

malachite
resources

ASX Announcement

ASX Code: MAR

24 November 2020

JEJEVO EXPLORATION TARGET AND DRILLING UPDATE

Malachite Resources Limited (Malachite or Company) (**ASX: MAR**) is pleased to provide an update on activities at the Company's Jejevo Nickel Project in the Solomon Islands.

OVERVIEW

- Malachite obtained shareholder approval at an Extraordinary General Meeting on 14 October 2020 to acquire Sunshine Minerals Limited (Sunshine). Sunshine has an 80% shareholding in Sunshine Nickel Limited which holds PL 01/18 containing the Jejevo nickel project¹.
- Mining One Pty Ltd (Mining One) has incorporated detailed historical block modelling work carried out by Sumitomo Metals and Mining to construct a new 3D block model at Jejevo from raw drilling and sampling data.
- A near term Jejevo Exploration Target has been generated in the range of 4.9Mt to 6.6Mt at 1.4% Ni to 1.6% Ni within all domains (Saprolite, Transitional and Limonite). This Target range reflects a potential quantity and grade for Jejevo and is conceptual in nature only as there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.
- This Target range has been determined by Mining One given their confidence in the historical Sumitomo drilling information including down to 50m x 50m spacing in the central Jejevo deposit area.
- Mining One have advised that there is a requirement to obtain more drill hole density and moisture data and have planned a twin hole drilling to provide sufficient QAQC support to the overall dataset to be JORC compliant.
- Drilling equipment is now scheduled to arrive at the Jejevo project area this week. Drilling is expected to commence in the coming weeks with a 64-hole program (approx. 1,300m).
- The initial drill program is designed to enhance the geological understanding of Jejevo and provide confirmatory results to allow preparation of a JORC compliant mineral resource estimate.
- Significant historical drilling intercepts include²:
 - **JSC030: 13m @ 2.04% Ni** from surface, including **11m @ 2.18% Ni** from 2m
 - **JSD049: 9m @ 1.98% Ni** from 1m, including **6m @ 2.26% Ni** from 2m
 - **JSD062: 12m @ 1.93% Ni** from surface, including **9m @ 2.04% Ni** from 3m

¹ ASX Announcement - Results of General Meeting, 14 Oct 2020

² ASX Announcement - Drilling to Commence at Solomon Islands Nickel Project, 12 Oct 2020

NEAR TERM EXPLORATION TARGET AT JEJEVO

The current drill program has been designed by Mining One based on a review of the existing data from the Jejevo Project. As part of that process Mining One carried out a gap analysis to identify what additional work was required to enable the Company to produce a Mineral Resource estimate in compliance with the JORC Code 2012 Edition. The current 64-hole drilling program at Jejevo is the product of the work undertaken by Mining One and is designed to enhance the geological understanding of Jejevo and to provide confirmatory results to allow for the preparation of a JORC mineral resource estimate.

Historical drilling by Sumitomo Metals and Mining for the Jejevo area comprised 413 individual drill holes drilled down to a 50m x 50m spaced grid in places. The drilling methods used included diamond coring and hand auger with the majority of these holes (338) being diamond core drilled between 2012 and 2013.

As previously reported, some examples of the nickel grades encountered within downhole drillhole intervals in the historical Sumitomo drilling programs are listed in Table 1 below. These holes have been selected to demonstrate several significant results as distributed across the deposit. The location of these holes is shown in Figure 1 below.

