

# **ARDIDEN LTD**

diversified portfolio targeting hard-rock energy minerals

A Canadian-focused explorer developing its



**ASX: ADV** 

**21 February 2018** 

## THE ARDIDEN ADVANTAGE

- Diversified project portfolio targeting hard-rock energy minerals
- A combination of near-term development projects and highly-prospective exploration prospects
- Ontario, Canada is a world-class mining jurisdiction
- Close proximity to world class infrastructure and all-year access to project locations
- Direct access to rapidly expanding American & Asian electric vehicle and energy storage markets
- Excellent exploration, drilling and metallurgical results from Seymour Lake Lithium Project
- Experienced Board, Management and Technical Teams
- Binding BOT & Funding Term Sheet with strategic partner Yantai Jinyuan Mining Machinery Co Ltd
- Well funded to rapidly develop and progress the 100% owned Seymour Lake flagship Lithium Project



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Sample of large high grade spodumene crystals exposed at North Aubry prospect, Seymour Lake, Ontario Canada.

# WORLD CLASS MINING JURISDICTION

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- Ontario, Canada is an established Tier-1 mining district
- Low sovereign risk for development and production
- World-class infrastructure (road, rail, power, communication and port facilitates)
- Direct access to rapidly expanding American & Asian EV and Energy Storage markets
- Project locations surrounded by major mining deposits
- Strong provincial support from Ministry of Northern Development and Mines



## **HIGH-QUALITY PROJECT PORTFOLIO**

- Ardiden holds a highly-prospective, diversified commodity portfolio
- Ardiden currently targeting quality hard-rock energy minerals
- Seymour Lake (100% owned) is the Company's flagship project and highly advanced lithium prospect
- Seymour Lake hosts high-grade premium quality hard-rock lithium project, with Lithium grades up to 6.01% Li<sub>2</sub>O identified (ASX Release: 20 December 2016)
- Drill testing extension of known spodumene hosting pegmatite structures within the Aubry prospects of the Seymour Lake Lithium Project
- Targeting substantial resource upgrade at Seymour Lake in 2018



Sample of coarse lithium concentrate (Spodumene) created with DMS at the specific gravity of 3.10 sourced from the Seymour Lake Lithium Project



### **CORPORATE OVERVIEW**

#### ASX Code : ADV

Dr Michelle Li

Shares on Issue	1,174 million	
Options on Issue (various)	38M	
Share Price	<b>\$0.020</b> (19/02/18)	
Market Cap @ \$0.020	A\$23.5M (undiluted)	
3-Month Range	A\$0.016 – \$0.036	
Cash	2.65M	
Funding Facility (19/02/18)	15M	
DIRECTORS		
Neil Hackett	Non Executive Chairman	
Brad Boyle	CEO & Executive Director	

Non Executive Director



Directors/Management \*3.0%



## A MULTI-ELEMENT DIVERSIFIED PORTFOLIO

### SEYMOUR LAKE LITHIUM PROJECT

- ✓ Flagship project
- ✓ Most advanced lithium project
- ✓ Near-term development potential
- ✓ High-grade, premium quality hardrock lithium up to 6.01% Li₂O
  - ✓ Only 5% of 5km strike drilled
  - ✓ Upside tonnage potential
  - ✓ Close proximity to world-class infrastructure/rail
- ✓ Strategic Chinese partner in place
  - ✓ Targeting substantial resource upgrade in 2018

### **OTHER PROJECTS**

#### PICKLE LAKE GOLD (Option)

- Highly prospective, advanced gold project
  - Further diversifies Ardiden's commodity portfolio and strengthens footprint in Canada
- Disciplined exploration approach to uncover upside potential and value
- A strategic asset, with potential to add significant value to existing shareholders

