SECTION 1 - SAMPLING TECHNIQUES AND DATA

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

Criteria	JORC Code Explanation	Commentary
Sampling techniques	• Nature and quality of sampling. • 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.	• Representative 2 meter samples were taken from ½ PQ, HQ and NQ diameter diamond core. • Visual checks by geologists of sampling confirm sample intervals. • Only assay result results from recognised, independent assay laboratories are reported.
Drilling techniques	• Drill type and details.	• Diamond drilling of NQ, HQ and PQ diameters with standard and triple tube sample recovery has been the primary drilling method.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • 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.	• Diamond core recoveries averaged 97% overall in mineralised zones. • In localized areas of faulting and/or fracturing the recoveries decrease; however this is a very small percentage of the overall mineralised zones. • Recovery measurements were collected during all drilling programs. The methodology used for measuring recovery is standard industry practice. • Analysis of recovery results vs. grade indicates no significant trends indicating bias of grades due to diminished recovery and / or wetness of samples.
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. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• Diamond drill core samples are logged for geology, alteration and mineralisation using a standardised logging system. • Rock quality data (RQD) is collected from all diamond drill core. • Diamond drill core was photographed after being logged by a geologist. • All diamond drill cores have been logged by a competent geologist.
Sub-sampling	• If core, whether cut or sawn and whether	• Diamond drill core is cut in half with a

Criteria	JORC Code Explanation	Commentary
techniques and sample preparation	quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • 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. • Whether sample sizes are appropriate to the grain size of the material being sampled.	diamond saw, following a line marked by the geologist. • The rock saw is regularly flushed with fresh water. • Sample intervals are a constant 2m interval down-hole in length. • Routine sample preparation and analyses of diamond drill core samples were carried out by SGS Mongolia LLC (SGS Mongolia), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar. • All samples were prepared to meet standard quality control procedures as follows: Crushed to 90% passing 3.54 mm, split to 1kg, pulverised to 90% - 95% passing 200 mesh (75 microns) and split to 150g. • Certified reference materials (CRMs), blanks and pulp duplicates were randomly inserted to manage the quality of data. • Sample sizes are well in excess of standard industry requirements.
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. • 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. • 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.	• All samples were routinely assayed by SGS Mongolia for gold, copper, silver, lead, zinc, arsenic and molybdenum. • Au is determined using a 30g fire assay fusion, cupelled to obtain a bead, and digested with Aqua Regia, followed by an atomic absorption spectroscopy (AAS) finish, with a lower detection (LDL) of 0.01 ppm. • Cu, Ag, Pb, Zn, As and Mo were routinely determined using a three-acid-digestion of a 0.3g sub-sample followed by an AAS finish (AAS21R). Samples are digested with nitric, hydrochloric and perchloric acids to dryness before leaching with hydrochloric acid to dissolve soluble salts and made to 15ml volume with distilled water. The LDL for copper using this technique was 2ppm. Where copper is over-range (>1% Cu), it is analysed by a second analytical

Criteria	JORC Code Explanation	Commentary
		technique (AAS22S), which has a higher upper detection limit (UDL) of 5% copper. • Quality assurance was provided by introduction of known certified standards, blanks and duplicate samples on a routine basis. • Assay results outside the optimal range for methods were re-analysed by appropriate methods. • Ore Research Pty Ltd certified copper and gold standards have been used as a part of QAQC procedures. • QAQC monitoring is an active and ongoing processes on batch by batch basis by which unacceptable results are re-assayed as soon as practicable.
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.	• All assay data QAQC is checked prior to loading into the data base. • No twinned drill holes exist. • The data is managed XAM geologists. • The data base and geological interpretation is managed by XAM. • No adjustment to assay data.
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 drill holes have been surveyed with a differential global positioning system (DGPS) to within 10cm accuracy. • All drill holes have been down hole surveyed to collect the azimuth and inclination at specific depths. Two principal types of survey method have been used over the duration of the drilling programs including Eastman Kodak and Flexit. • UTM WGS84 48N grid. • The DTM is based on 1 m contours with an accuracy of ±0.01 m.
Data spacing and	• Data spacing for reporting of Exploration Results.	• Drilling has been completed on nominal north-south sections, commencing at

