

1 May 2023

## Magnetotelluric surveys completed at the North Big Smoky Lithium Project

Completion of passive seismic surveys and magnetotelluric work at the Carvers and Austin project areas within North Big Smoky.

New potential Li-brine target identified in the Austin project area

Permitting and drilling contracts underway following soil sampling within Carvers project area which may indicate shallow clay-style Li mineralisation as a secondary target.

### Overview

Morella Corporation Limited (ASX: 1MC "Morella" or "the Company") is pleased to announce the results from geophysical exploration activities completed during January to March 2023 at both the North Big Smoky project areas in Nevada, USA ("the Project"). The results will be used to drive an upcoming drilling program aimed as providing geological samples to test the shallow clays.

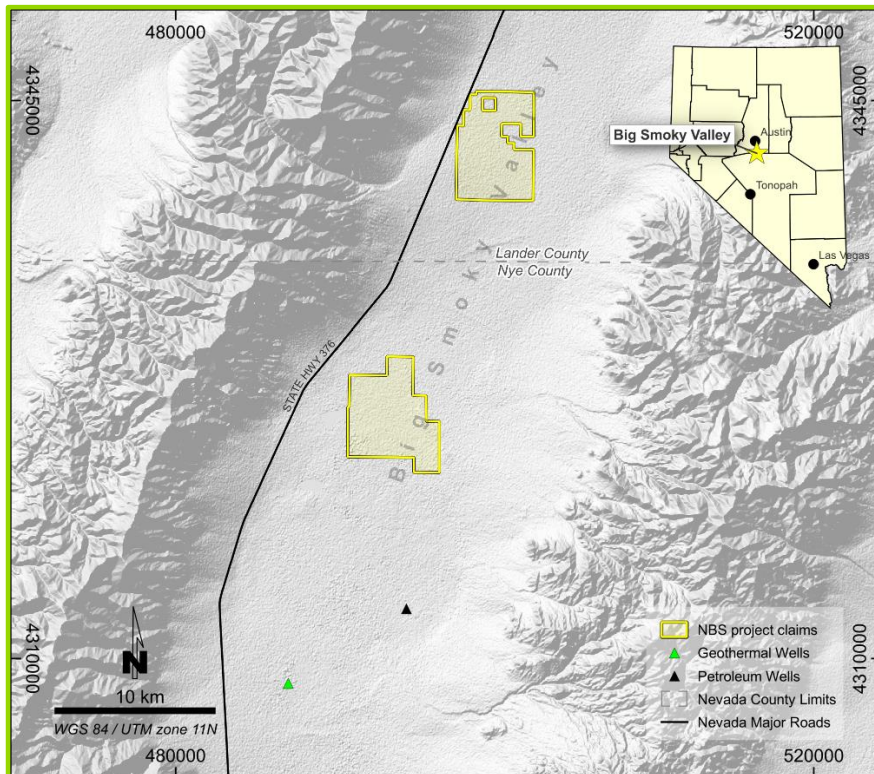


Figure 1: Location of the North Big Smoky Projects, Carvers and Austin.

Acquisition of magnetotelluric (MT) and passive seismic horizontal-to-vertical spectral ratio (PS-HVSR) survey data within the Carvers and Austin project areas was completed by US-based KLM Geoscience LLC (KLM), with quality assurance/quality control (QA/QC), data processing and modelling of the MT and PS-HVSR survey datasets completed by Perth-based geophysical consultants, Resource Potentials Pty Ltd (ResPot).

## Geophysical Surveys - Carvers

The “Carvers” project is the name for the original project area within the greater NBS Project, where soil geochemical sampling was completed during January 2023 (see ASX announcement “*Lithium mineralisation confirmed in North Big Smoky soil sampling results*”, released 17<sup>th</sup> January 2023).

A controlled source audio magnetotelluric (CSAMT) survey was completed during December 2022 (see ASX announcement “*North Big Smoky – CSAMT Survey*”, released on 22<sup>nd</sup> December 2022, which identified a deep conductivity anomaly that may be caused by an accumulation of brine, which may host Li in solution).

Morella then commissioned a PS-HVSR and MT survey covering the wider Carvers Project area in order to map the extents of the conductivity anomaly identified from 2D inversion modelling of the CSAMT survey. Figure 2 shows the MT survey lines and station locations and the PS-HVSR survey station locations completed during January and February 2023.

