

# Skuterud Samples Return High Grade Cobalt | Up to 5,000ppm

## Highlights

- **High-grade cobalt in rock samples at Skuterud of up to 0.5% (5,000ppm) Co from handheld XRF**
- **Extensive historical workings identified at Skuterud**
- **Multiple parallel zones of mineralisation identified**
- **Drill permits applications in progress**

Berkut Minerals Limited ('Berkut') is pleased to announce that following recent field sampling and mapping, extensive historical workings over a 300m trend have been confirmed on Berkut's 100% owned Skuterud Project in Norway (refer Figures 1, 2 and 3).

Cobalt mineralisation (suspected to be fine grained disseminated cobaltite and accompanied by chalcopyrite) was identified in spoil samples directly adjacent to the workings. Average point readings of the handheld XRF analyser (refer Figure 1) indicate cobalt levels of up to 0.5% and 0.3% copper (refer Figure 3 and Table 1) with laboratory analysis of samples pending. (Note: handheld XRF analysis should only be taken as indicative of mineralisation until laboratory analysis has been received).

The workings occur in three main clusters with a general NNW trend extent of 300m with a sub-vertical dip. The geometry of the historic workings indicates that two parallel mineralised trends (eastern and western) are present, being analogous with the nearby historic Skutterud Cobalt Mine, approximately 600m to the south (refer Figure 2).

Detailed geological mapping and sampling of the workings and nearby outcrop is planned over the next couple of months whilst Berkut awaits approval of drill permit applications. Drilling is being scheduled for the 4<sup>th</sup> Quarter of 2017, pending approvals. Analysis of geophysical data is ongoing, and further geophysical surveys will likely be undertaken prior to drilling to further define targets.

Berkut's Managing Director, Neil Inwood, commented *"The interpreted strike length and dual-zones of mineralisation evident through the historical workings, along with the indicative cobalt grades of spoil samples, is highly encouraging. Further field work will enable us to finalise drill positions to target potential depth and strike extensions of the mineralisation."*

## Fast Facts

Shares on Issue: 47.3M  
Market Cap: ~\$9.3M  
Cash (current): ~\$4.3M

## Board and Management

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

Ben Cairns, General Manager  
Aaron Bertolatti, Company Secretary

## Company Highlights

- 100% ownership of European cobalt projects in Norway and Sweden
- Historic mined cobalt grades up to 2%
- Ground position of approx. 39km<sup>2</sup> (3,900ha) covering historic cobalt mine workings
- Strategically located within proximity to operating cobalt refineries and European markets
- Tight capital structure | Only 31.1M non-escrowed shares
- Well funded | Strong cash position

## Registered Office

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**Figure 1 | Field Photographs: Showing extent of historic workings at Skuterud and spot handheld XRF analysis of disseminated sulphide mineralisation**



### Skuterud Project | Norway (100% owned)

- Region lends its name to one of the main cobalt minerals, Skutterudite
- Granted licences over approximately 19km<sup>2</sup> and 6km trend
- Extensive historical workings over a NNW trend

The Skuterud Project currently consists of seven granted licences (Figure 2) in southern Norway, within 100km of the Oslo port. The area contains one of the most famous, historic cobalt mines in the world, which lends its name to one of the main cobalt ore minerals, Skutterudite. The area was mined throughout the 18th and 19th Centuries, during which time it supplied much of the world's cobalt and employed thousands of people.