Hole ID	Intercept	From (m)	Including	From (m)
JS-K003	7m @ 1.91% Ni	1	Includes 4m @ 2.21% Ni	5
JSR049	9m @ 1.98% Ni	1	Includes 7m @ 2.21% Ni	3
JSK047	5m @ 1.56% Ni	1	Includes 2m @ 2.27% Ni	4
JST041	5m @ 1.90% Ni	1	Includes 2m @ 2.53% Ni	3
JSJ057	10m @ 1.82% Ni	1	includes 7m @ 2.12% Ni	4
JSA024	8m @ 1.74% Ni	1	includes 5m @ 2.11% Ni	5
JSC029	11m @ 1.66% Ni	1	includes 4m @ 2.16% Ni	4
JSD062	12m @ 1.93% Ni	1	includes 9m @ 2.04% Ni	3
JSD049	9m @ 1.98% Ni	1	includes 6m @ 2.26% Ni	2
JSC030	13m @ 2.04% Ni	0	includes 11m @ 2.18% Ni	2
JSD026	10m @ 1.78% Ni	1	includes 3m @ 2.22% Ni	2
JS-D016	9m @ 2.10% Ni	2	includes 6m @ 2.45% Ni	3
JSD031	7m @ 1.67% Ni	2	includes 2m @ 2.35% Ni	5
JSA006	6m @ 1.86% Ni	2	includes 3m @ 2.18% Ni	3

TABLE 1 – JEJEVO HISTORICAL DRILLING EXAMPLE SIGNIFICANT INTERCEPTS

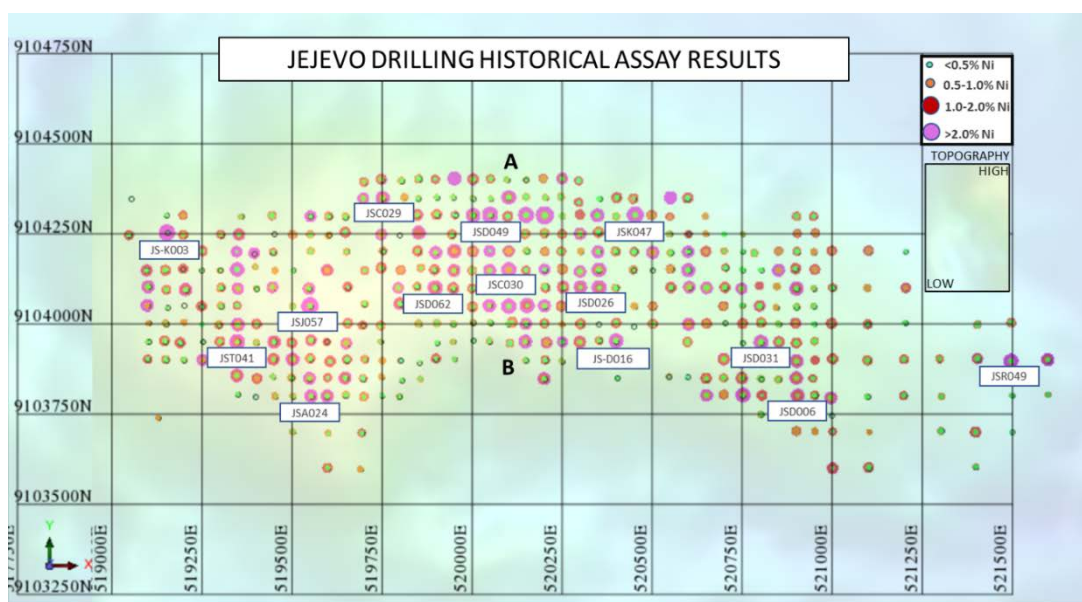


Figure 1 – Jejevo – Historical Drilling Assay Results (Ni%)

A cross section is also shown in Figure 2 below in addition to the typical regolith profile encountered within the Jejevo project area in Figure 3.

