

## **ASX Announcement**

## 1 September 2022

# Further drilling targets identified at Fish Lake Valley Lithium Project

Geophysical surveying, in the northern section of the Project area, confirms additional shallow and at depth target zones for future drilling programs

MT survey results show a shallow, very high conductivity layer of possible lithium sediments from surface to approximately 30m depth

Emerging north-south trend adds confidence to the Project's potential scale and size

Development of the Project through additional geophysics and drilling programs continues

High growth potential as the US electric vehicle/battery supply chain continues to receive significant investment

#### Overview

Morella Corporation Limited (**ASX: 1MC** "Morella" or "the Company") is pleased to advise further results from geophysical exploration activities completed at the Fish Lake Valley Lithium Project in Nevada, USA ("the Project"). From July to August 2022, Morella completed a second phase of magnetotelluric ("MT") surveying over the northern part of the Project area. A composite cross section (looking north east) of the four MT survey lines completed to date can be seen in Figure 1.



Figure 1 – Modelled resistivity cross sections at the Fish Lake Valley Lithium Project

The MT survey was designed to be complementary to a previous MT survey conducted in the southern portion of the Project area in December 2021 to April 2022 (refer to ASX Announcement *Key Drilling Targets identified at the Fish Lake Valley Lithium Project* released 28 April 2022).

#### Magnetotelluric Surveying and Modelling

MT surveying was completed along two east-west trending survey transects of the Project area. The survey was to identify electrically conductive anomalies, at depth, which are assessed as having potential to be caused by brine accumulations which may host lithium in solution. The MT survey lines in relation to the Project area are shown in Figure 2.



Figure 2 – MT survey lines completed at Fish Lake Valley in July 2022.

MT survey data was acquired by US-based Zonge International, Inc. ("Zonge") during July 2022 using the 'Zen' EMAP system, with 2D resistivity inversion modelling of the MT survey data using CGG Geotools, completed by Perth-based Resource Potentials in August 2022.

2D resistivity inversion modelling of the MT survey data produced a distinct, very high conductivity (<2 Ohmm) anomaly in the west, within a broader high conductivity (<4 Ohmm) anomaly zone, which may be caused by lithium bearing brines at 300m depth and near a vertical fault (it is also possible the high conductivities are in part, associated with increased clay content).

The MT inversion modelling results also show a shallow, very high conductivity (<1 Ohmm) layer is present from surface and extending to approximately 30m depth below surface, which may be caused be a shallow layer of lithium sediments with very saline groundwater at or just beneath the ground surface.

A deeper (approximately 300m below surface) and fault-bounded zone of intermediate conductivity (5-6 Ohmm) occurs in the east, and possible brines in this trough may connect to a sub-basin modelled

within the southern part of the project. The low resistivity/high conductivity anomaly zones are shown in the MT inversion model cross section with exploration drilling target areas highlighted in Figures 3 and 4.



Figure 3 – MT survey line L4196650N (northern line) modelled resistivity cross section identifying low resistivity target zones interpreted to be caused by possible lacustrine clays and ash layers hosting brines with lithium concentration in solution.



Figure 4 – MT survey line L4195650N (southern line) modelled resistivity cross section identifying low resistivity target zones interpreted to be cause by possible lacustrine clays and ash layers hosting brines with lithium concentration in solution.

#### **Drilling Targets and Forward Work Program**

The conductive anomaly zones modelled for both of the MT survey lines may be related to conductive brine accumulations hosted in sands and gravel units within sediments filling the young rift basin under the salt lake playa. As no existing drillholes are available within the northern part of the FLV Project area, downhole resistivity measurements and lithology records from a historical deep exploration well located within the southern part of the FLV Project area ("VRS-1"), indicate a deep electrically

conductive anomaly zone likely occurring across a Late Miocene tuff and underlying Silver Peak Formation sediments. This was assessed as being likely for the southern area of the Project and may also be present in the northern part of the Project in the west. While the centre of the basin may host younger Pliocene to Recent aged sedimentary deposits that fill deeper troughs in the centre of the basin within the Project area where higher lithium concentration brines may occur at greater depths (300-400m), similar to lithium-brine occurrences at the Clayton Valley 35 kilometres to the east.

Morella is actively engaging the market to secure drilling services in order to test lithium-brine targets. The availability of drilling contractors continues to be challenging due to unprecedented exploration activity in Nevada, however Morella remains positive that drilling will be underway in H1 2023.

