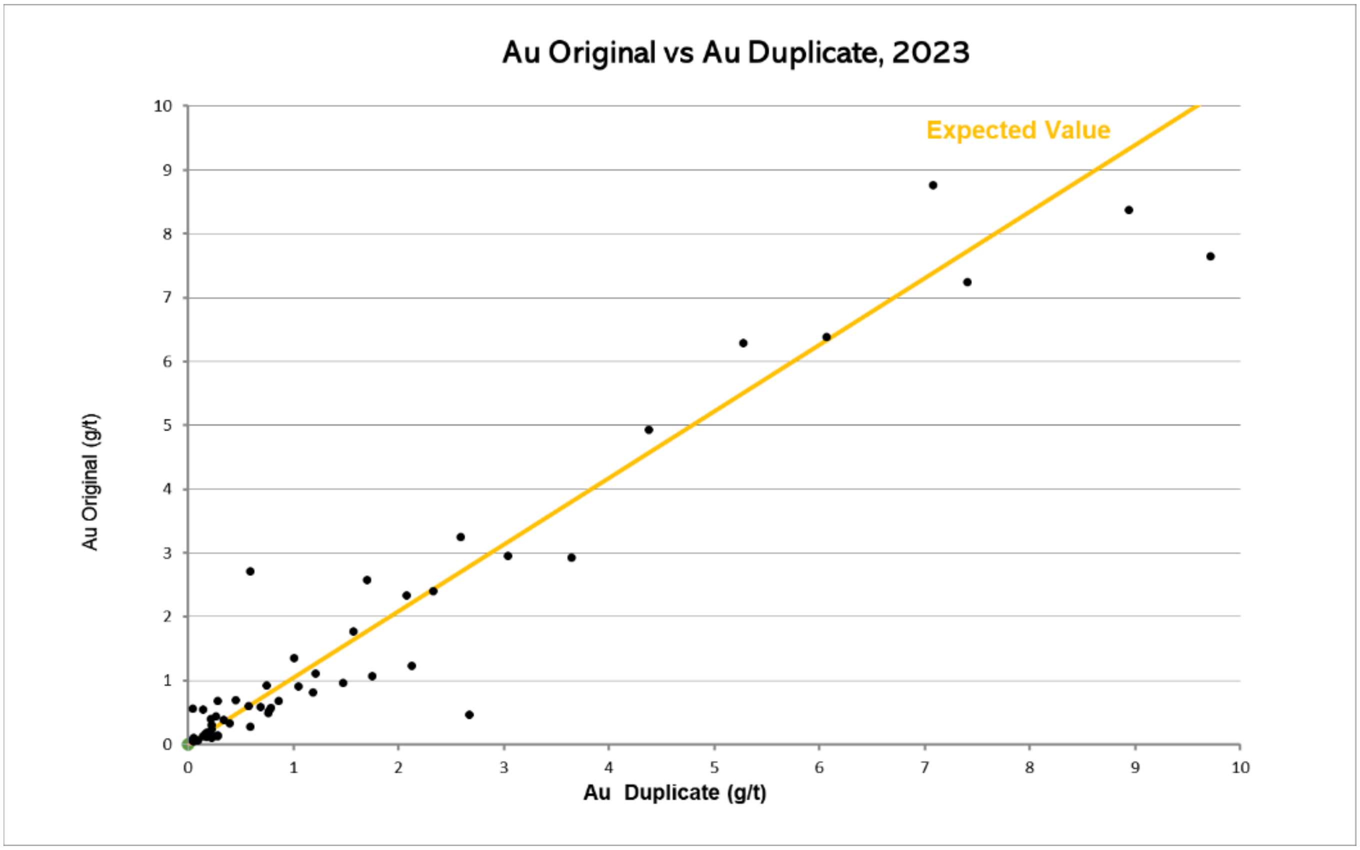
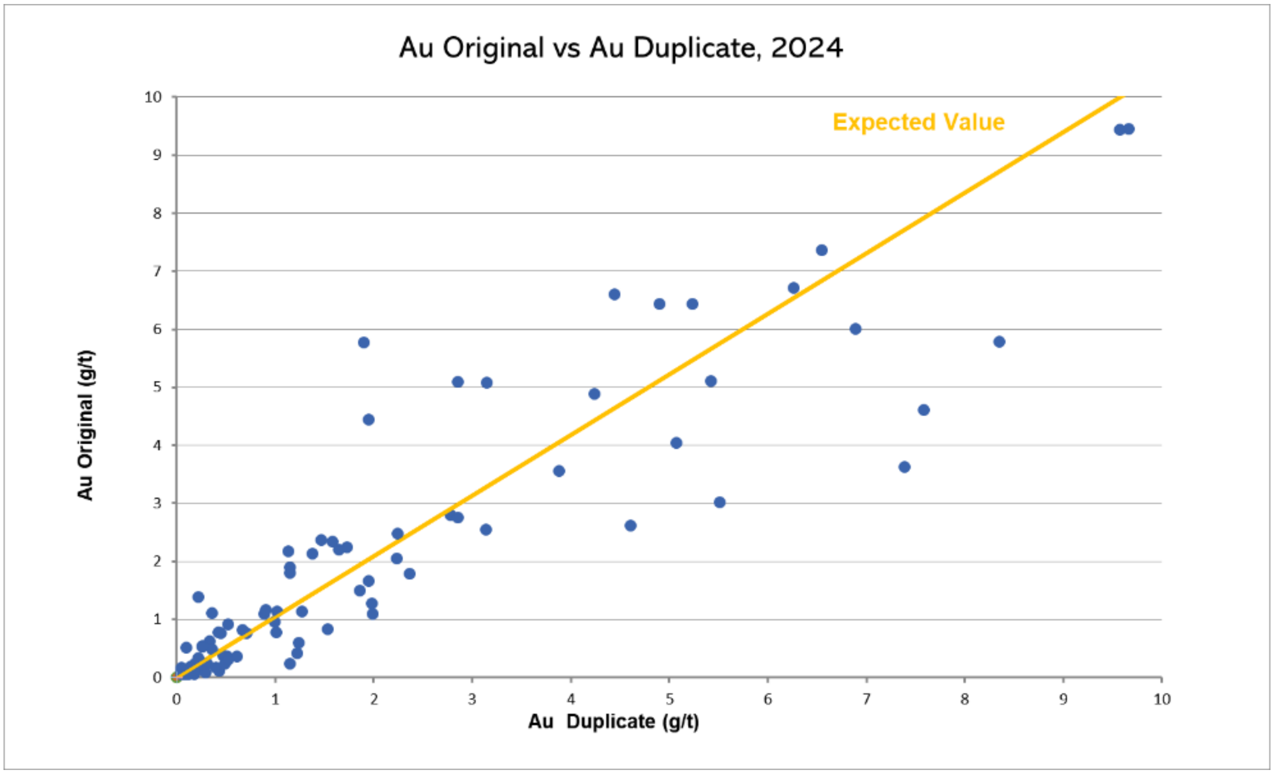


Figure 11-5: Duplicate Reject Sample Results 2024



11.6 Security

The Mine site has not experienced any major security issues. Access to the mine area, which is fenced, is restricted to authorized personnel that have received the Standard Solution Group (SSG) general safety training course, the SSG Björkdal local training course, and have been given access to pass through the gates with their personal key card.

Björkdal drill and mine samples, as well as Norrberget exploration samples, are transported from the site to the Björkdal on-site core logging and sample preparation facility, which is located within a secure area. All diamond drill core is logged into laptop versions of the Datashed drill hole database system. The stand-alone logging laptop computers are typically backed up on a daily basis. The Datashed database is located on the Björkdal server, with daily backups and access restrictions based on user level.

Only persons permitted by Björkdal are allowed to handle the samples.

Commercial freight companies are used to transport the samples to the appropriate independent sampling and assaying laboratories. Sample shipment lists are emailed to the assay laboratory.

11.7 Discussion and Recommendations

In the QP's opinion, the sample preparation, analysis, and security procedures at Björkdal and Norrberget are adequate for use in the estimation of Mineral Resources.

Björkdal utilizes the PAL1000, or LeachWELL in the past, cyanide leach assaying technique for all samples. The SLR QP agrees that PAL1000 is suitable on large samples (>500 g) for deposits with coarse or particulate gold and, in Björkdal's case, should provide a reduction in sampling errors over fire assay techniques. The QP notes that PAL1000 assays report cyanide recoverable gold within a sample, and not necessarily the total gold in the sample.

In the QP's opinion, the QA/QC program as designed and implemented by Mandalay is adequate and the assay results within the database are suitable for use in a Mineral Resource estimate.

12.0 Data Verification

12.1 Björkdal

The SLR QP's most recent site visit was carried out on 8 and 9 November 2022, during which visits were made to several underground locations in order to observe the nature of the host rocks, the style of the mineralization, and the structural complexity of the mineralization in several locations. Visits were also made to the on-site core shack and adjoining analytical laboratory to examine and discuss the core logging and sampling procedures as well as to discuss the analytical procedures used to determine the gold values. A general tour of the site was carried out in order to observe the major infrastructure items. SLR personnel also visited the processing plant.

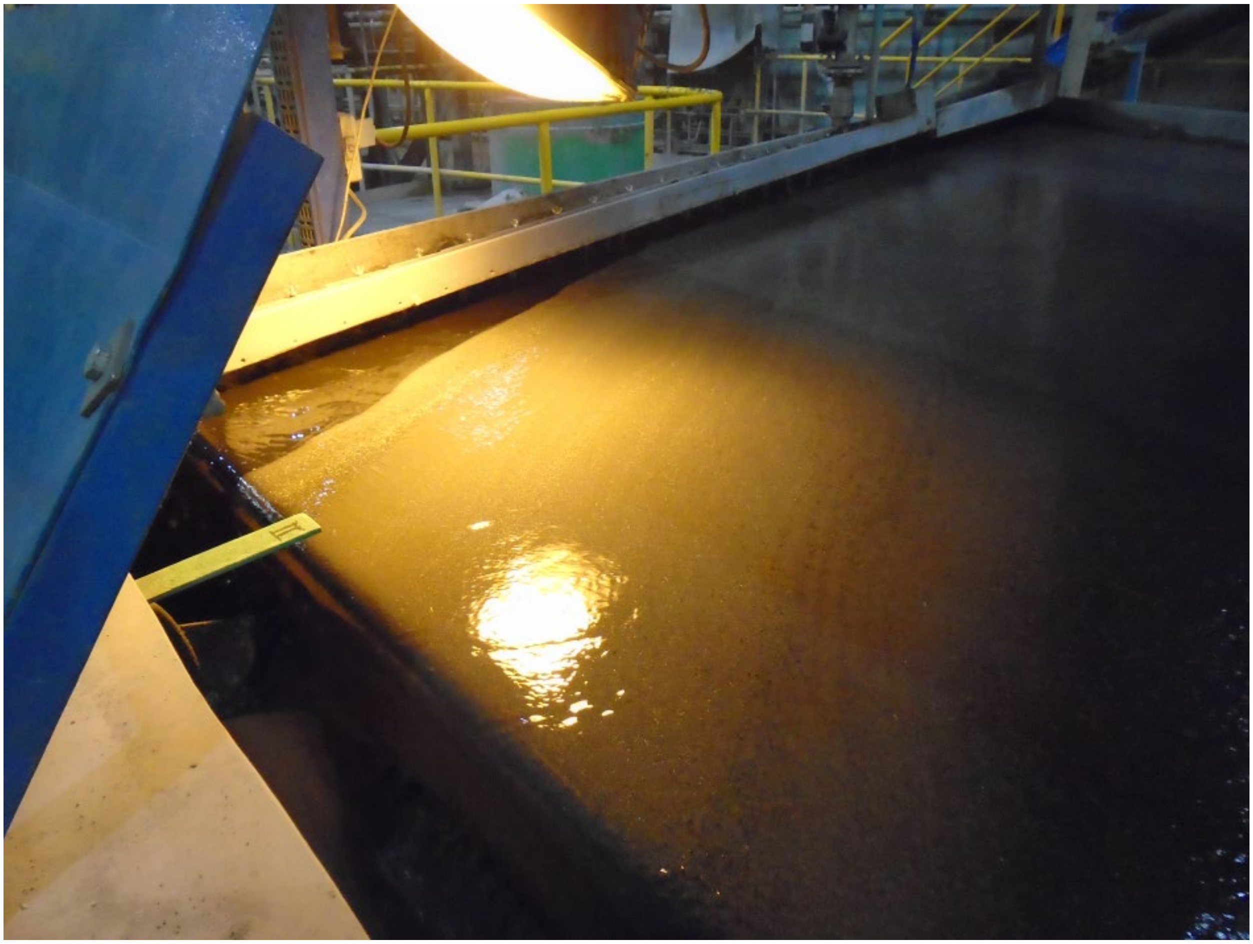
As part of the Mineral Resource audit workflow, SLR carried out a program of validating the assay tables in the drill hole databases by means of spot checking a selection of drill holes completed in 2023 and 2024. SLR proceeded to carry out its drill hole database validation exercise by comparing the information contained within the assay tables of the digital database against the assays presented in the original laboratory certificates. A total of 10 drill holes were examined from the Björkdal deposit and three drill holes from the Storheden deposit. No material discrepancies were noted. The SLR QP and colleagues have visited the mine several times in the past and have carried out spot checks on the pre-2023 data as well during previous Mineral Resource estimate updates.

Additional checks included a comparison of the drill hole collar locations with the digital models of the topographic surfaces and excavation models as well as a visual inspection of the downhole survey information.

The QP is of the opinion that the Björkdal drill hole and chip sample data as well as the Storheden drilling data are adequate for the purposes of Mineral Resource estimation.

No check samples were taken by the SLR QP to independently confirm the presence of gold mineralization, as the site has a long history of gold production, and the presence of gold was directly observed during the visit to the processing plant (Figure 12-1).

Figure 12-1: Native Gold Recovered on Shaker Table



12.2 Norrberget

The SLR QP carried out site visits to the Norrberget site on 24 September 2017 and from 8 to 9 November 2022. SLR reviewed the drill program and inspected the drill rig and pad setup. No drilling was underway at Norrberget during the site visit, although active drilling was observed at Björkdal.

As part of the Mineral Resource audit workflow, SLR carried out a program of validating the assay tables in the drill hole databases with the original assay certificates by means of spot checking a selection of drill holes completed in 2023 and 2024. Spot checking of drill holes completed before 2023 have been carried out during previous Mineral Resource estimates. SLR validated the database using standard software tools to check for errors within the database. A check was undertaken to ensure that the drill hole elevation was comparable with the digital terrain model (DTM) surface. Several drill hole collars were observed to be in poor agreement with the topographic surface at the Norrberget deposit. Investigations and remedial corrections are being undertaken by Mandalay.

The QP is of the opinion that the Norrberget drill hole data are adequate for the purposes of Mineral Resource estimation.

13.0 Mineral Processing and Metallurgical Testing

13.1 Björkdal

The mineral processing plant at Björkdal commenced operation in 1989. Since that time, it has processed approximately 39.1 Mt of ore from open pit and underground sources and produced approximately 1.66 million ounces of gold (Moz Au).

The original plant design was based on pilot plant data that was generated in 1987. Since then, numerous studies and metallurgical test programs have been carried out by mine staff, third party consultants, and Ph.D. students from the Mineral Engineering department at the University of Luleå. This work has included mineralogical characterization studies of the tailings, work index and abrasion index studies, and numerous internal studies on grinding/liberation/recovery relationships.

Since the plant has been operating for an extended period of time processing ore from both the open pit and the underground mines, in the QP's opinion, the historical data provides the best estimates of the anticipated plant performance in the future. Figure 13-1 provides an overview of the plant recovery data for the gravity, flotation, and total plant recovery starting in 2011.

Figure 13-1: Plant Recovery and Feed Grade Data 2011 to 2024

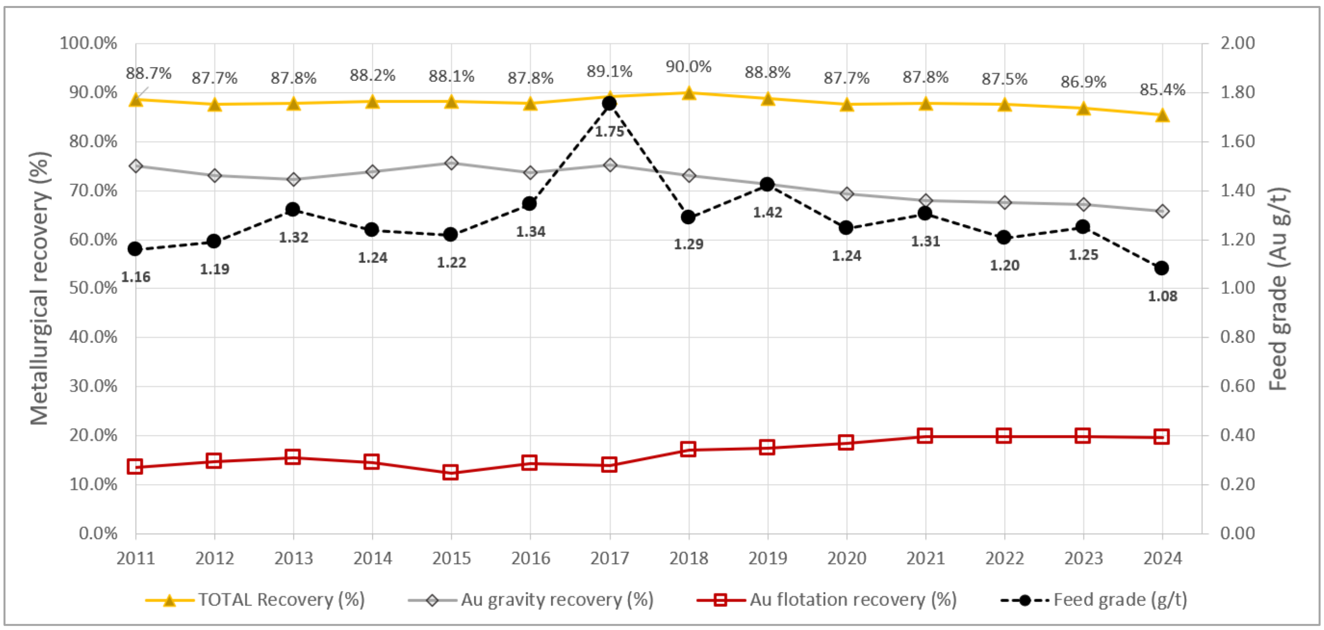


Figure 13-1 summarizes the plant production data from 2011 through 2024.

It is important note that the higher recovery in 2018 was the result of the flotation expansion project, which was completed in 2017. Recovery in 2019 was slightly lower due to the processing of skarn ore, which yields lower recovery rates. The open pit was closed in 2019, and the plant began processing larger quantities of underground ore instead of the previous mix of open-pit and underground ore. The LZA ore had different properties from the ore processed earlier; its gold particles were smaller, and it contained pyrrhotite, which led to lower recovery. Underground ore from "above the marble" has a higher pH, which disrupts the flotation process.

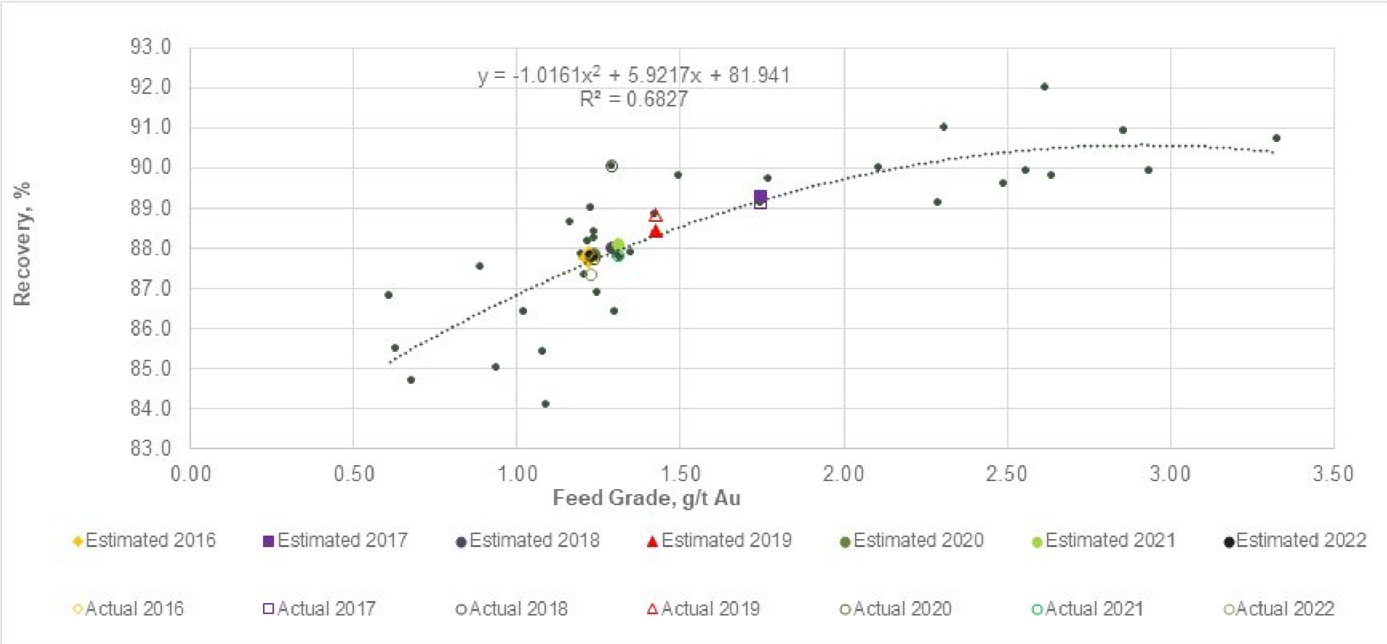
Table 13-1: Plant Production Data

Year	Throughput (kt)	Feed Grade (g/t Au)	Gravity Recovery (% of Total Au)	Flotation Recovery (% of Total Au)	Plant Recovery (% of Total Au)	Tailings (g/t Au)	Tailings (kg Au)	Production (oz Au)
2011	1,215	1.17	75.0	13.6	88.6	0.131	161	40,358
2012	1,385	1.2	73.2	14.6	87.8	0.146	202	46,808
2013	1,261	1.32	72.3	15.5	87.8	0.161	203	46,941
2014	1,318	1.24	73.8	14.4	88.2	0.145	192	46,292
2015	1,303	1.22	75.7	12.4	88.1	0.144	188	44,920
2016	1,289	1.35	73.6	14.3	87.9	0.164	211	49,140
2017	1,262	1.75	75.2	13.9	89.1	0.19	240	63,186
2018	1,249	1.29	73.1	17.0	90.0	0.129	161	46,662
2019	1,289	1.43	71.4	17.4	88.8	0.159	205	52,514
2020	1,320	1.24	69.3	18.4	87.7	0.153	202	46,289
2021	1,260	1.31	68.1	19.8	87.8	0.159	200	46,446
2022	1,249	1.21	67.4	19.8	87.3	0.150	187	42,332
2023	1,239	1.25	67.1	19.8	86.9	0.160	203	43,294
2024	1,370	1.08	65.8	19.6	85.4	0.160	216	40,754
Total	**18,009**	**-**	**-**	**-**	**-**	**-**	**2,771**	**655,936**
Average	**1,286**	**1.29**	**71.5**	**16.5**	**87.9**	**0.15**	**198**	**46,853**

A new plant project designed to increase rougher flotation retention and to install a second stage of cleaner flotation was completed in 2017. In 2018, an Expert Process Control System was installed. A graph demonstrating the relationship between feed grade and recovery (for 1988 through 2022) is provided as Figure 13-2. The recovery estimates based on feed grade for 2016 through 2022, using the formula generated from historical data, fall on the trend line. Actual recoveries for these years also fall on the trend line, with the exception of 2018[1], where the actual recovery is much higher than the estimate. Using this equation and the estimated feed grade for 2022, the estimated gold recovery for 2022 is 87.8%, which is slightly higher than the actual recovery (87.3%).

[1] The ore processed in 2018 has demonstrated different properties, compared to historical production. The gold particles were smaller and it contained pyrrhotite, which led to a lower recovery.

Figure 13-2: Historical Plant Grade-Recovery Data



The correlations between feed grade and tailings grade for the total plant recovery for 2016 through 31 December 2024 are shown in Figure 13-3. Using the relationship between feed grade and tailings grade and the budgeted feed grade for 2025, SLR estimates gold recovery will be 87.2%.

Figure 13-3: 2016 to 2024 Grade Tailings Grade Relationships

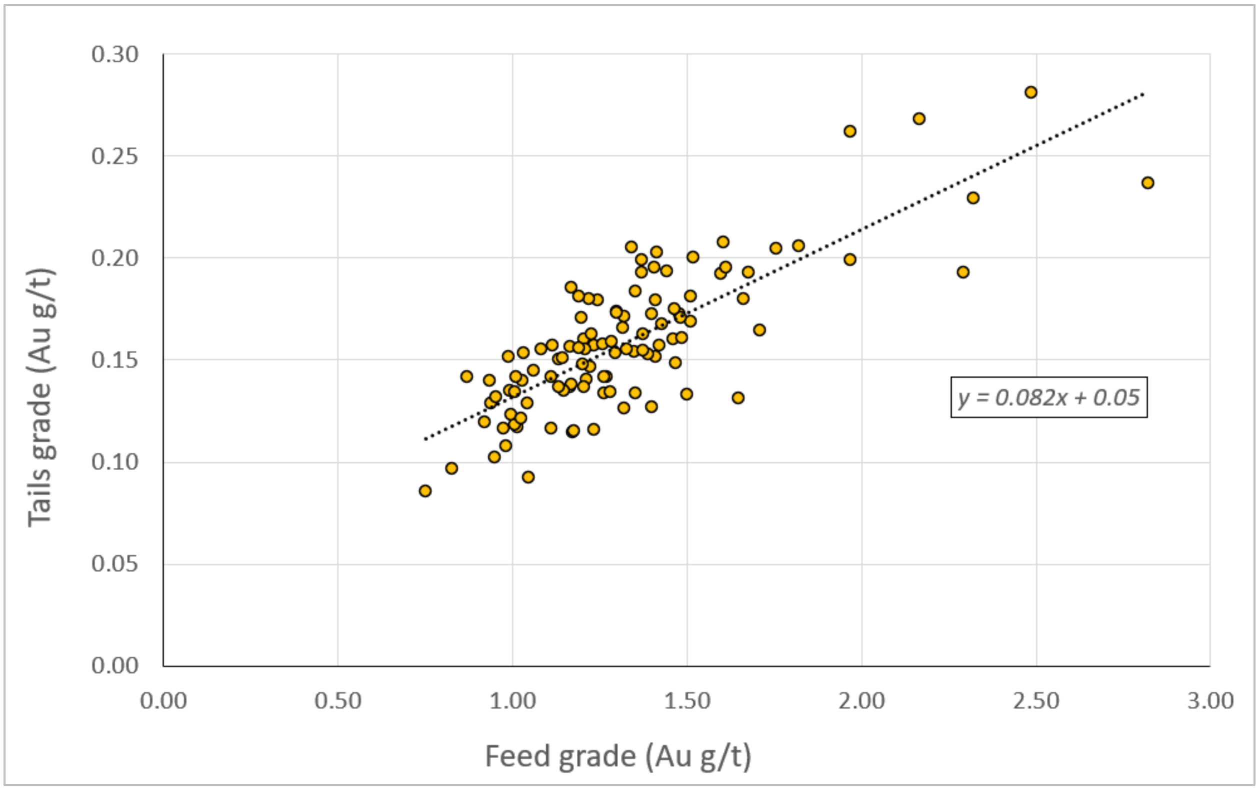


Figure 13-4 provides the monthly average tonnages and feed grades for 2016 through 31 December 2024.

Figure 13-4: 2016 to 2024 Operating Data

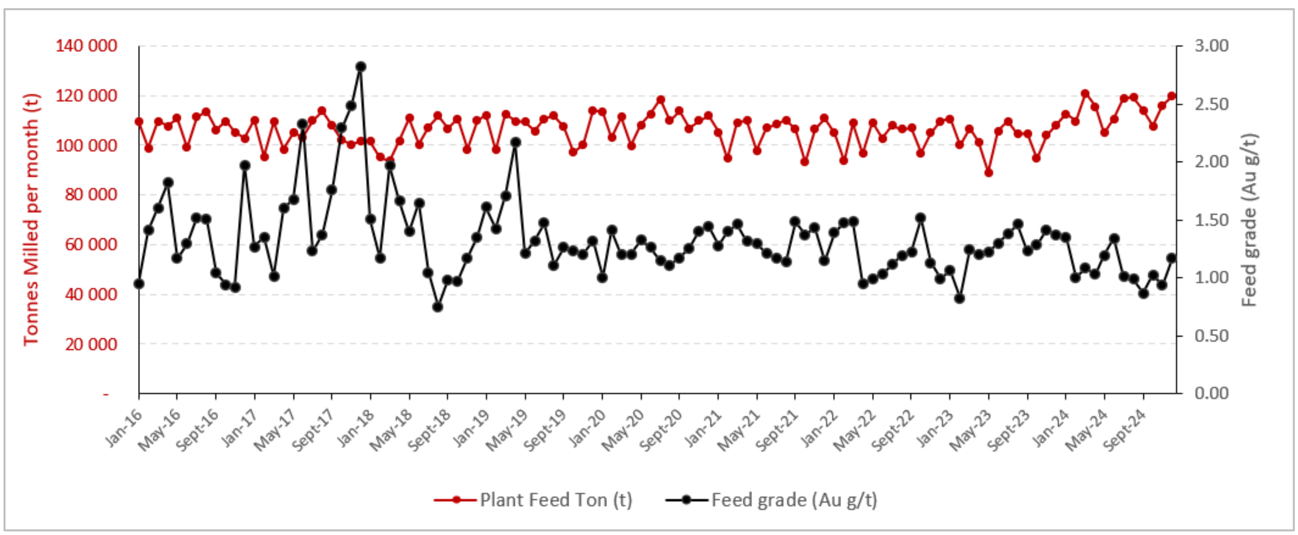


Figure 13-5 shows the comparison of the 2024 recoveries for the various products with the 2024 budget and current life-of-mine (LOM) long term forecast.

Figure 13-5: 2024 Gold Recovery Data

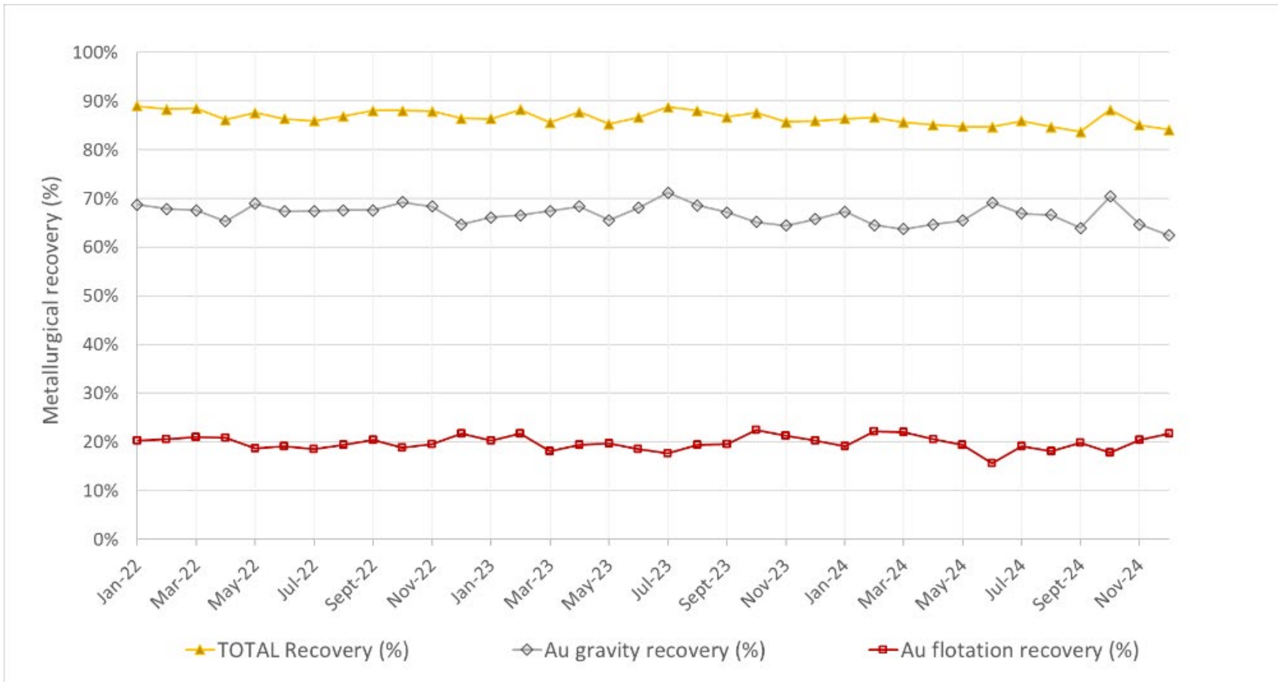
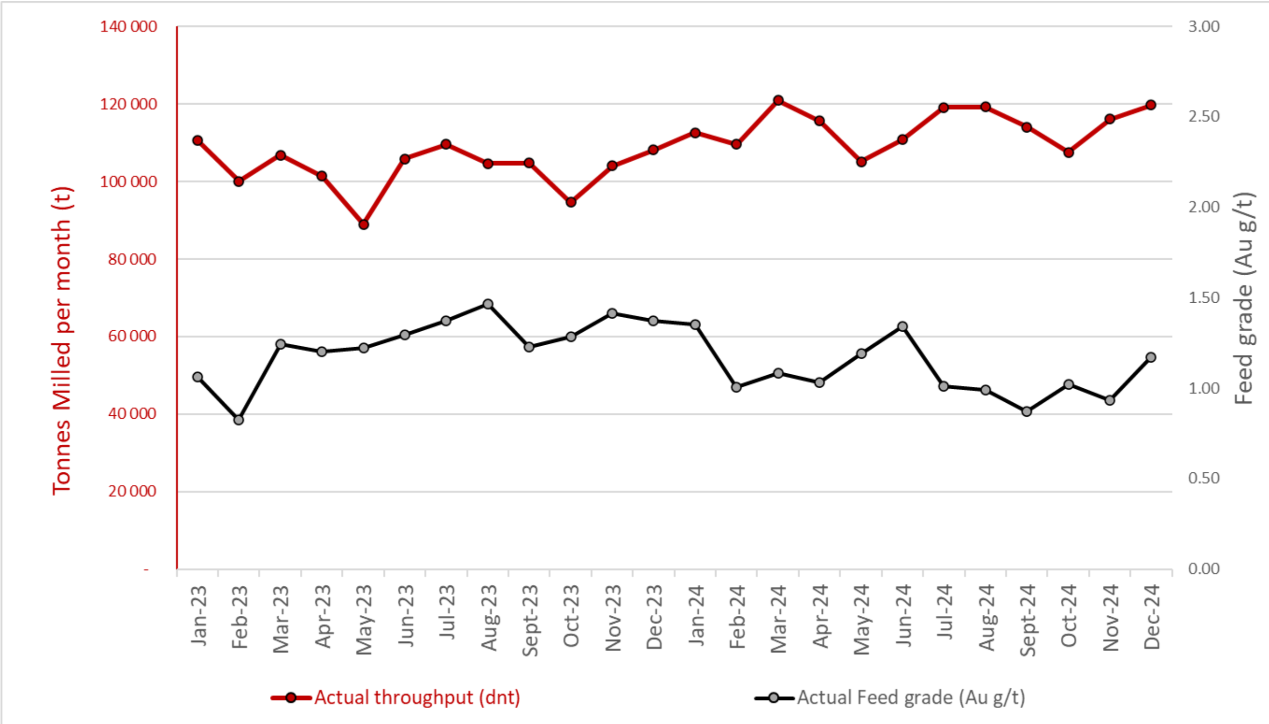


Figure 13-6 presents the actual tonnages and grades processed in 2023 and 2024. The average actual tonnage for 2023/24 was approximately 100,709 tonnes per month. The average actual head grade in 2023/24 was 1.07 g/t Au in 2024.

Figure 13-6: 2023 and 2024 Actual Throughput and Feed Grade



The QP is of the opinion that utilizing historical data to forecast future performance in the processing plant is appropriate.

In the QP's opinion, the budgeted tonnages and recoveries for 2025 appear to be reasonable based on historical operating data.

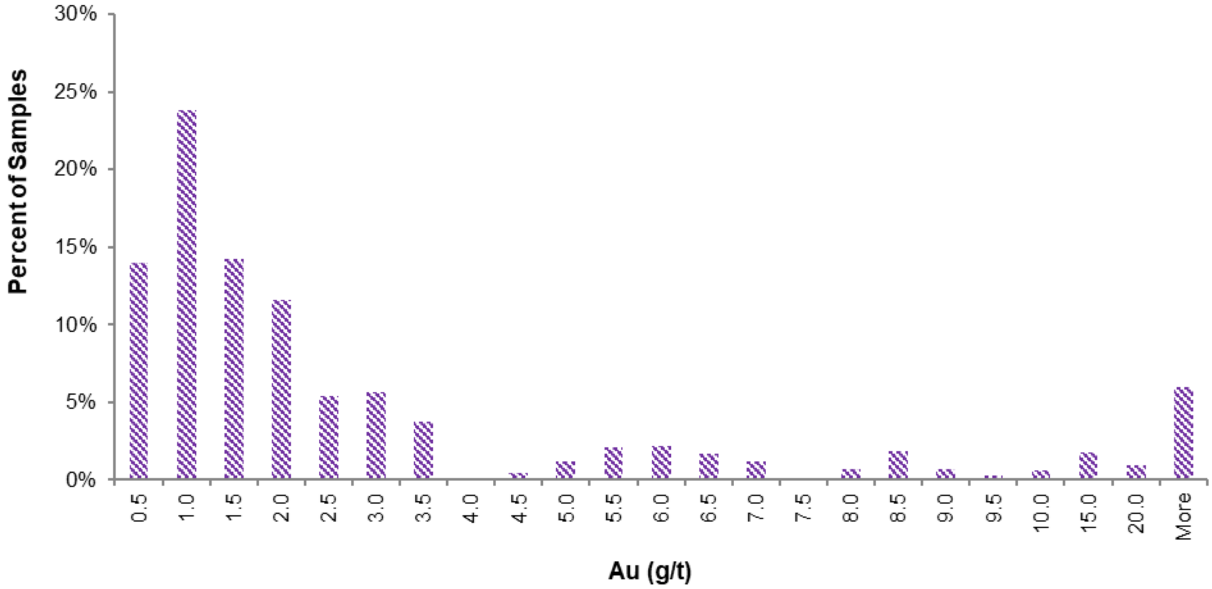
The QP is not aware of any processing factors or deleterious elements that could have a significant effect on economic extraction.

13.2 Norrberget Metallurgical Test Program

ALS Kamloops was commissioned in September 2017 to conduct a pre-feasibility level metallurgical testing program to support the Norrberget MRMR estimates for the technical report that was completed by RPA in 2018 (RPA 2018).

During the September 2017 site visit, SLR (RPA at the time), selected samples to complete the testing program using available quarter drill core. It was hoped that additional sample material would be available from the RC holes that were being drilled at the time of the site visit, however, upon review of the drill hole locations, it was determined that they fell outside of the areas that are expected to be mined. SLR selected material for three samples based on the grade distribution of the assay database for samples above the cut-off grade, as shown in Figure 13-7, however, some of the material was below the cut-off grade because the intervals of lower grade material were small and it is anticipated that it will be mined as it is surrounded by higher grade material.

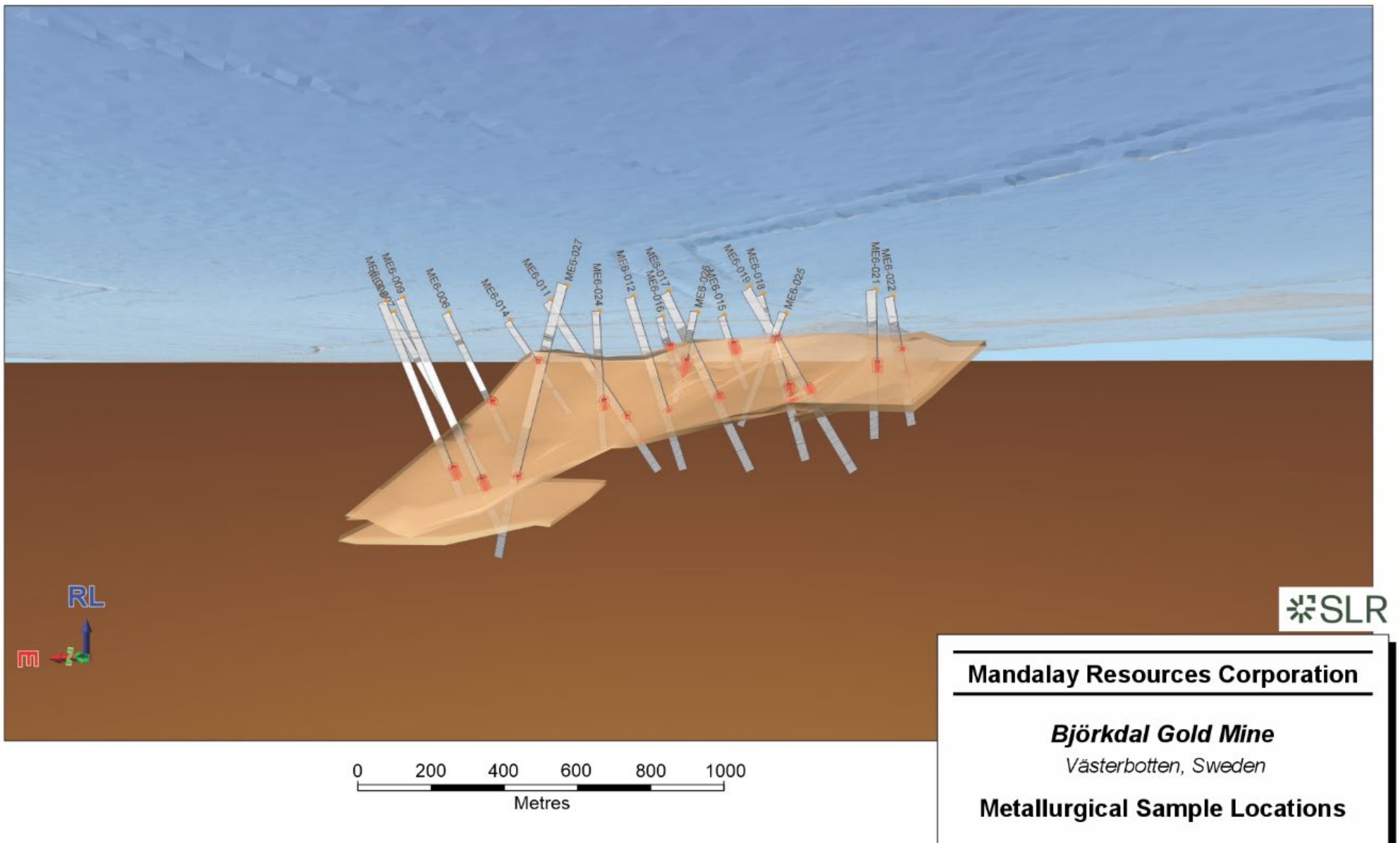
Figure 13-7: Norrberget Deposit Grade Distribution Data



The samples selected included a Master Composite sample that was estimated to be approximately the average grade of the deposit (i.e., 2.0 g/t Au), a Low Grade sample that was estimated to be near the cut-off grade for the Mineral Resource (i.e., 0.5 g/t Au), and a High Grade sample that was estimated to be approximately 5.0 g/t Au.

The locations of the drill holes are shown in Figure 13-8.

Figure 13-8: Metallurgical Sample Locations



Source: RPA 2018.

13.2.1 Head Grades

The composite samples were assayed by fire assay. The results are shown in Table 13-2.

Table 13-2: ALS Composite Sample Assays

Composite Sample	Au (g/t)	Fe (%)	S (%)
Master	6.17	1.90	0.08
Low Grade	0.79	1.77	0.07
High Grade	6.22	2.70	0.07

The Master Composite gold grade was three times higher than estimated from the geological data for the drill core intervals that were used. Since material from Björkdal is consistently difficult to assay due to the presence of coarse gold, it is anticipated that the calculated head grades from the metallurgical tests will be more accurate. Table 13-3 compares the assay data with the calculated head grades from the tests that have been completed at the date of this Technical Report.

Table 13-3: ALS Master Composite Head Grade Comparisons

Data Source	Au (g/t)
Estimated	1.93
Assayed	6.17
KM5489-01	5.36
KM5489-02	5.17
KM5489-03	5.18
KM5489-04A	5.01
KM5489-05A	5.21
KM5489-06B	7.77
KM5489-07B	5.19
KM5489-08A	4.80
KM5489-09A	5.28
KM5489-12A	5.67
KM5489-20A	4.75
KM5489-21A	5.16
Assayed by Size Fraction	6.52

The calculated head grades are somewhat lower than the assayed head grades but still significantly higher than the estimated head grade. The assay procedure used by the Björkdal geological staff for drill-hole assays is the Cyanide Extractable Gold Using LeachWELL accelerant on 500 g samples, which has historically been more accurate than traditional fire assays due to the larger sample size. In order to evaluate whether the large difference between estimated grade and actual grade of the Master Composite was a sample preparation problem or an analytical problem, splits of the sample were sent to CRS and ALS in Piteå, Sweden, for analysis using the LeachWELL procedure. CRS completed the geological assays for Norrberget. The results are shown in Table 13-4.

Table 13-4: Master Composite Head Grade Analysis using LeachWELL

Laboratory	Au (g/t)
CRS	6.95
ALS Piteå	5.61
ALS Piteå QC	5.58

13.2.2 Bond Ball Mill Work Index

One Bond ball mill work index test was completed using the Master Composite sample. The result is 12.2 kWh/t, which is similar to the Björkdal ore that is currently being processed.

13.2.3 Gravity Gold Recovery

Gravity gold recovery tests were completed using three grind sizes to determine whether there is any relationship to the gravity gold recovery and grind size. The results of the three tests and a fourth test that was used to prepare feed for a flotation test are provided in Table 13-5.

Table 13-5: ALS Master Composite Gravity Gold Recovery Data

Test	K80 (µm)	Calculated Head (g/t Au)	Recovery (%)
KM5489-01	244	5.36	48.2
KM5489-02	180	5.17	50.5
KM5489-03	172	5.18	51.1
KM5489-04A	193	5.01	51.3

The gravity gold recovery is approximately 50% and appears to be independent of the particle size. Based on these results, the decision was made to conduct further tests at the standard Björkdal particle size of 80% passing (K80) 206 µm. Due to some discrepancies with the grind calibrations, this was subsequently changed to K80 193 µm.

13.2.4 Flotation Tests

A series of flotation tests was conducted using the Master Composite sample in order to evaluate optimum flotation conditions for the Norrberget material. Four gravity plus rougher flotation tests and five gravity plus rougher-cleaner flotation tests were conducted. Following the optimisation phase of the test program, one gravity plus rougher flotation test and one gravity plus rougher-cleaner flotation test was conducted using the High Grade sample and the Low Grade sample. The results are shown in Table 13-6. The selected conditions were used for tests KM5489-12A and KM5489-20A.

