

## **ASX ANNOUNCEMENT**

ASX Code: HGM ACN: 062 879 583

5 APRIL 2018

# HGM DELIVERS MATERIAL EXPLORATION TARGET DEMONSTRATING POTENTIAL FOR A GLOBALLY SIGNIFICANT COBALT PROJECT

- An Initial Exploration Target\* has been established for the flagship Nöckelberg Cobalt, Copper and Nickel Prospect;
- Exploration Target\* supported by whole rock assay results, soil geochemical assessment and detailed geological modelling completed by HGM;
- A comprehensive drilling program at Nockelberg is scheduled to commence in Q3, CY18;

High Grade Metals Ltd (ASX: HGM) ("HGM" or the "Company") is pleased to deliver its initial Exploration Target\* for its flagship Nöckelberg Cobalt, Copper and Nickel Project ("Nöckelberg" or "Prospect") in Austria. The Exploration Target\* supports the company's goal to explore for a globally significant cobalt deposit (see Appendix 1).

\*The potential quantity and grade of the Exploration Target is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of Mineral Resource.

Table 2: Nöckelberg Exploration Target\* dated 30 March 2018

Area	Volume (m³)	Tonnage Range (Mt)	Co Range	Cu Range	Ni Range
Upper Layer	4,635,000	11 – 16 million	0.004 - 0.686%	1.23 – 7.82%	0.018 - 3.48%
Bottom Layer	11,290,000	26 – 39 million	0.004 - 0.686%	1.23 – 7.82%	0.018 - 3.48%
Total	15,925,000	37 – 55 million	0.004 - 0.686%	1.23 – 7.82%	0.018 - 3.48%

## High Grade Metals Managing Director & CEO Torey Marshall said:

"The material Exploration Target for Nockelberg supports our view that the Company's portfolio presents a significant opportunity to participate in the European battery metals market, and will be tested with a comprehensive drilling program in 2018"

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ASX code: HGM

Company Secretary: David Palumbo



## Nöckelberg Cobalt, Copper and Nickel Prospect

The flagship Nöckelberg Prospect sits within the broader Leogang Exploration Area which is located approximately 3 km west of Leogang (population circa 3,200) and 11 km west of Saalfelden (population 16,000) in the District of Zell am See, Federal State of Salzburg. The Leogang Exploration Area (shown in Figure 1) comprises 30 Freischürfe and covers a total area of approximately 12 km², including the historical Nöckelberg and Leogang mine sites.

Nickel and cobalt were mined in the region from the mid-16th century when Leogang was famed for the diversity of its mineralogy and rich ore. At various times in its past, cobalt, nickel, copper and silver have been mined at Leogang. However, historical mining records are incomplete and unreliable; although it is clear that a mineralised body has been exploited over a considerable period of time.



Figure 1: The Leogang Exploration Area



## **Exploration Target**

The Exploration Target is presented in Table 2.

### Tonnage Range

The range in potential volumes of rock, for the high and low side tonnage estimates of the Exploration Target were based on detailed geological modelling (ASX Release dated 21 March 2018) and geochemical results (ASX Release 27 March 2018).

The geological modelling was focussed on two target dolomite horizons referred to as the top and bottom layers per Figure 2 below. Based on historic information it is possible (see Table 1 for detailed explanation), these stratigraphic units are the historical mineralisation hosts.

Further, reconnaissance soil geochemical surveys above what would be the bottom layer showed anomalous results and thus further supporting the potential mineralisation in the bottom layer and its inclusion in the Exploration Target assessment.

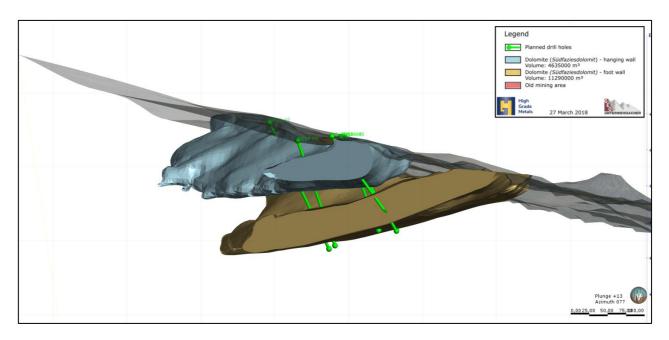


Figure 2: Geological modelling showing 3D projections of two target zones and planned drill holes

The geological modelling revealed the main target dolomite horizon (see Figure 2) is either duplicated or split. For modelling purposes, the Company has assumed they are split into two layers. The geological modelling used to estimate potential volume of the target bodies uses historic information and interpretation in addition to new information and interpretation gathered/performed by the Company and its consultants (see ASX release 21 March 2018). The top



layer (lower end) has a volume of 4,635,000m3 and the bottom layer (top end) has a volume of 11,290,000m3. To compute a tonnage range, a specific gravity of 2.9 was assumed and a range of +/- 20% has been applied to the results to estimate a Low Case and High Case.

