



Lithium Exploration and Development

Targeting the Battery and Technical Grade Spodumene Market

May 2019

www.jourdanresources.com FRANKFURT : 2JR1 TSX.V: JOR





Cautionary Language and Legal Disclaimer

Forward-Looking Statements

Certain information contained herein regarding Jourdan Resources Inc., including management's assessment of future plans and operations, may constitute forward-looking statements under applicable securities law and necessarily involve risks, including but not limited to risks associated with mining exploration, operating costs, production costs, volatility of share prices, currency fluctuations, imprecision of resource and reserve estimates, if any, environmental risks and ability to access sufficient capital from internal and external sources.

As a consequence, actual results may differ materially from those anticipated in any forward looking statements. Plans, intentions or expectations disclosed in any forward-looking statements or information should not be read as guarantees of future results or events, and will not necessarily be accurate indications of whether or when or by which such results or events will be achieved.

Except as required by law, Jourdan Resources Inc., expressly disclaims any intention and undertakes no obligation to update any forward-looking statements or information as conditions change.

Technical Information

The scientific and technical information contained herein has been reviewed and approved by Yves Caron, an independent consultant that is a “qualified person” as defined in National Instrument 43-101 – *Standards of Disclosure for Mineral Projects*.



OUR MISSION

Jourdan Resources Inc. is a Canadian junior exploration company focused on lithium.

We continually strive to maximize shareholder value by targeting the highest quality lithium projects with a professional and highly experienced management team.

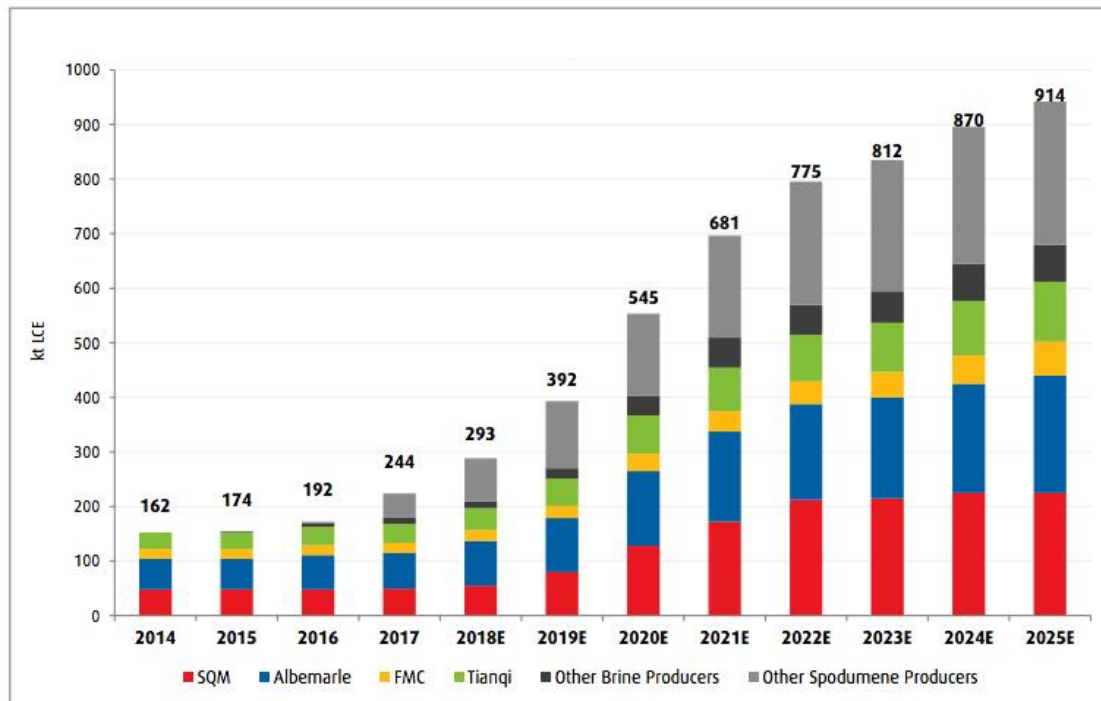
Our proactive approach combines creativity, experience, and technical expertise with tenacity and determination to advance existing projects while always being prepared to take advantage of new opportunities that can add value for our shareholders.

We are committed to conducting ourselves in an open, professional, and responsible manner, while always remaining available to all shareholders.

Our goal is to become the dominant lithium miner in North America.