Table 13-6: ALS Flotation Test Data

Test	Gravity				Rougher Flotation Recovery (%)	Rougher-Cleaner Flotation Recovery (%)	Concentrate Grade (g/t Au)	Total Recovery (%)
	K80, (µm)	Calculated Head (g/t Au)	Recovery (%)	Con Grade (g/t Au)				
Master Composite								
KM5489-04A	193	5.0	51.3	167.2	23.8		57.2	75.0
KM5489-05A	193	5.2	51.2	185.7	24.8		34.7	76.0
KM5489-06B	90	7.8	60.6	320.0	25.1		66.8	85.7
KM5489-07B	140	5.2	53.0	204.9	26.6		43.5	79.6
KM5489-08A	193	4.8	47.2	158.0		27.1	64.2	74.3
KM5489-09A	193	5.3	63.2	221.3		8.00	62.1	71.2
KM5489-12A	193	5.7	52.4	199.7		25.3	40.6	77.7
KM5489-20A	193	4.7	42.2	153.7		32.6	29.6	74.8
KM5489-21A	47	5.2	54.6	183.1		37.1	20.7	91.8
Average		5.4						
Low Grade								
KM5489-11A	214	0.57	38.2	14.8	29.5		5.4	67.7
KM5489-13A	214	0.66	41.1	17.5		26.1	4.7	67.2
Average		0.62						
High Grade								
KM5489-10A	189	5.9	37.7	140.7	25.2		52.6	62.9
KM5489-18A	189	6.9	37.6	157.0		37.7	52.3	75.3
Average		6.4						

13.2.5 Estimated Recovery

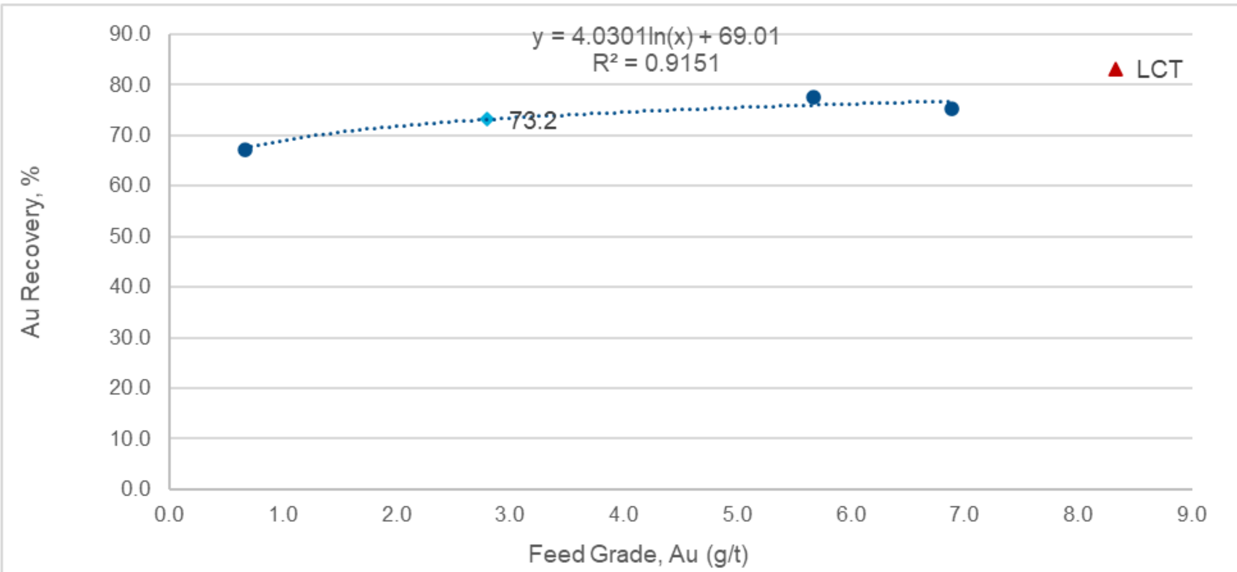
The Norrberget deposit has a metallurgical response that is different from the Björkdal ore. In order to realize a gold recovery that was consistent with Björkdal ore, it will be necessary to grind to a particle size K80 of approximately 47 µm. Due to the small size of the Norrberget deposit, it is not anticipated that it would be cost effective to modify the grinding circuit to achieve this recovery. Since it is expected that there is a relationship between grade and recovery, SLR analyzed the limited data that is available to estimate the recovery at the average grade that will be processed over the LOM (i.e., 2.8 g/t Au). The data used to estimate is provided in Table 137. SLR chose the results from KM5489-12A for the Master Composite and did not use the results from KM5489-20A because the calculated head grade was much lower than the calculated head grades for the majority of the tests.

Table 13-7: Test Data Used to Estimate Recovery

Sample	Au (g/t)	Recovery (%)	Gravity (%)	Flotation (%)
Master	5.7	77.7	52.4	25.3
Low Grade	0.66	67.2	41.1	26.1
High Grade	6.9	75.3	37.6	37.7

Figure 13-9 shows the graphical results of the recovery estimate.

Figure 13-9: Recovery Estimate for Norrberget



As shown in Figure 13-9, a locked cycle test (LCT) using the Master Composite sample was also conducted by ALS. In general, LCT data is more accurate in estimating plant performance than the open circuit flotation tests and LCT recoveries are somewhat higher than recoveries from open circuit tests. In this case, the calculated head grade was excessively high, which, in the QP's opinion, skews the data. Based on the evaluation using limited data, SLR estimates that the average total gold recovery will be approximately 75% with approximately 45% of the gold recovered in the gravity circuit and the remaining 30% recovered in the flotation circuit.

13.2.6 QEMSCAN and Diagnostic Leach

In order to evaluate the differences in the mineralogy between Björkdal and Norrberget, diagnostic leach tests and QEMSCAN bulk mineral analysis (BMA) and trace mineral search (TMS) were completed using the bulk concentrate from test 20.

The diagnostic leach tests showed that the majority of the gold was cyanide leachable, which indicates that it was exposed. Very little of the gold was encapsulated in silicates. It is theorized that the gold is less liberated and more associated with non sulphide minerals in the Norrberget ore compared to Björkdal ore. Further the particles may be too small to be recovered by flotation.

The mineral composition from the BMA is provided in Table 13-8 and the sulphide deportment is provided in Table 13-9.

Table 13-8: ALS Mineral Composition of Bulk Concentrate

Mineral	Mineral Content (wt. %)
Chalcopyrite	1.4
Molybdenite	0.1
Sphalerite	0.1
Galena	<0.1
Pyrrhotite	17.3
Pyrite	2.0
Iron Oxides	0.3
Feldspars	32.5
Amphibole	19.4
Quartz	9.1
Micas	6.2
Carbonates	3.9
Chlorite	1.8
Epidote	2.3
Sphene (Titanite)	1.7
Apatite	0.6
Bismuth Telluride	0.4
Others	0.8
Total	**100**

Notes:

1. Chalcopyrite includes trace amounts of Bornite, Chalcocite/Covellite and Tennantite/Enargite.
2. Iron Oxides include Magnetite, Hematite and Goethite/Limonite.
3. Feldspars include Feldspar Albite, Plagioclase Feldspar and K Feldspar.
4. Micas include Biotite/Phlogopite and trace amounts of Muscovite.
5. Carbonates include Calcite and trace amounts of Ankerite.
6. Others include Nickel Iron Sulphide, Cobaltite(?), Gold/Electrum and unresolved mineral species.
7. A Particle Mineral Analysis was used for the data.

Table 13-9: ALS Sulphur Deportment of Bulk Concentrate

Mineral	Test 20 Bulk Concentrate (%)
Chalcopyrite	6.2
Molybdenite	0.6
Sphalerite	0.3

Mineral	Test 20 Bulk Concentrate (%)
Galena	0.1
Pyrrhotite	79.6
Pyrite	12.9
Other Sulphur Bearing Minerals	0.5
Total	100

Notes:

1. Chalcopyrite includes trace amounts of Bornite, Chalcocite/Covellite and Tennantite/Enargite.
2. Other Sulphur Bearing Minerals includes Nickel Iron Sulphide and Cobaltite(?).

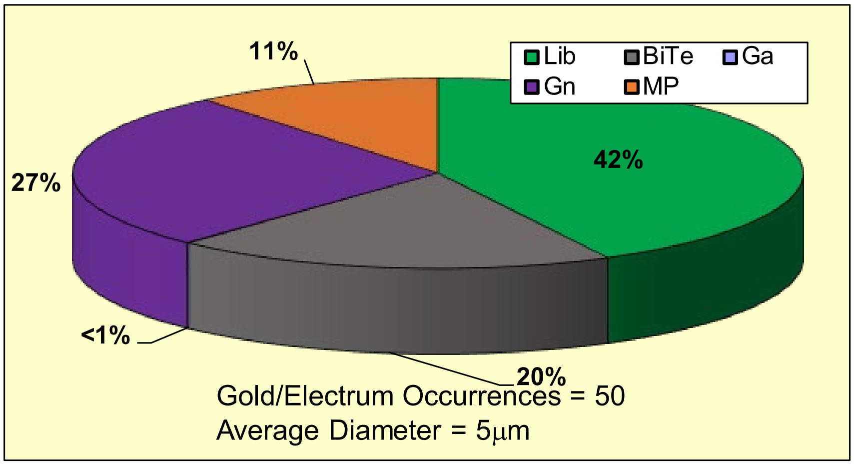
Figure 13-10 compares the results of the TMS for Norrberget with results from an earlier Björkdal study.

Fifty gold bearing particles were assessed. The electrum particles measured on average > 80% gold per the x-ray spectra. From the figure it can be seen that the gold/electrum occurrences identified for the Norrberget bulk concentrate appear to be more complex. A lower percentage of the gold surface area was identified as liberated gold/electrum particles, whereas a higher percentage was associated with either bismuth-telluride particles, non-sulphide gangue particles, or in multiphase form. The average mean projected diameter of gold bearing particles was also somewhat finer than that for the Björkdal bulk concentrate, at 5 µm versus 7 µm.

The SLR QP is not aware of any processing factors or deleterious elements that could have a significant effect on potential economic extraction.

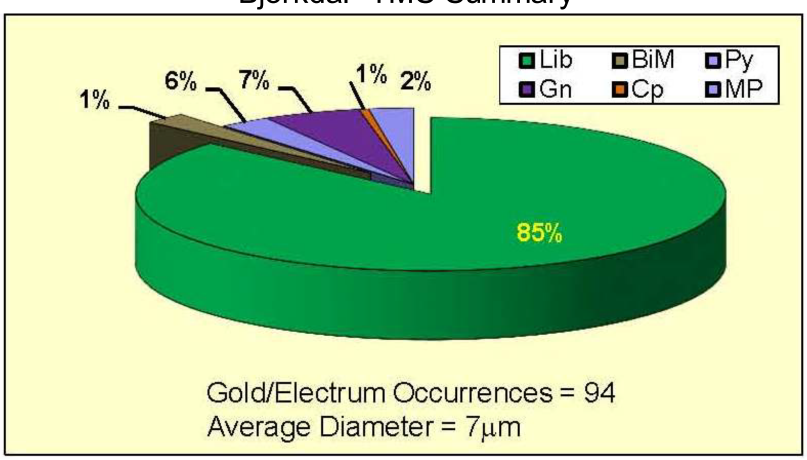
Figure 13-10: QEMSCAN TMS Results for Norrberget and Björkdal

KM5489 Norrberget - TMS Summary



Note: Lib - Liberated Gold particle; BiTe - Gold particle with Bismuth-Telluride;
Ga - Gold particle with Galena; Gn - Gold particle with Non-sulphide Gangue;
MP - Gold particle in Multiphase.
Data above is shown on an adjusted gold particle surface area basis,
where particles greater than 50 percent area are considered liberated.

Björkdal -TMS Summary



Note: Lib - Liberated Gold particle; Cp - Gold particle with Chalcopyrite;
Py - Gold particle with Pyrite; Gn - Gold particle with Non-sulphide Gangue;
FeOx - Gold particle with Iron Oxides; MP - Gold particle in Multiphase.
Data above is shown on an adjusted gold particle surface area basis,
where particles greater than 50 percent area are considered liberated.

14.0 Mineral Resource Estimates

14.1 Summary

Other than the normal-course updating of the mineralization wireframes used in previous Mineral Resource estimates to account for new drilling and sampling information, the workflow and estimation parameters used to prepare the year-end 2024 Björkdal long-term block model were largely unchanged from the previous years. Modifications to the workflow included only slight modifications to the Mineral Resource cut-off grades to reflect the higher gold prices used to prepare the Mineral Resource estimate.

Due to the positive results returned from the exploration drilling that targeted gold mineralization previously discovered lying below the marble unit, a new set of mineralization wireframes was created for the year-end 2024 Mineral Resource estimation workflow. This new wireframe group is referred to as either the North Zone Below Marble or the Grenholm Zone. The Grenholm Zone currently contains a total of 18 mineralization wireframes.

Due to the results of the exploration drilling carried out to the east of the mine, a new set of mineralization wireframes were also prepared for the Storheden deposit. This Technical Report discloses the first-time estimate of the Storheden Mineral Resource estimate.

The Mineral Resource estimates for the Norrberget deposit were updated to reflect the positive results of drilling carried out in 2023 and 2024.

Table 14-1 presents a summary of Björkdal, Storheden, and Norrberget Mineral Resources as of 31 December 2024.

Table 14-1: Mineral Resources at the Björkdal Mine and Storheden and Norrberget Deposits as of 31 December 2024

Location	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Measured Mineral Resources				
Björkdal	Underground	1,097	2.57	91
Indicated Mineral Resources				
Björkdal	Open Pit	4,130	1.61	213
	Björkdal Underground	13,792	2.41	1,069
	Stockpile	1,520	0.59	29
Subtotal, Björkdal		*19,442*	*2.10*	*1,311*
Norrberget	Open Pit	221	2.76	20
Total, Measured + Indicated		**20,760**	**2.13**	**1,422**
Inferred Mineral Resources				
Björkdal	Open Pit	6,666	1.09	233
	Björkdal Underground	3,178	2.11	216
	Storheden Underground	1,769	1.74	99
Subtotal, Björkdal		11,613	1.47	548

Location	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Norrberget	Open Pit	96	5.36	17
Total, Inferred		**11,709**	**1.50**	**565**

Notes:

1. Björkdal Mineral Resources are estimated using drill hole and sample data as of 30 September 2024, and account for production to 31 December 2024.
2. Norrberget and Storheden Mineral Resources are estimated based on a data cut-off date of 30 September 2024.
3. CIM (2014) definitions and the 2019 CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines were followed for Mineral Resources.
4. Mineral Resources are inclusive of Mineral Reserves.
5. Mineral Resources are estimated using an average gold price of US$2,500/oz and an exchange rate of 10.35 SEK/US$.
6. High gold assays were capped to 30 g/t Au for the Björkdal open pit mine.
7. High gold assays for the underground mine were capped at 60 g/t Au for the first search pass and 40 g/t Au for subsequent passes.
8. High gold assays at Norrberget were capped at 24 g/t Au.
9. Interpolation was by inverse distance cubed (ID3) utilising diamond drill, reverse circulation, and chip channel samples.
10. Open pit Mineral Resources are constrained by open pit shells and estimated at a cut-off grade of 0.17 g/t Au for Björkdal and 0.27 g/t Au for Norrberget.
11. Underground Mineral Resources are estimated at a cut-off grade of 0.71 g/t Au.
12. A nominal 2.5 m minimum mining width was used to interpret veins.
13. Reported Mineral Resources are depleted for previously mined underground development and stopes and exclude remnant material.
14. Stockpile Mineral Resources are based upon surveyed volumes supplemented by production data.
15. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
16. Numbers may not sum due to rounding.

The QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

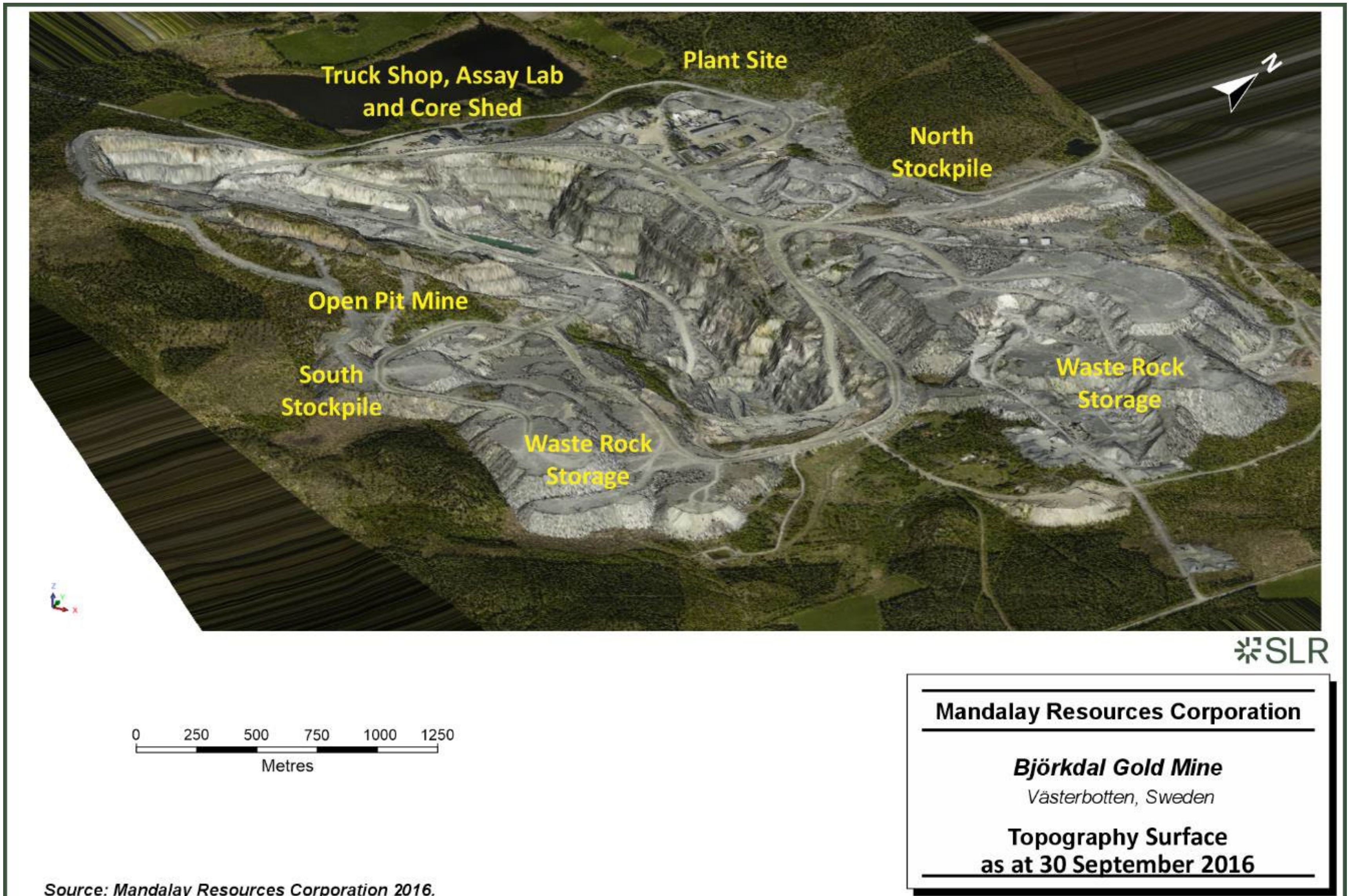
14.2 Björkdal

14.2.1 Topography and Excavation Models

Mandalay carried out a LiDAR survey in July 2016 to provide a digital surface for rendering onto an aerial photograph that was taken at the same time (Figure 14-1). The digital surface created from that survey was edited by Mandalay to incorporate the topographic surface of the open pit mine following cessation of mining activities in the open pit on 1 August 2019. No changes were made to the surface as of 31 December 2024. The resulting integrated model of the topographic surfaces was provided to SLR in a digital format that was suitable for use in coding the block models and estimating the Mineral Resources.

Access to the underground workings is by means of two adits that are located in the north wall of the open pit mine. Due to the shallow plunge of the mineralized vein system, each new level is accessed by means of ramp only. Excavation of the gold bearing material is carried out using a blast hole sub-level retreat method.

Figure 14-1: Topographic Surface as at 30 September 2016



Source: Mandalay Resources Corporation 2016.

The excavated volume of development headings is determined by Mandalay staff on a daily basis using a hand-held Hovermap scanner that is able to measure the excavated volume of a given advance using reference survey points that have been painted onto the walls of a drive. The raw digital data that is produced from the initial survey is processed using the software package that accompanies the Hovermap unit, then downloaded into the Surpac software package, which is used to construct a three-dimensional wireframe model of the new excavation and merge with the existing excavation wireframe model. The resulting merged wireframe model is checked for validity and is ultimately used to code the block model for the excavated material, and it is also used for estimating the amount of unplanned dilution (also referred to as overbreak) and mining losses (also referred to as underbreak). The block model is coded for the development excavations using the stated sub-block resolution.

An area of uncontrolled subsidence has occurred in the upper reaches of the underground mine such that access to this area is no longer possible. A simple generalized wireframe model was created to encompass this area. All blocks within this volume were coded as depleted volumes for the long-term block model. As the mine staff consider that any mineralized wireframes within this volume have the potential for being recovered by means of open pit mining methods, this subsidence area was not considered as excavated for the open pit mining surface.

For the year-end 2024 Mineral Resource estimate, all parent blocks and sub-blocks that are either completely within or abutting a given stope excavation model are considered to have been excavated, and the block model is coded accordingly. For the 2024 Mineral Resource estimate, the digital models of the development headings and stopes as of 11 November 2024 were used to code the model for excavated volumes.

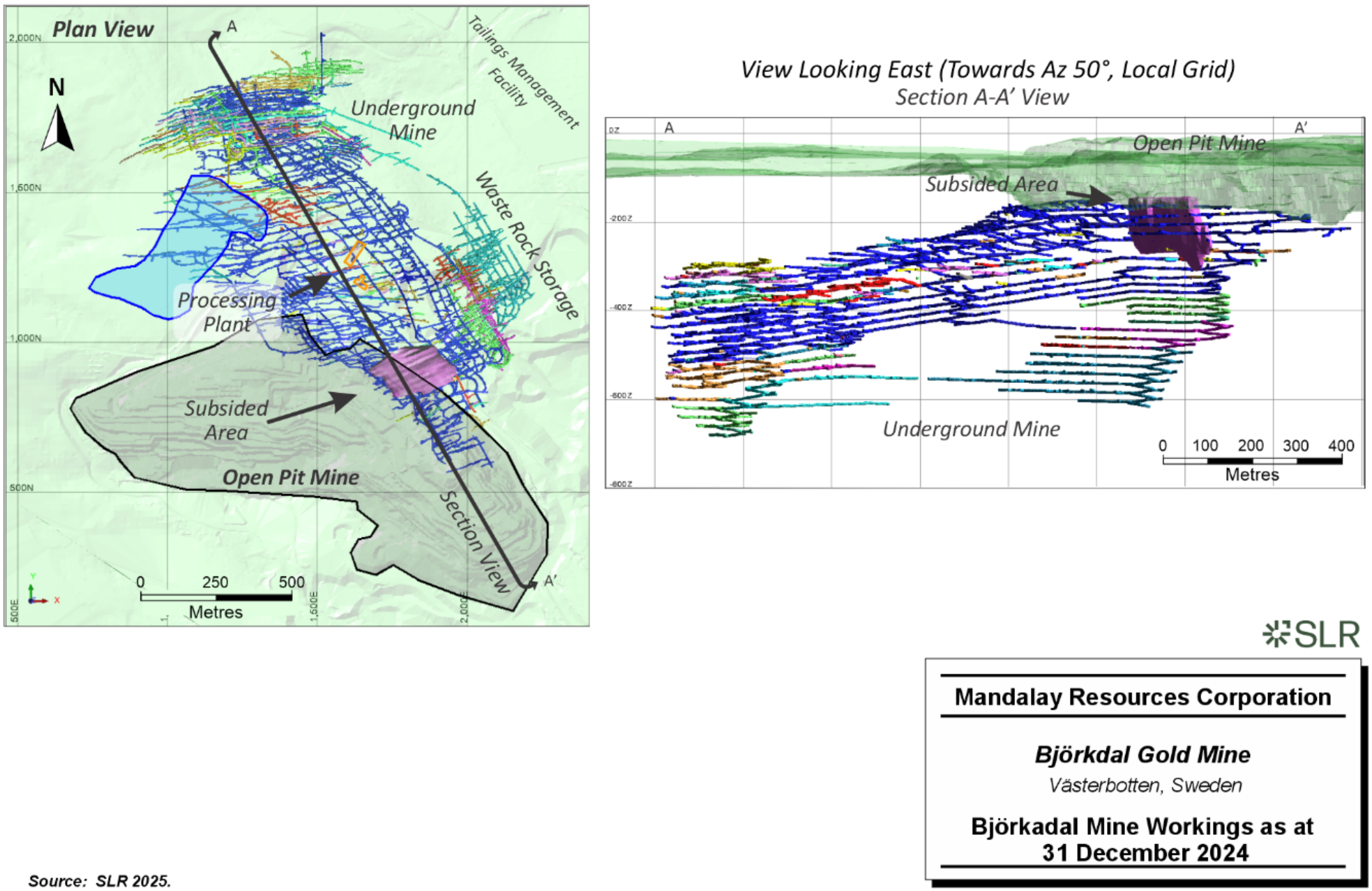
As of 11 November 2024, the development had reached an elevation of approximately -680 m (approximately 700 m vertically from surface, Figure 14-2).

The Björkdal Mine maintains several stockpile areas (the largest of which is referred to as the Norra stockpile) for storage of lower grade mineralized materials, as well as a small temporary stockpile in the crusher yard area. Topographic surveys of the stockpile areas are conducted carried out towards the end of each month using drone-mounted LiDAR surveying methods. The status of the Norra stockpile area, obtained from the drone-mounted LiDAR stockpile survey that was carried out at the end of December 2024, is presented in Figure 14-3. The base of the stockpiles is taken from earlier topographic surfaces that were completed prior to the commencement of building the pile. The volume of the stockpile is reported from the resulting merged surfaces and the tonnages were estimated using a bulk density of 1.80 t/m^3, representing a swell factor of approximately 50%. A summary of the tonnages and grades processed from the stockpiles is provided in Table 14-2.

Table 14-2: Summary of B-ore Stockpile Material Milled, 2018 to 2024

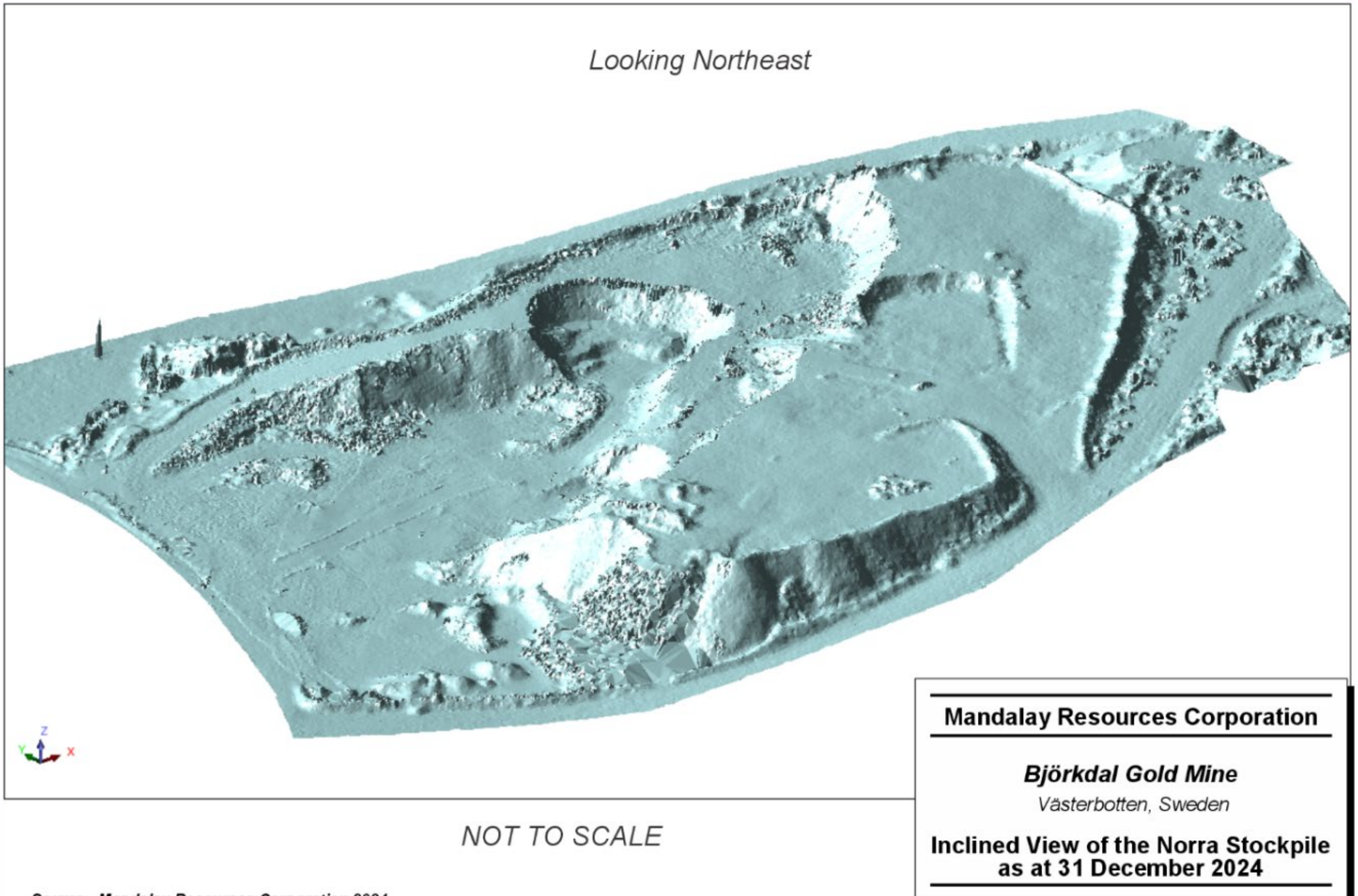
Year	Tonnes Milled (t)	Feed Grade (g/t Au)	Recovered Gold (kg)	Recovered Gold (oz)
2018	105,397	0.67	71.043	2,284
2019	292,169	0.67	174.685	5,617
2020	249,382	0.62	136.414	4,386
2021	179,081	0.65	103.715	3,335
2022	148,330	0.60	79.156	2,545
2023	197,930	0.65	112.571	3,620
2024	406,901	0.55	190.577	6,128

Figure 14-2: Björkdal Mine Workings as at 31 December 2024



Source: SLR 2025.

Figure 14-3: Inclined View of the Norra Stockpile as at 31 December 2024



Source: Mandalay Resources Corporation 2024.

14.2.2 Description of the Database

The presence and distribution of the gold mineralization found at the Mine is defined by means of diamond drill holes (DDH), RC drill holes located in the open pit mine, chip/channel samples taken from underground faces, and channel samples taken of blasted rock (GP) in the open pit mine for grade control purposes. Samples of the sludge created from development drilling are also collected for production planning purposes but are not used for preparation of Mineral Resource estimates. All information is entered into the Datashed geological database management system. Information from the chip sampling programs is entered into the master database system as pseudo-drill holes to facilitate their use in the Mineral Resource estimation process.

The Mine operates on a metric local grid coordinate system wherein the local grid north is 29.67° west of true north (i.e., local grid north is approximately towards azimuth 330° true). All drill hole and sampling information is entered into the Datashed master database using this local grid coordinate system. This local grid system differs from the SWEREF 99 national map projection system that is used throughout Sweden.

Subsets from this master database are extracted and used for estimations on an as-needed basis. All of the drill hole data are in the MS Access database format and were modified for use by the Dassault Systèmes Surpac 2024 (Surpac) mine modelling software package. Additional fields to store such information as the composited assay values and wireframe flags were created in the working database as required during preparation of the Mineral Resource estimate. Values of either 0.01 g/t Au, 0.025 g/t Au, or 0.050 g/t Au were inserted into the database by means of a computer script for any unsampled intervals at the outset of the Mineral Resource estimation workflow.

The drill hole database maintains a field representing the degree of confidence assigned to the various types of samples entered by various operators over the Mine's production history. A description of the confidence interval codes is provided in Table 14-3.

Table 14-3: Summary of Confidence Codes in the Björkdal Drill Hole Database

Confidence Value	Description
0	Samples with lengths less than 0.1 m. Not used for Mineral Resource estimation.
10	UG chip samples across the vein only collected by prior owners.
20	UG chip samples across the vein only collected by Mandalay
30	UG chip samples collected by Mandalay along walls or cross-cuts
40	UG chip samples collected by Mandalay across the full face width
50	DDH or RC samples

The cut-off date for the drill hole database is 30 September 2024. The location of the drill holes which were used to prepare the year-end 2024 Mineral Resource estimate were shown in Figure 10-1. A summary of the database is provided in Table 14-4.

Table 14-4: Summary of the Björkdal Drill Hole Database as of 30 September 2024

Hole Type	No. of Holes	Total Length (m)
Surface		
CH	512	285
DDH	408	60,011
GP	7,257	6,546
RC	4,395	225,103
Total, Surface	**12,572**	**291,945**
Underground		
CH	31,227	62,792
DDH	2,895	435,462
Total, Underground	**34,122**	**498,254**
Grand Total	**46,694**	**790,199**

Note:

1. Ch=Channel samples
2. DDH=Drill holes
3. GP=Grade control channel samples, open pit
4. RC=Reverse circulation.

14.2.3 Lithology and Mineralization Wireframes

Gold mineralization at the Mine occurs mostly as a large number of steeply dipping, structurally controlled narrow quartz veins that have been identified by drilling and grade control mapping and sampling for a distance of approximately 1,900 m in an east-west direction (along strike), 3,500 m in a north-south direction (across strike), and to a depth of approximately 900 m from surface.

Wireframe models of the mineralized veins were utilized in geological and grade continuity studies and to constrain the block model interpolation. Wireframe models of the Björkdal veins were constructed by Mandalay using either the Surpac or Leapfrog software packages and were reviewed by SLR. A total of 1,151 vein wireframe models were constructed. SLR notes that the vein models reflect the grades relating to a targeted vein only and do not include any potentially significant gold bearing samples that may be present between the veins. Additional samples are present which contain gold values in potentially economic concentrations. Observations made from the geological mapping programs suggest that these potentially significant gold bearing samples can represent gold bearing veins that occur as pods and pockets with limited spatial continuity, tabular, sheet-like veins with limited areal extents, or veins with spatial continuities in orientations that are not currently well understood.

The majority of the known mineralization at the Mine has been structurally controlled and hosted within a single homogenous host rock (the footwall intermediate volcanic unit) located beneath a marble marker unit, hence construction of a lithological model had historically been judged to be unnecessary other than creation of a surface of the bottom of the marble unit.

As a result of the on-going exploration and development work carried out since 2020, the understanding of the relationship of the gold bearing mineralization with the host rocks and structural features continues to evolve. The newly acquired information suggests that Björkdal fault zone is an important structural feature that separates the host volcanics into two structural blocks. Modelling of the Björkdal fault zone suggests that it closely follows the orientation of the marble unit, and serves to truncate the upper limits of the quartz veins in the footwall structural block present in the upper portions of the Mine. In the deeper portions of the Mine, the Björkdal fault zone acts as the lower limits of the quartz veins that are hosted in the hanging wall structural block (Figure 14-4).

As a result, the current view is that a significant degree of displacement may have occurred along the Björkdal fault zone that is on the order of several hundred metres in distance. The sense of movement along the fault is not clearly understood, as limited stratigraphic marker units are present in the Mine with which to gauge the magnitude and sense of movement across this fault. The initial interpretations are of oblique, strike-slip faulting with a sinistral sense of movement.

The SLR QP agrees with Mandalay's view that this current understanding presents significant exploration potential for the Mine. A key item for this activity is the ability to clearly identify the sense of movement across the fault and the magnitude of the displacement. In the past, the marble unit had been used as a key marker to enable discrimination between the hanging wall and footwall structural blocks. Unfortunately, this marble unit terminates at depth, making the discrimination between the two structural blocks more difficult. With experience, Mandalay's geologists are able to visually distinguish between the two structural blocks in drill core, however discriminating between the two is more difficult when viewed in underground faces.

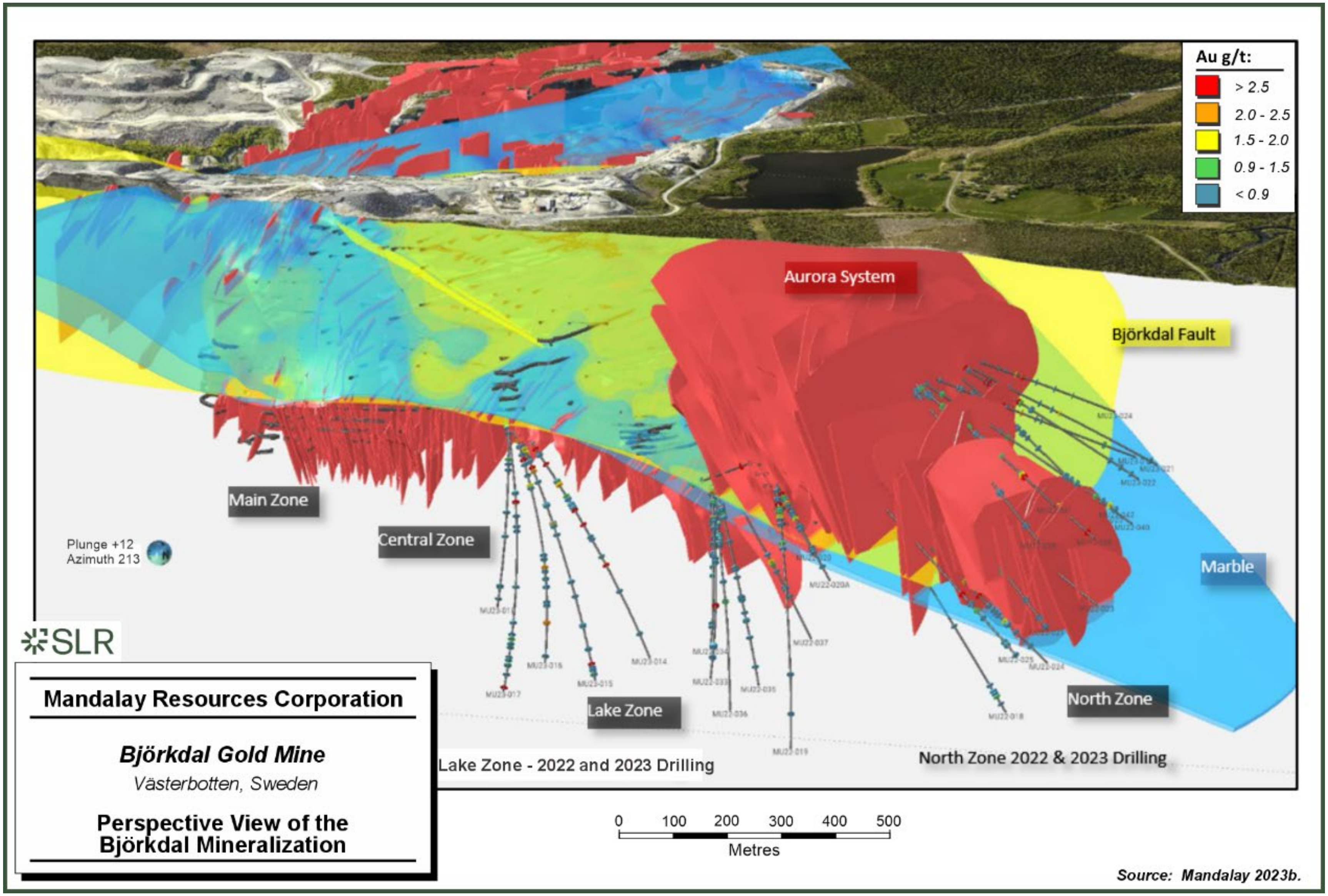
A three-dimensional model of the marble unit was constructed from available drill hole and geological mapping information. This three-dimensional volume was then used to code the block model. Three-dimensional digital models of the known fault surfaces were prepared by the Mine geological team and were used as guides in preparation of the mineralization wireframes.

Mandalay built individual mineralized wireframes separately for open pit and underground domains using both the Surpac and Leapfrog software packages. Due to the structural controls on the orientations of the quartz veins at Björkdal, a number of vein wireframe models intersected and cross-cut each other, which introduced an additional consideration to be addressed in the Mineral Resource estimation workflow.

For ease of use, the individual vein wireframes were grouped according to their spatial locations. A total of 13 wireframe domains were created for the year-end 2024 Mineral Resource estimate. The open pit wireframes were based on a nominal 0.3 g/t Au cut-off value over a minimum of 2.5 m. The underground wireframes were based on a nominal 2.5 m minimum width at a cut-off value of 0.5 g/t Au.

New tables were created in the database for each vein group and were coded with the intersection information for the individual mineralized wireframes in the open pit and underground mines by exploiting the macro/scripting functionality of the Surpac software package.

Figure 14-4: Perspective View of the Björkdal Mineralization



Source: Mandalay 2023b.

14.2.3.1 Open Pit Vein Models

The open pit mineralized wireframe models were grouped into five separate areas as follows: East Pit (EP), West Pit (WP), Quartz Mountain (QM), Skarn-Hosted (SKS-Op), Shear-Hosted (SHS), and Nylund (Nyl). In total, 446 individual wireframe models were created for the open pit mine.

The interpretation for the open pit mineralized wireframes was guided by mapped quartz veins on various benches in the pit and by knowledge gained from grade control drilling programs. The mineralization wireframes were created using Leapfrog wireframe modelling functions to a minimum width of 2.5 m and were projected to a nominal distance of 30 m away from the last drill hole intercept horizontally, and to a nominal 15 m vertically. The wireframes were driven to mid-distance when barren holes were encountered at the lateral limit of a vein, while occasionally the wireframe interpretations were driven through barren holes to preserve the continuity of the mineralization solid.

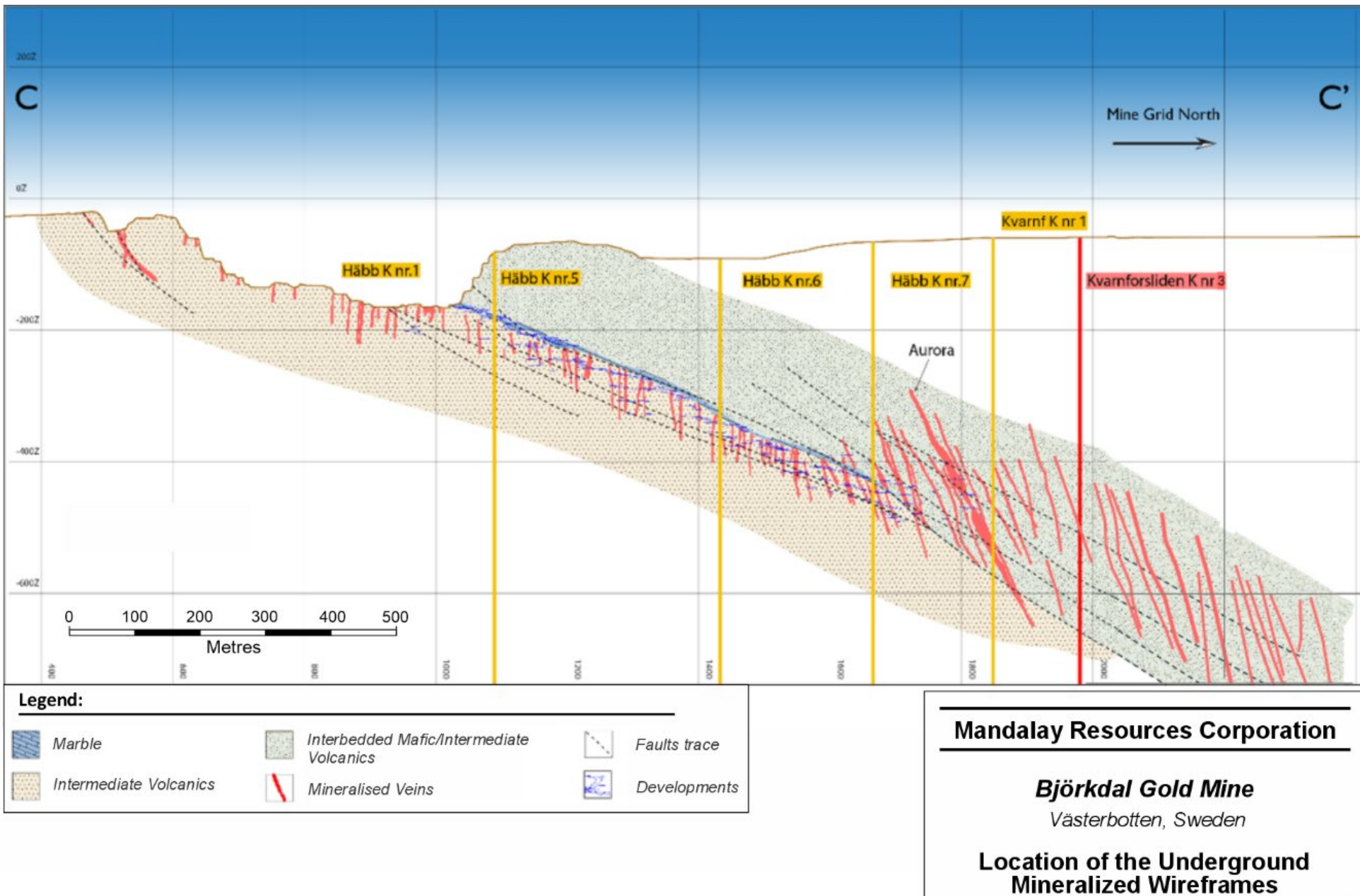
14.2.3.2 Underground Vein Models

The construction of the underground mineralization wireframes was guided by quartz veins mapped in the underground developments, face, and wall chip samples, as well as existing underground stopes. Mineralization wireframe shapes from previous years interpretation efforts were retained where no additional information was collected; new interpretations were created for those vein sets where additional information and knowledge was collected during 2023 and 2024. The mineralization wireframes for the vertically dipping veins were constructed to a minimum width of 2.5 m and were projected up to 30 m away from the last drill hole intercept horizontally, and up to 15 m vertically. The wireframe interpretations were carried through lower grade intercepts or occasionally through barren holes to preserve the continuity of the vein interpretation. In many cases, the widths of the mineralized wireframes were drawn larger than the widths of the above cut-off grade assays so as to achieve the minimum width criteria. The wireframes were extended to drill hole mid-distance when barren holes were encountered at the lateral limit of a vein. Similar interpretation parameters were applied for the Shear and Skarn hosted (SHS and SKS) mineralization.

The underground mineralized wireframe models were grouped into nine separate areas as follows: Central Zone (CZ), Grenholm (GZ), Lake Zone (LZ), Lake Zone-Aurora (LZA), Main Zone (MZ), North Zone (NZ), Skarn (SKS-Ug), Shear Zone (SHS), and South Zone (SZ). A total of 705 individual wireframe models were created for the underground mine (Figure 14-5).

