# OUTSTANDING DRILL RESULTS FROM NEW BELL 50 TARGET AT RENISON

Metals X Limited (**Metals X** or the **Company**) is pleased to advise it has received highly-encouraging results from exploration drilling of the conceptual Bell 50 target at the Renison Tin Operations (**Renison**) in Tasmania. Bell 50 is located down-plunge of the high-grade Area 5, which is currently in development. The drill results provide the potential for significant extensions of the orebody. Renison is 50%-owned by Metals X through the Bluestone Mines Tasmania Joint Venture.

# **HIGHLIGHTS**

- Five diamond drill holes for 1,772m completed testing the new Bell 50 target, with all holes intersecting tin (**Sn**) mineralisation.
- Outstanding intersections include (all true width);
  - > 10.3m at 7.65% Sn from 259.0m in hole U6681
  - 3.7m at 6.78% Sn from 223.2m in hole U6913
  - > 10.0m at 2.47% Sn from 203.0m in hole U6914
  - > 5.7m at 1.74% Sn from 255.1m in hole U6683
- The drill results are considered highly significant, providing the potential for a 200m down-plunge extension of the Area 5 mineralised system.
- Additional drill testing is being planned for the new region in the second half of 2019.
- Grade control and resource definition drilling programs continue at Renison with two drilling rigs in operation, in Area 5 and Leatherwood respectively.

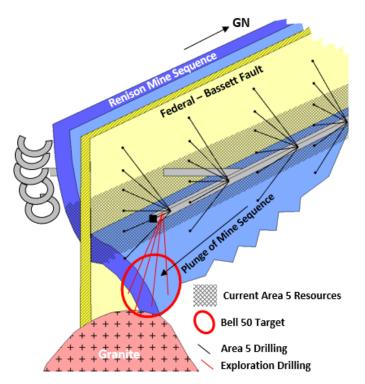


FIGURE 1 – SCHEMATIC SHOWING THE POSITION OF THE BELL 50 EXPLORATION TARGET RELATIVE TO AREA 5

#### Managing Director, Mr Damien Marantelli, commented:

"These are outstanding results and continue to reinforce Renison as a world class tier-1 orebody with a long-term mining future.

"The Renison operation continues to hit its operational guidance and milestones. We are in the advanced stages of updating the resource and reserve estimates and developing a life-of-mine plan. This detailed work includes consideration of development plans to maximise the huge opportunity provided by the substantial high-grade mineralisation in Area 5. With the discovery of the new Bell 50 zone, this opportunity has further increased.

"We've already seen improved production after installing the ore sorters, and the highly successful 2018/19 drilling programs have underpinned the opportunity to continue progressively increasing production from Renison over the medium term through grade improvement, increased mining and processing rates and ongoing recovery improvement. I look forward to further updating the market on the Renison strategy in the near future."



### **DETAILS**

A total of 5 holes for 1,772m were drilled from the southern end of the 1140 HW Drill Drive to test the down-plunge extension of the host Mine Sequence rocks towards the modelled position of the Pine Hill Granite (Figures 1 & 2). This new region has been named Bell 50.

Hole U6681 intersected an outstanding 10.3m at 7.65% Sn within the No. 2 Dolomite (primary Area 5 host rock) in close proximity to the granite contact. The hole continued into the granite, but no significant assays were returned. Holes U6682 and U6913 also penetrated the granite with the later intersecting 3.7m at 6.78% Sn within the Red Rock Member of the Mine Sequence. A further outstanding intersection of 10.0m at 2.47% Sn was returned from hole U6914, also hosted within Red Rock Member. Full drilling results are presented in Table 1.

Hole	Northing	Easting	RL	Intercept (True Width)	From (m)	Dip	Azi
U6681	66201.3	44672.3	930.5	10.3m at 7.65% Sn & 0.13% Cu	259.0	-52.6	232.4
U6682	66259.3	44675.4	929.6	1.7m at 1.46% Sn & 0.01% Cu	245.1	-57.7	251.2
U6683	66324.0	44688.0	958.0	3.0m at 1.01% Sn & 0.06% Cu	213.0	-58.0	285.1
00003	66330.0	44666	921.0	5.7m at 1.74% Sn & 0.05% Cu	255.1	-58.0	285.1
U6913	66305.6	44690.5	942.8	3.7m at 6.78% Sn & 0.11% Cu	223.2	-61.0	276.5
U6914	66314.1	44679.1	968.7	10.0m at 2.47% Sn & 0.08% Cu	203.0	-55.21	277.2

TABLE 1: BELL 50 - EXPLORATION DRILL RESULTS - APRIL-MAY 2019

These Bell 50 drill results are considered highly significant and provide a potential for both a 200m down-plunge extension of the Area 5 mineralised system and very high tin grades, similar to the Area 5 high-grade zone.

