

# **ASX Announcement**



12 January 2024

# **Positive Results for Fish Lake Valley Project**

Seismic reflection surveying identifies deep rift basin within a half-graben structure, akin to structure hosting lithium brines at Albemarle's Silver Peak Lithium Brine Mine

Completion of the first hole has identified sediment and volcanic deposits, indicating a positive likelihood of lithium brine occurrence

Infill surveys to commence to determine the most electrically conductive lithium brine target zones for drill testing

#### Overview

Morella Corporation Limited (ASX: 1MC, Morella or the Company) is pleased to announce that it has completed a 2D seismic reflection survey in the Southern Project area at the Company's Fish Lake Valley (FLV) Lithium Brine Project in Nevada, USA (FLV Project). The seismic reflection survey has, for the first time, defined the deep rift basin geology sitting below the playa. A classical half-graben structure with over 2 kilometres of sediment fill has been defined with striking similarities to the structure hosting lithium brines at Albemarle's Silver Peak Lithium Brine Mine in the Clayton Valley, located 35 kilometres to the east.

The first drillhole in the northern area of the FLV Project was also completed to test the geology in an area of easy drilling access. It encountered sediment and volcanic deposits which are a good source for lithium brine and a high geothermal gradient which bodes well for the occurrence of lithium brines below the playa.

## Morella Managing Director James Brown said:

"Expansion of the exploration program at FLV continues to build Morella's understanding of the lithium brine target within the untested sedimentary basin in the popular lithium mining province. The previous geophysical survey work<sup>1</sup> in combination with the recent 2D seismic reflection survey has given us a much greater understanding of the basin architecture and allowed us to generate high priority lithium brine targets for drill testing."

"The completion of the drillhole in the northern area of the FLV Project marks a pivotal milestone for the Company and its key partner, Lithium Corporation. It is the first step towards understanding the subsurface geology of the playa, where high temperatures and key lithium bearing volcanic ash source rocks were encountered, indicating strong potential for lithium brines to accumulate in the central and southern part of the basin, similar to Abemarle's Silver Peak Lithium Brine Project. This finding significantly enhances our understanding of the region, guiding our exploration efforts across the FLV Project area."

 $<sup>^1</sup>$  Refer to the Company's ASX release dated 1 September 2022 "Further drilling targets identified at Fish Lake Valley Lithium Project

#### Seismic Reflection in the Southern Project Area

During July 2023, Morella commissioned Bird Seismic Services (BSS) of Globe Arizona to carry out a high-resolution 2D seismic reflection surveying within the southern half of the FLV Project in Nevada, USA (Figure 1). BSS subcontracted Columbia Geophysical LLC (Columbia) to complete preliminary and final processing of the high-resolution 2D seismic reflection survey data. Perth-based geophysical consultancy, Resource Potentials Pty Ltd ("ResPot"), assisted Morella with survey planning, contracting, additional data processing and interpretation of the final processed survey data.

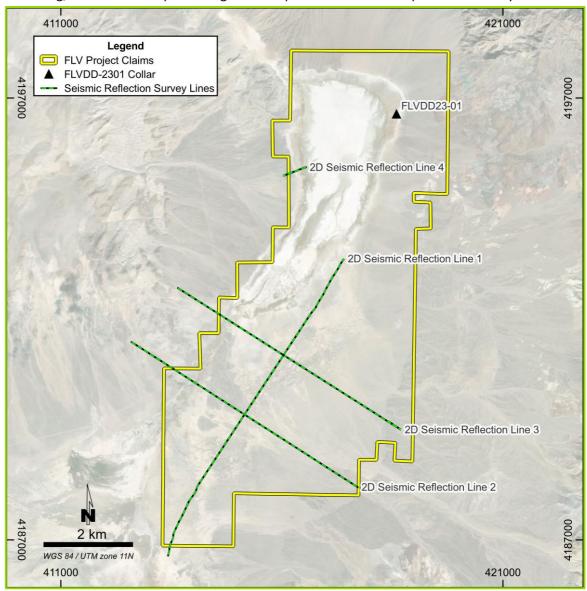


Figure 1: Location of 2D seismic reflection survey lines and Morella's first drillhole completed in the FLV.

#### **Seismic Reflection Survey Method**

BSS carried out high-resolution 2D seismic reflection surveying using an accelerated weight-drop AF-450 hammer system mounted on an IH-50 rubber track crawler buggy as the seismic source and a Sercel Wing MEMS sensor based nodal recording system as the receiver array (Figure 2).

The AF-450 fires a gas-spring driven 204kg hammer over 36cm travel on to an aluminium plate to generate and distribute the seismic energy into the ground. The Sercel Wing nodes recorded seismic data for 3 seconds at 1 ms sampling rate, and with a 0 - 400 Hz bandpass filter and 0.15625 Hz low-cut filter which are the ground signal limits and limits of the recording instruments.



