

ASX: ADV

Capital structure:

Ordinary shares 644.1m

Options (Unlisted) 6.5m

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CANADIAN LITHIUM PORTFOLIO EXPANDS FURTHER WITH ACQUISITION OF ADVANCED ROOT LAKE PROJECT

Ardiden's lithium footprint significantly increased with new project which includes extensive historical drilling, an existing known deposit and outstanding upside

Key Points:

- Ardiden has entered an option agreement to acquire 100% of the Root Lake Lithium (Spodumene) Project in Ontario, Canada, complementing its Seymour Lake Lithium Project.
- The Root Lake Project has extensive outcropping mineralisation and includes the McCombe spodumene-bearing pegmatite and the Root Lake spodumene-bearing pegmatite, both of which were originally discovered in the 1950s.
- The McCombe pegmatite has over 10,000m of historical diamond drilling which has confirmed the potential for high-quality spodumene mineralisation. Key features of the McCombe pegmatite include:
 - The McCombe Pegmatite, comprising two main outcropping spodumenebearing dykes, has been traced on surface for a strike length of 550m with widths up to 19m;
 - Capital Lithium Mines Ltd. reported a historical McCombe deposit of 2.3Mt of Li₂O grading 1.3% (not JORC or NI 43-101 compliant). This deposit was established over less than 5% of the Root Lake Project area Tantalum grades of up to 200nnm also reported.
 - \circ $\,$ Tantalum grades of up to 380ppm also reported.
 - The Root Lake pegmatite lies 2km to the east and along strike from the McCombe pegmatite. Key features of the Root Lake pegmatite include:
 - Historical diamond drilling indicated spodumene (lithium)-bearing pegmatites with widths of up to 17m;
 - Trenching by Consolidated Morrison Exploration outlined an outcropping pegmatite dyke over several hundred metres long and up to 9.14m wide, from which channel sampling returned grades of up to 3% Li₂O over 9.14m;
 - Subsequent diamond drilling traced the dyke for ~1200m (to the west, towards and along strike with the McCombe dyke) and the pegmatite remains open at depth and along strike;
 - Due diligence on historical trenches in 2009 verified the existence of significant lithium mineralization including a trench with 4.43% Li₂O recorded over 5m;
 - \circ Grab samples graded up to 5.10% Li₂O with 208ppm Ta.
- Drill approvals for the Seymour Lake Lithium Project are currently expected in the next 1-2 weeks with drilling expected to commence shortly thereafter. Due diligence and drill planning for Root Lake to commence immediately.

Ardiden Limited (ASX: ADV) is pleased to advise that it has further expanded its lithium portfolio in the established mining jurisdiction of Ontario, Canada securing an option to acquire **a second advanced Lithium project** with extensive spodumene (lithium ore)-bearing pegmatites, over 10,000m of historical diamond drilling and a known deposit (not a JORC compliant resource).

The Company has entered into an option agreement with Landore Resources Limited to acquire 100% of the advanced **Root Lake Lithium Project**, opening up a second front for lithium exploration alongside the recently secured Seymour Lake Lithium Project (also under option to acquire 100%), where a maiden drilling program is set to commence shortly.

The option deals give Ardiden an outstanding opportunity to acquire two high-quality lithium projects with known spodumene mineralisation, extensive historic drilling and the potential to establish JORC compliant resources relatively quickly.

The proposed acquisition of the Root Lake Lithium Project is consistent with the Company's strategy of acquiring and developing commodity projects (lithium and graphite) which are highly leveraged to the forecast growth in the lithium-ion battery sector. Lithium is anticipated to be in tight supply as the demand for lithium-ion batteries for use in home, industrial, utility and electric vehicle power storage undergoes transformational growth over the next decade.

Root Lake – An Advanced Canadian Lithium Project

The Root Lake Project comprises 33 patent claims and three staked mining claims covering an area of 1,013 Ha. Importantly, the Project has over 10,000m of historical diamond drilling and trenching, which has confirmed the presence of extensive spodumene mineralisation (a host mineral to lithium) in two main locations.

