



## **NORRLIDEN PROJECT SUCCESSFUL FIRST YEAR, PHASE 1 COMPLETION MANDALAY AND MRG REACH AGREEMENT TO EXPLORE OPPORTUNITIES FOR SALE OF ASSET**

- MRG successfully completes Phase 1, reaching 1<sup>st</sup> earn-in milestone of US\$500,000 expenditure to earn 10% of the Norrliden Project.
- Phase 1 work produced a Mineral Resource Estimate (MRE) of the Norra and Bjurfors deposits and a first pass study of the potential economic viability of their development.
- The first pass study produced a potentially economic estimated net profit of US\$111 M for the Norra deposit and US\$2.4M for the Bjurfors deposit.
- Phase 2 Exploration will see MRG earn to 25% with expenditure of US\$500,000 (cumulative US\$1,000,000).
- MRG is now developing an extensive exploration plan designed for Phase 2 Exploration to grow the current global resource base of 5.2Mt @ 2.1% Zn, 0.4% Cu, 0.2% Pb, 0.3 g/t Au, 29 g/t Ag<sup>1</sup>.
- Program to comprise follow up of promising Södra drilling in Phase 1, including 8m @ 2.3g/t Au, 130 g/t Ag, 0.46% Zn and 0.21% Pb from 57m in drillhole NOR17001.
- Mandalay and MRG are exploring opportunities for the sale of the asset that recognises MRG's right to earn up to 50% equity under the JV agreement.

MRG Metals Limited ("MRG" or "Company") is pleased to provide an update on the farm-in status of the Norrliden Project including a summary of the results achieved to date and the plans for the next phase of exploration at the project which is located in northern Sweden.

### **Earn-In Milestones**

In May 2017, MRG entered into a Farm in and Joint venture agreement with Mandalay Resources Corporation (Mandalay) at the Norrliden Project located in northern Sweden. The Farm-In Agreement is a staged agreement with MRG earning:

- 10% Earn-In after US\$500,000 sole expenditure within 15 months
- 25% Earn-In after cumulative US\$1,000,000 sole expenditure within 27 months
- 50% Earn-In after cumulative US\$3,000,000 sole expenditure within 39 months
- JV structure to commence after 50% Earn-In is reached

MRG has now completed >US\$500,000 exploration expenditure across the Norrliden Project and has earned 10% earn-in in the project. MRG Chairman Mr. Andrew Van Der Zwan commented "Reaching this first milestone at Norrliden on time and on budget is good and very satisfying that we have achieved a number of very good results during the past year. These results have significantly increased the value of the project as well as generating a number of exciting new exploration targets that will form part of the second phase of the earn-in agreement at Norrliden."

### **Sales Process**

Mandalay has advised the Company that it has commenced a sales process for the Norrliden Project. MRG is cooperating and assisting Mandalay with this process while continuing the preparation of plans for Phase 2 Exploration, a summary of which follows below.

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<sup>1</sup> Please refer to ASX Announcement dated 13<sup>th</sup> of July 2018.

## Summary of Phase 1 Exploration

- **Diamond Drilling**

MRG completed a total of 688m (effective metres) of diamond drilling across both Norra and Södra in 2017. Whilst the drilling was plagued with technical issues including severe hole deviation and mechanical breakdown a number of encouraging results were also received.

The drilling at Södra was designed to follow-up surface mineralisation confirmed through rock-chip sampling and also to follow-up a historical EM conductor and a prominent magnetic anomaly. A total of three diamond drill holes were successfully completed and all three holes intercepted zones of disseminated and banded sulphide mineralisation (pyrrhotite-pyrite-sphalerite-galena-arsenopyrite) within dominantly sericite-silica altered felsic-intermediate volcanoclastic rocks. Significant intercepts included<sup>2</sup>:

- NOR17001: 20m @ 1.0g/t Au, 55.3g/t Ag, 0.74% Zn and 0.22% Pb (from 45m) Including:  
8m @ 2.3g/t Au, 130 g/t Ag, 0.46% Zn and 0.21% Pb (from 45m)  
8m @ 1.2% Zn, 0.24% Pb, 0.14 g/t Au and 4.6 g/t Ag (from 57m)
- NOR17006: 9m @ 0.31g/t Au, 1.88g/t Ag, 0.23 % Zn and 0.06% Pb (from 58m) Including:  
3m @ 0.88g/t Au, 4.40g/t Ag, 0.23% Zn and 0.14% Pb (from 58m)
- NOR17003: 26.6m @ 2110ppm Zn, 299ppm Pb, 1.62g/t Ag and 0.03g/t Au from 101.4m.

The mineralisation at Södra has been identified over a strike distance of approximately 150m and remains open at depth and along strike in both directions.