Figure 2: Accelerated weight drop seismic survey source.

Receiver nodes and seismic source shot points were placed every 6 meters along the seismic reflection survey lines with source points being located in-between receiver stations.

A 600 channel spread was used to record the seismic data, with a minimum active channel count of 300 channels maintained along each of the 2D seismic survey lines.

Source and receiver locations were measured and recorded using Leica RTK grade GPS equipment having sub-meter accuracy, and wind speed was monitored during recording operations as part of data QA/QC.

# **Seismic Reflection Data Processing**

Preliminary and final seismic reflection data processing was completed by Columbia, who have extensive experience in seismic data processing in worldwide oil and gas projects, including more-recent lithium brine exploration within the Basin and Range environments. Columbia completed the seismic data processing using ProMax seismic data processing software, with Flat Irons Refraction Static software used for computation and correction of near surface weathering corrections.

Final data processing includes time to depth conversion required to integrate these seismic data sections into 3D workspaces for interpretation of these data in conjunction with other available drillhole, geochemical, geophysical (magnetotellurics and passive seismic) and geological datasets.

## **Seismic Reflection Results and Comments**

The results of the 2D seismic reflection surveying were outstanding and showed strong reflective signals from geological layers down to 3 kilometres of depth. Figure 3 shows 2D seismic reflection survey Line 3 which crosses the central portion of the FLV playa (see Figure 1 for location).

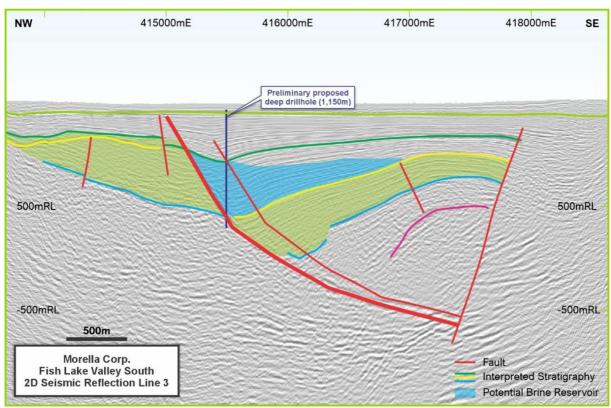


Figure 3: Depth converted seismic cross section for survey Line 3, with interpreted faults, key reflection horizons through the rift basin, lithium brine target zone (blue shading) and proposed drillhole.

The newly identified half-graben basin sediments as well as structures identified and interpreted by Morella at FLV have generated high priority brine targets for drill testing, with a key drillhole already proposed to depth of 1,150 metres to test the highest priority target zone in the hanging wall of the newly identified major rift border fault, as shown in Figure 3, as a listric normal fault.

# **Drill Program Results**

Between August to October 2023 a single 400m drill hole (FLVDD23-01 Figure 1) was executed with the goal of developing greater geological understanding of the basin structure and development, as well as testing a secondary magnetotelluric target identified in earlier work.

The completed hole was drilled with a Reverse Circulation pre-collar to 61m and then with a Diamond Drill tail to the final depth of 400m (Figure 4).



Figure 4: Drill site set up for drillhole FLVDD23-01.

Rock chip and core samples were submitted to Paragon Geochemical Nevada for industry standard ICP-MS assay analysis. Lithium assay results from the drilling are shown in Figure 5.

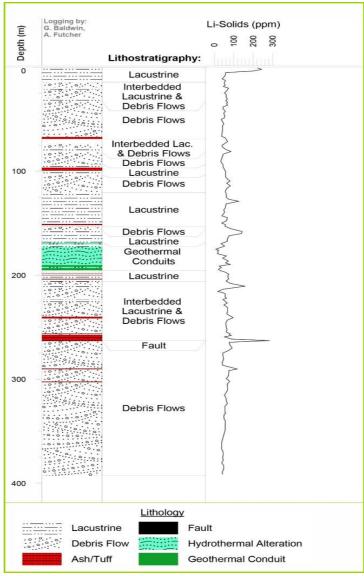


Figure 5: FLVDD23-01 stratigraphic log with Li assays

The analysis and interpretation of the 2023 FLV drilling program data produced several findings that advance Morella's understanding of lithium occurrences at the site.

Drilling intersected extensive intervals of anomalously elevated lithium bearing sediments, though not of economic grade. Notably, certain volcanic ash and tuff beds containing highly elevated lithium concentrations were identified. Current and historic geothermal features intersect the lithium bearing sediments. The assay results strongly indicate that geothermal waters have mobilised lithium from the sediments into groundwaters.