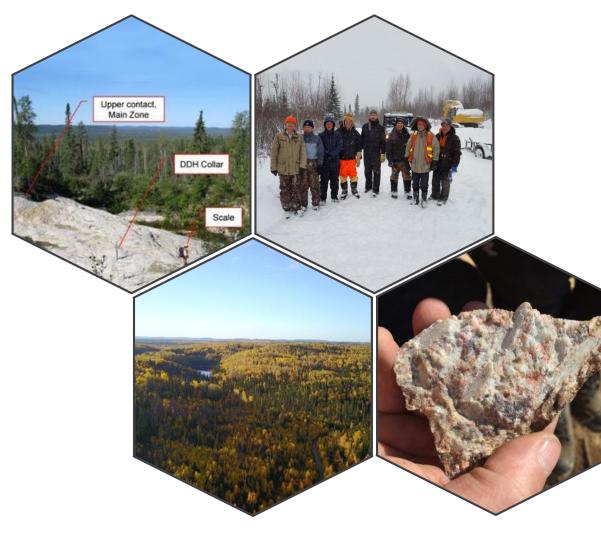
### **OTHER PROJECTS**

#### WISA LAKE LITHIUM

- ✓ Highly-prospective lithium project
- Historical drilling will form the basis for further exploration activity
- ROOT LAKE/BAY LITHIUM PROJECTS
- BOLD PROPERTY COBALT-COPPER-NICKEL PROJECT
- MANITOUWADGE GRAPHITE PROJECT



## **SEYMOUR LAKE – OUR FLAGSHIP PROJECT**



- Seymour Lake is high-grade, premium quality, hard-rock project with Lithium grades up to 6.01% Li<sub>2</sub>O identified
- The most advanced near-term development project
- Significant upside in resource and development as only ~5% of 5km strike has been drilled thus far
- At or near-surface spodumene bearing pegmatites
- A large focus will be placed on North, Central and South Aubry over the coming months
- On-going discussions with multiple potential strategic and off-take partners
- Targeting substantial resource upgrade in 2018
- Upside exploration potential with 40 additional pegmatite exposures to be evaluated and drill tested

### Seymour Lake Lithium Proje



### **Ferland Station**

### Transcontinental Rail Line

Armstrong

WHITESAND

wing locations of the North, Central and South Aubry prospects in reference to Armstrong and Ferland Train Station.

### **North Aubry: Pegmatite Exposures**

Ν

Image facing South West showing some locations of the North Aubry pegmatite



## SEYMOUR LAKE INITIAL LITHIUM RESOURCE

- Initial maiden JORC compliant Mineral Resource Estimate for the North Aubry deposit at Seymour Lake of 1.23Mt at 1.43% Li2O containing 8.2Kt contained tonnes of lithium (announced 4 October 2017). Required to satisfy the conditions precedent in the Yantai MOU.
- Continued resource expansion drilling has been successful as Ardiden work towards a significant resource upgrade in 2018, recent results include:
  - 25.26m at 1.26% Li<sub>2</sub>O from 110.60m down hole (SL-17-61) including:
    - 6.26m at 2.67% Li<sub>2</sub>O
  - 25.05m at 1.13% Li<sub>2</sub>O from 121.87m down-hole (SL-17-67) including:
    - 11.13m at 1.35% Li<sub>2</sub>O;
  - 18.29m at 1.38% Li<sub>2</sub>O from 98.0m down-hole (SL-17-63) including:
    - 3.00m at 2.98% Li<sub>2</sub>O.