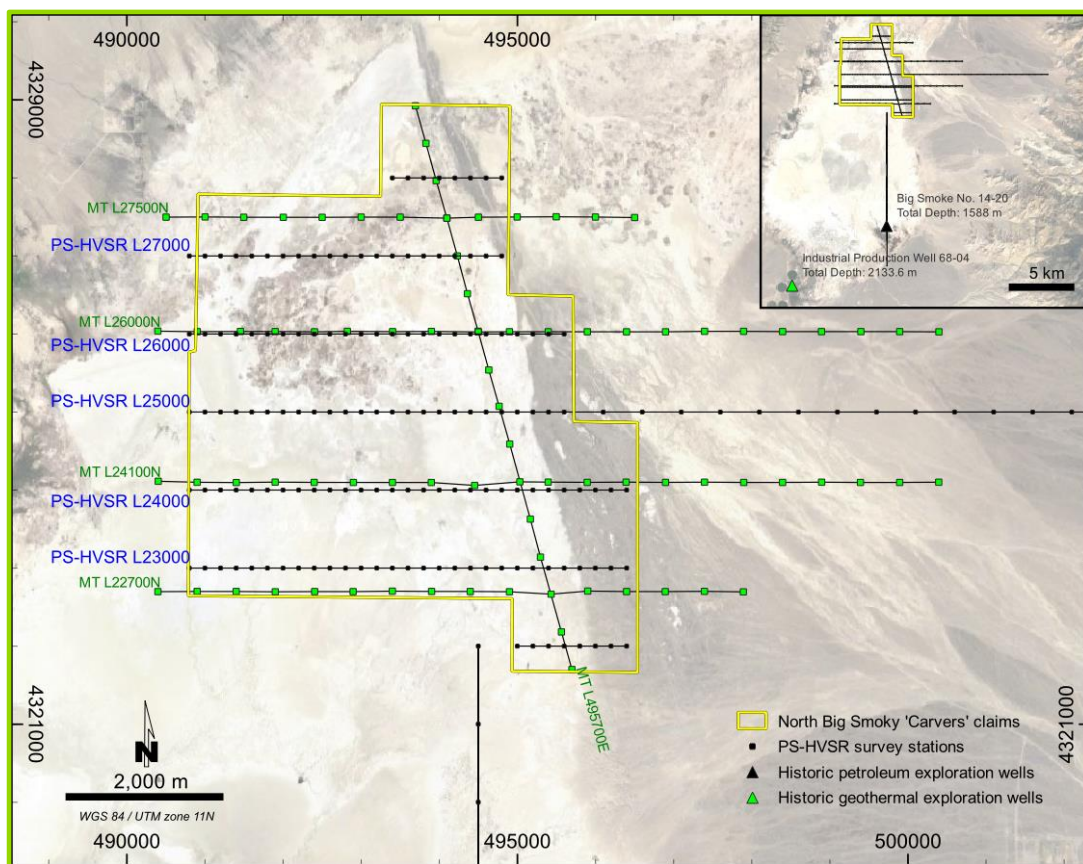


Figure 2 – Locations of the MT and PS-HVSR survey stations within the Carvers project area during January and February 2023.

Following completion of the MT survey data acquisition and QA/QC, ResPot completed 2D resistivity inversion modelling of the MT survey data acquired along the MT survey lines and gridded those model data in 3D to generate a 3D block model, which was used to create 3D resistivity isosurfaces and model slices (see Figures 3 and 4).

The 2D MT resistivity inversion model cross sections from the February MT survey reinforce and expand upon the 2D resistivity inversion modelling results from the CSAMT survey completed during December 2022, where a very high MT conductivity anomaly is present within the central and west of the Carvers area, which is broadly co-located or above the PS-HVSR acoustic bedrock, and could be caused by an electrically conductive brine accumulation located approximately 1,000 m below ground level (see Figures 3 and 4). The PS-HVSR depth calibration was completed using digital downhole log data from the nearby petroleum exploration well ‘Big Smoky No 14-20’ (see inset map, Figure 2).

