

# High Grade Nickel-Cobalt Resource Estimate at Lainejaur

ASX Announcement  
12 February 2018

## Highlights

- **Inferred Mineral Resource of 460,000t @ 2.2% Ni, 0.15% Co and 0.7% Cu (above 0.5% Ni lower cut-off) at the 100% owned Lainejaur Project in Sweden**
  - **68% increase in Ni grade and 63% increase in Co grade**
  - **20% increase in contained Ni and 16% increase in contained Co**
- **Mineralisation open to the north**
- **Resource estimate grades indicate potential tenor of regional targets**
- **Regional surface and downhole electromagnetic ('EM') surveys completed**
  - **Untested anomaly to south-east identified and interpreted as having a similar strength conductor to the Lainejaur massive sulphides**

Berkut Minerals Limited (ASX: BMT) ("Berkut" or the "Company") is pleased to report an updated mineral resource estimate for the Company's 100% owned Lainejaur Ni-Co Project in northern Sweden (refer Figure 1). The Lainejaur Project is located at the north-west end of the renowned Skellefteå mineral belt and only 15km from the regional centre of Malå.

Berkut's Managing Director, Neil Inwood commented:

*"The cobalt grade of the Lainejaur resource in Sweden, along with the cobalt mineralisation identified in recent drilling at the Skuterud Cobalt Project in Norway, demonstrates the high potential for cobalt mineralisation across all of the Company's projects in Scandinavia. The updated Mineral Resource at the Lainejaur Project has yielded a significant grade increase for both Ni and Co with a material increase in contained metal. The new estimate has established a truer reflection of the tenor of the massive sulphide mineralisation at Lainejaur. The surface EM surveys have also provided an early-stage target for potential repeats of mineralisation. These results will feed into our exploration targeting model over our 44km<sup>2</sup> of ground holdings in the Lainejaur area."*

### Fast Facts

Shares on Issue 54.3M  
Tradeable Shares 40.4M  
Market Cap (@ 16 cents) \$8.4M  
Cash (31 December 2017) \$4.4M

### Board and Management

Neil Inwood, Managing Director  
Justin Tremain, Non-Exec Chairman  
Paul Payne, Non-Exec Director

Ben Cairns, General Mgr Geology  
Aaron Bertolatti, Company Secretary

### Company Highlights

- European cobalt and nickel projects in Norway and Sweden, strategically located within proximity to operating cobalt refineries and European markets
- 100% ownership of the Skuterud Cobalt Project in Norway
- Historic mined cobalt grades up to 2% at the 100% owned Gladhammar Project in Sweden
- 100% ownership of historical Lainejaur Ni, Co, Cu resource in Sweden
- Swedish ground position of approx. 100km<sup>2</sup> and Norwegian cobalt ground position of 19km<sup>2</sup>, both covering historic mine workings
- Tight capital structure
- Well-funded | Strong cash position

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## Updated Lainejaur 2018 Resource

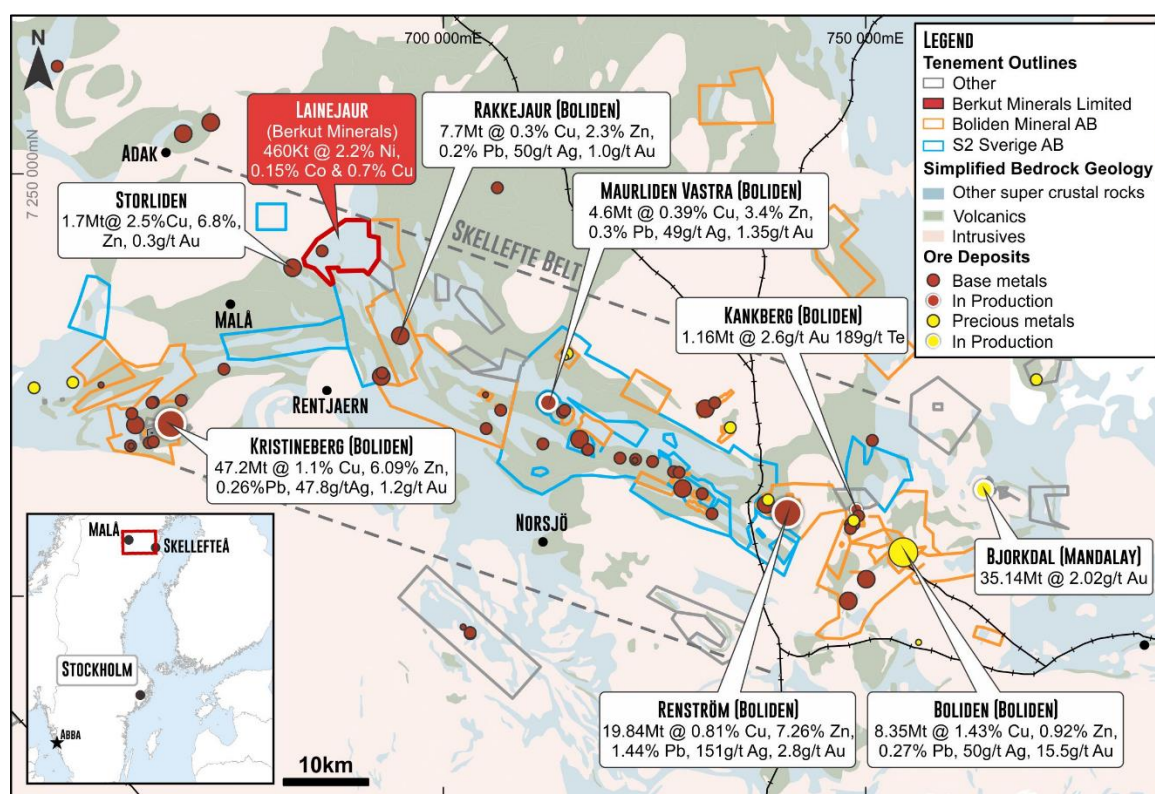
The Lainejaur Project (refer Figures 1 & 2) is located at the north-west end of the renowned Skellefteå mineral belt and only 15km from the regional centre of Malå. The deposit was discovered in 1941 and was bought into production to supply nickel for Sweden during the Second World War. When it closed, the mine had produced some 101,000t of ore @ 2.21% Ni, 0.1% Co and 0.93% Cu to approximately 100m below surface.

