Mount Dore Mineral Resource Update Summary

Chinova Resources Limited and ResEval Pty Ltd

15 December 2016
Following additional drilling and sampling by Chinova Resources Limited, ResEval Pty Ltd was engaged to complete a Mineral Resource update for the Mount Dore Deposit, in November 2016.

The Mineral Resource is summarised in Table 1. This can be compared to the previous estimate completed in 2014 and included in Table 2. Mount Dore is a broad mineralised system that is highly oxidised, near surface, dipping steeply and presents as an open pit development target. The estimates and reports do not include the underlying Merlin narrow high grade Mo-Cu mineralisation that is considered an underground development target.

The Mount Dore Mineral Resource is estimated as at using a 0.25% Cu cut-off, and includes:

- **Measured:** 1.1 Mt @ 0.69% Cu and 0.12 g/t Au
- **Indicated:** 66.9 Mt @ 0.58% Cu and 0.08 g/t Au
- **Inferred:** 42.4 Mt @ 0.49% Cu and 0.13 g/t Au
- **Total:** 110.4 Mt @ 0.55% Cu and 0.10 g/t Au

The new estimate shows only minor changes in both tonnes and grade from the previously published 2014. The most significant changes include:

- Areas drilled to 20 by 10 m spacing in Mount Dore South near surface are now classified as Measured Mineral Resource.
- There is a slight reduction in tonnage in the upper southern Mount Dore resource. This is in part due to the additional drilling in 2016 and sampling but is also due to a correction in the estimation procedures to manage selectively sampled drill holes.
- Minor adjustments to the original interpretations and wireframes.
- Adoption of a larger block size for the block model, now set at 5 m by 12.5 m by 5 m.

### Table 1 Mineral Resource at 0.25% Cu cut-off, November 2016

<table>
<thead>
<tr>
<th>Region</th>
<th>Classification</th>
<th>Mt</th>
<th>Cu %</th>
<th>Au ppm</th>
<th>Pb %</th>
<th>Zn %</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mount Dore North</strong></td>
<td>Indicated</td>
<td>24.8</td>
<td>0.44</td>
<td>0.10</td>
<td>0.08</td>
<td>0.42</td>
<td>2.61</td>
</tr>
<tr>
<td></td>
<td>Inferred</td>
<td>27.7</td>
<td>0.47</td>
<td>0.14</td>
<td>0.12</td>
<td>0.61</td>
<td>2.67</td>
</tr>
<tr>
<td></td>
<td><strong>Sub-total</strong></td>
<td>52.5</td>
<td>0.45</td>
<td>0.12</td>
<td>0.10</td>
<td>0.52</td>
<td>2.64</td>
</tr>
<tr>
<td><strong>Mount Dore South</strong></td>
<td>Measured</td>
<td>1.1</td>
<td>0.69</td>
<td>0.12</td>
<td>0.00</td>
<td>0.01</td>
<td>2.54</td>
</tr>
<tr>
<td></td>
<td>Indicated</td>
<td>42.1</td>
<td>0.67</td>
<td>0.07</td>
<td>0.01</td>
<td>0.07</td>
<td>2.46</td>
</tr>
<tr>
<td></td>
<td>Inferred</td>
<td>14.7</td>
<td>0.52</td>
<td>0.11</td>
<td>0.02</td>
<td>0.18</td>
<td>2.57</td>
</tr>
<tr>
<td></td>
<td><strong>Sub-total</strong></td>
<td>57.8</td>
<td>0.63</td>
<td>0.08</td>
<td>0.01</td>
<td>0.10</td>
<td>2.49</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>Measured</td>
<td>1.1</td>
<td>0.69</td>
<td>0.12</td>
<td>0.00</td>
<td>0.01</td>
<td>2.54</td>
</tr>
<tr>
<td></td>
<td>Indicated</td>
<td>66.9</td>
<td>0.58</td>
<td>0.08</td>
<td>0.04</td>
<td>0.20</td>
<td>2.52</td>
</tr>
<tr>
<td></td>
<td>Inferred</td>
<td>42.4</td>
<td>0.49</td>
<td>0.13</td>
<td>0.08</td>
<td>0.46</td>
<td>2.63</td>
</tr>
<tr>
<td></td>
<td><strong>Sub-total</strong></td>
<td>110.4</td>
<td>0.55</td>
<td>0.10</td>
<td>0.05</td>
<td>0.30</td>
<td>2.56</td>
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</table>
Table 2 Previous Mineral Resource at 0.25% Cu cut-off, 2014

