APPENDIX 1 – JORC Code 2012 Table 1 Criteria

The table below summaries the assessment and reporting criteria used for the Cambridge deposit Mineral Resource estimate and reflects the guidelines in Table 1 of *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code, 2012).

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	*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.*	• All drilling for which results are reported was completed by Intermin Resources and documented in Statutory Surrender Report CR92591 submitted to the Queensland DNRM. • Drill samples were collected by aircore (AC) drilling techniques (see below). • Drillholes are oriented perpendicular to the interpreted strike of the mineralised trend.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. *Aspects of the determination of mineralisation that are Material to the Public Report.* *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.*	• Regular cleaning of cyclone to remove hung-up clays and avoid cross-sample contamination. Samples were typically dry. • AC samples were collected by the metre from the drill rig cyclone, bagged and speared before being dispatched to the laboratory for analysis. • All samples assayed at ALS Chemex, Queensland: o Entire sample pulverised o Sample digest – 4 acid o Analytical procedure –ICP-AES
Drilling techniques	*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).*	• Aircore – 89 mm bit. • Drilling by Belldale Drilling utilising a truck mounted 650 cfm 300 psi drilling rig.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	• Sample recoveries are visually estimated and recorded for each metre.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	• Dry drilling and regular cleaning of sampling material.
	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.	• None noted.
Logging	*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.*	• Drill holes were geologically logged with the main lithologies recorded in the Statutory Surrender Report
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	• Logging was quantitative. • No core drilling completed
	The total length and percentage of the relevant intersections logged.	• Holes logged on 1m intervals. • The entire hole was logged.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	• No core drilling has been completed.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	• Samples cone split – typically dry.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• Sample preparation follows industry best practice standards and is conducted by internationally recognised laboratories; i.e. ALS Chemex.

Criteria	JORC Code explanation	Commentary
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	• Laboratory QAQC data was provided by ALS and considered adequate by Intermin Resources.
	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.	• Bulk samples were dry and homogenised. • Regular cleaning of cyclones and sampling equipment to prevent contamination.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	• The sample size submitted to laboratory was consistent with industry standards.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• Assaying was completed by ALS Townsville and ALS Perth, using industry standard procedures for a multi-element suite including vanadium. • Analytical techniques are total.
	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.	• None used.
	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.	• See above; laboratory QAQC was generated for Intermin Resources.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	• Internal review was carried out by alternate company personnel.
	The use of twinned holes.	• None were completed.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• Data was extracted from statutory reports, entered into Excel spreadsheets, validated and loaded into a Microsoft Access database. • Data was exported from Microsoft Access for processing by a number of different software packages. • All electronic data is routinely backed up.
	Discuss any adjustment to assay data.	• V% was converted to V_2O_5% by multiplying by 1.78
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.*	• All drillholes were located using a hand-held GPS.
	Specification of the grid system used.	• GDA 94 Zone 54
	Quality and adequacy of topographic control.	• Digital elevation data (1 second data) was downloaded from the Geoscience Australia dataset. This was used to construct a topographical surface and the drillhole collar data was projected to this surface to determine the collar elevations.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	• Holes were drilled at an approximate 1,000 mE by 400 to 500 mN spacing
	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.	• The data spacing is considered appropriate for Mineral Resource estimation and a classification has been applied.
	Whether sample compositing has been applied.	• No compositing was completed.
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.*	• Samples were oriented perpendicular to the mineralised horizon, suggesting that bias is unlikely.
	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.	• Given the style and homogeneity of mineralisation, no sampling bias is likely.

Criteria	JORC Code explanation	Commentary
Sample security	*The measures taken to ensure sample security.*	• An Intermin Resources' geologist supervised all sampling and subsequent storage in field. No unauthorised access was permitted.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	• None have been completed.

Section 2 Reporting of Exploration Results

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 such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	• The Toolebuc Vanadium Project comprises five granted exploration permits (EPMs 26490-26492 and 26494-26495) held by Liontown Resources Limited. • The combined tenement package covers a total area of ~1,040 km^2 and is located 440 km west of Townsville in north Queensland. • There are no material encumbrances affecting the tenements.
	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.	• All tenements are in good standing.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	• There have been multiple phases of exploration in the region since the early 1970s, with the main focus being on hydrocarbons and/or vanadium hosted by the Toolebuc Formation. • Liontown's tenure abuts significant vanadium resources originally reported by Intermin Resources in 2007 and 2010, and subsequently updated in March 2018. • Following assistance from the Queensland DNRM, detailed data has been recovered for the Intermin Resources' drillholes located immediately east of the Lilyvale Mineral Resource. • The only other significant exploration completed was by Pacminex in 1973 and Jacaranda Minerals in 2007, both of which conducted wide-spaced aircore drilling over EPMs 26492 and 26494. This work intersected strongly anomalous vanadium values hosted by the Toolebuc Formation.
Geology	*Deposit type, geological setting and style of mineralisation.*	• The Project area is largely underlain by sediments belonging to the Lower Cretaceous Rolling Downs Group which includes the Toolebuc Formation, the main host to the vanadium mineralisation. • The Toolebuc Formation is a flat-lying sediment about 100 million years old and consists of black carbonaceous and bituminous shale, minor siltstone with limestone lenses and coquinites. In the Project area, the Formation is draped over an interpreted basement high and has been structurally uplifted to the surface. • The resources estimated by Intermin Resources relate to near surface mineralisation derived from the oxidation of the oil shale horizon. • At Cambridge, the mineralisation is hosted by a flat-lying, 3-8 m thick horizon <30 m from the surface. The mineralisation is soft and would most likely be suitable for free digging.