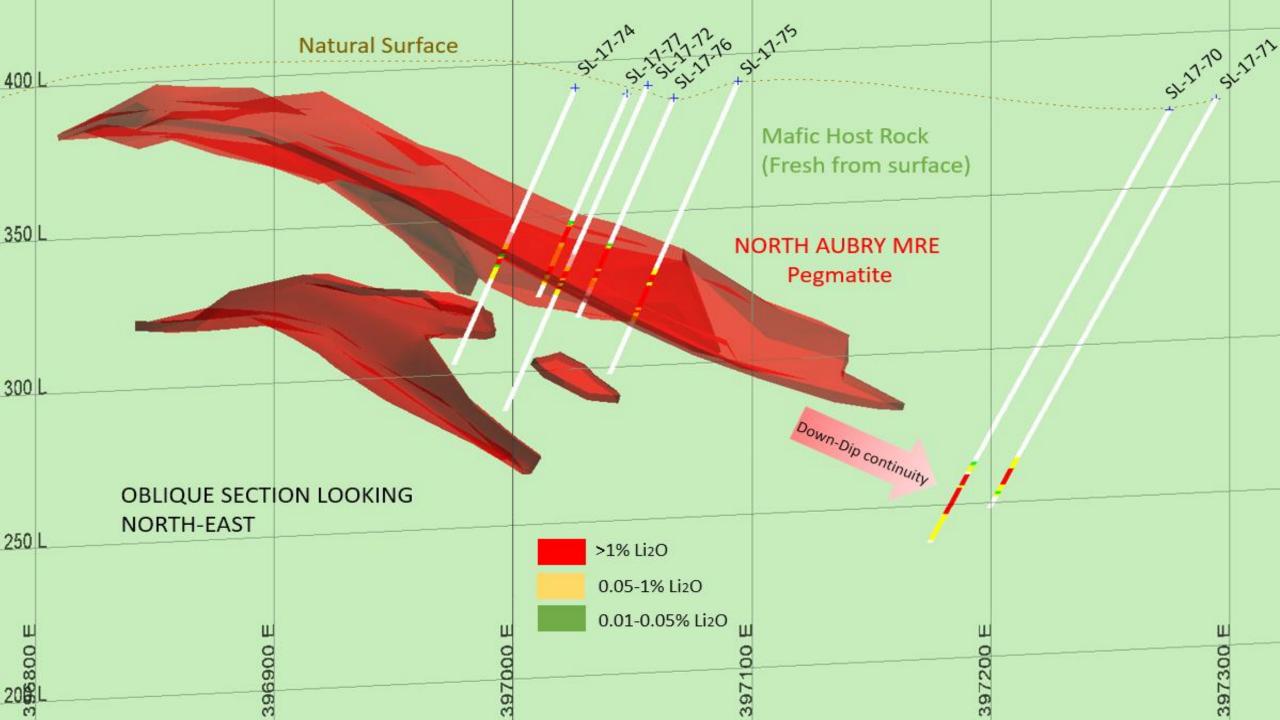
RESOURCE CATEGORY	TONNES (Mt)	GRADE Li <sub>2</sub> 0%	CONTAINED TONNES OF LITHIUM
Indicated	0.44	1.52	3,100
Inferred	0.79	1.38	5,100
TOTAL	1.23	1.43	8,200

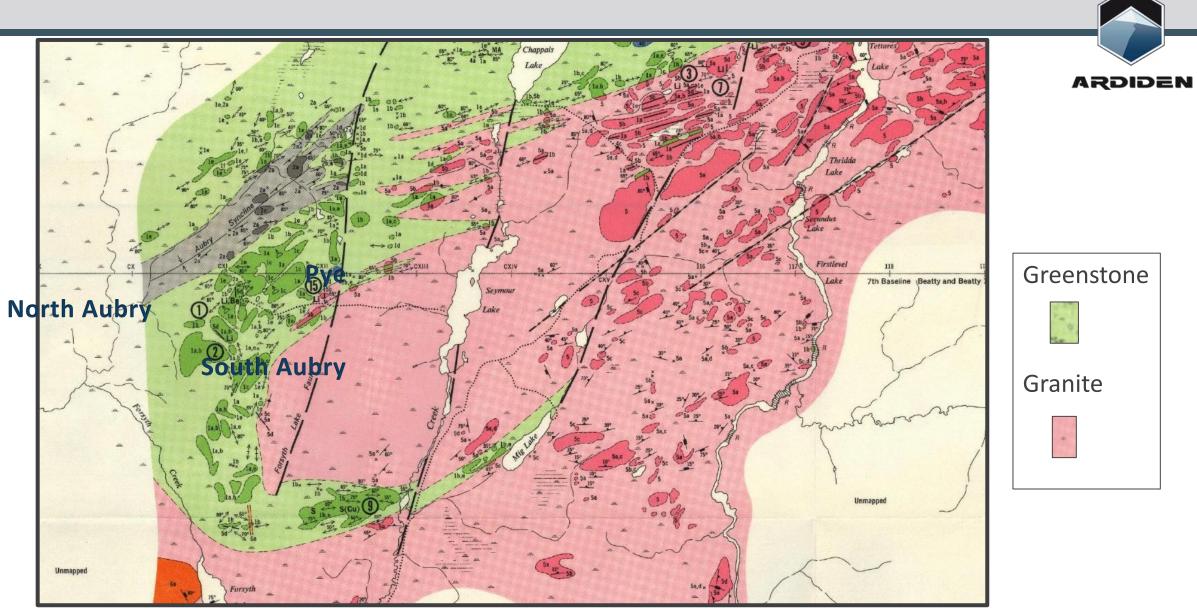
Table 1. North Aubry, October 2017 Mineral Resource Estimate Table. (Note that some of the numbers may not equate fully due to the effects of rounding.)