Assay results of sediments showed highly elevated lithium concentrations in shallow sediments and in proximity to fractures and faults. This aligns with the conceptual model that lithium is accumulating in shallow groundwater due to evapo-concentration and migrating into the deep basin through fractures and faults and along porous sedimentary beds.

Downhole geophysical surveys conducted in FLVDD23-01 indicate a high geothermal gradient and moderate hydraulic conductivity of much of the formation. Additionally, water airlifting was conducted at elevated rates for an extended period of several days, indicating that the FLV sediments have the potential to support sustained pumping at an elevated rate.

## **Next Steps**

The next steps for advancing the FLV Project include:

- Infill MT survey lines in between existing survey lines to provide closer spacing around the seismic reflection survey lines to highlight the most electrically conductive lithium brine target zones for drill testing.
- Drone based magnetic surveying to provide more definition and detail on buried rift fault structures and volcanic features between 2D seismic lines and across the entire FLV Project area.
- Infill 2D seismic reflection survey lines between the recent survey lines to define the geometry
  and size of lithium brine targets for exploration drill targeting, assist in potential resource
  volume estimation, and help to map out the hydrogeology in more detail for planning longterm brine extraction.
- Drilling of a single deep hole to 1,150m in the southern project area based on results from above, in a similar position to the preliminary deep drillhole planned along seismic survey Line 3, as shown in Figure 3.

#### Contact for further information

<u>Investors | Shareholders</u> Media

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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 Statements**

The information in this report that relates to Exploration Results is based on information compiled by Mr Henry Thomas, who is a Member of the Australasian Institute of Mining and Metallurgy and is the Exploration Manager employed by Morella Corporation. Mr Henry Thomas 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 Henry Thomas 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 announcement that relates to Geophysical Results complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and has been compiled and assessed under the supervision of Dr Jayson Meyers, a consultant to Morella and a Director of Resource Potentials Pty Ltd. Dr Meyers is a Fellow of the Australasian Institute of Geoscientists. He 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 JORC Code. Dr Meyers consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears. Dr Meyers does not hold securities in the Company.

APPENDIX 1

Drillhole collar co-ordinates in UTM Zone 11S

Hole ID	Easting	Northing	RL	DIP	AZIMUTH	Drilled Depth(m)	E of H
FLV23DD-01	418,593	4,196,650	1431	-90	270	400	400

APPENDIX 2
COMPLETE LITHUM ASSAY RESULTS

Sample ID	Depth From (m)	Depth To (m)	Li (ppm)
FLVDD2301_0-5	0.00	1.52	222.0
FLVDD2301_5-10	1.52	3.05	245.0
FLVDD2301_10-15	3.05	4.57	201.0
FLVDD2301_15-20	4.57	6.10	57.9
FLVDD2301_20-25	6.10	7.62	57.4
FLVDD2301_25-30	7.62	9.14	57.1
FLVDD2301_30-35	9.14	10.67	48.7
FLVDD2301_35-40	10.67	12.19	40.8
FLVDD2301_40-45	12.19	13.72	57.1
FLVDD2301_45-50	13.72	15.24	54.9
FLVDD2301_50-55	15.24	16.76	51.3
FLVDD2301_55-60	16.76	18.29	57.5
FLVDD2301_60-65	18.29	19.81	47.4
FLVDD2301_65-70	19.81	21.34	74.0
FLVDD2301_70-75	21.34	22.86	68.2
FLVDD2301_75-80	22.86	24.38	62.2
FLVDD2301_80-85	24.38	25.91	52.5
FLVDD2301_85-90	25.91	27.43	60.9
FLVDD2301_90-95	27.43	28.96	59.8
FLVDD2301_95-100	28.96	30.48	61.5
FLVDD2301_100-105	30.48	32.00	67.7
FLVDD2301_105-110	32.00	33.53	60.0
FLVDD2301_110-115	33.53	35.05	69.0
FLVDD2301_115-120	35.05	36.58	63.7
FLVDD2301_120-125	36.58	38.10	68.8
FLVDD2301_125-130	38.10	39.62	46.4
FLVDD2301_130-135	39.62	41.15	44.9
FLVDD2301_135-140	41.15	42.67	51.4
FLVDD2301_140-145	42.67	44.20	56.9
FLVDD2301_145-150	44.20	45.72	48.8
FLVDD2301_150-155	45.72	47.24	52.1
FLVDD2301_155-160	47.24	48.77	54.9
FLVDD2301_160-165	48.77	50.29	51.8
FLVDD2301_165-170	50.29	51.82	35.1
FLVDD2301_170-175	51.82	53.34	40.0
FLVDD2301_175-180	53.34	54.86	43.0

