



# Jadar Lithium

ASX: JDR

## INVESTOR PRESENTATION

November 2019



## FIRST MOVER ADVANTAGE ON MULTIPLE HIGH QUALITY PROJECTS

- 1 Strategic landholdings in some of the most prolific and unexplored regions in the world
- 2 Target definition and drilling across multiple projects planned, targeting large Lithium and Borate deposits in Serbia and Austria and Gold deposits in Peru
- 3 Portfolio offers outstanding opportunity for a Tier 1 discovery – several applications pending over additional prospective targets
- 4 Clear short-term path to production for Peruvian Gold project. Existing resource +200,000 ounces gold
- 5 Embarking upon first maiden scout drilling program in Serbia for Lithium/ Borate

# Portfolio Overview

Jadar Lithium

90KM<sup>2</sup>

Vranje South 100% OWNED (SERBIA)

- Very similar geological setting to the Jadar Basin, which hosts Rio Tinto's world-class Jadarite discovery = one of the world's largest lithium deposits
- Defined target areas with supporting high grade geochemistry.
- Jadar is in final preparations for maiden scout drill program at Vranje South Lithium Borate Project

75KM<sup>2</sup>

Rekovac 100% OWNED (SERBIA)

- Very similar geological setting to the Jadar Basin, which hosts Rio Tinto's world-class Jadarite discovery = one of the world's largest lithium deposits
- Defined target areas with supporting high grade geochemistry

93KM<sup>2</sup>

CER 100% OWNED (SERBIA)

- Pegmatite fields within close proximity to Rio Tinto's Jadarite deposit
- Potential for spodumene based mineralisation.

28KM<sup>2</sup>

Weinbene 80% OWNED (AUSTRIA)

- Surrounding European Lithium Limited's Wolfsberg lithium deposit with 11MT resources at 1.0% Li<sub>2</sub>O in accordance with the JORC Code (2012) (now in DFS)
- High Grade mineralisation trends/strikes into JDR ground
- Natural extension of Wolfsberg deposit
- Identified numerous spodumene bearing pegmatite's with very high lithium values up to 3.39% Li<sub>2</sub>O
- Additional field activities underway to support future drilling.

37km<sup>2</sup>

Satellite Projects 80% OWNED (AUSTRIA)

- 9 Unique high value lithium projects
- Sampling confirmed numerous pegmatites with very high lithium values up to 3.88% Li<sub>2</sub>O
- Additional field activities underway to support future drilling.

Yanamina – Peru (GOLD) 100% OWNED\*

- Advanced Yanamina Gold Project is located in the Ancash Province in Peru
- Yanamina is an outcropping epithermal gold resource with existing resource of +200,000 ozs gold
- Purchase cost minimal, relative to potential upside of project
- Provides significant exploration upside through potential depth and lateral extensions and a significant faulted extension target at depth

\*acquisition subject to shareholder approval 25 November 2019

## EU LAUNCHES “AIRBUS-STYLE CONSORTIUM FOR BATTERIES”

- The global energy storage market is estimated to be worth € 250 billion by 2025
- Gain independence from Asian production (currently 90% of all batteries for EV come from Asia)
- Facilitation of approval procedures and permitting processes for mining of resources in the EU  
Development of standards for production, software, security and recycling
- Demand: to meet the demand forecast, 10 to 20 Gigafactories are needed for battery cell production in Europe





Growth will be driven by rapid expansion in the lithium-ion battery industry as world demand for hybrid and electric vehicles, energy storage systems, and high-drain portable electronics continues to grow.

## McKinsey

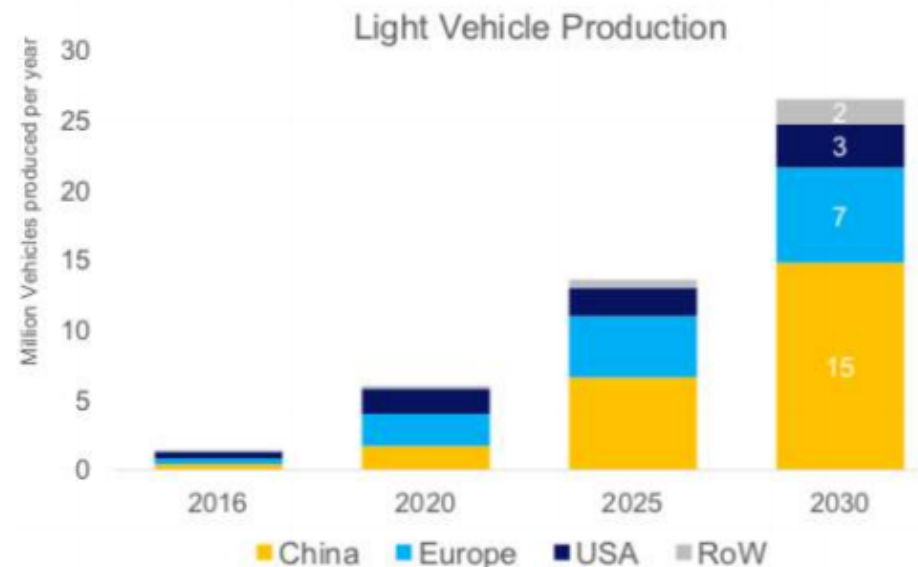
- EV production will reach more than 26 million globally by 2030
- China is expected to add approx. 15 million Evs by 2030 (56% market share), followed by Europe (26% market share) and the US (12% market share)

## Bloomberg New Energy Finance

- Sales of Evs are expected to surge to 30 million by 2030
- China leads with sales close to 39% of the global market in 2030
- China leads on adoption rates, 19% of all passenger vehicle sales will be Evs in 2025

## Benchmark Minerals Intelligence

- Planned lithium-ion battery capacity in the pipeline for the period 2019 – 2028 has risen from 189 GWh to 1,549 GWh (1.54 TWh)
- This expanded capacity is the equivalent of 23-24 million sedan-sized EVs



# Lithium Sources → Limited in Europe

Jadar Lithium

## PRODUCTION

1. SMP (Portugal)

## WORLD CLASS POTENTIAL

- 2a. Rio Tinto (Serbia)

- Resource of 135.7Mt @ 1.86% Li<sub>2</sub>O and 15.4% B<sub>2</sub>O<sub>3</sub> (Ranked as one of the world's largest Li deposits) <sup>1</sup>
  - *start construction ~ 2020*
  - *production target ~ 2023*

- 2b. Jadar Lithium (Serbia)

- two licences with very similar geological setting to Rio's Jadar project
- significant upside potential