The 2018 Mineral Resource (refer Figure 2) is reported under JORC (2012) and is based upon a technical review undertaken by Berkut of the historical core, assays and logging. The reported Inferred resource of 460Kt @ 2.2% Ni, 0.7% Cu and 0.15% Co (above a 0.5% Ni lower cut off) is shown in Table 1. The previous historical estimate is shown in Table 2 for comparison. Figure 3 illustrates a long-section through the deposit, and the modelled mineralised zones are shown in Figure 4.

**Table 1 | Lainejaur Deposit, January 2018 Inferred Mineral Resource Estimate (0.5% Ni cut off)**

Zone	Tonnes Kt	Ni %	Cu %	Co %	Au ppm	Pt ppm	Pd ppm	S %	Ni t	Cu T	Co t
Massive Sulphide	<b>460</b>	<b>2.2</b>	<b>0.7</b>	<b>0.15</b>	0.65	0.20	0.68	20.2	10,100	3,000	680

*ID<sup>2</sup> estimate using nominal 0.5m composites and an insitu dry bulk density of 4.1t/m<sup>3</sup> for massive-sulphide mineralisation*



**Figure 1 | Project Location and generalised geology**

**Table 2 | Superseded Historical 43-101 Inferred Mineral Resource Estimate <sup>1</sup>**

Region	Tonnes Kt	Ni %	Cu %	Co %
All Material	645	1.33	0.66	0.09

<sup>1</sup> Previously reported 26 July 2017. Reported using a US\$100 cut-off GMV per Tonne = (Ni% x US\$176.37) + (Cu% x US\$44.09) + (Co% x US\$176.37). Density of 3.55t/m<sup>3</sup> used.

The 2018 Mineral Resource estimation was undertaken by Payne Geological Services Pty Ltd (“PayneGeo”) of Perth in consultation with Berkut. Included in the study was a site visit in November 2017, inspection of historic core samples and remodelling of the mineralised zones.

The 2018 Mineral Resource effectively separated the massive-sulphide (‘MS’) and disseminated/stringer (‘DS’) mineralisation at Lainejaur into separate discrete three-dimensional (3D) wireframes. Additionally, an updated insitu dry bulk density was used for the MS based upon density test work undertaken by Berkut in 2017. The tighter modelling has led to a 68% increase in Ni grade and 63% increase in the Co grade; for an overall 20% increase in contained Ni metal and a 16% increase in contained Co. Berkut believes that the new model better reflects the massive sulphide nature of the mineralisation at Lainejaur. Further details of the estimate are discussed below and in summarised in Appendix One.