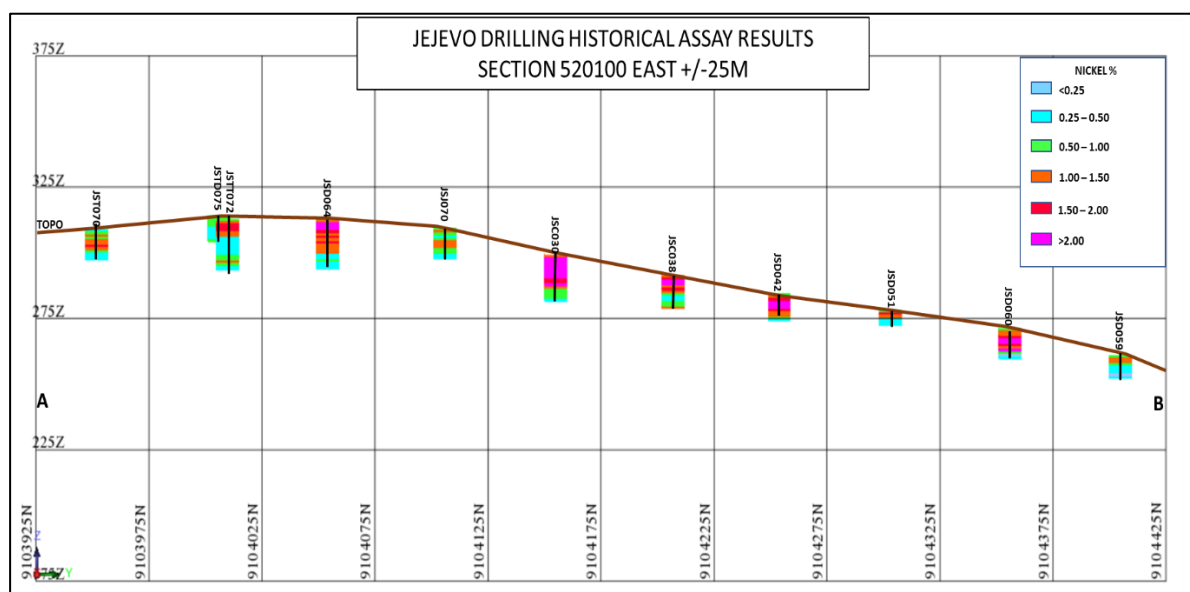


Figure 2 – Jejevo Deposit Cross Section 520100 East +/- 25m

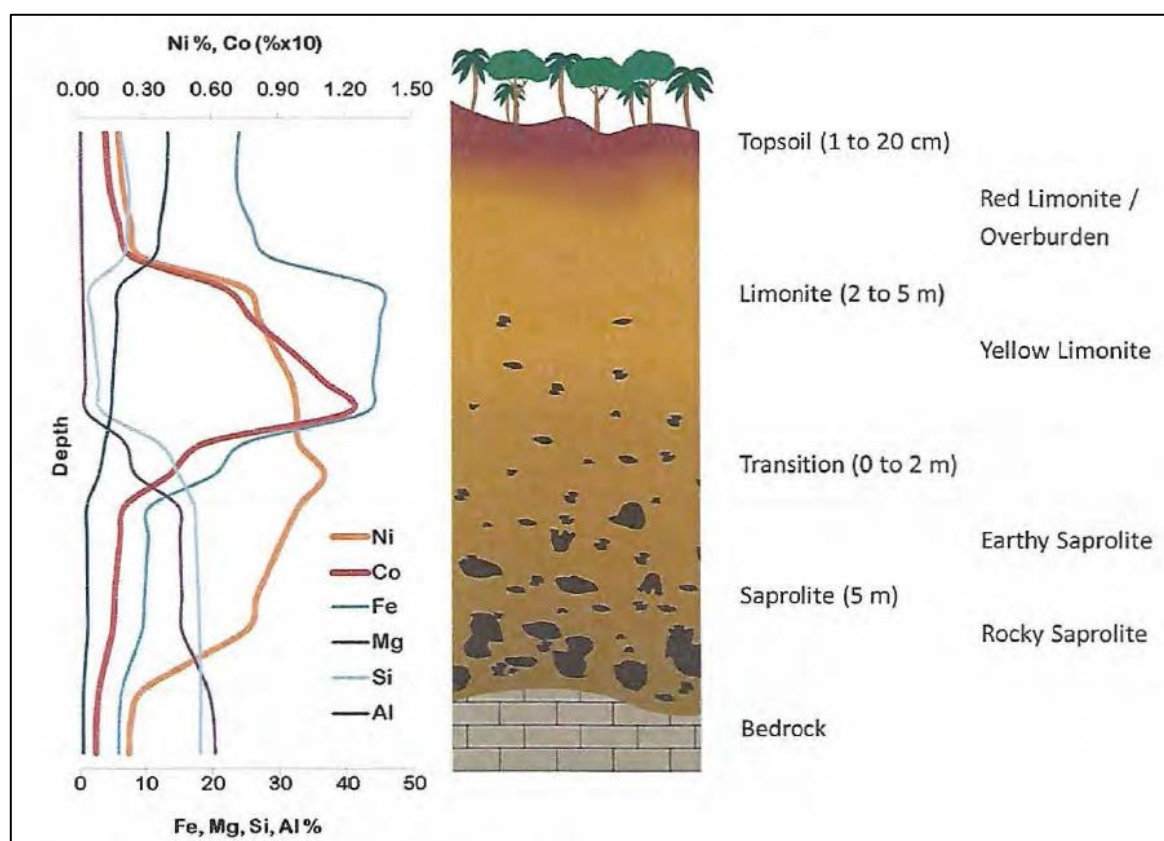


Figure 3 – Jejevo Example Nickel Laterite Profile (Golder Associates Jejevo Technological Report August 2014)

Mining One Consultants validated the drilling data available within the Jejevo project area and used this data to create lithological surface models for the base of saprolite, base of transitional, base of limonite and the base of the Fecap/Overburden domains. The drilling data assays were then used via creation of 1m composite files to assign nickel grades to the blocks in the block model using ordinary kriging. Densities were assigned based on historical records reported by Sumitomo and Golder

Associates in studies completed for the Jejevo project. The results of the modelling for the Saprolite domain are shown in Figure 4 below.

