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JADAR LITHIUM QUICK STATS

# Jadar Lithium generates exciting results at Vranje South Lithium – Borate Project in Serbia July 16, 2019

# Highlights

- Assay results from detailed rock sampling program return elevated Lithium (Li) and Boron (B) values from Vranje South project, Serbia
- Results suggest that the basins are prospective for deposits related to strata bound ores of chemical precipitates
- XRD analyses confirm the presence of Hexahydrite (MgSO<sub>4</sub>.6H<sub>2</sub>O), an evaporate mineral which is indicative of a permissive geological setting
- Gravity data acquisition and interpretation provide encouraging results in regard to basin geometry and structure
- Regional magnetic data acquisition and interpretation indicate a magnetic anomaly of a potential volcanic source of Li and B

Luke Martino, Non-Executive Chairman of the Board, said "The geochemical results of detailed sampling and geophysical data have demonstrated the validity of the exploration process and have greatly aided the understanding of the basin and indicating the potential of Vranje-South project to host Li – B mineralisation. The assay results from detailed sampling and geophysics data will aid in defining drilling targets to test defined anomalies."

Jadar Lithium Limited (ASX: JDR) ("Jadar" or "the Company") is pleased to provide an update on detailed sampling; acquisition and interpretation of regional gravity and magnetic survey data on the Vranje-South project in Serbia.

The objective of the latest field program was to determine the geometry of the sedimentary basin within the permit and to understand the sedimentary sequences which are associated with the elevated Lithium and Boron geochemical anomalies in more detail.

The field mapping and detailed sampling program focused on exposed sedimentary formations in an attempt to locate outcropping fine pelitic strata which are known to be favorable hosts for Li-B mineralisation. The samples were sent to the ALS laboratory in Bor, Serbia, where the samples were prepared and then forwarded to the ALS laboratory in Ireland for analysis of Lithium, Boron and associated elements.

# ASX Code: JDR Shares on Issue: 480.4 million Market Cap: \$4.32 million Cash: \$2.25m (at 31 Mar '19)

#### **BOARD & MANAGEMENT**

Non- Executive Chairman Mr Luke Martino

Non-Executive Directors Mr Steven Dellidis Mr Nicholas Sage Mr Stefan Müller

Company Secretary Ms Louisa Martino

#### **ASSET PORTFOLIO**

AUSTRIA

Weinebene

(80% interest - ~28km<sup>2</sup>)

**Eastern Alps Projects** 

(80% interest - ~37km<sup>2</sup>)

#### **SERBIA**

**Cer** (100% interest - ~92.77km<sup>2</sup>)

**Rekovac** (100% interest - ~75.4km<sup>2</sup>)

Vranje-South (100% interest - ~90.44km<sup>2</sup>) The Company also acquired regional gravity and magnetic survey data from a local contractor who re-interpreted the data with the aim to outline underlying basin geometry and define the presence Calc-Alkaline volcanism that may be a source of mineral-bearing fluids.

With the conclusion of the above program, the Company is aiming to execute a scout drilling campaign in the near future.

### Sampling

In total, 28 rock samples were collected and dispatched for geochemical analyses. The assays returned with elevated Li and B values with up to 430 ppm of boron and up to 180 ppm of lithium. The assay data also showed elevated As, Mg and K values which are indicative elements of an alkaline saline depositional environment. This suggests that the basin contains permissive sediments that may host deposits of stratabound ores of chemical precipitates.



Figure 1 – Vranje South geology map with sampling positions and boron values



Figure 2 – Vranje South geology map with sampling positions and lithium values

During the sampling program, the Company identified the presence of numerous efflorescence, a "wooly" appearance of fine white fibers within the project area. XRD analyses of sampled efflorescence returned with two detected evaporate minerals in the sample, Hexahydrite (MgSO<sub>4</sub>.6H<sub>2</sub>O) and Gypsum (CaSO<sub>4</sub>.2H<sub>2</sub>O).



Figure 3 - White "wooly" looking efflorescence associated with fine pelitic sediments

Presence of those two minerals within the sedimentary basin is encouraging as it is suggesting that the depositional environment was alkaline saline. This is considered permissive for stratabound Lithium-Borate deposit.