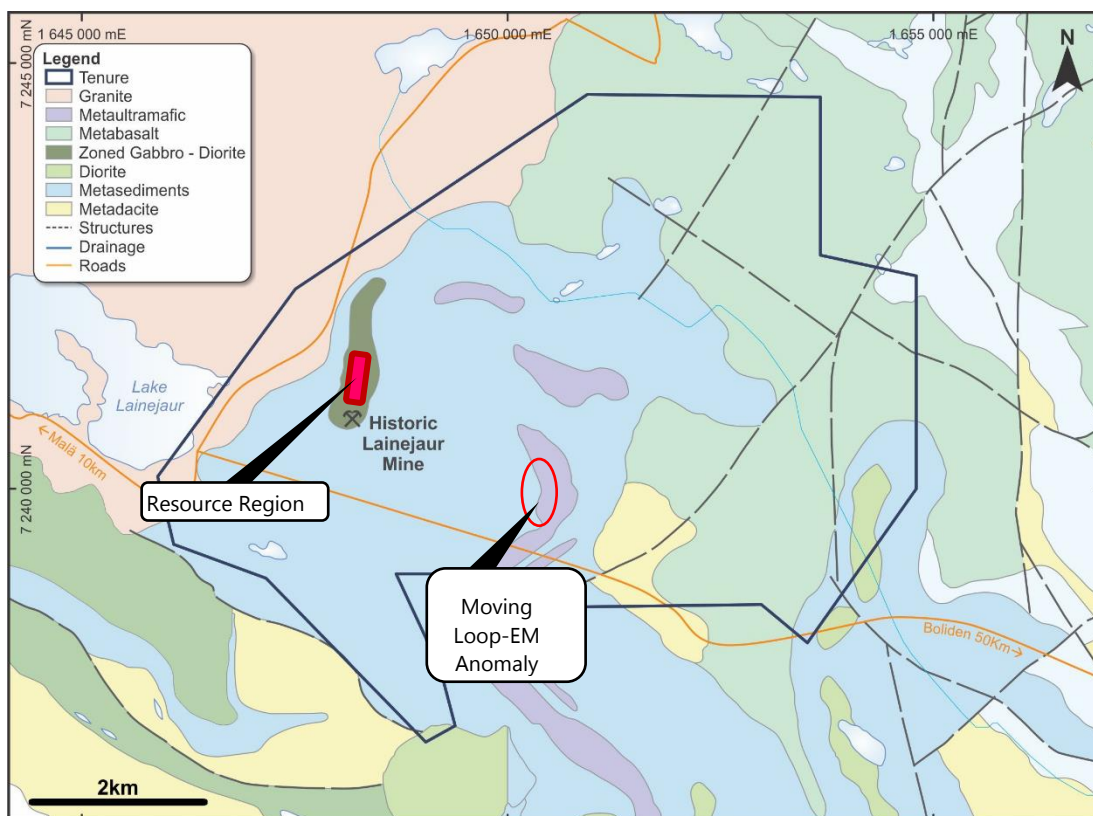


Figure 2 | Lainejaur Project Region: showing resource region

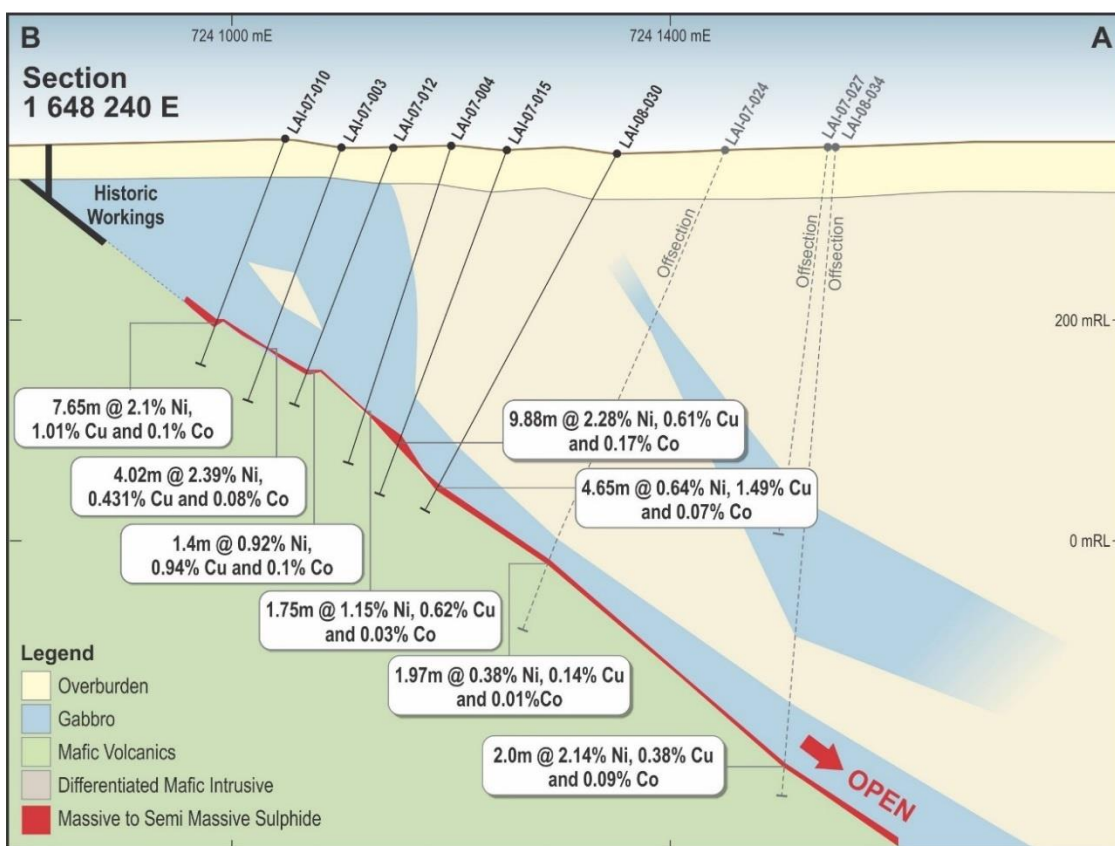


Figure 3 | Long section through Lainejaur

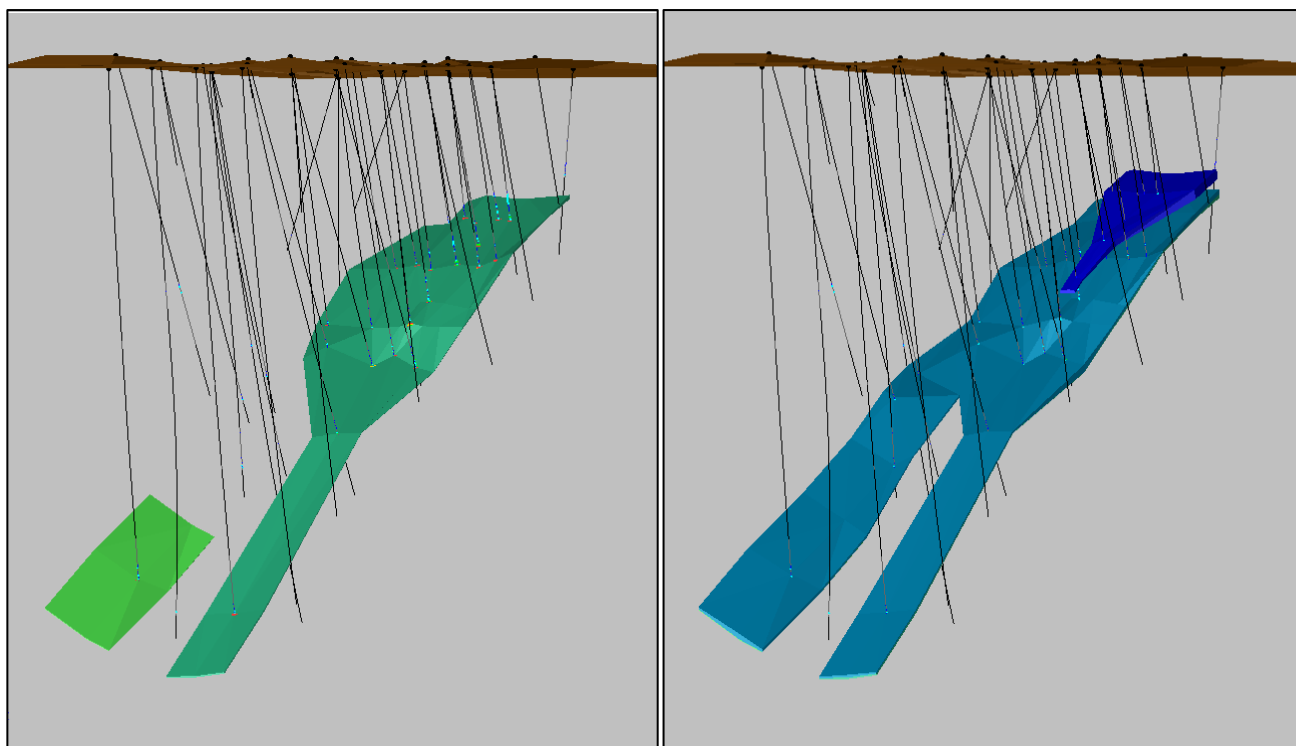


Figure 4 | Mineralised Wireframes: LHS - massive sulphide; RHS - disseminated sulphide



**Figure 5 | Massive Sulphide Mineralisation from Drill Hole LAI-08-034 (2.98% Ni) (PayneGeo)**



**Figure 6 | Disseminated Sulphide Mineralisation from Drill Hole LAI-08-034 (0.22% Ni) (PayneGeo)**

### Lainejaur Geophysical Surveys

In January 2018 Berkut finalised several ground electromagnetic ('EM') surveys at Lainejaur to both test the down-dip resource potential and to explore for conductive bodies in the region (refer Figure 7). The work focussed on fixed loop EM and down-hole EM surveys around the Lainejaur deposit and further reconnaissance moving loop EM surveys over magnetic anomalies to the south and east of the deposit.

The reconnaissance program of five surface moving loop EM profiles was undertaken to target magnetic anomalies 1 to 2km to the south and east of Lainejaur (refer Figure 2). The magnetic anomalies are interpreted to represent fold structures to the north and east of the known mineralisation and were targeted as a potential continuation of the host to mineralisation. Profile E (refer Figure 7) produced a positive EM anomaly with modelling suggesting a significant conductor at a depth of approximately 250m with similar conductance to the main Lainejaur massive sulphides. Results from Profile D suggest a weakly conductive anomaly 550m north of the anomaly on Profile E. Both anomalies warrant further work and will be targeted by a fixed loop EM survey planned for March/April 2018.

The fixed loop EM and downhole EM surveys at the Lainejaur resource region were successfully completed with three historical holes found to be open. The fixed loop EM survey gave a weak indication of potential mineralisation continuing to the north of the deposit; however, both surveys were considered not effective it is interpreted that the depth (>500m) to any down-dip conductor north of 7241550N is such that it will effectively be masked by the shallower up-dip response. The company is investigating alternative geophysical methods to circumvent this issue.