The near term exploration target is estimated based on actual nickel assay grades from historical drilling data and the tonnages calculated within the 3D block model from volumes. A work program is currently underway with the aim of achieving JORC 2012 compliance for the Jejevo deposit. Data currently being collected from new drilling includes twin drillholes and infill holes to enable adequate QAQC support for the drilling dataset, collection of additional density measurements and analysis for the full suite of relevant nickel laterite suite elements.

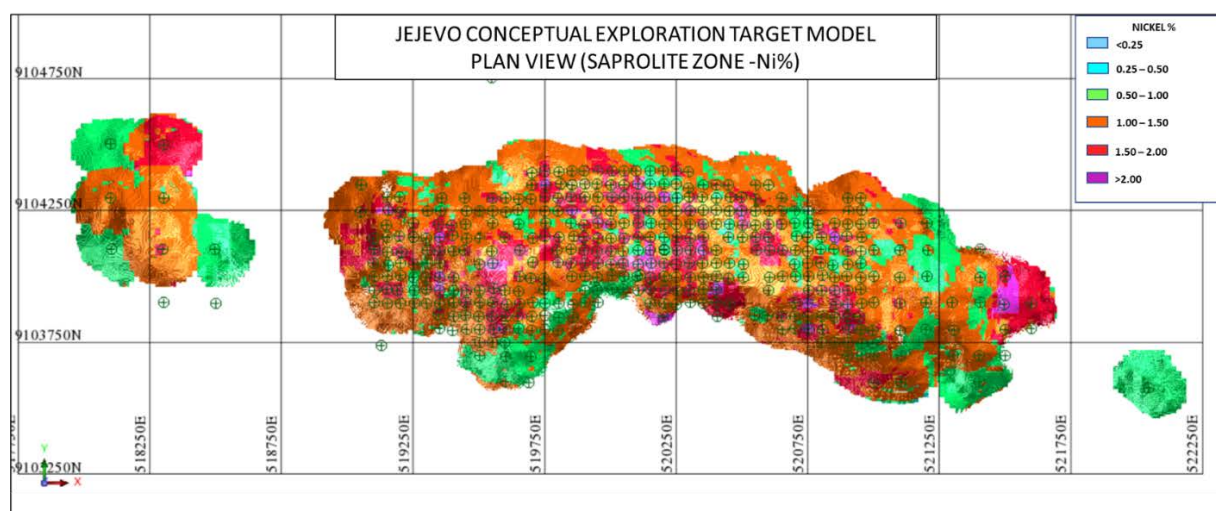


Figure 4 – Jejevo Conceptual Block Model – Saprolite Domain

The near term Exploration Target within the Jejevo project area is in the range of 4.9Mt to 6.6Mt at 1.4% Ni to 1.6% Ni within all domains (Saprolite, Transitional and Limonite). This Target range reflects a potential quantity and grade for Jejevo and is conceptual in nature only as there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.