## SCOPING / EXPLORATION

3. Avalonia Lithium (Ireland)

4. Keliber (Finland)

5. European Metals/Cinovec Tin (Czech Republic)

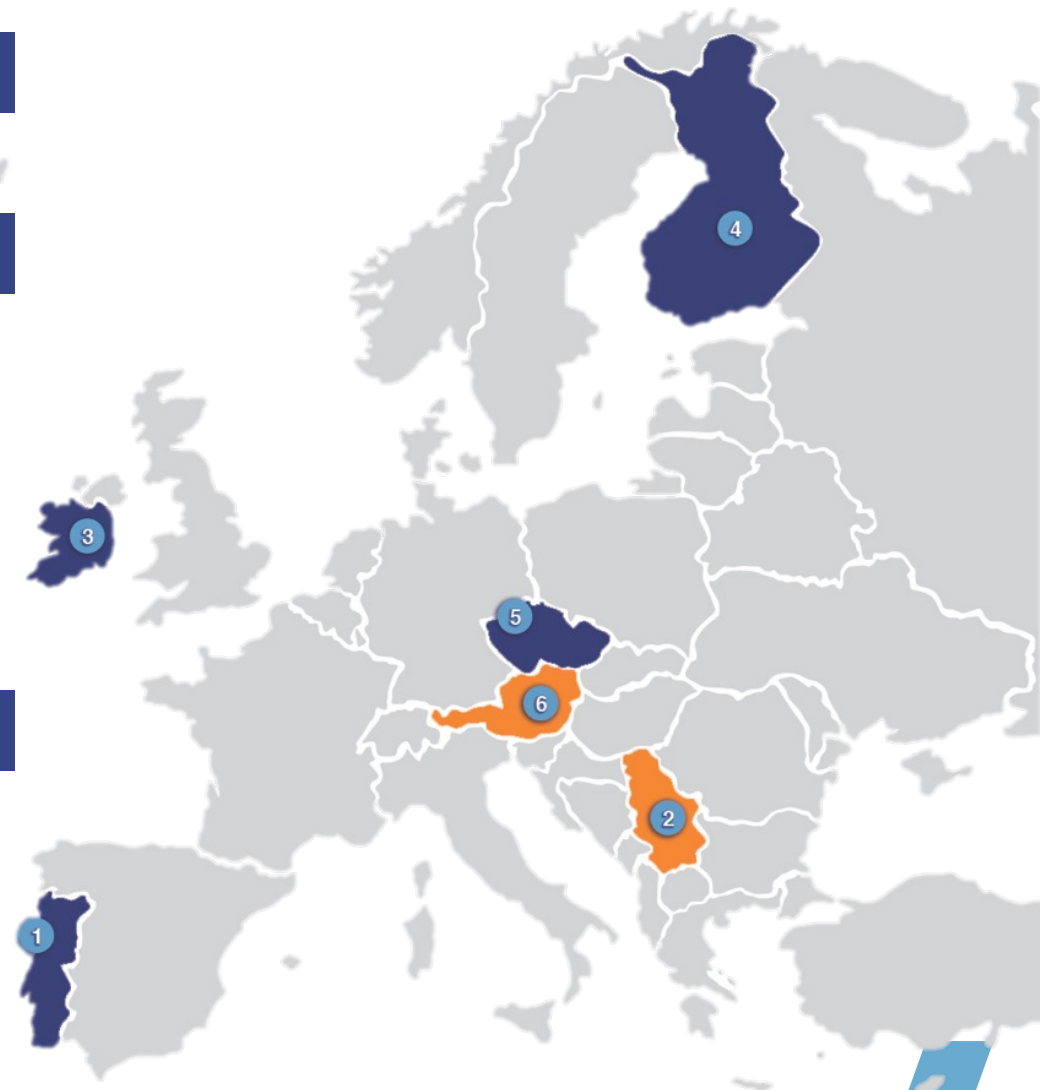
- 6a. European Lithium (Austria)

- 11Mt @ 1.0% Li<sub>2</sub>O (Wolfsberg project) in accordance with the JORC Code (2012) <sup>2</sup>

- 6b. Jadar Lithium (Austria)

- Licences surrounding European Lithium's Wolfsberg project
- Attractive satellite exploration assets with potential for near-term discovery

1. [https://www.riotinto.com/documents/180321\\_Presentation\\_Andrew\\_Latham\\_Lithium\\_Battery\\_Metals\\_Conference.pdf](https://www.riotinto.com/documents/180321_Presentation_Andrew_Latham_Lithium_Battery_Metals_Conference.pdf)  
2. <https://europeanlithium.com/wolfsberg-lithium-project/>



Goal to join European Union by 2025	World Bank #47 for overall ease of doing business 2017
At crossroad of Central & South Eastern Europe	Updated mining code in December 2015
Strong mining heritage & history	European quality infrastructure
Aim to increase GDP contribution from mining to 5% by 2020	Supportive government & favourable regulatory environment
Favourable foreign investment laws	No restrictions on foreign ownership
No government participation	No restrictions on flow of capital



# Highlights – Serbia

- ✓ 3 exploration licences in Serbia (emerging Tier 1 Lithium jurisdiction)
- ✓ Substantial exploration area  $\approx 258\text{km}^2$
- ✓ Serbia is only known source of Jadarite
  - = new & valuable lithium-borate bearing mineral ( $\text{LiNaB}_3\text{SiO}_7(\text{OH})$ )
- ✓ Rekovac and Vranje South licenses have a very similar geological setting to the Jadar Basin, which is host to Rio Tinto's world-class Jadarite discovery = one of the world's largest lithium deposits (Resource of 135.7 Mt @ 1.86%  $\text{Li}_2\text{O}$  and 15.4%  $\text{B}_2\text{O}_3$  now in PFS)<sup>1</sup>
- ✓ Experienced local team and consultants involved in major lithium discoveries worldwide.
- ✓ Strategically placed for European manufacturers using lithium (In heart of EU manufacturing centre).