Follow-up drill testing of the Bell 50 region is currently being planned for the second half of 2019.

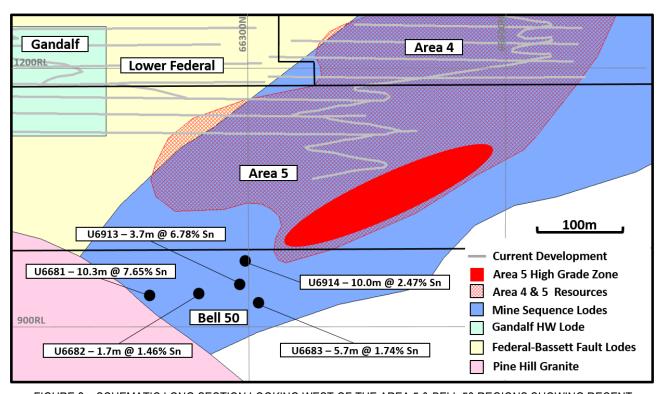


FIGURE 2 – SCHEMATIC LONG SECTION LOOKING WEST OF THE AREA 5 & BELL 50 REGIONS SHOWING RECENT EXPLORATION DRILL RESULTS



#### **ENQUIRIES**

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#### **COMPETENT PERSON'S STATEMENT**

The information in this report that relates to Exploration Results has been compiled by Mr. Simon Rigby B.Sc. (Hons), who is a member of the Australian Institute of Geoscientists. Mr Rigby is a full time employee of the Company and has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activities which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Rigby consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.



# **APPENDIX A**

# **JORC CODE, 2012 EDITION**

# JORC TABLE 1: THE INFORMATION IN THIS TABLE REFERS TO THE FOLLOWING PROJECTS AT THE RENISON TIN OPERATIONS: RENISON BELL, RENTAILS AND MOUNT BISCHOFF

# **SECTION 1: SAMPLING TECHNIQUES AND DATA**

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code Explanation	Commentary
Sampling techniques  Drilling techniques  Drill sample recovery	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</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 (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 gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> <li>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-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul> <li>Diamond Drilling</li> <li>The bulk of the data used in resource calculations at Renison has been gathered from diamond core. Three sizes have been used historically NQ2 (45.1mm nominal core diameter), LTK60 (45.2mm nominal core diameter) and LTK48 (36.1mm nominal core diameter), with NQ2 currently in use. This core is geologically logged and subsequently halved for sampling. Grade control holes may be whole-cored to streamline the core handling process if required.</li> <li>NQ and HQ core sizes have been recorded as being used at Mount Bischoff. This core is geologically logged and subsequently halved for sampling.</li> <li>There is no diamond drilling for the Rentails Project.</li> <li>Face Sampling</li> <li>Each development face / round is horizontally chip sampled at Renison. The sampling intervals are domained by geological constraints (e.g. rock type, veining and alteration / sulphidation etc.). Samples are taken in a range from 0.3m up to 1.2m in waste. All exposures within the orebody are sampled. A similar process would have been followed for historical Mount Bischoff face sampling.</li> <li>There is no face sampling for the Rentails Project.</li> <li>Sludge Drilling</li> <li>Sludge Drilling at Renison is performed with an underground production drill rig. It is an open hole drilling method using water as the flushing medium, with a 64mm (nominal) hole diameter. Sample intervals are ostensibly the length of the drill steel. Holes are drilled at sufficient angles to allow flushing of the hole with water following each interval to prevent contamination.</li> <li>There is no sludge drilling for the Rentails Project.</li> <li>There is no sludge drilling for the Rentails Project.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	<ul> <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>RC Drilling</li> <li>RC drilling has been utilised at Mount Bischoff.</li> <li>Drill cuttings are extracted from the RC return via cyclone. The underflow from each interval is transferred via bucket to a four tiered riffle splitter, delivering approximately three kilograms of the recovered material into calico bags for analysis. The residual material is retained on the ground near the hole. Composite samples are obtained from the residue material for initial analysis, with the split samples remaining with the individual residual piles until required for resplit analysis or eventual disposal.</li> <li>There is no RC drilling for the Renison Project.</li> <li>There is no RC drilling for the Rentails Project.</li> <li>Percussion Drilling</li> <li>This drilling method was used for the Rentails project and uses a rotary tubular drilling cutter which was driven percussively into the tailings. The head of the cutting tube consisted of a 50mm diameter hard tipped cutting head inside which were fitted 4 spring steel fingers which allowed the core sample to enter and then prevented it from falling out as the drill tube was withdrawn from the drill hole.</li> <li>There is no percussion drilling for the Renison Project.</li> <li>There is no percussion drilling for the Mount Bischoff Project.</li> <li>All geology input is logged and validated by the relevant area geologists, incorporated into this is assessment of sample recovery. No defined relationship exists between sample recovery and grade. Nor has sample bias due to preferential loss or gain of fine or coarse material been noted.</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>	<ul> <li>Diamond core is logged geologically and geotechnically.</li> <li>RC chips are logged geologically.</li> <li>Development faces are mapped geologically.</li> <li>Logging is qualitative in nature.</li> <li>All holes are logged completely, all faces are mapped completely.</li> </ul>