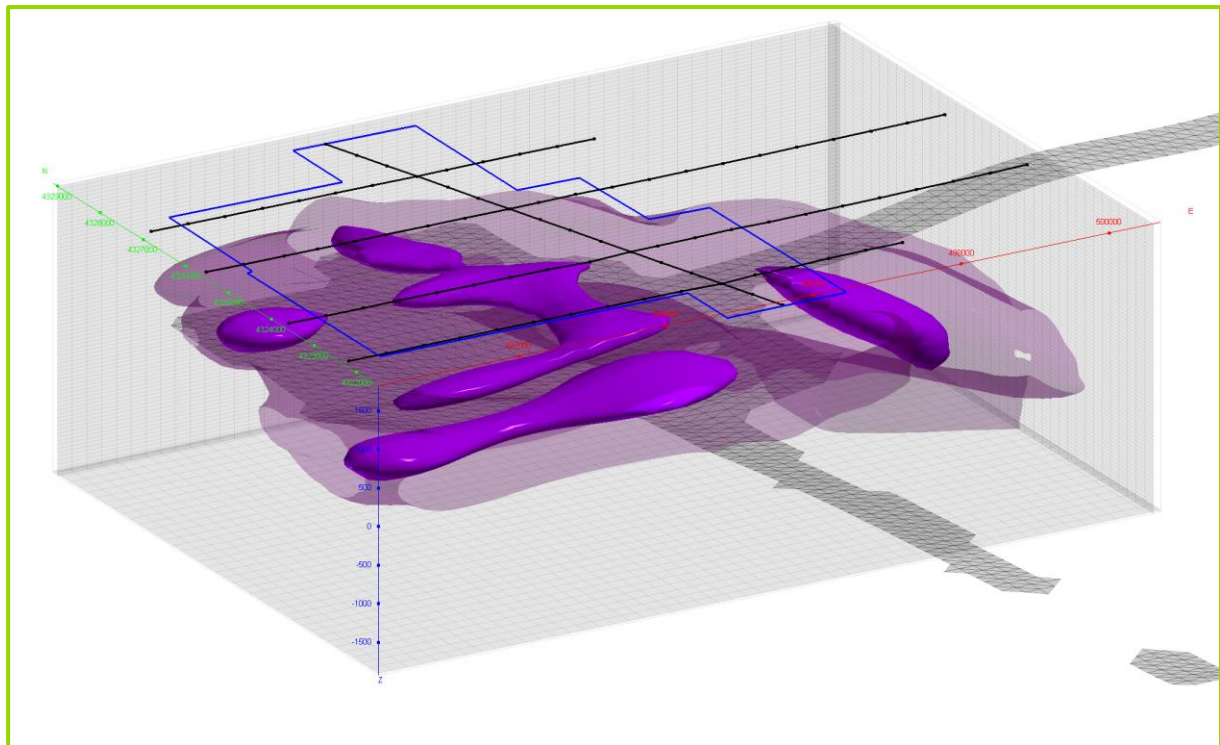


Figure 3: 3D view looking northeast and down on MT conductivity isosurfaces generated from 2D resistivity inversion modelling of the MT survey data (purple surfaces) and passive seismic HVSR acoustic bedrock (grey meshed surface) for the North Big Smoky 'Carvers' prospect area.

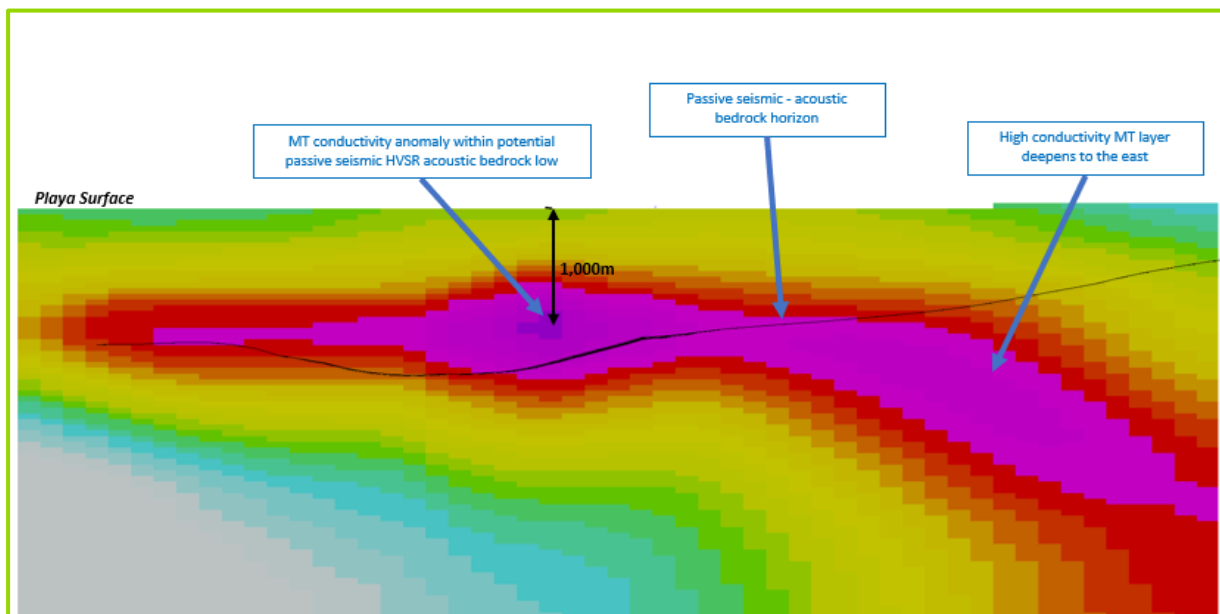


Figure 4 - Cross section (E-W) through the 3D gridded 2D MT resistivity inversion model results sliced along PS-HVSR line L25000N from the North Big Smoky 'Carvers' prospect, where conductivity is shown as hotter colours (red to pink) and resistivity shown as cooler colours (blue to white), with the passive seismic HVSR acoustic bedrock shown as a black line.