**Table 3: Nockelberg Exploration Target tonnage estimates** 

Area	Estimated Volume	SG	Estimated	Low Case	High Case
Upper Layer	4,635,000m <sup>3</sup>	2.9	13.4Mt	10.8Mt	16.1Mt
Bottom Layer	11,290,000m <sup>3</sup>	2.9	32.7Mt	26.2Mt	39.3Mt
Total	15,925,000m <sup>3</sup>	2.9	46.1Mt	37.0Mt	55.4Mt

## Grade Range

The entirety of the reconnaissance geochemical data, which was used to establish ranges of appropriate potential grade, was presented in an ASX release dated 27 March 2018. The presentation of the range in grades has been determined based on this information only. As such, no historical results have been included or integrated in this Exploration Target assessment (see JORC Table 1). This range was used as the benchmark representative sample of potential grades, that may be encountered, based on their representation of historical baseline mineralisation

**Table 4: Whole Rock Dump Sample Assay Results** 

		GPS-Punkte			Cu <sup>(1)</sup>	Ni <sup>(2)</sup>	Co <sup>(2)</sup>
SampleNr	x	у	z	Kommentar	%	%	%
1000001	-49615.694	255026.743	1362.494		-	0.083	0.039
1000002	-49368.53	255017.58	1310		-	0.658	0.261
1000003	-49280.838	255062.456	1311.746		-	0.027	0.015
1000004	-49252.741	255048.837	1305.904	Ottenthaler dump	-	0.083	0.058
1000005	-49252.741	255048.837	1305.904	Ottenthaler dump	-	0.025	0.009
1000007	-49252.741	255048.837	1305.904	Ottenthaler dump	-	0.057	0.03
1000008	-49252.741	255048.837	1305.904	Ottenthaler dump	1.68	0.5	0.375
1000009	-49252.741	255048.837	1305.904	Ottenthaler dump	-	0.018	0.004
1000010	-49252.741	255048.837	1305.904	Ottenthaler dump	7.41	0.772	0.436
1000011	-49252.741	255048.837	1305.904	Ottenthaler dump	1.37	0.695	0.59
1000012	-49252.741	255048.837	1305.904	Ottenthaler dump	2.52	0.6	0.277
1000014	-49252.741	255048.837	1305.904	Ottenthaler dump	7.82	0.581	0.293
1000015	-49252.741	255048.837	1305.904	Ottenthaler dump	2.84	0.761	0.32
1000016	-49252.741	255048.837	1305.904	Ottenthaler dump	1.65	0.699	0.428
1000017	-49252.741	255048.837	1305.904	Ottenthaler dump	4.74	1.085	0.686
				Standard	1.23	3.48	0.163
1000019	-49252.741	255048.837	1305.904	Ottenthaler dump	2.79	0.244	0.098
1000020	-49252.741	255048.837	1305.904	Ottenthaler dump	1.755	0.113	0.117
(1) Messmetho	Nessmethode: ME-OG62						
(2) Messmeth	ode: ME-ICP8	1					



This approach is consistent with the standards for modern data collection (with emphasis on acceptable QA/QC), and represents a conservative baseline given the sampling locations. Therefore, in the absence of drill hole information, it is a reasonable method for estimating potential grade for inclusion in an Exploration Target. The table below presents the results of this analysis.

**Table 5: Mineralised Grade from Dump Samples** 

Mineral	Mineralised Samples	Low Case	High Case
Cobalt	18	0.004%	0.686%
Copper	11	1.37%	7.82%
Nickel	18	0.018%	3.48%

## **Program to Test Exploration Target**

The proposed exploration program will acquire additional geochemical and geophysical data followed by drilling to test the Exploration Target presented (from same collar locations – see Figure 3). The drilling is planned to be spaced approximately 150m apart and is scheduled to be undertaken in the 2018 Austrian summer with its expected completion in Q3, CY2018.

The proposed locations, shown on Figure 3, are subject to confirmation from regulatory bodies and landholder access agreements. As such, they are regarded as preliminary and subject to change.

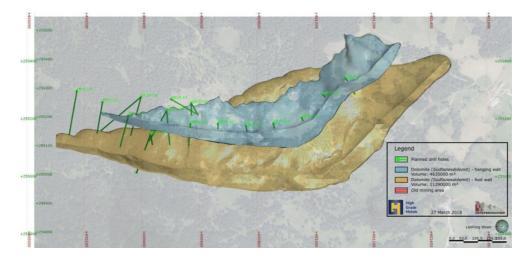


Figure 3: Geological modelling showing the planned drilling at the Nöckelberg Prospect



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## **Competent Persons Statement**

The information in this report that relates to the Exploration Target and the Exploration Results underlying the geochemical results is based on, and fairly represents, information and supporting documentation compiled under the supervision of Mr Torey Marshall, the Managing Director and CEO of HGM. Mr Marshall is a competent person who is a member of the Australian Institute of Mining & Metallurgy. Mr Marshall 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 2012 edition of the JORC Code. Mr Marshall consents to the inclusion of the matters based in this ASX Release on his information noted in the form and context in which it appears.