### **Gravity Survey**

The Company acquired regional gravity survey data from the local contractor "Vecom GEO doo". This data was acquired to aid in defining basin geometry and deep-seated fault zones, which may have acted as a potential conduit for mineralizing fluids. The data has been combined with the surface sampling data and used to assist in defining drilling targets. The gravity method is a useful exploration tool to visualize the basin geometry and relative thickness of the sedimentary section through defining basin highs and lows. The gravity surveys were accomplished as grids with nominal station spacing of approximately 1000m.

The Vranje basin has an elongated shape demonstrating a north-south trend that parallels the regional tectonic Paleozoic extensional structures. Based upon the linear configuration, the sharp parallel gradients on both the north and the south sides and deep gravity low (blue) suggest parallel faulting of basement rocks formed the basin.

Sedimentation in the Vranje basin is composed of extensive lacustrine sediments. Due to the long trough geometry and steep, probably faulted flanks, it likely contains some components of interbedded clastic (sands). The overall grain size suggests quiet water deposition. Since it contains such a well-defined gravity closure from at least - 34.0 to - 42.0 mGal, there is almost certainly an early period of lacustrine sedimentary deposition when the basin was isolated from drainage.



Figure 4 - Bouguer gravity image contoured at 1.0 mGal



Figure 5 - Terrain corrected complete residual gravity image contoured at 0.2 mGal

# **Regional Magnetic Survey**

The ground magnetic survey has been acquired to aid in defining the presence of "blind" (covered by hangingwall sediments) Calc – Alkaline volcanic formations that may be related to a spring emanation. The spring waters likely dispersed their elements broadly into the lake waters and only upon reaching appropriate cooling, pH and redox conditions provided favorable conditions for evaporate precipitation. The magnetic surveys were accomplished as grids with station spacing approximately at about 2000m.



Figure 6 - Map of magnetic anomalies with 10 nT contour interval. The elevated values in the southern part of the license indicate a possible "blind" volcanics



Figure 7 – Map indicating the interpreted depth and structure of the basin, which also indicates the possible presence of a "blind" volcanics



Figure 8 – A-B interpretation cross section



Figure 9 – C-D interpretation cross section

#### **Vranje South Project Geology**

Most of the exposed units within the license area are mapped as lake sediments consisting siltstone, claystone, coarse clastics, and volcanoclastic sediments and within the southeast corner the Paleozoic crystalline complex. The sedimentary units are sub-divided into four different sedimentary subsequences starting with volcanoclastic flows composed of andesite agglomerates, volcanic breccias, and tuffs discordantly overlaying the basement rocks. Volcanoclastic sediments overlaid by fluvial coarse clastic sediments composed of poorly sorted fanglomerates. The clastic sequences are exposed in the eastern part of the license area and represent the basal formation of fine pelitic strata which are exposed in the central and eastern portion of licenses. Pelitic sediments are represented by fine laminated to bedded clayey siltstone to laminated to bedded fine-grained sandstone. The youngest sediments mostly sandstones and siltstones are exposed in the western and northern portion of the license hiding perspective fine pelitic lake strata. The basement rocks are surrounding the Vranje basin have been mapped as various metamorphic Paleozoic rocks and older granitic intrusive.

#### About Vardar Zone

Pelitic sediments accumulated in several semi-interconnected basins along a geological trend that is now called the Vardar Zone (Figure 10). The Vardar Zone stretches from northern Iran to Bosnia and Herzegovina, where it appears to disappear at the edge of the Alpine formations. Basins along the long, narrow trend vary greatly in size, shape, and sedimentation. The Vardar zone was formed by the movement between two tectonic plate boundaries. This tectonic forces result in rhomboid-shaped - "pull apart" - basins between the more stable basin boundaries. The basins of interest are mapped as lacustrine and marine sediments.

Evaporate (Lithium – borate) deposits of the type being explored in Vardar zone are typically found in tectonically active zones associated with deep-seated faulting. The deposits occur in shallow water lacustrine and mudflat environments, usually accompanied by Calc - alkaline volcanics and tuffs.

In the Balkan region, borate and lithium mineral deposits and occurrences have been recognized in recent years. These occurrences have been barely tested, while lithium mineralisation was found associated with borates even more recently during drilling in the Jadar basin of Serbia. Beside Jadar deposit which is the world's largest lithium - borate deposit, borates have been found in Pobrdje and Piskanja within the Jarandol deposit. Some of the world's largest borate deposits were discovered as well within the Vardar zone. Kirka borax deposit in Turkey is the world's largest deposit and it's located central part of Vardar trend.