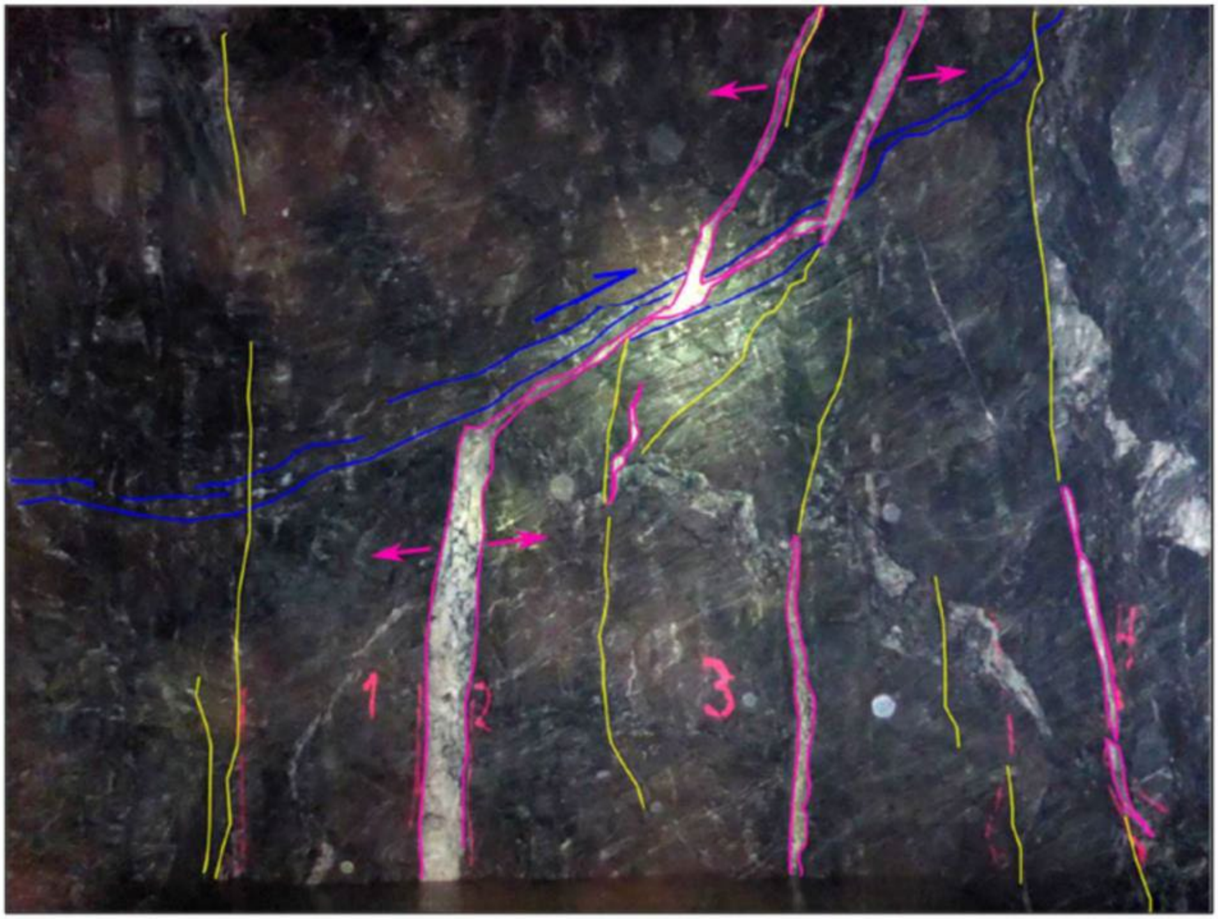
The goal of the underground wireframe shapes was to create continuous models of the mineralized lenses, hence sometimes slight departures from local or general trends might be observed. The general structural fabric of the deposit is characterized by several dominant directions, as shown by the mapped underground veins. These veins show anastomosing, splaying or cross cutting relationships, rendering interpretation and construction of individual wireframes difficult at times, due to occasional multiple interpretation options. The underground chip sampling along any given vein shows marked grade variations, with occasional grouping of higher grades forming ore shoots locally. Information collected from grade control mapping and sampling indicates that some of the veins have formed during progressive periods of strain and brittle movement along fault and shear planes (Figure 14-6). A typical cross section is provided in Figure 14-7.

Figure 14-5: Location of the Underground Mineralized Wireframes



Source: Mandalay Resources Corporation 2025.

Figure 14-6: Quartz Vein Paragenetic Example, Aurora Zone



SLR

Mandalay Resources Corporation

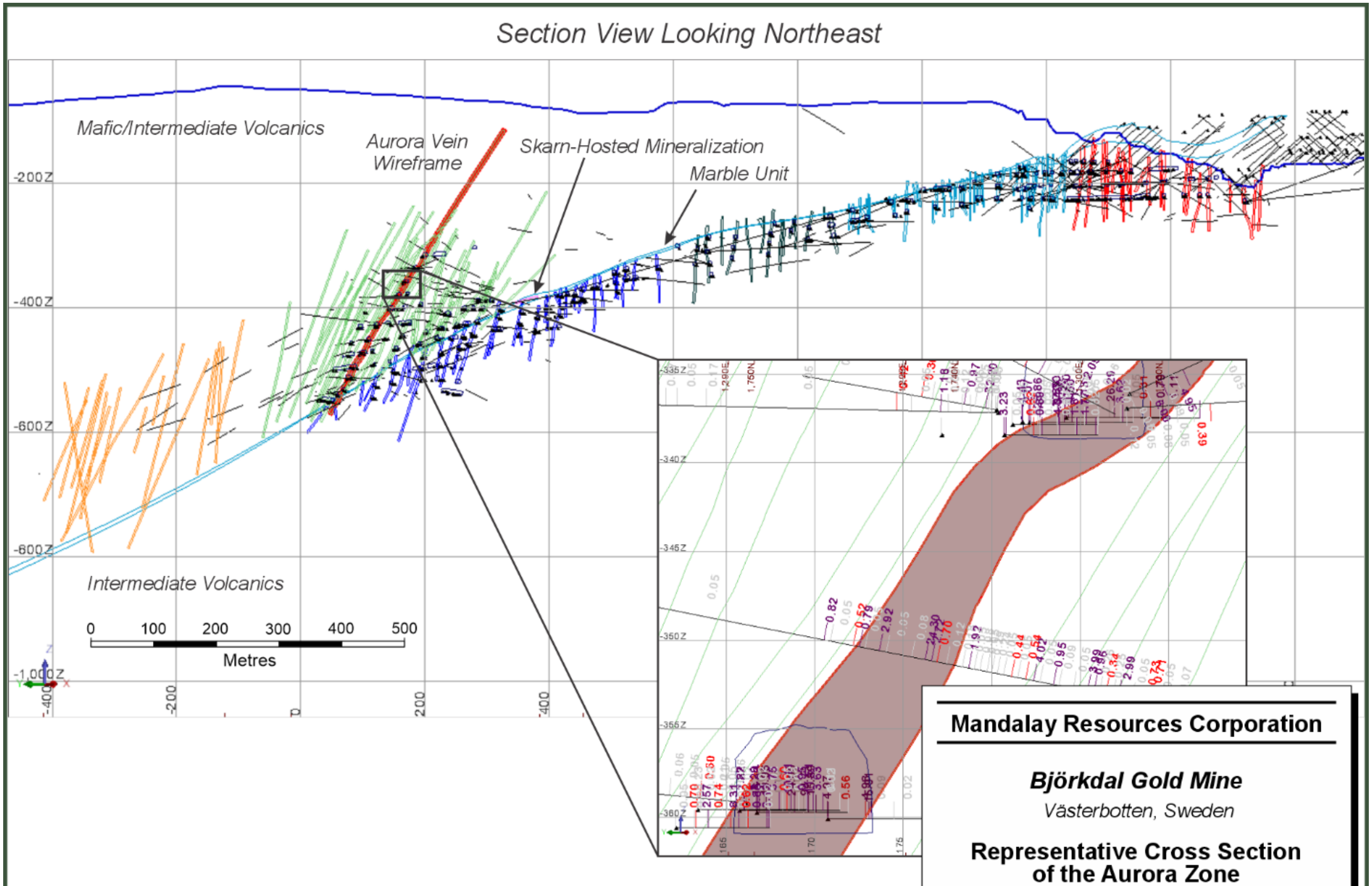
Björkdal Gold Mine

Västerbotten, Sweden

**Quartz Vein Paragenetic Example
Aurora Zone**

Source: Mandalay Resources Corporation 2025.

Figure 14-7: Representative Cross Section of the Aurora Zone



Source: Mandalay Resources Corporation 2025.

14.2.4 Compositing Methods and Grade Capping

14.2.4.1 Underground Mine

Chip Sample Data

The chip sample information for the underground mine has been classified by Mandalay according to the degree of confidence based on the date at which the sample was collected. Those chip samples collected prior to Mandalay's purchase of the Björkdal operations have been assigned a confidence level code of either 10 or 20 to recognize the limitations of the sample collection procedures at the time. Many of the chip samples collected prior to Mandalay's purchase were taken of vein material only, with no sample being collected of either of the walls of the vein. Those samples collected subsequent to Mandalay's purchase are assigned a confidence level code of 30 or 40 to acknowledge the revised sample collection procedures whereby chip samples are collected across the full width of a given face.

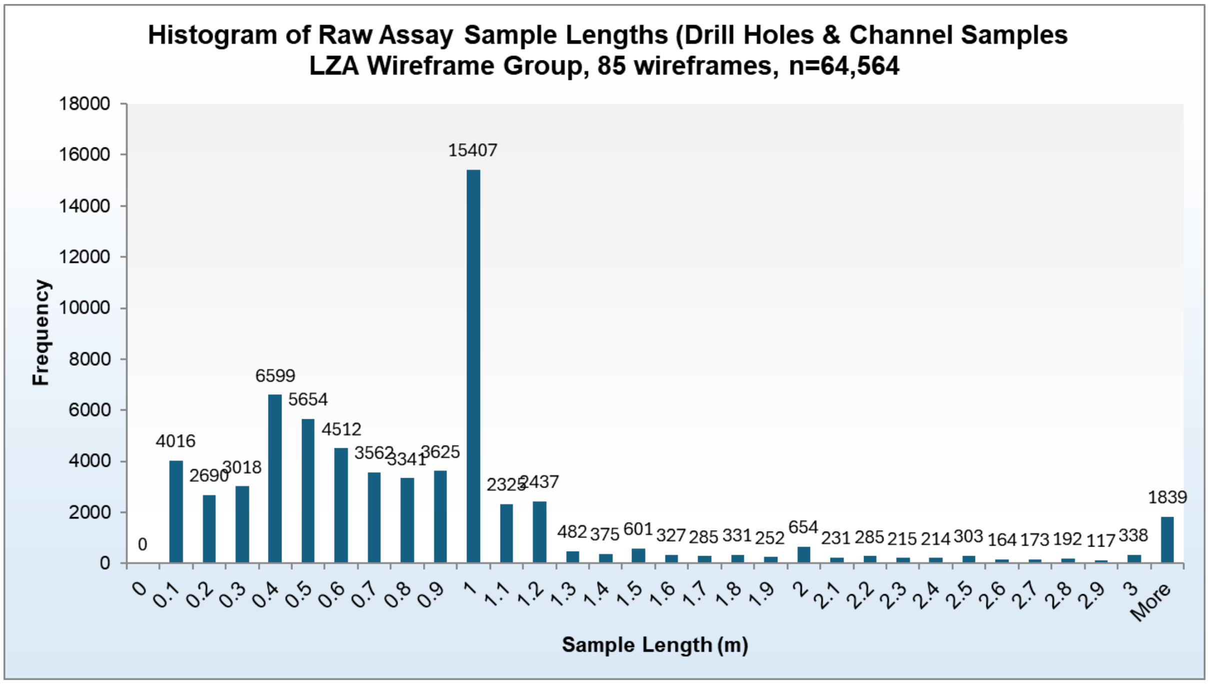
For those chip samples with a confidence level code of either 10 or 20, the grade of the resulting composited, capped sample grade was mathematically diluted to a nominal width of 2.5 m by using the length of the given chip sample as a weighting factor prior to use in estimating the block model grades. The gold grades for chip samples collected by previous operators were capped to 40 g/t Au prior to applying a dilution factor to achieve an equivalent minimum width gold grade. The composited gold grades for chip samples collected by Mandalay are capped to 40 g/t Au.

Diamond Drill Holes and RC Drill Holes

Visual examination of the assay tables related to the diamond drill hole data revealed the presence of a large number of un-sampled intervals within and abutting the boundaries of the interpreted mineralization wireframes. Replacement values of either 0.01 g/t Au, 0.025 g/t Au, or 0.05 g/t Au are regularly entered for all such intervals of null values by means of a computer script prior to creation of composited assays.

The resulting edited samples for the diamond drill holes and RC holes were composited into nominal equal lengths of one metre using the best-fit compositing algorithm of the Surpac mine modelling software package. An example of the distribution of the drill hole and channel sample lengths prior to compositing is provided in Figure 14-8. Composited assay values were created on an individual, vein-by-vein basis. Similarly, the assay results in the chip sample databases were composited into nominal equal lengths of one metre using the best-fit composting function. Both the drill hole and RC samples were assigned a confidence level code of 50 in recognition that these samples are taken on a fully diluted, full-length basis.

Figure 14-8: Histogram of Sample Lengths, LZA Group, 30 September 2024



Capping Values

The composited assay information for the various versions of chip samples, underground diamond drill holes and the RC drill holes were examined in detail on an individual basis for the year-end 2018 Mineral Resource estimate by means of frequency histograms, decile analyses and probability plots to determine whether capping values are best applied according to the sample type (RPA 2019). The results of this analysis showed no material difference in the statistics for the three sample types and that applying the same capping levels to all three sample types was reasonable.

Considering that the capping strategy used to prepare the previous long-term Mineral Resource block models has been yielding acceptable reconciliation results with the short-term grade control models, Mandalay elected to maintain the dual capping value approach for estimation of the gold grades contained within the mineralized wireframe models in the underground mine as was used for the previous estimates of the underground Mineral Resources. In this approach, the composited assays for diamond drill holes and RC drill holes are capped to values of 60 g/t Au and 40 g/t Au. Two different areas of influence are then used when estimating the block grades for each mineralized wireframe. The higher grade capped composites are used within a first pass search ellipse with a 15 m radius while the lower grade capped composites are used for subsequent estimation passes. The summary statistics of the composited, capped assay values for the composite samples that were used to prepare the estimated block model grades are provided in Table 14-5. It is important to note that given the large number of individual vein wireframes that comprise this Mineral Resource estimate, rather than reflecting the specific statistics for each sample type for each vein, these statistics include all composites used to estimate the individual veins within each of these wireframe groups. Consequently, the resulting statistics should be reviewed as being indicative only, rather than being definitive for any individual mineralization wireframe.

Table 14-5: Summary Statistics of the Composited, Capped Samples by Zone - Underground Mine

Central Zone (CZ)

Variable	Uncapped (g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Weighting Variable	Length	Length	Length	Length
Number of samples	21,160	21,160	21,160	21,160
Minimum value	0.00	0.00	0.00	0.00
Maximum value	1,701.54	60.00	40.00	30.00
Mean	2.62	1.67	1.61	1.47
Median	0.07	0.07	0.07	0.07
Variance	500.1	37.0	31.9	22.5
Standard deviation	22.4	6.1	5.6	4.7
Coefficient of variation	8.5	3.7	3.5	3.2

Grenholm Zone (GZ)

Variable	Uncapped g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Weighting Variable	Length	Length	Length	Length
Number of samples	543	543	543	543
Minimum value	0.00	0.00	0.00	0.00
Maximum value	183.67	60.00	40.00	30.00
Mean	1.60	1.20	1.09	1.02
Median	0.03	0.03	0.03	0.03
Variance	116.2	29.0	18.2	13.6
Standard deviation	10.8	5.4	4.3	3.7
Coefficient of variation	6.8	4.5	3.9	3.6

Lake Zone (LZ)

Variable	Uncapped g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Weighting Variable	Length	Length	Length	Length
Number of samples	23,284	23,284	23,284	23,284
Minimum value	0.00	0.00	0.00	0.00
Maximum value	918.58	60.00	40.00	30.00
Mean	2.50	1.68	1.64	1.51
Median	0.06	0.06	0.06	0.06
Variance	307.2	35.1	31.4	22.6
Standard deviation	17.5	5.9	5.6	4.8

Coefficient of variation	7.0	3.5	3.4	3.2

Lake Zone Aurora (LZA)

Variable	Uncapped (g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Weighting Variable	Length	Length	Length	Length
Number of samples	42,026	42,026	42,026	42,026
Minimum value	0.00	0.00	0.00	0.00
Maximum value	1,020.00	60.00	40.00	30.00
Mean	1.39	1.15	1.13	1.07
Median	0.05	0.05	0.05	0.05
Variance	97.6	18.0	16.3	12.6
Standard deviation	9.9	4.2	4.0	3.5
Coefficient of variation	7.1	3.7	3.6	3.3

Main Zone (MZ)

Variable	Uncapped (g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Weighting Variable	Length	Length	Length	Length
Number of samples	35,373	35,373	35,373	35,373
Minimum value	0.00	0.00	0.00	0.00
Maximum value	1,360.00	60.00	40.00	30.00
Mean	3.04	1.89	1.82	1.66
Median	0.08	0.08	0.08	0.08
Variance	531.1	43.9	37.1	26.1
Standard deviation	23.0	6.6	6.1	5.1
Coefficient of variation	7.6	3.5	3.3	3.1

North Zone (NZ)

Variable	Uncapped (g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Weighting Variable	Length	Length	Length	Length
Number of samples	1,227	1,227	1,227	1,227
Minimum value	0.00	0.00	0.00	0.00
Maximum value	73.1	60	40	30.00
Mean	0.54	0.53	0.49	0.46
Median	0.02	0.02	0.02	0.02
Variance	8.212.7	11.3	7.5	5.3
Standard deviation	3.6	3.4	2.7	2.3

Variable	Uncapped (g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Coefficient of variation	6.5	6.3	5.5	5.0

South Zone (SZ)

Variable	Uncapped (g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Weighting Variable	Length	Length	Length	Length
Number of samples	7,654	7,654	7,654	7,654
Minimum value	0.00	0.00	0.00	0.00
Maximum value	1,398.74	60.00	40.00	30.00
Mean	1.88	1.20	1.14	1.07
Median	0.08	0.08	0.08	0.08
Variance	579.9	24.1	18.0	13.5
Standard deviation	24.1	4.9	4.2	3.7
Coefficient of variation	12.8	4.1	3.7	3.4

Skarn Zones (SKS-UG)

Variable	Uncapped (g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Weighting Variable	Length	Length	Length	Length
Number of samples	9,600	9,600	9,600	9,600
Minimum value	0.00	0.00	0.00	0.00
Maximum value	300.00	60.00	40.00	30.00
Mean	0.89	0.65	0.63	0.58
Median	0.03	0.03	0.03	0.03
Variance	63.0	13.7	11.1	7.8
Standard deviation	7.9	3.7	3.3	2.8
Coefficient of variation	9.3	5.7	5.3	4.8

Shear Zones (SHS)

Variable	Uncapped (g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Weighting Variable	Length	Length	Length	Length
Number of samples	4,912	4,912	4,912	4,912
Minimum value	0.00	0.00	0.00	0.00
Maximum value	655.23	60	40.00	30.00
Mean	0.76	0.56	0.55	0.52
Median	0.03	0.03	0.03	0.03
Variance	107.8	8.5	7.7	5.7

Variable	Uncapped (g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 30 (g/t Au)
Standard deviation	10.4	2.9	2.8	2.4
Coefficient of variation	13.7	5.2	5.0	4.6

14.2.4.2 Open Pit Mine

Mineralized Wireframe Models

As for the drill holes intersecting wireframes for the underground mine, replacement values were entered for all such intervals of null values in the open pit drill hole database prior to creation of composited assays. The resulting edited sample information for the diamond drill holes and RC holes was composited into nominal equal lengths of one metre using the best-fit compositing algorithm of the Surpac mine modelling software package. Composited assay values were created on an individual, vein-by-vein basis. The open pit sub-set of composite samples included a number of grade control shovel samples that were taken along the width of the observable veins only. These shovel samples were assigned a confidence code of 10 or 20. As with samples from the underground mine, all samples were composited into nominal equal lengths of one metre using the best-fit composting function.

The composited assay information for the open pit samples were examined in detail on an individual basis for the year-end 2018 Mineral Resource update by means of frequency histograms, decile analyses, and probability plots to confirm that applying the same capping levels to all three sample types was reasonable (RPA 2019).

Considering that the capping strategy used to prepare the previous long-term Mineral Resource block models has been yielding acceptable reconciliation results with the production data, Mandalay elected to maintain the capping value approach for estimation of the gold grades contained within the mineralized wireframe models in the open pit mine as was used for the previous estimates of the open pit Mineral Resources. In this approach, a single capping value of 30 g/t Au has been maintained for the diamond drill hole, RC drill hole, and chip samples contained with the open pit wireframes. The summary statistics of the composited, capped assay values used to prepare the estimated block model grades are provided in Table 14-6.

Table 14-6: Summary Statistics of the Composited, Capped Samples by Zone - Open Pit Mine

East Pit (EP)

Variable	Uncapped (g/t Au)	Cap_30 (g/t Au)
Weighting Variable	Length	Length
Number of samples	11,177	11,177
Minimum value	0.00	0.00
Maximum value	390.00	30.00
Mean	1.21	0.95
Median	0.1	0.1
Variance	61.2	9.9

Variable	Uncapped (g/t Au)	Cap_30 (g/t Au)
Standard Deviation	7.8	3.1
Coefficient of variation	6.5	3.3

West Pit (WP)

Variable	Uncapped (g/t Au)	Cap_30 (g/t Au)
Weighting Variable	Length	Length
Number of samples	9,710	9,710
Minimum value	0.00	0.00
Maximum value	901.00	30.00
Mean	2.14	1.21
Median	0.1	0.1
Variance	357.4	16.4
Standard Deviation	18.9	4.1
Coefficient of variation	8.8	3.3

Quartz Mountain (QM)

Variable	Uncapped (g/t Au)	Cap_30 (g/t Au)
Weighting Variable	Length	Length
Number of samples	15,101	15,101
Minimum value	0.00	0.00
Maximum value	3,155.00	30.00
Mean	2.65	1.12
Median	0.1	0.1
Variance	1595.2	15.1
Standard Deviation	39.9	3.9
Coefficient of variation	15.0	3.5

Nylund (Nyl)

Variable	Uncapped (g/t Au)	Cap_30 (g/t Au)
Weighting Variable	Length	Length
Number of samples	3,515	3,515
Minimum value	0.00	0.00
Maximum value	64.6	30.00
Mean	0.47	0.44
Median	0.1	0.1

Variable	Uncapped (g/t Au)	Cap_30 (g/t Au)
Variance	6.3	3.7
Standard Deviation	2.5	1.9
Coefficient of variation	5.3	4.3

Skarn Zones (SKS-OP)

Variable	Uncapped (g/t Au)	Cap_30 (g/t Au)
Weighting Variable	Length	Length
Number of samples	1,426	1,426
Minimum value	0.00	0.00
Maximum value	161.07	30.00
Mean	1.22	1.1
Median	0.1	0.1
Variance	36.9	13.9
Standard Deviation	6.1	3.7
Coefficient of variation	5.0	3.5

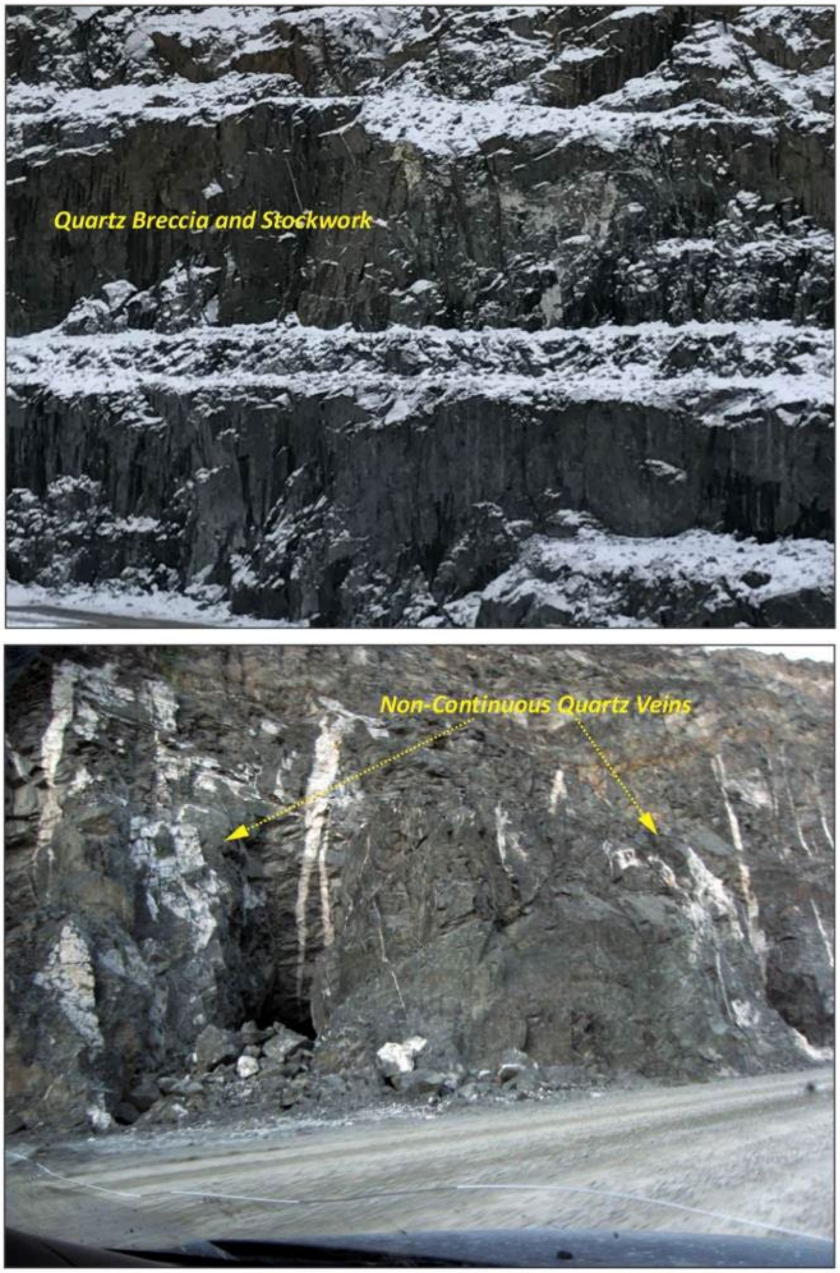
Dilution Model

Examination of the distribution of the gold grades for the portion of the Björkdal deposit located within the open pit mine reveals the presence of a significant number of above cut-off grade assay values that are located outside of the limits of the mineralized wireframe models. The current view for these samples is that they represent other occurrences of gold mineralization that are not hosted by a regular series of narrow, steeply dipping quartz veins as represented by the wireframe models. Examples of these types of occurrences could be breccia and/or stockwork styles of quartz veins, vertically dipping quartz veins with limited vertical or lateral extent, or narrow quartz veins that have dips that are not vertical (Figure 14-9). Operational experience from the open pit grade control program supports this view, as a significant amount of additional mineralization is located within the open pit mine each year outside of the modelled zones as a result of sampling at a detailed scale.

All diamond drill hole and RC drill hole samples that are located outside of the mineralized wireframe models were flagged and composited to nominal equal lengths of one metre using the best-fit compositing algorithm of the Surpac mine modelling software package.

The composited assay information for the open pit diamond drill holes and the RC drill holes located outside of the mineralized wireframe models was examined by means of a frequency histogram to determine an appropriate capping value. A capping value of 30 g/t Au has been selected for the diamond drill hole and RC drill hole samples contained with the dilution model.

Figure 14-9: Quartz Vein Breccia and Stockwork, Open Pit Mine



Mandalay Resources Corporation

Björkdal Gold Mine
Västerbotten, Sweden

Quartz Vein Breccia and Stockwork
Open Pit Mine

Source: RPA 2016.

14.2.5 Bulk Density

Since 2013 Björkdal has been collecting bulk density information on the major lithologic units and mineralization that has been encountered in the Mine. An additional 20 samples were collected in 2020 from select exploration drill holes. These samples were sent to CRS Kempele for specific gravity analysis, whereby the specific gravity was determined by a simple water immersion technique on whole core samples.

A total of 167 density measurements have been collected as of 31 December 2021. A summary of all results is shown graphically in Figure 14-10. Table 14-7 presents the summary statistics with the two granodiorite outliers removed.

Figure 14-10: Box and Whisker Plot of Björkdal Specific Gravity Measurements as at 31 December 2021

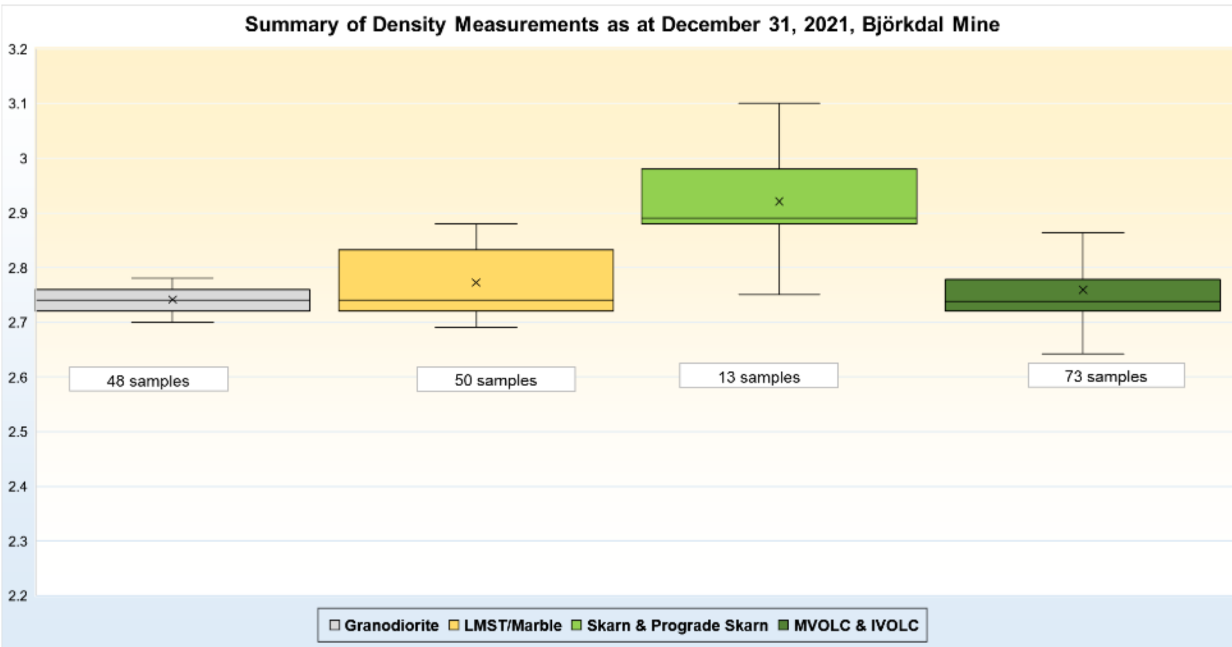


Table 14-7: Summary Statistics for Björkdal Bulk Densities as at 31 December 2021

Item/Lithology	Granodiorite	Limestone/ Marble	Skarn & Prograde Skarn	MVOLC & IVOLC
Mean (t/m^3)	2.74	2.77	2.92	2.76
Median (t/m^3)	2.74	2.74	2.89	2.74
Mode (t/m^3)	2.74	2.72	2.88	2.72
Standard Deviation	0.11	0.08	0.09	0.07
Sample Variance	0.01	0.01	0.01	0.01
Minimum (t/m^3)	2.24	2.69	2.75	2.62
Maximum (t/m^3)	3.32	3.13	3.10	2.94
Count	48	50	13	73

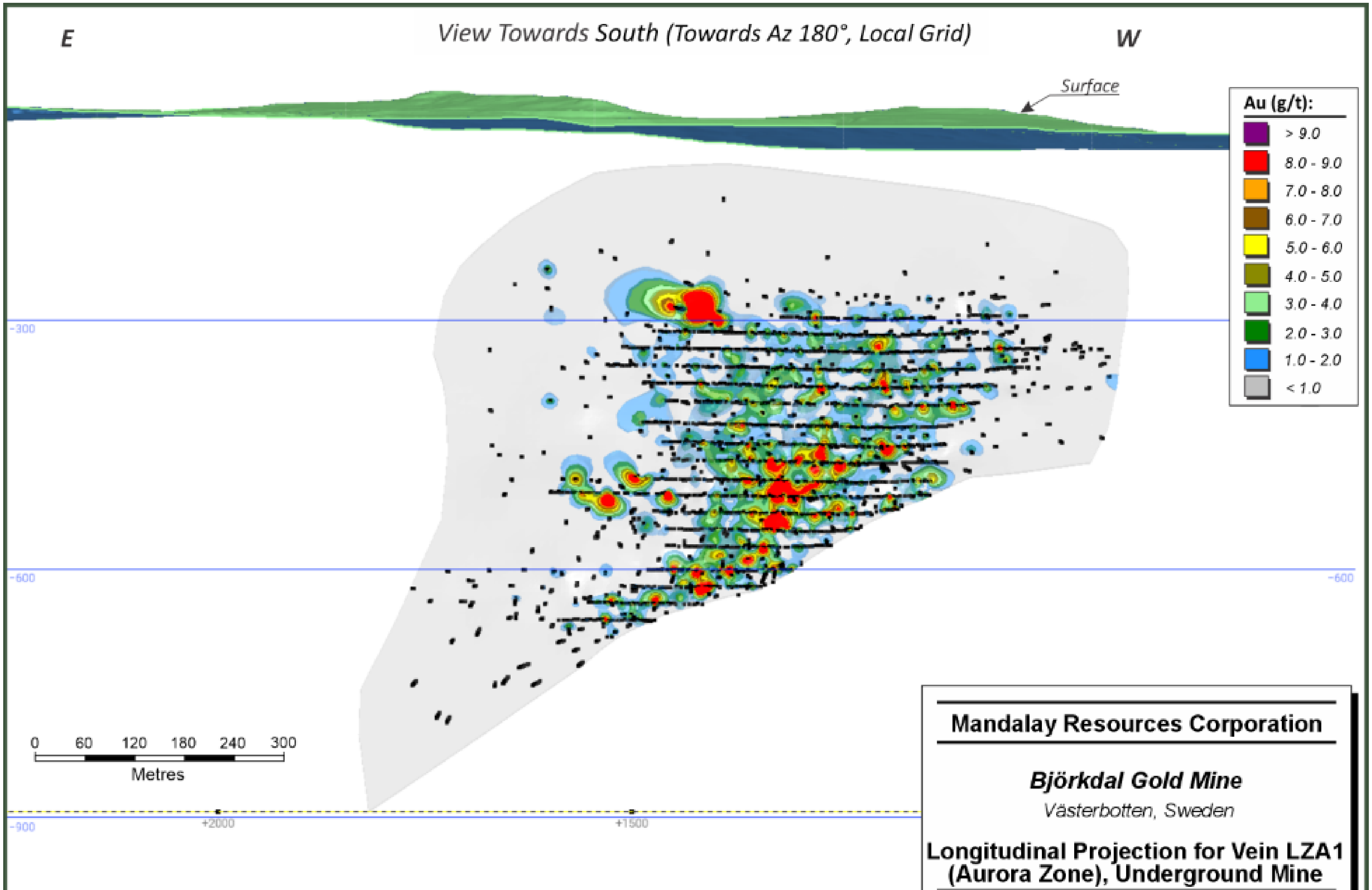
The global bulk density of 2.74 t/m^3 for the footwall mafic and hanging wall intermediate volcanic rocks used for previous Mineral Resource estimates was retained for the current estimate. An average bulk density of 2.77 t/m^3 was assigned to blocks located within the marble unit. An average bulk density of 2.92 t/m^3 was assigned to blocks located within the skarn wireframes.

14.2.6 Trend Analysis

14.2.6.1 Mineralized Wireframes

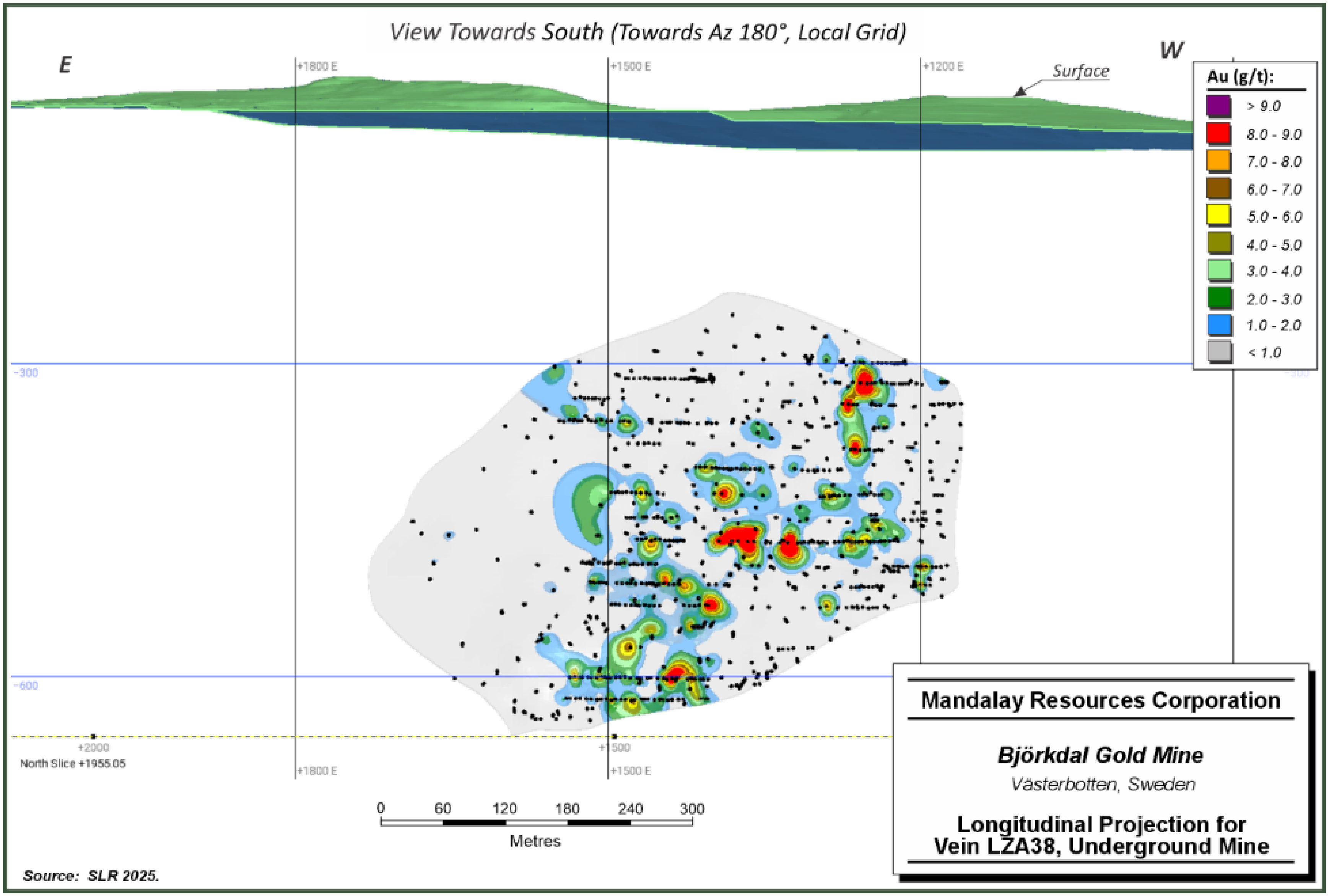
The distribution of the gold grades was examined in detail for three of the larger wireframes. For this exercise, a data file containing the capped, composited gold grades of the vein mineralized wireframe model were used to prepare contours of the gold grades using the contouring function contained within the Leapfrog software package. The results are presented as longitudinal projections (Figure 14-11, Figure 14-12, and Figure 14-13). Additional longitudinal projections for other selected veins have been presented in RPA (2017, 2018, 2019, and 2020) and SLR (2021 and 2023).

Figure 14-11: Longitudinal Projection for Vein LZA1 (Aurora Zone), Underground Mine



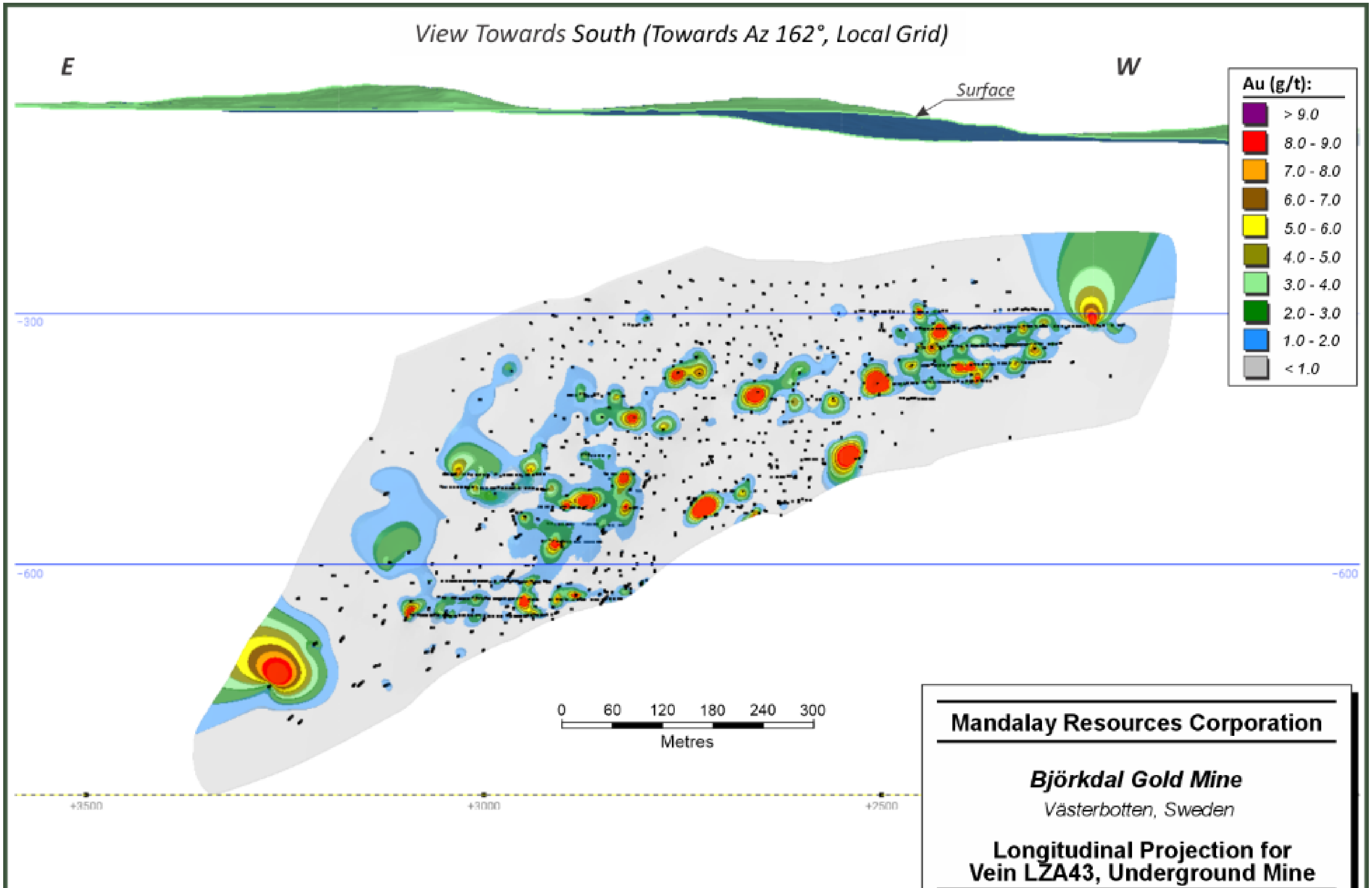
Source: SLR 2025.

Figure 14-12: Longitudinal Projection for Vein LZA38, Underground Mine



Source: SLR 2025.

Figure 14-13: Longitudinal Projection for Vein LZA43, Underground Mine



Source: SLR 2025.

14.2.7 Variography

The results of the variography studies presented in RPA (2017) were adopted for use in preparation of the current Mineral Resource estimate. These variography studies were conducted on a small number of selected mineralized wireframes for the open pit and underground mines.

A variography study was also carried out in 2020 for the mineralization contained within the principal mineralized zone for the Aurora Zone (Wireframe number LZA1). The results indicated that the mineralization contained within this mineralized zone bears similar variographic characteristics to the mineralization contained within the other mineralized wireframes found within the underground mine (RPA 2020).

14.2.8 Block Model Construction

An upright, non-rotated, sub-blocked block model was constructed to model the mineralization in the underground and open pit mines together.

The block model was constructed using the Surpac version 2024 software package and comprised an array of 2.5 m x 2.5 m x 5 m (Y, X, and Z) sized blocks using one level of sub-blocking to a minimum size of 1.25 m x 1.25 m x 2.5 m. The model was oriented parallel to the local grid coordinate system (i.e., no rotation or tilt). The selection of the block sizes for this model was based upon experience gained by the mine staff and remained unchanged from previous block models. A number of attributes were created to store such information as rock code, material densities, estimated gold grades, mineral resource classification, mined out material and the like. The block model origin, dimensions, and attributes are provided in Table 14-8 and Table 14-9.

Table 14-8: Summary of Björkdal Block Model Origins and Block Sizes

Type	Y (Northing)	X (Easting)	Z (Elevation)
Minimum Coordinates (m)	-400	0	-945
Maximum Coordinates (m)	2,500	3,100	50
User Block Size (m)	2.5	2.5	5
Min. Block Size (m)	1.25	1.25	2.5
Rotation	0.000	0.000	0.000

Table 14-9: Summary of Björkdal Block Model Attributes

Attribute Name	Type	Decimals	Background	Description
au_id3	Float	2	0	
au_op30	Float	2	0	
avg_dist_true	Real	3	-99	
avg_dist_true_op	Real	3	-99	
class	Integer	-	0	2 indicated, 3 inferred
class_final	Integer	-	0	
density	Float	2	2.73	

Attribute Name	Type	Decimals	Background	Description
depleted	Integer	-	0	
hw	Integer	-	0	0-below, 1-above
litho	Character	-	mafic	mafic or marble
material	Character	-	WAST	
nearest_true	Real	3	-99	
nearest_true_op	Real	3	-99	
no_samples	Integer	-	-99	
no_samples_op	Integer	-	-99	
nr_dh	Integer	-	-99	
nr_dh_op	Integer	-	-99	
op_shell	Integer	-	0	0-ug, 1-opshell
pass	Integer	-	0	
pass_op	Integer	-	0	
pp_depleted	Float	2	0	
remnt_rsc	Integer	-	0	
vein	Character	-	0	
vein_group	Character	-	0	
waste_domain	Integer	-	0	

Gold grades were estimated into the blocks by means of the Inverse Distance, Power 3 (ID^3) interpolation algorithm for each vein wireframe individually using the scripting functions of the Surpac software package. A total of three interpolation passes were carried out to estimate the grades in the underground block model. The first pass employed composite samples that had been capped to a maximum of 60 g/t Au and used a search radius of 15 m. The second and third passes used composite samples that were capped to 40 g/t Au and used longer search radii of 35 m and 70 m, respectively.

A two-pass search strategy was applied when estimating the grades for the blocks contained within the mineralized wireframes contained within the open pit mine.

