

**MINERAL RESOURCES LIMITED**  
**MT MARION EXPLORATION**  
**18 May 2016**

**DEEP DRILLING AT MT MARION INSECTS SIGNIFICANT BROAD ZONE OF PEGMATITE**

Neometals Ltd (ASX: NMT) (“Neometals”), Mineral Resources Limited (ASX: MIN) and Jiangxi Ganfeng Lithium Co., Ltd (SZSE: 002460) are pleased to provide an update on significant exploration results at the Mt Marion Lithium Project (‘Mt Marion’).

Mt Marion is a globally significant lithium deposit, containing total Indicated and Inferred Mineral Resources of 23.24Mt at 1.39% Li<sub>2</sub>O and 1.43% Fe<sub>2</sub>O<sub>3</sub>, at a cut-off grade of 0% Li<sub>2</sub>O (refer ASX Announcement 21 September 2015) (Appendix A).

Deep Reverse Circulation (RC) drilling at the Mt Marion Lithium Project has intercepted significant, deep, spodumene-bearing pegmatite in consecutive drill holes along a south-westerly trend at Area 2 West within M15/1000.

Assays received to date include the following significant intercepts;

Hole	MGAZ51 Easting	MGAZ51 Northing	Significant Intercept (Metres x %Li <sub>2</sub> O)
MMRC0342	352695	6561341	92m @ 1.54% from 56m
MMRC0361	352636	6561310	139m @ 1.69% from 116m
MMRC0393	352600	6561268	186m @ 1.82% from 95m

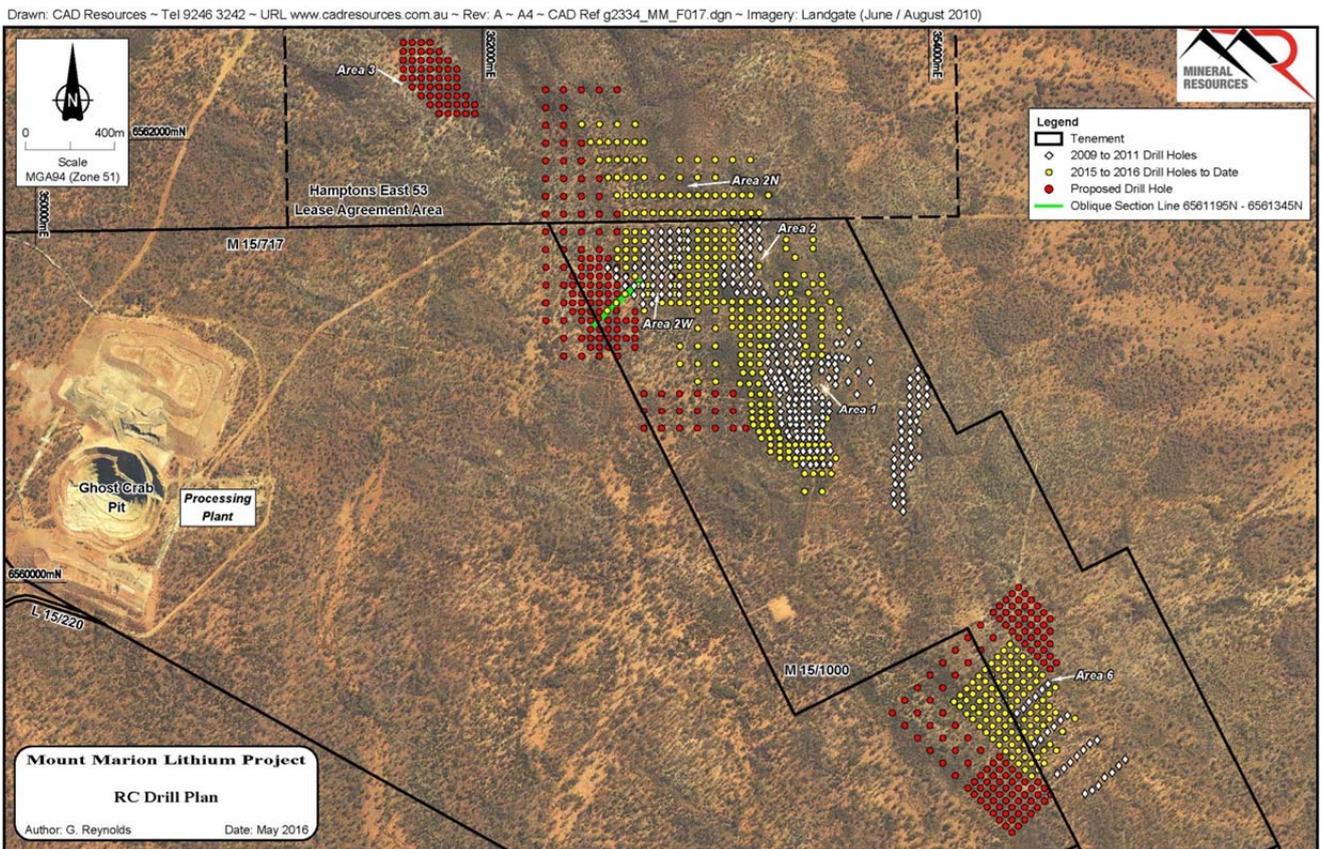
Assays are pending for pegmatite intercepts 0-27m, 52-122m, and 172-369m in MMRC0394. PROP803 (MMRC0395) is due to commence drilling on 19 May 2016 on strike of the drill holes detailed above and which appear in the oblique drill section.