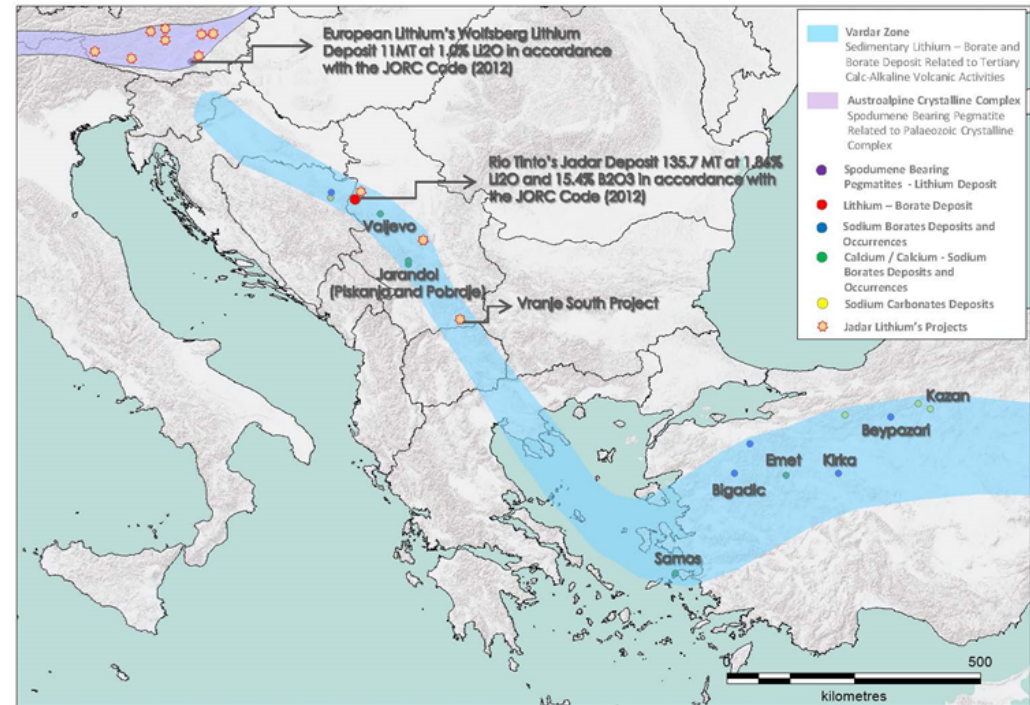


Figure 1 – Position of the Vardar Zone

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.



# Projects

Jadar Lithium

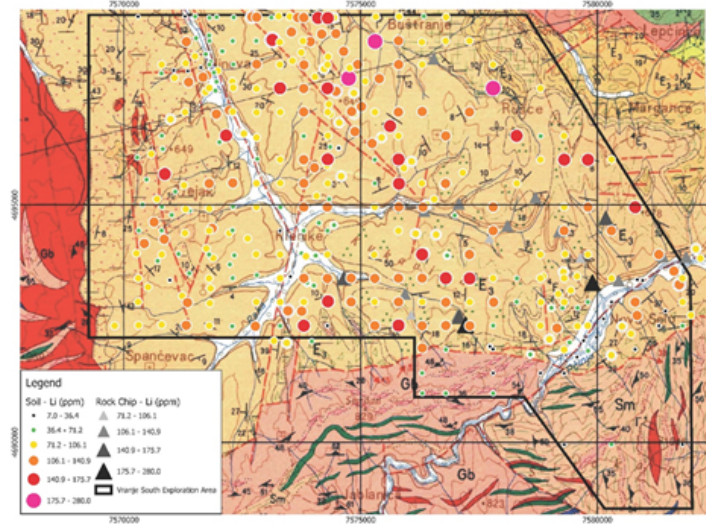
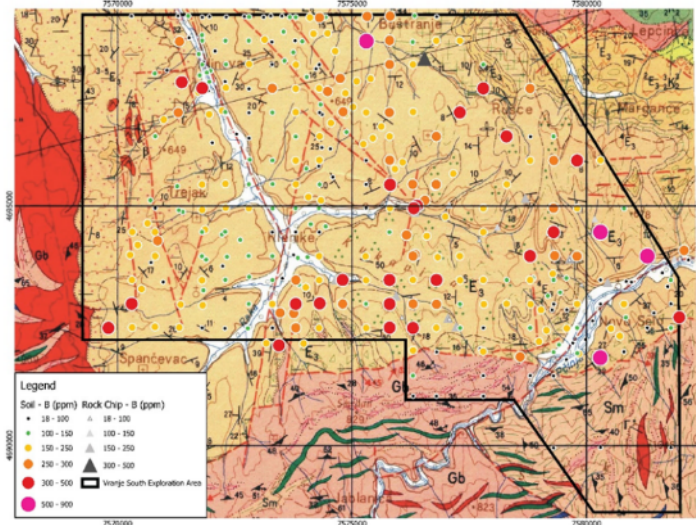
PROJECT	LOCATION	AREA (KM <sup>2</sup> )	DEPOSIT TYPE	HIGHEST SOIL SAMPLE VALUES	STATUS
Vranje South	South Vranje, South Serbia	90.4	Hydrothermal Sedimentary	+800ppm Borate and 280ppm Lithium	Targets defined and targeting T1 potential (Jadar Like deposits)
Rekovac	Paraci, Central Serbia	75.4	Hydrothermal Sedimentary	Borate up to 342ppm and 280ppm Lithium	Targets defined and targeting T1 potential (Jadar Like deposits)
Cer	Loznica, West Serbia	92.8	Pegmatite	N/A	Pegmatites defined and sampling underway to define spodumene mineralisation
TOTAL		258			

# Projects – Vranje South

Jadar Lithium

## PROJECT HIGHLIGHTS

- Project hosts a sedimentary basin with hydrothermal to metasomatically altered volcanogenic-sedimentary deposits
- Jadar Resources is 1<sup>st</sup> mover within the entire basin - has not been tested for Li-B mineralisation to date despite strategic position and geology
- Targeting a world class deposit akin to Rio Tinto's Jadar Deposit (Inferred Resource of 135.7 Mt @ 1.86% Li<sub>2</sub>O and 15.4% B<sub>2</sub>O<sub>3</sub> now in PFS)<sup>1</sup>
- 2 phases of sampling and mapping undertaken to date
- Numerous target areas defined with **very high** values of both Li and B present in soil and rock chip samples
- Highest values include **+800ppm Boron and 280ppm Lithium** in soil sampling
- Good correlation between B and Li anomalism throughout permit
- Ongoing activities – possibly including geophysics – in near term to define drill targets for 2H 2019 program
- Further ground applied for– strategically secure entire basin (ca 500km<sup>2</sup>).



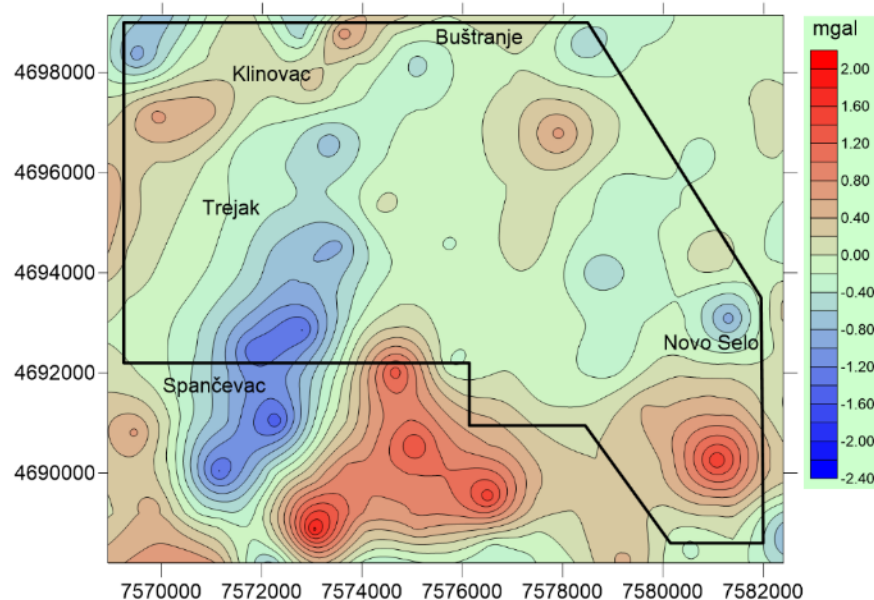
1. [https://www.riotinto.com/documents/180321\\_Presentation\\_Andrew\\_Latham\\_Lithium\\_Battery\\_Metals\\_Conference.pdf](https://www.riotinto.com/documents/180321_Presentation_Andrew_Latham_Lithium_Battery_Metals_Conference.pdf)