When estimating the grades of the mineralized wireframes, “hard” domain boundaries were used along the contacts of the mineralized wireframe models. Only those composite samples contained within the respective wireframe model were allowed to be used to estimate the grades of the blocks within the wireframe in question, and only those blocks within the wireframe limits were allowed to receive grade estimates. When estimating the grades for the dilution domain, “soft” domain boundaries were applied to minimize any artifacts at the dilution domain boundaries. A summary of the search strategies employed to estimate the grades into the block model is presented in Table 14-10 and remain unchanged from previous estimates.

Table 14-10: Summary of Search Strategies at Björkdal

Underground Mine

Item	Pass 1	Pass 2	Pass 3
Boundary Conditions-Data	Hard	Hard	Hard
Boundary Conditions-Blocks	Write to wireframe only	Write to wireframe only	Write to wireframe only
Major Axis	Isotropic	Isotropic	Isotropic
Major Axis Direction	Isotropic	Isotropic	Isotropic
Semi-Major Axis	Isotropic	Isotropic	Isotropic
Semi-Major Direction	Isotropic	Isotropic	Isotropic
Minor Axis	Isotropic	Isotropic	Isotropic
Minor Direction	Isotropic	Isotropic	Isotropic
Major/Semi-Major Ratio	1.01	1.01	1.01
Major/Minor Ratio	1.02	1.02	1.02
Length of Major Axis (m)	15	35	70
Minimum Number of Drill Holes	2	2	2
Weight by Sample Length	Y	Y	Y
Minimum Number of Samples	4	4	4
Maximum Number of Samples	20	20	20
Max No. of Samples/Hole	20	20	20
Search Ellipse Type	Ellipsoid	Ellipsoid	Ellipsoid
Estimation Algorithm	ID^3	ID^3	ID^3

Open Pit Mine, Mineralized Wireframes

Item	Pass 1	Pass 2
Boundary Conditions-Data	Hard	Hard
Boundary Conditions-Blocks	Write to wireframe only	Write to wireframe only
Major Axis	Isotropic	Isotropic
Major Axis Direction	Isotropic	Isotropic
Semi-Major Axis	Isotropic	Isotropic
Semi-Major Direction	Isotropic	Isotropic
Minor Axis	Isotropic	Isotropic
Minor Direction	Isotropic	Isotropic
Major/Semi-Major Ratio	1.01	1.01
Major/Minor Ratio	1.02	1.02

Item	Pass 1	Pass 2
Length of Major Axis (m)	35	70
Minimum Number of Drill Holes	2	2
Weight by Sample Length	Y	Y
Minimum Number of Samples	5	5
Maximum Number of Samples	15	15
Max Number of Samples/Hole	15	15
Search Ellipse Type	Ellipsoid	Ellipsoid
Estimation Algorithm	ID^3	ID^3

Open Pit Mine, Dilution Domain

Item	Waste Domain 1	Waste Domain 2
Boundary Conditions-Data	Soft	Soft
Boundary Conditions-Blocks	Write to Domain 1 only	Write to Domain 2 only
Major Axis	Along Strike (60 m)	Down Dip (80 m)
Major Axis Direction	0° at 110°	0° at 040°
Semi-Major Axis	Down Dip	Northeast
Semi-Major Direction	-90° at 020°	0°at 130°
Minor Axis	Across Strike	Southeast
Minor Direction	0° at 020	-90°at 130
Major/Semi-Major Ratio	1.3	1.01
Major/Minor Ratio	1.7	1.2
Length of Major Axis (m)	60	60
Weight by Sample Length	Y	Y
Minimum Number of Samples	5	5
Maximum Number of Samples	15	15
Max Number of Samples/Hole	15	15
Search Ellipse Type	Ellipsoid	Ellipsoid

14.2.9 Block Model Validation

Validation of the estimated grades in the block model was carried out using the following methods for a selection of mineralized wireframes:

- comparing the average block estimated grades with the corresponding average grade of the informing samples using a polygonal declustering approach,
- visual comparisons of the estimated block grades with the contoured grades for selected veins, and
- preparation of swath plots.

14.2.9.1 Comparison of Block Model Estimated Grades to Declustered Composite Samples

Block model validation efforts began with a comparison of the average classified block grades with the polygonally declustered averages of the informing composite samples for a selection of the three largest veins as measured by the estimated contained gold The purpose of the comparison is to perform a high-level check as to whether any data-related errors may have occurred during the estimation process and to provide a general basis for the overall accuracy of the estimated block model grades (Table 14-11). The polygonally declustered mean grades correspond well with the block model estimated mean grades for the three mineralization wireframes examined.

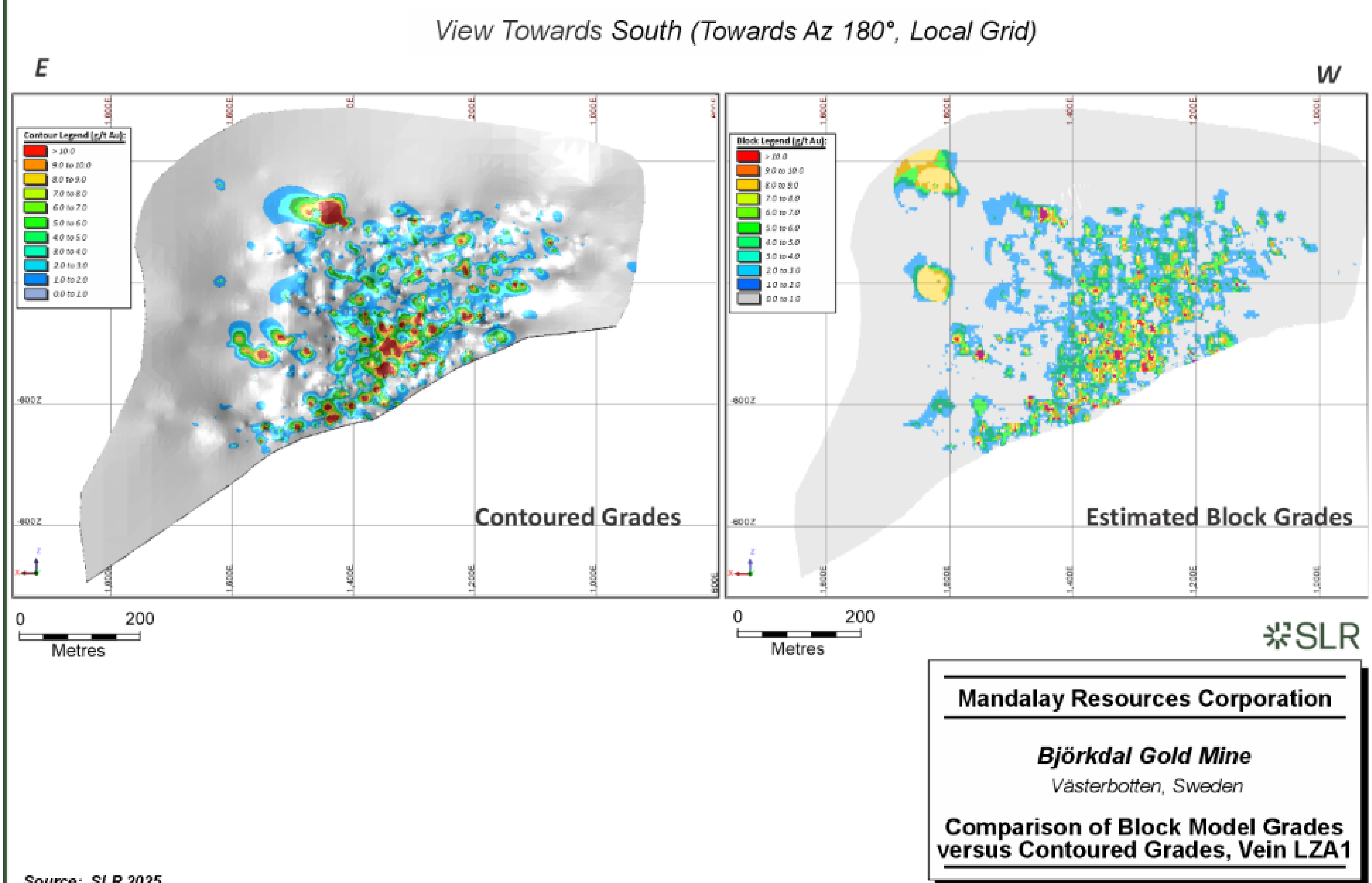
Table 14-11: Comparison of Block Model Estimated Grades to Declustered Composite Samples - Björkdal

Wireframe	LZA1	LZA38	LZA43
Polygonally Declustered Composite Mean (g/t Au)	1.12	1.08	0.82
Classified Block Model Average (g/t Au)	0.99	0.88	0.76

14.2.9.2 Visual Comparisons

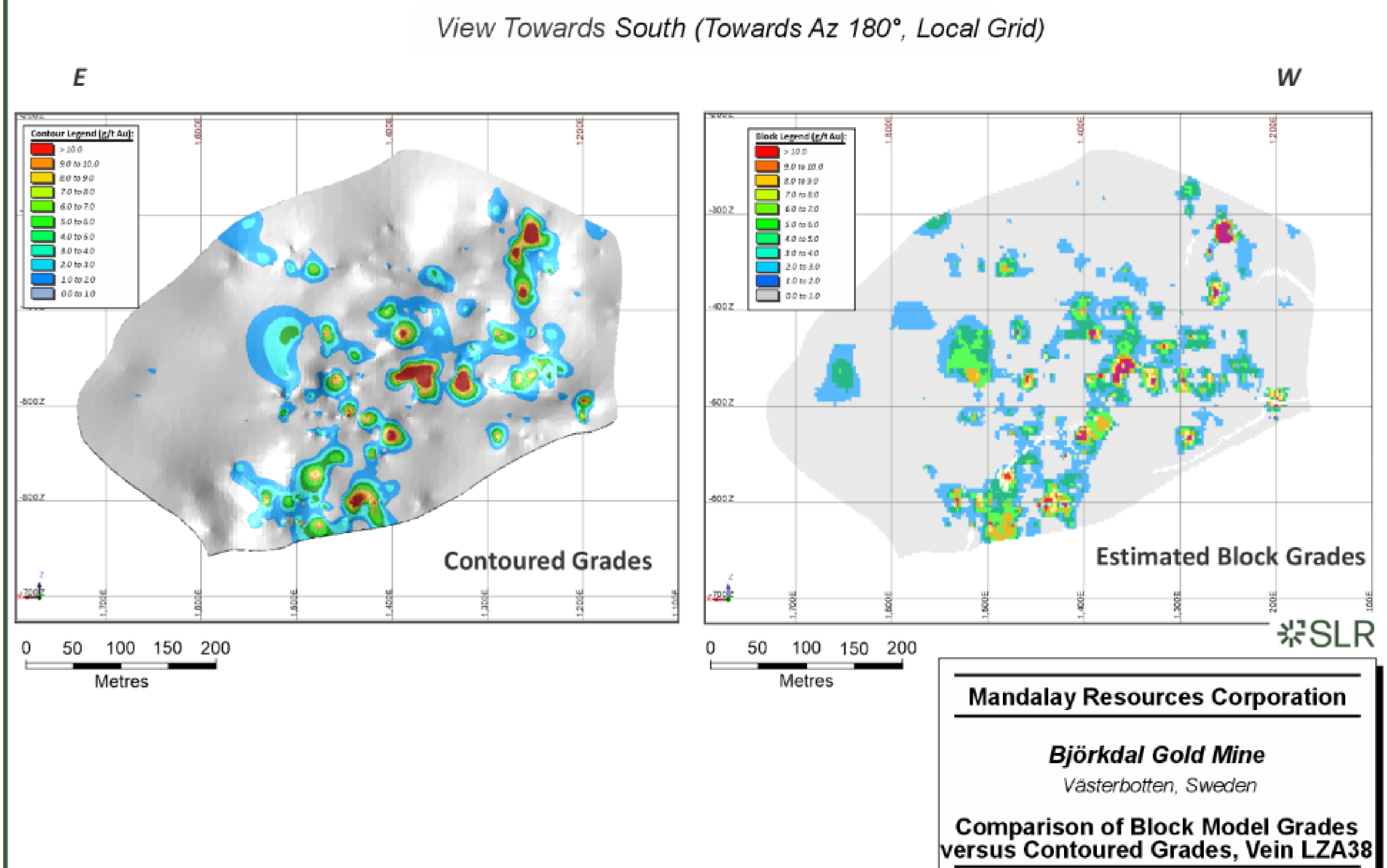
In order to gauge the accuracy of the local estimate, visual comparisons were carried out that compared the contoured grade distributions prepared during the trend analysis exercise described above with the estimated block grades (Figure 14-14, Figure 14-15, and Figure 14-16). Overall, reasonable spatial correlations were observed, however, estimation artifacts were noted locally which SLR suspects is a result of the search strategies employed for estimation of the block grades.

Figure 14-14: Comparison of Block Model Grades versus Contoured Grades, Vein LZA1



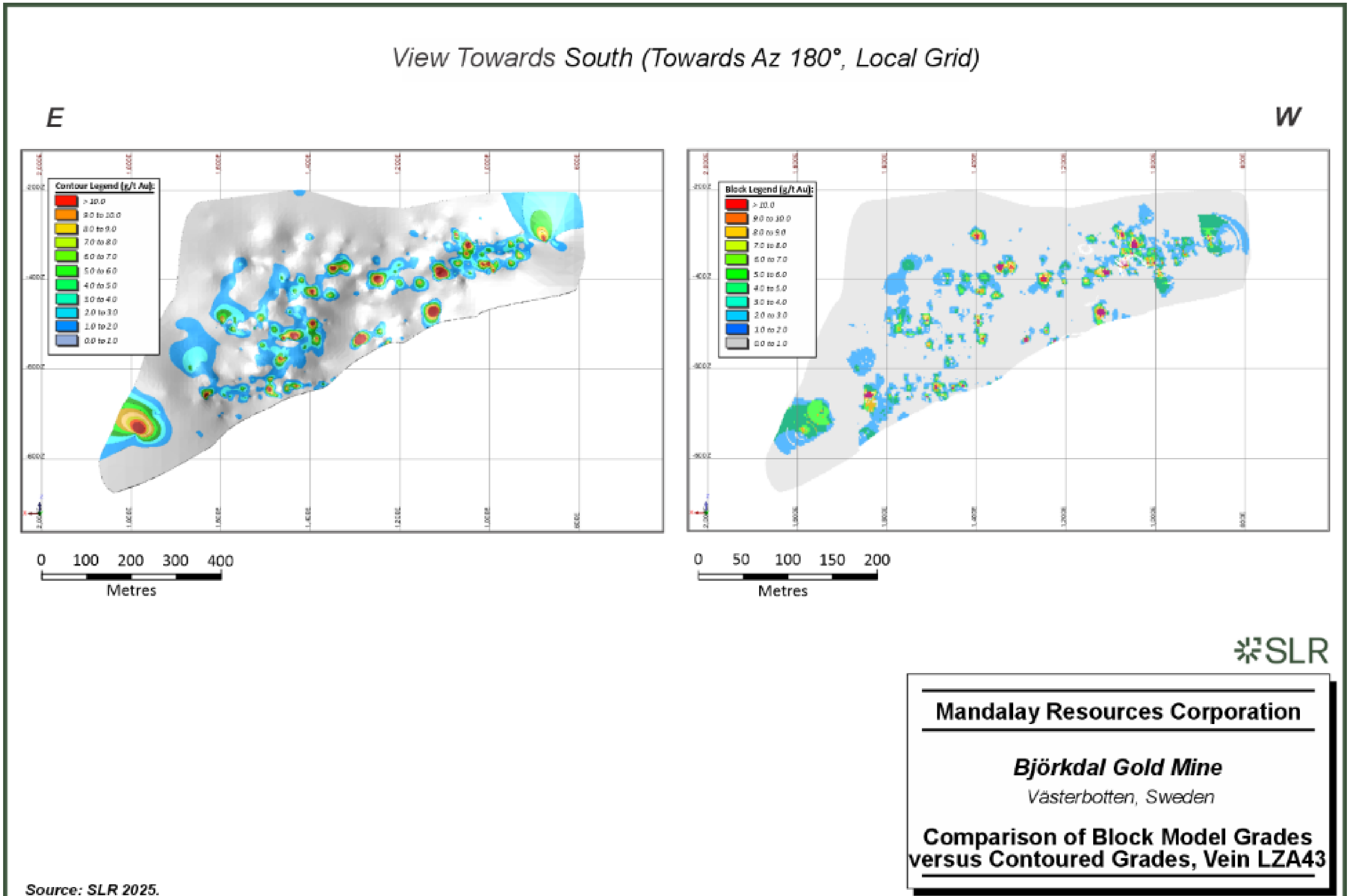
Source: SLR 2025.

Figure 14-15: Comparison of Block Model Grades versus Contoured Grades, Vein LZA38



Source: SLR 2025.

Figure 14-16: Comparison of Block Model Grades versus Contoured Grades, Vein LZA43



Source: SLR 2025.

14.2.9.3 Swath Plots

Similarly, SLR created swath plots for selected wireframes from the underground mine (Figure 14-17, Figure 14-18, and Figure 14-19). While some local variations were observed between the composite average grades and the block average grades, no material discrepancies were noted.

Figure 14-17: Swath Plot by Easting, Vein LZA1 (Aurora)

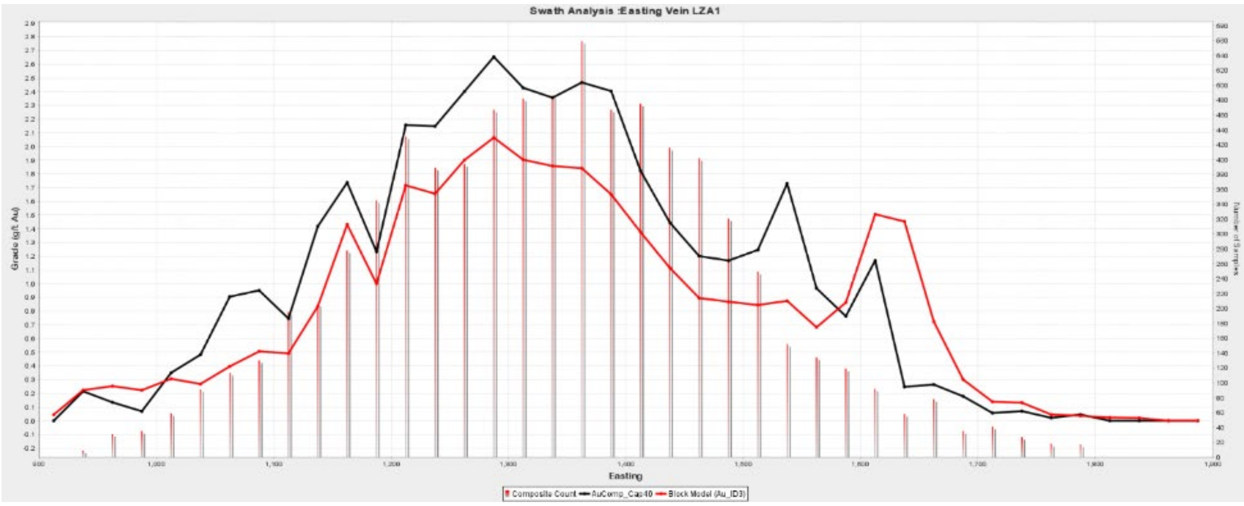


Figure 14-18: Swath Plot by Easting, Vein LZA38

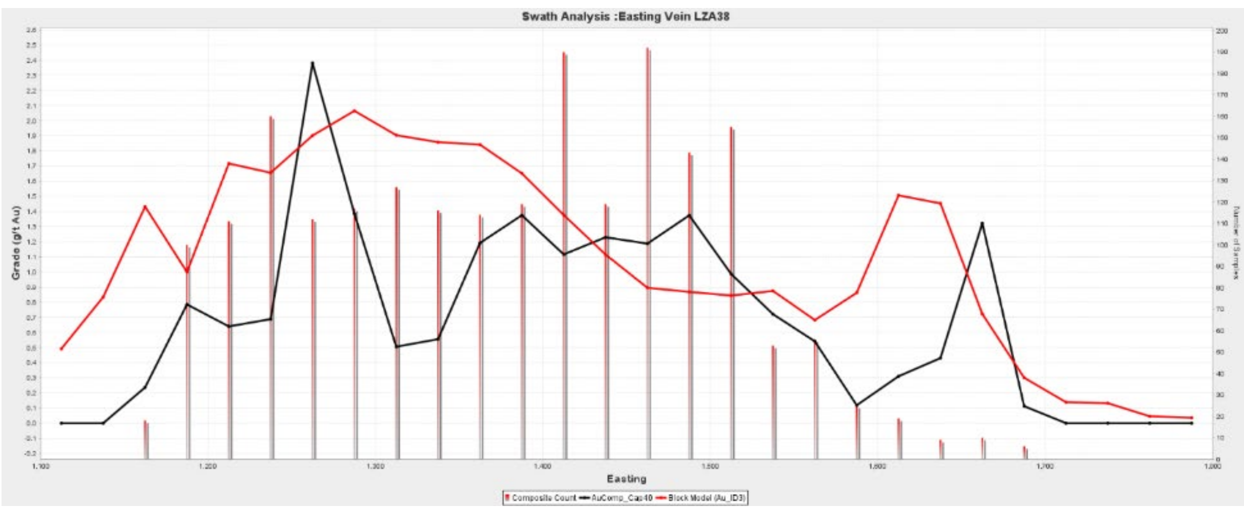
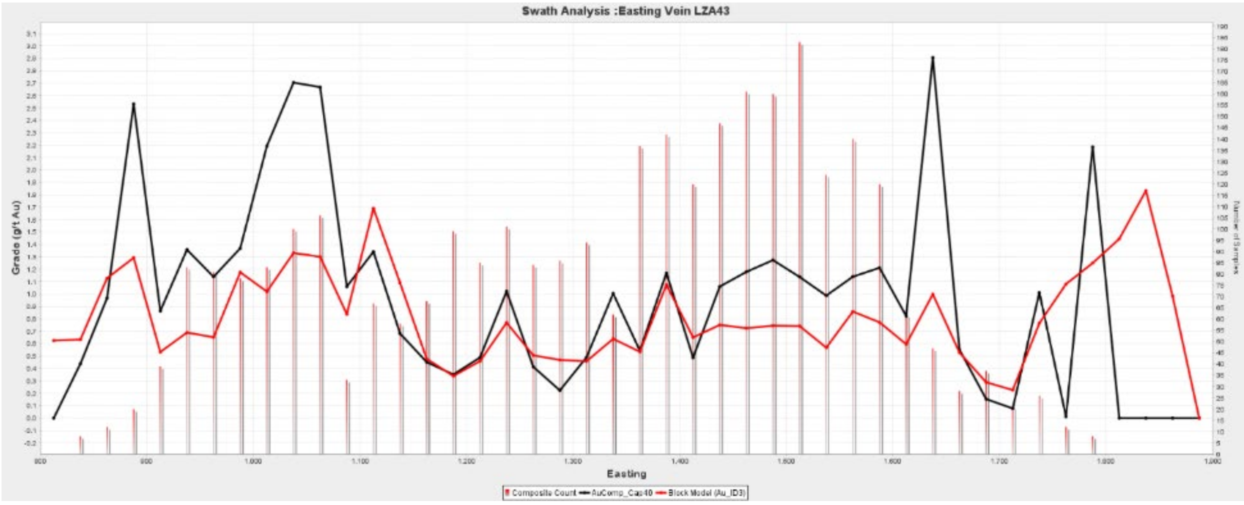


Figure 14-19: Swath Plot by Easting, Vein LZA43



14.2.10 Reconciliation to Production Statistics

A detailed description of the material flows at the Björkdal Mine is presented in SLR (2023).

A comparison of the predicted tonnage, grade, and contained gold between the year-end 2022 long-term model and the 2024 grade control model (constructed using the same parameters as the long-term model and updated more frequently as additional sample information became available) to 2024 plant production statistics was carried out for both stopes and for development material (Table 14-12).

For the stope material, valid cavity monitoring system (CMS) scans were not always available due to equipment failure and the implementation of new protocols around the scanning of stope voids. For stopes where valid scans were not available, the designed excavation was used, along with an expansion factor applied to account for likely overbreak.

For development material, the surveyed monthly drive solids were used to report the predicted tonnes, grade, and contained gold for these areas. It is important to note that not all development material is milled. Material that the grade control program identifies as waste or very low grade (generally less than 0.35 g/t Au) is rejected and sent to the appropriate waste or low grade stockpiles. No cut-off grade was applied to the model for the underground reconciliation reports, as digital models of the excavated voids were used to report all tonnes within the excavation volume.

Table 14-12: Reconciliation Data - Underground Mine

Underground: Stopes

Material	Long-Term Model (31 December 2022)			Grade Control Model (2024)			2024 Milled		
	Tonnes (t)	Grade (g/t Au)	Contained Metal (oz Au)	Tonnes (t)	Grade (g/t Au)	Contained Metal (oz Au)	Tonnes (t)	Grade (g/t Au)	Contained Metal (oz Au)
Stopes	524,652	1.27	21,456	524,652	1.35	22,772	578,493	1.37	25,506
Development	404,311	0.75	9,744	404,311	0.84	10,916	389,450	0.94	12,382
Total	**928,963**	**1.04**	**31,200**	**928,963**	**1.13**	**33,688**	**967,946**	**1.22**	**37,888**

14.2.11 Mineral Resources Classification Criteria

The definitions for resource categories used in this Technical Report are consistent with CIM (2014) definitions incorporated by reference in NI 43-101, and the 2019 CIM Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines.

In respect of the block model for the veins in the underground mine, all blocks that were located within a mineralization wireframe whose grades were estimated in either the first or second estimation passes were assigned a preliminary classification of Indicated Mineral Resources. Those blocks whose grades were estimated in the third estimation pass were assigned a preliminary classification of Inferred Mineral Resources.

Similarly, with respect to the block model for the open pit mine, all blocks that were located within a mineralization wireframe whose grades were estimated in the first estimation pass were assigned a preliminary classification of Indicated Mineral Resources. Those blocks whose grades were estimated in the second estimation pass were assigned a preliminary classification of Inferred Mineral Resources. No Measured Mineral Resources were assigned.

The initial classifications within both the underground and open pit mines were reviewed and manually adjusted so as to ensure that the material in the Indicated category possessed spatial continuity that was defined by at least two drill holes.

Those blocks located within 15 m of mine workings containing full chip/channel sample coverage were assigned to the Measured Mineral Resource category for selected veins.

An exercise was carried out by which selected groupings of blocks that were viewed as not meeting the “Reasonable Prospects” requirement of the CIM Definition Standards were removed from the classification into either the Measured, Indicated, or Inferred Mineral Resource categories. The exercise included a review of the volume and spatial continuity of the candidate blocks to ensure that they meet the minimum volume to be considered for stoping. The Mineral Resource category of those groupings of blocks below the minimum volume threshold was downgraded to the default value of zero. After consideration of such items as safety, remaining infrastructure, and accessibility, the Mineral Resource category for an area in the underground mine located immediately north (mine grid reference) of the current open pit mine was downgraded so that this material would not be included in the Mineral Resource statement.

Finally, all blocks that received an estimated grade within the waste domain in the potential open pit portion of the block model were assigned a classification into the Inferred Mineral Resources category.

14.2.12 Cut-Off Grade and Resource Reporting Criteria

Separate cut-off grades were developed for reporting of the underground and open pit Mineral Resources. Each cut-off grade was developed using the January to October 2024 actual cost information along with a gold price of US$2,500 per ounce and an exchange rate of 10.35 SEK/US$. The cut-off grade for reporting of Mineral Resources was determined to be 0.71 g/t Au within the underground mine and 0.17 g/t Au for the open pit mine. The open pit cut-off grade for reporting the Mineral Resources is on a pit discard basis that includes input costs comprising all operating costs but excludes mining costs.

To fulfill the CIM (2014) definitions requirement of “reasonable prospects for eventual economic extraction” (RPEEE) with respect to the open pit Mineral Resources, Mandalay prepared a preliminary open pit resource shell using the pit optimisation parameters reported in Section 15 and based on a US$2,500/oz gold price.

The criteria used to report the Mineral Resources within the open pit mine included:

- All blocks located above the resource pit surface,
- Not depleted for mining,
- Not including loose or backfill material,
- Within either a mineralized wireframe model, the mineralized waste domain model, or the failure zone,
- Having estimated block grades greater than 0.17 g/t Au, and
- Having a Mineral Resource category of either Indicated or Inferred.

The criteria used to report the Mineral Resources within the underground mine included:

- All blocks within a mineralized wireframe,
- Located below the open pit reporting shell,
- Not depleted for mining or being located within the subsidence area,
- Having estimated block grades greater than 0.71 g/t Au,
- Having a Mineral Resource category of either Measured, Indicated or Inferred; and
- Removal of material considered as remnant volumes or not meeting the RPEEE requirement of the CIM Definition Standards.

To fulfill the CIM (2014) definitions requirement of RPEEE with respect to the underground Mineral Resources, SLR carried out an exercise during the year-end 2022 Mineral Resource estimate for selected veins which compared the results of applying a block cut-off grade for preparing a Mineral Resource statement with an equivalent clipping polygon that considered the spatial continuity of the above cut-off grade blocks along with any blocks that might be contained within the clipping polygon whose grades were lower than the cut-off grade. The study concluded that, apart for the LZA1 vein, the use of a block cut-off grade approach was of sufficient accuracy for preparing Mineral Resource statements for all veins examined (SLR 2023).

14.2.13 Björkdal Mine Mineral Resource Estimate

The Mineral Resources are inclusive of Mineral Reserves. The Mineral Resources are reported using excavation volumes and surfaces current as of 31 December 2024 (Table 14-13). Mineral Resources for the open pit mine are reported using constraining surfaces that are prepared by consideration of the results from pit optimisation exercises, existing topographic surfaces, and site-specific infrastructure constraints. Mineral Resources for the underground mine are reported by application of block-cut off grades for remaining veins. Mineral Resources in the underground mine are reported after exclusion of remnant materials that can no longer meet the RPEEE requirement of the CIM Definition Standards for Mineral Resources. Mineral Resources are not reported for any blocks with volumes less than the minimum size for a stope, nor for any blocks residing within an area identified as having limited or no access for mining operations.

Table 14-13: Summary of Björkdal Mineral Resources as of 31 December 2024

Category	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Measured	Underground	1,097	2.57	91
Indicated	Open Pit	4,130	1.61	213
	Underground	13,792	2.41	1,069
	Stockpile	1,520	0.59	29
Sub-total, Indicated		19,442	2.10	1,311
Total, M+I		**20,539**	**2.12**	**1,402**
Inferred	Open Pit	6,666	1.09	233
	Underground	3,178	2.11	216
Total Inferred		**9,844**	**1.42**	**449**

Notes:

1. Björkdal Mineral Resources are estimated using drill hole and sample data as of 30 September 2024 and account for production to 31 December 2024.
2. CIM (2014) definitions and the 2019 CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines were followed for Mineral Resources.
3. Mineral Resources are inclusive of Mineral Reserves.
4. Mineral Resources are estimated using an average gold price of US$2,500/oz and an exchange rate of 10.35 SEK/US$.
5. High gold assays were capped to 30 g/t Au for the Björkdal open pit mine.
6. High gold assays for the underground mine were capped at 60 g/t Au for the first search pass and 40 g/t Au for subsequent passes.
7. Interpolation was by inverse distance cubed utilizing diamond drill, reverse circulation, and chip channel samples.
8. Open pit Mineral Resources are constrained by open pit shells and estimated at a cut-off grade of 0.17 g/t Au.
9. Underground Mineral Resources are estimated at a block cut-off grade of 0.71 g/t Au.
10. A nominal 2.5 m minimum mining width was used to interpret veins using diamond drill, reverse circulation, and underground chip sampling.
11. Stockpile Mineral Resources are based upon surveyed volumes supplemented by production data.
12. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
13. Numbers may not add due to rounding.

14.2.14 Factors Affecting the Mineral Resource Estimate

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. At the present time, the SLR QP is not aware of any environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues that may have a material impact on the Björkdal Mineral Resource estimate other than those discussed below.

Factors that may affect the Björkdal deposit Mineral Resource estimates include:

- Metal price and exchange rate assumptions,
- Changes to the assumptions used to generate the cut-off grade used for construction of the mineralized wireframe domains,
- Changes to geological and mineralization shape and geological and grade continuity assumptions and interpretations,

- Due to the natural variability inherent with gold mineralization in mesothermal gold deposits, the presence, location, size, shape, and grade of the actual mineralization located between the existing sample points may differ from the current interpretation. The level of uncertainty in these items is lowest for the Measured Mineral Resource category and is highest for the Inferred Mineral Resource category,
- Changes to the understanding of the current geological and mineralization shapes and geological and grade continuity resulting from acquisition of additional geological and assay information from future drilling or sampling programs,
- Changes in the treatment of high grade gold values,
- Changes due to the assignment of density values,
- Changes to the input values used to determine the Mineral Resource reporting cut-off grades,
- Inability to recover remnant mineralization residing as either sill pillars or rib pillars.

14.2.15 Comparison with Previous Mineral Resource Estimates

A comparison of the current Björkdal Mineral Resources with the previous Mineral Resources effective as of 31 December 2022 is presented in Table 14-14.

Table 14-14: Comparison of Mineral Resources, 31 December 2024 versus 31 December 2022

Category	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Mineral Resources as at 31 December 2024				
Measured	Underground	1,097	2.57	91
Indicated	Open Pit	4,130	1.61	213
	Underground	13,792	2.41	1,069
	Stockpile	1,520	0.59	29
Sub-total, Measured + Indicated		**20,539**	**2.12**	**1,402**
Inferred	Open Pit	6,666	1.09	233
	Underground	3,178	2.11	216
Total Inferred		**9,844**	**1.42**	**449**
Mineral Resources as at 31 December 2022				
Measured	Underground	526	2.39	40
Indicated	Open Pit	2,533	2.31	188
	Underground	11,084	2.60	926
	Stockpile	2,357	0.60	45
Sub-total, Measured + Indicated		**16,500**	**2.26**	**1,199**

Category	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Inferred	Open Pit	3,032	1.46	142
	Underground	1,815	2.10	123
Total Inferred		**4,847**	**1.70**	**265**
Difference				
Sub-total, M+I		+4,039	-0.14	+203
Inferred		+4,997	-0.28	+184

Notes:
1. CIM (2014) definitions were followed for Mineral Resources.
2. Open Pit Mineral Resources were estimated at cut-off grades of 0.36 g/t Au in 2022 and 0.17 g/t Au in 2024.
3. Underground Mineral Resources were estimated at cut-off grades of 0.82 g/t Au in 2022 and 0.71 g/t Au in 2024.
4. Mineral Resources were estimated using long term gold prices and long term foreign exchange rates of US$1,750/oz Au and an exchange rate of 9.0 SEK/US$ in 2022 and US$2,500/oz Au and a 10.35 SEK/US$ exchange rate in 2024.
5. Numbers may not add due to rounding.

14.3 Norrberget Deposit

The Mineral Resource estimate for the Norrberget deposit was updated to include the results of drilling activities carried out in 2023 and 2024.

14.3.1 Topography Model

The topographic data were collected by Boliden in 2019 while carrying out a regional aeromagnetic survey in the area. The topographic data were collected using laser imaging, detection, and ranging LIDAR equipment. Mandalay purchased that portion of the topographic data within its property boundaries. Some areas surrounding the Norrberget deposit are cleared and so the LIDAR survey data yields an accurate representation of the topography surface in these areas, other portions of the area remain forested. The topographic data for these areas have not been corrected for the canopy.

14.3.2 Description of the Database

The presence and distribution of the gold mineralization found at the Norrberget deposit is defined by means of diamond drill holes (DDH), completed from surface set ups. All DDH information is entered into the Datashed geological database management system. The drill hole locations are determined using the SWEREF 99 national map projection system that is used throughout Sweden.

Subsets from this master database are extracted and used for estimations on an as-needed basis. All of the drill hole data are in the MS Access database format and were modified for use by the GEOVIA Surpac 2024 mine modelling software package. Additional fields to store such information as the composited assay values and wireframe flags were created in the working database as required during preparation of the Mineral Resource estimate. Values of either 0.01 g/t Au, 0.025 g/t Au, or 0.050 g/t Au were inserted into the database by means of a computer script for any unsampled intervals at the outset of the Mineral Resource estimation workflow. The cut-off date for the drill hole database is 30 September 2024. The location of the drill holes which were used to prepare the year-end 2024 Mineral Resource estimate were shown in Figure 10-1. A summary of the resource database is provided in Table 14-15.

Table 14-15: Summary of Norrberget Mineral Resource Database

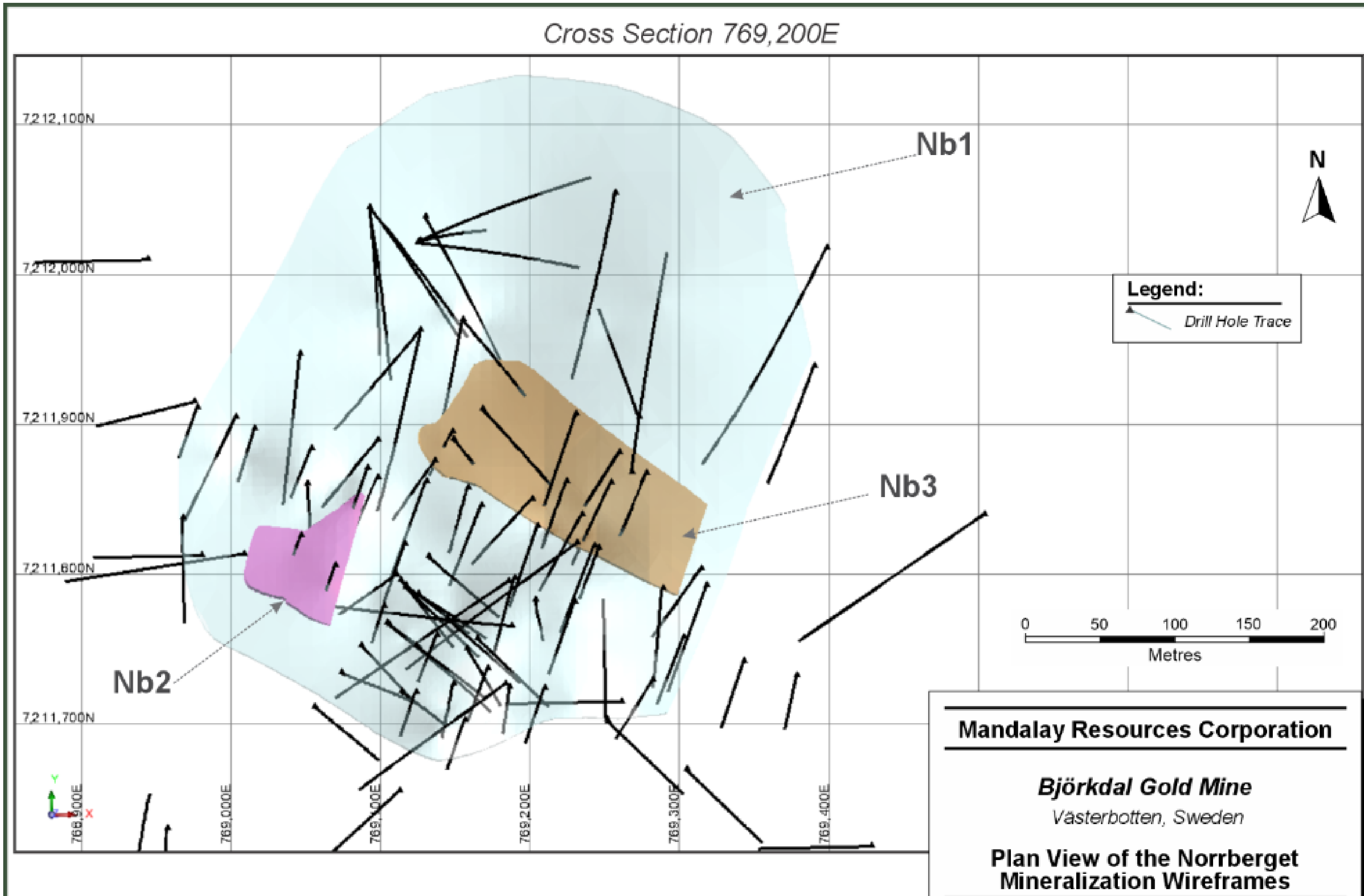
Table Name	Data Type	Table Type	Records
assay	interval	time-independent	8,134
collar			98
comps_1m	interval	time-independent	455
intercept	interval	time-independent	96
lithology	interval	time-independent	2,637
styles			72
survey			2,930

The resource database is considered by SLR to be sufficiently reliable for grade modelling and Mineral Resource estimation.

14.3.3 Lithology and Mineralization Wireframes

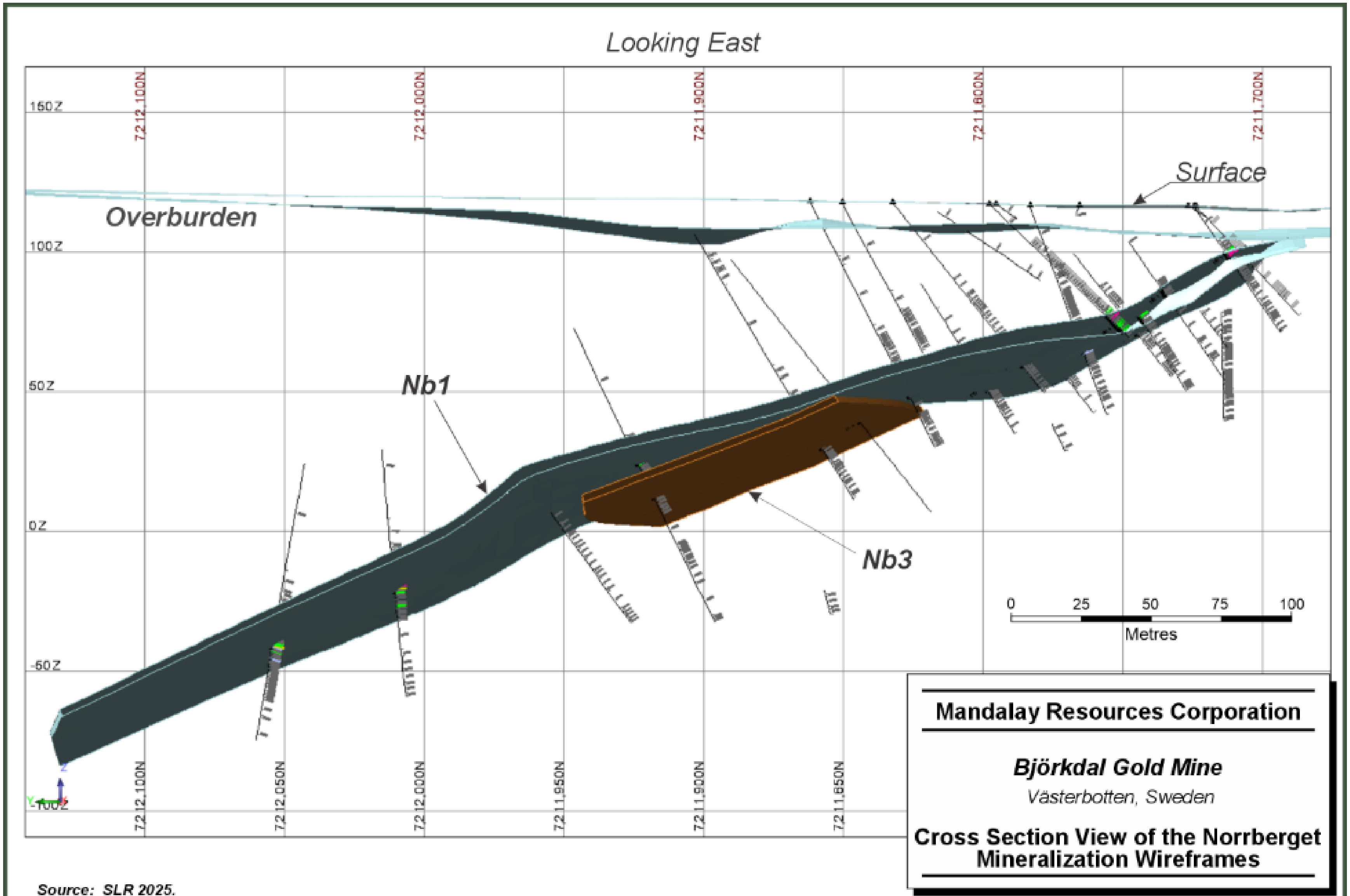
The Norrberget mineralization occurs within bands of veinlets and alteration containing amphibole in a package of interbedded mafic tuffs and volcaniclastics. RPA, now SLR, reviewed the geological logging and was not able to differentiate suitably the grade from waste rock using the lithology and alteration logging. Consequently, three mineralization wireframes were constructed using the Seequent Leapfrog software package based on an approximately 0.4 g/t Au wireframe cut-off grade (Figure 14-20 and Figure 14-21). The largest mineralization wireframe (domain Nb1) defines gold mineralization along an east-west strike length of approximately 400 m and to a depth of approximately 175 m beneath the surface. The wireframe dips gently towards the north at a dip of approximately 20º to 30º. The strike and depth limits of the mineralization have not been determined by drilling.

Figure 14-20: Plan View of the Norrberget Mineralization Wireframes



Source: SLR 2025.

Figure 14-21: Cross Section View of the Norrberget Mineralization Wireframes



Source: SLR 2025.

A bedrock surface was generated using the Seequent Leapfrog software package from the bottom of the casing.

14.3.4 Compositing Methods and Grade Capping

Samples within the domain wireframes were flagged with the wireframe domain name and were composited into equal lengths of one metre using the best-fit composite function of the Surpac software package. A capping value of 24 g/t Au was selected based on analysis of the limited number of data points available (Figure 14-22). Statistics for capped and uncapped composites for all three domains combined are presented in Table 14-16.