Sample ID	Depth From (m)	Depth To (m)	Li (ppm)
FLVDD2301 180-185	54.86	56.39	49.2
FLVDD2301 185-190	56.39	57.91	43.5
FLVDD2301 190-195	57.91	59.44	42.2
FLVDD2301 195-200	59.44	60.96	44.0
FLVDD2301_233 203	67.82	67.97	38.3
FLVDD2301_224.35-230.25	68.38	70.18	56.9
FLVDD2301 231.1-247.7	70.44	75.50	69.0
FLVDD2301_247.7-254	75.50	77.42	40.2
FLVDD2301 254-259.5	77.42	79.10	43.0
FLVDD2301 259.5-268.5	79.10	81.84	57.7
FLVDD2301 268.5-273.4	81.84	83.33	86.4
FLVDD2301 273.4-285.4	83.33	86.99	46.8
FLVDD2301 285.4-292.8	86.99	89.25	42.6
FLVDD2301 292.8-313	89.25	95.40	34.0
FLVDD2301_313-317.7	95.40	96.83	46.6
FLVDD2301 317.7-323	96.83	98.45	45.2
FLVDD2301_323-333	98.45	101.50	52.2
FLVDD2301 333-339	101.50	103.33	58.5
FLVDD2301 339-347.25	103.33	105.84	58.3
FLVDD2301 347.25-356.9	105.84	108.78	57.8
FLVDD2301 356.9-365	108.78	111.25	70.2
FLVDD2301_365-367.5	111.25	112.01	81.6
FLVDD2301_367.5-378	112.01	115.21	63.8
FLVDD2301_378-385	115.21	117.35	83.2
FLVDD2301_385-394	117.35	120.09	65.8
FLVDD2301_394-403	120.09	122.83	56.7
FLVDD2301_403-414.5	122.83	126.34	62.1
FLVDD2301_414.5-423	126.34	128.93	63.1
FLVDD2301_423-426.5	128.93	130.00	75.8
FLVDD2301_426.5-436	130.00	132.89	127.0
FLVDD2301_436-443	132.89	135.03	61.5
FLVDD2301_443-449	135.03	136.86	59.1
FLVDD2301_449-456	136.86	138.99	56.4
FLVDD2301_456-463	138.99	141.12	49.7
FLVDD2301_463-468	141.12	142.65	53.4
FLVDD2301_468-475.75	142.65	145.01	47.7
FLVDD2301_475.75-479.75	145.01	146.23	39.2
FLVDD2301_479.75-488	146.23	148.74	67.6
FLVDD2301_488-498	148.74	151.79	64.1
FLVDD2301_498-504	151.79	153.62	38.6
FLVDD2301_504-508	153.62	154.84	57.9
FLVDD2301_508-514	154.84	156.67	55.7
FLVDD2301_514-523.2	156.67	159.47	83.2
FLVDD2301_520-530	158.50	161.54	68.1
FLVDD2301_523.2-533	159.47	162.46	143.0

0	Double From (co.)	Davids Ta (m)	1:/
Sample ID	Depth From (m)	Depth To (m)	Li (ppm)
FLVDD2301_533-536.5	162.46	163.53	140.0
FLVDD2301_536.5-546.8	163.53	166.66	76.6
FLVDD2301_546.8-556.7	166.66	169.68	68.1
FLVDD2301_556.7-563.75	169.68	171.83	66.8
FLVDD2301_563.7-570.5	171.82	173.89	35.0
FLVDD2301_570.5-580	173.89	176.78	53.9
FLVDD2301_580-582.9	176.78	177.67	25.4
FLVDD2301_582.9-587.6	177.67	179.10	7.4
FLVDD2301_587.6-588.8	179.10	179.47	24.0
FLVDD2301_588.8-593	179.47	180.75	16.3
FLVDD2301_593-595	180.75	181.36	20.2
FLVDD2301_595-604	181.36	184.10	16.4
FLVDD2301_604-609.6	184.10	185.81	63.4
FLVDD2301_609.6-618.5	185.81	188.52	43.3
FLVDD2301_618.5-627.2	188.52	191.17	73.2
FLVDD2301_627.2-631.4	191.17	192.45	57.8
FLVDD2301_631.4-636.7	192.45	194.07	84.0
FLVDD2301_636.7-642	194.07	195.68	25.3
FLVDD2301_640-650	195.07	198.12	28.1
FLVDD2301_642-646	195.68	196.90	37.7
FLVDD2301_646-652.7	196.90	198.94	21.9
FLVDD2301_652.7-653.75	198.94	199.26	28.6
FLVDD2301_653.75-662.75	199.26	202.01	54.0
FLVDD2301_662.75-663.75	202.01	202.31	69.3
FLVDD2301_663.75-667.9	202.31	203.58	75.0
FLVDD2301 667.9-669.25	203.58	203.99	69.7
FLVDD2301_669.25-680.25	203.99	207.34	70.6
FLVDD2301_680.25-682.75	207.34	208.10	74.1
FLVDD2301 682.75-691.3	208.10	210.71	61.4
FLVDD2301 691.3-699.25	210.71	213.13	83.2
FLVDD2301_699.25-709.7	213.13	216.32	160
FLVDD2301 709.7-717.8	216.32	218.79	45.1
FLVDD2301_717.8-724.25	218.79	220.75	17.8
FLVDD2301_724.25-726.6	220.75	221.47	46.6
FLVDD2301 726.6-731.5	221.47	222.96	57.9
FLVDD2301 731.5-740.9	222.96	225.83	54.8
FLVDD2301_740.9-745	225.83	227.08	63.0
FLVDD2301 745-748	227.08	227.99	45.3
FLVDD2301_748-756.1	227.99	230.46	56.4
FLVDD2301_746 766.1-760	230.46	231.65	67.6
FLVDD2301_760-767.8	231.65	234.03	49.5
FLVDD2301_760-770	231.65	234.70	51.0
FLVDD2301_767.8-777.6	234.03	237.01	69.5
FLVDD2301_777.6-787.6	237.01	240.06	69.6
FLVDD2301_777.6-787.6 FLVDD2301_787.6-797.5	240.06	243.08	64.7
1 FADD 5201 - 101.0-121.2	∠40.00	243.00	04./