The Root Lake Lithium Project includes the **McCombe spodumene-bearing pegmatite** and the **Root Lake spodumene-bearing pegmatite**, which are over 2km apart along strike and have potential to be connected, subject to further drilling and due diligence.

The Root Lake Project is accessible via local logging roads north of Sioux Lookout and is located approximately 300km north-west of Thunder Bay, a leading mining jurisdiction in Ontario with key local infrastructure including a skilled mining workforce and excellent local logistics and infrastructure. It has strong potential to provide high quality product to supply growing North American demand and export markets.

Acquisition Rationale

The proposed acquisition is consistent with Ardiden's strategy of acquiring commodity projects located in Tier-1 jurisdictions with exposure to structural and transformational change and outstanding market fundamentals (such as those required to supply the rapidly growing lithium-ion battery sector). Together with its existing Seymour Lake Lithium project (under option to acquire 100%) and its 100%-owned Manitouwadge Graphite Project, this acquisition positions Ardiden as a potential supplier of both of the key ingredients in the manufacture of lithium-ion batteries.

The proposed acquisition is highly complementary and synergistic with Arididen's existing projects for a number of key reasons:

- Lithium-ion batteries use lithium as the cathode and graphite as the anode. Transformational growth is predicted in the lithium-ion battery market and the ability to supply both key ingredients provides expanded growth opportunities and optionality in the future;
- The Root Lake Project can be developed by Ardiden's existing experienced Ontario-based team, which has led the highly successful graphite drilling program in 2015 which made the Silver Star North discovery at the Manitouwadge Graphite Project. The team has extensive experience in exploring and developing projects in Ontario;

• All projects are located less than 4 hours drive from a key infrastructure hub at Thunder Bay which is less than 100km from the US border and has existing rail, road and port facilities which can also access the Atlantic and service European markets. Ardiden's project locations in relation to Thunder Bay, the US border and Lake Superior (accessible to Atlantic and US inland ports) are shown in Figure 1 below.



Figure 1: Location of Ardiden Projects (Root Lake Lithium, Seymour Lake Lithium, Manitouwadge Graphite) in Ontario, Canada. All projects are able to be serviced from Thunder Bay which is less than 100kms from the US border.

Root Lake Lithium Project

The Root Lake Lithium Project includes and number of known Lithium occurrences including the McCombe pegmatite and the Root Lake pegmatite. The claims area and location of the pegmatites is shown in figure 2 below.



Figure 2: Root Lake Lithium Project Claims Area and location of McCombe Pegmaitite and Root Lake Pegmatite

MCCOMBE SPODUMENE-BEARING PEGAMATITE

Lithium mineralization at the Root Lake Project is associated with spodumene pegmatites which are found at several locations on the property. A significant occurrence, the McCombe pegmatite, is located in the north-western portion of the Root Lake property.

Capital Lithium Mines Ltd. completed a diamond drilling programme on the Root Lake property in 1956, consisting of 55 drill holes for 10,442m. Capital Lithium Mines Ltd. outlined a 2,333,752 tonne deposit (NB: Not JORC or NI 43-101 compliant) at the McCombe pegmatite grading 1.3% Li₂O. This non-compliant deposit covers less than 5% of the Project area.

The McCombe pegmatite is located on a patent claim. Patent claims are an historical form of land tenure granted in Ontario that is more akin to freehold land and may therefore (in certain circumstances) allow for a more accelerated development pathway. A review of the Root Lake patent claims will be undertaken as part of the due diligence process.

Due diligence will include a review of available borehole logs, assay depths, drill collar coordinates, drill orientations and cross sections from the McCombe exploration.

Based on this review a drill program to test the spodumene mineralisation is to be planned.

ROOT LAKE SPODUMENE-BEARING PEGMATITE

The Root Lake pegmatite (located in the north-east of the Root Lake property) was originally discovered and explored by Consolidated Morrison Exploration in the 1950s with a program which included trenching and diamond drilling.

The trenching outlined a pegmatite dike over several hundred metres long and up to 9.14m wide, from which channel sampling returned up to 3% Li₂O over 9.14m.