Figure 14-22: Upper Tail Histogram of the Uncapped, 1m Composite Assays

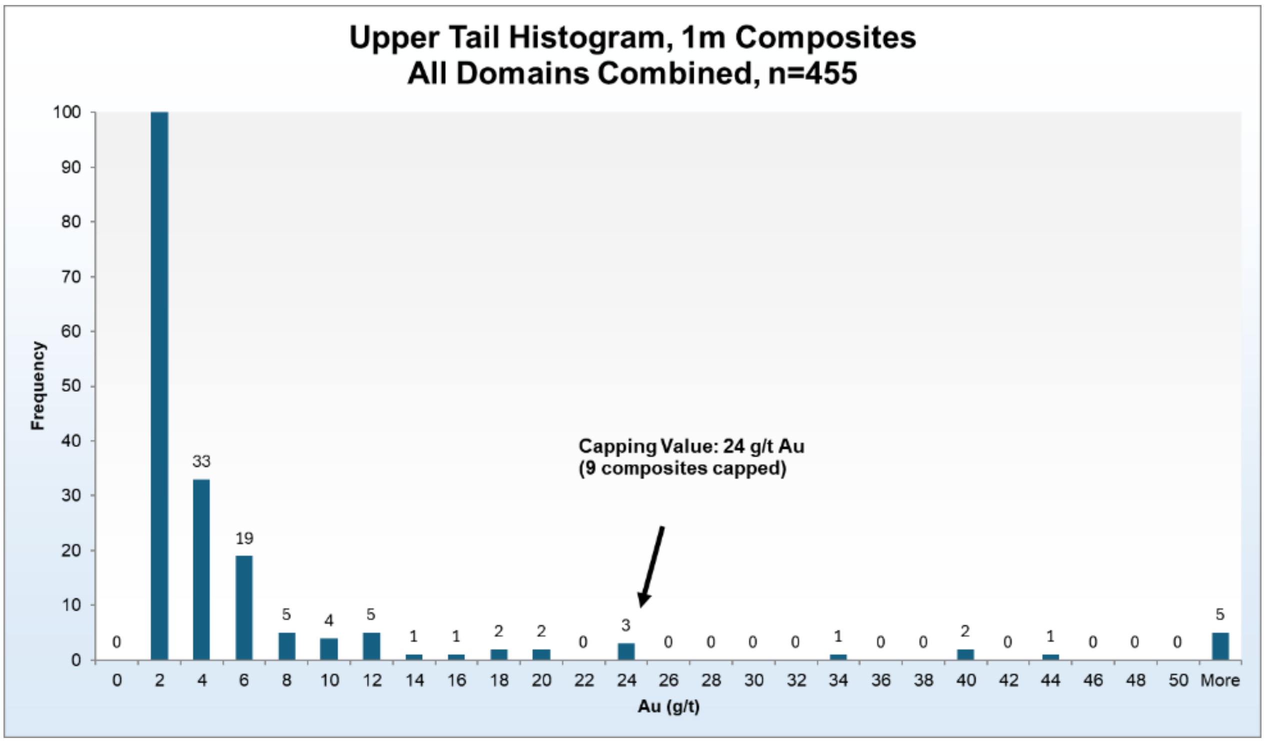


Table 14-16: Summary of Norrberget Composite Statistics

Item	Uncapped Composite	Capped Composite
Length-Weighted Mean	5.27	1.84
Median	0.27	0.27
Standard Deviation	48.3	4.5
Coefficient of Variation	9.2	2.4
Variance	2,333.1	19.8
Minimum	0.005	0.005
Maximum	946.37	24.00
Count	455	455

14.3.5 Bulk Density

Density measurements were taken during a previous exploration program that collected 358 samples from four diamond drill holes. Sample densities were calculated using Archimedean principles of measuring a sample in air and immersed in water. An average bulk density for each lithology is presented in Table 14-17. A density value of 1.80 g/cm^3 is adopted as an estimate of the bulk density of the glacial materials overlying the bedrock surface.

Table 14-17: Norrberget Mean Bulk Density by Lithology

Lithology	Density (g/cm^3)
Overburden	1.80
Mafic Tuff	2.78
Mineralization	2.78
Mafic Volcaniclastic	2.72
Limestone	2.76

14.3.6 Variography and Trend Analysis

No meaningful variograms could be derived due to the low sample numbers present within the mineralization wireframe domains and the typical high variance in the gold grades between composite samples.

A contour map of the gold distribution for the largest mineralization domain (Nb1) was prepared using the contouring functions of the Surpac software package. The results were presented in Figure 10-3. The contours of the available data suggests that the gold mineralization resides as shoots of higher grades plunging along the down-dip direction. The limits of the gold mineralization have not been defined by the drilling. The SLR QP recommends that additional exploration activities be carried out at the Norrberget deposit to search for the strike and depth limits of the gold mineralization.

14.3.7 Block Model Construction

The conceptual operational scenario envisions that mineralized material would be extracted by means of a small open pit mine at with the material being transported to the Björkdal processing plant for recovery of the gold.

A single upright, non-rotated, sub-blocked block model was constructed to model the mineralization in the potential underground and open pit mines together.

The block model was constructed using the Surpac version 2024 software package and comprised an array of 4.0 m x 6.0 m x 4.0 m (Y, X, and Z) sized blocks using one level of sub-blocking to a minimum size of 2.0 m x 3.0 m x 2.0 m. The model was oriented parallel to the grid coordinate system (i.e., no rotation or tilt). The selection of the block sizes for this model was based upon experience gained by the mine staff and remained unchanged from previous block models. A summary of the block model dimensions is provided in Table 14-18. A number of attributes were created to store such information as rock code, material densities, estimated gold grades, mineral resource classification, and the like (Table 14-19).

It is important to note that given the early stage of the Project development, selection of the most appropriate production rate(s) or selection of the specific mining methods which would ultimately be employed is not possible. Consequently, the selection of block dimensions is preliminary in nature based on the envisioned conceptual operating scenario. The block sizes may need to be revised at a later date as new information permits the identification of the most appropriate production rate and equipment selection.

Table 14-18: Summary of Norrberget Block Model Origins and Block Sizes

Type	Y (Northing)	X (Easting)	Z (Elevation)
Minimum Coordinates (m)	7,211,575.248	768,965.186	-108.605
Maximum Coordinates (m)	7,212,135.2484	769,391.186	127.395
User Block Size (m)	4.0	6.0	4.0
Min. Block Size (m)	2.0	3.0	2.0
Rotation	0.000	0.000	0.000

Table 14-19: Norrberget Block Model Attributes

Attribute Name	Type	Decimals	Background
area	Character	-	0
au	Float	3	-99
au_a	Float	3	-99
au_b	Float	3	-99
au_c	Float	3	-99
au_id3	Real	2	0
au_lt	Float	3	-99
auraw	Float	3	-99
class	Integer	-	0
class_final	Integer	-	0
density	Float	3	2.74
material	Character	-	WAST
nr_dh	Integer	-	-99
num_samp	Integer	-	-99
pass	Integer	-	0
vein	Character	-	0

Gold grades were estimated into the blocks by means of the Inverse Distance, Power 3 (ID^3) interpolation algorithm for each vein wireframe individually using the scripting functions of the Surpac software package. A total of three interpolation passes were carried out to estimate the grades in the block model.

When estimating the grades of the mineralized wireframes, "hard" domain boundaries were used along the contacts of the mineralized wireframe models. Only those composite samples contained within the respective wireframe model were allowed to be used to estimate the grades of the blocks within the wireframe in question, and only those blocks within the wireframe limits were allowed to receive grade estimates. A summary of the search strategies employed to estimate the grades into the block model is presented in Table 14-20.

Table 14-20: Summary of Search Strategies at Norrberget

Item	Pass 1	Pass 2	Pass 3
Boundary Conditions-Data	Hard	Hard	Hard
Boundary Conditions-Blocks	Write to wireframe only	Write to wireframe only	Write to wireframe only
Major Axis	Isotropic	Isotropic	Isotropic
Major Axis Direction	Isotropic	Isotropic	Isotropic
Semi-Major Axis	Isotropic	Isotropic	Isotropic
Semi-Major Direction	Isotropic	Isotropic	Isotropic
Minor Axis	Isotropic	Isotropic	Isotropic
Minor Direction	Isotropic	Isotropic	Isotropic
Major/Semi-Major Ratio	1.01	1.01	1.01
Major/Minor Ratio	1.02	1.02	1.02
Length of Major Axis (m)	15	50	75
Minimum Number of Drill Holes	2	2	2
Weight by Sample Length	Y	Y	Y
Minimum Number of Samples	4	4	4
Maximum Number of Samples	20	20	20
Max No. of Samples/Hole	20	20	20
Search Ellipse Type	Ellipsoid	Ellipsoid	Ellipsoid
Estimation Algorithm	ID^3	ID^3	ID^3

14.3.8 Block Model Validation

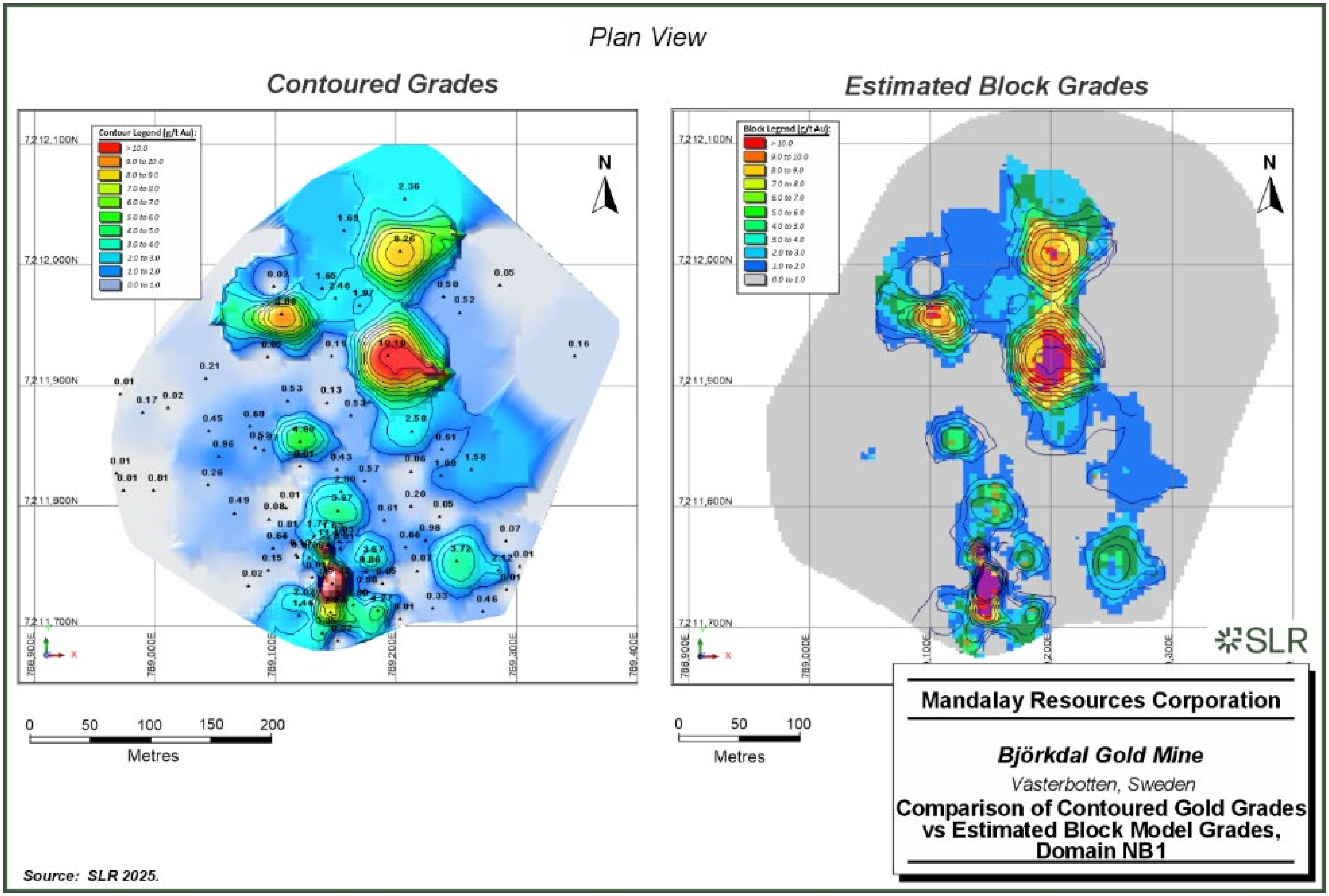
SLR reviewed the interpolated block model to ensure that it is representative of the input data. This validation included a comparison of the average grade of the informing composite samples for domain NB1 with the average estimated block grades (Table 14-21) and a visual comparison of the contoured gold values for domain NB1 and the estimated block grades (

Figure 14-23).

Table 14-21: Comparison of Composite Average Grades with Block Model Average Grades, Domain NB1

Domain ID	Capped Composite Average Grade (g/t Au)	Block Model Estimated Average Grade (g/t Au)
NB1	1.95	1.74

Figure 14-23: Comparison of Contoured Gold Grades vs Estimated Block Model Grades, Domain NB1



Source: SLR 2025.

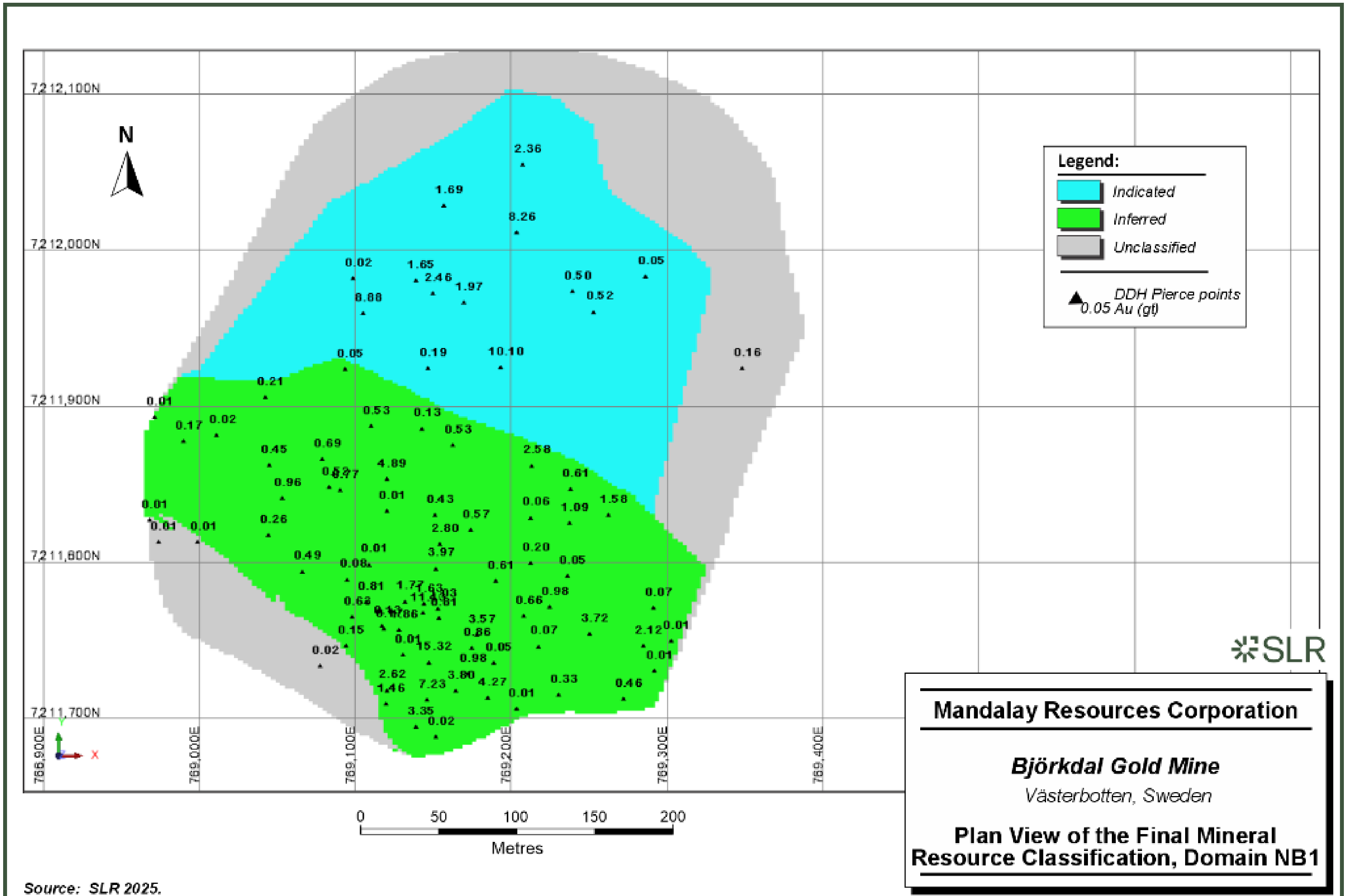
14.3.9 Mineral Resources Classification Criteria

Definitions for resource categories used in this Technical Report are consistent with CIM (2014) definitions and adopted by NI 43-101.

All blocks that were located within a mineralization wireframe whose grades were estimated in either the first or second estimation passes were initially assigned a preliminary classification of Indicated Mineral Resources. Those blocks whose grades were estimated in the third estimation pass were assigned a preliminary classification of Inferred Mineral Resources. Clipping polygons were applied to create a final classification that considered the drill hole spacing and the spatial continuity of the classified material (Figure 14-24).

The SLR QP recommends that in-fill drilling be carried out at the Norrberget deposit to upgrade the confidence category of those portions of the deposit currently classified in the Inferred Mineral Resource category to the Indicated Mineral Resource category.

Figure 14-24: Plan View of the Final Mineral Resource Classification, Domain NB1



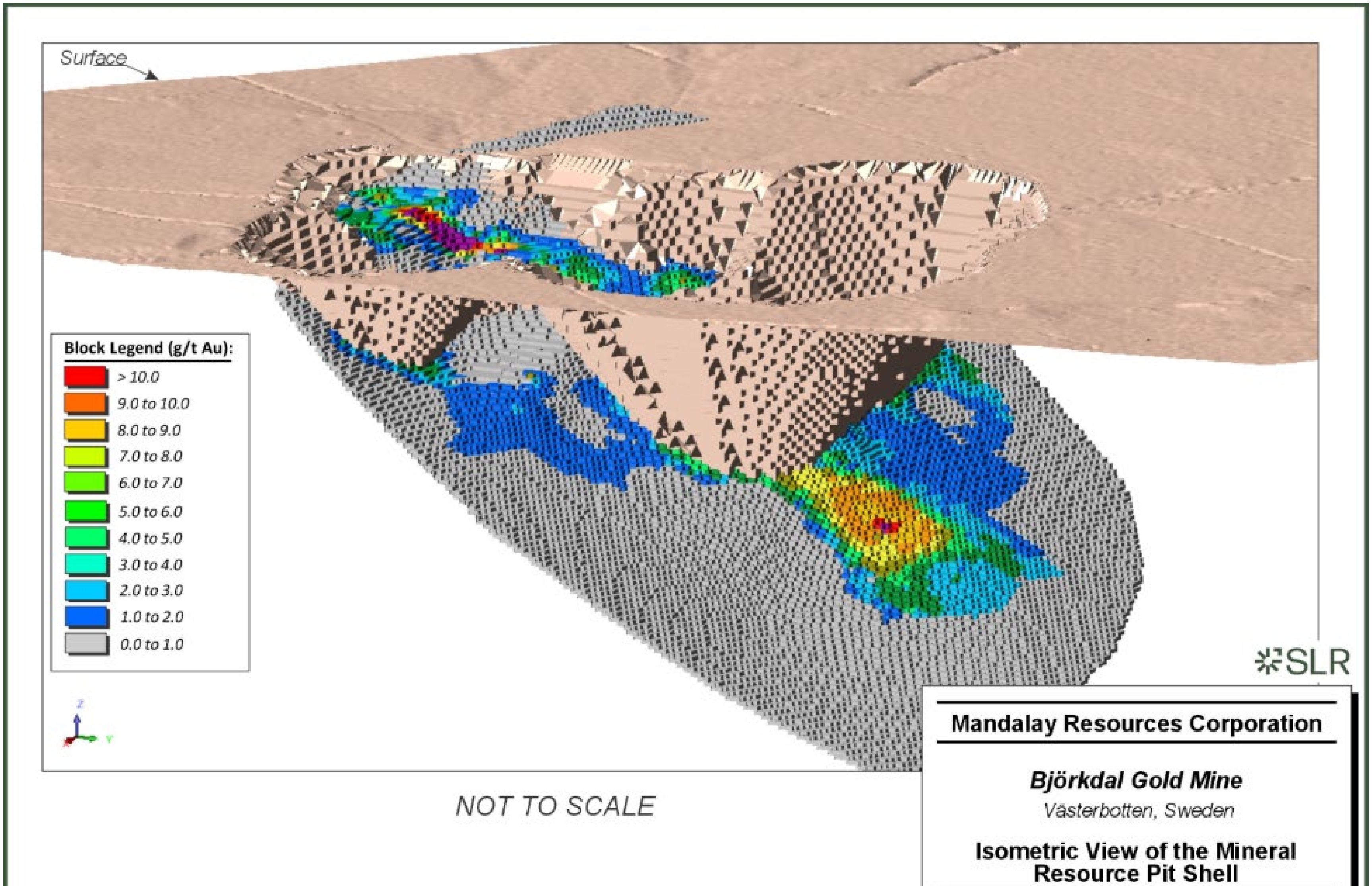
Source: SLR 2025.

14.3.10 Cut-Off Grade and Resource Reporting Criteria

The cut-off grade for the Norrberget deposit was developed using the January to October 2024 actual cost information along with a gold price of US$2,500 per ounce and an exchange rate of 10.35 SEK/US$. The cut-off grade for reporting of Mineral Resources was determined to be 0.27 g/t Au.

To fulfill the NI 43-101 requirement of “reasonable prospects for eventual economic extraction”, Mandalay prepared a preliminary open pit resource shell using the Deswik Pseudoflow software package, the optimisation parameters used in Section 15 and based on a gold price of US$2,500 per ounce (Figure 14-25).

Figure 14-25: Isometric View of the Mineral Resource Pit Shell



Source: SLR 2025.

14.3.11 Norrberget Deposit Mineral Resource Estimate

Table 14-22 presents the Norrberget Mineral Resource estimate as of 31 December 2024.

Table 14-22: Summary of Norrberget Mineral Resources as of 31 December 2024

Category	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Measured	0	0	0
Indicated	221	2.76	20
Sub-total, Measured + Indicated	***221***	***2.76***	***20***
Inferred	96	5.36	17

Notes:

1. Norrberget Mineral Resources are estimated using drill hole and sample data as of 30 September 2024.
2. CIM (2014) definitions were followed for Mineral Resources.
3. Mineral Resources are inclusive of Mineral Reserves.
4. A nominal 2.5 m minimum mining width was used to interpret veins using diamond drill and reverse circulation drill samples.
5. High gold assays were capped at 24 g/t Au.
6. Interpolation was by inverse distance cubed.
7. Open pit Mineral Resources are estimated at a cut-off grade of 0.27 g/t Au and constrained by a resource pit shell.
8. Mineral Resources are estimated using an average gold price of US$2,500/oz and an exchange rate of 10.35 SEK/US$.
9. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
10. Numbers may not add due to rounding.

The QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

14.3.12 Factors Affecting the Mineral Resource Estimate

Mineral Resources, which are not Mineral Reserves, do not have demonstrated economic viability. At the present time, the SLR QP is not aware of any environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues that may have a material impact on the Norrberget Mineral Resource estimate other than those discussed below.

Factors that may affect the Norrberget deposit Mineral Resource estimates include:

- Metal price and exchange rate assumptions,
- Changes to the assumptions used to generate the cut-off grade used for construction of the mineralized wireframe domains,
- Changes to geological and mineralization shape and geological and grade continuity assumptions and interpretations,
- Due to the natural variability inherent with gold mineralization in mesothermal gold deposits, the presence, location, size, shape, and grade of the actual mineralization located between the existing sample points may differ from the current interpretation. The level of uncertainty in these items is lowest for the Measured Mineral Resource category and is highest for the Inferred Mineral Resource category,

- Changes to the understanding of the current geological and mineralization shapes and geological and grade continuity resulting from acquisition of additional geological and assay information from future drilling or sampling programs,
- Changes in the treatment of high grade gold values,
- Changes due to the assignment of density values,
- Changes to the input values used to determine the Mineral Resource reporting cut-off grades,
- Inability to recover remnant mineralization residing as either sill pillars or rib pillars.

14.3.13 Comparison with Previous Mineral Resource Estimates

A comparison of the current Norrberget Mineral Resources with the previous Mineral Resources effective as of 31 December 2022 is presented in Table 14-23.

Table 14-23: Comparison of Norrberget Mineral Resources 31 December 2022 versus 31 December 2024

Category	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Mineral Resources as at 31 December 2024			
Measured	-	-	-
Indicated	221	2.76	20
Sub-total, Measured + Indicated	*221*	*2.76*	*20*
Inferred	96	5.36	17
Mineral Resources as at 31 December 2022			
Measured	-	-	-
Indicated	191	2.93	18
Sub-total, Measured + Indicated	*191*	*2.93*	*18*
Inferred	8	3.21	1
Difference			
Measured	0	0	0
Indicated	+30	-0.17	+2
Sub-total, Measured + Indicated	*+30*	*-0.17*	*+2*
Inferred	+88	+2.15	+16

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Open Pit Mineral Resources were estimated at cut-off grades of 0.42 g/t Au in 2022 and 0.27 g/t Au in 2024.
3. Mineral Resources were estimated using long term gold prices and long term foreign exchange rates of US$1,750/oz Au and an exchange rate of 9.3 SEK/US$ in 2022 and US$2,500/oz Au and a 10.35 SEK/US$ exchange rate in 2024.
4. Numbers may not add due to rounding.

14.4 Storheden Deposit

14.4.1 Topography and Excavation Models

Due to the proximal location of the Storheden deposit with the Björkdal mine, the same topographic surface was used to prepare the Storheden Mineral Resource estimate. A description of the topographic surface is provided in Section 14.2.1.

14.4.2 Description of the Database

The drill hole data used to prepare the Storheden Mineral Resource estimate uses the same coordinate system as the Björkdal mine. The mine operates on a metric local grid coordinate system wherein the local grid north is 29.67° west of true north (i.e., local grid north is approximately towards azimuth 330° true). All drill hole and sampling information is entered into the Datashed master database using this local grid coordinate system. This local grid system differs from the SWEREF 99 national map projection system that is used throughout Sweden. All drill hole information for the Storheden deposit is entered into the Datashed geological database management system.

Subsets from this master database are extracted and used for estimations on an as-needed basis. All of the drill hole data are in the MS Access database format and were modified for use by the GEOVIA Surpac 2024 mine modelling software package. Additional fields to store such information as the composited assay values and wireframe flags were created in the working database as required during preparation of the Mineral Resource estimate. Values of either 0.01 g/t Au, 0.025 g/t Au, or 0.050 g/t Au were inserted into the database by means of a computer script for any unsampled intervals at the outset of the Mineral Resource estimation workflow.

The drill hole database maintains a field representing the degree of confidence assigned to the various types of samples entered by various operators over the Mine's production history. A description of the confidence interval codes is provided in Table 14-24. The cut-off date for the drill hole database is 30 September 2024. The locations of the drill holes which were used to prepare the year-end 2024 Mineral Resource estimate were shown in Figure 10-1. A summary of the database is provided in Table 14-25.

Table 14-24: Summary of Confidence Codes in the Storheden Drill Hole Database

Confidence Value	Description
1	Condemnation drill holes. Not used for grade estimation.
50	DDH or RC samples

Table 14-25: Summary of the Storheden Drill Hole Database as of 30 September 2024

Table Name	Data Type	Table Type	Records
assay	interval	time-independent	18,406
assay_cap	interval	time-independent	2,287
collar			146
comps_1m	interval	time-independent	2,138
intercept	interval	time-independent	353
lithology	interval	time-independent	4,746

Table Name	Data Type	Table Type	Records
styles			57
survey			12,354

14.4.3 Lithology and Mineralization Wireframes

Gold mineralization at the Mine occurs mostly as a large number of steeply dipping, structurally controlled narrow quartz veins that have been identified by drilling for a distance of approximately 1,000 m in an east-west direction (along strike), 1,200 m in a north-south direction (across strike), and to a depth of approximately 450 m from surface.

Wireframe models of the mineralized veins were utilized in geological and grade continuity studies and to constrain the block model interpolation. Wireframe models of the Storheden veins were constructed by Mandalay using the Leapfrog software package and were reviewed by SLR. A total of 68 vein wireframe models were constructed. Their locations were presented in Figure 8-1. These mineralization wireframes likely represent the eastward continuation of the veins outlined in the hanging wall fault block in the mine.

14.4.4 Compositing Methods and Grade Capping

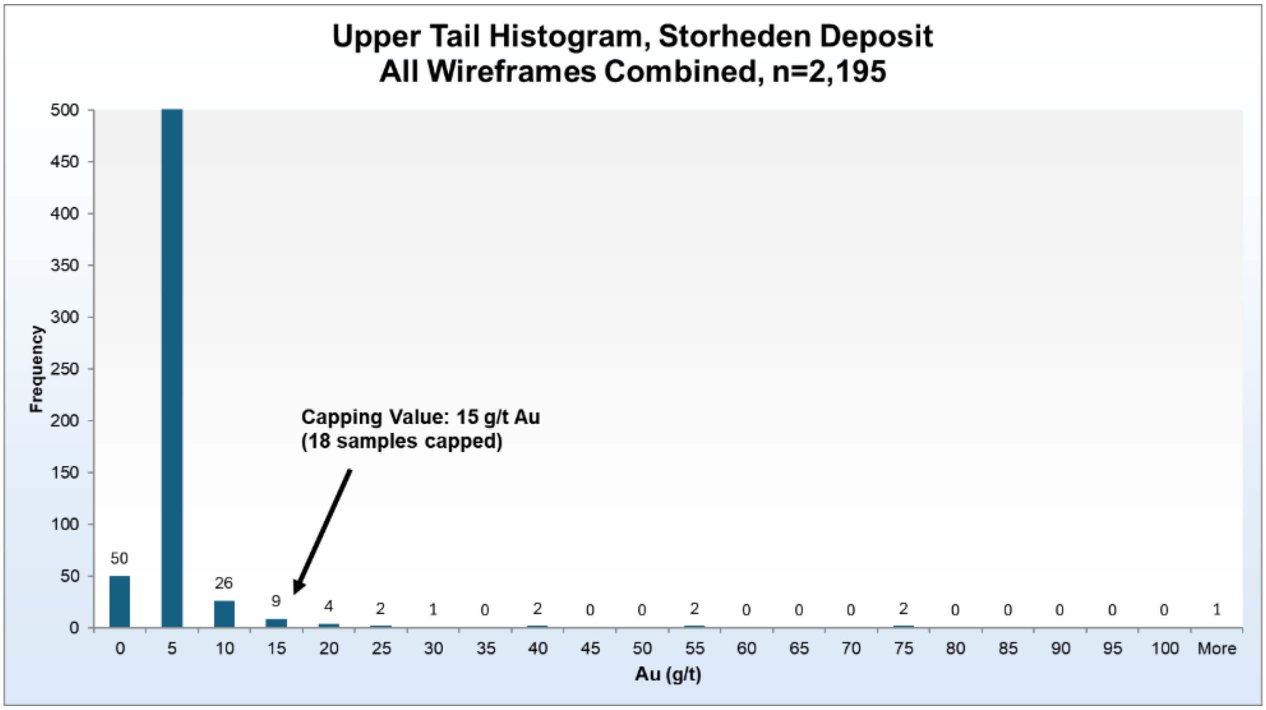
The resulting raw assay samples for the diamond drill holes and RC holes were composited into nominal equal lengths of one metre using the best-fit compositing algorithm of the Surpac mine modelling software package. The summary statistics of the composited assay values for the composite samples that were used to prepare the estimated block model grades are provided in Table 14-26. It is important to note that given the large number of individual vein wireframes that comprise this Mineral Resource estimate, rather than reflecting the specific statistics for each sample type for each vein, these statistics include all composites used to estimate the individual veins within each of these wireframe groups. Consequently, the resulting statistics should be reviewed as being indicative only, rather than being definitive for any individual mineralization wireframe. The grade distribution of the uncapped composite samples for all mineralization wireframes combined is presented in Figure 14-26.

Review of the grade distribution of the un-capped composite samples suggested that a capping value of 15 g/t Au is appropriate for this data set.

Table 14-26: Summary Statistics of the Composited, Capped Samples, Storheden Deposit

Variable	Uncapped (g/t Au)	Cap 60 (g/t Au)	Cap 40 (g/t Au)	Cap 15 (g/t Au)
Weighting Variable	Length	Length	Length	Length
Number of samples	2,195	2,195	2,195	2,195
Minimum value	0	0	0	0
Maximum value	109.64	60	40	15
Mean	0.70	0.66	0.61	0.51
Median	0.05	0.04	0.04	0.04
Variance	16.9	11.5	7.8	2.9
Standard deviation	4.1	3.4	2.8	1.7
Coefficient of variation	5.9	5.2	4.5	3.3

Figure 14-26: Upper Tail Histogram of the Un-capped Composite Samples Contained Within the Storheden Mineralization Wireframes



14.4.5 Bulk Density

Considering the close proximity of the Storheden mineralization wireframes with the Björkdal mine, the host rock bulk densities used for the Björkdal mine were applied to the Storheden deposit.

The SLR QP recommends that bulk density measurements be collected for the Storheden deposit either on existing remaining drill core, or from samples collected from any future drilling campaigns.

14.4.6 Variography

No meaningful variograms could be derived due to the low sample numbers present within the mineralization wireframe domains and the typical high variance in the gold grades between composite samples.

14.4.7 Block Model Construction

The conceptual operational scenario envisions that mineralized material would be extracted via the Björkdal mine with the material being delivered to the Björkdal processing plant for recovery of the gold.

An upright, non-rotated, sub-blocked block model was constructed to model the mineralization.

The block model was constructed using the Surpac version 2024 software package and comprised an array of 2.5 m x 2.5 m x 5 m (Y, X, and Z) sized blocks using one level of sub-blocking to a minimum size of 1.25 m x 1.25 m x 2.5 m. The model was oriented parallel to the local grid coordinate system (i.e., no rotation or tilt). The selection of the block sizes for this model was based upon experience gained by the mine staff. A number of attributes were created to store such information as rock code, material densities, estimated gold grades, mineral resource classification, mined out material and the like. The block model origin, dimensions, and attributes are provided in Table 14-27 and Table 14-28.

Table 14-27 Summary of Storheden Block Model Origins and Block Sizes

Type	Y (Northing)	X (Easting)	Z (Elevation)
Minimum Coordinates (m)	756	2,136	-527
Maximum Coordinates (m)	2,083.5	3,301	103
User Block Size (m)	2.5	2.5	5.0
Min. Block Size (m)	1.25	1.25	2.5
Rotation	0.000	0.000	0.000

Table 14-28 Storheden Block Model Attributes

Attribute Name	Type	Decimals	Background
area	Character	-	0
au	Float	3	-99
au15	Float	3	-99
au_a	Float	3	-99
au_b	Float	3	-99
au_c	Float	3	-99
au_id3	Float	2	0
auraw	Float	3	-99
class	Integer	-	0
class_final	Integer	-	0
density	Float	3	2.74
material	Character	-	WAST
nr_dh	Integer	-	-99
num_samp	Integer	-	-99
pass	Integer	-	0
vein	Character	-	0

Gold grades were estimated into the blocks by means of the Inverse Distance, Power 3 (ID^3) interpolation algorithm for each vein wireframe individually using the scripting functions of the Surpac software package. A total of three interpolation passes were carried out to estimate the grades in the block model.

When estimating the grades of the mineralized wireframes, “hard” domain boundaries were used along the contacts of the mineralized wireframe models. Only those composite samples contained within the respective wireframe model were allowed to be used to estimate the grades of the blocks within the wireframe in question, and only those blocks within the wireframe limits were allowed to receive grade estimates. A summary of the search strategies employed to estimate the grades into the block model is presented in Table 14-29.

Table 14-29: Summary of Search Strategies at Storheden

Item	Pass 1	Pass 2	Pass 3
Boundary Conditions-Data	Hard	Hard	Hard
Boundary Conditions-Blocks	Write to wireframe only	Write to wireframe only	Write to wireframe only
Major Axis	Isotropic	Isotropic	Isotropic
Major Axis Direction	Isotropic	Isotropic	Isotropic
Semi-Major Axis	Isotropic	Isotropic	Isotropic
Semi-Major Direction	Isotropic	Isotropic	Isotropic
Minor Axis	Isotropic	Isotropic	Isotropic
Minor Direction	Isotropic	Isotropic	Isotropic
Major/Semi-Major Ratio	1.01	1.01	1.01
Major/Minor Ratio	1.02	1.02	1.02
Length of Major Axis (m)	15	50	75
Minimum Number of Drill Holes	2	2	2
Weight by Sample Length	Y	Y	Y
Minimum Number of Samples	4	4	4
Maximum Number of Samples	20	20	20
Max No. of Samples/Hole	20	20	20
Search Ellipse Type	Ellipsoid	Ellipsoid	Ellipsoid
Estimation Algorithm	ID^3	ID^3	ID^3

14.4.8 Block Model Validation

The SLR QP reviewed the interpolated block model to ensure that it is representative of the input data. This validation included a comparison of the average grade of the informing composite samples for a selection of the mineralized wireframe domains with the average estimated block grades (Table 14-30).

Table 14-30: Comparison of Composite Average Grades with Block Model Average Grades, Storheden Deposit

Domain ID	Capped Composite Average Grade (g/t Au)	Number of Composites	Block Model Estimated Average Grade (g/t Au)
SH2	1.49	77	2.37
SH4	0.80	86	0.84
SH5	0.79	22	1.50
SH10	0.82	26	1.33
SH14	2.26	13	1.96
SH25	2.28	9	2.59
SH35	0.97	37	1.12
SH37	1.57	12	1.70
SH38	1.09	84	1.25
SH41	1.59	27	3.53

14.4.9 Mineral Resources Classification Criteria

Definitions for resource categories used in this Technical Report are consistent with CIM (2014) definitions and adopted by NI 43-101. All blocks whose grades were estimate in one of the three estimation passes were assigned to the Inferred Mineral Resource category.

14.4.10 Cut-Off Grade and Resource Reporting Criteria

The cut-off grade for the Storheden deposit was developed using the January to October 2024 actual cost information from the Björkdal mine along with a gold price of US$2,500 per ounce and an exchange rate of 10.35 SEK/US$. The cut-off grade for reporting of Mineral Resources was determined to be 0.71 g/t Au.

To fulfill the CIM (2014) definitions requirement of RPEEE with respect to the Storheden Mineral Resources, SLR carried out a visual examination of the spatial continuity of the block model with estimated grades greater than cut-off grade value. All blocks showed a good spatial continuity and thus meet the RPEEE requirement.

14.4.11 Storheden Mineral Resource Estimate

Table 14-31 presents the Storheden Mineral Resource estimate as of 31 December 2024.

Table 14-31: Summary of Storheden Mineral Resources as of 31 December 2024

Category	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Inferred	1,769	1.74	99

Notes:

1. Storheden Mineral Resources are estimated using drill hole and sample data as of 30 September 2024.
2. CIM (2014) definitions were followed for Mineral Resources.

3. Mineral Resources are inclusive of Mineral Reserves.
4. A nominal 2.5 m minimum mining width was used to interpret veins using diamond drill and reverse circulation drill samples.
5. High gold assays were capped at 15 g/t Au.
6. Interpolation was by inverse distance cubed.
7. Mineral Resources are estimated at a cut-off grade of 0.71 g/t Au.
8. Mineral Resources are estimated using an average gold price of US$2,500/oz and an exchange rate of 10.35 SEK/US$.
9. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
10. Numbers may not add due to rounding.

The QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

14.4.12 Factors Affecting the Mineral Resource Estimate

Mineral Resources, which are not Mineral Reserves, do not have demonstrated economic viability. At the present time, the SLR QP is not aware of any environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues that may have a material impact on the Storheden Mineral Resource estimate other than those discussed below.

Factors that may affect the Storheden deposit Mineral Resource estimates include:

- Metal price and exchange rate assumptions,
- Changes to the assumptions used to generate the cut-off grade used for construction of the mineralized wireframe domains,
- Changes to geological and mineralization shape and geological and grade continuity assumptions and interpretations,
- Due to the natural variability inherent with gold mineralization in mesothermal gold deposits, the presence, location, size, shape, and grade of the actual mineralization located between the existing sample points may differ from the current interpretation. The level of uncertainty in these items is lowest for the Measured Mineral Resource category and is highest for the Inferred Mineral Resource category,
- Changes to the understanding of the current geological and mineralization shapes and geological and grade continuity resulting from acquisition of additional geological and assay information from future drilling or sampling programs,
- Changes in the treatment of high grade gold values,
- Changes due to the assignment of density values,
- Changes to the input values used to determine the Mineral Resource reporting cut-off grades.

14.4.13 Comparison with Previous Mineral Resource Estimates

No previous Mineral Resource estimates were prepared for the Storheden deposit.

15.0 Mineral Reserve Estimates

15.1 Summary

The Mineral Reserves with an effective date of 31 December 2024 were estimated by Mandalay, audited and accepted by the SLR QP, and are shown in Table 15-1.

The total Mineral Reserve estimate for the Björkdal Mine and Norrberget Deposit is 13.68 Mt at a grade of 1.28 g/t Au, for a total of 563,000 oz Au. The Mineral Reserve estimate for Norrberget is 161,000 tonnes at a grade of 2.72 g/t Au, for a total of 14,000 oz Au.

Table 15-1: Summary of Mineral Reserves at the Björkdal Mine and Norrberget Deposit as of 31 December 2024

Location	Area	Tonnage (kt)	Grade (g/t Au)	Contained Au (koz)
Proven Mineral Reserves				
Björkdal	Underground	956	1.53	47
Total Proven		**956**	**1.53**	**47**
Probable Mineral Reserves				
Björkdal	Underground	5,721	1.59	293
Björkdal	Open Pit	5,325	1.05	180
Norrberget	Open Pit	161	2.72	14
Stockpiles	Stockpiles	1,520	0.59	29
Total Probable		**12,727**	**1.26**	**516**
Total Proven & Probable		**13,683**	**1.28**	**563**

Notes:

1. Björkdal Mineral Reserves are estimated using drill hole and sample data as of 30 September 2024 and depleted for production through 31 December 2024.
2. Norrberget Mineral Reserves are based on a data cut-off date of 30 September 2024.
3. CIM definitions (2014) were followed for Mineral Reserves.
4. Open Pit Mineral Reserves for Björkdal are based on mine designs carried out on an updated resource model, applying a block dilution of 100% at 0.0 g/t Au for blocks above 1.0 g/t Au and 100% at in situ grade for blocks below 1.0 g/t Au but above a cut-off grade of 0.2 g/t Au. The application of these block dilution factors is based on historical reconciliation data from 2018 and 2019. A marginal cut-off grade of 0.2 g/t Au was applied to estimate open pit Mineral Reserves.
5. Open Pit Mineral Reserves for Norrberget are based on 25% dilution at 0.0 g/t Au and a cut-off grade of 0.32 g/t Au.
6. Underground Mineral Reserves are based on mine designs carried out on the updated resource model. Minimum mining widths of 3.1 m for stopes (after dilution) and 4.6 m for development (after dilution) were used. Stope dilution was applied by adding 0.25 m on each side of stopes as well as an additional 25% sidewall over break dilution. Dilution factors of 20% for ore drives and 10% for capital development were applied to the development design widths. Mining extraction was assessed at 95% for contained ounces within stopes and 100% for development. A cut-off grade of 0.85 g/t Au was applied to material mined within stopes. An incremental cut-off grade of 0.2 g/t Au was used for development material.
7. Stockpile Mineral Reserves are based upon surveyed volumes supplemented by production data as of 31 December 2024.
8. Mineral Reserves are estimated using an average long-term gold price of US$2,100/oz for Björkdal and Norrberget, and an exchange rate of 10.35 SEK/US$.
9. Tonnes and contained gold are rounded to the nearest thousand.
10. Totals may not sum due to rounding.
11. The Independent Qualified Person for the Björkdal Mineral Reserve estimate is Rick Taylor, MAusIMM (CP), Associate Principal Mining Engineer with SLR, who is a Qualified Person as defined by NI 43-101.

The QP is not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate.

The current TMF and planned expansions do not have sufficient capacity for the tailings generated by the Mineral Reserves. The SLR QP understands that Mandalay is currently evaluating tailings disposal options and is of the opinion that a suitable tailings management disposal option will be planned and permitted prior to the requirement for additional storage.

15.2 Björkdal

15.2.1 Open Pit Optimisation

Potential pits were evaluated using the Deswik software package, which employs the Pseudoflow pit optimisation algorithm. A re-optimisation of the Björkdal open pits was completed in early February 2025. The updated parameters used for the 2025 pit re-optimisation are presented in Table 15-2.

Overall pit slopes of 45° and 50° were determined for the Main Pit using actual pit slope angles achieved in the main pit. The overall pit slopes for the Nylund pits (refer to Figure 16-1 for location), were approximately 42° after accounting for ramps, which had a larger impact on overall slope angles since the Nylund pits are much smaller than the Main Pit. Processing and G&A operating costs and mill recovery are based on actual operating data from 2024. Unit mining cost estimates for the Björkdal open pits have been provided by the Mandalay financial department.

Dilution and extraction factors are based on reconciliation data from 2018 and 2019.

A selective mining unit (SMU) of 5 m x 2.5 m x 2.5 m was used in the block model but was re-blocked in Deswik to 5 m x 5 m x 5 m to improve processing time during pit optimisation runs.

Table 15-2: Björkdal Reserve Pit Optimisation Parameters

Parameter	Unit	Input
Pit Slopes (Main Pit)	degrees	45 to 50
Pit Slopes (Nylund)	degrees	42
Pit Slopes (Overburden)	degrees	18
Mining Cost (Rock)	US$/t	3.04
Mining Cost (Around Stopes)	US$/t	4.35
Mining Cost (Till Stripping)	US$/t	1.88
Process Cost	US$/t	9.22
General & Administrative Cost	US$/t	8.39
TC/RC charges	US$/t	1.29
Process Recovery	%	85.60
Gold Payable	%	97.36
Mining Extraction	%	100
Mining Dilution	%	100
Base Gold Price	US$/oz Au	2,100

Parameter	Unit	Input
Exchange Rate	SEK/$US	10.35
Block Size	m	5 x 2.5 x 2.5
Block Size (re-blocked)	m	5 x 5 x 5

The optimised pit shell results show that the majority of ore tonnage in the pit optimisation is located in the crown pillar along the north wall of the Main Pit. This pillar contains the two main portal accesses to the underground operation and associated infrastructure and mine services.

15.2.2 Dilution and Extraction

15.2.2.1 Open Pit

Historically, the mining parameters and loading equipment allowed for reasonably good selectivity, however, dilution levels are much higher than typical open pit parameters due to the thin-veined nature of the Björkdal deposit.

The open pit contains “A-ore”, which is ore with a grade greater than 1.0 g/t Au, while “B-ore” has a grade of 0.2 g/t Au to 1.0 g/t Au. Historically, the bulk of the lower grade ore was stockpiled, which led to the creation of a large stockpile, which is processed when the mill has spare capacity.

More than a year (2018 to 2019) of reconciled open-pit production was compared against the modelled tonnes and grade on a blast by blast basis. While the contained ounces of the reconciled well with the model, the tonnage is significantly understated. This is because the tonnes were previously reported using a block cut-off grade rather than a mining shape. The compiled data supports the use of a block dilution of 100% at zero grade for blocks above 1.0 g/t Au.

Based on the same reconciliation data, an overall tonnage dilution factor of 100% at the estimated in situ grade was applied to all blocks between 0.2 g/t Au and 1.0 g/t Au. Reconciliation shows that operational mining was extending beyond the modelled wireframes, capturing more material than originally anticipated, resulting in mined tonnage and metal exceeding Mineral Reserve estimates.

The SLR QP recommends that an improved reconciliation process be implemented when open pit production recommences. This reconciliation should compare the block model, grade control model, and declared ore mined (mill data). Following this process, the minimum selective mining widths and the anticipated planned and unplanned dilution forecasts, should be updated together with, if possible, an estimate of the additional low-grade material that will likely be mined.

15.2.2.2 Underground

Underground reconciliation exercises comparing design against actual production from a large number of stopes, with estimates for dilution and underbreak, are routinely carried out at Björkdal. The 2024 reconciliation indicated that the long-term diluted forecast underestimated the tonnes by 10% and the gold content by 19%. These values average a wide range of underbreak and dilution across the stopes. In general, the planned and unplanned dilution is just under 30%. This is in line with the factors used in the mine design. Losses of both ore tonnes and ounces as a result of underbreak are fully accounted for.