## About High Grade Metals Ltd

High Grade Metals (ASX: HGM) is an Australian mineral exploration company with a portfolio of brown fields cobalt, copper and gold assets. The company's major projects are all located in mining friendly Austria, which covers an area of about 84,000 km<sup>2</sup> across Central Europe. The highly experienced management aims to grow the value of HGM's project portfolio to benefit shareholders by leveraging innovation and maximizing value of the assets through systematic exploration and teamwork. The dynamic two-year exploration and development program, focused on discovering, then defining resources, with a view to moving quickly into production, underpins the Company's business strategy.

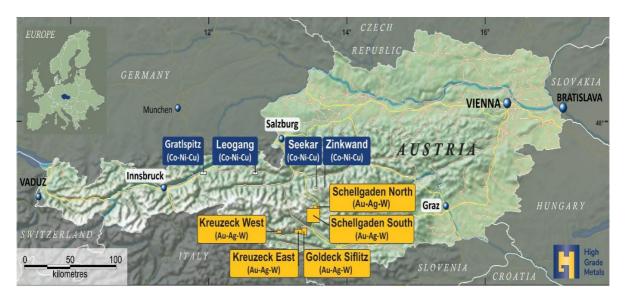


Figure 4. Location of High Grade Metals' Projects within Austria



## Appendix 1: World Mine Production and Reserves

	2016 Mine Production (t)	2017 Mine Production (t)	Reserves <sup>1</sup>
United States	690	650	23,000
Australia	5,500	5,000	1,200,000
Canada	4,250	4,300	250,000
Congo	64,000	64,000	3,500,000
Cuba	4,200	4,200	500,000
Madagascar	3,800	3,800	150,000
New Caledonia	3,390	2,800	-
Papua New Guinea	2,190	3,200	51,000
Philippines	4,100	4,000	280,000
Russia	5,500	5,600	250,000
South Africa	2,300	2,500	29,000
Zambia	3,000	2,900	270,000
Other countries	7,600	5,900	560,000
Total	111,000	110,000	7,100,000

Source: U.S. Geological Survey, Mineral Commodity Summaries, January 2018

 $<sup>^{\</sup>mathrm{1}}$  The worldwide Reserve estimated by the U.S. Geological Survey may not be a JORC-compliant Resource



## The JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>No historic procedures or flow sheets were sighted that explain the historic drilling and sampling processes completed at any of the mines within the portfolio described.</li> <li>Historical data referenced is contained in old reports, largely publicly accessible within the Austrian data system provided by the relevant government department or over the internet.</li> <li>The Company has assumed that all reported occurrences/assays are representative of technology available at the time but no reliance has been put on it, nor is any of it regarded as 'industry standard' under any modern code.</li> <li>No reference to sampling/analytical method, applicability or procedures were documented in any documentation referenced to the satisfaction of the Company.</li> <li>Channel sampling (133 samples) in the Schellgaden area comprised: making two parallel incisions with an hand-held electric diamond rock saw, about 3cm apart and about 2cm deep from top of the face to the bottom (depending on the age of the stope between 1.50 and 1.80, in rare cases over 2m, and where it exceeded 2.5 to 3m sampling was split into an upper and lower portion). The next step was to chisel the sample – wall rock and ore off the face collecting it in a sample bag. The cuts were always vertical to bedding and the stratiform ore layers. Samples and sample location were marked accordingly. Once sampling was completed the channel was measured and lithologies mapped: total length of channel, length of hanging wall, of the ore and of the foot wall (if wall rock was part of the channel). This allowed for a later calculation of a factor of ore dilution used to get the actual grade of each sampled ore body. It was during this mapping process that the frequent difference in wall rock lithologies was noted, leading to the multi-layer gold-horizon model for the Schellgaden mine channel sampling and 4 drillholes in the area of the Schellgaden mine.</li> <li>After Argosy left the project, a single 295m hole was drilled in 19</li></ul>
Drilling techniques	<ul> <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>	Drilling was not referenced in any results mentioned in this release as the Company was not satisfied with the information available. There are reported diamond core holes (size to be verified), at the Schellgaden and Goldeck-Siflit properties.     In the period 1995 to 1997, Argosy Minerals planned and executed the drilling of 4 diamond holes on the Schellgaden North property, adjacent to the historic mine.     No drilling results have been sighted for the Leogang Exploration Area  MODERN
		Drilling in the Leogang Area will comprise diamond drilling predominant likely of a HQ size, to obtain representative samples of target stratigraphy testing and to increase the geological understanding of the area.