# Projects – Vranje South

Jadar Lithium

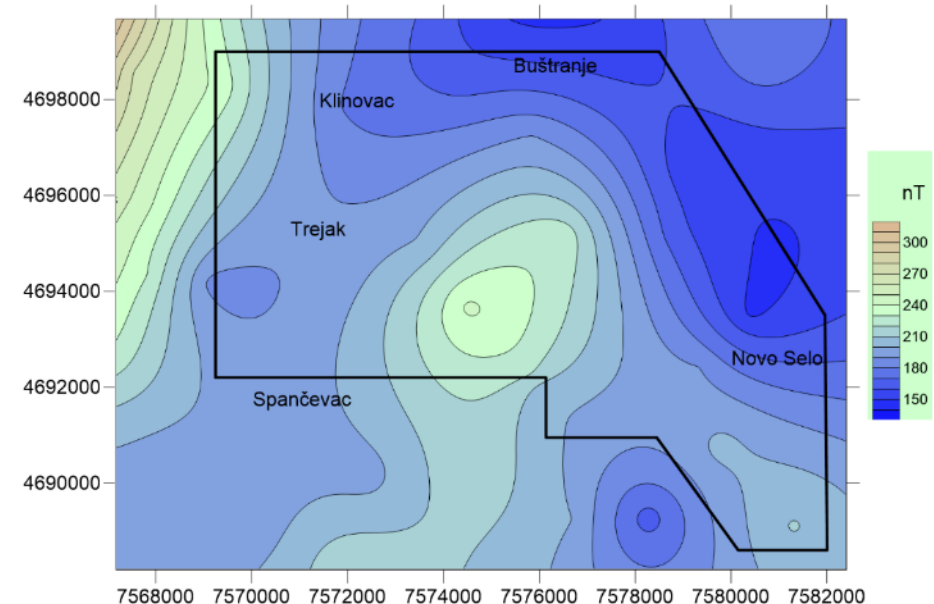
## Gravity

- These results helped to guide the subsequent drilling program
- Complete Bouguer gravity corrections were made for all surveys using a regional digital elevation model
- The corrected data was color contoured to highlight gravity lows in deep blue



## Ground Magnetic

- GM Surveys aided their structural and stratigraphic interpretation of the basin details, such as positions of and depths to the lacustrine sediments and basement contacts
- GM aided in defining the presence of “blind” (covered by younger sediments) Calc – Alkaline volcanic formations that may be related to a spring emanation



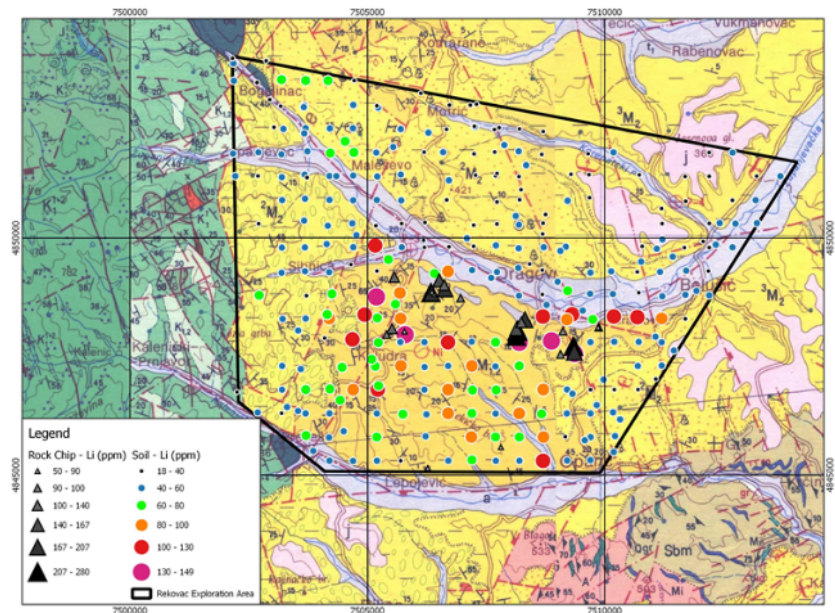
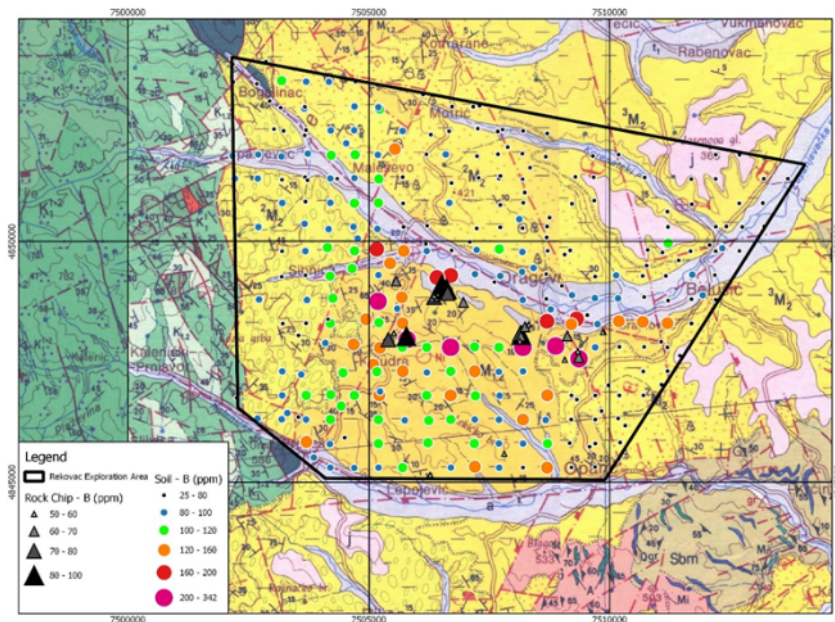