For the long-term design, zero grade dilution was applied in the Deswik software package and was assigned to the stope shapes as 0.25 m in the footwall and 0.25 m in the hanging wall. The minimum mining width is 2.5 m after footwall and hanging wall dilution has been applied. Additionally, general dilution of 25% was added to each stope to give an overall diluted mining width of minimum 3.1 m.

A mining recovery rate of 95% was applied to stope ore tonnes and ounces. No mining losses were applied to development ore.

15.2.3 Cut-Off Grade

15.2.3.1 Open Pit

Based on the reconciliation exercise between the 2018 block model and the 2018 mill data explained in Section 14.2.10, an additional block dilution factor of 100% was applied in Deswik during optimisation, which accounts for both planned and unplanned dilution. The inclusion of dilution in the optimisation process increases the effective cut-off grade and results in a smaller pit shell since ore blocks will have to carry a higher grade to offset the additional dilution material that would be processed.

In the 31 December 2024 Mineral Reserve estimate, a final pit design was carried out based on the selected optimised shell, revenue factor (RF) = 0.98.

Mining solids were created from the final pit designs and the resource block model was used to report tonnes and grade for all blocks above the in situ 0.2 g/t Au cut-off grade. The in situ cut-off grade is calculated as a pit discard (marginal) cut-off inclusive of processing, stockpiling, and transport and refining costs for the operating costs. It is assumed that once the material is mined, it will either be sent to the mill or the LOM stockpile for processing at the end of the operation. The blocks above the cut-off grade were then reported as Mineral Reserves and form the basis of the LOM plan.

15.2.3.2 Underground

The cut-off grade for underground mining was calculated based on several criteria. Consideration was given to the type of mining activity on which the cut-off parameter would be applied. The cut-off grades apply to the run-of-mine (ROM) head grade and are not in situ grades as they include dilution and losses. For stopes, a cut-off grade of 0.85 g/t Au was derived, while for development, a lower cut-off grade of 0.2 g/t Au was calculated.

The calculated stoping cut-off grade is based on the direct stoping cost average from Q1 2024 through to Q3 2024, and excludes all development, making it a marginal cut-off grade.

Underground optimisation was carried out using the Pseudoflow algorithm within Deswik and applied in three stages:

- Individual stope optimisation
- Stope and access development combined
- Optimisation on an area basis

All development cost has thus been accounted for in the various cut-off grade calculations.

The 0.2 g/t Au cut-off grade is the grade at which processing the development material becomes economically viable. As this material must be mined to access the stopes, the only costs to consider when determining whether it should be processed or discarded are the processing, stockpiling, and transport and refining costs.

The 0.2 g/t Au cut-off grade for development material is consistent with the pit discard calculation for open pit mining. The cut-off grade calculation is shown in Table 15-3.

Table 15-3: Björkdal Underground Cut-off Grade Calculation

Parameter	Unit	Value
Metal Price	US$/oz	2,100
Exchange Rate	SEK/US$	10.35
Process Recovery	%	85.60
Net Payable	%	97.361
Stoping Cost	US$/t	24.69
Process Cost	US$/t	9.22
G&A Cost	US$/t	8.39
Transport and Refining Cost	US$/t	1.29
Cut-Off Grade Cost	US$/t	47.73
Cut-Off Grade	g/t Au	0.85
Incremental Cut-Off Grade	g/t Au	0.20

Costs were based on the actual stoping and other costs at Björkdal for Q1, 2024 through Q3, 2024.

The gold price used for Mineral Reserves is based on consensus, long-term forecasts from banks, financial institutions, and other sources. For Mineral Resources, the gold price used is slightly higher than that used for Mineral Reserves.

15.3 Norrberget

15.3.1 Open Pit Optimisation

The Norrberget open pit was re-optimised in February 2025 to account for increases in the gold price assumptions and update to the block model with data cut-off date of 30 September 2024. No changes have been made to the other underlying assumptions, other than updating the costs, as they have not materially changed since the pit was last optimised (Table 15-4).

Table 15-4: Norrberget Reserve Pit Optimisation Parameters

Parameter	Unit	Input
Pit Slopes (Southwest Wall)	degrees	36
Pit Slopes (Northwest and Northeast Walls)	degrees	52
Pit Slopes (Overburden)	degrees	18
Mining Cost (Loose Overburden)	US$/t	1.88
Mining Cost (Solid Waste)	US$/t	3.04
Mining Cost (Ore)	US$/t	4.35
Process Cost	US$/t	9.22
General and Administrative Cost	US$/t	8.39
Transport and Refining Cost	US$/t	1.29
Process Recovery	%	75
Mining Extraction	%	100
Mining Dilution	%	25
Base Gold Price	US$/oz Au	2,100
Net Payable	%	97,361
Block Size	m	6x4x4

Pit slopes were determined based on a geotechnical assessment carried out by SRK Consulting (SRK) in October 2017 (Di Giovinazzo 2017). The northwest and northeastern wall sectors have slope angles of 52° while the southwest (footwall) sector has a slope angle of 36°.

A dilution factor of 25% and extraction factor of 100% was added based on reconciled production data from mining shallow dipping structures at Björkdal. The pit optimisation was carried out at the parent block size of 6 m x 4 m x 4 m.

The cost of hauling ore from Norrberget to the Björkdal mill was updated with a new estimate based on actual costs from contractor work during the summer of 2023, scaled with distance and production loss. Mining costs were based on the ore and waste mining costs at Björkdal.

The higher total cost of mining, inclusive of hauling ore, (increase of 43%) is due to approximately 4.1 km longer trucking distance to the Björkdal Mill. An overall gold recovery assumption of 75% was used based upon limited testwork conducted as described in Section 13.2.5.

15.3.2 Dilution and Extraction

As no production has taken place at Norrberget, a reconciled dilution and extraction factor cannot be obtained. A dilution factor of 25% and extraction factor of 100% has previously been drawn out of reconciled production data from mining shallow dipping structures at the Björkdal open pit, and therefore it is reasonable to assume that the similar conditions at Norrberget will yield similar results.

15.3.3 Cut-Off Grade

After the pit optimisation was completed, a final pit design was developed based on the selected optimised shell, revenue factor (RF) = 1.0. Mining solids were created from the final pit design shells and the resource block model was used to report tonnes and grade for all blocks above an in-situ 0.32 g/t Au cut-off grade. The in-situ cut-off grade is calculated as a pit discard (marginal) cut-off including the processing, stockpiling, and transport and refining costs in the total operating cost. It is assumed that once the material is mined, it will either be sent to the mill or the waste dump. The blocks above the cut-off grade were then reported as Mineral Reserves and form the basis of the LOM plan.

The SLR QP recommends that the Norrberget pit be re-optimised again based upon any further update of the Norrberget Resource block model prior to the planned commencement of mining operations in 2035.

15.4 Grade and Tonnage Capping and Factoring

In well-established underground areas at Björkdal, capping has been selectively employed where extensive development already exists. Stopes with diluted and recovered grades exceeding 2.0 g/t, and on-vein development drives exceeding 2.2 g/t have been capped at those grades as informed by historical reconciliation data.

This implementation of capping grades has been confined to regions where the likelihood of discovering new veins, with a consequential increase in ore tonnes, is limited.

Capping involves constraining the projected final grade of stopes or development drives to the specified cap value. For instance, a stope with a calculated final grade of 2.6 g/t and a capping value of 2.0 g/t will only account for ounces up to the capping threshold. Any ounces above this limit are excluded, while the final tonnage remains unaltered.

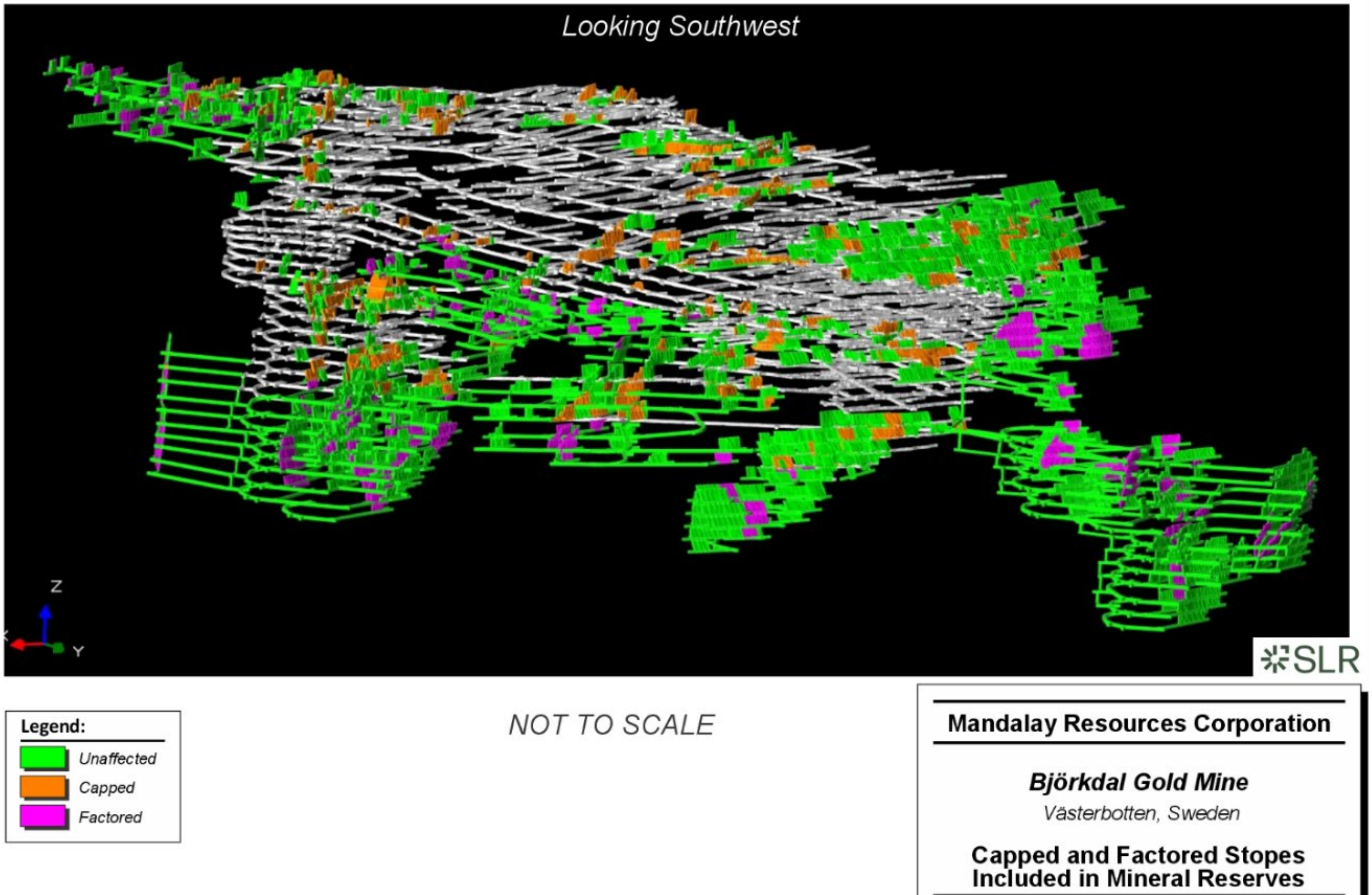
Grade and tonnage factoring has been applied in areas characterised by a high potential for discovery of new veins upon mining taking place. Stopes with diluted and recovered grades exceeding 2.0 g/t and on-vein development drives exceeding 2.2 g/t have been factored to reduce as-mined grades and increase mined tonnes. This approach is supported by reconciliation data, where an increase in ROM ore tonnes is related to mining more veins in a particular area than initially expected. This results in lower head grades but maintains total mined ounces.

Estimated stope ore tonnes have been calculated by dividing the projected final grade of stopes or development drives by the prescribed capping value, after applying dilution and recovery modifying factors. For instance, a stope with a forecast diluted and recovered grade of 4.0 g/t and a limiting value of 2.0 g/t would yield a factor of 2. Consequently, tonnes are multiplied by this factor, the final grade is reduced to 2.0 g/t, and the ounces are maintained.

Figure 15-1 shows the extent of the capping (orange) and factoring (purple) of long-term design stopes included in the Mineral Reserves update. No adjustment has been made to green coloured stopes which all have a diluted and recovered grade below 2.0 g/t.

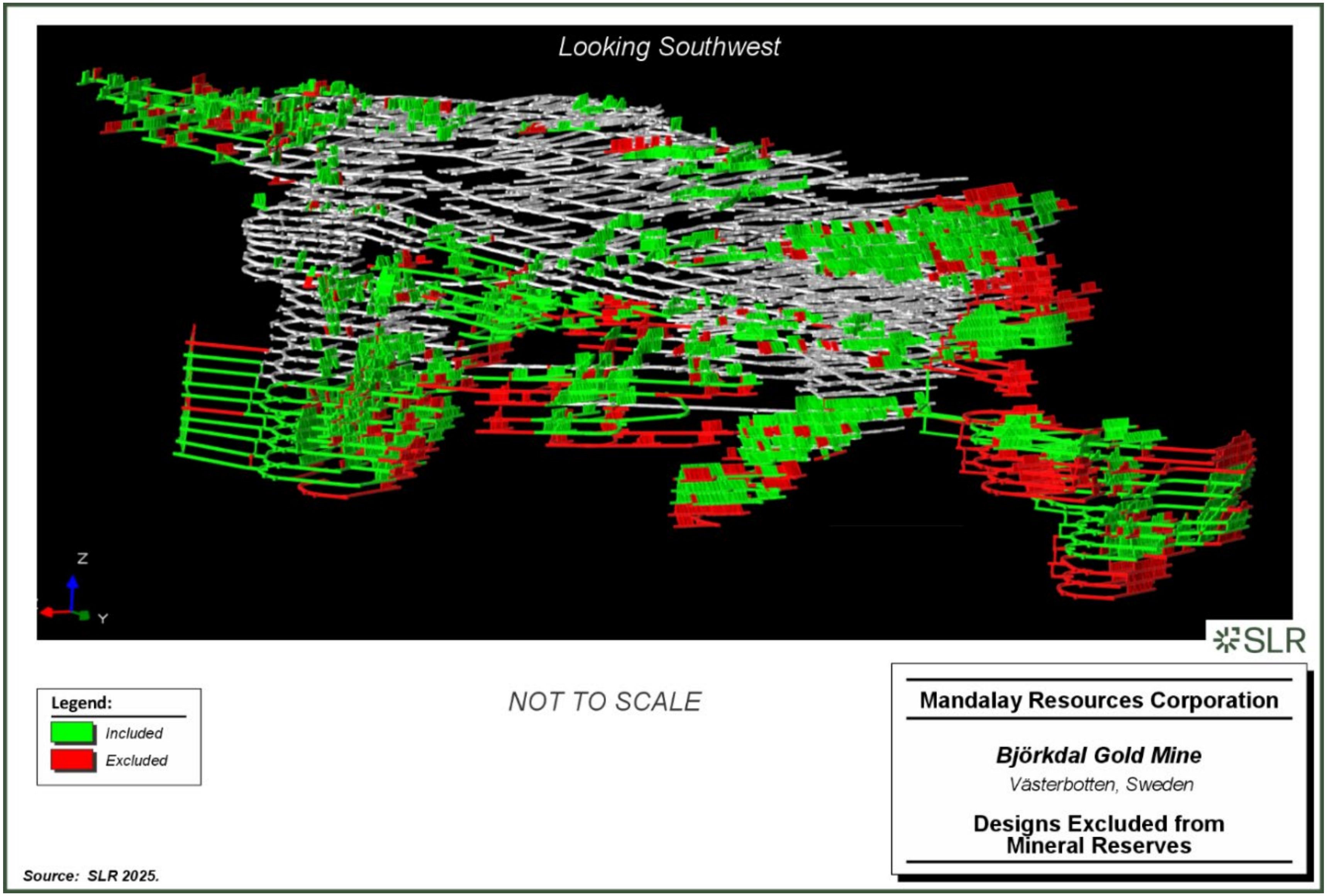
Figure 15-2 shows long-term designs (red) excluded from the interim Mineral Reserves due to falling below cut-off grade or for other access / economic reasons.

Figure 15-1: Capped and Factored Stopes Included in Mineral Reserves



Source: SLR 2025.

Figure 15-2: Designs Excluded from Mineral Reserves



Source: SLR 2025.

16.0 Mining Methods

The current environmental permit limits the total Björkdal production capacity to 1.70 Mtpa. In 2024, 1.37 Mt of ore were processed, and a total of 1.40 Mt are planned for 2025. Prior to 2020, production was split between the underground mine and the open pit. In 2019, mining of the open pit was stopped for economic reasons and this mill feed was replaced with ore from the low grade stockpile and an increase in underground production.

The remaining open pit material remains economically viable, however, the low grade stockpile realizes more value, so open pit mining has been deferred for several years until the stockpile has been run-down and open pit production is required to offset reducing underground production.

During 2024, 959,900 tonnes of ore was mined from underground, all of which was processed. An additional 410,500 tonnes of mill feed tonnage came from the stockpile for a total mill throughput of 1,370,400 tonnes. The open pit did not produce any ore during 2024.

The current production strategy is to maximize the extracted underground ore delivered to the process plant with the balance of the mill feed being rehandled from existing stockpiles. The current LOM plan indicates underground ore production for 2025 will be 1,039,000 tonnes at an average grade of 1.33 g/t Au, which is derived from the updated Resource Model and Mineral Reserves. The current 2025 Mining Budget was derived from the previous Resource Model. No production from the open pit is planned in 2025. Instead, 361,000 tonnes of ore at an average grade of 0.59 g/t Au, will be drawn from the stockpile to make up the balance of the mill feed.

As presently envisaged in the LOM plan, open pit pre-stripping and production will be restarted in 2027 to supplement the decrease in production from the underground mine.

16.1 Björkdal

16.1.1 Mine Design

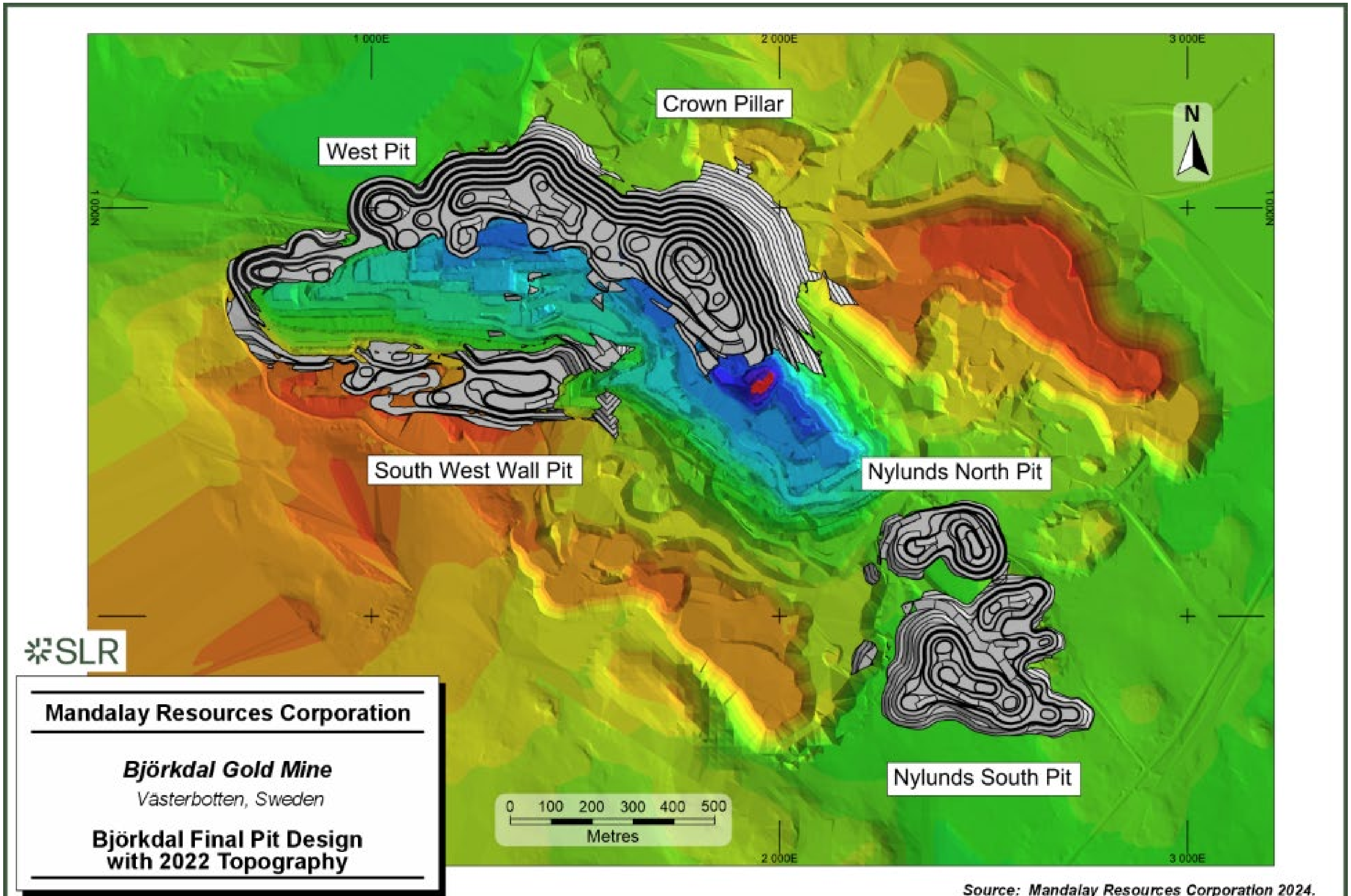
16.1.1.1 Open Pit

The potential for expanding the current open pit at Björkdal was re-evaluated using Deswik planning and optimisation software. The parameters used to derive the selected pit optimisation have been presented in Table 15-2. Several pit optimisations were run, the results indicating that the majority of ore tonnage is located in the crown pillar along the north/east wall of the pit. The pit designs were updated based on the selected optimised shell, revenue factor = 0.98.

Mining solids were created from the final pit designs and the resource block model was used to report tonnes and grade for all blocks above the in-situ 0.2 g/t Au cut-off grade. The in-situ cut-off grade is calculated as a pit discard (marginal) cut-off using processing, and part of the overhead costs (G&A and transport and refining charges), for the operating costs. It is assumed that once the material is mined, it will either be sent to the mill or LOM stockpile for processing at the end of the operation. The blocks above the cut-off grade were then reported as Mineral Reserves and form the basis of the LOM plan.

The final pit designs, along with the mid-2022 final topography, when open pit mining was halted, are presented in Figure 16-1.

Figure 16-1: Björkdal Final Pit Design with 2022 Topography



Source: Mandalay Resources Corporation 2024.

The final pit bottom in the crown pillar area is at the -240 level. Single ramps, with widths of 15 m, are used in the first series of benches to access ore at the bottom of the crown pillar area. These single ramps converge into a double ramp at the -210 level ultimately connecting with the current ramp on the south side of the pit. The ramp redesign aligns more effectively with the optimized shell; however, it necessitates operational adjustments, such as the use of temporary ramps and/or backfilling. While there is currently no fleet in operation, SLR considers the 30 m to 40 m minimum mining width to be reasonable for the size of mining fleet envisaged.

Benches will be 5 m high, and are taken in groups of two to four with an 8 m to 10 m wide berm every 10 m to 20 m. A 72° to 85° bench face angle (BFA) is used to give an overall wall slope of 42° to 52°.

The pit design parameters used are shown in Table 16-1.

Table 16-1: Björkdal Pit Design Parameters

Parameter	Unit	Input
Overall Slope Angle	degrees	42-52
Bench Face Angle	degrees	72-85
Berm Width	m	8-10
Bench Height	m	5
Benches per Berm	#	2-4
Double Ramp Width	m	24
Single Ramp Width	m	15
Ramp Slope	%	10

16.1.1.2 Underground

Deswik software is used for underground mine and production scheduling at Björkdal.

Measured and Indicated Mineral Resource blocks with a grade greater than 0.70 g/t Au were used as a basis for initial stope designs generated by Auto Stope Designer, an automated layout function that is part of the Deswik software. Stope design parameters are presented in Table 16-2.

Table 16-2: Björkdal Underground Stope Design Parameters

Parameter	Unit	Input
On-Vein Development Size	m	3.8 m wide x 5.0 m high
Maximum Stope Height	m	25
Undiluted Minimum Mining Width	m	2.0
Allowance for Overbreak	m	(0.25 x 2) + 25%
Diluted Minimum Mining Width	m	3.1
Maximum Mining Width	m	15
Minimum Inter-Vein Pillar Width	m	5
Stope Mining Extraction	%	95

Parameter	Unit	Input
On-Vein Mining Extraction	%	100
Block Size	m	5 x 3 x 5
Design Cut-off Grade Based on US$2,100/oz Au	g/t Au	0.85

The resulting stopes were evaluated manually and, adjustments made where necessary. Stopes were evaluated based on size, grade, and relative distance to existing development. Stopes that were not economically viable were eliminated from Mineral Reserves.

The current long-term stope designs do not incorporate localized geotechnical and geological considerations including detailed knowledge of hanging wall and footwall contacts, fault zones, and structural features such as folding. The five metre pillar requirement is based on the actual mining conditions experienced at Björkdal.

16.1.2 Mining Method

16.1.2.1 Open Pit

The open pit has currently been halted and is planned to be restarted in 2027, however, this could be delayed further in the event of additional underground reserves being identified. The planned mining method is standard truck and shovel mining, as was done historically. Details will be redefined closer to the restart date.

16.1.2.2 Underground

The known Björkdal underground deposit lies within a footprint of approximately 1,600 m x 600 m and has a vertical extent of approximately 520 m. Descriptions of the geology and styles of mineralization have been provided in Sections 7 and 14.

The long-term LOM underground ore production rate is planned to average 1,007,000 tpa up until 2027, 781,000 tpa in 2028, and then 638,000 tpa thereafter until production tails off in 2033. On vein development (OVD) will be carried out over the next three and a half years approximately, and stope production will continue for eight and a half years. A decrease in production is planned after 2027, when underground output reduces the mill feed balance being made up with open pit and stockpile tonnes.

Primary access to the underground operation is via ramp systems originating from two portals located in the wall of the existing open pit. Open pit mining, and removal of the crown pillar in the north/east wall, will disrupt this access as well as the supply of other services such as emergency egress, electrical, ventilation, and mine drainage systems.

An open pit PFS was delivered in Q3 2024 to address these challenges and help with strategical decisions. Portals and services can be maintained using, for example, a lock-block system for the majority of the open pit operation. It was also determined that underground voids will need to be systematically backfilled throughout open pit operations. Details on execution and safety considerations require further studies to be carried out. Open pit mining will therefore commence with stripping half of the crown pillar and concurrently mining satellite pits starting with Nylunds North.

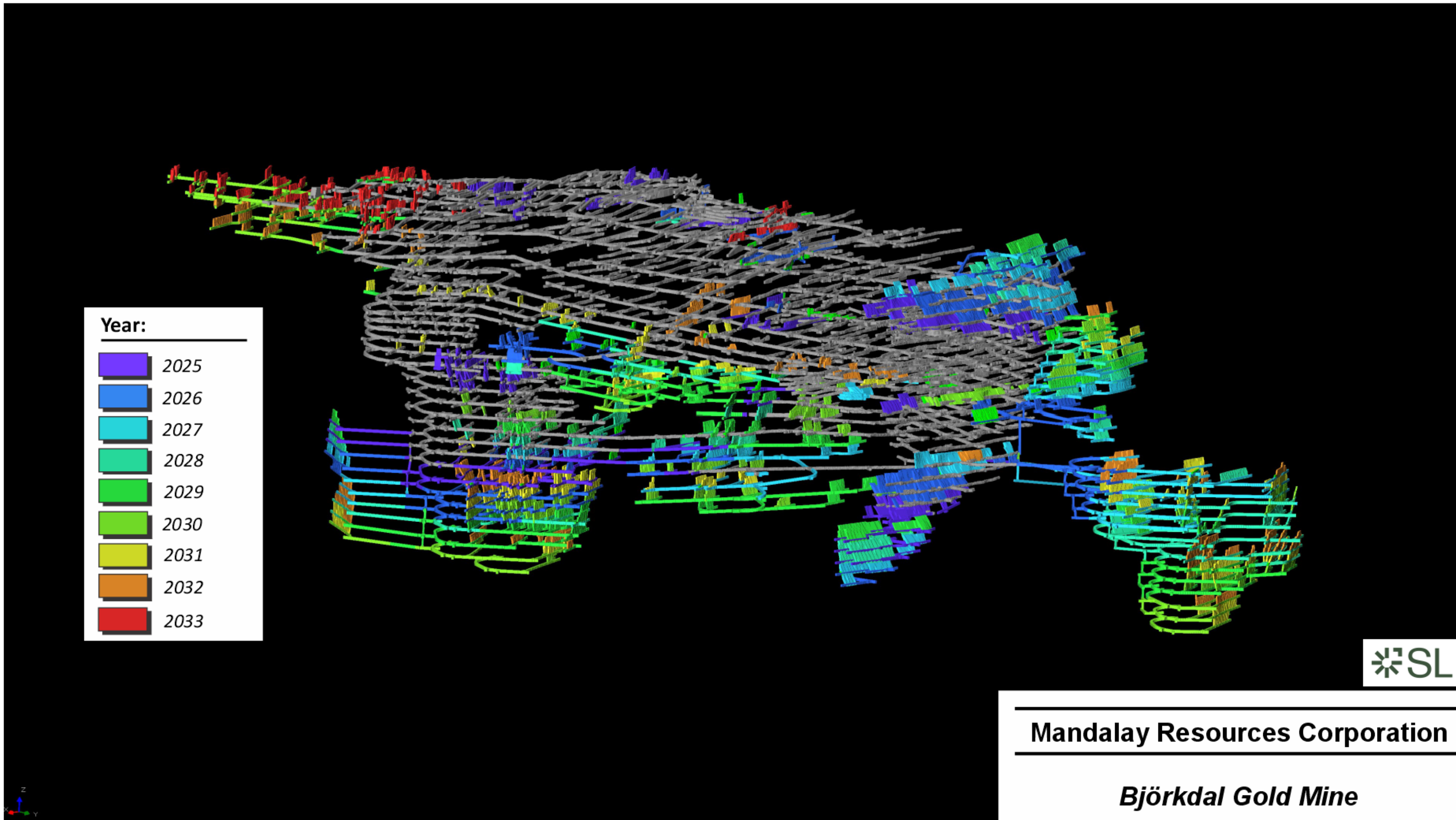
The underground mining method used at Björkdal is longhole stoping with a sub-level spacing of 15 m to 20 m, depending on the zone. Cross-cuts are established perpendicular to the vein system. Veins are then developed by drifting on each sub-level from the cross-cut. All pre-production vein, cross-cut, and ramp development is drilled and blasted using conventional trackless mining equipment.

Stoping blocks are currently drilled with approximately 15 m long, 70 mm or 76 mm diameter up-holes connecting to the bottom of the overlying stope using Epiroc Simba drill rigs. When production drilling has been completed, initial slot raises are developed, and drill lines blasted in groups of three to five rings using a burden of 1.5 m retreating towards the hanging wall. The material is removed between blasts, which also allows sufficient void for each successive blast. Remotely operated scoops are used to muck the stopes to nearby re-handle areas or directly into trucks.

The underground mine design is presented in Figure 16-2.

Figure 16-2: Björkdal Underground Mine Layout Showing Annual Mining Sequence

Looking Southwest



NOT TO SCALE

Mandalay Resources Corporation

Björkdal Gold Mine

Västerbotten, Sweden

Björkdal Underground Mine Layout Showing Annual Mining Sequence

Source: Mandalay Resources Corporation 2024.

The majority of the waste mined underground from capital development is placed directly into voids as unconsolidated backfill. If insufficient voids are available underground, waste is occasionally hauled to surface for temporary storage and backhauled underground at a later date for placement as fill. Generally, more waste is required for fill placement than is produced from development underground and therefore, suitable additional material is sourced from surface and transported underground by trucks returning from hauling ore to surface.

All underground material is loaded by Volvo L180 front end loaders (FELs) or load-haul-dumpers (LHDs), Sandvik 515, 514s and 410, and hauled to surface by a contractor using 26t Scania R520 XT highway tipper trucks. The objective of the current materials handling strategy in practice is as follows:

- Development material from cross-cuts and ramps above a grade of 0.35 g/t Au is hauled to a B-ore stockpile at the mill.
- OVD material is sampled and classified as waste or ore prior to being hauled to the appropriate location.
- All stope production, regardless of grade, is hauled to the stope production stockpile.

In consideration of the variable vein geometry and existing equipment configuration, 2.5 m has been applied as the average minimum mining width. This includes a base 2.0 m minimum width plus an allowance for 0.25 m of overbreak on both the hanging wall and footwall sides of the stope. An additional 25% dilution is added based on historical reconciliation data. This results in an overall planned mining width of 3.1 m.

Most of the mined out stopes are backfilled with unconsolidated fill. Only special and blind stopes under sill pillars are left open without any backfill. The Aurora Zone contains stopes that are wider, longer, and higher than in other areas.

A prefeasibility study to determine the mining method of the Aurora Zone was completed by Itasca Consultants AB (Itasca) in late 2019, which recommended a mining method, stope and pillar dimensions, as well as support requirements. Rill (or Avoca) mining with unconsolidated fill was determined to be the most cost effective option. Given that mining is currently taking place in the Aurora Zone, SLR considers these recommendations to be appropriate. The Avoca mining method has required a revised mining sequence and waste back filling. Neither of these is considered to be risky or onerous. All stopes blocks are mined from the bottom up with sill pillars left between main levels, as illustrated in Figure 16-2 above.

A portion of remnant material above cut-off grade, and adjacent to previously mined out stopes, is excluded from the underground Mineral Reserves. However, the extraction of these remnants warrants further evaluation. Some recovery of ore contained in infrastructure and crown pillar areas is planned at the end of the mine life. The ore around infrastructure will be extracted as part of the underground close-out sequence, which also includes a part of the crown pillar ore. The remainder of the crown pillar will be extracted from the open pit.

Stope grades are evaluated using an internal grade control model and the sludge grades from OVD are used to cross reference the grade control model. Stope tonnages are estimated from the stope design volume and are tracked by equipment bucket and truck count as well as a weightometer that records the tonnage on every truck hauling ore. A CMS is used to compare actual stope volumes against those planned, and to reconcile stope ore dilution. Closure notes are routinely produced for all mined out stopes.

The nature of the mining method is such that OVD has historically comprised not more than approximately 40% of the total underground ore production. Currently, the operational cut-off grade used for OVD is 0.35 g/t Au, which is consistent with the historical open pit break-even cut-off grade. All OVD is mined and sampled. Once the assay data becomes available, if the OVD ore exceeds a grade of 0.35 g/t Au, then the material is sent to the process plant, otherwise it is used as backfill in stopes. While efforts are made to identify areas of waste development, a portion of cross-cut and ramp material is combined and hauled to a low-grade surface stockpile and processed as B-ore.

16.1.2.3 Low Grade Stockpiles

Selective open pit mining at Björkdal commenced in 2009. Historically, ore greater than 1.0 g/t Au was separated and milled as A-ore and material between 0.3 g/t Au and 1.0 g/t Au was stockpiled as B-ore.

Batch milling experience has indicated that the stockpiled B-ore averages 0.59 g/t Au. Approximately 1.5 Mt of B-ore has been classified as an Indicated Mineral Resource, (Probable Mineral Reserve) at a grade of approximately 0.59 g/t Au.

Stockpiled ore will be fed continuously throughout the LOM to make up shortfalls in mill feed from the underground operations, and later, the open pit mines.

Rehandling will be carried out with a small equipment fleet. Assuming a rehandling cost of US$0.65/t for stockpiled material results in a cut-off grade of 0.20 g/t Au.

16.1.3 Geotechnical and Slope Stability

16.1.3.1 Open Pit

A structural and kinematic inter-ramp slope stability analysis for the Mine was carried out by SRK in October 2012 (Saiang 2012). The proposed inter-ramp slope angle of 70° and an inter-ramp height of 40 m were validated and showed a minimum factor of safety of 1.48. Water or pore pressure was not accounted for and required monitoring to see if it might become a concern.

Structural analysis showed that the dominant joint sets have similar orientations to the gold bearing quartz veins and dip steeply either parallel or sub-parallel to quartz veins. As a result, the hanging wall side is less prone to any major instability because the intersections of joints do not daylight at the slope face. This is clearly evident at Björkdal where the hanging wall side of the pit is very stable even though slope angles are near vertical. On the footwall side, however, potential instabilities are observed. Structural and kinematic analyses show that there is no major threat for the footwall slopes or pit walls.

The rock mass at Björkdal is of very high quality. Test work carried out at Björkdal has shown that Geological Strength Index (GSI) is estimated to be between 70 and 80, and intact strength exceeds 200 MPa. A visual observation of the open pit slopes indicates near-vertical to vertical benches and narrow stable berms.

In 2016, SRK carried out an additional slope design review (Di Giovinazzo, 2016). The outcome of the review highlighted the potential to mine 25 m high benches, (5 m benches in sets of five), with the opportunity to maintain the bench face angles (BFAs) at 75° and to reduce the berm width to eight or ten metres. The 2017 pit design incorporated these changes. The review also highlighted the differing geotechnical character of various geographical and geological sectors of the mine. These geotechnical sectors have been used to assign varying BFAs (from 70° to 85°), bench heights (from 10 m to 20 m), and localized face azimuths to avoid planar failure in specific areas.

16.1.3.2 Underground

Rock mechanic consultants have made several visits to the Björkdal underground mine since start of its operation in 2009 and, in general, consider the rock quality and ground conditions to be extremely good. The most recent work was carried out by Itasca in August 2019. Given the high rock quality, the underground rock reinforcement at Björkdal is on the conservative side. During 2024, approximately 85% of the underground development excavations were reinforced with shotcrete, and 60% with shotcrete and bolts.

Mechanical scaling of all development is carried out immediately following blasting. Shotcrete and resin rebar are used in the pre-production OVD on an as-required basis and shotcrete followed by systematic resin bolting is used for permanent development such as ramps and cross-cuts. Longer bolts are installed in wider intersections with unfavourable structure orientations. As of mid-2022, cable bolts are also installed in those stopes at risk from structural failure. Permanent development is also re-scaled every 12 months.

In some areas of the mine, the spacing between the parallel vein systems is small and the resulting pillar between the mined stopes has collapsed. Itasca has made a general recommendation that a minimum 10.0 m wide pillar is required around permanent development.

Ground control equipment at Björkdal includes an Atlas Copco Scaletec, three Jama 8000 scalers, a Sandvik DS411 bolting machine, an Epiroc Boltec bolting machine, and two Normet 8100 shotcrete units, supported by delivery of concrete directly to the face by a local supplier.

Development is ongoing in the Aurora Zone which comprises several thin and closely spaced veins (a so-called “stringer zone”). This zone, which is larger and more extensive than elsewhere, was the focus of the 2019 Itasca report, which analyzed potential stopes, pillars, and the related stress regimes in some detail, with the following conclusions:

- Unconsolidated backfill is required to limit the stope back length to 60 m.
- Sill pillars between 15 m and 10 m are required.
- Some stope backs will require shotcreting.
- Permanent accesses should be situated 25 m in the hanging wall and will need protection pillars of 10 m where they pass through the orebody.
- Cable bolts are recommended but can be reconsidered depending on the acceptable level of risk.

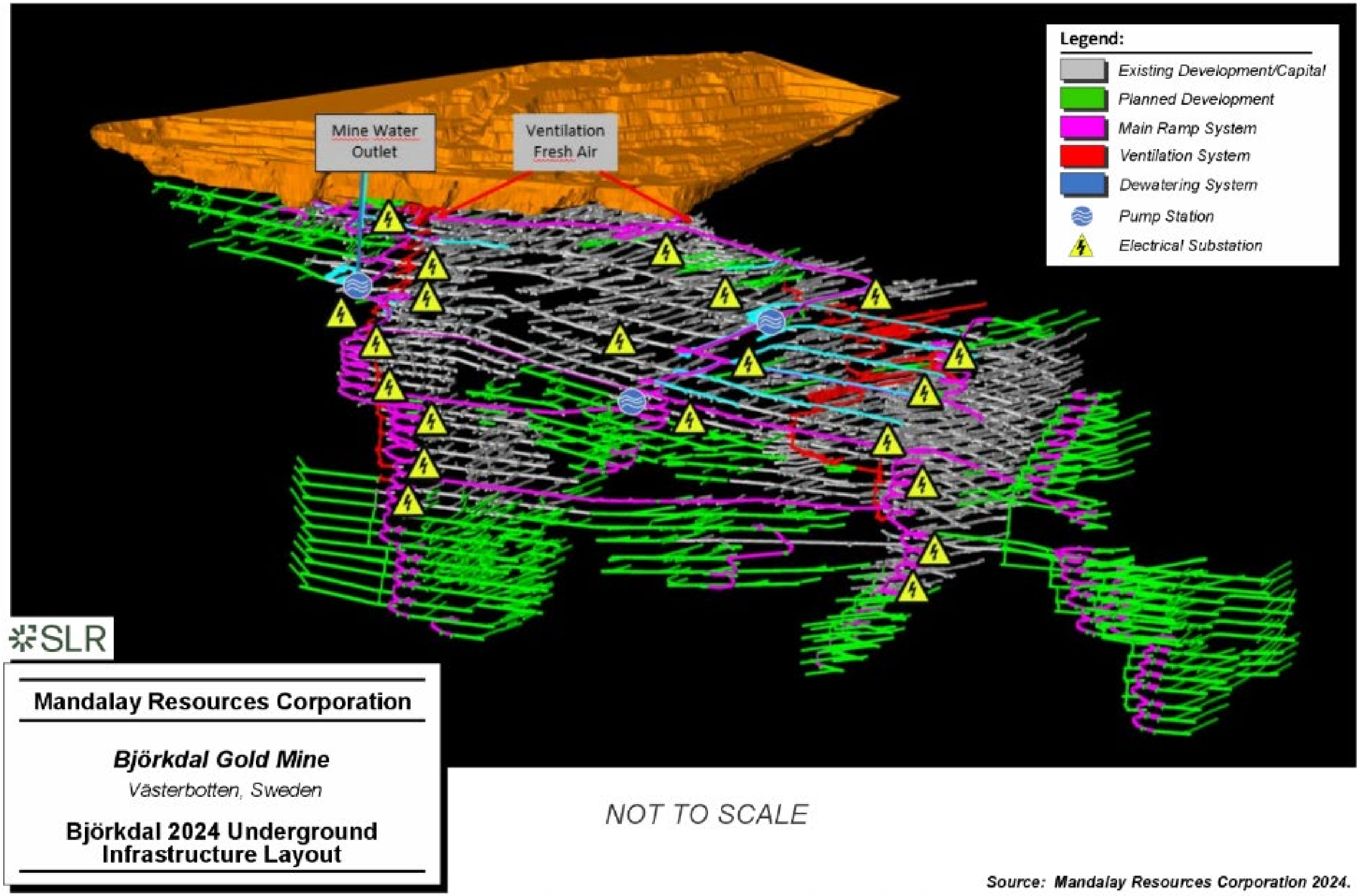
As part of an ongoing collaboration with Itasca, new mining areas are continuously evaluated during the design phase. Itasca makes routine site visits weekly and ground control recommendations are made on a case-by-case basis. FLAC3D models are utilised to ensure geomechanical stability of specific areas, such as Skarn, which are also inspected on a weekly basis.

SLR considers it essential that Björkdal continue to monitor local ground conditions as mining progresses, especially in the deeper levels.

16.1.4 Infrastructure

The underground mine workings are accessed by two ramps located in the wall of the existing open pit. The ramps cut through the orebody and connect to cross cuts that run perpendicular to the vein structure. All material mined underground is hauled to the surface via these two ramps by a contractor using rigid trucks. A layout of the 2025 underground infrastructure is presented in Figure 16-3.

Figure 16-3: Björkdal 2024 Underground Infrastructure Layout



Source: Mandalay Resources Corporation 2024.

16.1.4.1 Dewatering

Snow melt during Spring and heavy storm events can result in a substantial influx of water into the underground mine via high permeability fault systems connecting with the open pit. The site is currently in the process of upgrading the pumping system.

The 340/Ramp 2 pump station handles all the water that comes from production and groundwater inflows from the Lake Zone and Central Zone. The water is pumped from the working faces with submersible pumps in lifts to the 340/Ramp 2 pump station. The 340/Ramp 2 pump station pumps the water using two large submersible pumps (2 x 90 kW) in one horizontal 800 m section in two 150 mm diameter pipes to the Main Zone pump station. The water flow from this area varies between 10 m^3/h and 70 m^3/h, depending on the level of production activities and the season.

The Main Zone pump station, located on the 265 level, sends all underground pump water to surface using three centrifugal pumps (3 x 75 kW), with a capacity of 180 m^3/hr in total. The water is transported in one vertical lift of 200 m to surface in a 250 mm diameter steel pipe. The mine water then flows in a ditch to a clear water basin where the water is treated to remove suspended solids and nitrates.

The pump water that comes to the Main Zone pump station is mainly from the Lake Zone 340 ramp pump station, but also from the working faces in the deeper levels of the Main Zone, which is pumped with submersible pumps similar to Lake Zone.

Total annual pumped water from underground to surface is approximately 810,000 m^3.

16.1.4.2 Ventilation

The underground ventilation system is simple and effective. Fresh air is introduced into the mine via two primary intake air shafts located adjacent to the open pit and is distributed to the working areas by means of two primary and 29 secondary fans installed throughout the mine. Fresh air is drawn through old stopes to avoid the need for heating during the winter months. The return air is exhausted via two main ramp systems into the open pit.

16.1.4.3 Electrical

Björkdal has combined 400 V/1,000 V electrical sub-stations as well as single 400 V and 1,000 V sub-stations. Separate cables for both 1,000 V and 400 V are used.

All underground mining equipment requiring electrical power operate on 1,000 V while pumps and fans operate on 400 V. Electrical sub-stations are placed in strategic locations, close to fresh air ventilation shafts and near production faces.

Underground communication uses a digital leaky feeder system that covers the entire mine. Communication between personnel is carried out using Motorola two-way radios.

16.1.5 Mine Equipment

16.1.5.1 Open Pit

As noted elsewhere in this report, the open pit is not currently being mined. Some surface equipment is however being used to rehandle the low grade stockpile into the primary crusher.

16.1.5.2 Underground

With the exception of materials handling, haulage of ore to the surface, back haulage of waste fill material underground, road maintenance, and longhole charging, all underground mining activities are generally carried out by Björkdal personnel. In addition, some longhole drilling, cable bolting and development is occasionally carried out by contractor.

The underground mining equipment used at Björkdal is presented in Table 16-3.