Lithium Supply by Producer

Wave of much-needed spodumene based supply coming online

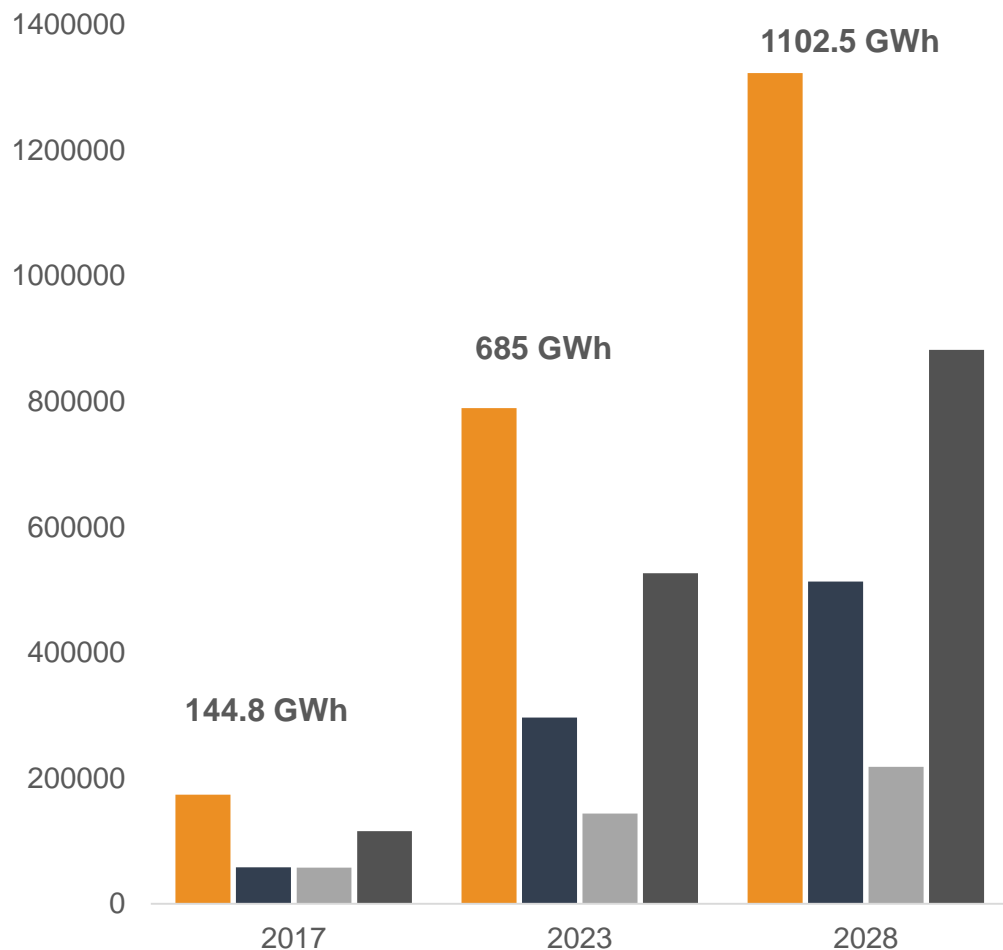


Lithium Battery Technology

Material	Description	Safety	Cost USD/kWh	Energy Density kWh/kg	Cycle Life times
LCO (LiCoO ₂)	Mostly used in consumer electronics. Limited application of xEVs (e.g., Tesla)	Low	Low	0.58	1,500-2,000
NMC ¹ (LiNi _x Co _x Mn _x O ₂)	Used mainly in consumer electronics but increasing use in xEVs	Mid	Mid	0.60	2,000-3,000
LMO (LiMn ₂ O ₄)	Relatively mature technology. Used in xEVs by Japanese OEMs (e.g., LEAF, iMiEV, Volt)	High	High	0.41	1,500-3,000
LPF (LiFePO ₄)	Relatively new technology used in xEVs and ESS. Driven by A123 and Chinese manufacturers (e.g., BYD, STL)	Very High	High	0.53	5,000- 10,000
NCA (LiNi _{0.8} Co _{0.15} Al _{0.05} O ₂)	Used mostly in consumer electronics (often blended with other chemistries) and e-vehicles (e.g., Tesla)	Mid	Mid	0.72	n/a

Source: Yoshi, M. et.al. 2009. Lithium-Ion Batteries: Science and Technologies. New York: Springer; McKinsey BMI battery materials demand modal