Sample ID	Depth From (m)	Depth To (m)	Li (ppm)
FLVDD2301_797.5-802.3	243.08	244.54	81.6
FLVDD2301_802.3-808.1	244.54	246.31	98.4
FLVDD2301_808.1-818.1	246.31	249.36	67.5
FLVDD2301_818.85-828	249.59	252.37	59.5
FLVDD2301_828-838	252.37	255.42	61.0
FLVDD2301_838-846	255.42	257.86	65.6
FLVDD2301_846-856	257.86	260.91	61.8
FLVDD2301_856-858	260.91	261.52	80.0
FLVDD2301_858-860.5	261.52	262.28	77.4
FLVDD2301_860.5-864	262.28	263.35	88.0
FLVDD2301_864-870	263.35	265.18	51.4
FLVDD2301_870-877	265.18	267.31	85.6
FLVDD2301_877-880.9	267.31	268.50	286
FLVDD2301_880.9-888	268.50	270.66	76.6
FLVDD2301_888-898	270.66	273.71	80.8
FLVDD2301_898-908	273.71	276.76	92.8
FLVDD2301_908-916	276.76	279.20	70.5
FLVDD2301_910-920	277.37	280.42	68.2
FLVDD2301_916-923	279.20	281.33	43.1
FLVDD2301_923-933	281.33	284.38	44.8
FLVDD2301_933.7-943	284.59	287.43	48.2
FLVDD2301_943-953	287.43	290.47	42.6
FLVDD2301_953-963	290.47	293.52	41.8
FLVDD2301_963-968.7	293.52	295.26	91.2
FLVDD2301_968.7-972.6	295.26	296.45	119.0
FLVDD2301_972.6-978	296.45	298.09	75.0
FLVDD2301_978-988	298.09	301.14	75.3
FLVDD2301_988-998	301.14	304.19	72.7
FLVDD2301_998-1005	304.19	306.32	62.8
FLVDD2301_1005-1010.5	306.32	308.00	77.2
FLVDD2301_1010.5-1013	308.00	308.76	78.1
FLVDD2301_1013-1023	308.76	311.81	67.0
FLVDD2301_1023-1033	311.81	314.86	69.0
FLVDD2301_1033-1043	314.86	317.91	69.2
FLVDD2301_1048-1060.7	319.43	323.30	52.6
FLVDD2301_1060.7-1066.9	323.30	325.19	60.2
FLVDD2301_1066.9-1077.5	325.19	328.42	62.7
FLVDD2301_1077.5-1086	328.42	331.01	68.3
FLVDD2301_1086-1088	331.01	331.62	59.2
FLVDD2301_1088-1098	331.62	334.67	53.8
FLVDD2301_1098-1108	334.67	337.72	55.4
FLVDD2301_1108-1112	337.72	338.94	55.9
FLVDD2301_1112-1114	338.94	339.55	59.8
FLVDD2301_1114-1118	339.55	340.77	51.4
FLVDD2301_1118-1120	340.77	341.38	52.5