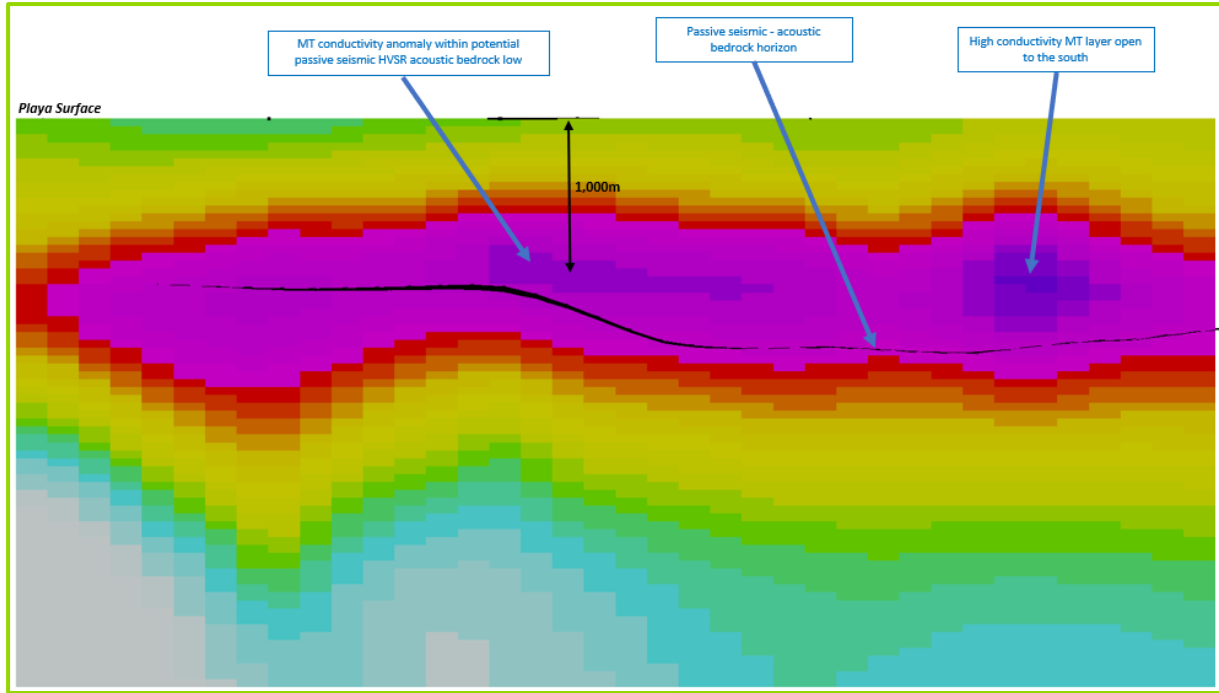


Figure 5 - Long section (N-S) through the 3D gridded 2D MT resistivity inversion model results from the North Big Smoky 'Carvers' prospect, where conductivity is shown as hotter colours (red to pink) and resistivity shown as cooler colours (blue to white), with the passive seismic HVSR acoustic bedrock shown as a black line.

### Geophysical Surveys - Austin

The "Austin" project area is located 11 km to the north of "Carvers" project area and was identified following review of regional open-file gravity data to be another potential deep sedimentary basin, which could also be suitable for accumulation of brines in the subsurface containing Li in solution.

Morella commissioned a PS-HVSR and MT survey covering the Austin Project area and surrounding areas to the south and east in order to help determine whether subsurface conductivity anomalies were present within the Austin Project area. Figure 6 shows the line locations for the PS-HVSR and MT surveys.

Following completion of the MT survey data acquisition and QA/QC, ResPot completed 2D resistivity inversion modelling of the MT survey data acquired along the MT survey lines and gridded those model data in 3D to generate a 3D block model, which was used to create 3D resistivity isosurfaces (see Figure 7) and model slices (see Figures 8 and 9).

The 2D MT resistivity inversion models generated from the MT data acquired at NBS-Austin shows a very high MT conductivity zone is present in the central-western Austin project area, which sits within or above the PS-HVSR acoustic bedrock and indicates that this high MT conductivity anomaly could be caused by an accumulation of brine located approximately 1,300 m below ground level (see Figures 7 to 9). A deeper MT conductivity anomaly is located within the eastern part of the NBS-Austin Project area, which is likely caused by a deeper electrically conductive shale unit rather than a brine accumulation.

