

Concentrate Leach Recoveries of over 96% achieved at RPM

High-grade gold with high gold recoveries at RPM lays a solid foundation for improved economics in the Phase 2 Scoping Study

Highlights

- Outstanding metallurgical results demonstrate gold recoveries of over 96% through the leach circuit at the RPM North Deposit;
 - The average head grade of the RPM metallurgical composite was 1.34 g/t Au. The overall average tail grade achieved from the composite was less than 0.15 g/t Au.
- The tail grades achieved at RPM of less than 0.15 g/t Au are very encouraging and have resulted from optimization of the process flowsheet and test work parameters since testing commenced on greater Estelle samples. Further test work will be undertaken at head grades that are in line with the expected process plant feed grades emanating from the Phase 2 Scoping Study, due later this year.
- The flow sheet for the test work comprises conventional flotation concentrate followed by fine grind cyanide leaching.
- Test work continues across all the Estelle Gold Trend deposits for inclusion in the PFS due late 2023, which will include the RPM North, RPM South, and the Korbel Deposits.
- RPM continues to deliver thick high-grade interceptions with RPM-008 recently returning 140m @ 6.5 g/t Au (*ASX Announcement: 8 August 2022*) following on from the previous announced RPM-005 discovery hole of 132m @ 10.1 g/t Au (*ASX Announcement: 11 October 2022*).
- Continuous flow of drill results from the ongoing Korbel and RPM programs to be reported throughout the year, as assay results become available from the laboratory.

Nova CEO, Mr Christopher Gerteisen commented: “The new metallurgical test work from the RPM Deposit at Estelle continues to demonstrate encouraging gold recoveries on the high-grade deposit using composite samples of only 1.34 g/t. These results from RPM are a significant improvement on the positive results already achieved from the Korbel Deposit and harmonized with the existing flowsheet (*ASX Announcement: 5 May 2021*). The consistently low tail grades achieved in test work at RPM will be carried through into the project studies and evaluations.

Metallurgical test work continues to provide confidence with improved high recovery expect achieve CAPEX and OPEX savings in fine grinding and leaching circuits.

The Phase 2 Scoping Study is a further snapshot in time and further test work and trade off studies will optimize capital, operating costs, recoveries and operability to enable the Company to select the



optimum route for the project to make the most money and demonstrate the highest NPV in the PFS, with ABH Engineering and Whittle Consulting working in tandem to find the optimum.”

Nova Minerals Limited (Nova or the Company) (ASX: NVA, OTC: NVAAF, FSE: QM3) is pleased to advise that it has received highly encouraging results from its first phase metallurgical test work on mineralization from its high-grade RPM North Deposit in Alaska.