Sample ID	Depth From (m)	Depth To (m)	Li (ppm)
FLVDD2301_1120-1130	341.38	344.42	49.3
FLVDD2301_1130-1132	344.42	345.03	51.5
FLVDD2301_1132-1143	345.03	348.39	57.4
FLVDD2301_1143-1153	348.39	351.43	56.2
FLVDD2301_1153-1163	351.43	354.48	56.2
FLVDD2301_1163-1168	354.48	356.01	56.6
FLVDD2301_1203-1213	366.67	369.72	37.8
FLVDD2301_1223-1233	372.77	375.82	37.3
FLVDD2301_1233-1243	375.82	378.87	46.3
FLVDD2301_1243-1249.8	378.87	380.94	46.2
FLVDD2301_1249.8-1258.9	380.94	383.71	44.0
FLVDD2301_1258.9-1266.1	383.71	385.91	46.5
FLVDD2301_1266.1-1278.3	385.91	389.63	39.0
FLVDD2301_1270-1280	387.10	390.14	41.1
FLVDD2301_1278.3-1287.3	389.63	392.37	49.5
FLVDD2301_1287.3-1298.2	392.37	395.69	47.6
FLVDD2301_1298.2-1306.6	395.69	398.25	41.3
FLVDD2301_1306.6-1311.7	398.25	399.81	43.6

#### JORC Code, 2012 Edition - Table 1

#### **Section 1 Sampling Techniques and Data**

#### Criteria JORC Code explanation

# Sampling techniques

- 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.
- Include reference to measures taken to ensure sample representivity and the 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 (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.

#### Commentary

Solids were sampled by collecting drill cuttings from the Reverse Circulation intervals and core samples from Diamond Core drilling. Samples were submitted to Paragon for lithium analysis.

The upper reverse circulation section of the borehole was sampled by splitting the drill cuttings exiting the shaker table. A consistent percentage of the drill cuttings were continuously directed into a 51 X 61 cm Protexo cloth sample bag. The sample bag was replaced every 1.52 m with a fresh bag.

Diamond core sample intervals were constrained to individual lithostratigraphic units. Except where core recovery was too low to provide adequate sample material, samples were constrained to less than 3.05 m intervals.

Diamond core intervals were sampled by dividing the core longitudinally into wedges of consistent width to produce the sample(s) while retaining a continuous core record. Cuttings, core, and water samples were processed at certified laboratories.

Cutting and core samples were dried and crushed to 70% passing -10 mesh, riffle split to a 250-g sample, which was pulverized to 90% passing -250 mesh. A 10 g sample was split for ICP analysis.

The samplers attempted to collect each core and cuttings sample uniformly across continuous intervals of similar stratigraphy, with cuttings and core sample intervals not exceeding 6.16 m. All recovered cutting and core intervals were sampled.

Formation fluids were sampled by airlifting using surge blocks to constrain the sample interval, with a low-flow submersible pressure-actuated valve pump in the same interval.

Drilling fluids were purged from the water sample intervals prior to water sample collection. The total volume of purged water was determined by periodically measuring the discharge rate. An InSitu AquaTroll 500 was used to periodically monitor purge water general chemistry parameters to identify the transition from drill water to groundwater.

The AquaTroll 500 multi-parameter meter was calibrated using InSitu QuickCal Solution prior to measuring chemical parameters.

A SciAps Z-903 handheld Laser Induced Breakdown Spectroscopy (LIBS) instrument with a SciAps Z-9 liquidator was used to monitor the presence of lithium in water samples.

The LIBS instrument was calibrated between each reading using fluid with a known lithium concentration.

Seismic reflection data were acquired by Bird Seismic Services LLC using a 204 kg accelerated weight drop system source with source locations every 6 meters along 2D seismic reflection survey lines and a wireless nodal receiver system with nodes every 6 meters along the survey lines located in between source locations (i.e. with 3m offset along the survey lines).

A minimum channel count of 300 active channels was maintained throughout the survey.

The raw seismic reflection data were processed by Columbia to produce depth-converted seismic sections with input from ResPot. Depth processed seismic data sections were interpreted by ResPot and Morella Corporation staff. The interpreted seismic horizons represent geology which is unknown until tested by drillholes.

