

30 October 2015

# **SEPTEMBER 2015 QUARTERLY ACTIVITIES REPORT**

Ardiden expands Canadian graphite project and triples strike length of EM anomalies with graphite prospectivity to over 19km. Following successful oversubscribed SPP the company has in excess of \$1m cash and is fully funded for its upcoming drill program to test high priority drill targets.

#### September Quarter Highlights

- Detailed geophysical review completed by CSA Global identifies potential for up to 19km of EM anomalies with graphite prospectivity. Project size expanded during the quarter from 3,400 Ha to 5,300 Ha with addition of new mining claims. All claims are owned 100% by Ardiden.
- Surface sampling confirms outcropping graphite with grades in excess of 10% at 2 newly identified areas.
- Graphite successfully expanded from Manitouwadge graphite. Expanded graphite sells for up to \$3,500/ tonne and can be rolled into graphite foils which sell for up to \$50,000/ tonne.
- Ultra high purity graphite (>99.95%) produced from Manitouwadge graphite.
- Entered into Collaboration Agreement with Waterloo University to undertake further graphene research with Ardiden retaining IP rights.
- Successful share purchase plan launched during quarter which was heavily oversubscribed.
- Company fully funded for upcoming exploration program with no debt and cash balance of \$1.04m as at 30/10/2015.

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During the quarter, Ardiden significantly expanded the footprint of its flagship 100%-owned **Manitouwadge Jumbo Flake Graphite Project** in Ontario, Canada with the acquisition of a package of nine new mining claims.

The total tenement area of the project was increased from 3,400Ha to 5,300Ha (see figure 1 below) and the strike length of EM anomalies with graphite prospectivity within the project area has been increased from 6.2km to 19.3km. All tenements are held 100% by Ardiden.

Ardiden has secured approvals for a major new drilling program to confirm the scale of the newly identified graphite zones. Approvals have been received to commence drilling at Thomas Lake and Silver Star and are pending for Silver Birch (expected mid-November).

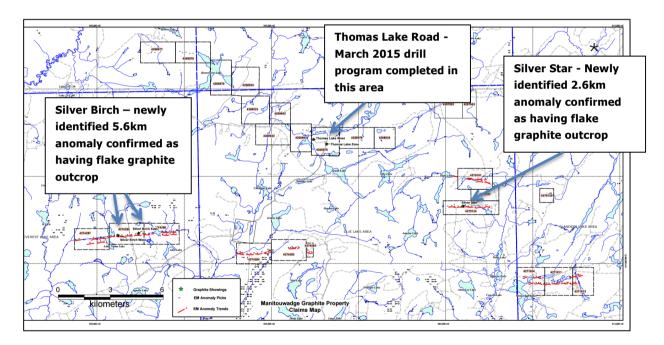


Figure 1: Locations of 9 Newly Acquired Tenements (Dotted Lines), EM Anomalies (Red) and Graphite Showings (Green)

A recent review of HEM data by CSA Global had identified multiple new areas of potential graphite prospectivity at Manitouwadge. The focus of the CSA Global review was to target EM anomalies in the Manitouwadge area with a minimum anomaly strike length of 1km and which exhibited excellent conductivity that may be indicative of graphite prospectivity.

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The results of the maiden drill program in March 2015 at the historical Thomas Lake Road graphite showing were used for correlation purposes. Using this information a ground-work program, including sampling, was devised and new tenement locations were identified for staking.

The review was intended to further advance the Company's understanding of the extent of the graphite propectivity at Manitouwadge and build on the successful maiden drill program where metallurgical work confirmed that up to 80% of the graphite was jumbo and large flake graphite in size (see ASX Announcement dated 2 June 2015).

The graphite at Manitouwadge is amenable to low cost gravity and flotation beneficiation with grades of 95.6% for jumbo flake. Testwork has also shown that the graphite can be purified to >99.95% purity by using proven caustic bake purification methods. These flake sizes are the largest and most valuable flake size of graphite, and are expected to be in high demand by new technologies such as lithium ion batteries for use in the rapidly growing electric vehicle and home/industrial battery storage markets.

To date the geophysical review has resulted in the following outcomes:

- 1) An increase in tenement land holdings to 5,300Ha and an increase of total EM anomaly strike length from 6.2km to 19.3km;
- 2) Confirmation of extensive outcropping graphite along anomaly strikes by ground team using EM targets;
- 3) Confirmed graphite outcrop in previously unexplored zones at the 2.6km Silver Star anomaly on existing ground (see ASX announcement 18 September) and 5.6 km Silver Birch anomaly on new ground (see below).

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#### Silver Birch

The newly acquired tenements include a 5.6km EM anomaly that includes the Silver Birch graphite occurrence. Outcropping graphite was uncovered during the recent ground program (see Figure 2 below) with a 25m width and was traced at surface before disappearing into cover at both ends.

Graphite was identified in both brecciated granites and pegmatites and also shear zones across the 25m wide structure. Historical diamond drilling in the area was also undertaken 1.6km east from the showing and confirmed graphite in the drill logs. Access to Silver Star is via an existing track in the centre of the tenement.