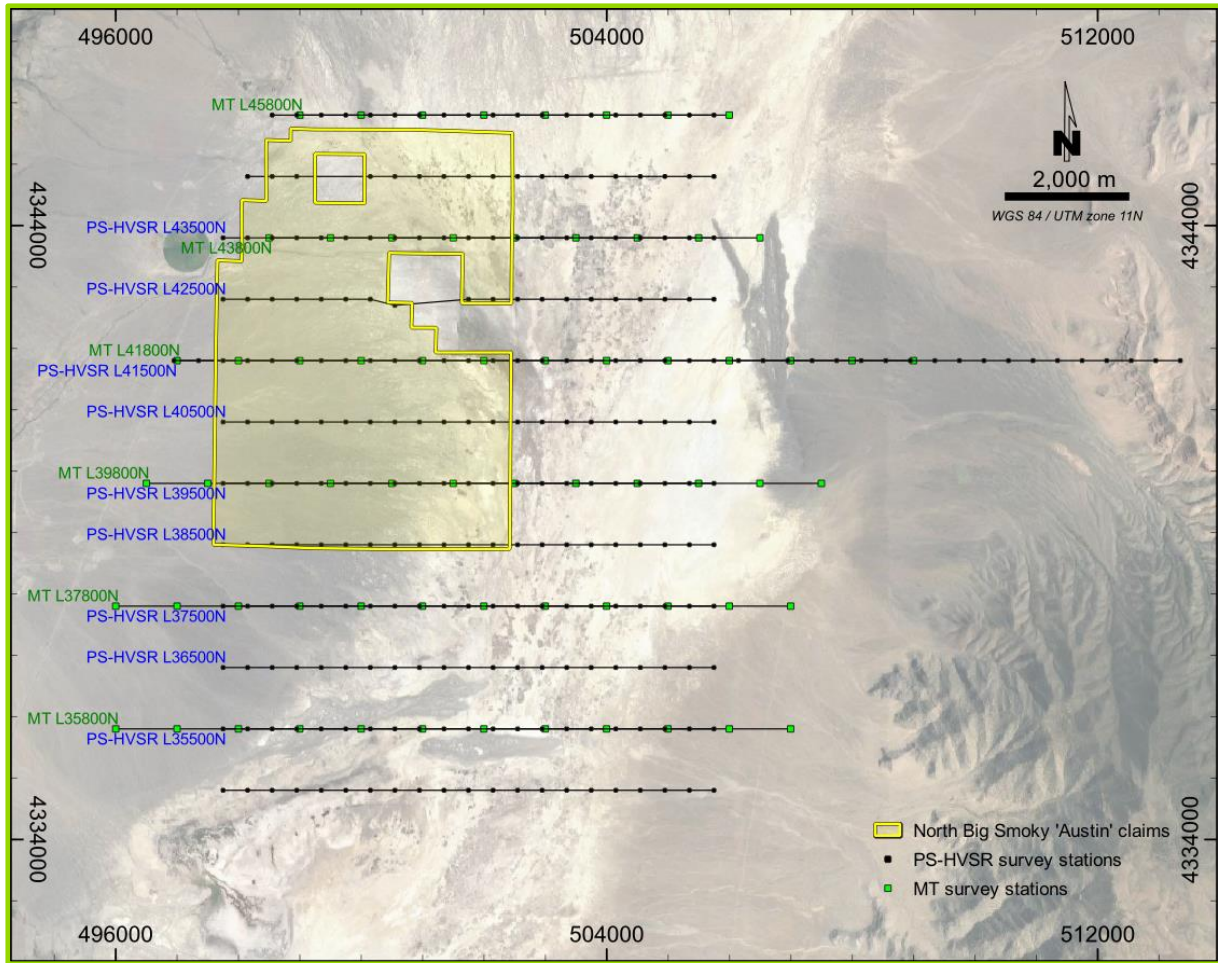


Figure 6 – Locations of the MT and PS-HVSR survey stations acquired within the Austin project area during February and March 2023.