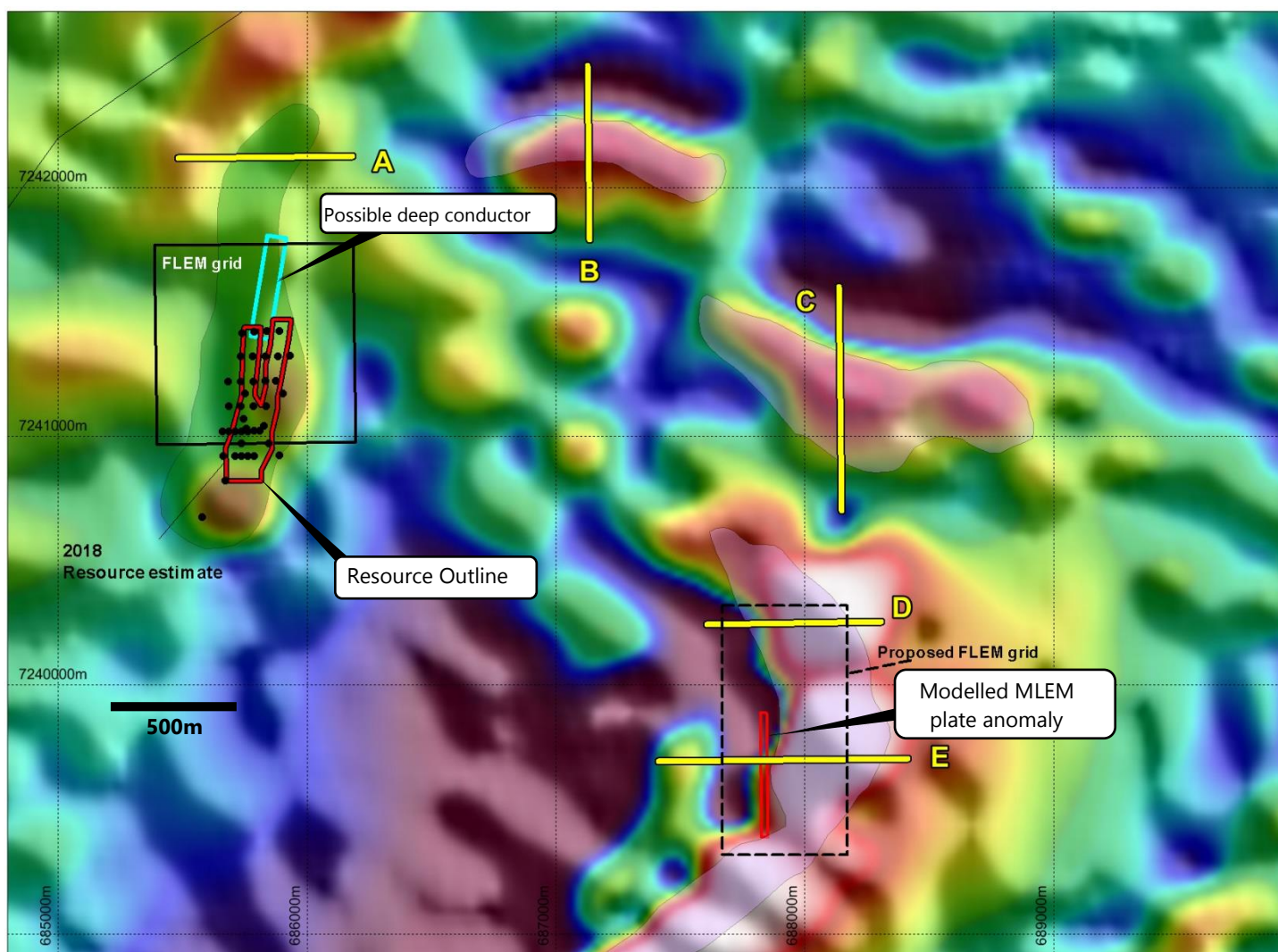


Figure 7 | Resource Outline and Survey Regions - over regional magnetics. Showing Resource drill collars (black dots), and resource Outline (red polygon)

## Resource Summary | Lainejaur Nickel Cobalt Deposit

### Geology

The Lainejaur mineralisation (refer Figures 3 and 4) is hosted at the base of the lopolithic gabbro-diorite intrusion overlain by mafic intrusive with minor intercalated metasedimentary units and underlain by meta-basalts. The host unit is interpreted to continue for approximately 1.5km down dip. The mineralised horizon forms a distinct tabular shoot plunging at 38° to the north with a defined extent of 800m. Sulphide mineralisation is defined by a basal layer of massive pyrrhotite, pentlandite and chalcopyrite (refer Figure 5), typically 1 - 3m thick, which are overlain by a variably mineralised zone of disseminated sulphides up to 11m thick (refer Figure 6). Sulphides consist of pyrrhotite, pentlandite, gersdorffite and chalcopyrite. Minor arsenical sulphides were also observed. A third, less common, style of mineralisation is represented by nickel-copper-arsenic veins.