The initial drill plans for Norra comprised a 345m deep hole with a 150-170m daughter hole wedged off the main hole. These holes were designed to confirm the intersection of Au-Ag-Cu mineralisation in historical drilling down-dip of the main Norra resource and to test the continuation of this mineralisation at depth. It was also planned to complete DHEM from the deeper hole. Three separate attempts were made to drill these holes at Norra in 2017 but all were unsuccessful due to drilling related issues namely extreme drillhole lift. Mechanical failure of the rig meant that hole NOR17009 was stopped at 158m but this hole will be re-entered once drilling recommences at the project again.

- **DHEM**

NOR17001 and NOR17003 were both cased with PVC to enable downhole electromagnetic (DHEM) surveying to be completed. DHEM surveying of NOR17001 was successful and identified a late-time off-hole conductor (500 Siemens) at approximately 65m depth; the conductor is centred below the current hole in a down-dip position. Whilst the model is largely unconstrained given the single drillhole, the modelling suggests a depth extent of at least 150m. A single drillhole testing the off-hole EM conductor in a down-dip position has been recommended.

The DHEM data from NOR17001 did not identified a south-easterly plunge to the EM conductor as did the historic data, nevertheless NOR17003 did intercept weak (26.6m @ 2110ppm Zn, 299ppm Pb, 1.62g/t Ag and 0.03g/t Au from 101.4m) polymetallic sulphide mineralisation in this position. A blockage at approximately 60m in NOR17003 meant that DHEM surveying was not able to be completed in that hole.

- **FLEM**

Two separate FLEM surveys at Norrliden were completed in January 2018. The first survey was designed to test a zone of structural interest located to the west of the existing mineralisation at both Norra and Södra. The zone (Norrliden Västra) is where the main east-west shear zone intersects a cross-cutting structure that is orientated NNE/SSW. No significant results were identified from this survey although the proximity of both a high-powered powerline and the historic cable-car line did impact the quality of the results in this area. This area was subsequently tested with the bottom-till geochemical survey.

The second FLEM survey was designed to test a coincident deep-IP and airborne GeoTEM anomaly located to the northeast of Norra at the Jungfrutjärnen prospect. The deep-IP profile was completed by local university (LTU) researchers in 2009 and the airborne GeoTEM was completed by previous explorer North Atlantic Resources (NAN) in 1997. The identified anomalies at Jungfrutjärnen had not previously been followed-up.

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<sup>2</sup> Please refer to ASX Announcement dated 9<sup>th</sup> of November 2017 and 23<sup>rd</sup> February 2018.

The FLEM survey at Jungfrutjärnen identified multiple conductors, three of which have been successfully modelled and range in conductance from ~100-500Siemens. Two of the three conductors are located at a shallow depth of 50m below surface and the third is deeper at an approximate depth of 200m below surface. Three drillholes have been planned to test these conductors when diamond drilling recommences at the project.

- **Technical Review & Structural Interpretation**

In October 2017 Outlier Geoscience travelled to Sweden to carry out a technical review and structural mapping at the project to develop a new working geological model for the project. The technical review and modelling were very comprehensive and both of which have greatly improved the geological understanding of the wider project area and on an individual deposit level. The new geological model for Norra was utilised when completing the MRE in 2018.

- **MRE & Mine Optimisation**

In July 2018 MRG completed an updated Mineral Resource Estimate ("MRE") and preliminary mine optimisation for its Norra and Bjurfors polymetallic sulphide deposits.

Highlights from the MRE include:

- **Norra:** 3.1Mt @ 2.3% Zn, 0.7% Cu, 0.2% Pb, 0.47g/t Au 39g/t Ag (1% ZnEq cut-off, 3.33t/m<sup>3</sup> density)
- **Bjurfors:** 2.1Mt @ 1.9% Zn, 0.1% Cu, 0.1% Pb, 0.15g/t Au, 15g/t Ag (1% ZnEq cut-off, 3.33t/m<sup>3</sup> density)
- **Global:** 5.2Mt @ 2.1% Zn, 0.4% Cu, 0.2% Pb, 0.3g/t Au, 29g/t Ag (1% ZnEq cut-off, 3.33t/m<sup>3</sup> density)

The addition of 2.1Mt of ore from the Bjurfors deposits (Mellersta & Västra) significantly increased the global MRE for the Norrleden Project. The previous MRE for the Norra deposit reported in 2012 was 1.497Mt @ 4.4% Zn, 0.8% Cu, 0.4% Pb, 0.8 g/t Au, 59.9 g/t Ag (Wheeler, 2012).

Positive optimisation calculations were returned for the Norra and Bjurfors deposits with the optimal open-pit shells containing 1.8Mt @ 4.13% ZnEq for Norra and 118Kt @ 5.29% ZnEq for Bjurfors.