Raw Material Demand

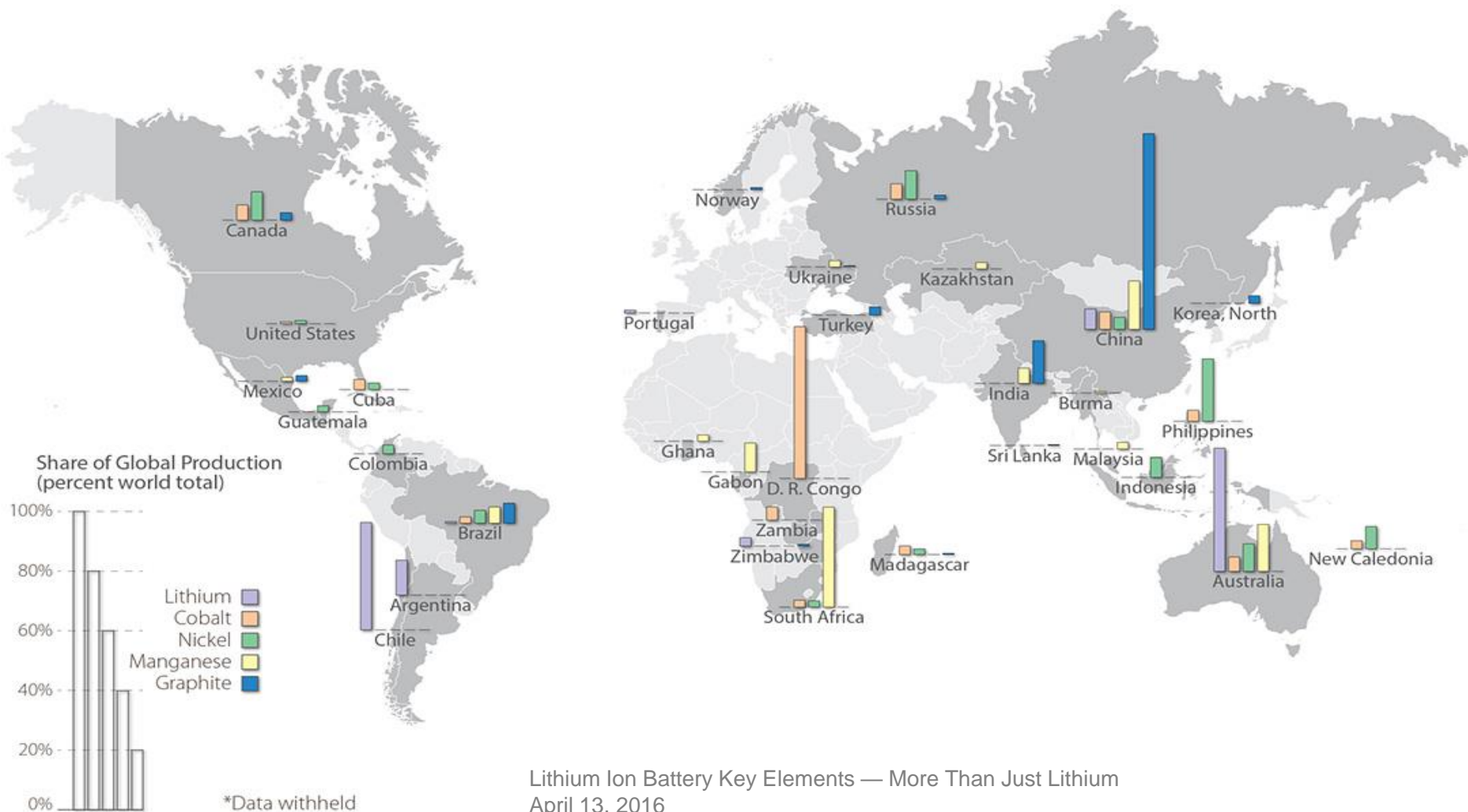


Material	2017	2023	2028
Lithium	115,840	526,400	882,000
Graphite Anode	173,760	789,600	1,323,000
Cobalt	57,581	143,987	218,412
Nickel	58,395	296,700	513,200

Source: Benchmark Mineral Intelligence

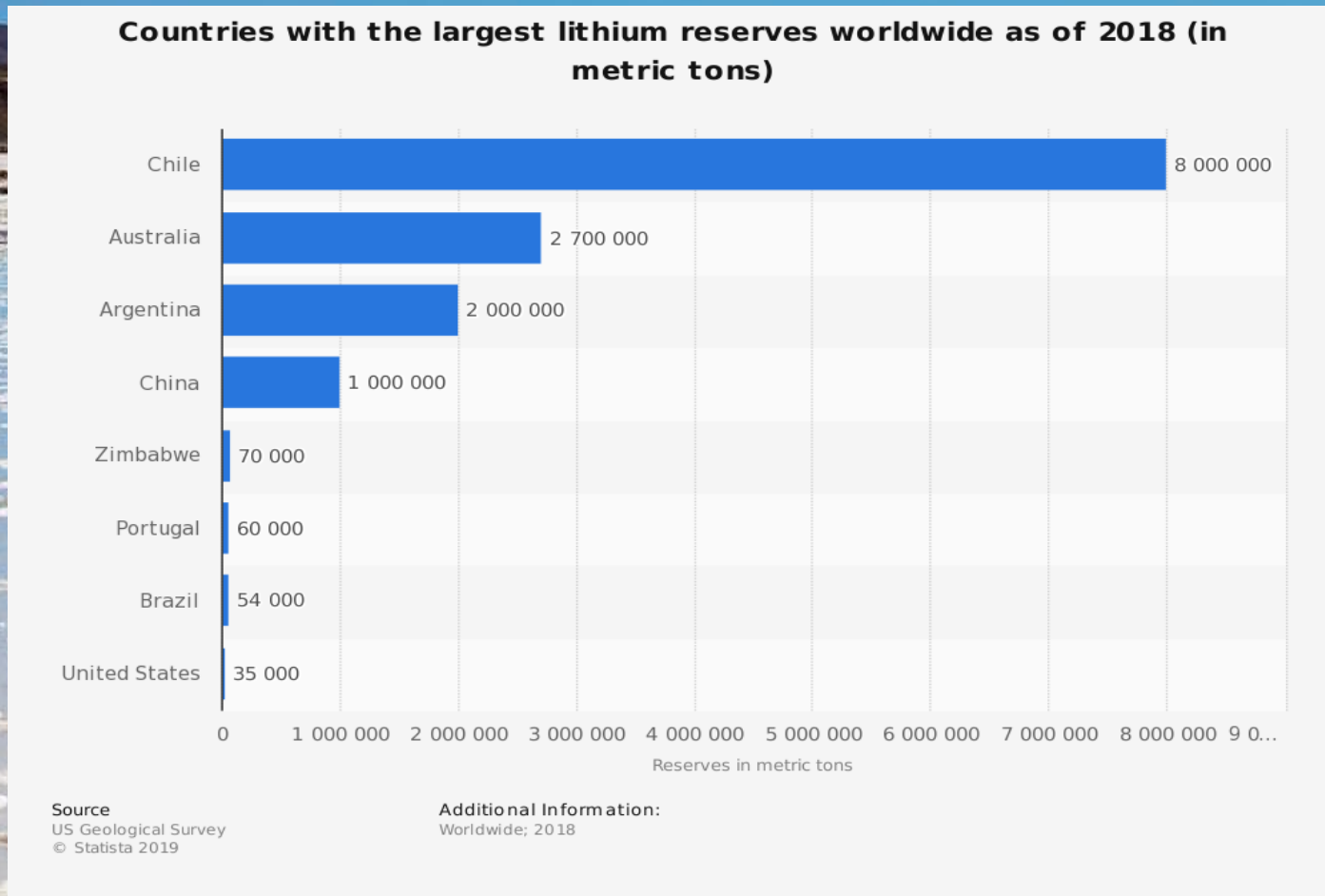
The data in this chart does not constitute a forecast, and assumes 100% utilisation rates

PRODUCTION OF KEY ELEMENTS IN LI ION BATTERIES



Lithium Ion Battery Key Elements — More Than Just Lithium
 April 13, 2016
 By Emma Elgqvist, National Renewable Energy Laboratory

LITHIUM RESERVES





LITHIUM FROM BRINES

There are two main sources of lithium: mines and brine water. Most of the world's lithium (87 percent) comes from the latter source. Among brine water sources, briny lakes (known as salars) offer the highest concentration of lithium (1,000 to 3,000 parts per million). The salars with the highest lithium concentrations are located in Bolivia, Argentina, and Chile.