<table>
<thead>
<tr>
<th>Region</th>
<th>Classification</th>
<th>Mt</th>
<th>Cu %</th>
<th>Au ppm</th>
<th>Pb %</th>
<th>Zn %</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Dore North</td>
<td>Indicated</td>
<td>25.4</td>
<td>0.43</td>
<td>0.1</td>
<td>0.09</td>
<td>0.47</td>
<td>2.62</td>
</tr>
<tr>
<td></td>
<td>Inferred</td>
<td>28.2</td>
<td>0.46</td>
<td>0.13</td>
<td>0.12</td>
<td>0.62</td>
<td>2.67</td>
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<tr>
<td></td>
<td>sub-total</td>
<td>53.6</td>
<td>0.44</td>
<td>0.12</td>
<td>0.14</td>
<td>0.55</td>
<td>2.64</td>
</tr>
<tr>
<td>Mount Dore South</td>
<td>Indicated</td>
<td>42.6</td>
<td>0.7</td>
<td>0.08</td>
<td>0.01</td>
<td>0.08</td>
<td>2.48</td>
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<tr>
<td></td>
<td>Inferred</td>
<td>14.6</td>
<td>0.53</td>
<td>0.11</td>
<td>0.02</td>
<td>0.19</td>
<td>2.57</td>
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<tr>
<td></td>
<td>sub-total</td>
<td>57.2</td>
<td>0.66</td>
<td>0.08</td>
<td>0.01</td>
<td>0.11</td>
<td>2.50</td>
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<tr>
<td>Total</td>
<td>Indicated</td>
<td>68.0</td>
<td>0.60</td>
<td>0.09</td>
<td>0.04</td>
<td>0.23</td>
<td>2.53</td>
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<tr>
<td></td>
<td>Inferred</td>
<td>42.8</td>
<td>0.48</td>
<td>0.12</td>
<td>0.09</td>
<td>0.47</td>
<td>2.64</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>110.8</td>
<td>0.55</td>
<td>0.10</td>
<td>0.06</td>
<td>0.32</td>
<td>2.57</td>
</tr>
</tbody>
</table>

Since 2014 additional exploration work includes:
- 13 RC drill holes (MDR0525 to MDR0537) for 1290 m.
- sampling of the remaining whole core from 9 Ivanhoe drill holes (MDQ0337 to MDQ0470) for 611 m.

The domain interpretations were adjusted for the new drilling and sampling and the Datamine scripts and processes were reviewed and rerun to update the Mineral Resource using the same estimation approach. The additional sampling, infills interpreted areas.

The Mineral Resource is within granted Mining Leases as summarised in Table 3 and Figure 1 and is based on over 100 drill holes as summarised in Table 4. Appendix A provides the JORC Table 1 criteria considered for classifying the Mineral Resource.

Table 3 Mount Dore-Starra-Merlin tenements

<table>
<thead>
<tr>
<th>Tenure</th>
<th>Number</th>
<th>Name</th>
<th>Area ha</th>
<th>Grant Date</th>
<th>Expiry Date</th>
<th>Status</th>
<th>Holder*</th>
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<tbody>
<tr>
<td>ML Mining</td>
<td>2688</td>
<td>Mount Dore Extended No 1</td>
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<td>21/06/1979</td>
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<td>2689</td>
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<td>27/04/1978</td>
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<td></td>
<td>2690</td>
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<td>129.6</td>
<td>24/08/1987</td>
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<td></td>
<td>2691</td>
<td>Mount Dore Extended No 4</td>
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<td>Mount Dore Extended No 5</td>
<td>129.6</td>
<td>24/08/1978</td>
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<td>2693</td>
<td>Mount Dore Extended No 6</td>
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<td>2733</td>
<td>Selwyn Hematites No1</td>
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<td>Selwyn Hematites No2</td>
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<tr>
<td>EPM</td>
<td>10783</td>
<td>Selwyn</td>
<td>238 sub blocks</td>
<td>26/10/1995</td>
<td>25/10/2017</td>
<td>Granted</td>
<td>CRCM</td>
</tr>
</tbody>
</table>