# Projects – Rekovac

Jadar Lithium

## PROJECT HIGHLIGHTS

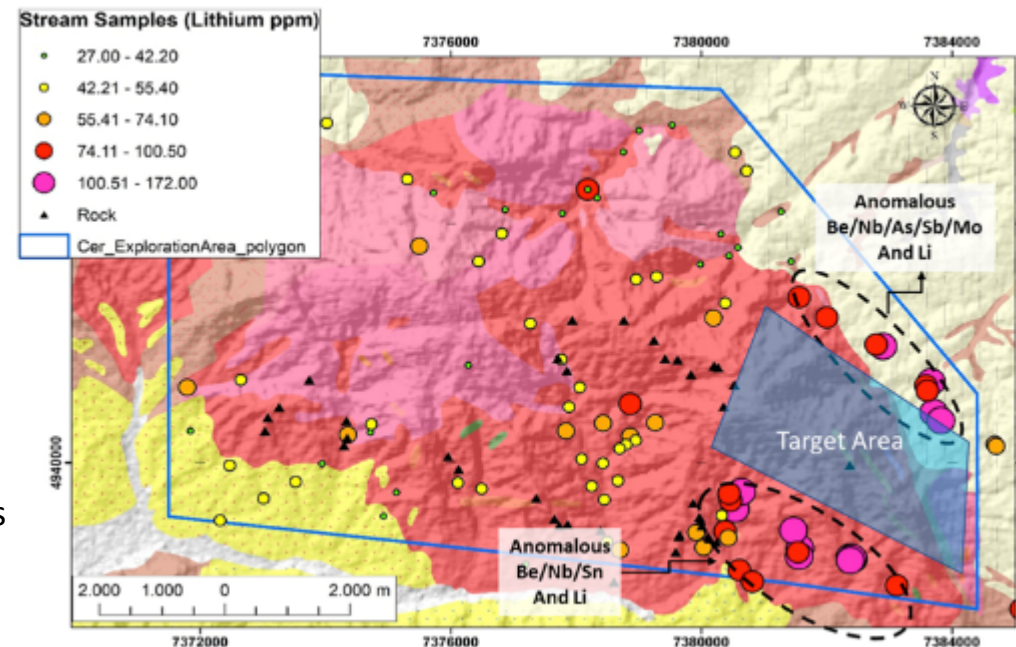
- Project composed of Miocene sediments which are very similar setting to Jadar Basin, with potential to contain lithium – borates mineralisation
  - Two phases of soil sampling have defined a target area in central part of permit
  - Strong correlation between lithium and boron in soil and rock chips samples
- Lithium values in rock chips up to **280ppm** Boron values up to **342ppm**
  - Ongoing activities – possibly including geophysics – in near term to define drill targets for 1Q 2020 program.





## PROJECT HIGHLIGHTS

- Proximal to known world class mineralization
- Excellent road and railway infrastructure nearby
- Numerous pegmatite fields mapped out by Government surveys
- Granitoid Complex shows metallogenic association with Lithium
- Initial reconnaissance sampling delineated target areas which will be focus of next phases of work
- Follow up work sampling recommencing Q1 2020 to define detailed targets.



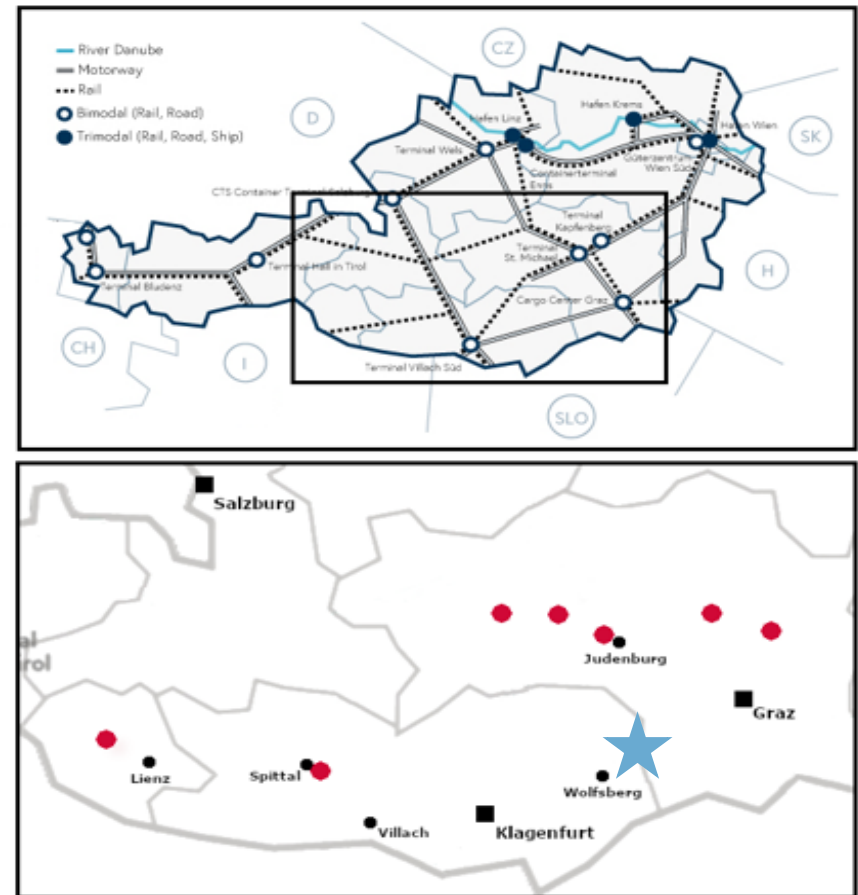
Part of European Union since 1995	Highly industrialized economy with skilled labor force
Closely tied to other EU economies, especially Germany	In 2012 the Austrian Raw Material Alliance was founded
Economic and Monetary Union since 1999	Excellent infrastructure with access to Trans-European Transport Networks
The Austrian Mineral Raw Materials Act (MinroG) regulate exploration and extraction of minerals	Supportive government with positive investment incentives
Favourable foreign investment laws	No restrictions on foreign ownership
In 2017 Austria elected a new pro-business government	No restrictions on flow of capital



# Austrian Project – Highlights

Jadar Lithium

- ✓ Jadar Lithium Limited holds an 80% interest in Austrian Lithium Exploration Licences
- ✓ Eight project areas covered with 135 exploration permits “Freischurf” covering in total 64.2 km<sup>2</sup> - **all hosting Li bearing mineralisation (Spodumene)**
- ✓ The eastern Alps region comprises favourable geology for locating deposits of lithium bearing pegmatite ores
- ✓ Weinebene project area surrounding European Lithium Limited’s Wolfsberg lithium deposit with 11MT at 1.0% Li<sub>2</sub>O - in accordance with the 2012 JORC Code (now in DFS)
- ✓ Potential for near-term brownfield discovery (resource extension)
- ✓ Attractive satellite exploration assets with potential for further high grade resources/mill feed
- ✓ Strategically placed assets for European manufacturers using lithium (In the heart of European manufacturing center).