Subsequent diamond drilling traced the dike for approximately 1200m (to the west, towards and along strike to the McCombe dyke) and the pegmatite remains open at depth and along strike. Diamond drill logs indicate the spodumene (lithium)-bearing pegmatite was intersected at thicknesses up to 17m but only two holes from the program reported lithium assays including 1.86% Li₂O over 5.64m and 2.63% Li₂O over 3.96m.

A subsequent surface sampling program at the Root Lake Pegmatite was undertaken in 2009 by Golden Dory Resources (Figure 3). Trench and chip samples reported from this program are set out in Table 1 below.



Figure3: Root Lake Pegmatite due diligence trench sampling by Golden Dory in 2009

Sample #	Trench #	<u>type</u>	<u>length</u> (m)	<u>Li2O (%)</u>	<u>Ta (ppm)</u>	<u>Nb</u> (ppm)	<u>Cs</u> (ppm)	<u>Rb2O</u> (%)
105951	Trench 1	chip	3.00	3.55	89.5	56	165	0.27
105952	Trench 1	chip	1.00	2.45	45.6	19	228	0.42
105953	Trench 2	chip	5.00	4.43	82.1	55	99	0.11
105954	Trench 2	grab		3.40	80.4	118	80	0.14
105955	Trench 2	chip	1.00	3.18	59.1	23	134	0.38
105956	Trench 5	grab		2.39	109	42	90	0.14
105957	Trench 4	grab		3.94	223	224	189	0.16
105958	Trench 3	chip	2.50	2.52	154	41	217	0.30
105959	Trench 3	chip	2.00	3.08	77.7	28	144	0.29
105960	Trench 3	grab		5.10	208	31	29	0.04

Table 1: Samples reported at Root Lake Pegmatite

Deal Terms

Key deal terms for the option agreement (in CAD) to acquire 100% of the Root Lake Project include:

- 1. An exclusivity/holding deposit of C\$50,000 to be paid on signing of the agreement (which amount has been paid) to commence a 150-day option and due diligence period;
- C\$150,000 in ADV equity (at the 20-day VWAP prior to this announcement) and C\$150,000 cash to be paid at the end of a 150-day due diligence period (subject to successful completion of due diligence) to exercise the option;
- Ardiden reserves both the right to accelerate all payments or withdraw from the option agreement at any time. The vendor will retain 100% of the Root Lake rights should Ardiden fail to complete any requirements of the option agreement; and
- 4. Should Ardiden exercise the option, the vendor will retain a 3% net smelter royalty (NSR). Ardiden will retain the option to purchase or buy back a 1.5% NSR for payment of C\$1,000,000.

Next Steps

The Company intends to accelerate the following near-term activities at both the Seymour Lake and Root Lake Lithium Projects as it continues its focus on commodities exposed to structural and transformational change (such as those which are essential ingredients in the manufacture of lithium-ion batteries) in leading jurisdictions.

- Drilling at the Seymour Lake Lithium Project to immediately commence once drill approvals are received in the next one to two weeks (see ASX Announcement on 6 January for more details on Seymour Lake) and further review of historical data;
- Review of historical data at the Root Lake Lithium Project and further geological exploration, potentially including but not limited to surface sampling, soil surveys and further drilling;
- A review of metallurgical work results once received and further drill planning for the Manitouwadge Graphite Project;
- Progression of discussions with potential off-take partners and customers;
- Expansion of the Ardiden team and recruitment of key team members to further develop project portfolio; and
- Acquisition of further project areas/ acreage with strong geological potential.

Further updates will be provided as they come to hand.

Board of Directors Ardiden Limited

ENDS

For further information:

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About Ardiden

The Seymour Lake Lithium Project (under option to acquire 100%) is located in Ontario, Canada. The project comprises 912 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 2.386% Li2O. In addition, tantalum and beryllium grades of up to 1,180 ppm (Ta_2O_5) and 1,270ppm (BeO) respectively were intersected.

The 100%-owned Manitouwadge Jumbo Flake Graphite Project is located in Ontario, Canada. The Project area is 5,300 Ha and has a 20km strike length of EM anomalies with graphite prospectivity and is being subject to systematic exploration to determine areas that have potential to be a near-term development opportunity.