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Criteria	JORC Code Explanation	Commentary
Sub-sampling techniques	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul> <li>Drill core is halved for sampling. Grade control holes may be whole-cored to streamline the core handling process if required.</li> </ul>
and sample preparation	<ul> <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</li> </ul>	<ul> <li>Samples are dried at 90°C, then crushed to &lt;3mm. Samples are then riffle split to obtain a sub-sample of approximately 100g which is then pulverized to 90% passing 75um. 2g of the pulp sample is then weighed with 12g of reagents including a binding agent, the weighed sample is then pulverised again for one minute. The sample is then compressed into a pressed powder tablet for introduction to the XRF. This preparation has been proven to be appropriate for the style of mineralisation being considered.</li> <li>QA/QC is ensured during the sub-sampling stages process via the use of the systems of an independent NATA / ISO accredited laboratory contractor.</li> <li>The sample size is considered appropriate for the grain size of the material being sampled.</li> <li>The un-sampled half of diamond core is retained for check sampling if required.</li> <li>For RC chips regular field duplicates are collected and analysed for significant variance to</li> </ul>
	the material being sampled.	primary results.
Quality of assay data and laboratory	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	<ul> <li>Assaying is undertaken via the pressed powder XRF technique. Sn, As and Cu have a detection limit 0.01%, Fe and S detection limits are 0.1%. These assay methodologies are appropriate for the resource in question.</li> </ul>
tests	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading	<ul> <li>All assay data has built in quality control checks. Each XRF batch of twenty consists of one blank, one internal standard, one duplicate and a replicate, anomalies are re-assayed to ensure quality control.</li> </ul>
	<ul> <li>times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Specific gravity / density values for individual areas are routinely sampled during all diamond drilling where material is competent enough to do so.</li> </ul>
Verification of sampling and	The verification of significant intersections by either independent or alternative company personnel.	<ul> <li>Anomalous intervals as well as random intervals are routinely checked assayed as part of the internal QA/QC process.</li> </ul>
assaying	<ul> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic)</li> </ul>	<ul> <li>Virtual twinned holes have been drilled in several instances across all sites with no significant issues highlighted. Drillhole data is also routinely confirmed by development assay data in the operating environment.</li> </ul>
	protocols.	<ul> <li>Primary data is loaded into the drillhole database system and then archived for reference.</li> </ul>
	Discuss any adjustment to assay data.	<ul> <li>All data used in the calculation of resources and reserves are compiled in databases (underground and open pit) which are overseen and validated by senior geologists.</li> </ul>
		No primary assays data is modified in any way.



Criteria	JORC Code Explanation	Commentary
Location of data points	<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>All data is spatially oriented by survey controls via direct pickups by the survey department. Drillholes are all surveyed downhole, currently with a GyroSmart tool in the underground environment at Renison, and a multishot camera for the typically short surface diamond holes.</li> <li>All drilling and resource estimation is undertaken in local mine grid at the various sites.</li> <li>Topographic control is generated from remote sensing methods in general, with ground based surveys undertaken where additional detail is required. This methodology is adequate for the resource in question.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drilling in the underground environment at Renison is nominally carried-out on 40m x 40m spacing in the south of the mine and 25m, x 25m spacing in the north of the mine prior to mining occurring. A lengthy history of mining has shown that this data spacing is appropriate for the Mineral Resource estimation process and to allow for classification of the resource as it stands.</li> <li>Drilling at Mount Bischoff is variably spaced. A lengthy history of mining has shown that this data spacing is appropriate for the Mineral resource estimation process and to allow for classification of the resource as it stands.</li> <li>Drilling at Rentails is usually carried out on a 100m centres. This is appropriate for the Mineral resource estimation process and to allow for classification of the resource as it stands.</li> <li>Compositing is carried out based upon the modal sample length of each individual domain.</li> </ul>
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>Drilling intersections are nominally designed to be normal to the orebody as far as underground infrastructure constraints / topography allows.</li> <li>Development sampling is nominally undertaken normal to the various orebodies.</li> <li>It is not considered that drilling orientation has introduced an appreciable sampling bias.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>At Renison, Mount Bischoff and Rentails samples are delivered directly to the on-site laboratory by the geotechnical crew where they are taken into custody by the independent laboratory contractor.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>Site generated resources and reserves and the parent geological data is routinely reviewed by the Metals X Corporate technical team.</li> </ul>