Austrian infrastructure and exploration licenses location map

● Denotes satellite projects  
Highest Grd 3.88% Li<sub>2</sub>O, Avg Grd 1.54% Li<sub>2</sub>O

★ Denotes Weinebene project  
Highest Grd 3.39% Li<sub>2</sub>O, Avg Grd 1.61% Li<sub>2</sub>O  
Surrounding European Lithium Limited's  
Wolfsberg lithium deposit with 11MT at  
1.0% Li<sub>2</sub>O - JORC

# Austrian Projects

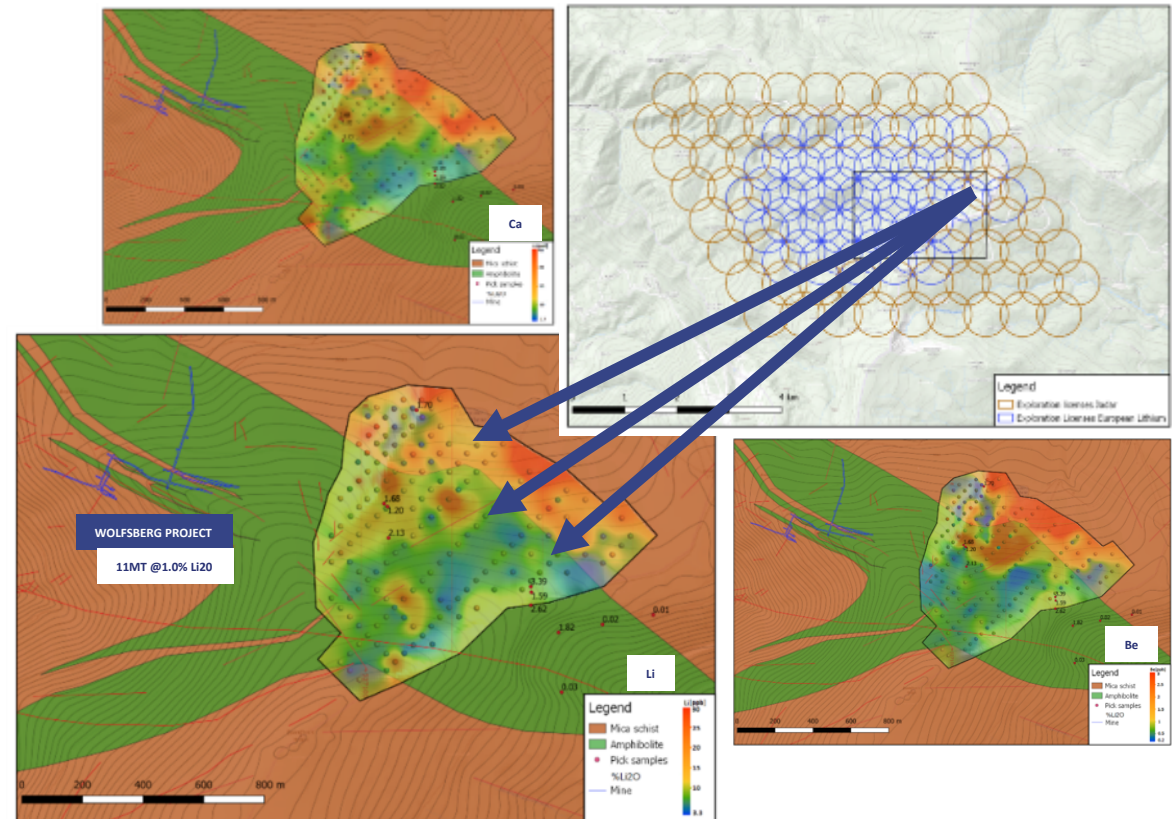
Jadar Lithium

PROJECT AREA	NUMBER OF LICENSES	LICENSES AREA (KM <sup>2</sup> )	HIGHEST Li <sub>2</sub> O GRADE SAMPLE	AVERAGE Li <sub>2</sub> O GRADE SAMPLE	STATUS
<b>Weinebene Project</b>	60	27.528	3.39%	1.61%	Brownfield opportunity with near term resource potential
<b>Sattelite Projects</b> Millstätter – Seerücken – Spittal Mittereck – Pallbaueralm Hohenwart St. Radegund (Garrach) Mitterberg Falkenberg Glanzalm – Ratzell - Poling Klementkogel Birkfeld	76	36.637	3.88%	1.54%	Greenfield opportunity with potential high grade mill feed opportunity



## PROJECT HIGHLIGHTS

- Weinebene project area surrounds the European Lithium Limited's Wolfsberg lithium deposit with 11MT @ 1.0%Li<sub>2</sub>O
- Field reconciliation and mapping, rock chips and soil sampling undertaken to-date
- Identified numerous spodumene bearing pegmatites with very high lithium values up to 3.39% Li<sub>2</sub>O - indicates the European Lithium resource possibly/likely extends into JDR project
- Soil sampling showing anomalous values in the northern portion of the sampled area to be aligned with the projected trend of the known pegmatite veins – anomaly still open to the north - northeast
- Planned work - soil sampling of north-eastern part; define drill targets for H2.



## PROJECT HIGHLIGHTS

- Unique high value lithium targets
- Short time line to discovery (target definition) and value creation
- Initial reconnaissance sampling confirmed numerous pegmatites with very high lithium values up to 3.88% Li<sub>2</sub>O
- Planned work - Company plans to conduct detailed mapping and soil sampling to evaluate projects and define trenching and drilling targets



# Projects – Yanamina Gold Project \* Jadar Lithium

## PROJECT HIGHLIGHTS

- Advanced Yanamina Gold Project is located in the Ancash Province in Peru
- Yanamina is an outcropping epithermal gold resource with existing resource of +200,000 ozs gold
- Purchase cost minimal, relative to potential upside of project
- Provides significant exploration upside through potential depth and lateral extensions and a significant faulted extension target at depth
- Clear short term path to production with defined short term plan



Figure 1: Yanamina Gold Project

\* Subject to shareholder approval 25 November 2019

# Next Steps

Jadar Lithium

## SERBIA

### Vranje South & Rekovac Projects:

- Additional in-field mapping and geophysical surveys
- Evaluate basin geometry on Rekovac and Vranje South
- Prepare maiden scout drill testing Q4 2019/Q12020

### Cer Project:

- Detailed mapping and trenching to define drill targets on Cer and prospectivity

## AUSTRIA

### Winebene Project:

- Soil sampling of the north-eastern part – outline previously identified Li, Be, Cs anomaly; define drill targets for H1 2020

### Satellite Projects:

- Detailed mapping and soil sampling of the satellite projects; project prioritization, and define trenching and drilling targets H1 2020