Figure 10 – Position of the Vardar Zone

# **Planned activities**

The Company continues to evaluate the Vranje South basin with the objective of defining drilling locations to test the anomalies generated to date.

# **ENDS**

Further Enquiries Luke Martino Non-Executive Chairman Tel: +61 8 6489 0600 E: luke@jadarlithium.com.au

#### **Competent Person Statement**

The information in this release that relates to Exploration Results is based on information prepared by Dr Thomas Unterweissacher, EurGeol, MAusIMM. Dr Unterweissacher is a licensed Professional Geoscientist registered with European Federation of Geologists and The Australasian Institute of Mining and Metallurgy based in Hochfilzen, Austria. European Federation of Geologists and The Australasian Institute of Mining and Metallurgy are a Joint Ore Reserves Committee (JORC) Code 'Recognized Professional Organization' (RPO). An RPO is an accredited organization to which the Competent Person (CP) under JORC Code Reporting Standards must belong in order to report Exploration Results, Mineral Resources, or Ore Reserves through the ASX. Dr Unterweissacher has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a CP as defined in the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Unterweissacher consents to the inclusion in the release of the matters based on their information in the form and context in which it appears. Dr Unterweissacher is a consultant to the Company and holds shares in Jadar Lithium Limited.

### Disclaimer

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)", "potential(s)" and similar expressions are intended to identify forwardlooking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the Company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forwardlooking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or nonoccurrence of any events.

# Table 1 - Sampling list

Project	Sample ID	Easting	Northing	Rock Type	Modifiers	Azimuth/Dip	Reaction with HCL
Vranje South	48000	7585747	4696513	Tuff	Thick Bedded	190/42	No
Vranje South	48001	7582718	4694253	Clayey siltstone	Laminated	162/34	Weak
Vranje South	48002	7581312	4693918	Clayey siltstone	Laminated	130/22	Weak
Vranje South	48003	7581385	4693904	Clayey siltstone	Laminated	126/23	Weak
Vranje South	48004	7580177	4694725	Clayey fine-grained sandstone	Laminated to thin bedded	130/20	Strong
Vranje South	48005	7577715	4694288	Clayey siltstone	Laminated	206/11	Weak
Vranje South	48006	7576543	4698075	Clayey siltstone	Laminated	250/11	Weak
Vranje South	48007	7574645	4693456	Clayey sandstone	Laminated to thin bedded	334/11	Strong
Vranje South	48008	7575936	4693119	Clayey fine-grained sandstone	Laminated to thin bedded	334/6	Strong
Vranje South	48009	7576063	4692674	Clayey sandstone	Thin bedded	188/12	Strong
Vranje South	48010	7577046	4692659	Silty claystone	Laminated	160/27	No
Vranje South	48011	7577079	4692639	Clayey siltstone/sandstone	Laminated		Strong
Vranje South	48012	7577217	4692471	Clayey siltstone	Laminated to thin bedded	255/16	Strong
Vranje South	48013	7581364	4712259	Tuff	Sub welded		
Vranje South	48014	7581361	4712261	Biotite tuff	Sub welded		
Vranje South	48015	7573234	4707840	Marley siltstone	Laminated	350/10	Weak
Vranje South	48016	7581874	4693900	Fine grained sandstone	Thin bedded to laminated	175/22	Strong
Vranje South	48017	7580450	4693403	Clayey siltstone	Thin bedded to laminated	140/4	Weak
Vranje South	48018	7579894	4693354	Dolomitic siltstone	Laminated to thin bedded	188/5	No
Vranje South	48019	7579895	4693360	Clayey siltstone	Laminated		Strong
Vranje South	48020	7579638	4693885	Clayey siltstone	Thin bedded to laminated	192/2	Strong
Vranje South	48021	7579644	4693876	Dolomitic siltstone	Thin bedded		No
Vranje South	48022	7579194	4694438	Clayey siltstone	Thin bedded to laminated		Weak
Vranje South	48023	7578691	4695154	Clayey siltstone	Thin bedded to laminated		Weak
Vranje South	48024	7578098	4694558	Clayey siltstone	Thin bedded to laminated	168/8	Strong
Vranje South	48025	7577071	4695023	Clayey siltstone/sandstone	Thin to thick bedded	248/4	Strong
Vranje South	48026	7576344	4694867	Clayey siltstone	Thin bedded to laminated	20/4	Strong
Vranje South	48027	7581876	4723283	Very fine sandstone	Thin bedded to laminated	60/24	Strong