* CRCM: Chinova Resources Cloncurry Mines Pty Ltd
Figure 1 Mining Leases and current Infrastructure at Mount Dore
Table 4 Summary of drilling at Mount Dore, various companies and drilling methods

<table>
<thead>
<tr>
<th>Company</th>
<th>Year</th>
<th>Number of drill holes</th>
<th>Total drilling length (m)</th>
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</thead>
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<tr>
<td></td>
<td></td>
<td>DDH (RC)</td>
<td>WB</td>
</tr>
<tr>
<td>Cyprus</td>
<td>1976</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1977</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1978</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1979</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1989</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1991</td>
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</tr>
<tr>
<td></td>
<td>2012</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>Ivanhoe</td>
<td>2013</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2014</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>13</td>
<td>84</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>520</td>
<td>22</td>
</tr>
</tbody>
</table>

**Competent Person:** Mr John Horton, Geologist, who is a Chartered Fellow of the Australasian Institute of Mining and Metallurgy, and is an independent consultant from ResEval Pty Ltd. Mr Horton has sufficient experience that is relevant to the style of mineralisation and the type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 edition of the ‘Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves’. John Horton consents to the inclusion in the report of the matters based on his information on the form and context in which it appears.

Mark McGeough, General Manager of Exploration, who is a Fellow of the Australasian Institute of Mining and Metallurgy, and a full time employee of Chinova Resources Pty Ltd. Mr McGeough has sufficient experience that is relevant to the exploration results and data for this type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 edition of the ‘Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mark McGeough consents to the inclusion in the report of the matters based on his information on the form and context in which it appears.
## APPENDIX A  JORC 2012 TABLE 1

### Section 1: Sampling Techniques and Data

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| **Sampling techniques** | The deposit was sampled mainly by a combination of predominantly surface diamond (DDH) and surface reverse circulation (RC) holes as details in Table 4.  
                        | The nominal drill spacing was based around 50 m spaced section lines with drill collars every 50 m along the lines.  
                        | In parts, infill drilling of the southern part of the deposit is at 25m (N) by 25m (E).  
                        | Merlin underground sampling is not used and lies outside the Mount Dore estimation area.                                                  |
| **Drilling techniques** | There are a total of 1087 holes drilled at the Mount Dore project, the northern extremity extends into Flora Prospect, while the southern extremity extends into the Ballarae Prospect. The surface drilling has been completed by previous companies since 1964 and is subset to 743 drill holes within the Mount Dore – Merlin project area. The drilling is summarised in Table 4 and includes:  
                        | • 212 historic holes (1976 to 2000) for 25103 m  
                          | o Including 59 diamond drill holes for 15173 m  
                          | • 531 modern holes (2004 to 2016) for 133506 m  
                          | o Including 461 diamond holes for 10241 m  
                        | By drill hole type the drilling includes:  
                        | • 520 diamond holes (118754 m)  
                        | • 90 Surface RAB or Airtrack holes (2154 m)  
                        | • 111 Surface RC holes (33945 m)  
                        | • 22 water bores (3757 m) some of which are assayed  
                        | 75 holes have no assays as they were completed for geotechnical, metallurgical, water or other purposes.  
                        | The majority of surface drilling was HQ diamond drill core which was half core sampled. Triple tube was used in areas where ground conditions are expected to be poor.  
                        | Modern RC drilling used for pre-collar drilling used standard face sampling hammers, high pressure air and riffle splitting methods. |
| **Drill sample recovery** | Core was metre marked, derived from measurements based on driller’s core blocks. Core loss and gain was noted between the block intervals.  
                        | Diamond core recovery is 94% for the Mount Dore Deposit. |
Examination of the data shows there appears to be no grade/sample recovery bias in the data i.e. high core loss does not correlate with high grade.