Criteria	JORC Code explanation	Commentary
		The company will put in place a current JORC compliant process for this drilling to enable it to competently report on future results.
Drill sample recovery	<ul> <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> <li>No drilling results were reported in this release, and no historic drilling from the key 1995 programs is available for further analysis (including a forma assessment on recovery.</li> <li>No drilling results have been sighted for the Leogang Exploration Area</li> <li>MODERN PROGRAM</li> <li>The Company is seeking to verify some aspects of historical drilling undertaker at Goldeck-Siflitz and Schellgaden</li> </ul>
Logging	<ul> <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>	No satisfactory records of logging and sampling have been satisfactorily verified by the Company at this time.     No Resource estimate, mining or metallurgical study is discussed in this release.     No drilling results have been sighted for the Leogang Exploration Area     MODERN PROGRAM
		<ul> <li>The Company is seeking to verify logging completed at Schellgaden and Goldec-Siflitz</li> <li>Whole rock geochemical samples were described in terms of lithology prior to being sent for destructive analysis, and photographed</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <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> <li>No drillcore was reported in this release</li> <li>For Schellgaden, all samples were sent initially to the Laboratory of Geosciences at the University of Salzburg then cores were cut in half paralle to axis, followed by a detailed continuous description of geological features by the project manager/chief geologist, and sample intervals were determined based on lithologies and mineralization; each sample (core &amp; channel) crushed by a jaw crusher, reducing size to &lt;2mm, followed by putting the crushed homogenized sample through a sample splitter, and repeating the process until 100-150g sample was obtained, which was then ground for about one hour in an agate mill, then sent to Bondar-Clegg, N Vancouver, B.C. for geochem "gold plus "34" analysis. Only duplicates 'taken randomly' are reported in historic documentation</li> <li>No QA/QC measures were satisfactorily identified by the Company at this time.</li> <li>The bulk of reported samples, based on historical references, is classed as a rock chip sample</li> <li>No satisfactory documentation with respect to sample sizes, methodology or use of blanks/duplicates has been sighted</li> <li>No drilling results have been sighted for the Leogang Exploration Area</li> </ul>
		<ul> <li>MODERN</li> <li>The Company is seeking to verify sub-sampling techniques and sample preparation that may have been adopted at the Schellgaden and Goldeck Siflitz projects</li> </ul>



	Criteria	JORC Code explanation	Commentary
J	Quality of assay data and laboratory tests	<ul> <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> <li>No satisfactory description of analytical method is available for most of the samples</li> <li>With respect to Schellgaden, the type of assay performed by a recognised laboratory in Canada is deemed appropriate, though the procedures in terms of blanks, duplicates and standards, do not meet current industry practice. It is recognised as an appropriate test that was routinely completed by company's at the time.</li> <li>No geophysical or geochemical instruments are reported in this release</li> <li>No QA/QC procedures were adequately documented in historical drilling across the Company portfolio</li> <li>No drilling results have been sighted for the Leogang Exploration Area</li> <li>MODERN PROGRAM</li> <li>The Company is in the process of verifying the quality of assay data and laboratory tests used on certain programs at Schellgaden and Goldeck-Siflitz</li> </ul>
	Verification of	The verification of significant intersections by either	<ul> <li>The results of soil and whole rock analysis used current quality control procedures including standards, blanks and duplicates which established an appropriate level of accuracy and precision</li> <li>HISTORICAL</li> </ul>
	sampling and assaying	<ul> <li>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> <li>No Drilling has been reported in this release, only rock chip samples.</li> <li>Paper records were translated to English (where they first were German), and otherwise reports were available written in English</li> <li>No documentation of primary data, data entry procedures, data verification or storage information has been sighted</li> <li>No adjustments were made to any of the historical data presented though the Argosy channel sampling (Schellgaden and Goldeck) was described above. Typically, a length of channel was measured and logged lithologically to allow identification of known barren wallrock. The sample was essentially then crushed and split as per specification and processed as a single sample. After receiving this 'diluted' result, it was corrected by adjusting the grade over a prospective interval that had the barren portion removed (based on the lithological logging). This is particularly salient for Schellgaden where, for example only, a sample length of 2m, which might have 50cm above and below a zone of barren wall rock, may assay at 10g/t over 2m, would be corrected to be 20g/t over 1m by decreasing the overall length (removing wallrock in the calculation).</li> <li>No drilling results have been sighted for the Leogang Exploration Area</li> <li>MODERN PROGRAM</li> <li>The Company will verify, via repeat sampling, key channel and rockship samples reported historically at Schellgaden and Leogang, and augment with acquisition of new data (drilling).</li> <li>The Company has not verified any past mining results reported at Leogang, and will undertake a future program to do so.</li> </ul>