#### **Competent Person's Statement**

The information in this report that relates to Mineral Resource Estimate at the North Aubry deposit on Seymour Lake Lithium project is based on, and fairly represents, information and supporting documentation prepared by Mr James Ridley, who is a Member of the Australasian Institute of Mining & Metallurgy. Mr Ridley is not a full-time employee of the Company Mr Ridley is employed as a Consultant from Jorvik Resources Pty Ltd. Mr Ridley has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves (the JORC Code)'. Mr Ridley consents to the inclusion in this report the exploration results and the supporting information in the form and context as it appears.

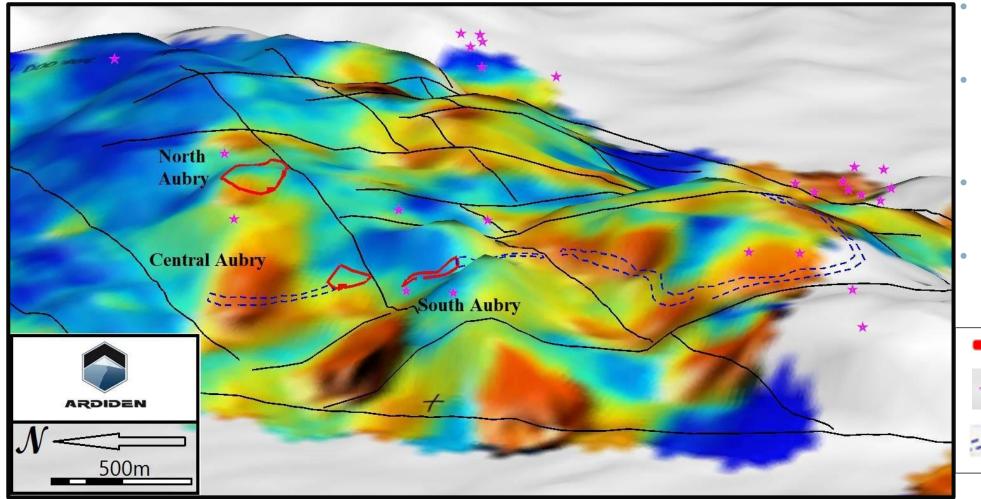
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SEYMOUR LAKE REGIONAL STRUCTURAL GEOLOGY