Criteria	JORC Code Explanation	Commentary
distribution	• 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.	100m spacing and then closing to 50m for mineralised zones. • Vertical spacing of intercepts on the mineralised zones similarly commences at 100m spacing and then closing to 50m for mineralised zones. • Drilling has predominantly occurred with angled holes approximately 70° to 60° inclination below the horizontal and either drilling to north or south, depending on the dip of the target mineralised zone. • Holes have been drilled to 1,000m vertical depth. • The data spacing and distribution is sufficient to establish geological and grade continuity. • Sample composite lengths of 5m on sample lengths of 2m have been applied.
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.	• Drilling has been predominantly completed on north-south section lines across the strike of the known mineralised zones and from either the north or the south depending on the dip. • Vertical to south dipping mineralised zones were predominantly drilled to the north. • Scissor drilling (drilling from both north and south), as well as vertical drilling, has been used in key mineralised zones to achieve unbiased sampling of possible structures and mineralised zones.
Sample security	• The measures taken to ensure sample security.	• Samples are dispatched from site via company employees to the Laboratories. • Samples are signed for at the Laboratory with confirmation of receipt emailed through. • Samples are then stored at the lab and returned to a locked storage site.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data	• Internal audits of sampling techniques and data management on a regular basis, to ensure industry best practice is

Criteria	JORC Code Explanation	Commentary
		employed at all times. • External review and audit have been conducted by the following groups • 2012 – AMC Consultants Pty Ltd. was engaged to conduct an Independent Technical Report which reviewed drilling and sampling procedures. It was concluded that sampling and data record was to an appropriate standard. • 2013 - Mining Associates Ltd. was engaged to conduct an Independent Technical Report to review drilling, sampling techniques and QAQC. Methods were found to conform to international best practise.

SECTION 2 – REPORTING OF EXPLORATION RESULTS

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

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, over riding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • 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.	• The Project comprises 1 Mining Licence (MV-17387A). • The Kharmagtai mining license MV-17387A is 100% owned by Oyut Ulaan LLC. THR Oyu Tolgoi Ltd (a wholly owned subsidiary of Turquoise Hill Resources Ltd) ("THR") owns 90% of Oyut Ulaan LLC. The remaining 10% is owned by Quincunx Ltd ("Quincunx"). • The Mongolian Minerals Law (2006) and Mongolian Land Law (2002) govern exploration, mining and land use rights for the project.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• Detailed exploration was conducted by Quincunx Ltd, Ivanhoe Mines Ltd and Turquoise Hill Resources Ltd including extensive surface mapping diamond drilling, surface geochemistry and geophysics.
Geology	• Deposit type, geological setting and style of mineralisation.	• The mineralisation is characterised as porphyry copper-gold type. • Porphyry copper-gold deposits are formed from magmatic hydrothermal fluids typically associated with felsic intrusive stocks that have deposited metals as sulphides both within the intrusive and the intruded host rocks. Quartz stockwork veining is typically associated with sulphides occurring both within the quartz veinlets and disseminated thought out the wall rock. Porphyry deposits are typically large tonnage deposits ranging from low to high grade and are generally mined by large scale open pit or underground bulk mining methods. The prospects at Kharmagtai are atypical in that they are associated with intermediate intrusions of diorite to quartz diorite composition; however the deposits are in terms of gold significant, and similar to other gold-rich porphyry deposits.

<table>
<tr><th>Criteria</th><th>JORC Code Explanation</th><th>Commentary</th></tr>
<tr><td>Drill hole Information</td><td>• 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.</td><td>• Diamond drill holes are the principal source of geological and grade data for the Project.