Table 16-3: Björkdal Underground Mining Equipment

Make	Model	Machine Type	Purpose	Owner	Units
Epiroc	Boomer E2C	Face Drilling	Production	Björkdal	2
Epiroc	Boomer M2C	Face Drilling	Production	Björkdal	2
Epiroc	Simba	Longhole Drilling	Production	Björkdal	3
Epiroc	Scaletec MC	Scaler	Production	Björkdal	1
JAMA	8000	Scaler	Production	Björkdal	3
Normet	Charmec	Charging Unit	Production	Björkdal	1
Normet	8100	Shotcreting	Production	Björkdal	2
Sandvik	DS411	Bolter	Production	Björkdal	1
Epiroc	Boltec	Bolter	Production	Björkdal	1
Sandvik	LH410	RC Loader	Production	Björkdal	1
Sandvik	LH514	RC Loader	Production	Björkdal	3
Sandvik	LH515i	RC Loader	Production	Björkdal	1
Scania	R520 XT	Haul Truck	Production	Renfors	7
Volvo	FH12	Concrete Mixer	Production	Björkdal	1
Volvo	FMX	Concrete Mixer	Production	Björkdal	2
Volvo	L150H	Wheel Loader	Production	EPC	1
Volvo	L120H	Wheel Loader	Production	Björkdal	2
Volvo	A25D	Water Bowser	Production	Björkdal	1
Volvo	A25G	Water Bowser	Production	Björkdal	1
Volvo	L180H	Wheel Loader	Production	Björkdal	4
Komatsu	WA80	Wheel Loader	General	Björkdal	1
Volvo	L110H	Wheel Loader	General	Björkdal	1
Volvo	L90H	Wheel Loader	General	Renfors	2
Volvo	L90F	Wheel Loader	General	Björkdal	2
Volvo	L90H	Wheel Loader	General	Björkdal	2

16.2 Norrberget

Norrberget is planned to supply approximately 161,000 tonnes of ore at an average grade of 2.72 g/t in 2035. Given the volume is a relatively small proportion of the total and will be mined at a later stage than the rest of the operation, the details of the mine plan are summarised here.

16.2.1 Mine Design

An updated pit design for Norrberget was created using Deswik mine planning software based on the selected re-optimised pit shell, revenue factor (RF) = 1.0. which accounts for increase in gold price assumptions and update to the block model with data cut-off date of 30 September 2024. The pit design parameters used are shown in Table 16-4 and based on current operating practices at Björkdal.

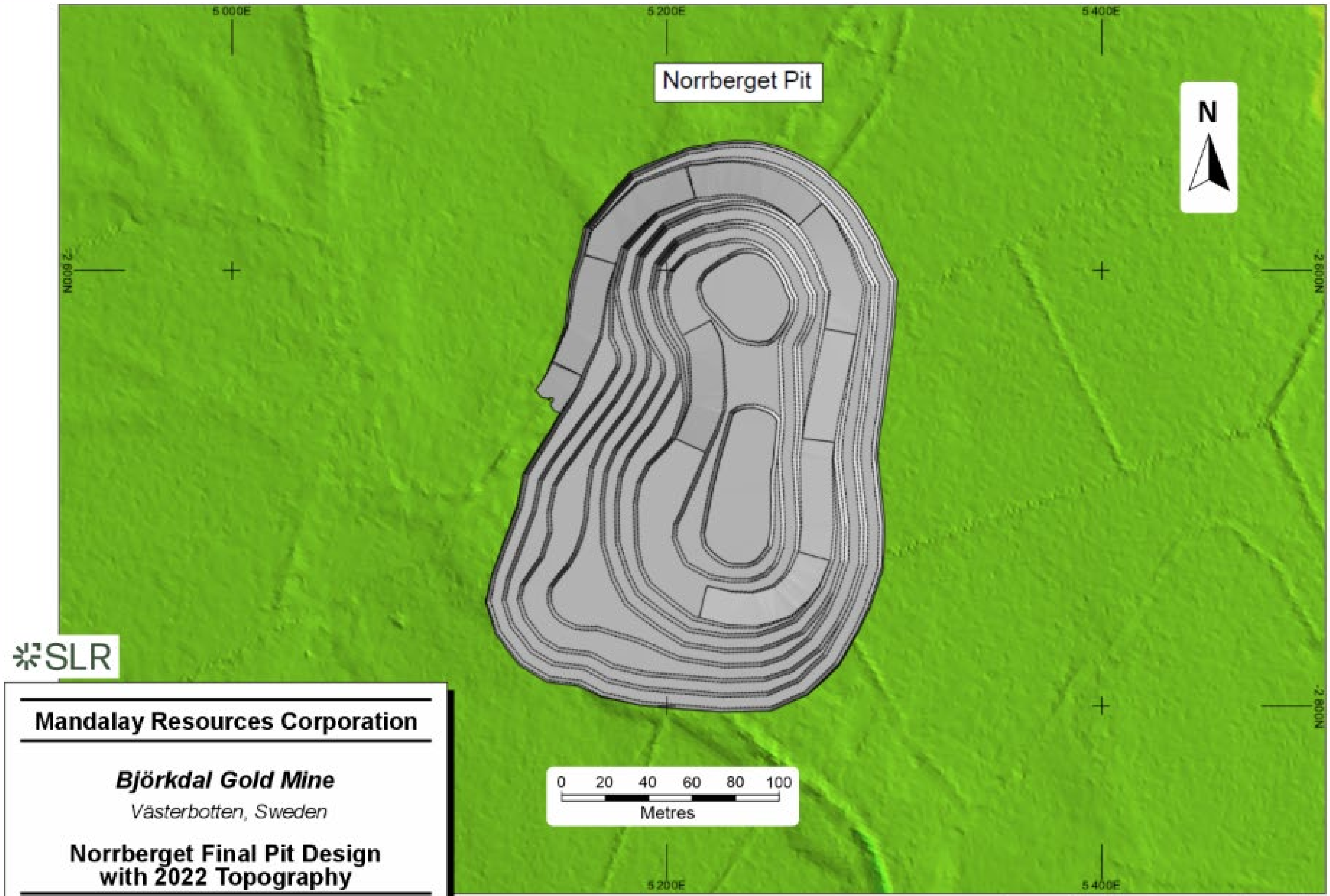
Table 16-4: Norrberget Pit Design Parameters

Parameter	Unit	Input
Overall Slope Angle	degrees	36-52
Bench Face Angle	degrees	70-75
Berm Width	m	5
Bench Height	m	5-10
Benches per Berm	#	1
Single Ramp Width	m	15
Ramp Slope	%	10

The final pit bottom lies approximately 50 m below the original topography. A single 15 m wide ramp is used to access the orebody.

The final Norrberget pit design, along with topography, is presented in Figure 16-4.

Figure 16-4: Norrberget Final Pit Design with 2022 Topography



Source: Mandalay Resources Corporation 2024.

16.2.2 Mining Method

At Norrberget, open pit mining will be carried out by a contractor, using trucks and excavators. This production will be part of an integrated mining contract for both Björkdal and Norrberget.

The mining schedule at Norrberget is integrated into the Björkdal open pit schedule to minimize potential production shortfalls and to provide added flexibility to the deliverable mill feed.

Waste mined during the life of the open pit will be placed on the north side of the open pit and will contribute to sound attenuation from the operation of the pit.

16.2.3 Geotechnical and Slope Stability

In July 2017, SRK was engaged to carry out a geotechnical assessment of the Norrberget deposit. The assessment included the following:

- analysis of drill core from existing logs and photographs
- intact rock strength
- jointing and structure
- kinematic analysis
- SBlock analysis
- recommendations for slope designs to be used in for pit optimisation and pit design

SRK recommended that the pit design be split into two distinct sectors: the southwest (footwall to the ore) and the northeastern sector (hanging wall). The southwest sector has been designed with an overall slope angle of 36° and a BFA of 70°. The northeastern sector has been designed with an overall slope angle of 52° and a BFA of 75°. The shallower design of the southwest sector does not significantly raise the strip ratio of the Norrberget mine as the recommended overall slope angle closely mirrors the dip of the orebody.

16.2.4 Hydrological Studies

In 2016, Golder Associates AB (Golder) was commissioned to carry out a hydrological study of the Norrberget area. Water handling at Norrberget will be integrated into the water management plan for Björkdal. Water quality of discharge from the mine and existing surface waterways will be monitored by Björkdal staff to comply with local regulations and the operating conditions of the environmental permit.

Golder concluded that the groundwater level at Norrberget is 115 MASL and the existing topography at the site averages 120 MASL. At an expected pit depth of 57 MASL (60 m below surface) the expected groundwater infiltration rate is 800 m^3 per day and the expected contribution of surface run-off and rainfall is 450 m^3 per day. This leads the analysis to conclude that pumping requirements at Norrberget should not exceed 1,250 m^3 per day. The estimated area of influence on the local groundwater system has been assessed to have a radius of approximately 450 to 500 m from the centre of the pit.

Pumping is planned to use portable pumps to dewater the workings as required with wastewater being discharged to the sedimentation dam northwest of the Norrberget pit.

The proposed open pit design is located at the confluence of two minor streams. Stream diversion trenches will be dug north and south of the planned pit to steer water from these two streams around the open pit and reconnect with the original drainage east of the pit design. A further trench will be constructed on the gently sloping west side of the designed pit to redirect surface water drainage away from the proposed pit and into the northern stream channel.

16.2.5 Mine Equipment

Mining equipment for Norrberget will be provided by mining contractors as required. As the Norrberget pit is scheduled to commence production in 2035, equipment details have not yet been determined.

16.3 Consolidated Life of Mine Plan

The LOM plan for Björkdal comprises production from Björkdal underground, open pits at Björkdal and Norrberget, and from historical ore stockpiles. The production and processing plan is shown in Table 16-5.

Table 16-5: Life of Mine Production Plan

	Units	Average / Total	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
MINING PRODUCTION - UNDERGROUND													
Total Rock	kt	**7,251**	1,234	1,244	1,008	867	665	637	636	637	324		
Waste	kt	**574**	194	183	88	86	19	4	0				
Ore	kt	**6,678**	1,039	1,062	920	781	646	633	636	637	324		
Stope Tonnes	kt	**5,297**	599	612	613	622	625	630	636	637	324		
Development Tonnes	kt	**1,381**	441	450	307	160	21	3	0				
Grade	g/t Au	**1.58**	1.33	1.34	1.53	1.59	1.86	1.84	1.86	1.73	1.46		
Gold Mined	koz	**340**	44	46	45	40	39	38	38	35	15		
Capital Development	m	**18,767**	3,491	3,566	3,378	3,320	3,097	1,916					
MINING PRODUCTION – OPEN PITS													
Total	kt	**50,082**			5,400	7,200	7,200	7,200	7,200	6,880	3,639	2,952	2,411
Total Waste	kt	**44,596**			4,994	6,706	6,654	6,576	6,491	6,447	2,637	1,917	2,174
Waste - Capex	kt	**30,002**			3,737	4,552	4,816	4,599	4,572	5,292	705	67	1,662
Waste - Opex	kt	**14,593**			1,257	2,153	1,839	1,977	1,919	1,155	1,932	1,849	512
Ore	kt	**5,486**			406	494	546	624	709	433	1,002	1,035	237
Grade	g/t Au	**0.20**			0.73	0.89	1.01	1.22	1.23	1.26	1.10	0.89	2.37
Gold Mined	koz	**194**			10	14	18	24	28	18	35	30	18
Strip Ratio	W:O	**9.6**			12.3	13.6	12.2	10.5	9.2	14.9	2.6	1.9	9.2
MINING PRODUCTION - STOCKPILE													
Ore	kt	**1,520**	361	338	75	125	208	143	55	216			
Grade	g/t Au	**0.59**	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59			
Gold Mined	koz	**29**	7	6	1	2	4	3	1	4			

	Units	Average / Total	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
TOTAL													
Ore	kt	**13,683**	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,286	1,326	1,035	237
Grade	g/t Au	**1.28**	1.14	1.16	1.25	1.25	1.34	1.44	1.49	1.38	1.18	0.89	2.37
Gold	koz	**563**	51	52	56	56	60	65	67	57	50	30	18
PROCESSING FEED													
Underground													
Ore	kt	**6,678**	1,039	1,062	920	781	646	633	636	637	324	0	0
Grade	g/t Au	**1.58**	1.33	1.34	1.53	1.59	1.86	1.84	1.86	1.73	1.46	0.00	0.00
Open Pit													
Ore	kt	**5,486**	0	0	406	494	546	624	709	433	1,002	1,035	237
Grade	g/t Au	**1.10**	0.00	0.00	0.73	0.89	1.01	1.22	1.23	1.26	1.10	0.89	2.37
Stockpile													
Ore	kt	**1,520**	361	338	75	125	208	143	55	216	0	0	0
Grade	g/t Au	**0.59**	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.00	0.00	0.00
Total													
Ore	kt	**13,683**	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,286	1,326	1,035	237
Grade	g/t Au	**1.28**	1.14	1.16	1.25	1.25	1.34	1.44	1.49	1.38	1.18	0.89	2.37
Gold	koz	**563**	51	52	56	56	60	65	67	57	50	30	18
Recovery	%	**0.856**	0.856	0.856	0.856	0.856	0.856	0.856	0.856	0.856	0.856	0.856	0.856
Gold Recovered	koz	**482**	44	45	48	48	52	55	57	49	43	25	15

16.3.1 Björkdal Underground

The Björkdal underground long term mining plan includes a significant number of development drives and stopes spread across the numerous mining zones and levels. This allows for flexibility in mine scheduling and the mining operations. Pillar recovery on the retreat is scheduled for the latter years of production.

16.3.2 Björkdal Open Pit

Mining of the crown pillar and main open pit area will commence with moraine and loose waste rock removal in 2027 on the west side of the pit. At the same time, mining of the Nylunds North satellite pit will begin, to be followed later by Nylunds South, South West Wall pit, and finally Norrberget. All satellite pits are scheduled to be mined concurrently with the Main Pit to ensure a steady feed of ore to the mill.

The final pushback in the crown pillar will commence in 2030 when the majority of underground operations have ceased and closure begins.

16.3.3 Norrberget Open Pit

The LOM plan for Norrberget is integrated into the LOM at Björkdal and provides incremental high grade feed of 161,000 tonnes to the mill over a twelve month period. Stripping of surface overburden is scheduled to commence in 2035, which will offset a shortfall of supply from the main Björkdal pit as production there comes to an end.

16.3.4 Stockpiles

Stockpiled ore will be fed continuously throughout the LOM until 2032 to make up for shortfalls in mill feed from the underground, and later, the open pit mines. The average stockpile ore mill feed over this period will be 190,000 tpa peaking at 361,000 tonnes in 2025

17.0 Recovery Methods

17.1 Introduction

The original Björkdal plant was designed and built by Davy McKee in 1987 for Terra Mining. There have been a number of major changes made to the processing circuit with the primary objective of increasing plant throughput while maintaining gold recovery. The modifications are summarised in Table 17-1.

Table 17-1: Plant Modifications

Year	Modifications
1989	Plant commenced operation
1990	New 750 kW regrind mill installed
1992	Sala 6.6 m^3 flotation cell installed
1993	2 – 75 kW Sala Agitated Mills (SAM) installed before flotation circuit
1994	A sorting plant and a new mill facility were constructed and commissioned in December 1994
2005	Knelson CD12 and a small regrind mill (7.5 kWh) installed in the gravity section
2009	Knelson XD30 installed before flotation
2013	The Reichert cones were replaced by Rougher spirals; an Outokumpu SkimAir- 240 flotation cell and a new double deck screen were installed in the grinding circuit
2017	Flotation expansion installed and commissioned, increased flotation capacity and increased recovery
2018	Expert Process Control System installed (Mintek)
2021	G-max cyclone battery installed in gravity circuit
2023	Mill conversion ball-mill 2 from overflow to grate discharge
2024	Toe position measurement system installed in ball-mill 2

17.2 Process Description

A simplified process flowsheet is provided in Figure 17-1.

The concentrator includes primary, secondary, and tertiary crushing, primary, and secondary grinding, a series of gravity concentration steps, regrinding, and flotation to produce three gravity concentrates and a flotation concentrate.

Ore is delivered to a series of small stockpiles that are utilized to campaign ore through the processing facility to provide reconciliation data for various parts of the mines. From the stockpiles, a front-end loader feeds a primary jaw crusher. Discharge from the jaw crusher is screened. The screen undersize is nominally minus 8 mm. The material is conveyed to a 5,000-tonne fine ore bin or to an emergency stockpile. Primary screen oversize is stored in a 400-tonne crushed ore stockpile. Ore is reclaimed from the stockpile and fed to a secondary cone crusher. Discharge from the cone crusher is conveyed to a secondary screen. Undersize from the screen is combined with the undersize from the primary screen and stored in the fine ore bin or the emergency stockpile. Oversize from the secondary screen is fed to a tertiary cone crusher. The discharge from the tertiary crusher is combined with the discharge from the secondary cone crusher and fed to the secondary screen. Thus, the ore is recirculated through the tertiary cone crusher until it meets required product size (i.e., minus 8 mm).

Crushed ore is reclaimed from the fine ore bin and passed across two screens operating in series prior to being fed to the primary grinding circuit. The screen oversize is directed to an oversize material stockpile. The screen undersize is split and fed to the primary ball mill (No. 1) and primary rod mill (No. 2) that are operated in parallel. Discharge from the primary mills is fed to a classifying screen. The screen oversize is returned to the primary ball mill for additional grinding. Screen undersize has a particle size of approximately 80% passing (P80) 560 µm and flows to the hydrocyclone feed sump. The resulting slurry is pumped to primary hydrocyclones for additional classification.

The primary cyclone underflow (P80 800 µm) is fed to rougher spiral concentrators. Tailings from the rougher and cleaner spirals are returned to the secondary ball mill (No. 3) with a discharge P_{80} 475 µm. From the discharge of mill number 3, the slurry is pumped to combine with the discharge from - mills 1 and 2. The discharge from the three mills is pumped to the classifying screen.

Concentrate from the rougher spirals is fed to the cleaner spiral concentrators. Tailings from the cleaner spirals are combined with the tailings from the rougher spirals and processed in the regrind secondary ball mill number 3 circuit. Concentrate from the cleaner spirals is cleaned on shaking tables. Tailings from the shaking tables are fed to a Knelson centrifugal gravity concentrator. Tailings from the Knelson concentrator are combined with the tailings from the rougher and cleaner spiral concentrators and processed in the regrind secondary ball mill circuit. Concentrate from the shaking tables and the Knelson concentrator are fed to the cleaner shaking table where two concentrate grades are produced. The gravity concentrate contains approximately 60% gold and the middlings from the cleaner shaking table contain approximately 1,500 g/t Au.

Overflow from the primary cyclones - (P80 230 µm) is further classified in the secondary flotation cyclones. The flotation cyclone underflow (P80 410 µm) is fed to a Knelson concentrator. The Knelson tail is fed to a single SkimAir flash flotation cell. The SkimAir flotation concentrate reports to the final flotation concentrate thickener, while the tailings from the SkimAir cell are combined with the flotation cyclone overflow (P80 125 µm) as feed to three banks of conventional rougher flotation cells that operate in series. Tailings from the rougher flotation circuit feed the scavenger flotation circuit that contains three conventional flotation cells. Concentrate from the scavenger flotation circuit is recombined with the feed to the rougher flotation circuit. Tailings from the scavenger flotation circuit are the final tailings from the plant. Rougher flotation concentrate is cleaned in the first cleaner flotation circuit that consists of one bank of four conventional flotation cells and the second cleaner flotation circuit that consists of one tank flotation cell. Tailings from the first cleaner flotation circuit are returned to the feed of the rougher flotation circuit and tailings from the second cleaner flotation circuit are returned to the feed of the first cleaner flotation circuit. The second cleaner flotation concentrate is collected in the final flotation concentrate thickener along with the SkimAir flotation concentrate. The flotation concentrate is dewatered in the flotation concentrate thickener and filtered prior to shipment.

17.3 Planned Modifications

The SLR QP understands that Björkdal has completed the ball mill conversion from overflow mode to grate discharge mode. It is expected that this modification would increase the mill throughput and slightly increase the grinding efficiency. However, the operating data indicates significant increases to the grinding efficiency so far. It is expected that, small improvements in mill throughput could be expected in the coming years.

17.4 Sampling and Metallurgical Accounting

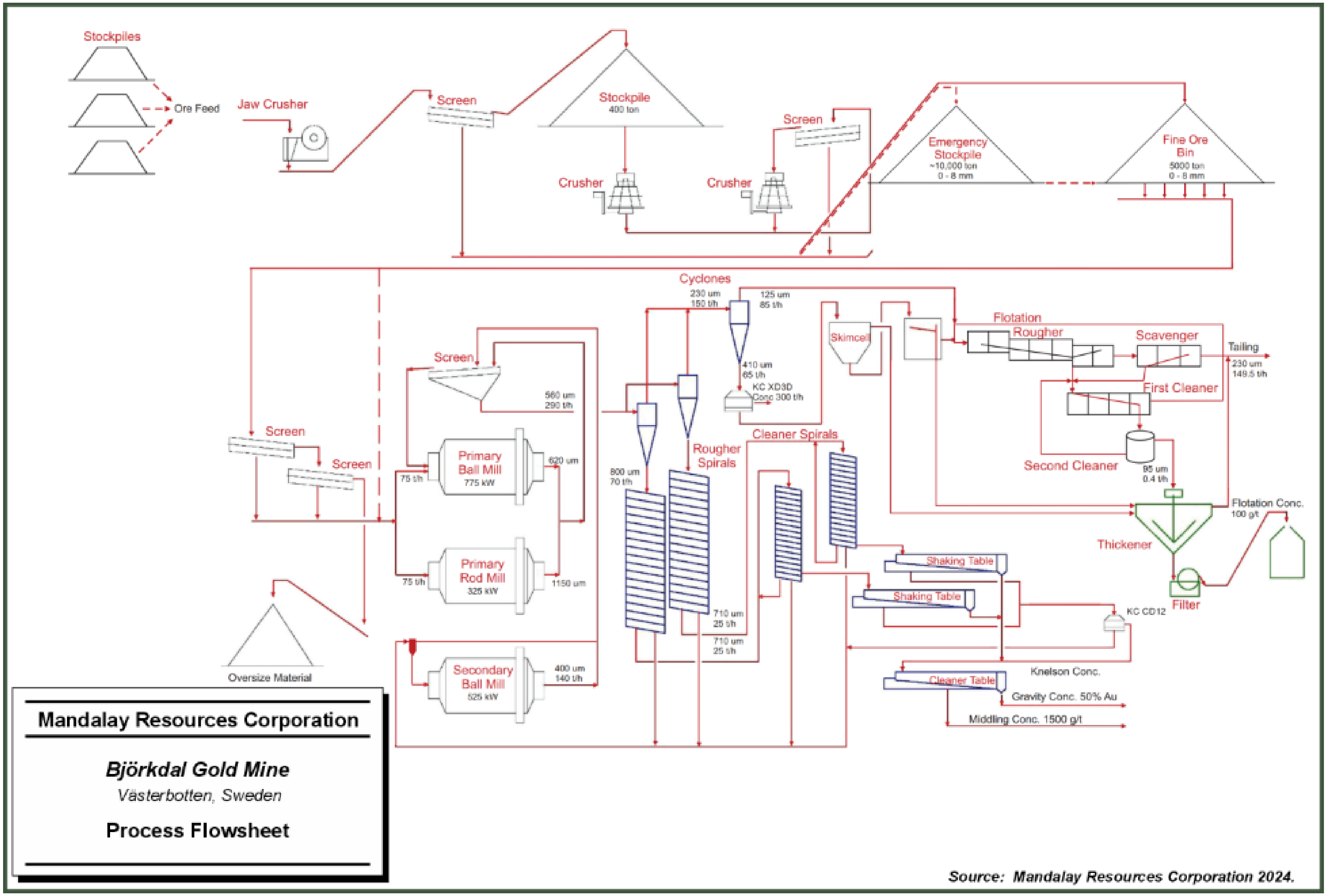
Regular flotation concentrate samples are taken automatically, as are Knelson and middlings concentrate samples. For tailings samples a metal accounting two step sampler is used. If an automatic sampler is out of operation, as a backup, manual samples are then taken using buckets.

For the gravity concentration circuit, the day's concentrate is homogenised and divided into a final sample.

Samples are not collected from the two mill feed conveyors. There have been several attempts undertaken in the past to take samples and compare feed grade. The site metallurgists informed SLR that the ore is too non-homogeneous, with samples varying too much, to provide an accurate representation of the feed grade on a shift to shift basis. The SLR QP understands that the mill head grade is consequently back calculated from sample data taken from the gravity and flotation samples, but not cross checked against actual assays from mill feed.

The SLR QP acknowledges that the process plant has been in operation for more than 30 years and consistently produces saleable concentrate products. Thus, lack of mill sampling is not considered a significant concern with respect to performance but, is highlighted as a practice that does not constitute best practice for metallurgical accounting.

Figure 17-1: Process Flowsheet



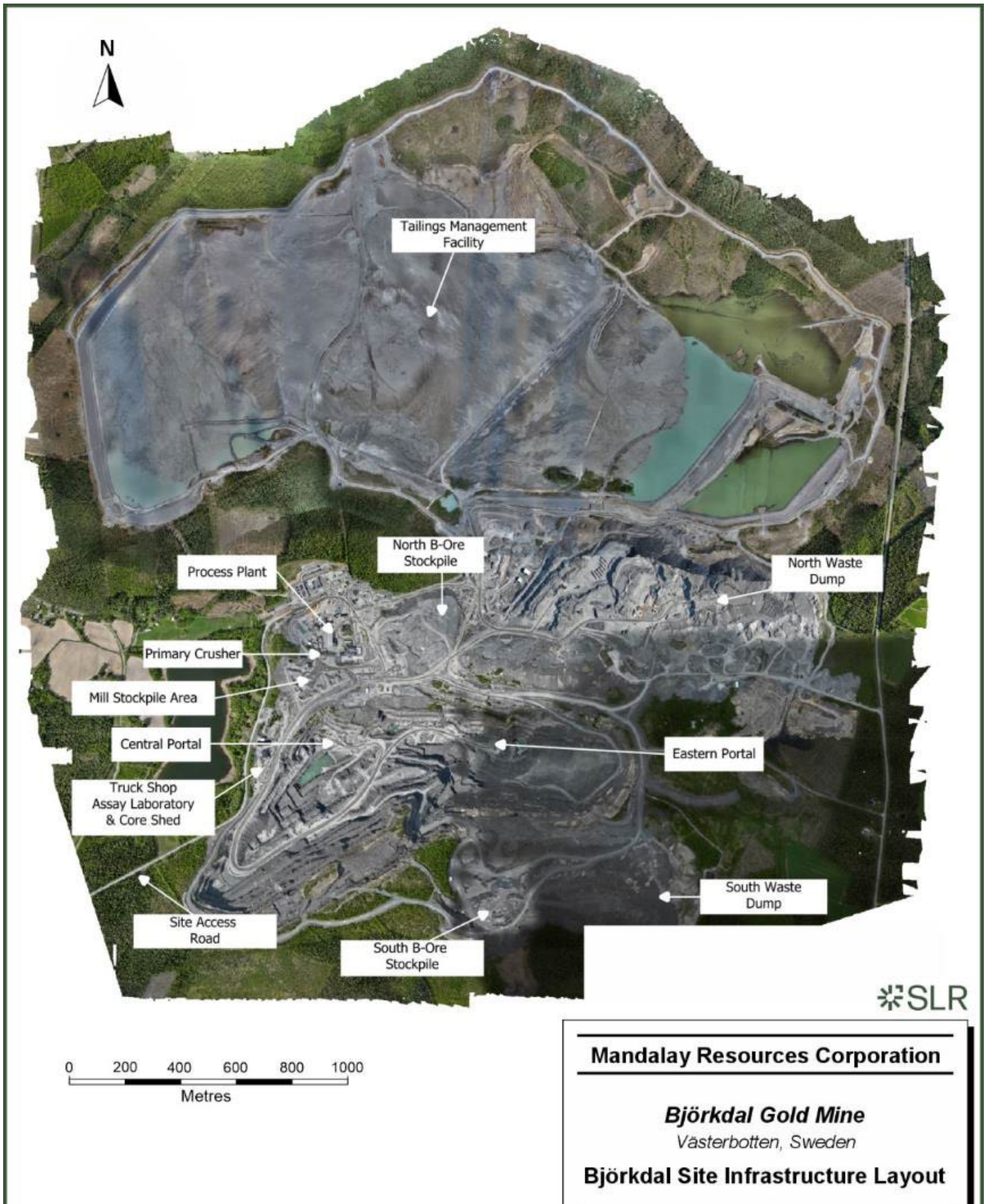
Source: *Mandalay Resources Corporation 2024.*

18.0 Project Infrastructure

18.1 Björkdal

A site surface plan based on a LiDAR survey conducted in June 2020 shows the overall extent of the Mine operation and infrastructure and is presented in Figure 18-1.

Figure 18-1: Björkdal Site Infrastructure Layout



Source: Mandalay Resources Corporation 2024.

18.1.1 Tailings Management Facility

The Tailings Management Facility (TMF) is located in an area of gently undulating relief approximately 1.5 km north of the processing plant and comprises three separate zones: the Western Area, the Central sand cone, and the Eastern Area. The Eastern Area consists of the Eastern Barrier dam, K1 dam, and the K2 dam.

Expansion of the western area of the TMF was approved under the latest environmental operating permit that was received in December 2018, and which remains valid for a period of ten years. The southern section of the Western Barrier Dam was raised by 1.2 m during the summer of 2022, which provided sufficient tailings capacity until K1 dam was completed in November 2023. The remaining tailings capacity in the western area is estimated to last six months; however, no tailings are deposited in this area currently.

The raising of the K1 Dam is being carried out in two stages. The Stage 1 raise, initiated during 2020, was completed in November 2023. Stage 2 is scheduled to be completed during 2026. At the planned plant throughput of 1.4 Mtpa, this will provide sufficient tailings storage capacity up to and including 2030. The Company is investigating the possibility of backfilling tailings into the inactive open pits to avoid additional TMF expansions between 2030 and the life of mine (currently 2035).

TMF expansions have been designed by the independent consultants, Tailings Consultants Scandinavia (TCS) and the construction is being carried out by PEAB Anläggning AB.

Figure 18-2: Björkdal Tailings Management Facility 2024

Source: Mandalay Resources Corporation 2024.

18.1.2 Process Water Supply

Water for the process plant is supplied from two sources. During 2024, two submersible pumps located at the Kåge River supplied approximately 805,472 m^3 of raw water (42% of total requirement) to the plant water tanks via two pipelines. Existing water rights allow Björkdal to withdraw up to 50 L/s, equivalent to 180 m^3/h and 1.58 million m^3/yr.

A second pump station located at the TMF recycles cleared water to the processing plant. During 2024, approximately 1,134,144 m^3 (58% of total requirement) of the process water was recycled from the tailings system. This means that less water is discharged from the tailings system and less fresh make-up water is required.

At present, the Mine is diverting water from the underground and open pit mines to the TMF. During 2024, a total of 1,346,000 m^3 of water was pumped from the underground and open pit mines.

18.1.3 Power Supply

The power supply for the site is provided by Skellefteå Kraft AB, the local power company. The electricity is sourced from relatively low-cost hydro power and is delivered to Björkdal via the Swedish power grid.

18.1.4 Communications

On-site communications include mobile services, internal radio communication, and internet service. Back-up of the Björkdal computer servers is completed automatically through high-speed internet to a service company in Skellefteå.

18.1.5 Waste Rock Dumps

The waste rock from open pit mining and low-grade ore stockpiles currently totals more than 51 Mt. An additional moraine stockpile amounts to more than one million tonnes.

Previous characterization studies conducted have shown that waste rock contains very low levels of heavy metals and sulphur and concluded that the waste should be considered inert.

There are currently two active waste dump areas. The North and South waste dumps, as shown in Figure 18-1. Under the new operating permit application, the capacity of the waste rock dumps has been expanded to a total of 91 Mt. This capacity is sufficient to cover the needs of the current mine life.

18.1.6 Surface Facilities

The Mine operation has all the facilities associated with an open pit and underground gold mine and includes the items listed below:

- Well-kept gravel site roads
- An administrative building consisting of office space, conference rooms and kitchen facilities
- Barrack modules with office space for contactors, changing rooms and mine dry mess
- An open pit with ramp access to the underground operations
- Raw ore stockpile facility containing a number of 5,000 t to 12,000 t capacity raw ore stockpiles

- Primary jaw crushing facility with 400 t coarse ore stockpile
- Secondary crushing facility
- 5,000 t fine ore stockpile and reclaim facility
- 3,700 tpd mill, gravity gold plant, and flotation plant
- An internal metallurgical assay laboratory
- Company and contractor maintenance facilities
- A core logging facility with covered storage, sample preparation laboratory, and grade control assay laboratory
- 250 ha TMF
- Fresh water supply and storage,
- Water treatment plant
- Explosive magazine and mixing facilities
- Storage facilities for chemical reagents and bulk supplies
- An off-site covered core storage facility
- Swedish grid electrical power.

18.2 Norrberget

Currently, there is no infrastructure at the Norrberget deposit other than forest access roads, currently used for forestry and hunting access to the surrounding area, and exploration drill pads. Water for drilling is obtained from surface streams or pumped from previous drill holes. Given the small size of the deposit and short mine life, it is envisaged that the bulk of the required infrastructure will be able to be somewhat temporary in nature.

18.2.1 Mine Water Supply

Water to support Norrberget mining operations is planned to be sourced from Lillträsket, a small surface lake approximately two kilometres northwest of the proposed operation. Lillträsket is planned to be used as a sedimentation clearing pond for the Björkdal TMF and appropriate land purchases have been made to facilitate its conversion to this use. As the pit progresses deeper, it is expected that much of the water required for mining can be recycled from dewatering operations.

A pipeline is planned to follow the existing track between Lillträsket and the deposit as this will obviate the need to construct a dedicated maintenance track. The pipeline will be constructed to service both the dewatering discharge needs of the Mine and the supply of mining operations water.

Fresh water supply for drinking and washing is planned to be trucked in. On the Mine site, fresh water is provided from an on-site borehole and this may prove to be the most economical option for fresh water supply at Norrberget. No investigations as to water quality for this purpose have yet been carried out.

18.2.2 Power Supply

The power supply for Norrberget is planned to be an extension of the existing Swedish electricity grid from Nylunds (approximately 3.5 km east). The major power supplier in the region is Skellefteå Kraft AB, the energy supply mix is dominated by locally sourced hydro power and is relatively low cost.

The planned route for the cable extension follows the course of the existing access road and a small sub-station is planned to service the operation of the site.

Other options for site power supply are being further investigated by Björkdal staff; this may provide opportunities to reduce required capital investment or unlock operational benefits.

18.2.3 Communications

A system of three radio repeater stations is planned to integrate the Norrberget site into the larger Björkdal radio system. This system is required for safe operations to be overseen by management and technical staff and will allow ore haulage trucks to operate around the existing open pit.

In addition to the radio system, cellular phone signal is available in the area. A GPS base station will be installed to facilitate surveying of the surface mine and allow GPS excavator control and communication. This can be integrated into the current system at Björkdal.

18.2.4 Waste Rock Dumps

Based on the current Mineral Reserves, it is forecast that approximately 0.49 Mt of loose glacial cover and approximately 1.53 Mt of solid waste rock will be removed from the Norrberget open pit. This material is planned to be stockpiled on both the north and south sides of the designed open pit. These piles will be designed to function as sound attenuation barriers to reduce the impact on the amenity of the small village of Norra Bastuträsk, approximately 1.7 km to the northeast of the proposed workings.

18.2.5 Surface Facilities

There is little requirement for permanent surface facilities at Norrberget. The short mine life and proximity to existing facilities at Björkdal minimize the need for any extensive construction. Office space for technical and management staff will be accommodated within the extant buildings at the Mine. Portable units are planned to be used to supply the required toilet/shower block, change house, and heated muster room.

Other surface infrastructure that would typically be required will be shared with the Björkdal site.

18.2.6 Ore Haulage Road

The existing forest access track will be widened and upgraded to a standard suitable for heavy vehicle access from Route 870 (Fällfors Road) to the deposit at Norrberget, a stretch of approximately 3.5 km. Existing access tracks will be suitable for ore haulage from Route 870 to the primary crusher stockpile area.

Construction of the road upgrade will require culverts in three places, to allow the passage of a surface stream and for two of the surface water diversion trenches described in Section 16.

19.0 Market Studies and Contracts

19.1 Markets

The principal commodity at Björkdal is gold, which is freely traded at prices that are widely known, so that prospects for sale of any production are virtually assured.

19.2 Contracts

Björkdal produces four saleable gold in concentrate products: a gravity concentrate, a middlings concentrate, a Knelson concentrate, and a flotation concentrate. Björkdal has concentrate sales agreements with Aurubis Ag in Germany and Boliden Commercial AB in Sweden.

The terms of these concentrate sales agreements are confidential but have been reviewed by SLR and are considered appropriate for the product and within industry norms. The specific terms of the agreements are included in the SLR assessment of the economic viability of the LOM plan.

Björkdal has also sold concentrate on the spot market to customers in Europe and Asia.

Other contracts that exist between the Mine and suppliers include those for:

- Renfors AB: responsible for the haulage to the surface of all underground mined material and haulage from low-grade stockpiles to crusher.
- Skellefteåbränslen AB: Supplies diesel and gas to site.
- Blasting: EPC Sverige AB for the supply of emulsion explosives and blast hole loading for underground.
- Byggbetong AB: Shotcrete for underground.
- Skellefteå Kraft: Electrical power supply.
- Sandvik Mining & constructions Sverige Ab, Epiroc SWEDEN Ab: Spare parts for mining equipment.
- Rexel/Selga: Supply of electrical components and cables.
- Exploration Diamond Drilling: Contracted on an as-needed basis.
- Minlab AB laboratory service on-site.
- Veidekke Entreprenad AB: Contracted for part of development, production drilling and cable bolting works.
- Sherpas AB: IT infrastructure management.
- Variety of leased mining equipment.

20.0 Environmental Studies, Permitting, and Social or Community Impact

The mine started operations in 1988 before modern environmental permitting regulations were in place. Prior to start-up, the operator was required to apply for water permits only based on a simple mine planning assessment. The first formal environmental impact assessment (EIA) was completed in 2009 in support of the mine's first environmental permit (Tyrens 2009). The latest EIA - referred to as a Miljökonsekvensbeskrivning (MKB) in Swedish - was completed in 2019 (Golder Associates AB 2019), included the extension of the underground mine. An addendum to this report was completed in 2021 (Geosyntec Consultants 2021) to account for the changes to tailings facility design.

An annual environmental report is submitted at the end of March to the authorities in Sweden for approval. The report summarises compliance to the terms stated in the environmental permits and water usage permit.

20.1 Environmental

The Mine has low sulphide content and, as a result, no acid rock drainage (ARD) potential exists. Gold is recovered by mechanical and gravity processes with no use of cyanide. There are no harmful elements associated with the mine tailings and the tailings have been declared non-toxic by the authorities. Previous characterization studies conducted have shown that waste rock from open pit mining contains very low levels of heavy metals and sulphur and have concluded that the waste should be considered inert.

Water quality is monitored on a regular basis at eight strategically placed monitoring stations. The Upper Lillträsk Creek, Upper Kåge River, and Upper Vidmyr Creek stations are located upstream of the mining area and provide reference water quality data; one station on the mine property monitors discharge quality from the TMF (PP2); this is the only discharge point to the receiving environment. Four additional stations, located in Lillträsk Creek, Lower Lillträsk Creek, Kåge River, and Lower Röjmyr Creek, monitor changes in the receiving watershed.

Sampling is performed by certified samplers and the protocol includes analyses for a suite of twenty-two metals; pH; temperature; ammonium-nitrogen, phosphates, and phosphorus; nitrogen, nitrates, and nitrites; oil and total suspended solids (TSS).

Historically, Björkdal reported that the discharge water quality from both the mine water management system (PP1) and the TMF (PP2) exceeded permissible levels for nitrates and TSS. Elevated levels of phosphorus and phosphates were also noted at PP1. Since 2018, and following several studies conducted by the Mine to establish the cause of the elevated levels, all mine discharge water has been discharged to the TMF through PP2, and PP1 removed from the control and monitoring system. Mine discharge water is no longer released from PP1. This change has been approved by the environmental court and is anticipated to resolve all issues with elevated nitrites and TSS.

While ongoing measures are being implemented to continually reduce levels, Björkdal's long-term solution is the raising of the K1 Dam which will support degradation of nitrogen due to longer residence time and dilution. The raising of the K1 Dam was approved during 2021 (Permit No. M2945-19), and the construction programme is still underway.

During 2022, elevated levels of nitrites/nitrates were noted in the tailings seepage / run-off water due to the use of explosives. The concentrations in the water rise and fall seasonally and peaks during the winter falling off again in the spring when the thaw dilutes the water. The authorities were notified that the Mine would not be able to comply with the nitrate concentration limits stipulated. An action plan including ongoing monitoring of concentrations has been put in place to rectify the situation. High concentrations of suspended solids were noted during the Spring floods. From 2021 to 2022, the mine has reported to have successfully used large-scale flocking techniques to quickly lower the TSS in the receiving environment. During 2023, based on the remedial actions taken (including absorbent booms on the TMF), levels of nitrites/nitrates were lower than the previous year, and all target conditions were achieved in 2024. As part of the change permit in 2021, the mine will be required to provide further suggestions to the environmental authorities in 2028 to investigate levels of arsenic, uranium and ammonium. This is also a requirement for other operators in the region and does not signify a specific issue at Björkdal.

When on site in 2024, it was noted that the most pressing environmental concern relates to the lake level of a small lake (Mörttjärnen) just to the west of the open pit along with local boreholes for household supply. The mine has drilled new boreholes for the local households and continues to monitor and report the lake levels.

It is also noted by SLR that the mine has a number of positive environmental opportunities. The low-carbon grid (almost exclusively hydroelectric power) results in the mine having very low Scope 2 greenhouse gas (GHG) emissions. The majority of the GHG emissions on site (Scope 1) come from diesel powered heavy equipment such as haul trucks. Mandalay is currently investigating various decarbonisation strategies. Other positive environmental actions include selling waste rock to a local aggregate producer for use in construction (thereby decreasing waste rock generation) and studies are ongoing into possible backfilling strategies to divert tailings into existing voids instead of expanding TMFs.

20.2 Permitting

No changes have occurred to the operations in the last year that have required new permits or amendments to permits. All operations are fully permitted in accordance with Swedish environmental, health, and safety legislation. A mining concession was granted in January 2019 that covers Norrberget and is valid until January 2044; however, no environmental permit has yet been granted to commence mining. Mining of Norrberget is planned to take place in 2035.

The current environmental permit (M 771-17) was granted in December 2018 and remains valid for a period of ten years from that date for the TMF (dam construction only) and until 05 October 2067 for all other aspects of the operations (provided other permit conditions are not exceeded, such as the total quantity of tailings in the TMF). The environmental permit allows for mining and mill throughput of up to 1.7 Mtpa. The permit also allows for the continued disposal of waste rock up to a total of 91 Mt with a final height of +205.5 m, and the handling of tailings in existing and expanded tailings dams to a maximum of 47 Mt of tailings.

A building permit (M 2945-19), for the K1 Dam was granted in May 2020, with a change permit granted in July 2021. The change permit effectively replaces the building permit. The change permit application also covers the extension of the underground mine. In November 2019, Björkdal applied for designated land with the Mine inspector in support of the construction of the K1 Dam; this was approved on 4 February 2021.

Under the existing long-term water-use permit, Björkdal is permitted to use the Kåge River as a water source for the processing plant, with the allowed limit being 50 L/s (180 m^3/h). On average Björkdal withdraws approximately 44% of the maximum permitted amount of raw water. The plant uses approximately 215 m^3/h and just less than half of this is recycled from the TMF.

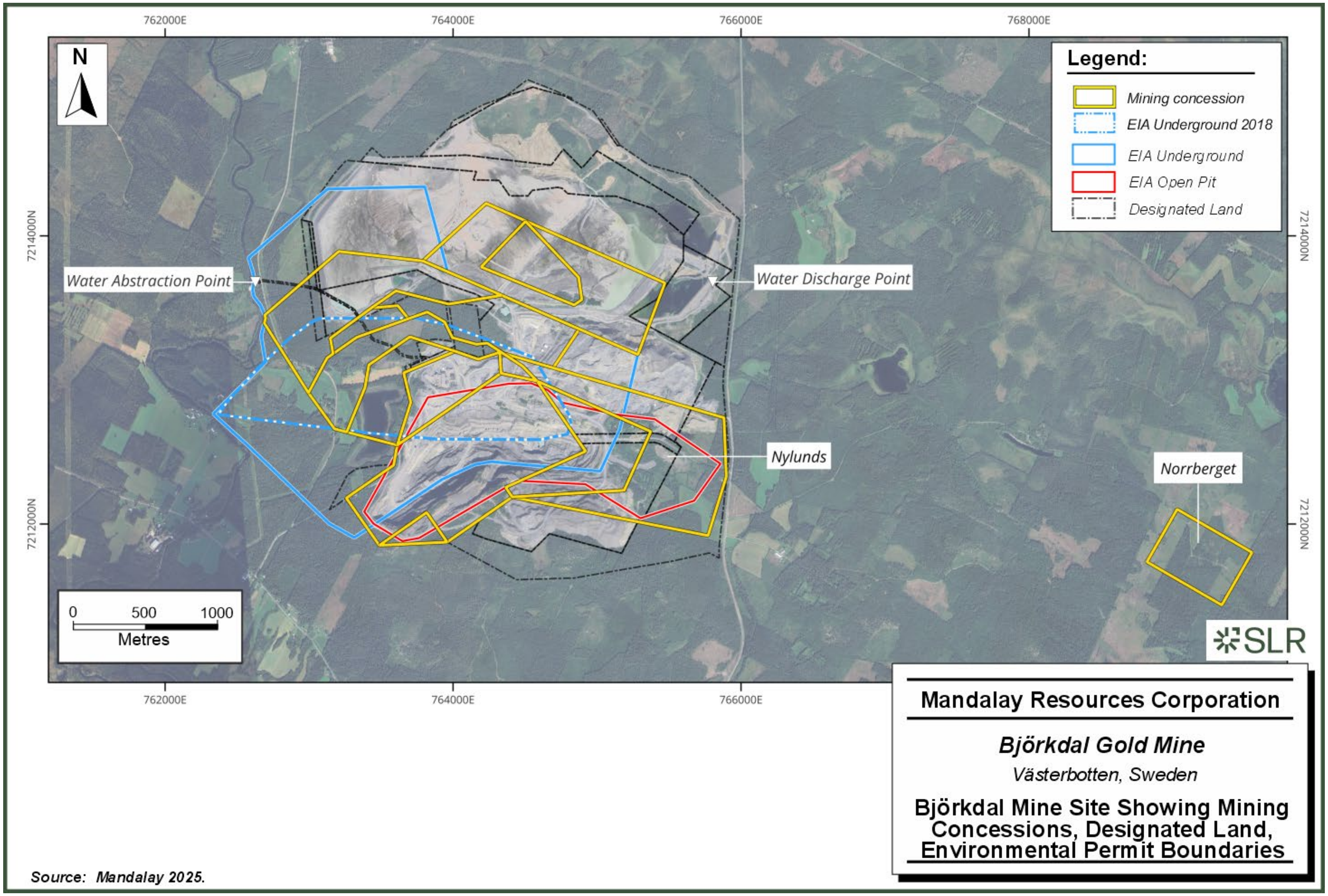
Water used at the Mine site for purposes other than the processing plant is sourced from a local bore hole.

The current permits in place for the operation are presented in Table 20-1. Figure 20-1 presents the boundaries of the mining concessions (for Björkdal and Norrberget), the land designation for industrial facilities around the mine and the environmental permit boundaries (one for the open pit operation, and two for the underground operation for tailings expansions). Mandalay has already started preparing change permit documentation for the updated TMF permits (required by 2028) including expansion of the TMF and underground mine. It was noted by site staff that the northwest extension of mining may result in the underground mine going underneath the Kåge River to the west. Further hydrogeological studies will be required to investigate to potential impacts of mining in this area.