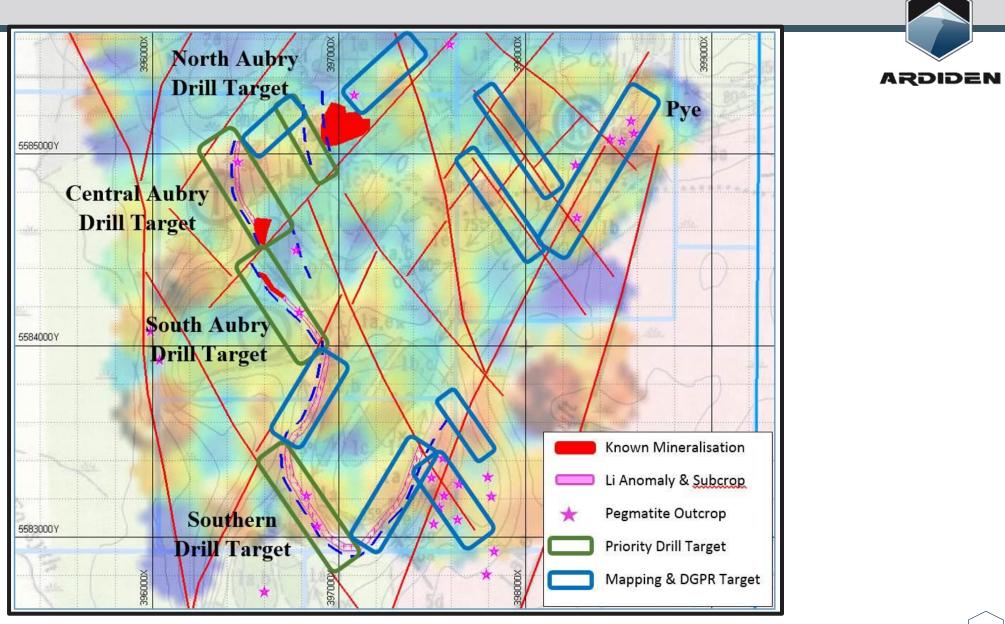
### **SEYMOUR LAKE LITHIUM PROJECT**



Multiple stacked pegmatite lodes

ARDIDEN

- Drill testing pegmatite
  extensions along strike from
  Aubry prospects
- Ground truthing large lithogeochemical anomalies
- 2018 targeting substantial resource upgrade
  - Known mineralisation
    - Pegmatite Outcrop
    - Interpreted pegmatite extensions





## SEYMOUR LAKE STRATEGIC PARTNERSHIP

- Binding term sheet signed with Yantai Jinyuan Mining Machinery Co., Ltd
- Build-Operate Transfer (BOT) agreement for construction of a lithium processing facility at site
- Subject to Ardiden exercising option and aftering defining a 1Mt JORC Mineral Resource at Seymour Lake in 2017, Yantai will be responsible for the following:
  - Design, build, operate and transfer a lithium concentrate processing facility for Seymour Lake
  - Provide 50% of the project funding
  - Either directly enter into, or facilitate the signing of, a 5-year off-take agreement for up to 5,000tpa of lithium concentrate product from Seymour Lake
- Yantai is a highly experienced market leader in the production of mining and pressing equipment, both in China and abroad



Mr. Xu (Yantai General Manager) and Mr.Boyle (Ardiden CEO) signing the term sheet at the Yantai head office (ASX Release: 28 June 2017)



## WORLD-CLASS METALLURGICAL RESULTS

- Heavy Liquid Separation (HLS) testwork on Seymour Lake spodumene readily returns high-grade lithium concentrate up to 7.73% Li<sub>2</sub>O (ASX Release: 9 February 2017)
- Dense Media Separation also delivers high-grade concentrate of up to 6.43% Li<sub>2</sub>O (ASX Release: 23 June 2017)
- Single stage flotation test produces 6.16% Li<sub>2</sub>O (ASX Release: 31 August 2017)
- Battery grade Lithium Carbonate at **99.52% Li<sub>2</sub>CO<sub>3</sub>** produced from initial downstream processing testwork by leading producer Shandong Ruifu Lithium Co. Ltd (ASX Release: 12 February 2018)
- Recent testing confirms the high purity Li<sub>2</sub>CO<sub>3</sub> can be made from Seymour Lake spodumene concentrate
- Testing also confirms robust conversion and recovery rates
- Strategic development partner Yantai continues to complete extensive metallurgical testwork on Seymour Lake spodumene
- Production of lithium concentrate at such high grades well over the industry standard of 6% Li2O confirms the high-quality spodumene at Seymour Lake
- Ardiden is well placed to potentially become a strategic supplier of high-grade lithium concentrate to American and Asian Lithium sectors