Lithium obtained from salars is recovered in the form of lithium carbonate, the raw material used in lithium ion batteries. The production process is fairly straightforward and requires only natural evaporation, which leaves behind not only lithium, but also magnesium, calcium, sodium, and potassium.

The lithium content of ocean water is far lower, hovering around 0.17 parts per million. However, about 20 percent of the lithium in seawater can be recovered using a combination of membranes, filters, and ion-exchange resins.



LITHIUM FROM BRINES (CONTINUED)

Salar brines are pumped from beneath the saline crust in two different areas of the salar. In one of them, extracted salar brines contain unprecedented concentration levels of potassium and lithium. In the other, salar brines obtained contain high concentrations of sulphate and boron.

After extraction, salar brines are located in evaporation. The Atacama Desert is the driest place on earth, with a solar evaporation index of 3,200 millimeters and average precipitations of only 15 millimeters per year. This results in an extremely efficient process of solar energy concentration.

From the resulting solutions and after a series of processes, companies produce potassium chloride, lithium carbonate, potassium sulphate, boric acid and magnesium chloride.

Source : <http://sgm.com> (edited)

LITHIUM FROM BRINES OR CONCENTRATE

LITHIUM CARBONATE

Formula	Li ₂
Li ₂ CO ₃ Content	Min 99.0%
Particle Size	<40 µm
Common impurities	Na, K, Ca Cl, SO ₄

LITHIUM HYDROXIDE

Formula	LiOH
LiOH Content	Min 55.0%
Particle Size	<40 µm
Common impurities	Na, K, Ca Cl, SO ₄

Source : <http://benchmarkminerals.com>

LITHIUM FROM HARD ROCK

The remaining 13 percent of the world's lithium is found in hard rock (pegmatites). The concentration is higher than those found in brine, but the mining process has a higher cost.

Over 145 minerals contain lithium, but only five (spodumene, lepidolite, petalite, amblygonite, and eucryptite) are utilized in lithium extraction. Of those five, spodumene provides the largest proportion of all mineral-derived lithium.

After spodumene is mined, it is heated to 1100°C , then cooled to 65°C and ground up, mixed, and roasted. The sulfuric acid kicks off a reaction in which lithium sulfate replaces hydrogen. The slurry is then filtered.

After its pH level is adjusted, the mixture is concentrated through evaporation. Finally, soda ash is added to create lithium carbonate.



FEBRUARY 20TH, 2018 | BY KYLE PENNELL

WHERE WILL THE LITHIUM COME FROM TO MEET DEMAND

Recently, an Argentinian lithium producer reported lower than expected lithium production in its third fiscal quarter, because weather interfered with its evaporation rates of its lithium brines. It reveals two problems with lithium brine production: geography and weather / climate.

Eight Capital analyst David Talbot pointed out that problems clearly demonstrate that production is not a straight forward process.

Weather has clear impacts on the production at lithium brine operations and with global demand for lithium on the rise, more reliable and consistent methods of production will be required. Lithium brine operations are limited to select climates and regions that can support sufficient sunny days and little rainfall to ensure economic processing.

The global lithium industry will need \$10 billion to \$12 billion of investment over the next decade to meet surging demand amid the electric vehicle boom, said an executive of Chilean Lithium miner SQM.

Demand for the metal is set to grow by 600,000-800,000 tonnes of lithium carbonate equivalent over the next 10 years, Daniel Jimenez, senior commercial vice president at SQM, said.

Not all lithium is equal and not all lithium is mined the same way. There are two significant sources of lithium, Lithium Brines and Lithium-Cesium Tantalum Pegmatites (hard rock).

Hard rock lithium deposits are going to fill the demand as they are geographically more evenly distributed across the globe and are less dependant on a changing climate for production.”

Source : <http://miningfeeds.com>

TALKING ABOUT LITHIUM – HARD ROCK

Lithium is found in very low concentration in igneous rocks. The largest concentrations of lithium-containing minerals are found in granitic pegmatites. The most important of these minerals are spodumene (Li_2O , Al_2O_3 , 4SiO_2) and petalite (Li_2O , Al_2O_3 , 8SiO_2). Spodumene has a theoretical Li_2O content of 8.03%. Due to its high lithium content, spodumene is considered the most important lithium ore mineral. A typical run of mine ore can contain 1-2% Li_2O , while a typical spodumene concentrate suitable for lithium carbonate production contains 6-7% Li_2O (75% - 87% spodumene). Higher grade concentrates with 7.6% Li_2O and low iron content are used in ceramics and more demanding industries.



**Spodumene in
pegmatite from
Jourdan's Vallee
Lithium Property**



LITHIUM FROM HARD ROCK - CONCENTRATE

LITHIUM CONCENTRATE

Formula

Li_2O

Li_2O Content

6%

Particle Size

$<75\ \mu\text{m}\ \text{SiO}_2$

Common impurities

$\text{Al}_2\text{O}_3\text{SiO}_2$



Overview

Jourdan Resources Inc. is a Canadian junior exploration company focused on the acquisition, exploration, development and production of lithium mining properties in Quebec.

