

Amended ASX Announcement



27 October 2022

The Board of Morella Corporation (ASX: 1MC "Morella" or "the Company") provides the following as an amendment to the Announcement released on Tuesday 25 October 2022.

The announcement has been amended to include a JORC Table 1, a Competent Person's Statement and related information.

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

John Lewis
Company Secretary

E: info@morellacorp.com

Direct Lithium Extraction Study confirms highly efficient lithium concentrating process

Ion exchange Media proves to be highly efficient for lithium extraction from brine contained within Fish Lake Valley

Lithium concentrations increased over 600% in a two-hour processing cycle with an extraction efficiency up to 95%.

Positive results support the study's extension and planning for pilot-scale development

Drill program at Fish Lake Valley expected in Late Q4 2022

Overview

Morella Corporation Limited (ASX: 1MC "Morella" or "the Company") is pleased to provide an update on the Direct Lithium Extraction (DLE) study being completed by Recion Technologies ("Recion") at Recion's laboratory in Edmonton, Canada. (Refer ASX Announcement *Direct Lithium Extraction Testwork Begins* released 14 June 2022) The study is aimed at providing a preliminary assessment of lithium extraction and underlying economics using Recion's technology solution and Fish Lake Valley (FLV) brine.

An interim progress report from Recion has provided positive early-stage indications of successful lithium concentration using Recion's ion exchange media (Media) process and FLV brine.

The brine sample was obtained from (417,213mE; 4,197,266mN; 1438mRL) near surface (from 4.26m) of the playa at FLV and was expected to be highly diluted from surface water, however the testing process focussed on lithium extraction from the brine type or signature of the brine. As part of the next phase of DLE testing Morella will provide brine samples from reservoirs identified in the Passive Seismic and MT surveys completed earlier in 2022. (Refer ASX announcement *Geophysical Exploration Update for Fish Lake Valley Lithium Project* released on 22 February 2022)

The report has identified that two hours of absorption is sufficient to extract lithium from the brine with extraction efficiency up to 95% using an absorption column configuration. Absorption column configuration has been used in water treatment operations and is known to be scalable using standard/commercially available equipment.

Extended testing saw high lithium recoveries, resulting in lithium concentration levels over 600%.

Kinetics Test

Morella provided a 20 litre brine sample to Recion in June 2022, initial testing was conducted at benchtop scale, focusing on understanding how Recion's Media process performed with the FLV brine.

To test the lithium extraction rate, a prescribed amount of Media was packed into a column, a prescribed amount of brine then flowed through the column at a prescribed flowrate. Lithium was then desorbed from the column by using acid¹ at a prescribed flow rate.

Concentrate samples were taken every 30 minutes and analysed for lithium concentration. The concentration rates can be seen in Table 1 (below).

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¹ Testing was conducted using both sulfuric acid and hydrochloric acid – no notable difference in performance was observed between the two acid types.

Table 1 – Fish Lake Valley Brine and mineral concentrations (ppm) during DLE testing

	Li	В	Na	Mg	K	Ca
Original Brine	72	1,040	105,000	BDL	2,620	BDL*
Concentrate 30 min	212	77	3,546	BDL	239	BDL
Concentrate 60 min	322	82	3,440	BDL	275	BDL
Concentrate 90 min	421	82	3,458	BDL	308	BDL
Concentrate 120 min	450	80	3,400	BDL	280	BDL

^{*}BDL = below detection limit

Recion has identified two hours as the optimal cycle time and ran a set of extended series repeat tests varying Media quantity, flow rates and total brine volume flowing through the column. The results continue to build a body of knowledge on processing options for larger scale testing.

Media Performance

Recion also conducted a series of tests to assess the performance of the Media process for extended cycles of lithium absorption and desorption. Observations identified that the Media process performed consistently achieving 80-95% lithium extraction over more than 2 months of operation.

Recion also tested Media which had been used for more than 8 months and achieved a high lithium extraction rate. The performance of the process over repeat cycles is a key area of interest to support developing an economic model around the use of DLE technology to underpin the FLV Project. Media performance testing is ongoing.

Progress Report Conclusion

The Recion testwork on the FLV brine has determined the following conclusions:

- 2 hours was sufficient timeframe to extract lithium from the provided brine sample with an extraction efficiency up to 95% using an absorption column configuration;
- Processing of the brine in the column results in a high lithium recovery and lithium can be concentrated by a factor of 7-9 up to ~400-500 ppm depending on recovery;
- Desorption can be completed in 1-2 hours; however, 2 hours is recommended to ensure full recovery of lithium from the sorbent;
- The absorption column configuration is a well-known modular configuration which has been used in water treatment for decades and can be scaled up using standard equipment; and
- Preliminary economics have been determined and will be refined following the provision of more representative deeper reservoir samples from the upcoming drill program.

Future Works

The DLE study will continue with Morella recently providing additional brine material to Recion. A primary objective of the next phase of testing is to generate enough concentrated lithium in solution to allow for continued processing at benchtop scale and production of lithium chemicals from the FLV brine.

Morella is currently in the final stages of permitting and a drill contract has been awarded for a drill program aimed at providing brine samples from depth at the FLV project. The Company expects that drilling will commence in the latter part of Q4 2022 once all regulatory approvals have been received.

Morella has also commenced initial discussions on using Recion's recently built field prototype and potential field pilot and will advise the market in due course.