| Logging | Core drilled before 2004, little documentation exists for these procedures. Some of the core is still keep at the Mount Dore core shed.  
Core drilled in 2004 to 2009 was loaded into trays and transported to a processing shed located approximately 3 km from Mount Dore.  
Core drilled after 2009 was geo-technically logged at the rig before the core was loaded into trays. It was then loaded into trays and transported to a processing shed located approximately 3 km from Mount Dore.  
Routine core logging included; recovery, orientation, magnetic susceptibility measurements, density measurements (generally every 10 m) and logging of geology, alteration, minerals, structures, and weathering. Where practical, similar measurements are made for RC chips.  
All core logging was recorded at the core shed directly into notebook computers connected to an electronic database via a network of wireless routers.  
Digital photography of the wet and dry core was done in a specifically designed photographic jig. Photographs are stored on a computer server for reference. |
|---|---|
| Sub-sampling techniques and sample preparation | RC chips are riffle split at the drill rig.  
Diamond core samples were obtained from a combination of HQ and HQ3 (i.e. 61.1 and 63.5 mm diameter) drill core.  
A 2 m sampling standard was used in 2008 to 2009. After 2009 sampling was allowed to be shortened to match geological contacts with particular reference to the high grade Merlin and Mount Dore mineralisation.  
Core was cut longitudinally with a diamond blade saw. 2008-9 core was cut with a diamond brick saw. After 2009 core was cut with an Almonte “Auto” saw.  
Core was marked with a cut line to ensure proportional sampling of one side of the core.  
Samples were bagged in numbered sample bags and routinely trucked in “bulka bags” of 70 samples to an off-site commercial laboratory in Mount Isa (145 km).  
All sample preparation was at an offsite commercial laboratory at Mount Isa.  
The first stage coarse-crushing used a 9 mm jaw setting, for approximately 70% passing 6 mm then split by 1 cm riffle splitter for a ½ split to obtain 3 to 4 kg. Fine Boyd crushing to 90% passing 2 mm and split to obtain a 1 kg sample. Pulverizing with LM2 (or LM5 in some cases) to a nominal 75 μm. |
| Quality of assay data and laboratory tests | A single independent assay service provider has been used during the project with a sample preparation facility in Mount Isa discussed above.  
- Depending on the assay suite required, assays were undertaken in one of four laboratories located in Mount Isa, Townsville, Perth and Brisbane.  
- Four main assay suites were used:  
- Cu requiring digest with hydrofluoric acid |
• Base metals and geochemical trace elements requiring a standard two acid digest.
• Au by fire assay.
• Most Cu determinations were completed by 4 acid (including hydrofluoric acid) digest with ICP instrumentation used for the final determination.

Copper analysis methods are summarised as

- 4 Acid Digest/ICPMS  6% of assays
- 2 Acid Digest/ICP  23%
- 4 Acid Digest/ICP  53%
- Cu_unknown_pct  17% (historic method)
- Cu_unknown_ppm  1% (historic method)

A 70 sample batch process was maintained to ensure that sample despatch matched assay receipt reports. This also enabled regular inclusion of QAQC with each despatch and validation before acceptance of the assay results into the electronic database.

For most of the project a 70 sample despatch comprised:

- 59 routine samples
- 4 standard reference materials (SRM) (randomly inserted at site).
- field blanks (randomly inserted at site).
- pulp duplicates (from the 59 routine samples).
- 2 coarsely-crushed duplicates (from the 59 routine samples)
- 1 core duplicate (i.e. both sides of the core are sampled)

Assay results were electronically communicated from the laboratory and after checking by a Chinova QAQC administrator, they were loaded into the electronic database.

Commercial Certified Reference Material (CRM) has been made for the Mount Dore deposit for Cu and Au at various grades.

Tolerance limits for reference material were set at two and three standard deviations from the round robin mean value. A CRM was recorded as a failure when the batch result was beyond three standard deviations from mean, or any two consecutively assayed CRM's were beyond two standard deviation limit on the same side of the mean. All 35 samples in the batch are re-assayed by ALS once a failure is noted.

Blanks are inserted into despatches at regular intervals; analysis identified no issues with smearing.