# Table 2 – Assays results

SAMPLE ID	ME- ICP41a											
	Ag	Al	As	Ва	Be	Bi	Са	Cd	Со	Cr	Cu	Fe
	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
48000	<1	1.49	10	130	<5	<10	0.67	<5	8	15	16	2.92
48001	<1	3.13	50	140	<5	10	3.35	<5	30	75	48	5.94
48002	<1	3.13	40	240	<5	<10	3.5	<5	21	68	39	4.19
48003	<1	3.17	80	430	<5	<10	6.76	<5	26	74	79	4.27
48004	<1	3.43	40	300	<5	<10	5.28	<5	22	85	40	4.36
48005	<1	3.83	10	200	<5	<10	3.32	<5	16	51	36	3.29
48006	<1	3.18	90	390	<5	<10	4.21	<5	16	59	31	3.64
48007	<1	3.77	50	270	<5	<10	3.05	<5	21	85	43	4.36
48008	<1	3.36	20	170	<5	<10	3.08	<5	19	86	47	4
48009	<1	3.58	160	170	<5	<10	4.11	<5	17	83	41	4.16
48010	<1	2.18	240	480	<5	<10	12.9	<5	10	55	25	4.4
48011	<1	3.72	20	290	<5	<10	4.72	<5	19	105	40	4.3
48012	<1	3.76	90	550	<5	<10	7.85	<5	19	95	38	4.11
48013	<1	2.55	10	1860	<5	<10	1.37	<5	<5	11	<5	1.37
48014	<1	2.26	10	550	<5	<10	1.01	<5	6	12	5	1.87
48015	<1	3.42	10	310	<5	10	4.61	<5	13	67	43	3.83
48016	<1	2.72	170	390	<5	<10	7.25	<5	18	70	33	4.21
48017	<1	3.46	70	260	<5	<10	3.34	<5	19	75	45	4.8
48018	<1	3.18	40	170	<5	<10	1.17	<5	21	73	56	4.75
48019	<1	4.51	40	160	<5	<10	2.4	<5	25	107	81	5.5
48020	<1	3.29	70	220	<5	<10	4.21	<5	19	74	48	4.58
48021	<1	2.54	70	180	<5	<10	1.21	<5	20	55	37	3.93
48022	<1	4.45	90	220	<5	<10	1.02	<5	34	91	79	6.51
48023	<1	3.5	60	300	<5	<10	4.37	<5	19	84	45	4.46
48024	<1	4.61	110	250	<5	<10	6.51	<5	24	64	54	3.75
48025	<1	3.64	30	280	<5	<10	3.03	<5	18	81	45	4.44
48026	<1	3.44	80	210	<5	<10	3.49	<5	19	73	43	4.3
48027	<1	2.24	70	70	<5	<10	0.33	<5	9	19	15	2.68
SAMPLE	ME-											
	60		V		Ma	Mn	Mo	No	Ni	D	Dh	C

ID	ICP41a											
	Ga	Hg	К	La	Mg	Mn	Мо	Na	Ni	Р	Pb	S
	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%
48000	<50	<5	0.35	<50	0.64	830	<5	0.16	11	980	30	<0.05
48001	<50	<5	0.61	<50	2.12	880	<5	0.59	54	530	20	0.06
48002	<50	<5	0.85	<50	1.31	740	<5	0.05	73	690	30	<0.05
48003	<50	<5	0.67	<50	1.79	740	<5	0.14	77	600	20	<0.05
48004	<50	<5	0.69	<50	1.95	850	<5	0.28	84	550	30	<0.05