## PERU

### Yanamina Gold Project\*:

- Complete due diligence
- Obtain shareholder and regulatory approvals Q4 2019
- Short term path to production
- Update JORC resources for 2012 reporting standards

\* Subject to shareholder approval 25 November 2019



# Corporate Overview

Jadar Lithium

## BOARD OF DIRECTORS

- **Mr Luke Martino** – Specialist in corporate advisory and investment banking
- **Mr Steven Dellidis** – Project management and strategic investment for 20+ years
- **Mr Nicholas Sage** – Experienced marketing and communications professional
- **Mr Stefan Müller** – Extensive financial markets and investment banking knowledge and experience built over a 25-year career

## CAPITAL STRUCTURE

Shares on Issue (Undiluted)	480.4 million
Options (\$0.02; 12/2020)	70.2 million
Options (\$0.03; 07/2020)	30.0 million
Options (\$0.02; 05/2023)	25.0 million
Share Price (24/10/2019)	A\$0.011
Market Capitalisation (Undiluted)	~A\$5.3 million
Cash balance 30/09/2019	~A\$1.7 million
Escrowed shares (12/2019)	50.0 million
Listing	ASX "JDR" Frankfurt Exchange R1E.F Berlin Exchange R1E.B Stuttgart Exchange R1E.SG

## TOP HOLDERS (@ 24/10/2019)

Top 20	50%
Other	50%

## TOP 5 SHAREHOLDERS (@ 24/10/2019)

J P Morgan Nominees Australia Limited	12.74%
Sunshore Holdings Pty Ltd	5.21%
Battle Mountain Pty Ltd	4.25%
Mr Adrian Stephen Paul & Mrs Noelene Paul	3.95%
ADKSK Superfund Pty Ltd	2.60%

## **Luke Martino (Chairman)**

- 25+ years experience at partner & board level with Deloitte
- Director of Indian Ocean Corporate, a boutique corporate & investment banking firm in Australia & Mainland China
- Experience & credibility in mining & resources, property and hospitality industries
- Specialist in corporate & growth consulting

## **Steven Dellidis (Non-executive)**

- Project management and strategic investment for 20+ years
- Significant experience in managing a number of listed companies
- Has assisted in initial acquisitions of important assets, bolstering company profiles
- Currently manages a variety of businesses across a range of industries from mechanical engineering to earth moving

## **Stefan Müller (Non-executive)**

- Extensive financial markets and investment banking knowledge and experience built over his 25-year career
- Founder and CEO of DGWA Deutsche Gesellschaft für Wertpapieranalyse, a boutique European Investment and financial markets consulting firm
- Supervisory Board member of Frankfurt listed Agrarius AG, Non-Executive Director of ASX listed European Lithium Limited and Cape Lambert Resources Limited

## **Nicholas Sage (Non-executive)**

- Mr Nicholas Sage is an experienced marketing and communications professional with in excess of 25 years in various management and consulting roles. Mr Sage is based in Western Australia and has held various management roles within Tourism Western Australia. Mr Sage also runs his own management consulting business.
- Mr Sage is a Non-Executive Director of ASX listed Cauldron Energy Limited and Fe Limited.

## Dejan Jovanovic (Austria)

- Dejan graduate Economic Geology at the University of Belgrade.
- He is a member of the European Federation Geologist (QP) and oversees lithium exploration and mining projects.
- Specializing in: Exploration, geochemistry and ore body knowlage
- Proven ability to manage field staff in the successful evaluation, management, and completion of mineral exploration and mining projects
- Well-versed in scheduling and coordinating all aspects of exploration projects, including contractor selection, the scope of work, as well as utilizing area selection, target generation, and target testing to consistently generate a new projects
- Experienced with Rio Tinto's "Jadar" deposit

## Dusko Ljubojevic (Serbia)

- A geologist with over 13 years experience in the resource sector.
- Previous positions spanning exploration; mining operations, investor relations and executive roles.
- He has worked in the Americas, Africa, Asia and Europe, and has significant experience in Eastern Europe.
- He held positions with a number of junior and mid tier development companies and served on the advisory board of a number of private companies. He also acted as an advisor and Head of Small Scale Mining within Barrick Gold Corporations' Asset Development Group.

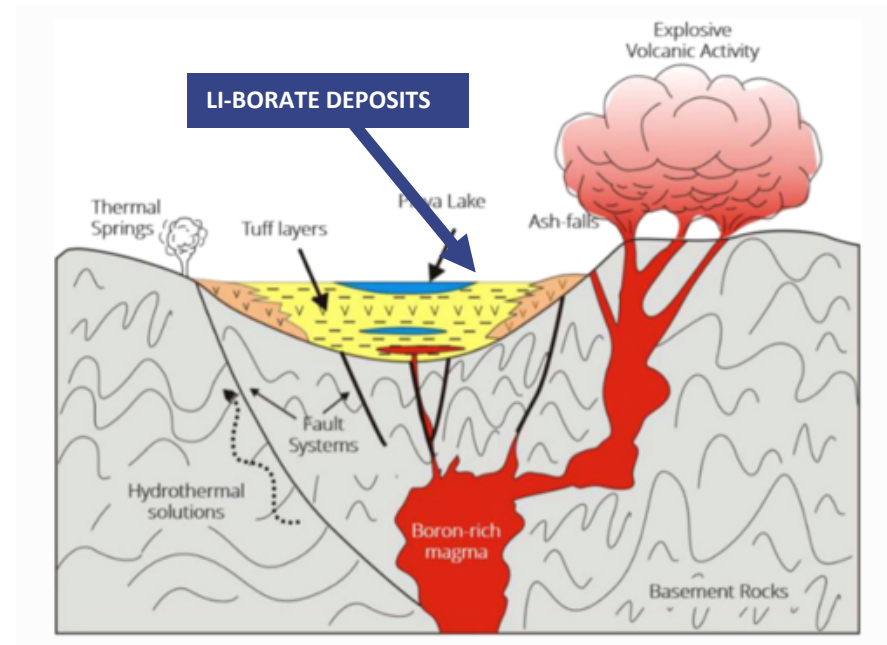
# APPENDICES





## JADAR STYLE LITHIUM-BORATE

- Jadar Deposit is essentially a borate deposit with high grade lithium co-product
- Borate deposits form from hydrothermal fluids associated with volcanic activity and granites in arid tectonic basins
- Typically associated with fine-grained, lacustrine sediments, evaporates, clays and sands
- Have kilometre scale footprints
- Deposits associated with basin scale faults that provided fluid conduits
- Testing will require reconnaissance drilling of the basin sequence
- Potentially prospective accumulations of sediments exist at Rekovac and Vranje South
- Additional data review and field visits are required to ascertain the prospectivity of these sedimentary packages.