959 duplicate analysis on core, crushed samples, and pulps have been completed and identified no issues with sampling representatively. The duplicates include:

- Core Duplicate  294 samples
- Crusher Split  334
- Pulp Duplicate  331
- Total Duplicates  959

Laboratory duplicate assays were undertaken by the commercial laboratory and reported with the assay results. These were duplicate assays of the sample pulps, used for internal quality control at the laboratory and include:

- Laboratory Repeat  1,028 samples
Umpire checks to a third party laboratory were completed on a regular basis by Chinova. Overall the QAQC assays represent 22% of all results, this is better than the current industry standard. All QAQC results are monitored and procedures are followed to repeat assays which show imprecision. Assay bias trends were not found to be significant.

Laboratory inspections were generally conducted 3 times a year by project personnel 2008-2012 and once a year 2012-2014.

Pulp residues of each sample (master pulps) are stored on site in a weatherproof warehouse.

<table>
<thead>
<tr>
<th>Verification of sampling and assaying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two independent Australian resource consultancies have prepared mineral resource statements for JORC and NI43-101 compliant public reporting of the Mount Dore mineral resource between 2008 and 2012. This required site visits and included reviews of a completed drill section and observations of significant sections of Cu present. Primary data was captured on tough books laptops using industry standard drill hole software. Data entry was auto-validated as data was entered e.g. no overlapping samples or invalid geology codes allowed. The primary data is always kept and is never replaced by adjustment or interpreted data. A set of priority codes is used to flag the accuracy of the data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location of data points</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Mount Dore deposit has a local grid system established, Starra Regional Grid (SRG). The SRG grid system was used during previous mining operations in the later 1990’s, and used by Chinova for the Starra 276 mine. The local grid was reviewed by Chinova before readopting it in 2011. The RL is assigned as the Australian Height Datum (height above sea level) plus 4,000 m. Hence the surface is approximately 4,500m RL. Chinova undertook to survey drill hole location and resurvey some previous holes by an independent surveyor in 2009. Subsequently Chinova undertook surveys using an internal registered surveyor using RTK GPS system for surface, and Leica 1200 series for underground. Topography data is provided by a detailed LiDAR survey procured by Chinova in 2004. This provides sub-meter topography accuracy implemented in a topography surface model using 1 m contours. A combination of non-magnetic and magnetic down hole survey tools were used. Magnetic interference is not significant at Mount Dore however, where gyro surveys have been conducted to check hole accuracy then the gyro surveys are used for plotting. After 2009 all compasses were regularly checked against a test survey orientation cradle. In the case of discrepancy the compass was sent for service and recalibration.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data spacing and distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill hole spacing is varied within the deposit, with 25 m spacing in parts of the deposit in the south, increasing to 50 m drill spacing at the northern extremes of the deposit. No exploration results reported. No diamond drill core or RC samples were composited before assaying.</td>
</tr>
</tbody>
</table>
**Orientation of data in relation to geological structure**

Cu Mineralisation localised in faults and on the contact of the Kuridala Group (shale/phyllite/granite) and Staveley Formation (calc-silicate).

Mineralised lenses dip at approximately 50° to the east, and can be as steep as 70° or as shallow as 30°.

The Mount Dore Cu mineralisation forms various lenses from only a few metres to >10 m.

At Mount Dore, surface drill holes are drilled west (across dip). Surface drill holes are vertical or inclined between 60° and 80° to the west. This results in oblique intersections in (vertical) holes.

All core, where possible is oriented using Reflex ACT I or II RD orientation tool with stated accuracy of ±1% in the range of 0 to 88°.

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**Sample security**

Bulka bags were zip tied with security tags and checked on receipt at the Commercial Laboratory for tampering or damage.

The commercial laboratory was notified electronically of the sample despatch. The shipments were examined on arrival at the laboratory and Chinova received confirmation of the state of security seals on bags, the samples comprising each batch, and laboratory report numbers assigned to each batch.

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**Audits or reviews**

The sampling techniques and data collection process are of industry standard and have been subject to multiple internal and external reviews on many aspects of the Mount Dore deposit since being discovered in 2008.