Criteria		JORC Code explanation	Commentary
Location data points	of :	<ul> <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> <li>No drillhole locations were reported as none were surveyed, only rockchip samples from localities were reported.</li> <li>Whilst no detailed map is presented in this release, the projection system is typically a Gauss Kruger for tenement maps</li> <li>No topographic map was presented in this release</li> <li>No drilling results have been sighted for the Leogang Exploration Area</li> <li>MODERN PROGRAM</li> <li>The Company will undertake a survey to properly locate any historic drilling or mining that may have been completed in any of the project areas.</li> <li>Topographic data available from the Austrian State was used (5m accuracy) to superimpose historic mine maps over and determine relative mining levels. The accuracy of the old maps and sections is indeterminable and it was fitted to the topographic map via observation of access shafts and adits. The fit between newly acquired data and historic data was quite strong.</li> <li>Drill hole (proposed) locations are based on the same data used in preparation and reporting of recent results and are based on the same EPSG 31252 (Austrian MGI (Ferro) Gauss Kruger Central Zone), used in all reported recent results.</li> </ul>
Data spo and distribu	acing ution	Data spacing for reporting of Exploration Results.     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.  Whether sample compositing has been applied.	<ul> <li>HISTORIC</li> <li>The historic rock chip sampling appears to have been completed on an irregular spacing within selected localities, almost certainly within old workings</li> <li>No satisfactory evidence of sample compositing being applied for any project at this time</li> <li>No Mineral Resource or Ore Reserve is reported in this release</li> <li>As a result of wide spacing and reliance on historical information that has yet to be replicated, it is considered only appropriate expressed as a broad exploration result with considerable additional work required</li> <li>MODERN PROGRAM</li> <li>The Company is assessing the appropriate data spacing and distribution at the Schellgaden and Goldeck-Siflitz projects in terms of channel sampling and drillholes completed. The drillhole program is sparse, and channel sampling requires subsurface mine surveys to properly locate</li> <li>The data spacing in geological interpretation was strong as it was based on historic field mapping and interpretation of airborne imagery. Cross sections generated by previous researchers on circa 250m spacing were also spliced into the interpretation and used as control on the interpretation. Interpolation in the construction of the bodies was created by the software package Leapfrog. The Company applied a hard cut off to the end of the interpreted body based on a lack of confidence deeper than circa 300m sub surface.</li> <li>Data spacing in the recent reconnaissance geochemical program was focussed and appropriate for testing hypotheses relating to potential mineralisation of the lower modelled layer, and in spot sampling waste dumps to determine possible characteristics of historically extracted material</li> </ul>



Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <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> <li>No documentation on the sampling of possible structures and any bias was sighted in any documentation for the Cobalt-Nickel-Copper properties, ir particular Leogang &amp; Nockelberg. The sampling is assumed to be biased to the lithologic host of mineralisation being a dolomitic unit. The controls on that unit are not discussed in detail in specific reference to historically sampled units</li> <li>In terms of Schellgaden historic workings and the Argosy exploration program (which includes work at Goldeck), the data was gathered across old 'mine faces', and drilling was completed roughly perpendicular to known mineralisation to accurately test the thickness of any mineralisation encountered. Post drilling analysis in particular did identify additiona structural controls to these areas which should be followed up in new programs.</li> <li>In terms of the Argosy program across Schellgaden and Goldeck in particular there appears to be no bias introduced in drilling.</li> <li>No drilling results have been sighted for the Leogang Exploration Area</li> <li>MODERN PROGRAM</li> <li>Adapting and testing the geological models resulting from historica exploration will be critical in ensuring that any potential mineralisation is tested properly at the material projects of Leogang and Schellgaden</li> <li>This modelling has been created to better understand the orientation of geological structures as part of program planning.</li> <li>The location of drillholes and anticipated trajectory is based on the geological modelling completed to date. Only drilling these holes will enable a further</li> </ul>
Sample security	The measures taken to ensure sample security.	discussion on orientation of data in relation to geological structure     HISTORICAL     Sample security measures during transport and sample preparation as unknown.     MODERN PROGRAM
		<ul> <li>Industry standard best practice will be applied for physical data capture</li> <li>This was not applicable for desktop geological modelling, geochemical data assessment and Exploration Target generation</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No details sighted on any previous sampling reviews or audits and none wer undertaken  MODERN PROGRAM  No audit has been undertaken, standards and procedures are reviewed on tri-weekly basis and their application to the program checked by compan representatives to ensure contractors adhere to minimum standards. Geological modelling was checked by multiple professional geoscientists for internal consistency and defensible peer review. Interpretation is subjective in all cases. Geochemical modelling was audited by multiple professional geoscientists for internal consistency against the results of the blanks, standards and duplicate inserted in the program as part of JORC standard QA/QC processes (n spurious or unacceptable results were detected)