Criteria	JORC Code explanation	Commentary
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc) and details (eg core diameter, triple o	, circulation and diamond core methods.
	standard tube, depth of diamond tails, face sampling bit or other type, whether core is	to 60 06 m
	oriented and if so, by what method, etc).	Diamond core PQ3 triple tube 152 centimetre tooling was used to drill to 179.1 m, where ground conditions prevented further drilling.
		Diamond core HQ3 tripe tube 152 centimetre tooling was used to drill to the final hole depth of 400 m.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	Cutting sample recoveries were estimated by assessing the volume of cuttings per time discharging from the shaker table.
	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	measured length of recovered core with the drilled length of every drill run. A graduated tape measure was used to measure both the recovered core and the drilled length.
	<ul> <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>	Reverse circulation cuttings were sampled by splitting the drill
		The diamond core drilling utilized drilling fluids engineered to maximize core recovery. The drilling fluids were modified to adapt to changing ground conditions to maximize core recovery.
		Diamond core intervals were sampled by dividing the core longitudinally into wedges of consistent width to produce the sample(s) while retaining a continuous core record.
		The shaker table disproportionately removed the fine materials, causing cuttings samples to be biased towards coarse grained constituents.
		Intervals of unconsolidated formation were not recovered due to washout during diamond core drilling and were not sampled. Diamond core samples are biased towards intervals of more consolidated formation. Diamond core samples are representative of the recovered core.
		The top 45% of the borehole was cased off to prevent hole collapse and was not water sampled. Water sample intervals included 84% of the open borehole.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a leve	I the ongoing studies.
	of detail to support appropriate Minera Resource estimation, mining studies and metallurgical studies.	All cuttings and core have been quantitatively geologically
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All recovered intervals of cuttings and core have been logged
	The total length and percentage of the relevan intersections logged.	Water samples have been quantitatively logged for chemical parameters.
Sub-sampling techniques	If core, whether cut or sawn and whether quarter, half or all core taken.	
and sample preparation	If non-core, whether riffled, tube sampled	
	<ul> <li>rotary split, etc and whether sampled wet or dry</li> <li>For all sample types, the nature, quality and</li> </ul>	Well consolidated and lithified intervals of core were sawn with a wet diamond saw.
	appropriateness of the sample preparation technique.	Core samples were halved, except where duplicates were collected. In duplicate samples, both the primary and duplicate

sample were quartered.

#### Criteria JORC Code explanation

- Quality control procedures adopted for all subsampling 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.

#### Commentary

The sampling techniques employed were the most appropriate methods for retaining all portions of the sample.

For cuttings and core samples random duplicate, blank, and standard samples were collected and submitted at the rate of 16.3% of primary samples. Duplicates consisted of evenly split cuttings or quartered core. Blanks consisted of material with a known absence of economic constituents of interest. Standards consisted of certified reference materials (CRM) certified in accordance with International Standards Organisation (ISO) recommendations.

The grain size distribution of the material being sampled was logged during drilling. Sample sizes are appropriate to the grain size of the sampled materials.

Core and cuttings sample intervals ranged from 0.15 to 6.16 m in length, with a geometric mean interval of 1.82 m.

Water samples were bottled using clean laboratory supplied bottles.

Total and Dissolved Metal water samples were preserved using laboratory supplied acid.

All water samples were split into three samples. One sample was preserved for laboratory submittal. A second sample was used to measure general chemical parameters at the time of collection using a calibrated InSitu AquaTROLL 500 multiparameter meter. A third sample was used to measure lithium concentrations at the time of collection using a SciAps Z-903 LIBS.

Adequate water sample volumes were submitted for all analytical suites.

Laboratory water samples were stored at laboratory recommended temperatures.

Water sampled intervals ranged from point samples to 28.5 m.

#### 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.
- 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.

Lithium analysis of cuttings and core, and water samples was by Inductively Coupled Plasma (ICP) Spectroscopy, the industry standard for lithium analysis.

The water laboratory utilized the appropriate National Environmental Methods Index (NEMI) Standard Methods (SM) to measure general water chemistry parameters.

The water laboratory utilized EPA 300.0 methods to determine Anions by Ion Chromatography of the water samples.

The water laboratory utilized EPA 200.7 methods to determine trace metals by ICP-OES for appropriate samples.

The water laboratory utilized EPA 200.8 methods to determine trace metals by ICP-MS for appropriate samples.

Measurements of certain water chemistry parameters were measured independently of the laboratory using an InSitu AquaTroll 500 multiparameter meter.

Laboratory supplied water chemistry standards and duplicates were analysed by the laboratory.

#### Verification of sampling and assaying

- The verification of significant intersections by either independent or alternative company personnel.
- 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.

Mineralised intercepts and data have been verified by Company's staff and consultants.