• See figures above.

<table>
<tr><th></th><th></th><th colspan="2">Diamond Drilling</th></tr>
<tr><th>Year</th><th>Prospect</th><th>No. of Holes</th><th>Metres</th></tr>
<tr><td rowspan="4">2002</td><td>AT</td><td>18</td><td>6,234.90</td></tr>
<tr><td>TS</td><td>17</td><td>6,233.80</td></tr>
<tr><td>ZU</td><td>41</td><td>10,175.50</td></tr>
<tr><td>Regional Targets</td><td>7</td><td>2,429.60</td></tr>
<tr><td>2003</td><td>AT</td><td>18</td><td>5,127.00</td></tr>
<tr><td rowspan="2">2004</td><td>AT</td><td>22</td><td>8,519.25</td></tr>
<tr><td>Regional Targets</td><td>6</td><td>2,234.00</td></tr>
<tr><td rowspan="3">2005</td><td>AT</td><td>2</td><td>495.55</td></tr>
<tr><td>TS</td><td>4</td><td>1,415.40</td></tr>
<tr><td>ZU</td><td>2</td><td>844.25</td></tr>
<tr><td rowspan="4">2007</td><td>AT</td><td>4</td><td>1,538.30</td></tr>
<tr><td>TS</td><td>1</td><td>496.20</td></tr>
<tr><td>ZU</td><td>1</td><td>300.00</td></tr>
<tr><td>Regional Targets</td><td>9</td><td>2,804.10</td></tr>
<tr><td rowspan="4">2011</td><td>AT</td><td>7</td><td>5,890.60</td></tr>
<tr><td>TS</td><td>2</td><td>1,781.20</td></tr>
<tr><td>ZU</td><td>1</td><td>549.70</td></tr>
<tr><td>Regional Targets</td><td>9</td><td>6,824.10</td></tr>
<tr><td>Total</td><td></td><td>171</td><td>63,893.45</td></tr>
</table>
</td></tr>
<tr><td>Data Aggregation methods</td><td>• 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.</td><td>• A nominal cut-off of 0.1% Cu is used for identification of potentially significant intercepts for reporting purposes.

• Most of the reported intercepts are shown in sufficient detail to allow the reader to make an assessment of the balance of high and low grades in the intercept.

• Samples have been composited to two metre lengths honouring the geological domains and adjusted where necessary to ensure that no residual sample</td></tr>
</table>

Criteria	JORC Code Explanation	Commentary
	• The assumptions used for any reporting of metal equivalent values should be clearly stated.	lengths have been excluded (best fit). • No metal equivalent values are used.
Relationship between mineralisation on 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').	• Mineralised structures are variable in orientation, and therefore drill orientations have been adjusted from place to place in order to allow intersection angles as close as possible to true widths. • Exploration results have been reported as an interval with 'from' and 'to' stated in tables of significant economic intercepts. Tables clearly indicate that true widths will generally be narrower than those reported.
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.	• See figures above.
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.	• Exploration results have been reported at a range of grades, predominantly above a minimum for potentially significant intercepts for reporting purposes.
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.	• Extensive work in this area has been done in the past. • Detailed geological mapping and rock chip, geochemistry (2,960 rock-chip samples). • A total of 119 trenches (65,636m) were completed. • Geophysics included gradient array IP (289 km2), ground magnetics (589 km2), ground gravity (39 km2) and aerial magnetics and aerial gravity. • A total of 208 Reverse Circulation drill holes were completed (27,747m) regionally.
Further work	• The nature and scale of planned further	• The mineralisation is open at depth and

Criteria	JORC Code Explanation	Commentary
	work. • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive	along strike. • Proposed exploration activities designed to test the validity of the exploration target and increase the current drill density comprises between 15,000 to 20,000m of diamond drilling. An increase in drilling density would be likely to improve the current level of understanding of the overall morphology of the mineralisation and may support estimation of a Mineral Resource.