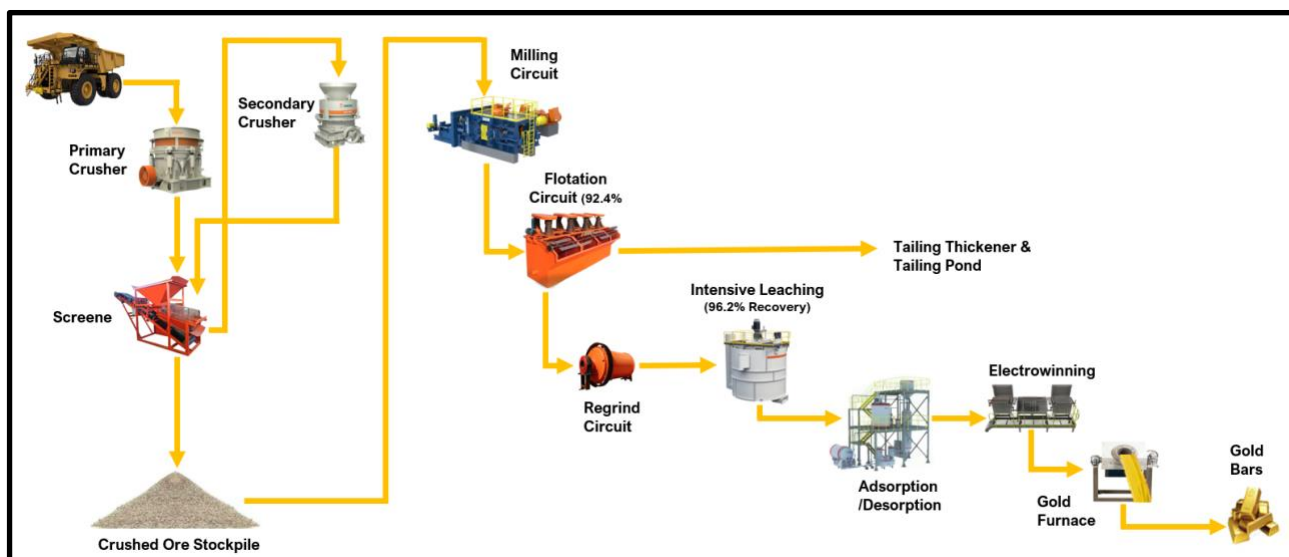


Figure 1. Simplified RPM process flow sheet

Table 1. Metallurgical result calculation

Flotation				Leach		Overall Recovery
P80	<u>Composite</u> Average Feed Grade	Conc Grade	Recovery	Regrind P80	Recovery	
µm	Au (g/t)	Au (g/t)	Au (%)	µm	Au (%)	Au (%)
73	1.3 <i>As per Table 2</i>	8.7	92.4	16.0	96.2	88.9

Leach

Tests were conducted at Bureau Veritas Vancouver to determine the potential for intensive leach of gold contained in flotation concentrate. Results were outstanding with 96.2% of gold recovered. Concentrate leach recovery was calculated by Bureau Veritas based on gold recovered into solution and gold left in solid tailings. Relatively minor losses can be expected from the electrowinning circuit.

Flotation

Tests were conducted at Bureau Veritas Vancouver to determine the potential for flotation to concentrate gold. Results were outstanding with 92.4% of gold recovered into a concentrate with 14.3% of the flotation feed mass. A high flotation concentration ratio is important as it allows fine grinding and intensive leaching of a small flotation concentrate, at a reasonable cost.



Test Work

Flotation and leach recoveries were 92.4% and 96.2% respectively. Combined Flotation and leach recovery is 88.9% using 73 microns in flotation and 16 microns in leaching. Minor losses could be expected

Table 2. RPM Samples collected for Flotation/Leach

Hole_ID	Sample_ID	From_m	To_m	Au_Ppm	Rock Type
RPM-001	B712938	224	227	1.43	Hornfels
RPM-002	B713971	50	53	1.32	Hornfels
RPM-002	B713995	108	111	4.10	Intrusive
RPM-002	B714005	132	135	1.10	Intrusive
RPM-004	B714393	297	300	1.20	Hornfels
RPM-004	B714399	312	315	1.10	Hornfels
RPM-005	B714488	68	71	1.84	Hornfels
RPM-005	D885043	197	200	2.08	Intrusive
RPM-006	D885186	77	80	1.81	Intrusive
RPM-006	D885198	99	102	2.08	Intrusive

Table 3. RPM Drillhole Locations

Hole_ID	UTM_E	UTM_N	ELEV (m)	EOH (m)	AZI	DIP	Zone	Assay Results
RPM-001	501926	6848902	1736	379	135	-45	North	ASX : 9 September 2021
RPM-002	501929	6848901	1738	369	100	-70	North	ASX : 9 September 2021
RPM-004	501928	6848902	1736	463	170	-70	North	ASX : 18 October 2021
RPM-005	501929	6848903	1738	459	170	-45	North	ASX : 11 October 2021
RPM-006	501929	6848901	1737	431	155	-80	North	ASX : 18 October 2021

For further information regarding Nova Minerals Ltd please visit the Company's website
www.novaminerals.com.au

This announcement has been authorized for release by the Executive Directors.