## **Drilling**

The resource drill holes at the Lainejaur project (refer Figure 7) were all diamond holes completed by the previous operator Blackstone Minerals Inc in 2007 and 2008. Within the Mineral Resource area, a total of 28 holes define the deposit, with most of the deposit drilled at hole spacings of 25m to 50m on 100m spaced cross sections.

Collar surveys from the Blackstone drilling programs were completed by contract or company surveyors using a Differential GPS system. Berkut has identified the collar locations of 10 holes either with hand held GPS or with differential GPS.

Down hole surveys were carried out on the majority of holes and were taken typically at 50m intervals. Either a Reflex tool or a Maxibor tool was utilised.

## **Sampling and Sub-Sampling Techniques**

Samples in mineralised zones were always sampled to reflect geological contacts or sulphide zonation, so intervals are highly variable. In the massive sulphide zones, sample intervals are typically 0.4-0.6m in length. In the disseminated sulphides, intervals were typically 0.5m-1.0m in length. Half core samples were taken using a diamond saw.

## **Sample Analysis Method**

Samples were prepared and assayed at contract laboratories using peroxide fusion and ICP-AES (Ni, Co, Cu, S) and fire assay with ICP (Au, Pt, Pd) techniques. The Blackstone drilling included a QAQC protocol involving the use of certified standards and blanks for which the results are reported to be satisfactory. Berkut has completed qualitative checks of a number of intervals using a portable XRF instrument which were also satisfactory.

## **Estimation Methodology**

The deposit was estimated using inverse distance squared ("ID2") grade interpolation of 0.5m (MS) and 1.0m (DS) composited data within wireframes prepared using logged geology (MS) or 0.2% Ni (DS) envelopes. Interpolation parameters were based on the geometry of each zone. No high-grade cuts were applied.

The block dimensions used in the model were 25m EW by 25m NS by 10m vertical with sub-cells of 6.25m by 6.25m by 0.3125m.

Bulk density determinations from drill core were used to assign density to the model. Values used in the resource estimate were 4.1t/m<sup>3</sup> for MS, 3.3t/m<sup>3</sup> for DS and 3.0t/m<sup>3</sup> for unmineralised gabbro host rocks.

## **Mineral Resource Classification**

The entire deposit has been classified as Inferred Mineral Resource. Although continuity of geology and mineralisation appears to be excellent, the nominal 100m cross section spacing is not sufficient to confidently define grade trends within the deposit. At a 0.5% Ni cut-off, the entire massive sulphide domain is included in the reported Mineral Resource. No blocks in the disseminated domain are above 0.5% Ni.

The deposit appears to have potential for underground mining if sufficient tonnage can be confirmed to develop the project.

## **Cut-off Grades**

The Mineral Resource has been reported at a 0.5% Ni cut-off based on assumptions about economic cut-off grades for underground mining.

At a 0.5% Ni cut-off, the entire massive sulphide domain is included in the reported Mineral Resource. No blocks in the disseminated domain are above 0.5% Ni.

## **Metallurgy**

Metallurgical test-work was not undertaken by Berkut or previous operators at the project. Historic production has demonstrated that nickel recovery can be expected from conventional processing methods.

## Modifying Factors

No modifying factors were applied to the reported Mineral Resource estimate. Parameters reflecting mining dilution, ore loss and metallurgical recoveries will be considered at a more detailed stage of project evaluation.

## Next Stages

Modelling of the profile E MLEM anomaly suggests a body with similar conductance to the main Lainejaur ore body at approximately 250m depth with an easterly dip, and as such a fixed loop EM survey is planned to be undertaken in March or April 2018.

## Competent Persons Statement

The information in this document that relates to exploration and drill results is based upon information compiled by Mr Neil Inwood, a full-time employee of Berkut Minerals Limited. Mr Inwood is a Fellow of the AUSIMM and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the December 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr Inwood consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

The information in this document that relates to the 2018 Mineral Resource for Lainejaur based upon information compiled by Mr Paul Payne, an employee of PayneGeo, and a Director of Berkut Minerals Limited. Mr Payne is a Fellow of the AUSIMM and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the December 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr Payne consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

## Notes

*<sup>1</sup> For full details of exploration results refer to ASX announcements including on 18 May, 15 June, 7 July, 26 July, 31 July 2017 and 23 October 2017. Berkut Minerals is not aware of any new information or data that materially affects this information. Other than as specified in this announcement and the mentioned announcements, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, Exploration Target or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.*

Detailed information on all aspects of Berkut Minerals projects can be found on the Company's website [www.berkutminerals.com.au](http://www.berkutminerals.com.au).