48005	<50	<5	0.82	<50	1.06	500	<5	1.26	41	590	30	<0.05
48006	<50	<5	1.06	<50	1.15	530	<5	0.21	46	9620	40	0.07
48007	<50	<5	0.99	<50	1.68	650	<5	0.36	87	650	30	<0.05
48008	<50	<5	0.84	<50	1.59	470	<5	0.13	94	540	40	<0.05
48009	<50	<5	0.65	<50	1.23	650	<5	0.76	90	600	30	<0.05
48010	<50	<5	0.46	<50	6.03	1430	<5	0.09	46	480	20	<0.05
48011	<50	<5	0.95	<50	2.06	790	<5	0.62	98	700	40	<0.05
48012	<50	<5	0.77	<50	2.82	1020	<5	1.48	93	6880	30	0.16
48013	<50	<5	1.01	<50	0.67	210	<5	0.11	5	1210	20	<0.05
48014	<50	<5	0.52	<50	0.78	420	<5	<0.05	11	1270	40	<0.05
48015	<50	<5	0.82	<50	2.65	920	<5	0.95	44	290	30	0.06
48016	<50	<5	0.46	<50	2.58	1040	<5	1.17	69	2130	30	0.2
48017	<50	<5	0.89	<50	1.61	890	<5	0.55	72	700	40	0.12
48018	<50	<5	0.81	<50	1.83	520	<5	0.09	46	830	<10	<0.05
48019	<50	<5	0.74	<50	2.04	430	<5	0.28	85	560	10	<0.05
48020	<50	<5	1.01	<50	1.2	720	<5	<0.05	79	590	30	<0.05
48021	<50	<5	0.66	<50	1.22	480	<5	0.2	49	740	20	<0.05
48022	<50	<5	0.65	<50	1.8	900	<5	<0.05	78	480	20	<0.05
48023	<50	<5	0.84	<50	1.34	830	<5	<0.05	89	540	30	<0.05
48024	<50	<5	0.91	<50	1.05	630	<5	1.01	66	640	50	0.05
48025	<50	<5	0.87	<50	1.4	430	<5	0.08	83	490	20	<0.05
48026	<50	<5	1.1	<50	1.39	570	<5	<0.05	70	720	30	<0.05
48027	<50	<5	0.42	<50	0.84	500	<5	<0.05	15	620	50	<0.05

SAMPLE	ME-	ME-	ME-	ME-	ME-	ME-	ME-	ME-	ME-	ME-	ME-	ME-
10	Sb	Sc	Sr	Th	Ti	TI	U	V	W	Zn	B	Li
	ppm	ppm	ppm	ppm	%	ppm						
48000	10	6	50	<100	0.17	<50	<50	59	<50	60	<50	<50
48001	10	12	267	<100	0.09	<50	<50	130	<50	120	<50	140
48002	10	10	153	<100	0.06	<50	<50	72	<50	120	240	100
48003	<10	11	603	<100	0.06	<50	<50	88	<50	110	190	110
48004	10	10	324	<100	0.07	<50	<50	81	<50	100	120	170
48005	10	9	86	<100	0.08	<50	<50	70	<50	80	80	90
48006	40	12	617	<100	0.06	<50	<50	79	<50	110	430	140
48007	10	11	150	<100	0.08	<50	<50	77	<50	110	190	160
48008	10	10	116	<100	0.06	<50	<50	66	<50	100	170	120
48009	10	10	124	<100	0.06	<50	<50	72	<50	80	80	100
48010	10	7	1335	<100	<0.05	<50	<50	49	<50	50	220	110
48011	10	10	283	<100	0.07	<50	<50	72	<50	100	90	160
48012	10	13	1140	<100	0.08	<50	<50	76	<50	100	180	180
48013	<10	5	1250	<100	0.14	<50	<50	45	<50	20	<50	<50
48014	10	<5	201	<100	0.14	<50	<50	48	<50	20	<50	<50

48015	10	12	381	<100	0.07	<50	<50	69	<50	90	100	150
48016	10	16	713	<100	0.05	<50	<50	76	<50	70	110	110
48017	20	11	227	<100	0.08	<50	<50	81	<50	110	160	140
48018	10	11	100	<100	0.14	<50	<50	96	<50	90	<50	130
48019	10	14	110	<100	0.11	<50	<50	135	<50	110	<50	180
48020	10	10	135	<100	0.06	<50	<50	67	<50	80	250	100
48021	10	7	99	<100	0.12	<50	<50	65	<50	70	<50	90
48022	10	16	51	<100	0.08	<50	<50	126	<50	130	120	120
48023	<10	10	204	<100	0.06	<50	<50	71	<50	100	160	140
48024	10	12	115	<100	0.07	<50	<50	75	<50	90	120	130
48025	10	10	80	<100	0.06	<50	<50	71	<50	90	150	120
48026	10	10	132	<100	0.09	<50	<50	75	<50	90	190	110
48027	10	7	22	<100	<0.05	<50	<50	44	<50	110	<50	70