Genetic Model for Borate +/- Lithium deposit formation, From: Helvacı, C., 2015, *Geological Features of Neogene Basins Hosting Borate Deposits: An Overview of Deposit and Future Forecast, Turkey*. Bull. Min. Res. Exp., 151: pp 169-215

# Licences in similar geological setting to World-Class Deposit

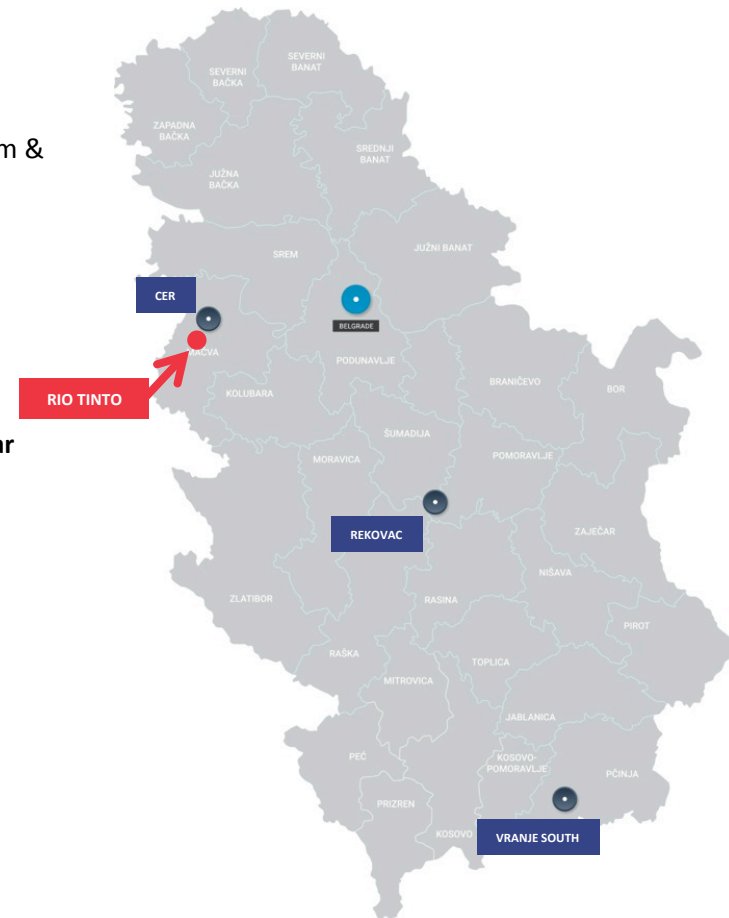
Jadar Lithium

## RIO TINTO'S JADAR PROJECT

- World-class lithium borate deposit
- Unique Jadarite deposit near Loznica
- Ranked as one of the largest global lithium deposits in world (due to high lithium & boron concentrations)
- Rio Tinto spent US\$200m + to date
- Currently in prefeasibility stage
- Production could commence by 2023
- Could supply 10% of global lithium demand

Source: "Jadar Project Fact Sheet", Rio Tinto, March 2017

≈Rekovac and Vranje South licences in very similar geological setting to Rio's Jadar Project



**"Rio Tinto powers up Serbian lithium mine for car battery boom"**

*AFR, Feb 2017*



# Field Photos from Austria

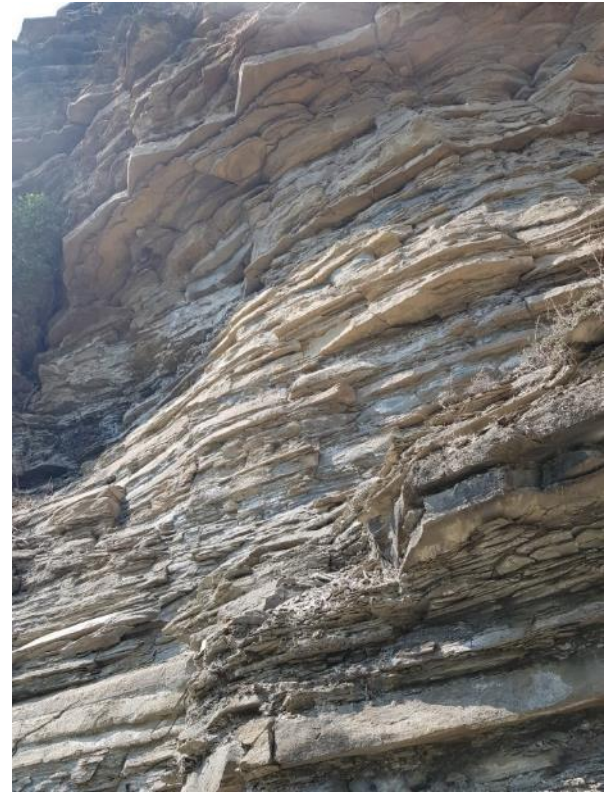
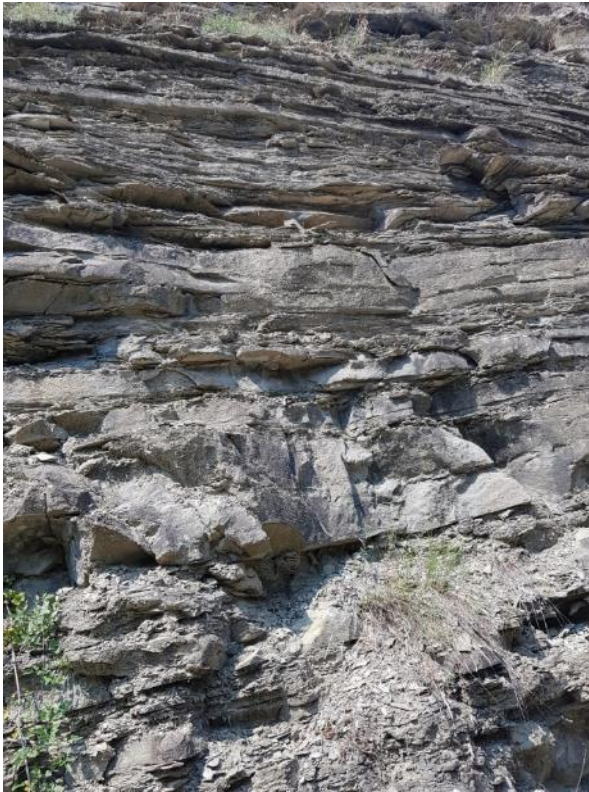
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# Field Photos from Serbia

Jadar Lithium





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ASX announcements are as follows:

Eastern Alps Satellite Project – 14 March 2019;

Weinebene Project – 19 February 2019;

Cer Project – 6 July 2018;

Vranje South Project – 20 August 2018, 14 November 2018 and 14 July 2019;

Rekovac Project – 7 August 2019; and

Yanamina Project – 16 September 2019



# Jadar Lithium

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