# **SECTION 2: REPORTING OF EXPLORATION RESULTS**

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

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties	<ul> <li>All Tasmania resources are hosted within 12M1995 and 12M2006. Both tenements are standard Tasmanian mining leases.</li> </ul>
	<ul> <li>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>	No native title interests are recorded against the Tasmanian tenements.
		<ul> <li>Tasmanian tenements are held by the Bluestone Mines Tasmania Joint Venture of which Metals X has 50% ownership.</li> </ul>
		No royalties above legislated state royalties apply for the Tasmanian tenements.
		<ul> <li>Bluestone Mines Tasmania Joint Venture operates in accordance with all environmental conditions set down as conditions for grant of the mining leases.</li> </ul>
		There are no known issues regarding security of tenure.
Exploration done by other	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>The Renison and Mount Bischoff areas have an exploration and production history in excess of 100 years.</li> </ul>
parties	·	<ul> <li>Bluestone Mines Tasmania Joint Venture work has generally confirmed the veracity of historic exploration data.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Renison is one of the world's largest operating underground tin mines and Australia's largest primary tin producer. Renison is the largest of three major Skarn, carbonate replacement, pyrrhotite-cassiterite deposits within western Tasmania. The Renison Mine area is situated in the Dundas Trough, a province underlain by a thick sequence of Neoproterozoic-Cambrian siliciclastic and volcaniclastic rocks. At Renison there are three shallow-dipping dolomite horizons which host replacement mineralisation.</li> </ul>
		<ul> <li>Mount Bischoff is the second of three major Skarn, carbonate replacement, pyrrhotite-cassiterite deposits within western Tasmania. The Mount Bischoff Mine area is situated within the Dundas Trough, a province underlain by a thick sequence of Neoproterozoic-Cambrian siliciclastic and volcaniclastic rocks. At Mount Bischoff folded and faulted shallow-dipping dolomite horizons host replacement mineralisation with fluid interpreted to be sourced from the forceful emplacement of a granite ridge and associated porphyry intrusions associated with the Devonian Meredith Granite, which resulted in the complex brittle / ductile deformation of the host rocks. Lithologies outside the current mining area are almost exclusively metamorphosed siltstones. Major porphyry dykes and faults such as the Giblin and Queen provided the major focus for ascending hydrothermal fluids from a buried ridge of the Meredith Granite. Mineralisation has resulted in tin-rich sulphide replacement in the dolomite lodes, greisen and sulphide lodes in the porphyry and fault / vein lodes in the major faults. All lodes contain tin as cassiterite within sulphide mineralisation with some coarse cassiterite as veins throughout the lodes.</li> <li>The Rentails Mineral Resource is contained within three Tailing Storage Facilities (TSF's) that have been built up from the processing of tin ore at the Renison Bell mine over the period 1968 to 2013.</li> </ul>

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Criteria	JORC Code Explanation	Commentary
Drill hole Information	<ul> <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> <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> </ul>	No exploration results are reported as part of this release, results relating to the deposits have been previously released.
	<ul> <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>	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> </ul>	<ul> <li>No exploration results are reported as part of this release, results relating to the deposits have been previously released.</li> </ul>
	<ul> <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> </ul>	
	<ul> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
Relationship between	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> </ul>	<ul> <li>No exploration results are reported as part of this release, results relating to the deposits have been previously released.</li> </ul>
mineralisation widths and	<ul> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> </ul>	
intercept lengths	<ul> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>No exploration results are reported as part of this release, results relating to the deposits have been previously released.</li> </ul>

# **OUTSTANDING EXPLORATION DRILLING RESULTS FROM NEW BELL 50 TARGET**



Criteria	JORC Code Explanation	Commentary
Balanced reporting	<ul> <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>	<ul> <li>No exploration results are reported as part of this release, results relating to the deposits have been previously released.</li> </ul>
Other substantive exploration data	<ul> <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>	No relevant information to be presented.
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale stepout drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Exploration assessment and normal mine extensional drilling continues to take place at Renison.</li> <li>Exploration assessment continues to progress at Mount Bischoff.</li> <li>Project assessment continues to progress at Rentails.</li> </ul>