COMMENCEMENT OF DRILLING AT THE JEJEVO NICKEL PROJECT

The current drill program will utilise drilling rigs that were previously used on the tenement by Sumitomo Metals and Mining which were recently acquired by the Company. The drill rigs are expected to arrive on Isabel Island this week, with drilling to commence soon thereafter – Figure 5.

The drilling program at Jejevo, comprising 64 holes (approximately 1,300 m), was delayed slightly due to the availability of the landing craft to transport the drill rigs from Honiara to Isabel Island. The Company will be using four drill rigs for this drilling program.

The initial 64-hole drill program at Jejevo will consist of 25 holes for confirmatory (twin hole) purposes (395m), 15 holes for infill (306m) and 24 holes for new exploration (600m).

Following completion of the initial 25 confirmatory holes and receipt of assays, the Company expects to be in a position to provide a JORC (2012) mineral resource estimate for the Jejevo Project early next year. That initial mineral resource estimate will also form the basis of a feasibility study.



Figure 5 – Drilling Equipment being loaded onto landing craft at Honiara

REGIONAL EXPLORATION AT THE JEJEVO NICKEL PROJECT

As previously reported, there are also targets for future exploration programs that exist on ridges to the east and west of the currently defined Jejevo deposit (Figure 6)³. Further work including field inspections is required to rank these target areas prior to commencement of step out drilling programs.

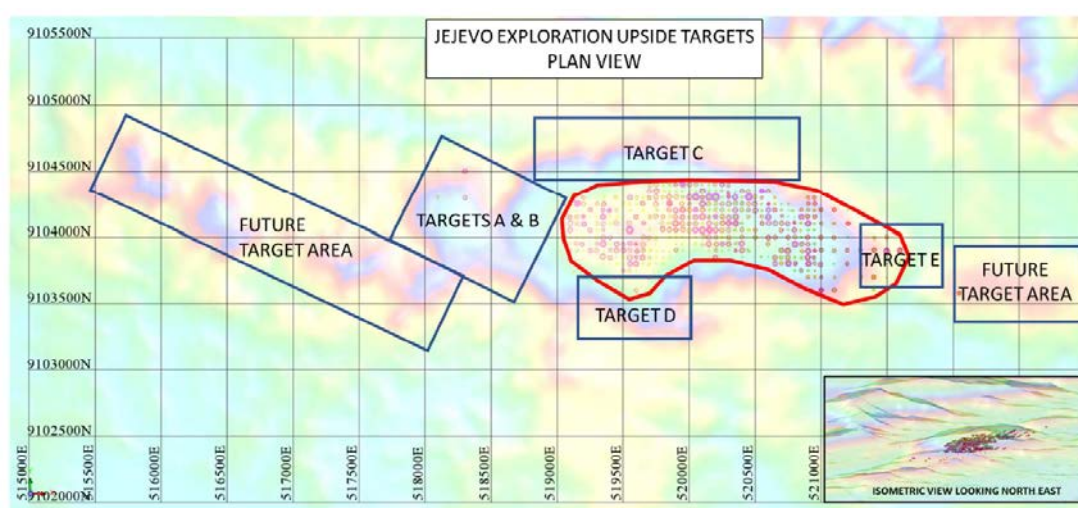


Figure 1 - Jejevo Regional Targets

THE JEJEVO NICKEL PROJECT - BACKGROUND

The Company owns Sunshine Minerals Ltd which owns 80% of Sunshine Nickel Limited (SNL) which holds prospecting licence tenement PL 01/18 located on the south coast of Santa Isabel Island in the Solomon Islands. The remaining 20% of SNL is owned by local landowners (Landholders). The Jejevo Nickel Project is located within the PL 01/18 project area (refer Figure 7).