2008-9 drilling used electronic downhole (magnetic) multi shot survey equipment. However, an audit of the data recommended checking due to the absence of a routine calibration test bed i.e. a frame with a known dip and azimuth that downhole compasses can be compared to. Chinova undertook a program to re-survey with a down hole gyroscopic tool.

Chinova, (2010) undertook a program to re-survey all the collar locations within the Mount Dore deposit using an external consultant from Mount Isa. Collar surveys are now completed by Chinova mine surveyors.

An independent resource estimate by an Australian consultancy reviewed assay results supplied by the laboratory, to the electronic database. The laboratory supplied 642 batch reports covering Mount Dore drilling from 2007 to 2010. It was found by the external reviewer that the laboratory assay data compared directly to the assay data provided by Chinova and used for the resource estimate.

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**Section 2: Reporting of Exploration Results**

**Mineral tenement and land tenure status**

Chinova holds the current mining leases for the Mount Dore Deposit. One small hole towards the north is included in the encompassing EPM 10783.

The mining leases covering Mount Dore Deposit include 4 leases ML 2688, 2689, 2690 and 2691 and were granted in 1979.

The leases are in good standing and detailed further in Table 3.
### Exploration done by other parties

Drilling by pre Chinova companies include a range of drilling types and sample procedures.

Carpentaria Exploration Company Pty Ltd completed a 10 hole program in May 1968. Details of the assays are available, the hole locations cannot be exactly determined, so not used in the Resource Estimate.

Cyprus completed 32 diamond holes between 1976 and 1980 and used the data generated to calculate some preliminary geological resource estimates for the prospect. A number of open hole percussion holes were also drilled in the area.

In 1989 to 1994, Cyprus completed a program of 16 diamond holes and 2 water bores in the Mount Dore prospect.

Arimco undertook a significant part of the Mount Dore drilling in 1999-2000. Aimed at testing near surface open pit potential, 54 Airtrack and 15 RAB holes were drilled. In addition 8 diamond holes and 7 RC water bores were sampled. 43 RC holes in 2000 added to this substantial campaign that tested the upper 50m of the mineralization.

### Geology

Copper mineralisation at Mount Dore is hosted within tectonised sequence of metashale, metasiltstone, schist and phyllite belonging to the Proterozoic Kuridala Group in the Eastern Fold belt of the Mount Isa Inlier. The mineralisation at is concealed under extensive granite.

The project area consists of secondary copper oxides and carbonates (chrysocolla, cuprite, chalcotrichite, pseudomalachite, minor to trace azurite and malachite) and native copper after chalcocite. This oxide zone is underlain by a transition zone dominated by chalcocite (replacing pyrite, chalcopyrite and sphalerite and trace covellite. The oxides and native copper penetrate deeper into the transition zone within major shears and fault zones.

The copper mineralisation generally occurs within as breccia’s and irregular fracture infill along and adjacent a major fault contacts, one being the contact between the underlying Staveley Formation and overlying Kuridala Group, a second being the contact between the granite and phyllite.

### Drill hole Information

Exploration results are not presented in this report.

Previous drilling is summarised in Error! Reference source not found.

### Data aggregation methods

Exploration results and aggregates are not presented in this report.

Resource estimation use 2 m composites.

### Relationship between mineralisation widths and intercept lengths

Exploration results are not presented in this report.

### Diagrams

Exploration results are not presented in this report.

### Balanced reporting

Exploration results are not presented in this report.
Other substantive exploration data

Resources are primarily defined by drilling and assaying. Geophysics and surface geochemistry are used in exploration.

Further work

Work is planned to update mine planning studies.

Section 3: Estimation and reporting of Mineral Resources

Database integrity

Chinova has used an acQuire database to manage and store the company’s geological database since 2009. Assay data is imported electronically from file sent from the laboratory. Assay priorities are assigned by assay method if different methods were used for the same interval. ‘Best assay’ is assigned the highest priority. Repeats are not averaged to produce the ‘best’ assay; this conforms with standard industry practice.

Multi-shot and gyro down hole surveys uploaded into acQuire, have priorities based on method used. The results of the single down hole surveys are written onto survey forms by the driller, and entered manually into the database (system adds seven degrees to the magnetic azimuth to align the reading with the local grid).