Criteria	JOI	RC Code explanation	Commentary
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 used in Mineral Resource estimation.  Specification of the grid system used.  Quality and adequacy of topographic control.	Source and receiver locations were measured using Leica RTK GPS equipment having sub 1 metre accuracy.  The WGS 84 datum and UTM Zone 11S projection grid system has been used.
Data spacing and distribution	•	Data spacing for reporting of Exploration Results.  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.  Whether sample compositing has been applied.	Continuous cutting and core sampling at ~1.82 m spacing is appropriate for evaluation of lithium in basin sediments.  Downhole formation water sampling of 84% of the target profile at sub-28 m spacing is appropriate for first-pass evaluation of water borne lithium in basin sediments.  Seismic reflection data were acquired by Bird Seismic Services LLC using a 204 kg accelerated weight drop system source with source locations every 6 meters along 2D seismic reflection survey lines and a wireless nodal receiver system receiver system with nodes every 6 meters along the survey lines located in between source locations (i.e. with 3 meters offset along the survey lines).  No Mineral Resource or Ore Reserve estimate is appropriate at this initial stage of exploration, which is intended to confirm existence and relative grade of lithium mineralisation.
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.  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.	Deposit type is stratiform. Vertical drill holes through shallowly dipping strata provide unbiased representative samples of the stratigraphic units.  Two reflection seismic survey lines were orientated east-west as dip-lines running perpendicular to the strike of the basin axis. A third line was oriented in a more north-south direction following the axis of the basin as a strike line.
Sample security	•	The measures taken to ensure sample security.	Cutting and core samples were transported from the drill site and stored in Conex in a locked and monitored facility in Tonopah, NV.  Water samples were transported from the drill site and stored in a locked climate-controlled building in Tonopah, NV.  Prepared cutting and core samples and water samples were hand delivered to laboratories in Sparks, NV by Morella personnel.  A chain of custody (COC) was recorded for all samples.
Audits or reviews	•	The results of any audits or reviews of sampling techniques and data.	The raw seismic reflection data were processed by Columbia Geophysical LLC to produce depth-converted seismic sections with input from Resource Potentials Pty Ltd. Depth processed seismic data sections were interpreted by Resource Potentials Pty Ltd and Morella Corporation staff. The interpreted seismic horizons represent geology which is unknown until tested by drillholes.

# **Section 2 Reporting of Exploration Results**

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

Criteria	JO	RC Code explanation	Commentary			
Mineral tenement	•	Type, reference name/number, location and ownership including agreements or material		-	oject is located in N er an area of ~44.4kı	
and land tenure status		issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	entered into an e October 2021, w	arn-in a hereby	d by Lithium Corp greement with Lithiu Morella has the rig ith options to acquir	ım Corporation in ht to earn a 60%
	•	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 claims are in a the US Bureau of	_	anding, with paymen anagement.	ts up to date with
			There are no kno		pediments to maint a.	aining the claims
			Te	nement I	D	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.	in the late 1860' 1873. Production tons) of concer sometime prior to further activity of	's, with n by 187 ntrated to the 1 r explora	pped as a borate pro the earliest record 5 was in the order of borax daily. Op .900's and there is ation until the 1970'	of production in of 1.814 tonnes (2 perations ceased no record of any s.
			-	e genera	SGS conducted some Il area and drilled se	
			Oil and Minerals	s Inc. T logy an	ell was also drilled 19 he well, VRS1, rea d wireline resistivit atabase.	ched a depth of
			American Lithium	n Corpor	ration carried out wo	ork in 2016-19.
Geology	•	Deposit type, geological setting and style of mineralisation.	province, within t (to recent) struct southeast paralle in Eastern Califor of the Death Vall	the "Wa ural def ling the nia. The ey-Furn	stern margin of the lker Lane" which is a formation which tre trend of the Sierra I area occurs at the na ace Creek-Fish Lake omplex array of activ	zone of Miocene nds northwest to Madre Mountains orthern extremity Valley fault zone
			extensional activ depression is inf sediments, comp sediments (the la interbedded sal	vity wit filled wi prising v atter bei ndstone	o structural depres hin the complex f th up to 1,800m o volcanics, volcanicla ng the FLV Formatio , conglomerate, ded volcanic tuff).	ault zone. The of post-Oligocene stic and detrital on and comprising
			enriched with lith basin-fill sedimenthrough evapo-c	nium (an nts. Th concentr	a conduit for g d other minerals), to lese fluids may be ration where they r is subject to evap	omigrate into the further enriched reach the near
			basin-fill sedime	nts tha	ne deposits maybe l it have sufficient e extraction. Brine a	transmissivity to

Criteria	JORC Code explanation	Commentary
		at Silver Peak from aquifer units that are thought to be lateral equivalents to the upper FLV 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 easting and northing of the drill hole collar  elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar  dip and azimuth of the hole  down hole length and interception depth  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.	Drilling was previously completed by Lithium America and 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.  These drilling results do not provide information relevant to the deep targets of the reflection survey.
Data aggregation methods	<ul> <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>	No grade results have been reported.
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 not known').</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	<ul> <li>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.</li> </ul>	All data has been presented and balanced reporting completed.

Criteria	JORC Code explanation	Commentary
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.	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>	Further MT and reflective seismic work in the southern area, drone magnetic surveying over the entire project area, followed by a deep drill hole