The Jejevo Nickel Project is an advanced stage direct shipping ore nickel laterite project. The project was previously drilled in 2013 and the Company's initial objective is to do sufficient work to confirm a 2012 JORC Resource at the earliest opportunity.

³ ASX Announcement - Drilling to Commence at Solomon Islands Nickel Project, 12 Oct 2020

The Jejevo Nickel Project has a number of positive aspects including its close proximity to the coast, no processing requirements, low capital route to direct shipping, ore production and local landowner support. It is envisaged that mining at Jejevo could potentially commence within 2 years.

In March 2014 Sumitomo Metals and Mining, as previous owner of the Jejevo Nickel Project, completed a Social Impact Assessment (ESIA) which covered a number of aspects including mining, rehabilitation and environmental monitoring, mitigation and management. The ESIA formed the basis of a Mining Lease Application at Jejevo and will provide a basis for future studies to be conducted by the Company.

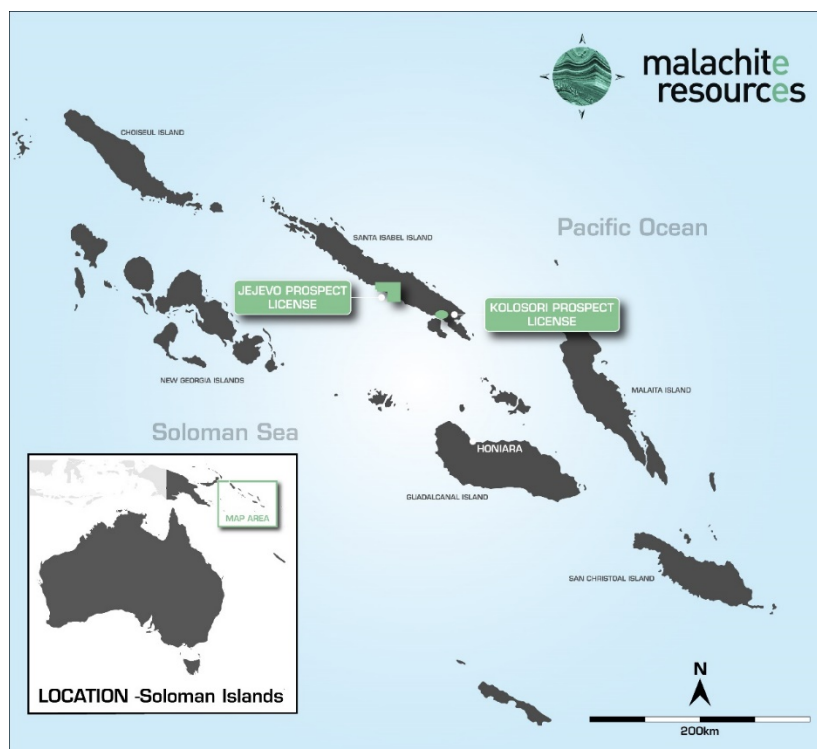


Figure 2 – Jejevo and Kolosori Project Location Map

IMPACT OF COVID-19 ON ACTIVITIES

The Company has engaged local geologists and environmental scientists in the Solomon Islands to ensure minimal impact to activities in light of restrictions on international travel and to protect against any unwarranted spread of the COVID-19 virus within the local communities. The local specialists are being directed by the Company and its consultants to ensure that the work carried out complies with 2012 JORC and ASX reporting requirements.