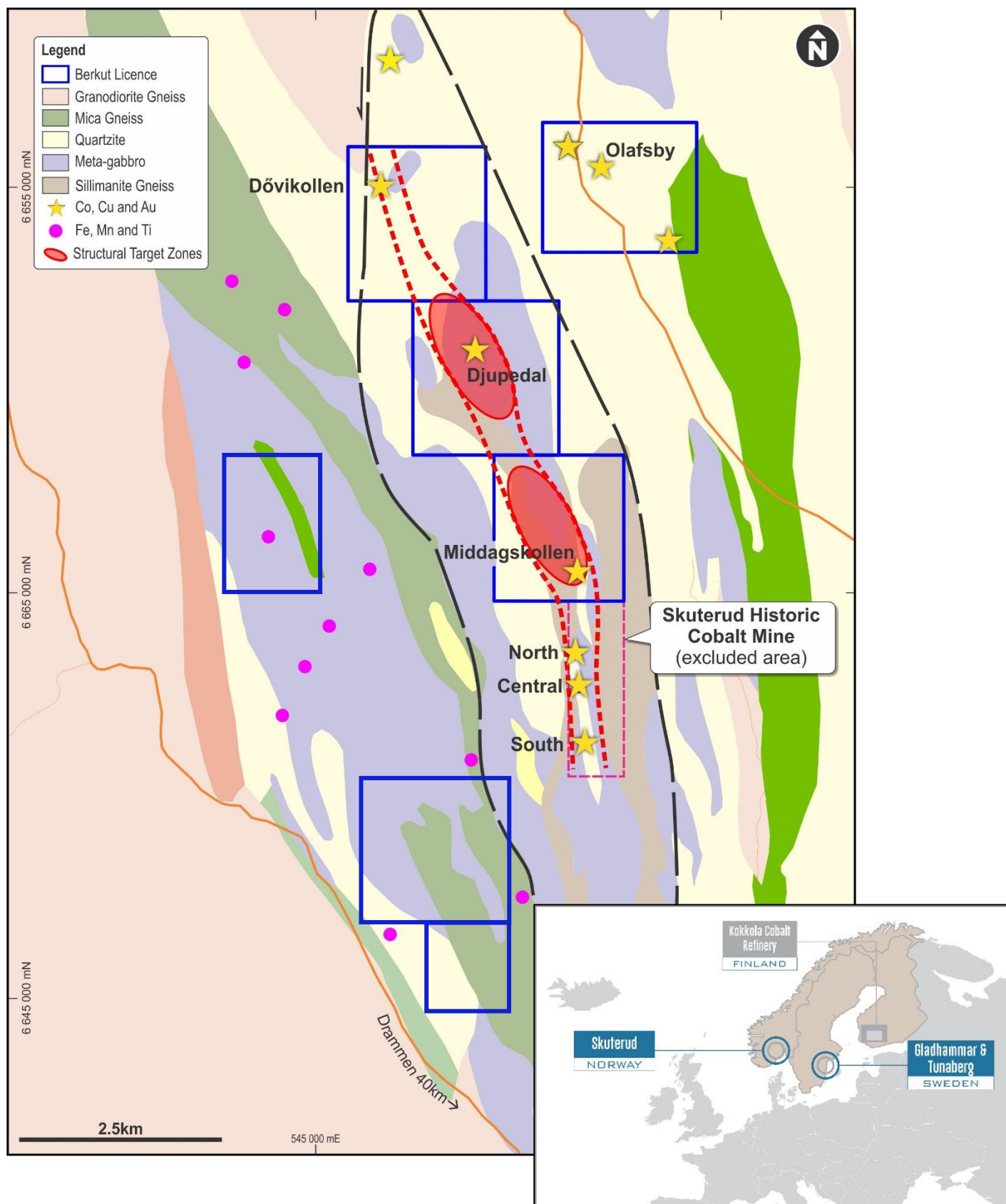
The Skutterud cobalt occurrences are related to meta-sedimentary, sulphide-rich schist zones, so-called 'fahlbands'. The most extensive sulphide-rich zone has a length of 12km along strike, and is up to 100-200m wide. The cobalt mineralisation is, to a large degree, characterised by impregnation of cobaltite, glaucodote, safflorite and skutterudite, which partly occur as enrichments in quartz-rich zones and lenses.

Historical workings with an approximate north-south trend extent of 300m were identified within the southern granted licences, with an eastern and western zone indicated. The vast majority of the strike of old workings remains open and untested by modern exploration methods.