To support resource modelling, Morella is investigating options for further, infill MT surveys to fully map the distribution of high conductivity areas, and 2D high resolution, seismic reflection surveys to provide geological control to the basin geometry. Morella is currently advancing formal discussions with a number of service providers in this regard. It is possible that MT infill survey will be conducted this calendar year and the 2D seismic survey work will be conducted early in 2023.

#### Morella CEO Alex Cheeseman said:

"Building on our initial exploration results with additional, clear and obvious drilling targets is a fantastic result for the effort that the Morella team has undertaken over the past few months.

Having recently been on the ground at Fish Like Valley, we are increasingly confident of the potential of this Project. The local workforce, communities and service providers fully support the exploration and development activity in the area, which is attracting significant investment.

With continued, multibillion-dollar downstream investment into US electric vehicle supply chains, having our hands on a prospective lithium project with increasing size and scale provides an enviable growth opportunity for the Company. We look forward to keeping the market informed as we continue to take the project forward."

#### **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 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.

### JORC Code, 2012 Edition – Table 1

#### Section 1 Sampling Techniques and Data

Criteria	JOI	RC Code explanation	Commentary
Sampling	•	Nature and quality of sampling (eg cut channels,	No sub-surface sampling or brine sampling has been
teeningues		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	Data collection ("sampling") is limited to Magnetotelluric (MT) geophysical survey, using EMAP Broadband MT sensors EMAP.
		limiting the broad meaning of sampling.	A total of 9.6km of MT survey over two lines (4.8km and 4.8km respectively) was completed.
	•	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Data were acquired using X-component (i.e. parallel to the survey line) electric field dipoles ('Ex') at 200 m station spacing, with Y-component (i.e. perpendicular to the survey line) electric field dipoles ('Ey') acquired every 400 m. Magnetic
	•	Aspects of the determination of mineralisation that are Material to the Public Report.	field sensor stations, including Hx, Hy, and Hz magnetic field coil sensors, were deployed at four stations spaced between 800 and 1,600 m along the survey lines. The minimum station
	•	In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1	occupancy time was 12 hrs (overnight). The magnetic sensor was ANT-4 (0.0001 – 1000 Hz).
		m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other	Locations were made using hand-held GPS accurate to 5m, which is sufficient accuracy for this type of survey.
		where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	2D resistivity inversion modelling of the MT survey data was completed using CGG Geotools, which utilises the RLM-2D inversion modelling code.
Drilling techniques	•	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).	No drilling has been undertaken.
Drill sample recovery	•	Method of recording and assessing core and chip sample recoveries and results assessed.	No drill samples have been collected
	•	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.	
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.	No geological data have been logged
	•	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	
	•	The total length and percentage of the relevant intersections logged.	
Sub-sampling techniques and sample	•	If core, whether cut or sawn and whether quarter, half or all core taken.	No sampling has been undertaken
preparation	•	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	

Criteria	JOI	RC Code explanation	Commentary
	•	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.	
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.	No assays have been undertaken
	•	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.	
Verification of sampling and assaying	•	The verification of significant intersections by either independent or alternative company personnel.	No assays have been undertaken
	•	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.	
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	MT survey points were set out with handheld GPS accurate to 5m.
		used in Mineral Resource estimation.	The WGS 84 datum and UTM Zone 11N projection grid system has been used.
	•	Specification of the grid system used.	No other topographic control was used.
	•	Quality and adequacy of topographic control.	
Data spacing and	•	Data spacing for reporting of Exploration Results.	MT data was collected from stations at 200m spacing.
distribution	•	Whether the data spacing and distribution is sufficient to establish the degree of geological	The spacing is adequate to support interpolation of sub- surface brine conductivity where the brine is hosted in regional sedimentary basin aquifers.
		Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Notwithstanding adequate data-spacing, in the absence of sub-surface sampling, no mineral resource estimation is supported.
	•	Whether sample compositing has been applied.	

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieve unbiased sampling of possible structures and th extent to which this is known, considering the deposit type.	Geophysical survey lines were orientated east-west perpendicular to the strike of the rift basin axis.
	<ul> <li>If the relationship between the drilling orientation and the orientation of ke mineralised structures is considered to hav introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	
Sample security	• The measures taken to ensure sample security.	No samples were collected.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	MT data were subject to review by independent geophysical consultant, Resource Potentials Pty Ltd. All data were found to be of high quality.