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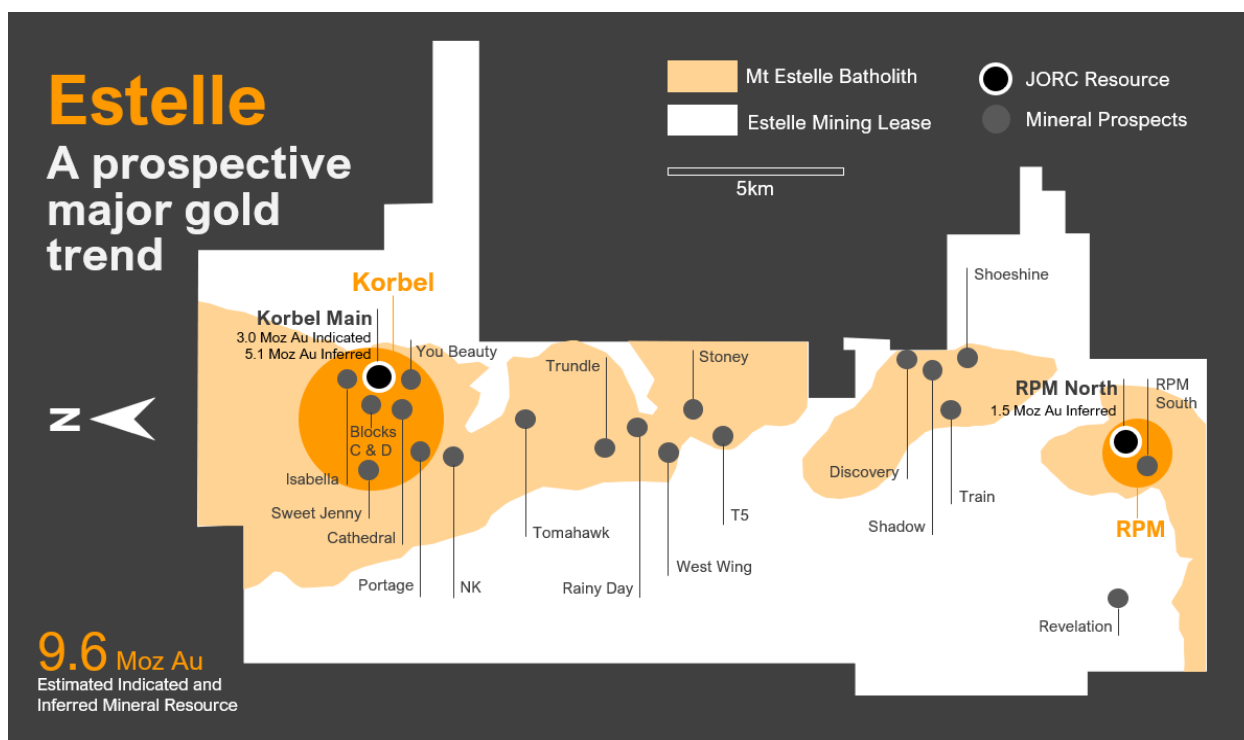
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About Nova Minerals

Nova Minerals Limited (ASX: NVA) vision is developing North America's next major gold trend, Estelle, to become a world-class, tier-one, global gold producer. The company is focused on exploration in Alaska's prolific Tintina Gold Belt, a province which hosts a 220 million ounce (Moz) documented gold endowment and some of the world's largest gold mines and discoveries including Victoria Gold's Eagle Mine and Kinross Gold Corporation's Fort Knox Gold Mine. The Company's Estelle Trend development is a 35km long corridor of 21 identified gold prospects bracketed by the Korbel Project in the north and the RPM Project in the south. Currently, these two flagship projects have a combined total estimated JORC gold resource of 9.6 Moz (3 Moz Indicated and 6.6 Moz Inferred) and are host to extensive resource development programs.

Additionally, Nova holds a substantial interest in NASDAQ-listed lithium explorer Snow Lake Resources Ltd (NASDAQ: LITM) and a holding in Asra Minerals Limited (ASX: ASR), a gold exploration company based in Western Australia.



Competent Person Statement

Mr Dale Schultz P.Geo., Principle of DjS Consulting, who is an independent consulting geologist of a number of mineral exploration and development companies, reviewed and approves the technical information in this release and is a member of the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS), which is ROPO accepted for the purpose of reporting in accordance with ASX listing rules. Mr Schultz has sufficient experience relevant to the gold deposits under evaluation to qualify as a Competent Person as defined in the 2012 edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Schultz is also a Qualified Person as defined by S-K 1300 rules for mineral deposit disclosure. Mr Schultz consents to the inclusion in the report of the matters based on information in the form and context in which it



appears.