As reported in the March Quarterly 2016 planned infill and extension drilling program will prioritise the near surface mineralisation as depicted in the drill plan. The current deep RC drilling has defined deep mineralisation previously unknown. This mineralisation will also be followed up by a program of deep RC drill holes. The striking of this mineralisation trends towards the processing plant location.

The current exploration program is now completed and Mineral Resource and Mining Reserve estimates will be prepared with anticipated release of results to the market by around 30 June 2016.

The Joint Venture partners have now committed to a new extension drilling exploration program to commence immediately with a nominal value of AUD\$4m and with an anticipated completion timeline for this extended program of around 4 months. The market will be kept appropriately informed.



Plan: Mt Marion drill hole locations

*For further information:*

Bruce Goulds  
 Company Secretary & CFO  
 Mineral Resources Limited  
 T: +61 8 9329 3600  
 E: [bruce.goulds@mineralresources.com.au](mailto:bruce.goulds@mineralresources.com.au)

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

*The information in this report that relates to Exploration Results is based on information compiled by Derrick Kettlewell, who is a full time employee of Mineral Resources Limited. Mr Kettlewell is a Member of The Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. The Competent Person consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.*

### **APPENDIX A: MINERAL RESOURCE ESTIMATE**

**Mt Marion Resource Table for 0% Li<sub>2</sub>O cut-off**

<i>Category (JORC, 2012)</i>	<i>Tonnage (Mt)</i>	<i>Li<sub>2</sub>O (%)</i>	<i>Fe<sub>2</sub>O<sub>3</sub> (%)</i>
<i>Indicated</i>	<i>10.5</i>	<i>1.45</i>	<i>1.33</i>
<i>Inferred</i>	<i>13.19</i>	<i>1.34</i>	<i>1.5</i>
<i>Total</i>	<i>23.24</i>	<i>1.39</i>	<i>1.43</i>

All tonnage and grade figures have been rounded down to two or three significant figures, respectively; slight errors may occur due to rounding of values.