Final Lithium Carbonate (Li<sub>2</sub>CO<sub>3</sub>) Products of Battery Level



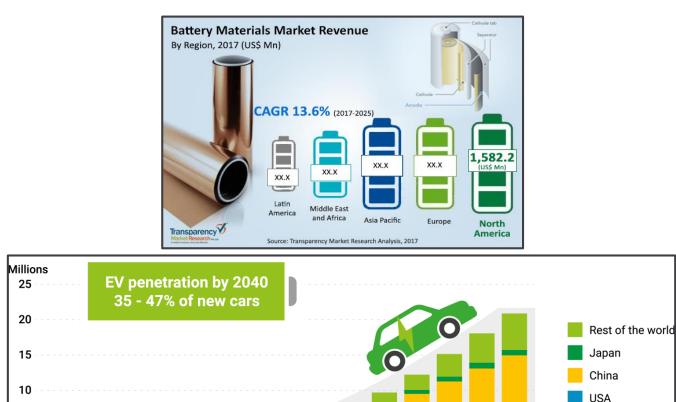
# DIRECT ACCESS TO RAPIDLY GROWING MARKETS

2016

2018

2020

- Lithium demand continues to show strong market fundamentals and growth forecasts
- Demand supported by the shift towards electric vehicles and battery storage
- Globally there has been a strong push from a number of major economics and companies to restrict use of ICE (Internal Combustion Engines)
- Ontario has extensive infrastructure to access growing lithium-ion battery markets in America and Asia
- Ardiden is focused on fast-tracking Seymour Lake to provide a high-grade, premium quality lithium product
- World-class infrastructure (road, rail, power, communication and port facilitates)



2024

2026

2022

2030

2028

Europe

Source · BNFF

### China to Ban Sale of Fossil **Fuel Cars in Electric Vehicle** Push

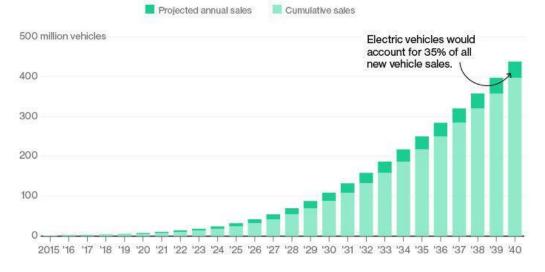
Bloomberg News September 9, 2017, 7:54 AM EDT

- → Regulators are working on a timetable of the ban, Xin says
- → China joins U.K., France to phase out combustion-engine cars

China will set a deadline for automakers to end sales of fossil-fuel powered vehicles, a move aimed at pushing companies to speed efforts in developing electric vehicles for the world's biggest auto market.

### The Rise of Electric Cars

By 2022 electric vehicles will cost the same as their internalcombustion counterparts. That's the point of liftoff for sales.



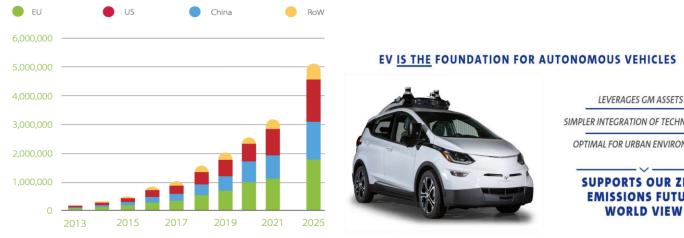




A battery\* production boom is set to turbocharge green energy growth 2016 capacity 2020 forecast 1 GWh \* Lithium-ion



#### Predictive Global Electric Vehicle Sales



https://www.aov.uk/aovernment/uploads/system/uploads/attachment data/file/3986/plug-in-vehicle-infrastructure-strategy.pdf