Forward-looking Statements and Disclaimers

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Although all reasonable care has been undertaken to ensure that the facts and opinions given in this Announcement are accurate, the information provided in this Announcement (including information derived from publicly available sources) may not be independently verified.

Appendix 1: JORC Code, 2012 Edition – Table 1 Estelle Gold Project - Alaska

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• <i>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.</i> • <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> • <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> • <i>In cases where ‘industry standard’ work has been done this would be relatively simple (e.g. ‘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 Au that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i>	• Core is systematically logged from collar to EOH characterizing rock type, mineralization and alteration. Oriented core measurements are taken where appropriate. Geotechnical measurements such as recoveries and RQDs are taken at 10-foot (3.05 m) intervals. Samples are taken each 10 feet (3.05m) unless there is a change in lithology. In these cases samples are broken to lithologic boundaries. Samples are then half cut with one of the half cuts being sent to the ALS lab in Fairbanks Alaska for processing.
Drilling techniques	• <i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-</i>	• HQ diamond core triple tube, down hole surveys every 150 feet (~50m), using a Reflex ACT-III tool.



Criteria	JORC Code explanation	Commentary
	<i>sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i>	
Drill sample recovery	• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> • <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> • <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material</i>	• Core is processed in the Fairbanks ALS laboratory Core processing room. Recoveries were recorded for all holes, into a logging database to 3cm on a laptop computer by a qualified geologist using the drillers recorded depth against the length of core recovered. No significant core loss was observed. • Triple tube HQ to maximise core recovery. • No known relationship between sample recovery and grade. As no samples have been taken as yet, no assay results are reported, visual results only.



Criteria	JORC Code explanation	Commentary
Logger	• <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i> • <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i> • <i>The total length and percentage of the relevant intersections logged.</i>	Core logging is carried out by project partner qualified geologists using a project specific logging procedure. Data recorded includes, but is not limited to, lithology, structure, RQD, recovery, alteration, sulphide mineralogy and presence of visible gold. This is supervised by senior geologists familiar with the mineralisation style and nature. Inspection of the drill core by Nova Minerals Chief Geologist is monitored remotely using photographs and logs. Rock codes have been set up specifically for the project. Logging is to a sufficient level of detail to support appropriate Mineral Resource estimation and mining studies. • <i>Drill logging is both qualitative by geological features and quantitative by geotechnical parameters in nature. Photographs are taken of all cores trays, (wet) of whole core prior to cutting.</i>
Sub-sampling techniques and sample preparation	• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	• <i>Samples are taken each 10 feet (3.05m) unless there is a change in lithology. In these cases samples are broken to lithologic boundaries. Samples are then half cut with one of the half cuts being sent to the ALS lab in Fairbanks Alaska for processing. Three different types of SRM are inserted each 20 samples. Duplicates of the reject are taken each 20 samples. One blank is inserted each 40 samples. Data is plotted and evaluated to see if the samples plot within accepted tolerance. If any “out of control” samples</i>



Criteria	JORC Code explanation	Commentary
		are note, the laboratory is notified. For the ore-sorting program Tomra sent “Products” and “Waste” samples to Bureau Veritas for testing by Fire Assay using method code FA001
Quality of assay data and laboratory tests	• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i> • <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	• Samples are tested for gold using ALS Fire Assay Au-ICP21 technique. This technique has a lower detection limit of 0.001 g/t with an upper detection limit of 10 g/t. If samples have grades in excess of 10 g/t then Au-AA25 is used to determine the over detect limit. Au-AA25 has a detection limit of 0.01 g/t and an upper limit of 100 g/t. Three different types of SRM are inserted each 20 samples. Duplicates of the reject are taken each 20 samples. One blank is inserted each 40 samples. Data is plotted and evaluated to see if the samples plot within accepted tolerance. If any “out of control” samples are note, the laboratory is notified. Ore Sorting Bureau Veritas: FA001 -Nominal 40g charge analysed. Silver used as secondary collector, Au is determined with AAS finish. Nature of the sample and/or lower sample weights may compromise detection limits. Detection limits in ppm.



Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• Assay data intercepts are compiled and calculated by the CP and then verified by corporate management prior to the release to the public.
Location of data points	• 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. • Specification of the grid system used. • Quality and adequacy of topographic control.	• All maps and locations are in UTM grid (NAD83 Z5N) and have been measured by hand-held GPS with a lateral accuracy of ± 4 metres and a vertical accuracy of ± 10 metres.
Data spacing and distribution	• 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.	• Drill holes have been spaced in a radial pattern such that all dimensions of the resource model is tested. Future geo-stats will be run on the data to determine if addition infill drilling will be required to confirm continuity.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • 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.	• The relationship between the drilling orientation and the orientation of key mineralised structures has not been confirmed.
Sample security	• The measures taken to ensure sample security	• A secure chain of custody protocol has been established with the site geologist locking samples in secure shipping container at site until loaded on to aircraft and shipped to Tomar's testing Facility at Castle Hill Sydney, Australia by a recognised freight forwarder. Brent
Audits or Reviews	• The results of any audits or reviews of sampling techniques and data.	• No review has been undertaken at this time.



Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i> • <i>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.</i>	• The Estelle project is comprised of 450km² State of Alaska mining claims • The mining claims are wholly owned by AKCM (AUST) Pty Ltd. (an incorporated Joint venture (JV Company between Nova Minerals Ltd and AK Minerals Pty Ltd) via 100% ownership of Alaskan incorporate company AK Custom Mining LLC. AKCM (AUST) Pty Ltd is owned 85% by Nova Minerals Ltd, 15% by AK Minerals Pty Ltd. AK Minerals Pty Ltd holds a 2% NSR (ASX Announcement: 20 November 2017) Nova owns 85% of the project through the joint venture agreement. • The Company is not aware of any other impediments that would prevent an exploration or mining activity.
Exploration done by other parties	• <i>Acknowledgment and appraisal of exploration by other parties.</i>	• Geophysical, Soil testing, and drilling was completed by previous operators in the past. Nova Minerals has no access to this data.
Geology	• <i>Deposit type, geological setting and style of mineralisation.</i>	Nova Mineral is primarily exploring for Intrusion Related Gold System (IRGS) type deposit within the Estelle Project



Criteria	JORC Code explanation	Commentary
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: - easting and northing of the drill hole collar - elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar - dip and azimuth of the hole - down hole length and interception depth -hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• See Appendix 1 summary table of drill hole results.
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Widths are report as core length. Future true widths will be calculated by measuring the distance perpendicular to the dip of the mineralized zone on any given cross section that the intercept appears on. Two holes per section are required to calculate true thickness. No “Top Cap” has been applied to calculation of any intercepts. A “Top Cap” analysis will be completed during a future Resources Study and applied if applicable. Widths of intersection are calculated by applying a weighted average ($\text{Sum [G} \times \text{W]} / \text{Sum [W]}$) to the gold values and reported widths within any given intercepts. The CP will visually select the intercept according to natural grouping of higher-grade assays. Zones of internal dilution may vary depending on the CP discretion as to what is geologically significant. Sub intersection of higher grades within any given intercepts may be broken out if present.



Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • 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').	• See above
Diagrams	• 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.	• Plan view Map in Figure 1 shows the hole traces of the PAD3 drilling. Holes completed and / or in progress are also marked. • Cross Section in Figure 2 showing trace of Hole KBDH-001 and 002, R/C holes for 2019 Resource Drilling, and Outline of the Block Model • Figure 3 showing photos of QTZ-ASP sheeted Veins with grades for assay results • Figure 4 Regional Map of the Korbel Valley
Balanced Reporting	• 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.	• Does not apply. All Nova results have been disclosed to the ASX via news releases.
Other substantive exploration data	• 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.	• metallurgical flotation concentrate leach recovery test work carried out on composite sample comprised of selected average grade assay intervals from representative drill cores across the deposit (Table 1 and 2 of this document).
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.	• Diamond drilling is ongoing. Project planned is for up to 40,000 metres in 2020 and 80,000 metres in 2021.