## **Section 2 Reporting of Exploration Results**

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

Criteria	Commentary	
Mineral tenement and land tenure status	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	purchased with an undiluted 100% working interest are of the announcement dated 13 November 2017 or uary 2018  2.5% Net Smelter Royalty, payable up to a cumulative reached. After that, there are no royalties bediments to obtaining a licence to operate a suitable the area outside of standard landholder and regulator the relevant mining code
Exploration done by other parties	some projects precludes date  No substantive moderne 50 years), has been ide Copper exploration area studying the area and pa from "Die Kupfer-nicke Schwarzleo, Nockelberg" Argosy Minerals complet the Schellgaden and Gol confirmatory channel sa small drilling program), underground mine/work the actual presence of Where those samples we undertaken at Schellgade mineralised bodies in the Eurocan Mining Gmbh h drillholes in the 22 years The STB-1 vertical diamon completed in the right loo was higher, plus there we those recognised in histot there may be missed mexplored by a system interpretation of mineral up to 11 mineralised bod No historic exploration re (within the Leogang proj material extracted at the	esults have been referenced at the Nockelberg prospect ect area). Historic reporting has referened mineralised site and as such is artisanal mining. No systematic work mpleted outside of research work referenced in the



Criteria Commentary

Geology

Deposit type, geological setting and style of mineralisation.

- The project areas comprise a diverse set of deposit styles, principally located around the periphery of the Tauern window. The mid-Alpine sequences have been exposed to volcanic, hydrothermal, epithermal, epigenetic, structural and metamorphic/metasomatic events which has produced a polymetallic halo effect that is quite variable. In general Austria can be subdivided into major tectono-stratigraphic groupings, and particularly those that relate to the Tauern window, around which, the majority of mineralised bodies have been located to date (commodity agnostic). The northern part of the country is dominated by the Bohemian Massif, to the south the Molasse, Helvetic and Penninic zones. Material projects disclosed in this release are located in the northern calcareous zone (Leogang), and the southern Penninic zone (Schellgaden). Overall, the Tauern window is classed as a nappe structure, with significant N-S thrusting creating a series of sheets. Its these exposed sheets that carry mineralisation in certain areas around the window.
- The style of mineralisation at Leogang/Nockelberg relates to the host lithology, dolomites, and their proximity to hydrothermal fluids. Commonly these fluids will concentrate around zones of structural deformation and the main mineralised zone at Leogang is widely reported as proximal/part of a thrusted package, which is demonstrably occurring over a wide area of central Europe (regional structural history). Where previous research indicated structural controls on the mineralised unit, there is little regional exploration information to assess whether the geological setting of mineralisation can be broadened from the Leogang type section/deposit of upper Silurian to Middle Devonian age.
- The style of mineralisation at Schellgaden relates specifically to the genesis of the Penninian epi-metamorphic formations which are a volocanic, volcaniclastic and sedimentary origin which were deposited during the early Palaeozoic in a series of E-W basins. Due to volcanism active during the deposition, which effectively has produced rhythmic exhalites, a complex series of syngenetic stratabound ore deposits have been formed. Mineralisation is complex and regional overlapping of metallogenic processes often created a unique blend of ore types. For instance tungsten and antimony ores often have quite high gold grades and are ascribed to the earliest stage of metallogenic evolution. In terms of Schellgaden, it belongs to this exact system and timing of evolution. It is a stratabound series of mineralised units that tend to show much higher gold grades than other constituent commercial minerals (though does have Copper and Silver in some areas). This stratabound layering of mineralisation is horizontal to subhorizontal over large areas and currently the geological model suggests all the old mines and workings occur in this layer (locally the Kareck series within the Habach Formation). These flat lying beds are faulted and offset in the historic mine workings, though mineralisation is not controlled by faulting, only its current representation of prospective zones to be drilled.

Drill hole Information

- 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:
  - o easting and northing of the drill hole collar
  - elevation or RL (Reduced Level elevation above sea level in metres) of the drill hole collar
  - o 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.

#### HISTORIC

- No completed drilling has been reported in this release
- The Company is undergoing a process of resurveying and evaluation of limited drilling completed at Schellgaden and Goldeck-Siflitz. No drilling results or locations are known at the Leogang/Nockelberg area.
- The drilling information has been excluded due to the need to verify most aspects required under the JORC 2012 code with independent studies, and that it does not alter the presentation of data insofar as the properties concerned are 'exploration' and all require substantially more drilling than has been excluded. No representation on a Mineral resource can be inferred and the past completed programs were quite minor versus testing a broad suite of concepts that would otherwise demonstrate anything other than an area having 'potential'. As a result the exclusion is justified as not material, and its absence does not detract from the understanding presented.
- No drilling results have been sighted for the Leogang Exploration Area

#### MODERN

• The Exploration Target Assessment is based on the modelled location of potentially mineralised layers, and planned drill hole locations. The proposed locations, shown on maps are subject to confirmation from regulatory bodies and landholder access agreements. As such, they are regarded as preliminary and subject to change, so no further tabulated location information has been presented. In the event that a hole is drilled, then future Exploration Results would require disclosure of the appropriate location/orientation information. As such, this does not detract from the understanding of the Exploration Target