JORC COMPETENT PERSONS STATEMENT

The information in this report that relates to Exploration Results at the Jejevo project is based on, and fairly represents, information and supporting documentation prepared by Mr Stuart Hutchin a Member of the Australian Institute of Geoscientists. Mr Hutchin is a full-time employee of Mining One Consultants and has sufficient experience which is relevant to the style of mineralisation and type of deposit and to the activity which they are undertaking 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”. Mr Hutchin consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

Authorised by the board:

Mr. Geoff Hiller

Director and Chief Executive Officer

Email: info@malachite.com.au

APPENDIX A: JORC 2012 Table 1 criteria assessment

Section 1: Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Sampling techniques	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i> <i>Include reference to measures taken to ensure sample representation and the appropriate calibration of any measurement tools or systems used.</i> <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> <i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	Sampling has been undertaken sporadically over the Jejevo license area since the 1960s. Work was completed by INCO/INAL originally via 82 drill holes and 158 test pits. During 2008 Sumitomo acquired rights to the license area and subsequently completed the following drilling campaigns: • 4 Auger holes in 2008 • 4 Pilot/Scout holes in 2009 • 6 Diamond core holes in 2012 • 332 diamond core holes in 2013 Drilling was completed down to a 50m x 50m spacing in some areas of the Jejevo deposit. The diamond core drilling was sampled using whole core and then assayed via the pressed pellet XRF method in the Sumitomo laboratory located in Honiara, Solomon Islands. Laboratory analysis was completed for Ni%, Co%, Mg%, Cr%, Fe%, Mn%, Al%, Si%, Ca% and K%.
Drilling techniques	<i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	Diamond drilling was completed using a small portable drilling rig that was moved between drill sites using a track based crawler. The rigs drilled conventional NQ sized single tube core that was contained within a plastic sleeve within the core barrel to ensure any loosely consolidated material was contained within the sample interval. These types of drill rigs are commonly used for drilling of laterite hosted deposits within Indonesia and the South Pacific. Holes were drilled vertically through the limonite and saprolite zones into underlying basement.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	Sample recovery averaged greater than 95% given the containment of each sample run within a plastic sleeve within the core barrel.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Logging	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i> <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> <i>The total length and percentage of the relevant intersections logged.</i>	All holes were: - marked up for recovery calculations - geologically marked up and logged for geology, fractures and recovery - marked up for sampling interval - photographed Geology logging includes lithology, minerals, colour and texture.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> <i>Quality control procedures adopted for all sub-sampling stages to maximise representation of samples.</i> <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The NQ core was sampled as whole core over samples ranging in length from 0.25m to 1.0m. The majority of sample intervals were 1m in length. Geological contacts were used to determine the sampling intervals where practical to do so. The principal sampling method from the drill core resulted in samples averaging 3-5 kg in weight for each 1m sample. The Sumitomo laboratory in Honiara, a commercial laboratory facility, used standard perpetration methods that included: 24 hour drying at 90° C - jaw crushing to <5 mm - riffle split to 1.2 to 1.6 kg - pulverised with LM2 sampled to 50 g and 200 g pulps. Detailed information on sample QAQC protocols and results in relation to Standards, Blanks and Duplicates is not available for the samples
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i> <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	All samples were analysed at the Sumitomo laboratory located in Honiara. The pressed pellet XRF method was used where a standard multi-element suite was completed. Assay were determined for: Ni%, Co%, Mg%, Cr%, Fe%, Mn%, Al%, Si%, Ca% and K%. Detailed Sumitomo quality control reports are not available to support the assay dataset.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i> <i>The use of twinned holes.</i> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i>	No verification drilling or sampling has been completed since the last drilling campaign was completed in 2013. Areas of the deposit have however been drilled down to a 50m x 50m spacing where correlation between sample results for Ni% and Co% are high and are in line with the distribution expected within a nickel laterite deposit. Mining One Consultants have completed a review of the drilling dataset and have made recommendations on requirements for confirmatory and infill drilling to provide QAQC support for the historical dataset. There were no adjustments to any assays other than the replacement of below detection values with half the detection limit.
Location of data points	<i>Accuracy and quality of surveys used to locate drill holes (collar and down hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i> <i>Specification of the grid system used.</i> <i>Quality and adequacy of topographic control.</i>	Collar locations were surveyed by hand-held GPS. No elevation was recorded, GPS reading accuracy was to approximately 5 m. Collar elevations have been assigned based on the topographic surface that covers the deposit area. All exploration and evaluation work is completed in UTM WGS 84 Zone 57S. Topography data includes a processed DTM grid with an average accuracy of within 1m.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i> <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i> <i>Whether sample compositing has been applied.</i>	Drilling has been completed on spacings ranging from 100m x 100m down to 50m x 50m in the central deposit area. The 50m spacing is adequate to establish continuity of the nickel laterite style of mineralization. Drill core samples are generally 1 m in length, the regolith horizons encountered within the deposit are generally greater than 1m in thickness. The drill spacing and sampling intervals are assessed as acceptable for this style of mineralization.
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	The nickel laterite deposit is formed as a weathered geomorphic surface sourced from ultramafic bedrock units. All diamond holes were vertical and provide a suitable intersection angle. The drill pattern spacing allows for interpretation of the nickel and cobalt mineralization throughout the project area. Regional and local structures are described as horizontal to sub-horizontal and related to thrusting. There is no evidence of cross cutting structures or units that would bias the assay results.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Information on the Sumitomo Chain of custody protocols are not available.
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Mining One has commenced a preliminary review of the Sumitomo drilling data. Further confirmatory, infill and extensional drilling is planned to provide QAQC support for the historical dataset. Golder Associates also completed a review of the dataset as part of the technological study completed in 2014.