An open pit optimisation completed for the Norrleden block model yielded a profitable pit shell that was not significantly devalued by a reduction in pricing. The pit shell results are summarised as in the following Table:

	Total Mass MT	Total Ore Mined MT	Total Margin US\$M	Strip Ratio Ore:Waste
Norra Open Pit	12.6	1.8	US\$ 111 M	5.8 : 1
Burfors Open Pit	1.1	0.1	US\$ 2.4 M	8.5 : 1

The Norra deposit is also suitable for underground mining based on stope optimisation modelling, yielding the following results assuming US\$ 65 per tonne mining cost:

	Total Ore Mined (MT)	Total Margin US\$M
Norra Underground	1.0 MT	US\$ 48.9 M

While extremely encouraging, these results should not be taken to represent actual mineable outcomes.

With the inclusion of greater modelling detail and mineable shapes, the overall profitability of the deposit would be expected to decrease.

However, there is sufficient profit margin resulting from the modelling to justify further feasibility studies for ore extraction.

A hybrid mine combining an underground operation declining from the floor of an open cut pit was also examined. However, the analysis demonstrated that it reduced profit margin compared with a purely open cut mine.

The optimisation analysis demonstrated that the Norra mineralisation is economically robust due to its shallow depth, good metal grades over consistent thicknesses, sufficient mass and metallurgy which is amenable to reasonable recoveries and successful production of Cu and Zn concentrates. The optimisation analysis demonstrated that the Bjurfors deposits are more sensitive to price changes than the Norra mineralisation although a minable pit is still possible at lower prices with the appropriate strip ratios as long as capital investment can be minimised: possibly by running the Bjurfors deposits as satellite pits to the main processing facilities at Norra or through contract mining.

- **BOT Drilling**

In April-May 2018 MRG completed a 58-hole bottom-till geochemical drilling programme at Norrilden. The drilling was designed to test the previously untested structural corridor between Norra and Södra westwards towards the permit boundary with S2 Resources Ltd who had previously identified an ~800m long gold-in-soil anomaly. The drilling utilised a drill rig with a top-hammer sampling system that systematically collected chip samples from the upper-till, bottom-till and from the bedrock with each sample averaging between 2-3kg.

The BOT drilling successfully identified the Södra mineralised trend across at least four drill traverses for a total strike length of ~650m; this mineralised trend is anomalous in Au, Ag, As, Pb, Zn and S. In addition to the Södra mineralised trend anomaly, the BOT drilling also identified three single-point, multi-element anomalies; one anomaly lies immediately due west of the Norra deposit, one lies on the northern end of the western-most traverse and the third is located at the southern end of the orientation line. All three single-point anomalies showed elevated levels of Au, Ag, As, Pb, Zn and S and have been recommended for follow-up drilling in due course.

A single drill traverse served as an orientation line that passed directly over the known mineralisation at Södra and at Norra. On the orientation line, the upper-till, bottom-till and bedrock samples were assayed using a combination of assaying methods. The mineralisation at Norra was easily identified in all fractions and in all assay methods, albeit in a single drillhole. The peak assays for this single drillhole were<sup>3</sup>:

- Four-acid Bedrock: 0.95% Cu, 0.05g/t Au, 4.23g/t Ag, 119.5ppm As, 23.9ppm Pb, 374ppm Zn and 8.6% S.
- Aqua Regia Bedrock: 0.93% Cu, 0.05g/t Au, 4.21g/t Ag, 133ppm As, 22.8ppm Pb, 365ppm Zn and 9% S.
- Aqua Regia Upper-Till: 0.92% Cu, 0.16g/t Au, 5.63g/t Ag, 138.5ppm As, 27.2ppm Pb, 152ppm Zn and 5.01% S.
- Ionic Leach Upper-Till: 98400ppb Cu, 27.3ppb Au, 4.2ppb Ag, 32.2ppb As, 9.1ppb Pb, and 40ppb Zn.

### **Summary of Planned Phase 2 Exploration**

The successful Phase 1 Exploration culminated in the update of the MRE for Norrilden increasing to 5.2Mt @ 2.1% Zn, 0.4% Cu, 0.2% Pb, 0.3g/t Au, 29g/t Ag. Phase 2 Exploration will be primarily focussed on building on this significant resource base through the following activities:

- **Norra**  
Re-enter NOR17009 to test the depth extensions at Norra.
- **Södra**  
Follow-up diamond drilling to test extensions of Södra including drill testing of an EM conductor identified in a down-dip position of drillhole NOR17001 which intercepted 8m @ 2.3g/t Au, 130g/t Ag, 0.46% Zn, 0.21% Pb from 45m.  
  
Extensional drilling at Södra along strike both east towards Bjurfors and west along the mineralised trend identified in the BOT drilling.
- **Bjurfors**  
Review the recently completed MRE for Bjurfors and plan follow-up diamond drilling to test strike and dip extensions of these deposits.
- **Jungfrutjärnen**  
Drill test the fixed-loop EM conductors identified at Jungfrutjärnen located northeast of Norra.
- **Regional Exploration**  
Follow-up reconnaissance drilling of the four anomalies identified in the BOT drilling and the 1.5km structural corridor between Södra and Bjurfors.  
  