Collar surveys are uploaded into acQuire. These have priorities and the most accurate survey method is used.

Drill hole logs are generally entered directly into acQuire data logger software at the core shed, allowing the entry forms to perform basic validation during logging.

Data templates with lookup tables and fixed formatting are used for collecting primary data.

Chinova has had dedicated database management and QAQC staff who ensure all relevant data is entered and collated into the commercial integrated database system, acQuire. These staff have monitored QAQC data for assaying and survey information and undertaken equipment calibration.

The project has been reviewed and audited on several occasions. Golder, 2011 completed a database audit against available hard copy and digital information.

Site visits

The Competent Person for the Mount Dore deposit geology and data is the Chinova GM-Geology who has a good understanding of the deposit.

The Mineral Resource was undertaken by John Horton who visited the Mount Dore site and Selwyn camp on several occasions between 2010 and 2014. These visits were for the purpose of reviewing exploration activities for Mount Dore/Merlin and other projects.

Geological interpretation

Interpretation is based on geological knowledge acquired through data acquisition from drilling, including detail geological core logging, assay data and surface mapping. This information increases the confidence in the interpretation of the deposit.

Broad lithological wireframes are constructed to model the adjacent marker horizons. (Quartzite and Granite).
The mineralisation localised on the contact of the Kuridala Group (shale/phyllite) and Staveley Formation (calc-silicate) and within the shale/phyllite. In general the wireframes defining the mineralisation are modelled at a 0.25 % Cu cut-off grade.

<table>
<thead>
<tr>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The mineralisation zone at Mount Dore comprises seven Cu grade zones between 10 m and 50 m in width, defined over a strike length of 1500 m and between depths of 0 to 580 m.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimation and modelling techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block estimation has been completed within Datamine Studio 3 Resource Modelling software version 3.23.53. Three dimensional mineralisation wireframes were completed within Studio 3. These wireframes are used as hard boundaries for the grade interpolation.</td>
</tr>
</tbody>
</table>

A block model was constructed from the geological interpretations and LiDAR topography with multiple cell dimensions. The parent cell size for Mount Dore is 10 m by 25 m by 10 m (E, N, RL) sub-celled to 2.5 m by 6.25 m by 2.5 m.

The block model extends from 16500 E to 18000 E, 26900 N to 29600 N, and vertically from 3700 RL to 4440 RL. Elements in the estimation are Mo, Re, as well as trace elements Cu, Au, Pb, Zn, Ag, S, Fe, As.

The drill hole data was composited to 2 m intervals by domain for use in estimating grades.

Variogram model remains unchanged from the previous estimate completed by Golder, 2011.

Outlier samples within the drill hole sample data were restricted by applying top-cut values to the 2 m composite file determined from summary statistics. The top-cut values represent the 99.7 percentile of the data.

Grade wireframes were used to constrain the block model, and allowed lens and inter-lens material to be estimated separately. The maximum wireframe extrapolation is ½ the distance to the nearest drill hole.

Search parameters were selected on the basis of the general drill spacing of approximately 50 m and QKNA results undertaken by external consultants in preparation of the Mineral Resource for the 2011. Three search passes within the mineralisation lens were undertaken as follows:

- Pass 1: 75 m by 75 m by 20 m (strike, down dip and cross strike orientations).
- Pass 2: 150 m by 150 m by 40 m.
- Pass 3: 300 m by 300 m by 80 m.

For the Mineralised Lenses, a three pass search ellipse was used with search radii based on the variogram ranges. Dip and dip-direction were estimated into the block model, for variable anisotropy, from grade wireframe surfaces based on the geological interpretation and interpretation of the internal orientation of the mineralisation.

Ordinary kriging with locally varying anisotropy was used to estimate grades into the parent block. Grades were estimated on a parent block basis using block discretisation of 2 by 5 by 2.

The estimates were validated by: visual inspection of the model, construction of SWATH plots in easting, northing and RL, comparing drilling with model estimates.
Comparison of mean grades between the drill hole data, inverse distance estimates, Nearest Neighbour and the ordinary kriging estimates. Estimation is not designed to provide grade discrimination across mining units.