Criteria	JORC Code explanation	Commentary
Drillhole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* • *easting and northing of the drillhole collar* • *elevation or RL (elevation above sea level in metres) of the drillhole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.*	• Diagrams in the announcement show the location of and distribution of drillholes in relation to the Mineral Resource.
Data aggregation methods	*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.*	• Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
Relationship between mineralisation widths and intercept lengths	*If the geometry of the mineralisation with respect to the drillhole 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 (e.g. 'down hole length, true width not known').*	• Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
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.*	• Diagrams have been included in the report.
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.*	• Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
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.*	• Where relevant this information has been included or referred to elsewhere in this Table.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• Further aircore drilling is required to confirm historic results and define the limits of mineralisation at Cambridge. • Wide-spaced aircore drilling is required across areas of exposed Toolebuc Formation. • Metallurgical testwork. • Density measurements.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	• Drillhole data was extracted directly from the Company's drillhole database, which includes internal data validation protocols. • Data was further validated by Optiro upon receipt, and prior to use in the estimation.
	Data validation procedures used.	• Validation of the data was confirmed using mining software (Datamine) validation protocols, and visually in plan and section views.
Site visits	*Comment on any site visits undertaken by the Competent Persons and the outcome of those visits.*	• Mr Richards visited the site during 2018 to inspect the areas where rock chip sampling and the collection of a bulk sample (20 kg) for metallurgical test work had been undertaken. • Mrs Standing has not visited the site.

Criteria	JORC Code explanation	Commentary
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	• The confidence in the geological interpretation is high as the sedimentary package is reasonably predictable over large areas.
	Nature of the data used and of any assumptions made.	• Both assay and geological data were used for the mineralisation interpretation. • The vanadium mineralisation is defined by a nominal 0.12% V_2O_5 cut-off grade and within the Toolebuc Formation. Continuity between drillholes and sections is good.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	• No alternative interpretations were considered. • The interpreted geology and mineralisation is simple and therefore any alternative interpretations are unlikely to significantly affect the Mineral Resource estimate.
	The use of geology in guiding and controlling Mineral Resource estimation.	• The vanadium mineralisation is constrained within the Toolebuc Formation – a flat-lying sequence of marine sediments.
	The factors affecting continuity both of grade and geology.	• Grade and geological continuity is good. The mineralisation is contained within the flat-lying sedimentary sequence of the Toolebuc Formation. At Cambridge, the Toolebuc Formation is draped over an interpreted basement high and has been structurally uplifted to the surface. The sectional interpretation confirms this regional interpretation.
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The Cambridge deposit is 5 km long and up to 3 km wide. • The mineralisation extends from 1 m to 22 m below surface (average 10 m) and ranges in thickness from 2 m to 17 m with an average thickness of 9.7 m.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	• Vanadium pentoxide (V_2O_5) % and molybdic trioxide (MoO_3) ppm grades were estimated using ordinary kriging (OK). Optiro considers OK to be an appropriate estimation technique for this type of mineralisation. • The nominal spacing of the drillholes is 1,000 mE by 400 to 500 mN. • A maximum extrapolation distance of 200 m was applied. • Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software. • Drill samples were all taken over 1 m intervals and compositing was not required for estimation. • All variables were estimated separately and independently. • Variogram analysis was undertaken to determine the kriging estimation parameters used for OK estimation of V_2O_5 and MoO_3. • V_2O_5 mineralisation continuity was interpreted from variogram analyses to have an along strike range of 2,050 m and an across strike range of 480 m • Kriging neighbourhood analysis was performed in order to determine the block size, sample numbers and discretisation levels. • Three estimation passes were used for V_2O_5 and MoO_3; the first search was based upon the variogram ranges; the second search was two times the initial search and the third search was