Section 2: Reporting of Exploration Results

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
<i>Mineral tenement and land tenure status</i>	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	Sunshine Minerals owns 80% of Sunshine Nickel Limited (SNL) which holds prospecting licence tenement PL 01/18 located on the south coast of Santa Isabel Island in the Solomon Islands. The remaining 20% of SNL is owned by local landowners (Landholders). The Jejevo Nickel Project is located within the PL 01/18 project area.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	INCO/INAL and Sumitomo have completed significant exploration programs over the Jejevo area since the 1960's. Golder and Associates completed a technological study in 2014 that included geology, mining, metallurgical assessment of the Jejevo deposit.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	Wet tropical laterite. In-situ chemical weathering of the ultramafic rocks with nickel and cobalt enrichment through both residual and supergene processes. See Figure 3 for an example of the regolith profile encountered within the Jejevo deposit area.
<i>Drill hole Information</i>	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all material drill holes: • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. If the exclusion of this information is justified on the basis that the information is not material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	Diamond drilling programs primarily completed by Sumitomo between 2008 and 2013 comprise the bulk of the drilling and sampling dataset. A total of 413 drillholes comprising 5,166 individual samples are available within the Jejevo project area. These holes were drilled on various spacings ranging from 100m x 100m down to 50m x 50m. Diamond drilling was completed using a small portable drilling rig that was moved between drill sites using a track based crawler. The rigs drilled conventional NQ sized single tube core that was contained within a plastic sleeve within the core barrel to ensure any loosely consolidated material was contained within the sample interval. These types of drill rigs are commonly used for drilling of laterite hosted deposits within Indonesia and the South Pacific. Holes were drilled vertically through the limonite and saprolite zones into underlying basement. Details of the drillhole locations are shown in Figure 1 within this ASX release.
<i>Data aggregation methods</i>	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	Weighted averages are used for reporting all assay intervals from the diamond drillholes.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i>	The laterite is thin but laterally extensive. The intercepts are almost perpendicular to the mineralisation. Drilling so far has been confined to the major ridgelines due to access and deposit geometry.
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported.</i> <i>These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Maps are provided in this ASX release that show the distribution of drilling across the Jejevo deposit.
<i>Balanced reporting</i>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	The significant results reported from the historical drilling use a lower cut-off of 1% Ni with no more than 1m of internal material less than 1% included.
<i>Other substantive exploration data</i>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	Significant studies were completed by Golder Associates and Sumitomo Metal Mining Co. This work included geotechnical, metallurgical, mining, geological and environmental studies.
<i>Further work</i>	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Future work will include: • Completion of validation, infill and extensional drilling within the Jejevo deposit area • JORC Resource estimation at Jejevo • Conceptual mining and processing studies for Jejevo