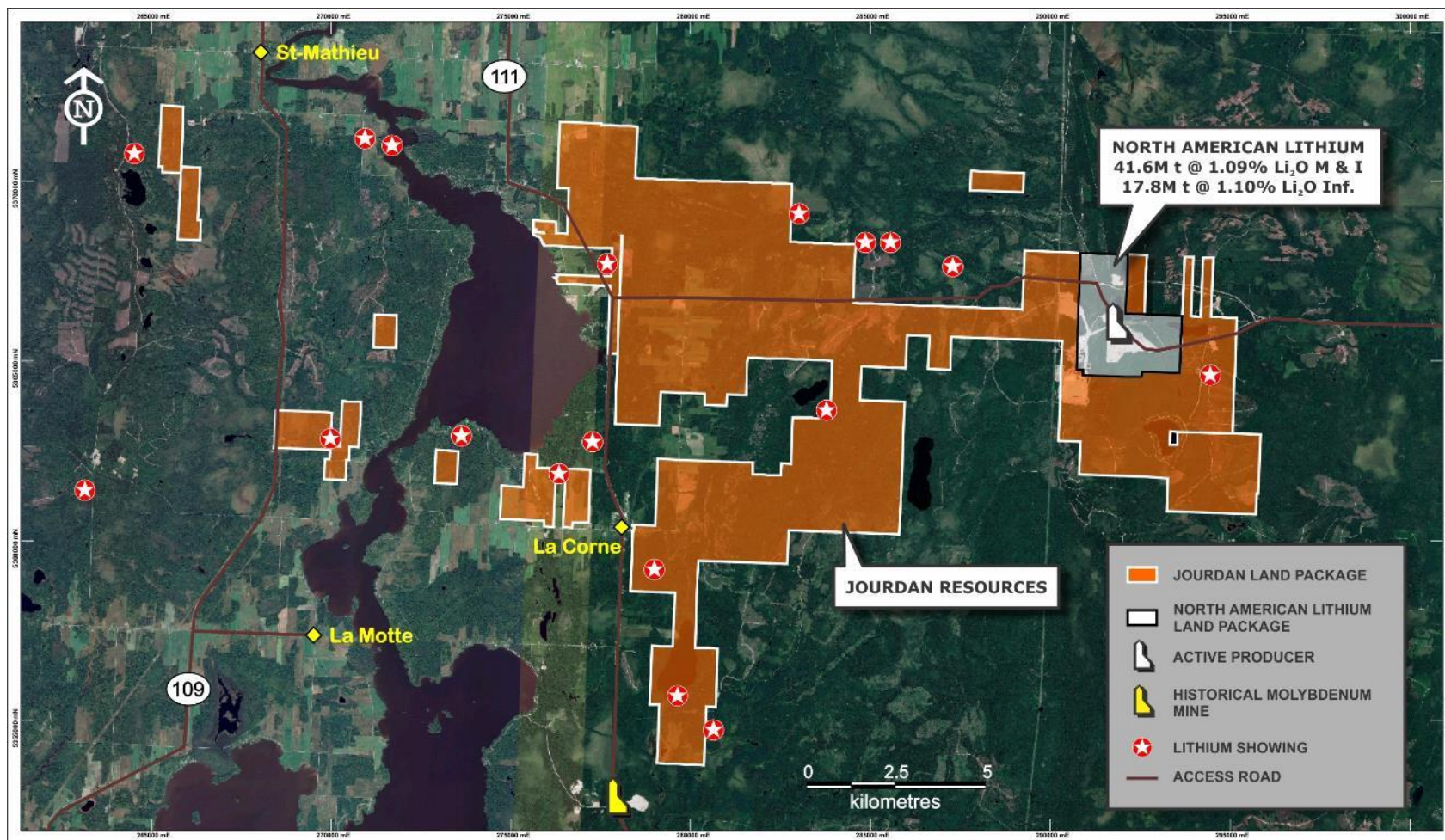


Close proximity to +50 year operational lithium project

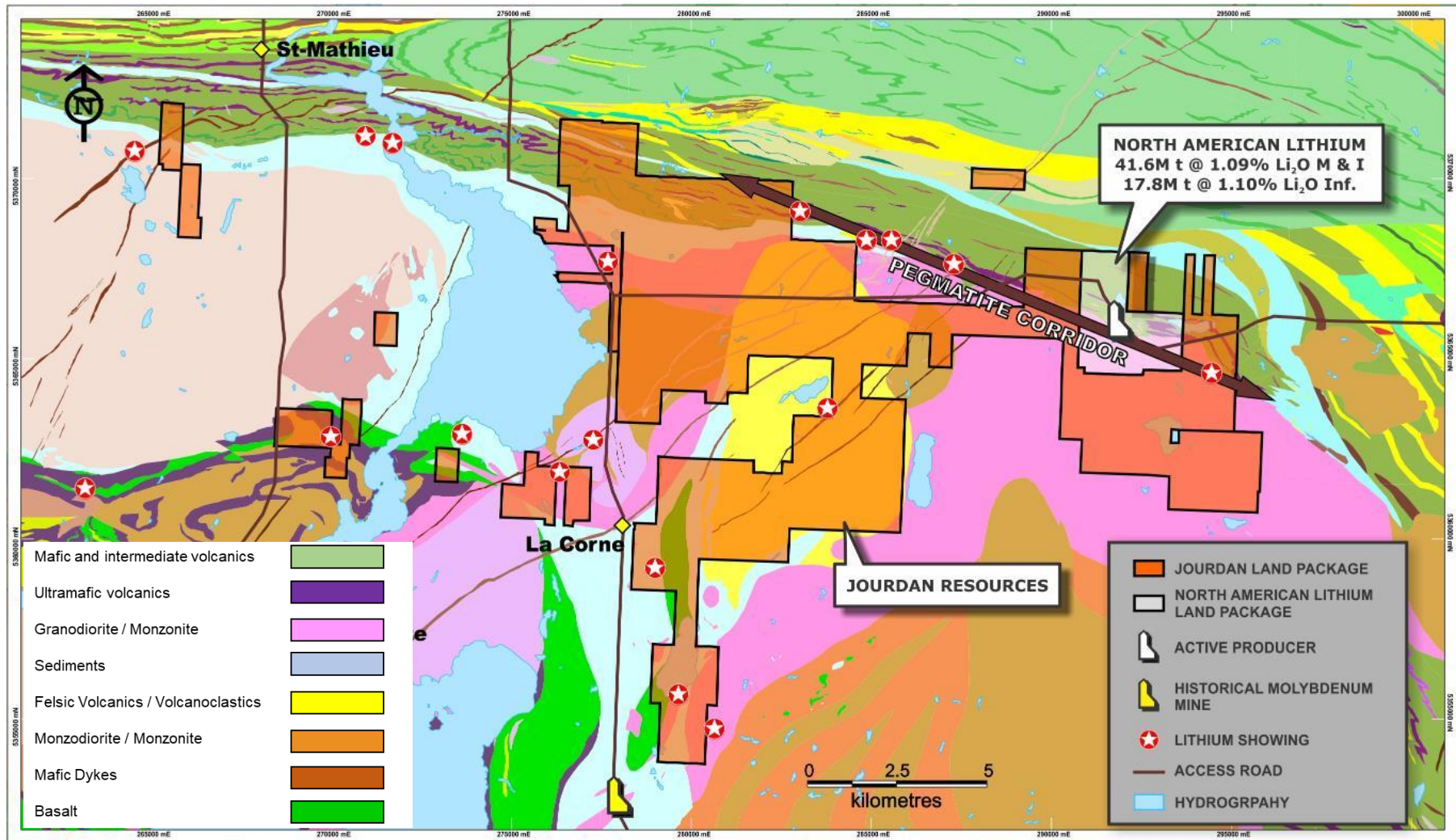
Located in an established mining camp

Access to metallurgical plant