**Moisture**
All density samples are calculated on a dry basis and dry bulk density used for the resource estimate.

**Cut-off parameters**
A cut-off grade of 0.25% Cu is used in line with the previous 2011 and 2014 estimates.

**Mining factors or assumptions**
The geotechnical slope parameters were defined on the various oxidation profiles including base of complete oxidation (BOCO), base of partial oxidation (BOPO) and Primary.

Open pit optimisation was performed by AMDAD (Nov 2014) on the Mount Dore resource model based on updated parameters of costs, geotechnical slopes, processing, metal prices, mining dilution and recovery. Selection of an optimal pit shell provided the basis of a final pit design for both the north and south areas of the Mount Dore deposit. Previous optimisation was completed by AMEC, 2012.

**Metallurgical factors or assumptions**
Extensive mineralogical and metallurgical test work has been completed on the Mount Dore Resource, including a geo-metallurgical program and column leach tests.

Test work indicated that copper is successfully recovered through conventional heap leach, solvent extraction and electrowinning. Acid consumption is negatively impacted by the presence of calcite in the deposit.

Although higher copper extractions are possible, an optimal economic copper extraction was identified at 80%, with a corresponding acid consumption of 32.5 kg/t.

**Environmental factors or assumptions**
Chinova currently holds an Environmental Authority (MIN 100894709 and MIN100459006) over the site.

Water Licence number 69411J for 260 ML/year.

Water Licence number 604203 for dewatering the Mount Dore aquifer.

Quarry permits SP20110851, 20110852,20110854,20110855,20110856 for borrow pits to construct access road.

Fresh rocks from the Merlin Decline, lying below the Mount Dore Deposit were analysed for acid producing potential. Classified as non-acid forming and geochemically benign. Initial study of the waste rock from Mount Dore Copper heap leach project indicates the rocks are but a further test work is required.

The proposed Mount Dore operations have a low probability of causing any significant environmental liabilities. It is also recognised that the project contains a number of legacy sites for which the environmental liabilities has been summarised in the current plan of operations for Merlin.

Further permitting required, to support the development of Quarry Permits, amendment to MIN100459006 to authorised full mine development and amendment to the plan of operations, noting that the project is already on existing Mining Leases.
### Bulk density

Bulk density measurements are taken on representative diamond drill core, nominally every 10 m down hole. The bulk density is determined using Archimedes principle, where the samples are weighed dry and during immersion in water to determine their bulk density relative to that of water.

Chinova undertook a trial of different methods after which the slow wax method was replaced with a simple water immersion method in 2011.

The average bulk density for Mount Dore is 2.65 g/cm$^3$.

Bulk density values are estimated into the block model by Ordinary Kriging or if insufficient data a default of 2.62 g/cm$^3$ is used.

### Classification

Mineral Resources have been classified into Indicated and Inferred categories based on drill hole intercept spacing, geological confidence, grade continuity and estimation quality. A combination of these factors guides the manual digitising of strings to construct envelopes that are used to control the Mineral resource categorisation.

The geological model and mineral resources estimate reflect the competent person’s view of the deposit.

### Audits or reviews

Independent verification of the mineral resources and data has been completed on numerous occasions, by various third parties, and includes, database audits, observed presence of Cu in core, QAQC assay results, assaying methods, collar survey, down hole survey, assay validation, resource estimate audit and validation.

The 2011 Mineral Resource prepared by independent consultants concluded that Chinova has applied modern drilling, sampling and surveying methods to derive the data used as the basis for the mineral resource estimate.

An Independent consultant undertook a fatal flaw audit of the 2014 Resource estimate, with recommendations:

- Review the boundary limits adjacent to excluded holes.
- Review model density allocations and methodology
- Continue to fine tune domain boundaries

### Discussion of relative accuracy/confidence

Mineral Resources are reported in accordance with the guidelines of the 2012 edition of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves.

The statement relates to the global estimate of tonnes and grade.

The accuracy of the estimate is strongly dependent on:

- accuracy of the interpretation and geological domaining, accuracy of the drill hole data (location and values),
- orientation of local anisotropy and estimation parameters which are reflected in the global resource classification.