For further information please contact

Berkut Minerals Limited

Neil Inwood, Managing Director



Appendix One | JORC Code, 2012 Edition | 'Table 1' Report

**Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g 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.</li> </ul>	<ul style="list-style-type: none"> <li>The historical diamond core samples were cut in half then processed at the ALS Chemex facility in Pitea Sweden then sent to ALS Chemex in Vancouver for analysis for Ni, Cu, Co, Ag and S by peroxide fusion and ICP-AES.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>All historical drill samples are understood to be from diamond core. Blackstone diamond core was nominally of BQ size.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Detailed drill recovery information is not available; comments in reporting indicates good recovery. Visual inspection of core at the Mala archive indicates generally high recovery.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>The core was completely logged for lithology, mineralisation style and sulphides. Geotechnical data is understood not to have been collected.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Core was longitudinally cut using a diamond saw with one half submitted for sampling. This method is industry standard practice.</li> <li>The samples were reportedly shipped to ALS Chemex in Pitea for crushing and pulverisation, with pulps then shipped to ALS Chemex Vancouver for analysis.</li> <li>Samples were crushed to better than 70% -2mm. A split off 250 gram sample was then pulverized to better than 85% passing 75 microns. These pulps were then shipped to Vancouver, B.C by commercial aircraft for completion of analytical work. Pulps and rejects were returned to BLV and stored in Vallen, Sweden.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Standards and blanks were reportedly submitted for every 20 samples and inserted at the end of mineralised zones. Field duplicates were not taken.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Blackstone diamond core was analysed by ALS Chemex in Vancouver, B.C. with analysis for Ni, Cu, Co, Ag and S by peroxide fusion and ICP-AES; x Pt, Pd and Au by fire assay and ICP-AES finish (30 gram nominal sample weight). Post 2007 a nominal 1:20 standard and blank submission regime was reportedly implemented.</li> <li></li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Berkut used a handheld XRF to spot analyse select core with empirically equivalent nickel and base metal results noted with respect to the documented assays.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Blackstone collars were recorded against the RT90 2.5 gon V grid system.</li> <li>Field verification of the Blackstone collars showed accuracy to within 1-10m using against a handheld Garmin GPS.</li> <li>Only national based topographic control (~5m accuracy) has been used to date.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>The Blackstone drill spacing was nominally 100m x 50m and is considered appropriate for an Inferred Mineral Resource.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Based upon the current understanding of the mineralisation geometry, the historical drilling generally intersected the mineralisation at close to right angles to the mineralisation.</li> <li></li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>The Blackstone drill core samples were reportedly kept with Blackstone's possession until transport to the laboratory</li> <li></li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Berkut has checked geological logging and sample depth intervals to the recorded database for 4 holes, no material issues were identified.</li> <li>Berkut has conducted spot checks of significant assay intervals against original laboratory pdf files; no material issues were identified.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section).

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Lainejaur licences (Lainejaur nr 20 – 41.2km<sup>2</sup>, granted 28 June 2017 for an initial 3 year period) held 100% by Berkut Minerals Ltd. There is a small area classified as a nature reserve in the eastern portion of the licence: this is distant from the currently known mineralisation.</li> </ul>
Acknowledgment and appraisal of exploration by other parties.	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Summary exploration work undertaken on the project is shown below:</li> <li>1940 -Boliden- drilling and discovery of the Lainejaur deposit</li> <li>1941-1945-Boliden - underground development and commercial nickel and copper production</li> <li>2002-NAN- ground mag and EM surveys; 2 diamond drill holes</li> <li>2007-2009 - Blackstone - ground and bore hole EM surveys and diamond drilling 43 holes totalling 12,733 metres. NI43-101 resource estimate.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The nickel-copper sulphide deposit is hosted at the base of a lopolithic gabbro-diorite intrusion which grades upwards from gabbro to diorite to granodiorite. The gabbro portions (which host nickel-copper sulphides) consist of fine-grained olivine gabbro,</li> <li>Mineralisation includes massive sulphide ore near the basal portions of the intrusion</li> <li>Disseminated sulphides are also present grading upward into the gabbro host from the massive sulphides.</li> <li>Less common is nickel-copper-arsenic veins.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>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:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>This information is included in a previous release to ASX dated 24 July 2017.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Length weighted averaging is used for material intervals.</li> <li>Metal equivalents are not used</li> </ul>

Criteria	Explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• 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').</li> </ul>	<ul style="list-style-type: none"> <li>• Based upon the current understanding of the mineralisation geometry, the historical drilling generally intersected the mineralisation at close to right angles to the mineralisation. Reported intervals are expected to be close to true thicknesses.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>• Included in body of report.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>• 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.</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Significant intercepts have been previously reported for the historical drill data.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Meaningful observations included in the body of the report</li> <li>• FLEM geophysical survey – Twin transmitter loops, 800m x 800m powered by 5Kw/300v Zavet GTE-4M transmitter. 100m line spacing with 50m stations. Sensor - SQUID (Supracon Jessy Deep HTS) paired with EMIT SMARTEM-24 receiver. Base frequency of 1HZ, 3 component (XYZ) data.</li> <li>• DHEM survey - Twin transmitter loops, 800m x 800m powered by 5Kw/300v Zavet GTE-4M transmitter.. Down stations at 10m intervals with 2.5-5m infill. Sensor – EMIT Digi-Atlantis with EMIT SMARTEM-24 receiver. Base frequency 1 Hz, 3 component (UVA) data.</li> <li>• MLEM survey – 200m x 200m loop single turn. Zavet GTE-4M 5kW/300V transmitter (38A). EMIT SMARTEM-24 receiver. Station spacing 100m. Base frequency 1 hz, 3 component (XYZ) data.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>• The company plans to compile historical production records and geophysical exploration results from the project and then carry out additional works as required.</li> </ul>