**Figure 1** – Diffraction pattern with schematic representation of relative intensity of the present mineral phases in sample



# JORC Code, 2012 Edition Table 1. This table applies to Vranje South Exploration Project

Criteria	JORC Code explanation	Commentary				
Sampling techniques	<ul> <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> </ul>	<ul> <li>The rock chips samples were collected directly from fresh non weathered fine pelitic sediments along exposed outcrops.</li> <li>The samples were large enough to be representative for sedimentary lithology, generally in the range 0.5-1 kg.</li> <li>The sample is placed into the sampling</li> </ul>				

Criteria	JORC Code explanation	Commentary
	<ul> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>container, which is labeled according to the attributed sample number.</li> <li>All relevant information with regard to the outcrop was recorded.</li> <li>Sample for XRD was taken from exposed efflorescence within sedimentary basin.</li> <li>Regional gravity survey stations were accomplished within a grid with nominal station spacing of about 1000m. The reginal gravity data were acquired using a WORDEN gravity meter.</li> <li>Regional magnetic survey stations were accomplished within a grid with station spacing of about 2000m. The regional magnetic data was acquired using magnetic vertical component of the geomagnetic field.</li> </ul>

# JORC Code, 2012 Edition Table 1. This table applies to Vranje South Exploration Project

# Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The rock chips samples were collected directly from fresh non weathered fine pelitic sediments along exposed outcrops.</li> <li>The samples were large enough to be representative for sedimentary lithology, generally in the range 0.5-1 kg.</li> <li>The sample is placed into the sampling container, which is labeled according to the attributed sample number.</li> <li>All relevant information with regard to the outcrop was recorded.</li> <li>Sample for XRD was taken from exposed efflorescence within sedimentary basin.</li> <li>Regional gravity survey stations were accomplished within a grid with nominal station spacing of about 1000m. The reginal gravity data were acquired using a WORDEN gravity meter.</li> <li>Regional magnetic survey stations were accomplished within a grid with station spacing of about 2000m. The regional magnetic data was acquired using magnetic vertical component of the geomagnetic field.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and</li> </ul>	• The Company did not conduct any drilling activities to date.

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Drill sample recovery	<ul> <li>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> <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/agin of fine/coarse material.</li> </ul>	<ul> <li>The release refers to results from surface sampling and geophysical surveys; this section is not relevant to this release.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Information about sampling location, rock type being sampled, attitude of sedimentary formation and reaction with HCL have been recorded in field book and transferred in Excel spreadsheet subsequently.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>The samples have been prepared in ALS laboratory in Bor, Serbia.</li> <li>After drying samples have been crushed so that 70% pass 2mm. Approximately 250g of crushed material have been divided using rotary splitter.</li> <li>After splitting samples were pulverized down to 75μm.</li> <li>After sample preparation, sample pulps have been sent to ALS laboratory in Ireland for geochemical analyses.</li> <li>No filed duplicates were collected during the sampling program.</li> <li>Internal lab duplicates were prepared by the laboratory to check the preparation process and the precision of the instrument determination.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>After sample preparation, sample pulps were then analyzed High Grade Aqua regia ICP-AES. The ALS method is ME-ICP41a, comprising a standard suite of 35 elements including Li and B. The lower and upper detection range for Li and B by this method are 50 ppm and 50,000 ppm respectively.</li> <li>ALS utilized standard internal quality control measures including the use of certified lithium standards, blanks and duplicates.</li> <li>One sample has been sent for mineral determination by XRD. The sample has been analysed by mineralogy department at Belgrade University.</li> <li>Acquired regional gravity and magnetic survey was undertaken by Yugoslav geological survey during 80's. There is no detail information about quality</li> </ul>