Claim Map

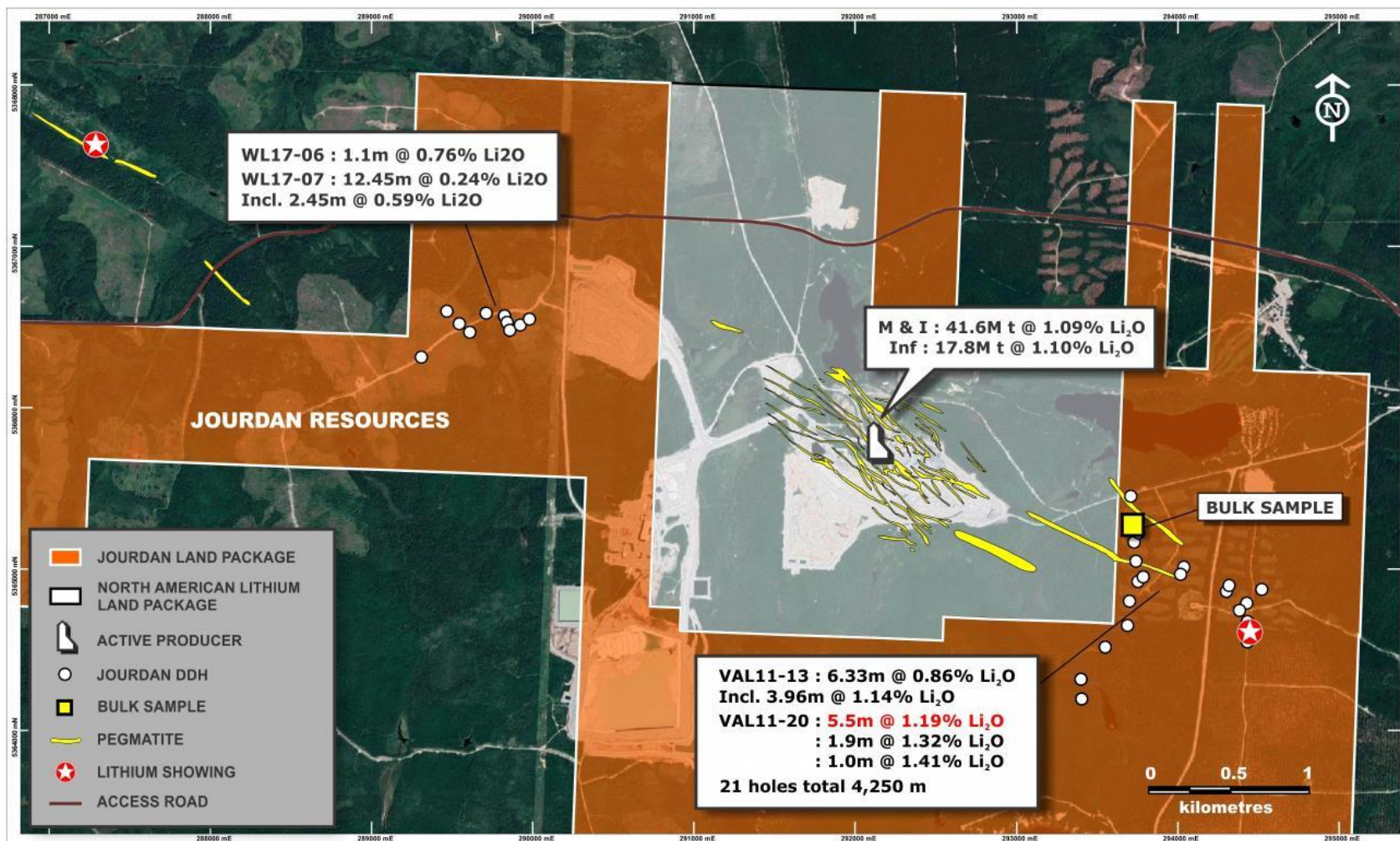


Geology Map



Operational Neighbour

Mineralized Spodumene Pegmatites continue directly onto Jourdan's claims and confirmed by several drill holes (white dots).