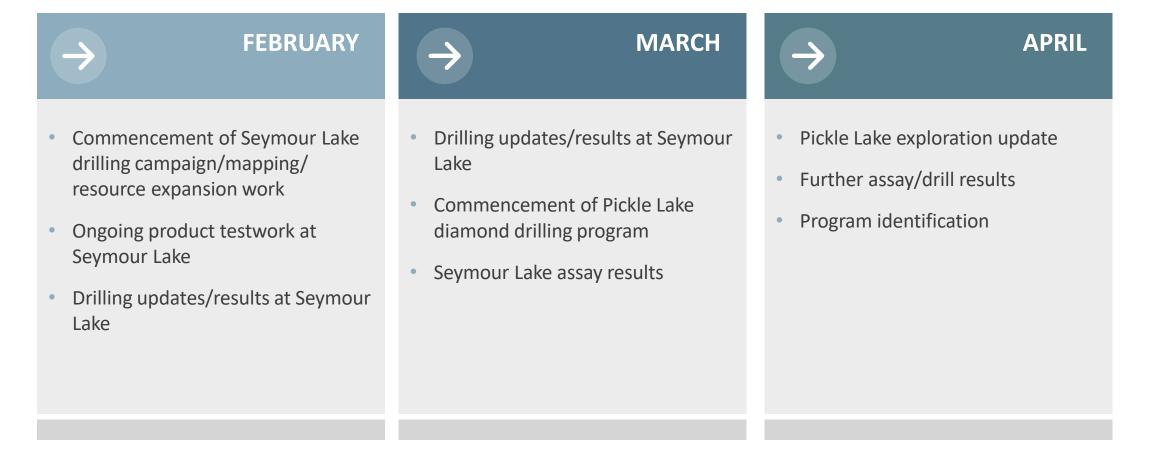
EV IS THE FOUNDATION FOR AUTONOMOUS VEHICLES

SIMPLER INTEGRATION OF TECHNOLOGIES **OPTIMAL FOR URBAN ENVIRONMENT** 

SUPPORTS OUR ZERO **EMISSIONS FUTURE** WORLD VIEW



## **2018: THE YEAR AHEAD**





# DRIVING SEYMOUR LAKE TOWARDS PRODUCTION

- Ardiden is well-funded to aggressively explore and develop the 100% owned, flagship Seymour Lake project
- A large exploration focus will be placed on North, Central and South Aubry prospects over the coming months
- Ardiden will be targeting a number of near-surface spodumene bearing pegmatites throughout Seymour Lake landholding
- The Company is focused on delivering a substantial resource upgrade for Seymour Lake in 2018
- Supportive partner Yantai continues to develop and produce world-class metallurgical lithium concentrate results

### A high-quality, near-term lithium opportunity



## **CONTACT DETAILS**

### **For further information:**

Investors:

Brad Boyle CEO & Executive Director Ardiden Ltd Tel: +61 (0) 8 6245 2050 Media:

Michael Weir / Cameron Gilenko Citadel-MAGNUS Tel: +61 8 6163 4903

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### **ABOUT ARDIDEN**



Ardiden Limited (ASX: ADV) is an emerging international diversified exploration and development company possessing a mature multi-element asset portfolio, with a near term development pipeline, focused quality projects located in the established mining jurisdiction of Ontario, Canada.

The 100%-owned Seymour Lake Lithium Project comprises 7,019 Ha of mining claims and has over 4,000m of historic drilling. Mineralisation is hosted in extensive outcropping spodumene-bearing pegmatite structures with widths up to 26.13m and grades of up to 6.0% Li<sub>2</sub>O. These high-grade pegmatite structures have been defined over a 5km strike length.

The 100%-owned Wisa Lake Lithium project is located 80km east of Fort Frances, in Ontario, Canada and only 8km north of the Minnesota/US border. The property is connected to Highway 11 (Trans-Canada), which is located 65km north via an all-weather road that crosses the centre of the project. The Wisa Lake Lithium Project consists of five claims (1,200 hectares) and covers the historical drilling location of the North Zone. Ardiden is aiming to commence a limited drill program to drill test and verify the historical lithium results.

The Pickle Lake Gold Properties (under option to acquire 100%) are located within the prolific gold-producing Meen-Dempster Greenstone Belt of the Uchi Geological Sub-province of the Canadian Shield, in close proximity to several of the Company's existing projects and to the regional mining centre of Thunder Bay. The Properties consists of four separate gold properties offering both advanced development opportunities and early stage exploration. Over 25,000m of historical diamond drilling completed across the Pickle Lake Gold Properties, confirming the potential for multiple extensive gold mineralised zones at both Dorothy-Dobie Lake and Kasagiminnis Lake, with gold mineralisation remaining open along strike and at depth.

The 100%-owned Root Lake Lithium Project is located in Ontario, Canada. The project comprises 1,013 Ha of mining claims and has over 10,000m of historic drilling. Mineralisation is hosted in extensive outcropping spodumene-bearing pegmatite structures with widths up to 19m and grades of up to 5.10% Li2O. In addition, tantalum grades of up to 380 ppm were intersected.