## JORC Code, 2012 Edition – Table 1 Report: Mt Marion exploration drilling – As at 18 May 2016

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</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 (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.</li> </ul>	<ul style="list-style-type: none"> <li>Deposits have been sampled by diamond drilling (DD) and Reverse Circulation (RC) drilling.</li> <li>DD – Sampled sections are PQ3. Core sample intervals are defined by the geologist to honour geological boundaries.</li> <li>RC – Rig mounted cone splitter used, with samples falling through an inverted cone splitter, splitting the sample in 90/10 ratio. 10% off-split retained in a calico bag. 90% split residue stored on ground and sampled using a 'spear' sampling tool. All intervals sampled as 1m composites. 1m composites of mineralisation and adjacent waste sent for lab analysis. Remaining waste composited from split residue using a 'spear' into 6m composites and sent to the lab. All intervals were drilled wet. Where asbestiform minerals were identified in the waste, lab analysis was not commissioned.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>RC – Reverse circulation drilling was carried out using a face sampling hammer and a 142mm diameter bit.</li> <li>DD – Diamond drilling was carried out using PQ3 (triple tube) technique. Drill holes are vertical, core was not orientated.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <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 style="list-style-type: none"> <li>RC – Approximate recoveries are recorded as a percentage based on visual and weight estimates of the sample.</li> <li>DD – Recoveries are recorded as absolute values calculated from measured core versus drilled interval.</li> <li>There is no known relationship between sample recovery and grade, diamond drill recovery is very high.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Core and chip samples have been logged by qualified Geologists to a level of detail sufficient to support a Mineral Resource estimate, mining studies and metallurgical studies.</li> <li>RC – logging was carried out on a metre by metre basis and at the time of drilling. All intervals were logged.</li> <li>DD – logging was carried out according to geological boundary. All intervals were logged.</li> <li>Logging is qualitative and quantitative. All core was photographed both wet and dry.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <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> </ul>	<ul style="list-style-type: none"> <li>DD – Resource definition drilling uses PQ3: All core is taken. Sample intervals are defined by a qualified geologist to honour geological boundaries. All mineralised zones are sampled. Core is sampled on the width of the geological/mineralised structure in recognized ore zones.</li> <li>RC – Cyclone mounted cone splitter used. All samples drilled wet.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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 the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core is not dried. Sample cut to requirement based on geological logging. Whole sample crushed to -5.6mm prior to being passed through a rotary splitting device (RSD) to generate 5kg or 1/10<sup>th</sup> subsamples and reserved for Size by Assay. Remainder retained for compositing.</li> <li>RC chips were dried at 100C. All samples below approximately 4kg were totally pulverized in LM5's to nominally 85% passing a 75µm screen. The few samples generated above 4kg were crushed to &lt;6mm and riffle split first prior to pulverization.</li> <li>The measures taken to ensure the RC sampling is representative of the in situ material collected included the insertion of a duplicate sample at an incidence of 1 in 25. No commercially prepared certified reference materials (CRM) or blanks were inserted amongst the drill samples.</li> <li>For RC samples, no formal heterogeneity study has been carried out or nomographed. An informal analysis suggests that the sampling protocols currently in use are appropriate to the mineralisation encountered and should provide representative results. As such sample sizes are considered appropriate.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The lab QAQC protocols used for the RC drill samples included the insertion of a duplicate sample at an incidence of 1 in 20, one of four types of CRM's at an incidence of 1 in 10, and repeats at an incidence of 1 in 10.</li> <li>No hand held analytical instruments were used in the field.</li> <li>QAQC data is assessed on import into the database and reported yearly.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Significant intersections not verified.</li> <li>Diamond holes twinning existing RC holes have been drilled for metallurgical purposes. Currently waiting on Diamond assay results.</li> <li>Sample data is stored using a customized Access database using semi-automated or automated data entry. Hard copies of primary data stay in the field during the exploration campaign. To be brought back to the Perth office post campaign for storage.</li> <li>No adjustments were made to the assay data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Collar positions were recorded using a hand held Global Positioning System (GPS). All holes were drilled vertically.</li> <li>The grid system is MGA Zone 51 (GDA94) for horizontal data and AHD (based on AusGeoid09) for vertical data.</li> <li>Topographic control is from Digital Elevation Contours (DEM) 2015 based on 0.25m contour data.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>RC holes are generally based on 40m x 40m drill spacing.</li> <li>DD holes are spaced to provide representative samples from the larger deposits for the purpose of metallurgical test work.</li> <li>The data spacing and distribution is sufficient to establish geological and or grade continuity appropriate for future Mineral Resource and classifications to be applied.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>RC samples are composited to 1m through the mineralisation and two metres either side. Remaining waste is composited to 6m.</li> <li>Diamond core is sampled to geology; sample compositing is not applied until the estimation stage.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The orientation of sampling is perpendicular to the main mineralisation trends.</li> <li>The orientation achieves unbiased sampling of all possible mineralisation and the extent to which this is known.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>RC – All samples are bagged in numbered calico bags, grouped into larger tied polyweave bags, and placed in a large bulka bag with a sample submission sheet. The bulka bags are transported via freight truck to Perth, with consignment note and receipted by external laboratory (NAGROM).</li> <li>DD – All core trays are loaded onto a pallet, held in place with steel cable. The core tray pallets are transported via freight truck to Perth, with consignment note and receipted by external laboratory (NAGROM).</li> <li>All sample submissions are documented and all assays are returned via email.</li> <li>Sample pulp splits are stored in Mineral Resources Limited (MRL) Facilities.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>All recent sample data has been reviewed internally by MRL geologists.</li> <li>No external audits have been carried out on the sample data.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</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>	<ul style="list-style-type: none"> <li>The drilling is located on M15/1000 held in the name of Reed Industrial Minerals Pty Ltd (RIM). MRL is a 30% shareholder in RIM. The other project participants are Neometals Ltd with a 45% interest and Jiangxi Ganfeng Lithium Co. Ltd with a 25% interest. M15/1000 is not up for renewal until 2030.</li> <li>All WA EP Act and Mining Act approvals are in place for the commencement of the project and construction is underway.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>All exploration during the current reporting period was carried out by MRL.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Mt Marion lithium mineralisation is hosted within a number of sub-parallel, northeast to northwest trending pegmatite intrusive bodies which dip at between 10° to 30° to the west.</li> <li>Individual pegmatites vary in strike length from approximately 300 m to 700 m and average 15 m to 20 m in thickness, but vary locally from less than 2 m to up to 35 m thick. The pegmatites intrude the mafic volcanic host rocks of the surrounding greenstone belt.</li> <li>The lithium occurs as 10 - 30 cm long grey-white spodumene crystals within medium grained pegmatites comprising primarily of quartz, feldspar, spodumene and muscovite. Typically the spodumene crystals are oriented orthogonal to the pegmatite contacts. Some zoning of the pegmatites parallel to the contacts is observed, with higher concentrations of spodumene occurring close to the upper contact.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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> <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>	<ul style="list-style-type: none"> <li>A summary of the exploration drilling into the Mt Marion deposits is attached.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>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.</li> <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> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Reported exploration results are uncut.</li> <li>Reported aggregate Li<sub>2</sub>O intercepts based on geological intervals of continuous pegmatite greater than or equal to 4m.</li> <li>Reported aggregate Li<sub>2</sub>O intercept grades are a weighted average based on assay interval length.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>• Apparent thickness as downhole length is reported.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Plan view and typical cross section of Mt Marion showing drill collars is attached.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All holes related to the Mt Marion drilling program for the December 2015 reporting period are reported here.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No other meaningful data to report.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Exploration drilling is ongoing.</li> <li>• As part of the main document (Plan View).</li> </ul>