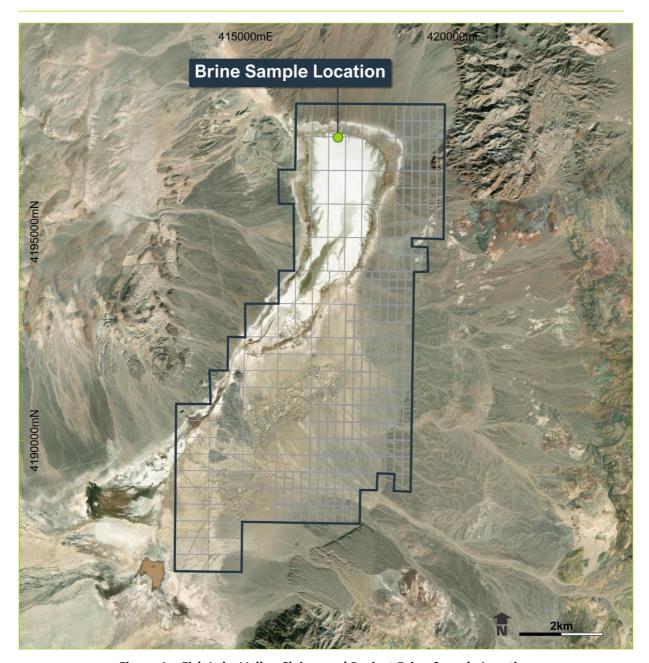


Figure 1 – Fish Lake Valley Claims and Project Brine Sample Location

Contact for further information

<u>Investors | Shareholders</u>

James Brown Managing Director

E: info@morellacorp.com

<u>Media</u>

Michael Weir Citadel Magnus

M: 0402 347 032

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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 Metallurgical Test Results is based on and fairly represents information and supporting documentation prepared by Mr Aaron Debono (Consultant - NeoMet Engineering Pty Ltd). Mr Debono is a Fellow of the AusIMM and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Debono consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

JORC CODE, 2012 EDITION - TABLE 1

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary	
Sampling techniques	 Nature and quality of sampling (e.g. 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. Include reference to measures taken to ensure sample representivity and the 	An auger was used to drill a hole into the playa and a brine sample was extracted using a bailer The sample was the transferred to two sample containers (10 litres each) for transportation to Recion in Canada	
	 appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 		
	• In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.		
Drilling techniques	 Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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). 	An auger was used to drill a hole into the playa and a brine sample was extracted using a bailer	
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 	No drill core was taken A 20 litre sample was extracted using a bailer.	
	 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 & metallurgical studies.	No geological data has been logged	
	 Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. 		

Criteria	JORC Code explanation	Commentary		
	relevant intersections logged.			
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	The sample was a liquid brine which was transferred to two 10 litre sample containers		
	 If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. 			
	 For all sample types, the nature, quality and appropriateness of the sample preparation technique. 			
	 Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 			
	 Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. 			
	 Whether sample sizes are appropriate to the grain size of the material being sampled. 			
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. 	Samples were analysed using an ICP/MS with matrix matched standards, blanks, and internal standard recovery correction.		
	 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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. 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 external verification has been completed.		
	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	The sample location was surveyed by Morella personnel using a handheld GPS unit (with an error of +/- 5 m).		
	locations used in Mineral Resource estimation.	The Grid System used was UTM Zone 11 The level of topographic control offered by a handheld		
	Specification of the grid system used.	GPS was considered sufficient for the work undertaken.		
	 Quality and adequacy of topographic control. 			
Data spacing and distribution	 Data spacing for reporting of Exploration Results. 	A single sample from a single location was taken		
	 Whether the data spacing and distribution is sufficient to establish the degree of 			

Criteria	JORC Code explanation	Commentary	
	geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.		
	 Whether sample compositing has been applied. 		
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 	No orientation was undertaken	
	 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. 		
Sample security	The measures taken to ensure sample security.	The chain of custody for sampling procedures and sample analysis was managed by Morella personnel.	
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews of the data have been conducted at this stage.	

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary	
Mineral tenement and land tenure status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, 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 ~44.4km2 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. TenementID Location NV101621690 - NV101621695 Nevada USA NV101622134 - NV101622141 Nevada USA NV101340597 - NV101340600 Nevada USA NV105231487 - NV105231518 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.	

Criteria	JORC Code explanation	Commentary
		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.
		American Lithium Corporation carried out work in 2016- 19
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 "Walker Lane" which is a zone of Miocene structural deformation that 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 may be 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: 	A single sample was taken by Morella personnel at: 417,213mE 4,197,266mN 1438mRL Depth of the hole is: 4.26m
	o easting and northing of the drill hole collar	
	 elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar 	
	o dip and azimuth of the hole	
	o down hole length and interception depth	
	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 (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. 	No aggregation was undertaken
	Where aggregate intercepts incorporate short	

Criteria	JORC Code explanation	Commentary	
	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. 		
Relationship between mineralisation widths and	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with 	As it's a liquid brine sample there is no relationship between widths and lengths	
intercept lengths	respect to the drill hole angle is known, its nature should be reported.		
	 If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 		
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	See in body of 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. 	Balanced reporting has been 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	Samples were filtered (0.8 micron) prior to metallurgical tests. To test the lithium extraction rate, a prescribed amount of Media was packed into a column, a prescribed amount of brine then flowed through the column at a prescribed flowrate. Lithium was then desorbed from the column by using acid at a prescribed flow rate. Concentrate samples were taken every 30 minutes and analysed for lithium concentration	
	contaminating substances.	Recion also conducted a series of tests to assess the performance of the Media process for extended cycles of lithium absorption and desorption. Observations identified that the Media process performed consistently achieving 80-95% lithium extraction over more than 2 months of operation.	
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further work is planned with a drill hole expected to be completed in November and a larger bulk sample to be extracted and will be sent to Recion for analysis and	
	 Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	testwork	