Carry-out reconnaissance mapping of the recently granted permit located northeast of Norrilden to generate further drill targets.

Andrew Van Der Zwan

Chairman

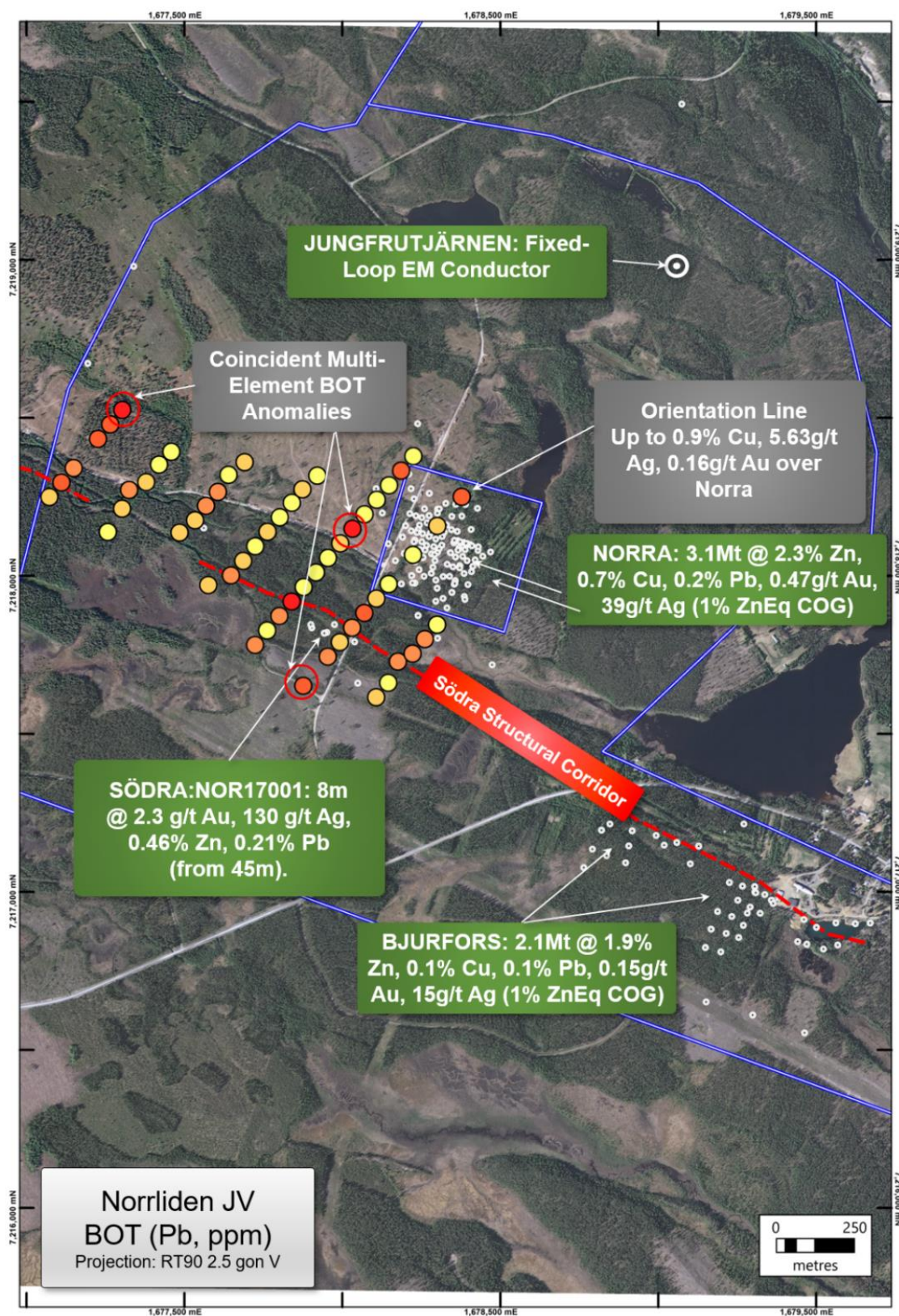
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<sup>3</sup> Please refer to ASX Announcement dated 14<sup>th</sup> of September 2018.

## Competent Persons Statement

The information in this document that relates to exploration results is based on information compiled by Amanda Scott, a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy (Membership No.990895). Amanda Scott is a full-time employee of Scott Geological AB. Amanda Scott has sufficient experience, which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Amanda Scott consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.





**Figure 1:** Location map showing the recently completed bottom-till geochemical drilling at the Norrleden Project, Sweden.