Metallurgical testwork has indicated that up to 80% of the graphite is high value jumbo or large flake graphite. Testwork has also indicated that simple, low-cost gravity and flotation beneficiation techniques can result in graphite purity levels of up to 96.8% for jumbo flake and 96.8% for large flake. Testing using the proven caustic bake process was able to produce ultra-high purity (>99.95%) graphite. The graphite can also be processed into high value expandable graphite and produces a high quality graphene and graphene oxide.

The information in this report has been reviewed by Mr Paul Nielsen who is a member of the Association of Professional Geoscientists of Ontario. Mr Nielsen has more than five years relevant exploration experience, and qualifies as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Nielsen consents to the inclusion of the information in this report in the form and context in which it appears.

Forward-Looking Statement

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.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	 Drill core information is based on historic reports from the Ministry of Northern Development and Mines assessment records. Core sampling was assumed to be done with mechanical core splitter and remaining half of sample was placed back in core tray.
Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and 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). 	 Diamond core drilling. No core orientation procedures indicated.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	Drill logs are available but no description of drill program is available and was not required at the time of reporting.
Logging	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	• Samples represent half the core width, and were logged in insufficient detail to support appropriate Mineral Resource estimation.

Criteria	JORC Code explanation	Commentary
	 studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	
<i>Sub-sampling techniques and sample preparation</i>	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	Historic information is not available to elaborate on these points.
<i>Quality of assay data and laboratory tests</i>	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	 Assay standards were appropriate for the time of sampling in 1956 but cannot be comparable to assay techniques that may be available today. A magnetometer and resistivity survey was completed over the property but the relationship between mineralisation and geophysical anomalies was not described in the report.
verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	No verification of significant intersections by independent personnel or data entry procedures is indicated.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. 	 Location and placement of holes was based on cut grid lines using imperial measurements and are not tied to earth coordinates. Drill dip was measured using acid tube method but corrected azimuth was not available.

Criteria	JORC Code explanation	Commentary
	Quality and adequacy of topographic control.	
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	 No information available to accurately establish geological or grade continuity New drilling and sampling will be required to adequately establish the geologic and grade continuity for any Mineral Resource and Ore Reserve estimation procedure.
Orientation of data in relation to geological structure	 Whether sample compositing has been applied. Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	Not documented
Sample security	The measures taken to ensure sample security.	Not documented.
Audits or reviews	 The results of any audits or reviews of sampling techniques and data. 	 The 2002 drill results were reviewed by Mat Rees the qualified person documenting the exploration results up to and including 2009 drilling and surface exploration work described in the 2010 43-101 compliant report.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	 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. The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area. 	All claims are in good standing and are 100% owned by Landore Resources the vendor of the property. Exploration permit application is in progress.
Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	Other parties have not appraised the exploration carried out to date
Geology	Deposit type, geological setting and style of mineralisation.	• Root Lake and McCombe area pegmatites have been classified as belonging to the Complex-type, Spodumene-subtype. Mineralization is dominated by spodumene (Li), with lesser tantalite(Ta) hosted in a series of steeply dipping pegmatite dykes.

Criteria	JORC Code explanation	Commentary
Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	 Drill hole information including Easting and Northing (imperial grid) of drill collars, elevation, dip and azimuth and down hole length has been documented in scanned to pdf files. Property assessment report for 2009 trench sampling program to verify historic data is available on the Ontario Ministry of Natural Resources website for the Root Lake pegmatite.
<i>Data aggregation methods</i>	 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. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	Documentation is incomplete from the historic records to comment on these points.
relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. 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'). 	 Downhole information is available but true width of mineralisation can not be verified from historic records.
diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	 Maps and scaled sections are available but incomplete and not all drill sampling is available.
Balanced reporting	 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. 	• NA

Criteria	JORC Code explanation	Commentary
<i>Other substantive exploration data</i>	 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; 	• NA
	bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 Diamond drilling and twinning of holes is planned to verify historic information.