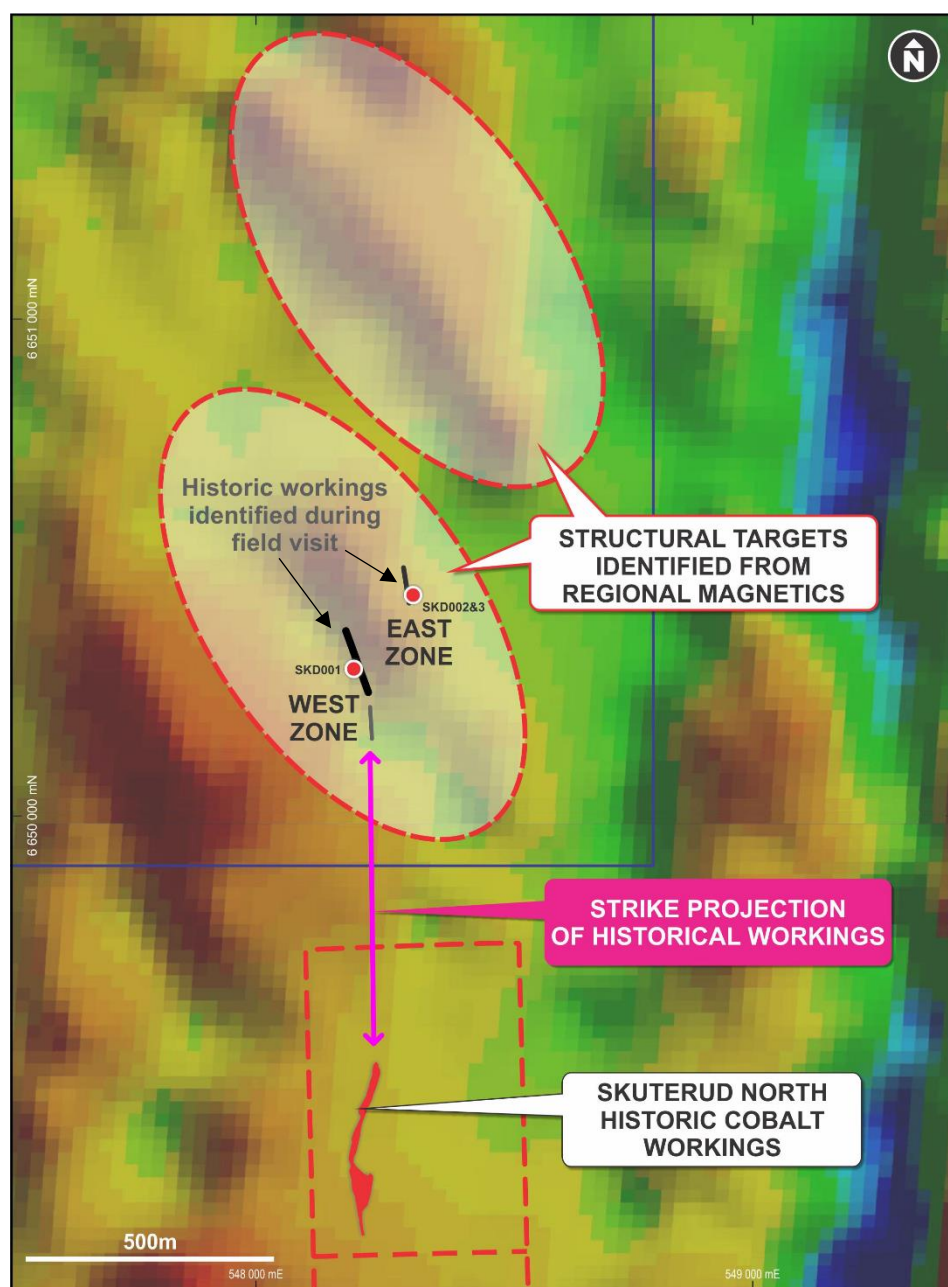
Table 1 summarises the results of the in-field hand-held XRF analysis of two spoil samples taken at the base of the historical workings. The samples were taken to highlight potential mineralisation styles near the historical workings as safe access to the workings themselves was not possible on the day. Multiple readings were taken over the face of the samples to minimise sampling bias. Chalcopyrite was observed alongside interpreted fine grained disseminated cobaltite which is analogous with the historic Skutterud Cobalt Mine (refer Figure 2).

**Table 1 | Skuterud Hand Samples – Hand-held XRF Readings**

Skuterud Hand Samples   Hand-held XRF Readings							
Element	Reading 1	Reading 2	Reading 3	Reading 4	Average (%)	Easting (UTM Z32)	Northing (UTM Z32)
Sample SKD002 - Amphibolite sample taken from spoil pile at base of historical workings							
Co	1.05	0.08	0.39	0.77	<b>0.57</b>	548,310	6,650,442
Cu	0.37	0.06	0.10	0.01	<b>0.14</b>		
Sample SKD003 - Quartzite sample taken from spoil pile at base of historical workings							
Co	0.97	0.03	1.02	0.07	<b>0.52</b>	548,310	6,650,442
Cu	1.05	0.01	0.17	0.01	<b>0.31</b>		



**Figure 2 | Skuterud Project Area: Showing historic cobalt workings (yellow stars)**



**Figure 3 | Skuterud South Project Area: Showing historic cobalt workings and the mineralisation trends of the nearby historic Cobalt Skuterud Mine** (note: the Skuterud Cobalt Mine is not on Berkut's Licence.)