Table 20-1: Björkdal Environmental Permits

Permits	Valid from Date	Valid to Date	Type
M 771-17	2018-12-03	2028-12-03 (for the TMF) 2067-10-05 (for other operations)	Environmental permit
M 2945-19	2021-07-15	2067-10-05	Change permit (including building permit for Dam K1, changes in management of tailings, extension of the underground mine, and changes in management of water operations)
VD DVA 9/87	1987-05-26	No expiry date	Water-use permit

Figure 20-1: Björkdal Mine Site Showing Mining Concessions, Designated Land (For Industrial Facilities), Environmental Permit Boundaries (open pit, pre-2018 underground and 2018 underground)



Source: Mandalay 2025.

20.3 Social and Community

A grievance mechanism is in place for local residents or affected persons to make complaints against the mine. Personnel at Björkdal report that there are no material issues with community impact. The main ongoing issue in the local community appears to be traffic related (namely heavy traffic and high speeds through villages). This issue was discussed during a local residents' meeting and measures were implemented by Björkdal to ensure awareness amongst its employees, permanent contractors, and other major road users.

During the third quarter of 2022, a local resident informed the Mine about low water levels in their drinking well. Since the well is within the Mine's estimated area of influence, the Company has drilled a replacement well. The Mine is located in a part of Sweden that has a long history of mining activity and mining is accepted as a socially responsible and necessary contributor to the local economy. Engagement and information sharing with nearby residents takes place on an annual basis.

The Björkdal property is located in an area where the Svaipa Sámi village (the local indigenous group) retains winter grazing rights for their reindeer herds. A compensation agreement for lost grazing land and increased operating costs for the reindeer herders was signed in April 2017. This agreement remains valid for the planned operating life of the Mine. The EIA completed in 2019 in support of the change permit application noted that no further impact on the reindeer industry was expected to arise due to the activities applied for, as no new aboveground areas would be required outside the contract area established with the Sámi village.

The Norrberget deposit is not covered by the above agreement. A new mining concession has been granted that covers Norrberget and is valid until January 2044, however, no permit has yet been granted to commence mining. Mining of Norrberget is planned to take place in 2035.

The Mine employs approximately 259 full time employees and 70 contractors and has a social development programme in place to continue to maintain its strong social licence to operate. In recent year, Björkdal has sponsored local community projects including a playground, bike trail park, snowmobiling club, meeting room and local hockey team.

20.4 Health and Safety

The management at Björkdal has a strong focus on the safety of all personnel employed at, or visiting, the operation and is committed to the following fundamental objectives:

- No personnel employed by Björkdal or its contractors, should suffer either injury or illness arising from being employed at the Björkdal site.
- All personnel, contractors, service providers, and suppliers must rate safety and the protection of the environment as core values.

Safety meetings to discuss workplace Occupational Health and Safety (OHS) issues are conducted by relevant department or contractor supervisors and presented to individual work groups. Safety meetings are held weekly and are attended by all members of the work group.

All managers and employees at Björkdal have completed a comprehensive program focussed on safety culture and improving attitudes towards safe work habits.

Other safety related initiatives being, or having been introduced since 2022 include:

- Risk assessment training for all managers and safety representatives.

- An employee bonus that is focussed on increasing risk observations and reporting (in order to prevent hazards to occur).
- A new system of pre-start for light vehicles and a campaign of pre-start checks for heavy vehicles.
- Emergency preparedness training regularly during the year.
- A project with the aim of switching from general to personal workwear.
- A local training program with different work steps has been established, where the employee studies via e-learning and takes a test in order to be approved. Work has been put in place to develop information, understanding and increase safety at the various stages. The training has been started with the underground mine.
- Communication tool for managers to workshop and lead workplace meetings.
- Continuation of the leadership training program.
- Safety training; fire emergency, risk assessment and safety rounds.
- First aid training for all employees.
- Extended first aid training for those with increased responsibilities, including driving the local ambulance and assisting the fire department in the event of a serious accident.
- Health and safety day for all employees once a year. Quarterly safety information presentations to be communicated to all employees.
- Traffic and vehicle controls on site.
- HS participates in the work carried out before and during the operational stops.
- Meetings with permanent contractors about safety.
- Safety statistics reporting at Björkdal is based on the following classifications:
  - Medical Treatment Injury Frequency Rate (MTIFR).
  - Lost Time Injury Frequency Rate (LTIFR).
  - Total Reportable Injury Frequency Rate (TRIFR).

The incident classification is presented in Table 20-2. MTIFR and LTIFR statistics for 2015 through 2023 are presented in Table 20-3.

Table 20-2: Incident Classification

Incident Classification	Statistical Grouping		
	TRIFR	MTIFR	LTIFR
First Aid	X	X	-
Medical Treatment	X	X	-
Restricted Duties	X	-	-
Lost Time	X	-	X
Fatality(s)	X	-	X

Table 20-3: Statistics for MTIFR and LTIFR

Year	MTIFR	LTIFR
2015	22.24	16.68
2016	0	12.28
2017	9.73	12.97
2018	13.91	6.94
2019	13.75	12.16
2020	16.88	2.11
2021	9.54	1.91
2022	17.73	3.94
2023	9.37	1.87
2024	2.31	6.92

The Björkdal health and safety statistics for 2024 are summarized in Table

Table 20-4: 2024 Health and Safety Statistics

Class	Value
Fatalities	0
Lost Time Incidents (LTI)	1
Restricted Work Incidents (RW)	2
Medical Treatment (MT)	5
Total Hours, Contracted Time Björkdal	386,906
Total Hours, Worked for Contractors	146,689
Total Recordable Incident Rate (TRIFR)	18.70
Medical Treatment Incident Rate (MTIFR)	12.76
Lost Time Incident Rate (LTIFR)	2.65

20.5 Mine Closure

Mine closure and reclamation plans are submitted and approved as an Annex to the Environmental Permit. The approved plan provides an overview of reclamation requirements that follow the July 2004 European Commission guidelines for Best Available Practice for the management of tailings and waste rock in mining activities.

The 2018 environmental permit included an updated closure and reclamation plan. As required, this plan was updated and submitted during autumn 2021. Thereafter, an update is required every five years or earlier if necessary. A final detailed remediation and closure plan must be submitted to the authority in good time before the activity ceases; the next update is due in 2026. To support the Change Permit approval received during 2021, an additional payment of SEK 350,000 was required and provided for by Mandalay.

The 2021 updated closure and reclamation plan shows that in during the remainder of the mine life, the reclamation costs will increase. Mandalay presently has set aside the required SEK 48.1 million (approx. US$4.3 million) in a secured reclamation account held by the Swedish authorities.

20.6 Site Visit

SLR's environmental and social QP visited site on 8 and 9 November 2024. The aim of the visit was to ensure the information provided to date was correct and inspect the facilities. The visit involved discussions with site staff – namely geologists, mining engineers, processing plant engineers, tailings specialists and environmental specialists. The visit also included a tour of the open pit mine, gold processing plant, tailings facilities and water discharge point.

During the visit, no material environmental or social issues were identified, and the SLR QP can confirm the information provided by Mandalay and summarised herein appears to be valid. It was noted that some of the now disused areas of the TMF are beginning to be naturally rehabilitated through forest encroachment.

21.0 Capital and Operating Costs

21.1 Capital Costs

21.1.1 Basis of Estimate

The Björkdal property is an on-going operation with the necessary facilities, equipment, and personnel in place to produce gold in concentrate. The basis for the LOM plan is the Proven and Probable Mineral Reserve estimate outlined in Section 15.

The majority of the capital cost estimates contained in this Technical Report are based on quantities generated from the open pit and underground development requirements and data provided by Björkdal.

The QP has reviewed the LOM and cost estimates in sufficient detail to be satisfied that economic extraction of these Proven and Probable Mineral Reserves is justified.

A summary of capital requirements anticipated over the LOM is summarized in Table 21-1.

Table 21-1: Capital Cost Summary

Description	Value (US$000)
Sustaining Capital Fixed Assets	81,400
Capital Development Underground	61,000
Pre-Strip Open Pit	81,100
Sustaining Exploration	700
Total Sustaining Capital	**224,200**
Growth Capital	2,000
Total LOM Capital Expenditure	**226,200**

21.1.2 Sustaining Capital

The sustaining capital cost estimate provides for the periodic addition of capital required to maintain the operations at its existing levels.

Sustaining capital is broadly divided between three main areas: spending on fixed assets, ongoing underground development, and open pit pre-stripping. There is also an allowance for sustaining exploration capital expenditure.

Pre-stripping costs account for the removal of approximately 30.0 Mt of open pit waste rock and overburden, while underground development includes the advancement of 18,800 m of cross-cuts and ramps to facilitate access to future mining areas. Costs are estimated based on actual cost history at Björkdal.

The fixed asset estimate includes provision for equipment replacement; maintenance of the underground ventilation, electrical distribution, and mine water management systems; equipment replacement in the process plant and the replacement of items associated with tailings disposal, water treatment, and other general items.

21.1.3 Growth Capital

The Company has indicated that the majority of the growth capital reported relates to expenses for expansion of tailing dams and exploration drilling and comes directly from the 2025 budget.

21.2 Operating Costs

21.2.1 Basis of Estimate

Detailed and all-inclusive operating cost records are maintained by Mandalay for the Björkdal Mine operations that provide an excellent basis for the estimate of future operating costs. Mandalay produced a cash flow estimate based on the budgeted costs for 2025. Actual costs for 2023 and 2024 and updated forecasts were the basis for 2025 budget costs. The majority of operating costs at Björkdal are expended in Swedish Kronor. All costs have been converted to US dollars using exchange rate assumptions of 10.35 SEK/US$.

Unit costs used to estimate LOM operating costs are summarized in Table 21-2.

Table 21-2: Unit Cost Inputs

Activity	Units	Value
Open Pit Mining	US$/t moved	3.04
Underground Mining	US$/t ore	30.47
Combined Mining	US$/t processed	20.61
Stockpile Rehandling	US$/t moved	0.65
Processing and Refining	US$/t processed	9.22
G&A	US$/t processed	8.39
Total Cost	US$/t processed	38.29

21.2.2 Life of Mine Operating Costs

SLR has used the Björkdal unit costs to estimate LOM operating costs. Average LOM plan operating costs are shown in Table 21-3.

Table 21-3: Life of Mine Operating Costs

Description	LOM (US$000)	Annual Average (US$000)	Unit Cost (US$/t processed)
Mining and Rehandle	283,030	27,613	20.68
Processing	126,160	12,308	9.22
G&A	114,800	11,200	8.39
Total Operating Cost	523,990	51,121	38.29

The LOMP has been prepared on the basis that all planned mining activities can be carried out using the existing Björkdal personnel. It is assumed that current/recent contract prices will remain unchanged for mining activities performed by a contractor such as open pit mining and underground rock haulage.

Cost inputs have been priced in real Q4 2024 dollars, without any allowance for inflation or consideration to changes in foreign exchange rates.

22.0 Economic Analysis

This section is not required as the property is currently in production, Mandalay is a producing issuer, and there is no material expansion of current production. The SLR QP has verified the economic viability of the Mineral Reserves via cash flow modelling, using the inputs discussed in this Technical Report.

23.0 Adjacent Properties

There are no adjacent properties relevant to this Technical Report.

24.0 Other Relevant Data and Information

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

25.0 Interpretation and Conclusions

The Björkdal plant has processed approximately 39.1 Mt of ore to 31 December 2024 to produce a total of approximately 1.66 Moz Au at an average feed grade of 1.49 g/t Au. Both open pit and underground mining methods have been employed on the property.

Additional gold mineralization has been outlined by exploration drilling at the nearby Norrberget and Storheden deposits, however, no gold production has taken place from those deposits as of the date of the current Technical Report.

25.1 Geology and Mineral Resources

Björkdal

- At a cut-off grade of 0.17 g/t Au, open pit Measured and Indicated Mineral Resources at Björkdal are estimated to be approximately 4.13 Mt grading 1.61 g/t Au, containing approximately 213,000 oz Au. Open pit Inferred Mineral Resources at Björkdal are estimated to be approximately 6.67 Mt grading 1.09 g/t Au, containing approximately 233,000 oz Au.
- At a cut-off grade 0.71 g/t Au, underground Measured and Indicated Mineral Resources at Björkdal are estimated to be approximately 14.9 Mt grading 2.42 g/t Au, containing approximately 1,160,000 oz Au.
- Stockpile Mineral Resources are estimated to be approximately 1.52 Mt grading 0.59 g/t Au, containing approximately 29,000 oz Au.
- Gold mineralization at the Mine occurs mostly as a large number of steeply dipping, structurally controlled narrow quartz veins that have been identified by drilling and grade control mapping and sampling for a distance of approximately 1,900 m in an east-west direction (along strike), 3,500 m in a north-south direction (across strike), and to a depth of approximately 900 m from surface.
- Ongoing exploration and grade control programs have identified the presence of a number of faults and shears present in the Mine. These programs have shown that the paragenetic relationships of these faults and shears with the gold mineralization is complex. The larger of these structures, the Björkdal shear, has been traced in the Mine from surface to a depth in excess of 500 m.
- As a result of the on-going exploration and development work carried out since 2020, the understanding of the relationship of the gold bearing mineralization with the host rocks and structural features continues to evolve. The newly acquired information suggests that Björkdal fault zone is an important structural feature that separates the host volcanics into two structural blocks. Modelling of the Björkdal fault zone suggests that it closely follows the orientation of the marble unit, and serves to truncate the upper limits of the quartz veins in the footwall structural block present in the upper portions of the Mine. In the deeper portions of the Mine, the Björkdal fault zone acts as the lower limits of the quartz veins that are hosted in the hanging wall structural block. As a result, the current view is that a significant degree of displacement may have occurred along the Björkdal fault zone that is on the order of several hundred metres in distance.
- Exploration activities carried out in 2023 and 2024 have been successful in continuing to outline mineralization in the underground mine along the eastern extensions of the

Central Zone and Main Zone vein groups. As well, a new set of veins have been identified. These are referred to as either the North Zone Below Marble or the Grenholm zone veins.

- The Björkdal open pit wireframes were based on a nominal 0.3 g/t Au cut-off grade over a minimum of 2.5 m. The underground wireframes were based on a nominal 2.5 m minimum width at a cut-off grade of 0.5 g/t Au. A total of 705 mineralized wireframe models were created for the underground mine and 446 wireframe models were created for the open pit mine.
- The dual capping value approach was continued to be used for estimation of the gold grades contained within the mineralized wireframe models in the underground mine. In this approach, the composited assays for diamond drill holes (DDH) and reverse circulation (RC) drill holes are capped to values of 60 g/t Au and 40 g/t Au. Two different area of influences are then used when estimating the block grades for each mineralized wireframe. The higher grade capped composites are used within a first pass search ellipse with a 15 m radius, while the lower grade capped composites are used for subsequent estimation passes. A single capping value of 40 g/t Au was applied to the composited samples contained within the chip sample database. A value of 30 g/t Au has been selected as the capping value for the DDH, RC, and chip samples contained within the open pit wireframes. This capping value was also applied to all samples contained within the dilution domain volume.
- All blocks that were located within a mineralization wireframe whose grades were estimated in the first estimation pass were assigned a preliminary classification of Indicated Mineral Resources. Those blocks whose grades were estimated in the second estimation pass were assigned a preliminary classification of Inferred Mineral Resources. No Measured Mineral Resources were assigned at the preliminary classification stage.
- The initial classifications within both the underground and open pit mines were reviewed and manually adjusted so as to ensure that the material in the Indicated category possessed spatial continuity that was defined by at least two drill holes.
- Those blocks located within 15 m of mine workings containing full chip/channel sample coverage were assigned to the Measured Mineral Resource category for selected veins.

Norrberget

- The primary gold mineralization at Norrberget is contained within bands of veinlets and alteration containing amphibole in a package of interbedded mafic tuffs and volcaniclastics.
- At a cut-off grade of 0.27 g/t Au, open pit Measured and Indicated Mineral Resources at the Norrberget deposit are estimated to be approximately 0.22 Mt grading 2.76 g/t Au, containing approximately 20,000 oz Au. Open pit Inferred Mineral Resources at the Norrberget deposit are estimated to be approximately 0.01 Mt grading 5.36 g/t Au, containing approximately 17,000 oz Au.
- The largest mineralization wireframe (domain Nb1) defines gold mineralization along an east-west strike length of approximately 400 m and to a depth of approximately 175 m beneath the surface. The wireframe dips gently towards the north at a dip of approximately 20º to 30º.

- Intercepts within the Norrberget mineralization wireframes were composited to 1.0 m lengths with a minimum sample length of 0.5 m. Composited samples were capped at 24 g/t Au. The low number of mineralized samples at Norrberget necessitated the use of inverse distance weighted interpolation rather than the ordinary kriging method.
- All blocks that were located within a mineralization wireframe whose grades were estimated in either the first or second estimation passes were initially assigned a preliminary classification of Indicated Mineral Resources. Those blocks whose grades were estimated in the third estimation pass were assigned a preliminary classification of Inferred Mineral Resources. Clipping polygons were applied to create a final classification that considered the drill hole spacing and the spatial continuity of the classified material.

Storheden:

- At a cut-off grade of 0.71 g/t Au, Inferred Mineral Resources at the Storheden deposit are estimated to be approximately 1.77 Mt grading 1.74 g/t Au, containing approximately 99,000 oz Au.
- Gold mineralization at the Mine occurs mostly as a large number of steeply dipping, structurally controlled narrow quartz veins that have been identified by drilling for a distance of approximately 1,000 m in an east-west direction (along strike), 1,200 m in a north-south direction (across strike), and to a depth of approximately 450 m from surface.
- The Storheden mineralization wireframes are located in close proximity to the eastern limits of the Björkdal mine and likely represent the eastward continuation of the veins outlined in hanging wall fault block in the mine. A total of 68 vein wireframe models were constructed.
- A capping value of 15 g/t Au was applied to composited samples.
- Gold grades were estimated using the Inverse Distance, Power 3 interpolation algorithm.
- All estimated blocks at the Storheden deposit were classified into the Inferred Mineral Resource category.

25.2 Mining and Mineral Reserves

- At a cut-off grade of 0.20 g/t Au, open pit Probable Mineral Reserves at Björkdal are estimated to be approximately 5.33 Mt grading 1.05 g/t Au, containing 180,000 oz Au.
- At a cut-off grade 0.85 g/t Au for stopes and incremental cut-off grade of 0.20 g/t Au for development material, underground Proven and Probable Mineral Reserves at Björkdal are estimated to be approximately 6.68 Mt grading 1.58 g/t Au, containing 340,000 oz Au.
- At Norrberget, there are estimated to be 161,000 tonnes of Probable Mineral Reserves at a grade of 2.72 g/t Au for a total of approximately 14,000 oz Au.
- Stockpile Mineral Reserves are estimated to be approximately 1.52 Mt grading 0.59 g/t Au, containing 29,000 oz Au, at a cut-off grade of 0.20 g/t Au.
- The underground Mineral Reserves at Björkdal are based on a minimum mining width of 3.1 m inclusive of dilution. This comprises a 2.5 m baseline minimum mining width,

inclusive of 0.25 m on both hanging wall and footwall, plus an additional 25% dilution to align with recent reconciliation data.

- The current Mineral Reserves for Björkdal support a mine life of over nine years at a production rate of approximately 1.4 Mtpa. Gold production averages approximately 57,000 oz per year over the next nine years. During the final 15 months, 48,000 oz are forecast to be produced. A number of opportunities that could further extend the mine life exist including:
  - Continue upgrading Inferred Mineral Resources to Indicated Mineral Resources, especially at depth to the north and at Storheden.
- The underground mine is scheduled to produce approximately 1,039,000 tonnes of run-of-mine ore during 2025 and an average of approximately 759,000 tonnes of ore over the following seven years. Underground production will reduce and end in year eight (2033) of the current LOM.
- The Björkdal open pit mining operation was suspended in July 2019 and is now scheduled to recommence in 2027. Mining will commence simultaneously in the Main and satellite pits on the periphery of the Main Pit.
- The current mine plan includes the recovery of the crown pillar from the main open pit during the final years of mining. This pillar contains infrastructure servicing the underground operations that will be disrupted by mining of the crown pillar. It also contains a large number of voids from previous underground mining that may cause some operational issues during mining and potentially some high wall stability concerns.
- Mining of the crown pillar and main open pit area will commence with moraine and loose waste rock removal in 2027.
- A PFS, conducted during 2024, showed that there are other, more cost-effective methods of retaining existing in-pit underground access than relocating the existing portals and declines, in order to allow the crown pillar to be mined in parallel with underground options.
- The open pit mining operation will make use of contractors for most of the mining activities. The SLR QP considers that there may be an opportunity to reduce open pit operating costs by converting to a mine-owned fleet when the open pit operation restarts in 2027.
- The low grade stockpile will be used to provide the additional ore needed to allow the mill to operate at full capacity each year. However, this stockpiled material will be fully consumed by 2032 and, all mill feed will be sourced directly from the Björkdal and Norrberget open pits during the final two and a half years of production.
- Due to the variable quality of the material that comprises the low grade stockpiles, grade variations in the planned mill feed are anticipated.
- Structural features such as folding and their impact on metal distribution are still not well understood in some areas which makes accurate forecasting of grade, dilution, and mining losses a challenge. The QP is of the opinion that some variation from planned, in the short term, is an inevitable consequence of the complexity of the orebody. As a result, historical dilution and recovery reconciliation data is heavily relied upon for mine planning.

- Mining method and stope design is driven primarily by geotechnical considerations. SLR considers it essential that continued attention be given to local and regional rock mechanics issues during future mine design as underground stresses are redistributed. There may however be some opportunities in areas of very competent ground to save costs through reduction in the use of shotcrete.
- The nature of the mining method is such that development ore will always represent a significant proportion of the underground tonnage production (approximately 38% from actual 2024 production figures).
- Detailed reconciliation comparing design to actual mined tonnes (using CMS) and grade from all stopes, is routinely carried out and stope closure notes (reconciliation reports) produced for each stope once mined out. Year end 2024 reconciliation results indicate that diluted stope ore tonnage was under-estimated by approximately 9% and gold content was under-estimated by approximately 19%. Historical reconciliation indicates that dilution averages approximately 30% underground. This is consistent with the slightly more optimistic factors used in the mine design and planning.
- As presently planned, mining of the Norrberget open pit will be carried out by the same contractor employed in the future at the Björkdal open pit. The total mine life for Norrberget is estimated to be approximately twelve months.

25.3 Processing

- Björkdal has been consistently successful in recovering approximately 88% of the gold, with approximately 68% to 75% of the gold recovered in gravity concentrates (i.e., gravity concentrate, middlings, and Knelson concentrate), and an additional 14% to 20% of the gold recovered in flotation concentrates.
- Preliminary metallurgical tests using samples from Norrberget show that the mineralogy is more complex, and the gold grain sizes are smaller, which requires a finer grind size to achieve liberation. Since the deposit is small, it is not anticipated that modifications to the existing processing plant will be cost effective. Therefore, the data indicates that the average gold recovery for Norrberget will be approximately 75%.
- Historical operating data and the plant performance indicates that the process plant will continue to produce gold concentrates as per the budgets
- The mill operating mode has been changed from overflow to grate discharge, the plant continues to operate in a consistent manner following the modifications.
- The process plant is appropriately staffed with qualified professionals. The metallurgical accounting and the plant operation has been handled systematically by the process plant team over the past years,

25.4 Environmental, Permitting, and Social or Community Considerations

- A new operating permit was granted in December 2018 and remains valid for the TMF (dam and related water discharge) for ten years and until 5 October 2067 for all other aspects of the operations. The environmental permit allows for mining and a mill throughput of 1.7 Mtpa.

- During 2019, an adjustment was submitted to the environmental permit that was approved in July 2021 which included an increased underground mining permit area and changes in the construction of the K1 tailings dam.
- The quality of tailings seepage / run-off water remains an area of focus with ongoing measures being implemented to continually reduce levels together with continuous monitoring and engagement with the Swedish authorities.
- A compensation agreement for lost grazing land and increased operating costs for the reindeer herders was signed with the Sámi community of Svaipa in April 2017. This agreement is valid for the planned operating life of the Björkdal Mine.
- The Norrberget deposit is not covered by the aforementioned agreement. A new mining concession has been granted that covers Norrberget and is valid until January 2044; however, Norrberget has yet to be granted an environmental permit. Mining of Norrberget is planned to take place during 2035. Prior to this, an EIA/MKB is required to be completed for the environmental permit, which may require up to four years to complete.
- The 2018 environmental permit includes a fully funded, closure and reclamation plan. A reclamation account is in place and held by the Swedish authorities. To support the Change permit approval received during 2021, additional funds were required and provided for by Mandalay.

25.5 Risks

- The Mine has been in production for over 36 years and is a mature operation. In the QPs' opinion, there are no significant risks or uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information, Mineral Resource or Mineral Reserve estimates, or projected economic outcomes.
- Mining of Norrberget requires an environmental permit, which may involve up to four years to prepare an EIA, apply for the permit, stakeholder consultation and approval. This process should be started several years prior to planned commencement of operation to ensure there are no operational delays to mining.

26.0 Recommendations

SLR presents the following recommendations:

26.1 Geology and Mineral Resources

1. Carry out further exploration drilling to search for the eastern limits of the Storheden vein system.
2. Carry out in-fill drilling to upgrade the confidence category of the Storheden deposit.
3. Consider attempting to map the paleotemperature regime, the fluid paths of the Björkdal hydrothermal system, and the use of metal associations as vectoring tools. Potential tools available are listed:
    a) mineral chemistry studies on such tracer minerals as epidote, apatite, zircon, and others,
    b) use of chlorite geothermometer to map out the paleotemperatures,
    c) oxygen-hydrogen isotope values to estimate the water-rock ratios,
    d) whole-core hyperspectral imagery to map out alteration signatures,
    e) Raman spectroscopy on carbonates to map out temperature variations,
    f) whole rock geochemistry within the skarn alteration zones to search for trace metal indicators,
    g) trace metal assays within the basalt-hosted veins to examine the utility of background tellurium or bismuth values as vectors to gold mineralization, and
    h) use of laser ablation – inductively coupled mass spectroscopy studies on pyrite to examine the utility of trace metal concentrations as potential vectoring tools.
4. Complete additional drilling be completed to search for the strike and depth extensions of the gold mineralization found at the Norrberget deposit.
5. Carry out in-fill drilling at the Norrberget deposit to upgrade the confidence category of those portions of the deposit currently classified in the Inferred Mineral Resource category to the Indicated Mineral Resource category.
6. Collect bulk density measurements for the Storheden deposit either on existing remaining drill core, or from samples collected from any future drilling campaigns.

26.2 Mining and Mineral Reserves

1. Continue ongoing reconciliation and production management work to improve future grade and dilution forecasts.
2. Continue to regularly review the underground support requirements in line with the recent 2023 ITASCA study and report. Potential may exist for some cost savings in areas of more competent ground through the reduction in the use of shotcrete.
3. Continue to evaluate whether identification and cable anchoring of weaker areas in the hanging wall and crowns of stopes could result in better control of stope dilution.

26.3 Mineral Processing

1. Continue to monitor the performance of all unit operations and to optimise plant performance to achieve the highest economic outcome possible.
2. Continue to evaluate historical data and to use the results to estimate future plant gold recovery and operating costs.
3. In future metallurgical tests for Norrberget, use variability samples with a range of head grades from throughout the deposit, using test conditions that evaluate what the metallurgical response will be in the existing processing facility.
4. Collect regular samples from mill feed and cross check the assayed head grades against the back calculated head grades (from the data from tail sample assays).

26.4 Environmental, Permitting, and Social

1. Commence EIA preparation for Norrberget well in advance to ensure no operational delays for planned 2035 start.
2. Continue to investigate initiatives discussed in the 2023 ESG report, including decarbonisation initiatives to reduce greenhouse gases (GHG) and tailings backfilling.

27.0 References

Allen R.L., Wiehed, P., Svenson A.S. 1997. Setting of Zn-Cu-Au-Ag Massive Sulfide Deposits in the Evolution and Facies Architecture of a 1.9 Ga Marine Volcanic Are, Skellefte District, Sweden. Economic Geology. Vol. 91, pp. 1022-1053

Billström, K., Broman, C., Jonsson, E., Recio, C., Boyce, A.J., Torssander, P. 2009. Geochronological, stable isotopes and fluid inclusion constraints for a premetamorphic development of the intrusive-hosted Björkdal Au deposit, northern Sweden. International Journal of Earth Sciences (Geol Rundsch) Vol. 98, pp.1027–1052

Billström, K., Mattson, B., Söderlund, U., Årebäck, H., Broman, C. 2012. Geology and Age Constraints on the Origin of the Intrusion-Related, Sheeted Vein-Type Åkerberg Gold Deposit, Skellefte District, Sweden. Minerals Vol. 2, pp. 385–416.

CIM. 2014. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves, adopted by the CIM Council on May 10, 2014.

CIM. 2019. CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines, adopted by the CIM Council on November 29, 2019.

Clauson, L. Å. 1985. The geochemistry of Early Proterozoic metavolcanic rocks hosting massive sulphide deposits in the Skellefteå district, northern Sweden. Geological Society of London Journal Vol. 142, pp. 899-909.

Claesson, S. and Lundqvist, T. 1995. Origins and ages of Proterozoic granitoids in the Bothnian Basin, central Sweden; isotopic and geochemical constraints. Lithos. 1995 Nov 30;36(2):115-40.

Di Giovinazzo, M. 2016. Björkdal Slope Design Review – Draft, a report by SRK Consulting, August 2016.

Di Giovinazzo, M. 2017. Norrberget PFS Geotechnical Assessment, a report by SRK Consulting, December 2017.

Elgin Mining Inc. 2013. NI 43-101 Technical Report on the Mineral Resource and Mineral Reserve Estimation for the Björkdal Gold Mine, Sweden, prepared by Wardell Armstrong International (August 28, 2013).

Geosyntec Consultants. 2021. Environmental Impact Assessment - Processing Concession Björkdalsgruvan Kvarnforsliden K Nr 2, 2021-12-20 Final.

Golder Associates AB. 2019, Björkdalsgruvan AB Miljökonsekvensbeskrivning (Environmental Impact Assessment).

Gold-Ore Resources Ltd. 2009. Gold-Ore Reports Resource/Reserve Statement for Björkdal Gold Mine, Gold Ore Press Release October 28, 2009.

Gold-Ore Resources Ltd. 2010. NI 43-101 Technical Report on the Björkdal Gold Mine, Sweden, prepared by Wardell Armstrong International (March 26, 2010).

Gold-Ore Resources Ltd. 2012. NI 43-101 Technical Report on the Mineral Resource and Mineral Reserve Estimation for the Björkdal Gold Mine, Sweden for Elgin Mining Inc. (March 30, 2012)

Goodmans LLP. 2014. Elgin Mining Inc., Gold-Ore Resources Ltd., Björkdalsgruvan Aktiebolag and Björkdal Exploration AB (July 31, 2014).

Grimstad, E. and Barton, N. 1993. Updating of the Q-system for NMT: International Symposium on Sprayed Concrete.

Hoek, E. and Karzulovic, A. 2001. Rock Mass Properties for Surface Mines. In Slope Stability in Surface Mining (eds. W. A. Hustrulid, M. K. McCarter, D.J.A. Van Zyl), Chapter 6, pp. 59-69. Littleton: Society for Mining, Metallurgy, and Exploration, Inc. (SME).

Joint Ore Reserve Committee (JORC), 2012. Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code), effective 20 December 2012.

Kathol, B. and Weihed, P. 2005. Description of regional geological and geophysical maps of the Skellefte District and surrounding areas: Sveriges Geologiska Undersökning.

Kautsky, G. 1957. Ein beitrag zur Stratigraphie und dem Bau des Skelleftefeldes, Nordschweden. Generalstabens Litogr. Anstalts Förlag.

Lindfors, Ulf. June 2011. Vattenfall Power Consultant, Letter of Inspection.

Lundberg, B. 1980. Aspects of the geology of the field, northern Sweden Geologiska Foreningens I Stockholm Fordhandlinger. Vol. 102, pp. 156-166.

Lundström, I. and Antal, I. 2000. Bedrock map 23K Boliden, scale 1: 50 000. Sveriges Geologiska Undersökning, Ai. 2000:110-3.

Mandalay. 2018. Mandalay Resources Corporation Announces Further High-Grade Intercepts at Youle (Costerfield) and the Discovery of the Aurora Zone at Björkdal: News release available on the Mandalay Resources website at https://www.mandalayresources.com/wp-content/uploads/2018/01/MND_Nov_14_2018.pdf, 10 p.

Mandalay. 2020a. Mandalay Resources Corporation Continues to Deliver Positive Exploration Results at its Costerfield and Björkdal Operations: News release available on the Mandalay Resources website at https://www.mandalayresources.com/wp-content/uploads/2020/01/2020-01-14-MND_Janurary_2020_Exploration-Update_Final.pdf , 19 p.

Mandalay. 2020b. Mandalay Resources Corporation Announces Recent Drilling Results for Aurora (Björkdal), Highlighting high-Grade Extensions to both the East and at Depth: News release available on the Mandalay Resources website at https://www.mandalayresources.com/site/assets/files/2990/2020_11_24_aurora_release_final.pdf , 8 p.

Mandalay. 2021. Annual environmental report.

Mandalay. 2022c. Quarterly report Björkdalsgruvan, January – Mar 2022.

Mandalay. 2022d. Quarterly report Björkdalsgruvan, April – June 2022.

Mandalay. 2022e. Quarterly report Björkdalsgruvan, July – Sept 2022.

Mandalay. 2023a. Mandalay Resources Reports Encouraging Near-Mine Exploration Results From The Eastern Extension and North Zone Drilling Programs: News release available on the Mandalay Resources website at https://mandalayresources.com/site/assets/files/3602/2023_07_18_eastern_ext_and_north_zone.pdf .

Mandalay. 2023b. Mandalay Resources Corporation Continues to Produce Excellent Results from its Björkdal Eastward Mine Extension Drilling and Reports on Successful Aurora

Extension Drilling Program: News release available on the Mandalay Resources website at 2023_02_22_eastern_extension_and_aurora_update.pdf (mandalayresources.com), 10 p.

Mandalay. 2024a. Mandalay Successfully Depth Tests the Björkdal Norrberget Gold Deposit Intercepting 13.3 g/t Au Gold Over 5.5 Metres: News release available on the Mandalay Resources website at https://mandalayresources.com/site/assets/files/3706/2024_05_bjorkdal_norrberget_release_final.pdf .

Mandalay. 2024b. Mandalay Extends the Storheden Gold Deposit Adjacent to the Operating Björkdal Mine: News release available on the Mandalay Resources website at https://mandalayresources.com/site/assets/files/3695/2024_04_bjorkdal_storheden_release_final.pdf .

Mandalay. 2024c. Mandalay Intercepts Gold at Two Highly Prospective Targets Near the Björkdal Mine, Sweden: News release available on the Mandalay Resources website at https://mandalayresources.com/site/assets/files/3750/2024_06_bjorkdal_sw_prospects_release_final.pdf .

Mercier-Langevin, P., McNicoll, V., Allen, R.L., Blight, J.H.S., and Dube, B. 2013. The Boliden gold-rich volcanogenic massive sulphide deposit, Skellefte district, Sweden: new U-Pb age constraints and implications at deposit and district scale. Miner Deposita 48:485-504.

Mining Plus Pty Ltd, 2022. Mandalay Resources – Björkdal Property NI43-101 Technical Report; Report prepared by Fowler, A., Spong, A., Field, M., Stinton, C., Fowler, A, Pressacco, R., Taylor, R., and Altman, K., for Mandalay Resources Corporation and available on the SEDAR website at www.SEDAR.com, 238 p.

RPA (Roscoe Postle Associates Inc.). 2015. Technical Report on the Björkdal Gold Mine, Sweden; Unpublished report prepared by Blakley I.T., and Healy, T.H.A., for Mandalay Resources Corporation and available on the SEDAR website at www.SEDAR.com, 200 p.

RPA. 2017. Technical Report on the Björkdal Gold Mine, Sweden; Unpublished report prepared by Pressacco, R., Cox, J.J., Robson, D., Weir., and Altman, K.A., for Mandalay Resources Corporation and available on the SEDAR website at www.SEDAR.com, 227 p.

RPA. 2018. Technical Report on the Björkdal Gold Mine, Sweden; Unpublished report prepared by Pressacco, R., Lunnon, J., Smith, D. J. F., Robson, D., Weir., I., and Altman, K.A., for Mandalay Resources Corporation and available on the SEDAR website at www.SEDAR.com, 267 p.

RPA. 2019, Technical Report on the Björkdal Gold Mine, Sweden; Unpublished report prepared by Pressacco, R., Lunnon, J., Smith, D. J. F., Holm, D., Weir., I., and Altman, K.A., for Mandalay Resources Corporation and available on the SEDAR website at www.SEDAR.com, 263 p.

RPA. 2020, Technical Report on the Björkdal Gold Mine, Sweden; Report prepared by Pressacco, R., Lunnon, J., Smith, D. J. F., Holm, D., Weir., I., and Altman, K.A., for Mandalay Resources Corporation and available on the SEDAR website at www.SEDAR.com, 268 p.

Saiang, D. 2012. Inter-Ramp Slope Stability Analysis for Björkdal, a report by SRK Consulting, October 2012.

SLR (SLR Consulting (Canada) Ltd.). 2021. Technical Report on the Björkdal Gold Mine, Sweden; Report prepared by Pressacco, R., Taylor, R.C., Altman, K.A., and, Pheiffer, A., for Mandalay Resources Corporation and available on the SEDAR website at www.SEDAR.com, 244 p.

SLR. 2023. Technical Report on the Björkdal Gold Mine, Sweden. Report prepared for Mandalay Resources Corporation and available on the SEDAR+ website. March 31, 2023. 271 p.

Sveriges Geologiska Undersökning. 2007. Unofficial translation of “Minerallagen” SFS 1991:45 and “Mineralförordningen” SFS 1992:285. May 23, 2007.

Tyrens Group. 2009. Tillståndsansökan Björkdalsgruvan Bilaga G Miljökonsekvensbeskrivning (Environmental Impact Assessment).

Weihed, P., Weihed, J.B., and Sorjonen-Ward, P. 2003. Structural evolution of the Björkdal gold deposit, Skellefte district, northern Sweden: Implications for early Proterozoic mesothermal gold in the late stage of the Svecokarelian orogen. Economic Geology Vol. 98, pp. 1291–1309.

Wilson, M.R., Sehlstedt, S., Claesson, L. A., Smellie, J.A., Aftalion, M., Hamilton, P.J., and Fallick, A.E. 1987. Jörn, an early Proterozoic intrusive complex in a volcanic-arc environment, north Sweden. Precambrian Research Vol. 36, 201–225.

UMEA District Court, Land and Environment Court. 2022. Application for amendment of financial security conditions for the execution of restoration measures at Björkdalsgruvan in Skellefteå municipality. Case No. M 389-22.

28.0 Date and Signature Date

This report titled "NI 43-101 Technical Report, Björkdal Gold Mine, Sweden" with an effective date of 31 December 2024 was prepared and signed by the following authors:

(Signed and Sealed) ***Reno Pressacco***

Dated at Toronto, ON 28 March 2025	Reno Pressacco, M.Sc.(A), P.Geo., FGC Associate Principal Geologist

(Signed and Sealed) ***Richard C. Taylor***

Dated at Exeter, UK 28 March 2025	Richard C. Taylor, MAusIMM, CP Principal Mining Engineer

(Signed and Sealed) ***Arunasalam Vathavooran***

Dated at Bristol, UK 28 March 2025	Arunasalam Vathavooran, Ph.D., CEng, FIMMM Consulting Metallurgist and Process Engineer

(Signed & Sealed) ***Ben Lepley***

Dated at Cardiff, UK 28 March 2025	Ben Lepley, MESci, CGeol, MIMMM Mining ESG Consultant

29.0 Certificate of Qualified Person

29.1 Reno Pressacco

I, Reno Pressacco, M.Sc.(A)., P.Geo., FGC, as an author of this report entitled titled "NI 43-101 Technical Report, Björkdal Gold Mine, Sweden" with an effective date of 31 December 2024, prepared for Mandalay Resources Corporation and dated 28 March 2025, do hereby certify that:

1. I am an Associate Principal Geologist with SLR Consulting (Canada) Ltd, of Suite 501, 55 University Ave., Toronto, ON, M5J 2H7.
2. I am a graduate of Cambrian College of Applied Arts and Technology, Sudbury, Ontario, in 1982 with a CET Diploma in Geological Technology, Lake Superior State College, Sault Ste. Marie, Michigan, in 1984, with a B.Sc. degree in Geology and McGill University, Montreal, Québec, in 1986 with a M.Sc.(A) degree in Mineral Exploration.
3. I am registered as a Professional Geologist in the Province of Ontario (Reg. #939). I have worked as a geologist for a total of 39 years since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Review and report as a consultant on numerous exploration and mining projects around the world for due diligence and regulatory requirements, including preparation of Mineral Resource estimates and NI 43-101 Technical Reports.
    - Numerous assignments in North, Central and South America, Europe, Russia, Armenia and China for a variety of deposit types and in a variety of geological environments; commodities including Au, Ag, Cu, Zn, Pb, Ni, Mo, U, PGM, REE, and industrial minerals.
    - Vice president positions with Canadian mining companies.
    - A senior position with an international consulting firm, and
    - Performing as an exploration, development, and production stage geologist for a number of Canadian mining companies.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the Björkdal Gold Mine on September 20 to 22, 2016; November 18 to 21, 2019; and most recently on November 8 and 9, 2022.
6. I am responsible for Sections 4 through 12, 14.1, 14.2.1 to 14.2.11, 14.2.13 to 14.2.15, 14.3.1 to 14.3.9, 14.3.11 to 14.3.13, 14.4.1 to 14.4.9, 14.4.11 to 14.4.13, 23, and 24, and relevant disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have previously prepared public domain Mineral Resource estimates for the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections of the Technical Report for which I am responsible contain all scientific

and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 28th day of March, 2025,

(Signed and Sealed) ***Reno Pressacco***

Reno Pressacco, M.Sc.(A)., P.Geo.

29.2 Richard C. Taylor

I, Richard C. Taylor, MAusIMM, CP, as an author of this report entitled titled "NI 43-101 Technical Report, Björkdal Gold Mine, Sweden" with an effective date of 31 December 2024, prepared for Mandalay Resources Corporation and dated 28 March 2025, do hereby certify that:

1. I am an Associate Principal Mining Engineer with SLR Consulting Ltd, Broadwalk House, Southernhay West, Exeter, Devon, United Kingdom EX1 1GE.
2. I am a graduate of North Staffordshire Polytechnic in 1987 with a B.Eng. degree in mining engineering.
3. I am registered as a Chartered Professional in Australia with the AusIMM (Reg.# 222470). I have worked as a mining engineer for a total of 37 years since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Review and report as a consultant on many mining operations and projects globally for feasibility study, due diligence, and regulatory requirements, including preparation of Mineral Reserve estimates and NI 43-101 Technical Reports.
    - Operational experience as Senior Planning Engineer, and Technical Services Manager at six mines in South Africa, Australia, Central Asia, and UK, both open pit and underground.
    - Manager at three mining consultant companies in South Africa and Australia
    - Planning and operational experience in coal, gold, copper, nickel, diamonds, tungsten and PGMs.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I last visited the Björkdal Gold Mine on November 8 and 9, 2022.
6. I am responsible for Sections 14.2.12, 14.3.10, 14.4.10, 15, 16, 18, 19, 21, and 22, and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have previously prepared public domain Mineral Reserve estimates for the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 28th day of March, 2025.

(Signed and Sealed) ***Richard C. Taylor***

Richard C. Taylor, MAusIMM, CP

29.3 Arunasalam Vathavooran

I, Arunasalam Vathavooran, Ph.D., CEng, FIMMM, as an author of this report entitled titled "NI 43-101 Technical Report, Björkdal Gold Mine, Sweden" with an effective date of 31 December 2024, prepared for Mandalay Resources Corporation and dated 28 March 2025, do hereby certify that:

1. I am Consulting Metallurgist and Process Engineer with SLR Consulting Ltd, of Brew House, Jacob Street, Tower Hill, Bristol, BS2 0EQ, UK.
2. I am a graduate of the University of Moratuwa, Sri Lanka in 2001 with a BSc.Eng. in Mining and Minerals Engineering and the University of Nottingham, UK in 2006 with a Ph.D. degree in Mineral Processing.
3. I am registered as a Chartered Engineer in the UK with the Engineering Council (Reg. #579205) and am a Professional Member of the Institute of Materials, Minerals and Mining (Membership #444570). I have worked as a mineral process engineer / metallurgist for a total of 21 years since my BSc Eng. graduation. My relevant experience for the purpose of the Technical Report is:
    - Numerous consulting assignments, including feasibility and pre-feasibility studies, Competent Person's reports, NI 43-101 Technical Reports, audits, and due diligence for financial institutions.
    - Extensive experience in various commodities, including gold, silver, zinc, copper, tungsten, coal, iron, phosphate, potassium, niobium, manganese, tantalum, titanium, and vanadium.
    - Design, supervision, and management of mineral processing and hydrometallurgical test work programmes
    - Conceptual process plant designs for gold, silver, and base metal projects
    - Simulation, analysis, and debottlenecking of mineral processing flowsheets, mass balance-based steady state simulations
    - Equipment sizing, selection, and plant cost estimation
    - Senior Metallurgist with a large multinational consulting and engineering firm
    - Senior Metallurgist with a renowned company specializing in the development and application of advanced technologies for mineral processing and environmental industries.
    - Research engineer with various universities and centres in Sri Lanka, the UK, and the USA
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the Björkdal Gold Mine on 20 November 2024.
6. I am responsible for Sections 13 and 17 and related disclosure in sections 1, 25, 26, and 27 of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have had no prior involvement with the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form43-101F1.
10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections in the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 28th day of March, 2025.

(Signed and Sealed) ***Arunasalam Vathavooran***

Arunasalam Vathavooran, Ph.D., CEng, FIMMM

29.4 Ben Lepley

I, Ben Lepley, MESci, CGeol, MIMMM, a as an author of this report entitled titled "NI 43-101 Technical Report, Björkdal Gold Mine, Sweden" with an effective date of 31 December 2024, prepared for Mandalay Resources Corporation and dated 28 March 2025, do hereby certify that:

1 I am a Senior Mining ESG Consultant with SLR Consulting Limited, of Ground Floor, Helmont House, Churchill Way, Cardiff, UK CF10 2HE.

2 I am a graduate of Cardiff University in 2008 with a First Class Honours Masters degree in Geology (MESci).

3 I am registered as a Chartered Geologist by the Geological Society of London (CGeol, No. 1016813) and a Member of the Institute of Materials, Minerals and Mining (MIMMM, No. 680289). I have worked as a geologist for a total of 12 years and as an ESG consultant for 4 years since my graduation. My relevant experience for the purpose of the Technical Report is environmental, social and permitting:

   a) Author and reviewer as an ESG consultant on many mining operations and projects globally for technical studies and due diligence commissions.

   b) ISO14001 environmental management system auditor qualified.

   c) Towards Sustainable Mining (TSM) of Canada, certified verifier

4 I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5 I visited the Björkdal Project on 20 November 2024.

6 I am responsible for Section 20 and related disclosure in Sections 1, 25, 26, and 27 of the Technical Report.

7 I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8 I have had no prior involvement with the property that is the subject of the Technical Report.

9 I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10 At the effective date of the Technical Report, to the best of my knowledge, information, and belief, t the sections in the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 28th day of March, 2025.

(Signed and Sealed) ***Benjamin Lepley***

Benjamin Lepley, MESci, CGeol, MIMMM

Making Sustainability Happen