Vallee Lithium Project

In 2011 Jourdan completed a total of 21 drill holes totaling 4,256m

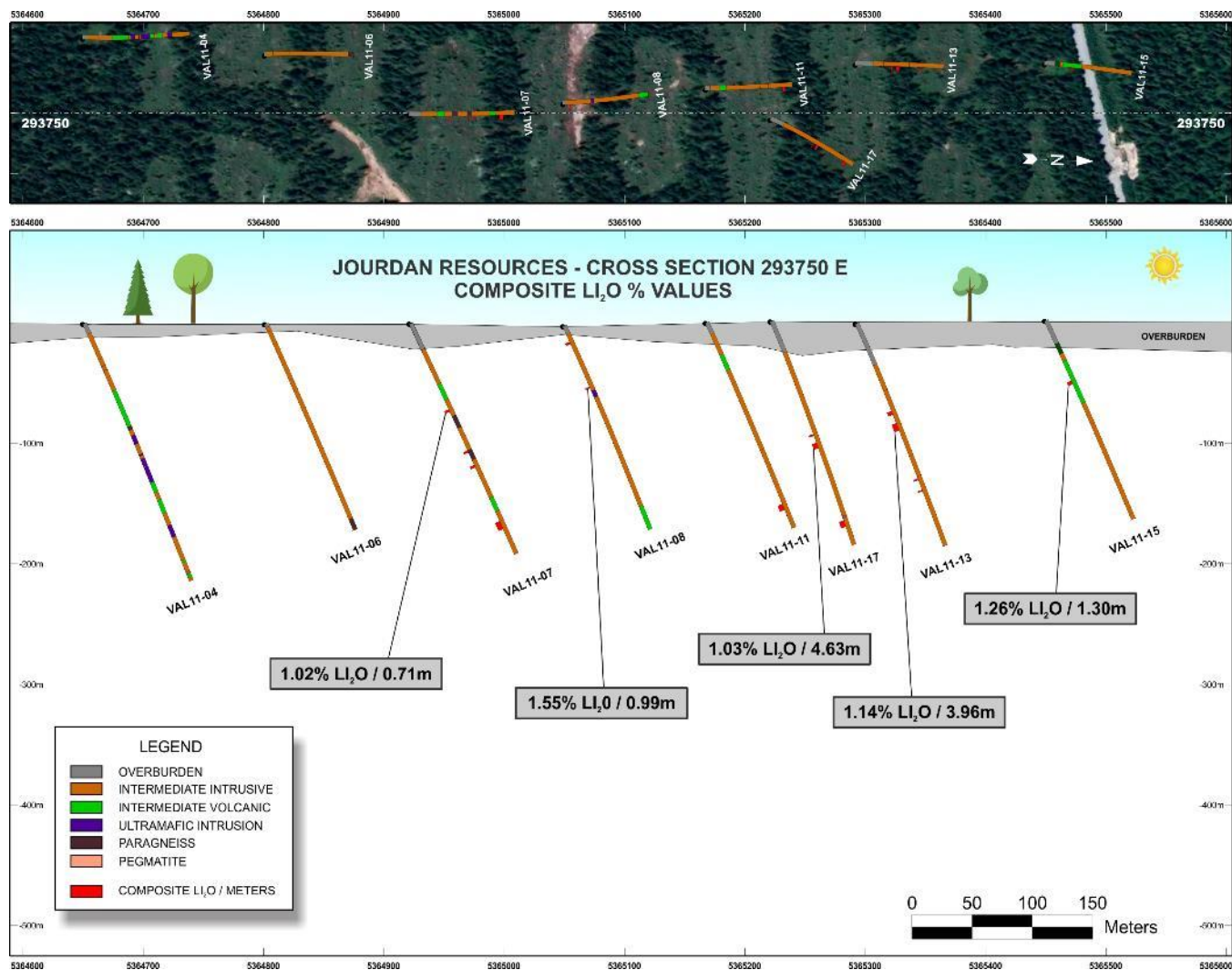
The number of spodumene bearing dykes in drill holes intersected on the Vallee Lithium property are estimated at more than 400, from centimetres in width to many metres wide.

Drill Hole	Assay Results
VAL 11-20	1.19% Li ₂ O over 5.50 metres 2.68% Li ₂ O over 0.85 metres
VAL 11-21	1.05% Li ₂ O over 4.31 metres
VAL 11-17	1.03% Li ₂ O over 4.63 metres

See press release dated October 2, 2017

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Jourdan Cross Section



LITHIUM PROJECTS IN VAL D'OR

Open pit mine at the neighbouring North American Lithium Mine. Note the ore is the white rock hosted by the grey rock.



Jourdan's crushed bulk sample in storage, ready for processing for grade estimation and metallurgical test work.

Aurbel Processing Plant Memorandum of Understanding

Jourdan has signed a non-binding memorandum of understanding with QMX Gold Corporation (“QMX”) that is expected to facilitate Jourdan’s investigation into the economic and technical viability of producing lithium from its 100% owned Vallee Lithium project located near and adjacent to the producing North American Lithium mine and mill (the “Property”). Upon completion of a technical assessment and satisfactory due diligence, Jourdan and QMX intend to enter into a definitive agreement to process raw materials from the Property at QMX’s Aurbel processing plant, located in Val d’Or, Quebec.