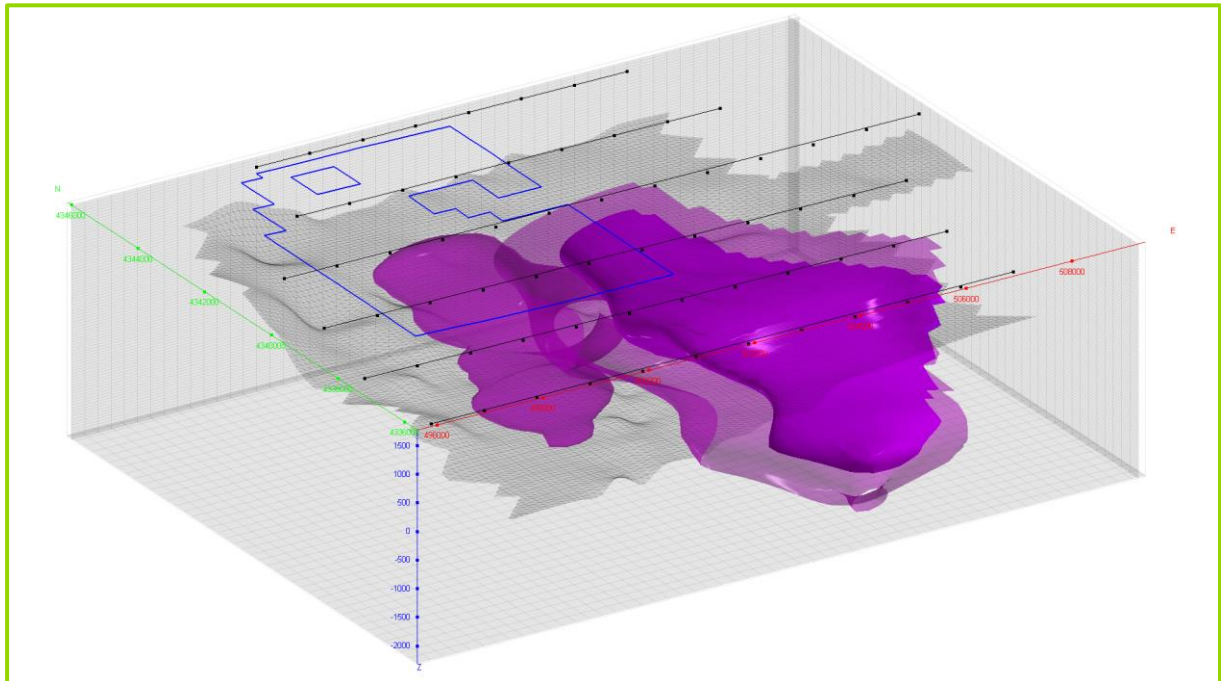


Figure 7: 3D view looking northeast and down on MT conductivity isosurfaces generated from 2D resistivity inversion modelling of the MT survey data (purple surfaces) and passive seismic HVSR acoustic bedrock (grey meshed surface) for the North Big Smoky 'Austin' prospect area.

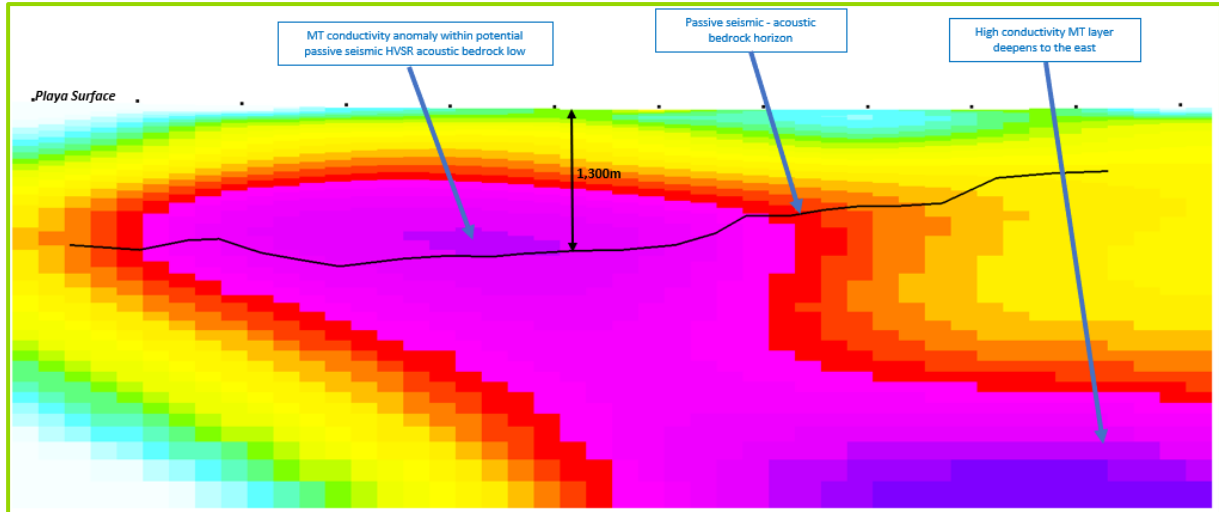


Figure 8 - Cross section (E-W) through the 3D gridded 2D MT resistivity inversion model results sliced along MT survey line L37800N from the North Big Smoky 'Austin' prospect, where conductivity is shown as hotter colours (red to pink) and resistivity shown as cooler colours (blue to white), with the passive seismic HVSR acoustic bedrock shown as a black line.