The 100%-owned Root Bay lithium project is strategically located approximately 5km to the east of the recently acquired Root Lake Lithium Project and consists of three claim areas, totalling 720 hectares. The project was staked by Ardiden as part of its regional exploration focus in and around the Root Bay spodumene-bearing pegmatite. Initial observations of the exposed pegmatite are characterized by coarse white albite, grey quartz and pale grey-green spodumene crystals up to 10cm long.

The 100%-owned Bold Properties project is located approximately 50km north-east of the town of Mine Centre in Ontario, Canada. The property is connected to Highway 11 (Trans-Canada), which is located 25km south via an allweather road. The Bold Property Project consists of four claims (1,024 hectares) and covers a number of anomalous sulphide zones. In 1992, Hexagon Gold (Ontario) Ltd. completed a total of 17 drill holes in multiple locations on and around the Bold Property Project at various depths of up to 428m down-hole. The nine grab samples that were collected by Hexagon in 1992 returned encouraging cobalt, copper and nickel grades, confirming the significant exploration potential.

The 100%-owned Manitouwadge Flake Graphite Project covers an area 5,300 Ha and has a 20km strike length of EM anomalies with graphite prospectivity. Previous preliminary metallurgical test work indicated that up to 80% of the graphite at Manitouwadge is high value jumbo or large flake graphite. Test work also indicated that simple, gravity and flotation beneficiation can produce graphite purity levels of up to 96.8% for jumbo flake and 96.8% for large flake. With the proven caustic bake process, ultra-high purity (>99.95%) graphite can be produced. The graphite can also be processed into high value expandable graphite, high quality graphene and graphene oxide.

All projects located in an established mining province, with good access to infrastructure (road, rail, power, phone and port facilitates) and local contractors and suppliers.



#### **Competent Person Statement**

The information in this report that relates to exploration results on the Seymour Lake project is extracted from the reports entitled ASX Release, "Bulk Sample Metallurgical Testwork Commences in China", created 2 October 2017, ASX Release, "Maiden JORC Resource Completed for Seymour Lake Updated", created 4 October 2017, ASX Release, "New Thick High Grade Lithium Intercepts at Seymour Lake" created 1 November 2017, ASX Release, "Thick Spodumene Bearing Pegmatites at South Aubry", created 13 November 2017, ASX Release "Further Outstanding Metallurgical Results from Seymour Lake" created 15 November 2017, ASX Release "Strong Support for Development of Seymour Lake Project", created 30 November 2017, ASX Release, "Thick Lithium Intercepts from Maiden Drilling at South Aubry", created 15 December 2017, ASX Release "Ardiden Expands Seymour Lake Project", created 19 December 2017, ASX Release, "Thick High Grade Lithium Intercepts Continue at North Aubry", created 30 January 2018, ASX Release, "High Purity Battery Grade Lithium Carbonate Produced From Seymour Lake Concentrate", created 12 February 2018 and is available to view on www.ardiden.com.au. The reports were issued in accordance with the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this report that relates to Data and Exploration Target at the North, Central and South Aubry on Seymour Lake Lithium project is based on, and fairly represents, information and supporting documentation prepared by Ms Karen Lloyd, who is a Fellow of the Australasian Institute of Mining & Metallurgy. Ms Lloyd is not a full-time employee of the Company Ms Lloyd is employed as a Consultant from Jorvik Resources Pty Ltd. Ms Lloyd has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves (the JORC Code)'. Ms Lloyd consents to the inclusion in this report the exploration results and the supporting information in the form and context as it appears.

#### **Forward Looking Statements**

This announcement may contain some references to forecasts, estimates, assumptions and other forward-looking statements. Although the company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions, it can give no assurance that they will be achieved. They may be affected by a variety of variables and changes in underlying assumptions that are subject to risk factors associated with the nature of the business, which could cause actual results to differ materially from those expressed herein. All references to dollars (\$) and cents in this presentation are to Australian currency, unless otherwise stated. Investors should make and rely upon their own enquires and assessments before deciding to acquire or deal in the Company's securities.