Criteria Commentary statement as it is based on a proposed exploration program Data HISTORICAL aggregationmethods In reporting Exploration Results, averaging techniques, maximum and/or minimum No aggregation methods are reported, or have been sighted for the Cobaltgrade truncations (eg cutting of high grades) and Nickel-Copper Properties, in particular the Leogang area cut-off grades are usually Material and should be No metal equivalence figures have been reported for any project in this release stated. The Argosy channel sampling (Schellgaden and Goldeck) was described above. Where agareagte intercepts incorporate short Typically a length of channel was measured and logged lithologically to allow lengths of high grade results and longer lengths of identification of known barren wallrock. The sample was essentially then crushed low grade results, the procedure used for such and split as per specification and processed as a single sample. After receiving aggregation should be stated and some typical this 'diluted' result, it was corrected by adjusting the grade over a prospective examples of such aggregations should be shown in interval that had the barren portion removed (based on the lithological logging). detail. This is particularly salient for Schellgaden where, for example only, a sample The assumptions used for any reporting of metal length of 2m, which might have 50cm above and below a zone of barren wall equivalent values should be clearly stated. rock, may assay at 10g/t over 2m, would be corrected to be 20g/t over 1m by decreasing the overall length (removing wallrock in the calculation). The results reported historically, and presented in this release are 'undiluted' (i.e. with wallrock calculation made), for the channel samples taken at Schellgaden and Goldeck. No drilling results have been sighted for the Leogang Exploration Area MODERN No metal equivalent values are reported in this release. The determination of Exploration Target grade is expressed in terms of the previously reported reconnaissance geochemical results. The range in grade referred to in this release is entirely related to that, and no historical information has been used. As a result, no aggregation methods or arbitrary cut offs were used, only the range of values quantitatively assessed. It is possible that this 'raw' presentation of data does introduce bias in terms of understating potential grades that may be present in the subsurface. Assuming the exploration program is executed, statistical analysis will be employed to determine appropriate future ranges to discuss in the context of an Exploration Target for the Nockelberg Prospect. Relationship between HISTORICAL These relationships are particularly important in mineralisation widths the reporting of Exploration Results. and intercept lengths If the geometry of the mineralisation with respect No drilling reported, no mineralisation widths and intercepts from drillholes any to the drill hole angle is known, its nature should any project referred to in this release. be reported. The widths/thickness of any mineralised layer reportedly present or mined in the If it is not known and only the down hole lengths Leogang-Nockelberg area is not known. are reported, there should be a clear statement to In the Argosy channel sampling broadly undertaken across a large number of this effect (eg 'down hole length, true width not sites (but where specifically applicable to the Schellgaden and Goldeck projects); the samples were taken from the top of a mineralised face in an old addit/working/stope, to its base. This corresponds to a perpendicular channel sample which is representative of the overall thickness of a mineralised body being sampled. The thickness of channel samples taken varied from tens of centimetres (quite thin), to 3 metres (quick thick). Significant variation in the thickness of zones was observed during due diligence and as such the true thickness of any layer, at any given point, cannot be reliably estimated at this time No drilling results have been sighted for the Leogang Exploration Area MODERN PROGRAM The modern resampling and resurveying of the mine areas in all projects will allow a better understanding of the true geometry of the potentially mineralised bodies present, therefore improve drill planning such that it can optimally intersect a target The geological modelling is designed to orient the geological structures in preparation for drilling planning to ensure intercepts are, within the boundaries of interpretation, likely to be as orthogonal to target units as possible

The Exploration Target assessment is based on the geological modelling completed which is a 'best guess' mathematical interpolation of data collected at surface. The complete lack of drill hole data and nature of an Exploration