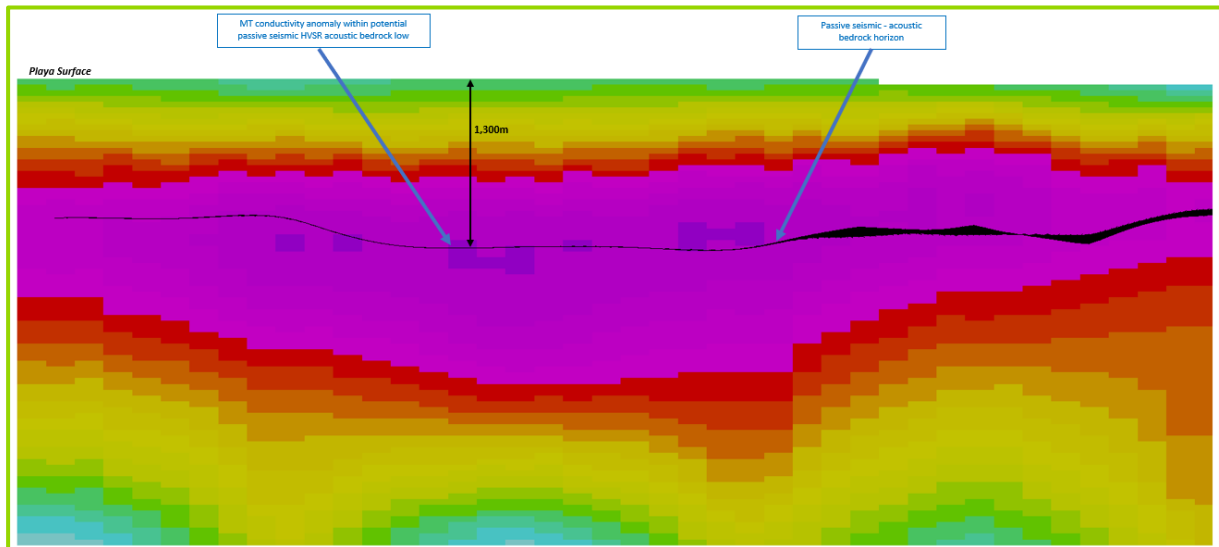


Figure 9 - Long section (N-S) through the 3D gridded 2D MT resistivity inversion model results from the North Big Smoky 'Austin' prospect, where conductivity is shown as hotter colours (red to pink) and resistivity shown as cooler colours (blue to white), with the passive seismic HVSR acoustic bedrock shown as a black line.

## Conclusions and Next Steps

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The MT and PS-HVSR surveys completed during January to March have expanded on work previously completed within the Carvers project area and have helped identify a new potential Li-brine target within the Austin project area. The 2D resistivity inversion model cross sections generated from the MT surveys completed at the Carvers and Austin projects show a high MT conductivity anomaly, which may be caused by an accumulation of brine with potential to host Li in solution. In addition, recent soil sampling within the Carvers project area shows a high concentration Li, which may indicate a shallow clay-style deposit as a secondary target for Li exploration within the NBS project area.

The next steps to develop the NBS Project include:

- Award a drilling contract with the drill program aimed at providing geological samples to test the shallow clays.
- Submit permit notices with regards to the shallow drilling program.
- Consider 2D reflection seismic to further calibrate the PS-HVSR and MT results and identify key basin structures and layers to assist drill targeting, hydrogeological modelling and potential resource definition.

### Morella Managing Director, James Brown said:

*“These MT results along with the previous seismic work give us full confidence in the prospectivity of the area. The extra MT lines demonstrates continuity along strike and width across our claim area at Carvers. The expanded footprint at Carvers and the new Austin project areas provides significant exploration potential which is demonstrated by the MT results. Combined with Fish Lake Valley this places Morella in a strong position of highly prospective projects in Nevada”.*

## Contact for further information

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**This announcement has been authorised for release by the Board of Morella Corporation Limited.**

**About Morella Corporation Limited** Morella (ASX:1MC) is an exploration and resource development company focused on lithium and battery minerals. Morella is currently engaged in exploration activities on multiple lithium project opportunities, strategically located, in Tier 1 mining jurisdictions in both Australia and the United States of America. Morella will secure and develop raw materials to support the surging demand for battery minerals, critical in enabling the global transition to green energy.

**Competent Person's Statement** The information in this report that relates to Geophysical Exploration Results is based on information compiled by Mr Duncan Storey, who is a Chartered Geologist with the Geological Society of London (an RPO defined by JORC 2012). Mr Storey is an independent consultant engaged by Morella Corporation and has sufficient experience with the exploration and development of mineralised brine deposits qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Storey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Geological Exploration Results is based on information compiled by Mr Chris Grove, who is a Member of the Australasian Institute of Mining and Metallurgy and is a Principal Geologist employed by Measured Group Pty Ltd. Mr Chris Grove has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Mineral Resources'. Mr Chris Grove consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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>	<p>No sub-surface sampling or brine sampling has been undertaken with the current works.</p> <p>Data collection ("sampling") is limited to magnetotelluric (MT) geophysical surveying.</p> <p>At the NBS-Carver's prospect, a total of 85 MT stations were completed at 500 m station spacing along four E-W oriented survey lines spaced between 1.5 km and 2 km apart, as well as one NNW-SSE oriented MT survey line linking the four E-W MT survey lines.</p> <p>At the NBS-Austin prospect, a total of 69 MT stations were completed at 1,000 m station spacing along six E-W oriented survey lines spaced 2 km apart.</p> <p>Data were acquired using 200 m E-field dipoles aligned N-S (Y component) and E-W (X component) at each survey site. Magnetic field sensor stations comprising Phoenix Geophysics MTC-155 AMT/MT magnetic field coil sensors oriented in Hx, Hy and Hz were deployed at regular intervals along the MT survey lines. MT survey data were acquired overnight with a minimum station occupancy time of 12 hrs.</p> <p>Unconstrained 2D resistivity inversion modelling of the MT survey data was completed using CGG Geotools, which utilises the RLM-2D inversion modelling code.</p>
<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>	No drilling has been undertaken.
<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>	No drill samples have been collected
<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>	No geological data have been logged
<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> </ul>	No sampling has been undertaken