Criteria	JORC Code explanation	Commentary
		up to three times the initial search and third searches had reduced sample numbers required for estimation. The majority of V_2O_5 block grades (almost 88%) were estimated in the first pass, 12% in the second pass and the remaining 0.5% in the third pass. • The V_2O_5 and MoO_3 estimated block model grades were visually validated against the input drillhole data and comparisons were carried out against the declustered drillhole data and by northing, easting and elevation slice.
	Description of how the geological interpretation was used to control the resource estimates.	• Geological interpretations were completed on sections which were wireframed to create a 3D interpretation of the mineralised horizon. • The interpretation of mineralisation was made by Optiro based on geological logging and V_2O_5 content. A nominal grade of 0.12% V_2O_5 was used to define the mineralised horizon, which was constrained below a surface for the interpreted top of Toolebuc Formation and above a base of drilling surface. • The mineralised domain is considered geologically robust in the context of the resource classification applied to the estimate.
	Discussion of basis for using or not using grade cutting or capping.	• V_2O_5 has a low coefficient of variation (CV) and no outliers were noted. Grade capping was not applied for estimation of V_2O_5. • MoO_3 has a low CV. One outlier grade was capped (top-cut). The top-cut level was determined using a combination of top cut analysis tools, including grade histograms, log probability plots and the CV.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	• Mineral Resources have not previously been reported for this deposit area and no production has occurred.
	The assumptions made regarding recovery of by-products.	• No assumptions have been applied for the recovery of by-products. • The MoO_3 concentrations were estimated but it is unclear if this product can be economically recovered through beneficiation.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	• Deleterious elements were not considered. Metallurgical testwork is planned.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	• Grade estimation was into parent blocks of 500 mE by 200 mN by 1.0 mRL. • Block dimensions were selected from kriging neighbourhood analysis and reflect the variability of the deposit as defined by the current drill spacing. • Sub-cells to a minimum dimension of 100 mE by 40 mN by 0.5 mRL were used to represent volume.
	Any assumptions behind modelling of selective mining units.	Selective mining units were not modelled.
	Any assumptions about correlation between variables.	• Moderate correlation exists between V_2O_5 and MoO_3. Both V_2O_5 and MoO_3 were estimated independently.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• No production has taken place and thus no reconciliation data is available.

Criteria	JORC Code explanation	Commentary
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages have been estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The Mineral Resource estimate for the Cambridge deposit has been reported above a cut-off grade of 0.25 % V_2O_5 to represent the portion of the resource that may be considered for eventual economic extraction. • This cut-off grade has been selected by Liontown Resources in consultation with Optiro based on current experience and in-line with cut-off grades applied for reporting of vanadium Mineral Resources elsewhere in Australia.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous.*	• The mineralisation at Cambridge is soft and would most likely be suitable for free digging. • The thickness, areal extent, and continuous nature of the mineralisation at Cambridge are such that non-selective bulk mining methods can be appropriately considered. • The Toolebuc Vanadium Project is located close to existing infrastructure, including a gas pipeline, a major highway and railway linked to Townsville Port • On the basis of these assumptions, it is considered that there are no mining factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous.*	• A 20 kg sample from the Toolebuc Vanadium Project area was submitted to ANSTO Minerals in Sydney for preliminary metallurgical testwork. • Preliminary results from the testwork indicate that the mineralised material is oxidised, soft, friable and probably free-digging; the vanadium is largely contained within the finer fraction (<38um) meaning it may be suitable for pre-concentration; and the mineralisation is amenable to acid leaching. • Liontown reported that these testwork results indicate that the vanadium mineralisation on Liontown's tenure is similar to the upper mineralised zone within Intermin Resources' Lilyvale deposit (Liontown, 2018).
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation.*	• No environmental impact assessments have been conducted. It is assumed that any remedial action to limit the environmental impacts of mining and processing will not significantly affect the economic viability of the project.
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• No direct measurements of bulk density have been taken. • A dry bulk density of 1.8 t/m^3 has been assumed. This density factor was applied by Interim Resources for Mineral Resource estimation at the adjacent Lilyvale deposit announced in March 2018. • This value is consistent with industry standards for similar rock types. • A recommendation for future work is that confirmatory bulk density information is acquired.

Criteria	JORC Code explanation	Commentary
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	• Inferred Mineral Resources have been defined where the drill spacing is up to 1,000 mE by 500 mN.
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	• The estimate has been classified according to the guidelines of the JORC Code (2012) as an Inferred Resource taking into account data quality, data density, geological continuity, grade continuity and confidence in estimation. • In plan, a polygon was used to define the area of Inferred Resources.
	Whether the result appropriately reflects the Competent Person's view of the deposit	• The assigned classification of Inferred reflects the Competent Persons' assessment of the accuracy and confidence levels in the Mineral Resource estimate.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	• The Mineral Resource has been reviewed internally as part of normal validation processes by Optiro. • No external audit or review of the current Mineral Resource has been conducted.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person.*	• The assigned classification of Inferred reflects the Competent Persons' assessment of the accuracy and confidence levels in the Mineral Resource estimate.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	• The classification relates to the global estimate of tonnes and grade.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• No production has occurred from the deposit.