Criteria Commentary Target statement means that there is no certainty on the relationship of any mineralisation to drill hole angle, thicknesses, or clearly, grade. This statement is based on a future program, to be undertaken and completed in the Austrian summer of 2018, and is not based on any quantitative data recovered as a result of any drilling. Diagrams Appropriate maps and sections (with scales) and Refer to Figure 1 for tenure location tabulations of intercepts should be included for No drilling is reported in this release, and no resource or discovery is reported in any significant discovery being reported These this release should include, but not be limited to a plan view of The proposed exploration program, which is the basis for the Exploration Target, drill hole collar locations and appropriate sectional does allow the creation of appropriate maps and sections that clearly show the views proposed location of drillholes, and projected path of drillholes with respect to the target layers. Balanced reporting Where comprehensive reporting of all Exploration Representative reporting of the range of results found in literature currently Results is not practicable, representative reporting available to the Company has been presented in the release. This includes the of both low and high grades and/or widths should highest and lowest grades available from rockchip samples across 8 main project be practiced to avoid misleading reporting of areas and 50+ old mines and workings. The spot nature of rockchip samples, lack Exploration Results. of documentation, lack of drillholes, variable thickness of key zones as observed, and lack of modern exploration generally is appropriately reported. These areas can, at best, be described as being broadly 'prospective', but none have had modern techniques and rigor applied. No drilling results have been reported Results for sampling reported historically at what the Company believes to be a material property, and focus of exploration at Leogang/Nockelberg is shown below. (reported in a UTM WGS84 location) A summary of results from channel sampling completed by Argosy at what the Company believes to be a material property and focus of exploration at Schellgaden is shown in Appendix 3 Easting Northing Sample Co (%) Ni (%) Cu (%) Referen 9 1.55 2.19 Haditsch No inferences are made from the geological modelling outside of the observation that the mine appears to have had a limited extent versus the target horizon which appears to have hosted mineralisation and its possible separation into two bodies that will need to be further tested via geophysics and geochemistry ahead  $\,$ of drilling. The entirety of reconnaissance geochemical data, which was used to establish ranges of appropriate potential grade, was presented in an ASX release dated 27-3-2018. The presentation of a range in grades has been determined on the basis of this information only. No historical results have been included. The reader should be aware this may result in understating a potential grade as the basis of the whole rock sampling is 'discarded' material as opposed to 'in situ' material. The range in potential volumes of rock, for the high and low side tonnage estimates of the Exploration Target were based on the geological modelling. The minimum exploration target is defined by reducing the tonnage estimate generated from the geological modelling by 20%. The maximum exploration target is defined by increasing the tonnage estimate generated from the geological modelling by 20%. The drilling program is designed to test the Top Layer and the Bottom Layer by pattern drilling on approximate 150m spacing. Assuming the drillholes do penetrate both layers based on the modelling, they represent a fair 'minimum' and 'maximum' tonnage target. The Exploration Target is based on a very limited amount of qualitative (historical) data and relies heavily on interpretations derived from that data. Effectively, no 'modern' exploration data is available for the Nockelberg Prospect, meaning that the Exploration Target for the Prospect is based entirely on reconnaissance work completed by the Company, and a future program, subject to significant uncertainty and may not result in any significant mineralisation being reported in 2018 after drilling. Other substantive Other exploration data, if meaningful and All substantive exploration information has been reported at this time for all the exploration data material, should be reported including (but not

limited to): geological observations; geophysical

survey results; geochemical survey results; bulk

The Company is undertaking a detailed review of the Schellgaden project in light

of the historic work completed which includes a historic NI43-101 (completed by



Criteria Commentary

samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.

- an underlying vendor and does not meet current code requirements), a historic prefeasibility study, and preliminary metallurgical testing. This cannot be reported at this time as significant elements to the reports and assumptions need to be verified or updated. This information, if proven to be accurate or currently acceptable, could be material in the future.
- The geological modelling reveals two units which could host mineralisation. The
  modelling further suggests that the old mine area, based on historic maps and
  sections, might be of limited extent. Further work will be undertaken to
  understand potential rock volumes, which forms the basis of the Exploration
  Target which has been completed.
- The Exploration Target Statement for the Leogang Area (Nockelberg Prospect) is conceptual in nature in terms of both potential grade and potential size. Further, its uncertain if future exploration as detailed in this release, will result in any discovery which leads to the declaration of any Mineral Resource as defined by the JORC Code (2012)

Further work

- The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).
- Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.
- The Company has prepared a 2 year program with the specific intention of advancing the understanding of any potential mineralisation to be substantial enough to be proven through drilling as a resource at the Leogang/Nockelberg and Schellgaden areas. As such a combined circa \$4.1m program across the material projects has been preliminarily designed to:
  - Survey main underground mines and addits via Laser, complete topographic surveys of the surface to enable final drill planning;
  - Complete core/RC drilling at the Leogang/Nockelberg and Schellgaden areas to prove the existence of a resource that could be extended;
  - Complete additional regional/local geochemical and geophysical surveys to assist in proving direction of extension of any mineralised body/unit;
  - Complete an updated prefeasibility study, inclusive of metallurgical studies, and resource modelling where a mineralised body can be elevated to a Mineral Resource under the JORC (2012) requirements. The Company believes that by concentrating on the Leogang/Nockelberg and Schellgaden areas, this could be forthcoming quite quickly.
- The Company will undertake metallurgical test work, environmental baseline studies and various engineering studies should the early stage drilling program result in the discovery of potentially economic mineralisation
- Further work will include the continuing assembly of, and translation of (where appropriate), all historic information that can be found on the projects
- The geological modelling reveals two units which could host mineralisation. The
  modelling further suggests that the old mine area, based on historic maps and
  sections, might be of limited extent. Further work will be undertaken to
  understand potential rock volumes, which together with the geochemical
  reconnaissance survey results provides a basis for an Exploration Target
  assessment
- Drior to drilling the Mockelherg prospect the Company will need to undertake

Disclaimer: Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are hot limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the Company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.