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</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>	No assays have been undertaken
<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>	No assays have been undertaken
<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>	<p>MT survey points were set out with handheld GPS.</p> <p>The WGS 84 datum and UTM Zone 11N projection grid system has been used.</p> <p>No other topographic control was used.</p>
<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>	<p>At the NBS-Carvers prospect, a total of 85 MT stations were completed at 500 m station spacing along four E-W oriented survey lines spaced between 1.5 km and 2 km apart, as well as one NNW-SSE oriented MT survey line linking the four E-W MT survey lines.</p> <p>At the NBS-Austin prospect, a total of 69 MT stations were completed at 1,000 m station spacing along six E-W oriented survey lines spaced 2 km apart.</p> <p>The station spacing is adequate to support interpolation of sub-surface brine conductivity where the brine is hosted in regional sedimentary basin aquifers.</p> <p>Notwithstanding adequate data-spacing, in the absence of sub-surface sampling, no mineral resource estimation is supported.</p>

Criteria	JORC Code explanation	Commentary
<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>	MT survey lines were oriented E-W to cover the extents of the regional NNE-SSW strike of the basin and are spaced at approximately 2-3x the MT survey station spacing to facilitate unbiased interpolation between survey lines. The MT survey stations were spaced regularly along MT survey lines to provide unbiased sample coverage.
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	No samples were collected.
<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>	MT data were subject to review by independent geophysical consultant, Resource Potentials Pty Ltd. Stations were repeated if data acquired at those stations were considered low quality. All data used in modelling and subsequent interpretation are considered to be of high quality.

## 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 license to operate in the area.</li> </ul>	<p>The North Big Smoky Project Carvers is located in Nevada, USA and comprises 388 claims over an area of ~29km<sup>2</sup></p> <p>The North Big Smoky Project Austin is located in Nevada, USA and comprises 356 claims over an area of ~29km<sup>2</sup></p> <table border="1"> <thead> <tr> <th>Tenement ID</th> <th>Location</th> <th>Project</th> </tr> </thead> <tbody> <tr> <td>NV105765895 - NV105766072</td> <td>Nevada USA</td> <td>Carvers</td> </tr> <tr> <td>NV105818558 - NV105818767</td> <td>Nevada USA</td> <td>Carvers</td> </tr> <tr> <td>NV105818903 - NV105819258</td> <td>Nevada USA</td> <td>Austin</td> </tr> </tbody> </table> <p>The tenements are held by Lithium Corporation, Morella entered into an earn-in agreement with Lithium Corporation in July 2022, whereby Morella has the right to earn a 60% interest in the project, with options to acquire 100% interest.</p> <p>The claims are in good standing, with payments up to date with the US Bureau of Land Management.</p> <p>There are no known impediments to maintain the claims and operate in the area.</p>	Tenement ID	Location	Project	NV105765895 - NV105766072	Nevada USA	Carvers	NV105818558 - NV105818767	Nevada USA	Carvers	NV105818903 - NV105819258	Nevada USA	Austin
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NV105818903 - NV105819258	Nevada USA	Austin												
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>USGS gravity data has been carried out over the area previously</p> <p>First pass lithium exploration work has been conducted at North Big Smoky over the past 10 years. A reconnaissance sediment sampling program determined that the clayey sediments in the valley host anomalous lithium mineralization.</p>												
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	The Big Smoky Valley is a Tertiary through Quaternary unconsolidated sediment filled basin, with geothermal fluids common in range bounding faults, and/or faults within the basin. The basin is filled with sediment weathered from the bounding Toiyabe and Toquima Ranges.												
<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>eastings and northings of the drill hole collar</li> </ul> </li> </ul>	No known drilling on the play												

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> <ul style="list-style-type: none"> <li>● <i>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.</i></li> </ul>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>● <i>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.</i></li> <li>● <i>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.</i></li> <li>● <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	No grade results have been reported.
<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>	No intercepts or brine reservoir geometry is reported.
<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>	Plans, cross sections and 2D subsurface modelling are presented in the release.
<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>	All MT data have been presented and balanced reporting completed.
<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>	<p>A controlled source audio magnetotelluric (CSAMT) survey was undertaken in late 2022 and is detailed in the ASX Announcement -North Big Smoky – CSAMT Survey, released on 22nd December 2022 which identified a deep brine anomaly</p> <p>Non-invasive investigations are progressing and there are no other substantive exploration activities.</p>

Criteria	JORC Code explanation	Commentary
<p><b>Further work</b></p>	<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>	<p>Drill targets to be defined. Reflective seismic</p>