### JORC Table 1 Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Historic records were compiled from digital and hard copy records and loaded into a database via electronic capture.</li> <li>Validation included comparison of assay results to observed geology to verify mineralised intervals.</li> </ul>
Site visits	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>A site visit was undertaken by the Competent Person in 2017 to locate drill collars from previous drilling, review core from historic drilling and to confirm that no obvious impediments to future project exploration or development were present.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The confidence in the geological interpretation is considered to be good, with consistent mineralised structures defined by good quality drilling.</li> <li>The deposit consists of a moderately plunging, contact related zone of sulphide mineralisation which has been interpreted based on logging and assay data from samples taken at regular intervals from angled drill holes.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>The Lainejaur Mineral Resource area extends over a plunge length of 800m and has a vertical extent of 500m and commences 100m below surface.</li> </ul>
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>Inverse Distance Squared (ID2) was used to estimate average block grades based on 0.5m composites in the massive sulphide and 1.0m composites in the disseminated sulphide.</li> <li>Surpac software was used for the estimation.</li> <li>No high grade cuts were applied to composited data.</li> <li>The parent block dimensions used were 25m NS by 25m EW by 10m vertical with sub-cells of 6.25m by 6.25m by 0.3125m.</li> <li>Historical production records were available for previous mining and production grades are consistent with the estimated Mineral Resource.</li> <li>Previous resource estimates have been completed and compare well with the current estimate.</li> <li>No assumptions have been made regarding recovery of by-products.</li> <li>No estimation of deleterious elements was carried out. Values for Ni, Cu, Co, Au, Pt, Pd and S were interpolated into the block model.</li> <li>An orientated ellipsoid search was used to select data and was based on geometry of the deposit and drill hole spacing.</li> <li>An initial interpolation pass was used with a maximum range of 80m which filled 84% of blocks. The remaining blocks were filled by expanding the search range to 160m and reducing the minimum samples to one.</li> <li>A minimum of 2 samples and a maximum of 24 samples was used for the first and second passes. A minimum of one sample was used for the third pass.</li> <li>Selective mining units were not modelled in the Mineral Resource model. The block size used in the model was based on drill sample spacing and lode orientation.</li> <li>Correlation between the main elements was analysed, but no assumptions of correlation were included in the modelling.</li> <li>The deposit mineralisation was constrained by wireframes constructed using logged geology for the MS, and a nominal 0.2% Ni cut-off for the DS. The wireframes were applied as hard boundaries in the estimate.</li> <li>For validation, trend analysis was completed by comparing the interpolated blocks to the sample composite data within 20m vertical intervals.</li> </ul>

Criteria	JORC Code explanation	Commentary
Moisture	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages and grades were estimated on a dry in situ basis. No moisture values were reviewed.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource has been reported at a 0.5% Ni cut-off based on assumptions about economic cut-off grades for underground mining. The MS is relatively insensitive to cut-off grade.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The deposit has previously been mined using small scale underground development. It is assumed that further underground mining is possible at the project.</li> <li>Portions of the deposit are considered to have sufficient grade and continuity to be considered for underground mining.</li> <li>No mining parameters or modifying factors have been applied to the Mineral Resource.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Metallurgical test-work was not undertaken by Berkut or previous operators at the project.</li> <li>Historic production has demonstrated that nickel recovery can be expected from conventional processing methods.</li> </ul>
Environmental factors or assumptions	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>The area is not known to be environmentally sensitive and there is no reason to think that approvals for mine development including the dumping of waste would not be approved.</li> <li>Numerous base metal and gold operations are present in this region of Sweden.</li> </ul>
Bulk density	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>Bulk density determinations were made on samples from drill core using the weight in air/weight in water method.</li> <li>Bulk density values used in the resource were 3.0t/m<sup>3</sup>, 3.30t/m<sup>3</sup> and 4.10t/m<sup>3</sup> for gabbro, disseminated and massive mineralisation respectively.</li> </ul>

Criteria	JORC Code explanation	Commentary
Classification	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>Mineral Resources were classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). The Mineral Resource was classified as Inferred Mineral Resource on the basis of data quality, sample spacing, and lode continuity.</li> <li>The entire deposit has been classified as Inferred Mineral Resource. Although continuity of geology and mineralisation appears to be excellent, the 100m cross section spacing is not sufficient to confidently define grade trends within the deposit.</li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>A documented audit of the Mineral Resource estimate was completed by Berkut.</li> </ul>
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>The Lainejaur Mineral Resource estimate is considered to be reported with a high degree of confidence. The consistent deposit geometry and continuity of mineralisation is reflected in the Mineral Resource classification. The data quality is good and the drill holes have detailed logs produced by qualified geologists.</li> <li>The Mineral Resource statement relates to global estimates of tonnes and grade.</li> <li>The deposit is not currently being mined. Production records are available for previous underground mining completed at the deposit.</li> </ul>