Jourdan’s President and CEO, Dr. Andreas Rompel, commented “We are excited about the memorandum of understanding as we view it as one step towards enabling us to process our future raw materials. The Aurbel plant is within 30km of our Property and we believe it is particularly well-equipped for our purposes; any required modifications will be of a relatively minor nature. Hence, we believe this represents a positive development towards our objectives”.



Path Forward

2019

2020

2021

Fund raising / 400
samples send to assay
lab

Bulk sample processing
(50 tonnes)

Geological mapping,
trenching and drilling of
lateral and downward
extent

Resource modelling
towards a NI 43-101

Production permitting the
quarry / toll milling
agreement / build on the
resource / large bulk
sample

Enter production 1200 to
1500 tpd



SHARE STRUCTURE

Jourdan Resources Inc.	TSX-V:JOR
Shares Outstanding	44,581,831
Warrants	16,981,655
Options	5,870,000
Fully Diluted	58,873,111
Current Share Price	\$0.035
52-Week High / Low	\$0.125 / \$0.03
Market Capitalization	\$2,060,559

Significant Shareholders	Ownership
Management & Directors	12%
Aberdeen International Inc.	14%
Sulliden Mining Capital	13.5%



JOURDAN RESOURCES MANAGEMENT

Dr. Andreas Rompel, FSAIMM, President and CEO

Dr. Rompel is a seasoned exploration professional with three decades of exploration experience in a wide range of roles from VP Exploration and Project Manager to Country Manager and Corporate Development. Most recently, Dr. Rompel was the President & CEO of Cobalt Power Group. Dr. Rompel has also worked in a variety of commodities, including precious metals and base metals as well as coking coal and cobalt. For more than a decade Dr. Rompel evaluated capital projects within Anglo American and was on the board of Spectrem (an Anglo-American company) as Technical Director. He has worked in many countries on several continents and has well developed multi-linguistic skills.

Michael Dehn, VP Exploration

With over 25 years of experience in the mining industry, Michael has been a VP, President, CEO and Director of nearly 20 companies. Between 1994 and 2005, he worked as an exploration geologist and later as a Senior Geologist with Goldcorp Inc. His expertise lies in grassroots to advanced minerals exploration, marketing and financing junior companies. Michael has worked in diamond, base metals, precious metals, industrial minerals, oil and natural gas, as well as sand, gravel and peat deposits, primarily in the Americas on private, public company and government projects.

Stephen Woodhead, CFO

Mr. Woodhead is a graduate of the University of Cape Town and a member of the South African Institute of Chartered Accountants. Mr. Woodhead has over 25 years of experience having worked for the South African Department of Finance and Trans Hex Group, a South African diamond producer, before relocating to Canada in 1997 as Chief Financial Officer of Trans Hex International. From 2003 until it was acquired by Yamana Gold in 2006, Mr. Woodhead was the Chief Financial Officer of Desert Sun Mining, developer of the Jacobina gold mine in Brazil, and in 2011 and 2012 was Chief Financial Officer of Crocodile Gold Corp.

Aaron Atin, Corporate Secretary

Mr. Atin is a corporate and securities lawyer with securities, mergers and acquisition and corporate finance experience. Mr. Atin is currently a legal consultant to various Toronto Stock Exchange, TSXV and CSE listed companies in various sectors including mining, financial services, agriculture and technology. Mr. Atin began his legal career as a corporate law associate at Davies Ward Phillips & Vineberg LLP. Mr. Atin holds a Bachelor of Arts from the University of Waterloo and a J.D. from the University of Toronto, Faculty of Law.



JOURDAN RESOURCES BOARD OF DIRECTORS



Rene Bharti, Chairman

Over a 20 year career, Rene has held several key roles in both public and private companies, including those in the resource, technology and entertainment industry. Mr. Bharti co-founded ARHT Media, along with legendary singer Paul Anka. Rene is a former President & Chief Executive Officer at Avion Gold Corp, that was later acquired by Endeavour Mining Corporation for CDN\$389 million. Mr. Bharti holds a Bachelor of Commerce (Honors) from Queens University.

Dr. Andreas Rompel, FSAIMM, President and CEO

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Maxime Lemieux, LLB, Director

Mr. Lemieux is part of the Corporate Group at McMillan LLP in Montréal. He is primarily acting for public companies, agents, securities distributors and underwriters in Canada, to which he offers legal counseling services on public and private offerings and on mergers and acquisitions. He has been a member of the Quebec bar since 2006, completed a LL.L and a LL.B at the University of Ottawa as well as an MBA at Laval University and the Fachhochschule Kiel in Germany.

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Blake Hylands, Director

Mr. Hylands is a professional geologist with experience in gold, base metals and iron ore in Canada and internationally. He has held technical and corporate development positions for several junior mining companies; most recently for Sulliden Mining Capital, and also Coastal Gold Corp. from 2010 to 2015, where he developed grassroots mapping and sampling programs, managed large scale drill programs, and helped transition projects from early exploration to resource definition stage. Mr Hylands is also the Vice President of Exploration for Troilus Gold Corp. Mr. Hylands holds a B.Sc in Geology from Western University in London, Ontario.

Michael Dehn, Director

With over 25 years of experience in the mining industry, Michael has been a VP, President, CEO and Director of nearly 20 companies. Between 1994 and 2005, he worked as an exploration geologist and later as a Senior Geologist with Goldcorp Inc. His expertise lies in grassroots to advanced minerals exploration, marketing and financing junior companies. Michael has worked in diamond, base metals, precious metals, industrial minerals, oil and natural gas, as well as sand, gravel and peat deposits, primarily in the Americas on private, public company and government projects.



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