### Competent Persons Statement

The information in this announcement that relates to Exploration Results, Mineral Resources or Ore Reserves for the European cobalt projects is based on information compiled by Mr Ben Cairns, who is a member of the Australasian Institute of Geologists. Mr Cairns is a full time employee of Berkut Minerals and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a competent person as defined in the 2012 Edition of the "Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves" (JORC Code). Mr Cairns consents to the inclusion in this announcement of the matters based upon the information in the form and context in which it appears.

## 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>	<p>Where reporting historical production grades or quantities this ASX Release refers to historical production records from the Norwegian Geological Survey (NGU), available from <a href="http://geo.ngu.no/kart/mineralressurser/">http://geo.ngu.no/kart/mineralressurser/</a> for the Skuterud project.</p> <p>Berkut undertook field investigations in June 2017. As the faces of the historical workings were not accessible, selected hand samples of nearby spoil material were selected to highlight mineralisation styles in the area. A hand held XRF machine (Niton XL3t) was used to take spot readings of hand samples. Multiple readings were taken on the best exposed sample face to assist in minimising sampling bias.</p>
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>	No drilling results have been included in this release.
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>	No drilling results have been included in this release.
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. The total length and percentage of the relevant intersections logged.</li> </ul>	Not Applicable
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>	As the faces of the historical workings were not accessible, selected hand samples of nearby spoil material were selected to highlight mineralisation styles in the area. Laboratory analysis of the samples are pending.
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> </ul>	<p>Laboratory analysis of the samples are pending.</p> <p>The Niton XL3t hand held XRF was used to obtain field samples and was tested against calibration standards for cobalt and copper, iron and nickel prior to the commencement of field work. These calibrations indicated that cobalt readings often exhibited a step change, but that high-grade readings were reproducible.</p>

Criteria	JORC Code explanation	Commentary
	<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>	Copper, nickel and iron readings performed closely to the calibration standards. It is noted that further matrix matched cobalt calibration may be required for the deposits in question. Approximately 60 second readings were taken with 20s per filter pass.
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	Not applicable as drilling results have not been included in this release.
Location of data points	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	Samples were recorded against the ETRS1989 UTM Z32 grid system. Only national based topographic control (~5m accuracy) has been used to date.
Data spacing and distribution	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <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></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	Spoil samples were taken from the base of historical workings. They indicate the style of mineralisation present but are not indicative of mineralisation thickness or continuity.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	Not applicable as drilling results have not been included in this release.
Sample security	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	Samples were directly posted to the ALS laboratory in Stockholm.
Audits or reviews	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	No audits or reviews of sampling completed to date.



## 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>	The Skuterud licences are held 100% either directly by Berkut or through its 100% subsidiary Kobald Mineral Holdings Pty Ltd.
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>	The company is in the process of assessing exploration by other parties by compiling and assessing historical records.
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	The cobalt occurrences at Skuterud in Norway are related to meta-sedimentary, sulphide-rich schist zones, so-called 'fahlbands'. The most extensive sulphide-rich zone has a length of 12km along strike, and is up to 100-200m wide. The rock type hosting the sulphides may be characterized as a quartz-plagioclase-tourmaline-phlogopite-sulphide gneiss or schist. The cobalt mineralisation is, to a large degree, characterised by impregnation of cobaltite, glaucodote, safflorite and skutterudite, which partly occur in quartz-rich zones and lenses.
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: <ul style="list-style-type: none"> <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> </ul> </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>	No drill hole results are included in the reported exploration results. Material information is included in the body of the report.
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>	Not applicable
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>	No drill hole results are reported
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>	Included in body of report as deemed appropriate by the competent person for the stage of exploration the company is currently at.
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> </ul>	Not applicable – only spot samples have been reported. These indicate the style of mineralisation present but are not indicative of mineralisation thickness or continuity.



Criteria	Explanation	Commentary
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>	Meaningful observations included in the body of the report
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>	<p>The company plans to compile historical production records and exploration results from the Projects and then carry out geological mapping and sampling</p> <ul style="list-style-type: none"> <li>The company is in early stages of assessment of the project and is not in a position to provide detailed diagrams showing potential extensions at this time.</li> </ul>