#### Section 2 Reporting of Exploration Results

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

Criteria	JOI	RC Code explanation	Commentary
Mineral tenement and land tenure status	•	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The 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 Fish Lake Valley Project is located in Nevada, USA and comprises 297 claims over an area of ~44.4km <sup>2</sup> The tenements are held by Lithium Corporation, Morella entered into an earn-in agreement with Lithium Corporation in October 2021, whereby Morella has the right to earn a 60% interest in the project, with options to acquire 100% interest. The claims are in good standing, with payments up to date with the US Bureau of Land Management. There are no known impediments to maintain the claims and operate in the area.
			Tenement ID Location
			NV101621690         -         NV101621695         Nevada USA           NV101622134         -         NV101622141         Nevada USA           NV101340597         -         NV101340600         Nevada USA           NV 105231487         -         NV 105231518         Nevada USA           NV105243416         -         NV105243451         Nevada USA
Exploration done by other parties	•	Acknowledgment and appraisal of exploration by other parties.	The property was developed as a borate producer sometime in the late 1860's, with the earliest record of production in 1873. Production by 1875 was in the order of 1.814 tonnes (2 tons) of concentrated borax daily. Operations ceased sometime prior to the 1900's and there is no record of any further activity or exploration until the 1970's. During the 1970's the USGS conducted some lithium focused exploration in the general area and drilled several holes on the periphery of the playa.
			A deep oil exploration well was also drilled 1970 by the Nevada Oil and Minerals Inc. The well, VRS1, reached a depth of 2797m. A lithology and wireline resistivity log are available through the USGS well database.
Geology	•	Deposit type, geological setting and style of mineralisation.	Fish Lake Valley is located on the western margin of the Basin and Range province, within the "Walker Lane" which is a zone

Criteria	JOF	C Code explanation	Commentary
			of Miocene (to recent) structural deformation which trends northwest to southeast paralleling the trend of the Sierra Madre Mountains in Eastern California. The area occurs at the northern extremity of the Death Valley-Furnace Creek-Fish Lake Valley fault zone and comprises a highly complex array of active faults.
			Fish Lake Valley represents a deep structural rift depression formed by extensional activity within the complex fault zone. The depression is infilled with up to 1800m of post-Oligocene sediments, comprising volcanics, volcaniclastic and detrital sediments (the latter being the Fish Lake Valley Formation and comprising interbedded sandstone, conglomerate, clay and playa sediments with interbedded volcanic tuff).
			Deep faulting provides a conduit for geothermal brine enriched with lithium (and other minerals), to migrate into the basin-fill sediments. These fluids may be further enriched through evapo-concentration where they reach the near surface and groundwater is subject to evaporation from the playa surfaces.
			Potentially economic brine deposits maybe hosted within the basin-fill sediments that have sufficient transmissivity to support commercial brine extraction. Brine abstraction occurs at Silver Peak from aquifer units that are thought to be lateral equivalents to the upper Fish Lake Valley Formation.
Drill hole Information	•	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:	Drilling was completed by Lithium America and previously outlined in Morella's ASX announcement of 15th December 2021. This drilling comprised 74 direct push drill holes and 1 sonic drill hole. The maximum depth was 150m and average drilled depth of these programmes was 50m.
		<ul> <li>easting and northing of the drill hole collar</li> <li>clouttion or PL (Reduced Love)</li> </ul>	These drilling results do not provide information relevant to the deep conductivity targets interpreted from the MT survey.
		<ul> <li>elevation of RL (Reduced Level</li> <li>elevation above sea level in metres) of the drill hole collar</li> </ul>	
		• dip and azimuth of the hole	
		<ul> <li>down hole length and interception depth</li> </ul>	
		o 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.	
Data aggregation methods	•	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.	No grade results have been reported.
	•	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.	
	•	The assumptions used for any reporting of metal equivalent values should be clearly stated.	

Criteria	JORC Code explanation	Commentary
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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</li> </ul>	No intercepts or brine reservoir geometry is reported.
Diagrams	<ul> <li>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.</li> </ul>	Plans, cross sections and 2D subsurface modelling are presented in the release.
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.	All MT data have been presented and balanced reporting completed.
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.	Data from shallow drilling for the project was summarised in Morella's release of 15th December 2021. Data from an initial stage of passive seismic geophysical survey was presented in Morella Corporations release of 22nd February 2022. Data from initial geophysics programs was presented in Morella Corporations release of 28 April 2022 Non-invasive investigations are progressing and there are no other substantive exploration activities.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive</li> </ul>	MT survey infill is being considered Morella seeking to secure drillers for defined targets Reflective Seismic survey is being scoped.