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		control from that time, but the data provider stated that data have been checked in recent years and that there is no significant deviation observed.				
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>No verification performed at this stage.</li> <li>Assay data received from the lab is imported into the database.</li> <li>No adjustment to assays data being applied.</li> </ul>				
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>km = kilometer; m = meter; mm = millimeter</li> <li>Samples were located using handheld GPS with an expected accuracy of +/-5m.</li> <li>At that time the coordinates of the points were determined from the topographic maps 1: 10000 scale where 1 mm on the map corresponds to 10 m in nature. Elevation have been surveyed by tacheometry and levelling instruments.</li> <li>All sampling and geophysics survey coordinates are tied into the state triangulation network and provided in the Serbian Gauss Kruger co-ordinate system.</li> </ul>				
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>No regular spacing was used. The samples were collected from restricted outcrops.</li> <li>The geophysics survey involved acquisition of regional gravity and magnetic data with spacing of about 1000m for gravity and 2000m for magnetic survey.</li> <li>The data spacing and distribution is not sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource estimation purposes.</li> <li>No compositing applied.</li> </ul>				
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The samples were taken directly from outcropping fine pelitic sedimentary strata to represent potential hosts of mineralisation that the Company is looking for.</li> </ul>				
Sample security	• The measures taken to ensure sample security.	<ul> <li>Company geologist supervises all sampling and subsequent storage in field.</li> </ul>				
Audits or	• The results of any audits or reviews of sampling	• There have not been any audits.				

Criteria	JORC Code explanation	Commentary
reviews	techniques and data.	

Section 2	Reporting	of Exploration	Results
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Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Centurion Metals DOO, a 100% owned subsidiary of Jadar resources LTD, is a 100% holder of Vranje South mineral exploration license (License # 2225). The license is located in south Serbia.</li> <li>At time of reporting the Company license is in good standing and the Company plans to comply with all provisions relating to the Serbian mining law.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Historical work has been conducted on the Vranje-South project area by various Serbian and Yugoslav state geological agencies.</li> <li>There is no available information that any previous exploration work has been done related to the type and stile of mineralisation that Jadar Lithium is looking for.</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>Evaporate (Lithium – borate) deposits of the type being explored in Vardar zone are typically found in tectonically active zones associated with deep- seated faulting. The deposits occur in shallow water lacustrine and mudflat environments, usually accompanied by volcanic and tuffs, or indications of spring or spring apron accumulations - travertine. The deposit model currently being used is Jadar deposit and it is a borate deposit with relatively high lithium content. The published Jadar deposit resource are 135.7 million tons of jadarite ore grading 15.4% B2O3 and 1.86% Li2O.</li> </ul>
Drill hole Information	<ul> <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> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is</li> </ul>	• No drilling undertaken.

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	the case.	
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 data aggregation done.
Relationship between mineralisation widths and intercept lengths Diagrams	<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> <li>Appropriate maps and sections (with scales) and</li> </ul>	<ul> <li>As the geochemical results reported here that were collected by Jadar Lithium are from surface, any potential depths of mineralisation or orientations can only be inferred from geological observations on the surface and hence are speculative in nature.</li> <li>Maps and diagrams are part of this</li> </ul>
	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.	report. See Report maps.
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>	<ul> <li>The reporting here covers the area of the Company's current focus. Further data analysis and interpretation may result in the definition of drilling targets.</li> </ul>
other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>The Company acquired historic gravity and ground magnetic survey data from local contractor.</li> <li>Gravity readings taken and recorded in the field go through several processing steps to generate absolute gravity values. These steps include: converting the meter reading to milligals (using the calibration tables unique to each meter) and referencing them to the gravity base value, correcting for solar and lunar tides and meter drift, and correcting for height of the meter above ground level. Absolute gravity (also known as observed gravity) values represent the change in the strength of gravity due to changes in: latitude, elevation, earth density and terrain effects. Accuracy of gravimeter was - 0.1mGal.</li> <li>The vertical component of the geomagnetic field was converted into a total vector by a special mathematical method taking into account the magnetic inclination and declination as well as the calculation of the normal</li> </ul>

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		geomagnetic field. The accuracy of the magnetometer at that time was 5 nT.
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>	<ul> <li>Given the rapid advance of the multidisciplinary exploration program currently underway, the Company expects the exploration drilling program to be initiated in 2H 2019.</li> </ul>