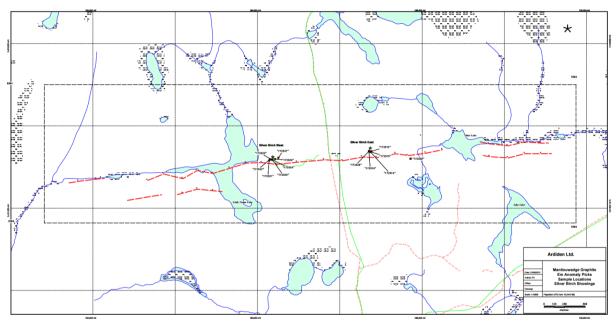


Figure 2: Locations of graphite outcrop along 5.6km Silver Birch EM anomaly

The new claims were physically staked (a requirement under Ontario's regulations) by Ardiden's ground team during September and claim staking applications completed with Ontario's Ministry of Northern Development and Mines ("MNDM"). During its review, the ground team also identified outcropping flake graphite at the mid-point of the 2.6km Silver Star anomaly (see ASX announcement 18 September 2015).

All of the Company's tenements are located approximately 25km north/north-east of the town of Manitouwadge (population 2,000) and have good access via a series of main and logging roads. A rail line and station is located approximately 10km to the north of the claim areas and a historical rail access right-of-way runs through the property.

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A review of other priority exploration areas on Ardiden's tenements is ongoing and further sampling, trenching, drilling and metallurgical test work is planned. Approvals for a drill program have been granted by MNDM in advance of a drilling program planned for Q4 2015 which will target high priority drill targets.

As part of recent testing a 150kg bulk sample (grading 11.4%) was taken from the outcrop at the existing known graphite showing at Thomas Lake (1.2km EM conductor) and surface samples were taken from the Silver Star showing (2.6km EM conductor grading up to 11.8%) and the Silver Birch showing (5.6km EM conductor grading up to 13.6%) – see figure 3 below.

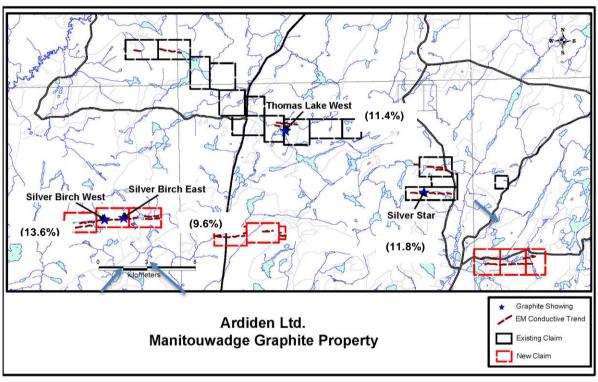


Figure 3: Maniotouwadge graphite project showing 19kms of EM anomalies (in red) with graphite prospectivity and maximum grades from surface sampling achieved at each of the Thomas Lake, Silver Star and Silver Birch graphite showings. Surface samples are not necessarily representative.

The confirmation that high grade outcropping graphite is present at existing and new Manitouwadge graphite sites will be used in planning for the upcoming drill program at high priority EM targets. The recent geophysical review highlighted multiple zones of high EM conductivity that are to be tested in the upcoming drill program and confirmation of graphite outcrop along strike is highly encouraging. The total strike zone length with prospectivity for graphite mineralization is 19kms. A focus of the upcoming program will be to test multiple high priority zones with high EM conductivity including:

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- 1) Thomas Lake West (1.2kms strike length)
- 2) Silver Star (2.6kms strike length)
- 3) Silver Birch West and East (5.6kms strike length)

## **Expandable Graphite**

During the quarter the company produced expandable graphite from Manitouwadge graphite.

The testing was undertaken by a leading Canadian testing facility which confirmed that the graphite is amenable to conversion to high value expandable graphite (see figure 4 below).

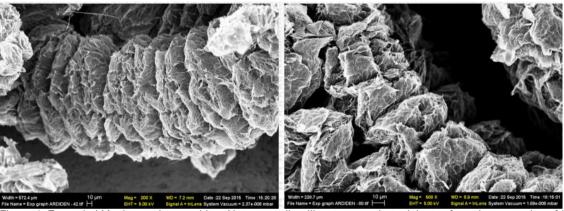


Figure 4: Expanded Manitouwadge graphite. Note accordion-like structure that originates from the expansion of just one flake of graphite.

The confirmation that Manitouwadge graphite is able to be expanded reaffirms Ardiden's strategy to date which has been to undertake metallurgical tests at multiple facilities in North America, Asia and Australia on graphite sourced from a surface bulk sample and drilling undertaken in early 2015. Given the end user markets for graphite are specific to customer needs it is vital that multiple end user products can be produced efficiently. To date the met testing has confirmed the following characteristics:

- 1) Graphite has a large proportion of jumbo and large flake graphite (up to 80%)
- 2) Amenable to low cost gravity and flotation beneficiation work yielding grades of 95.6% for jumbo flake.
- 3) Testwork has also shown that the graphite can be purified to >99.95% purity by using proven caustic bake purification methods.
- 4) Expandable graphite can be produced
- 5) Graphene and Graphene Oxide can be produced at a quality equivalent to synthetic graphene

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The high quality of the Manitouwadge graphite makes it amenable to multiple end uses and allows for improvement of the raw product with value add processing. The in situ flake sizes are the largest and most valuable flake size of graphite, and are expected to be in high demand by new technologies such as lithium ion batteries for use in the rapidly growing electric vehicle and home/industrial battery storage markets.

### **CORPORATE**

During the quarter a Share Purchase Plan was offered to existing shareholders and supported by a \$500,000 commitment from Sanlam. Sanlam is a leading global financial services group with \$20 billion in assets under management and administration for 30,000 clients. It has some 400 employees spanning 23 international offices.

The plan was heavily oversubscribed and subject to scalebacks. Subsequent to the end of the quarter the SPP was finalized and a placement was undertaken to Sanlam clients to accommodate the high level of demand from investors.

As at the date of this quarterly report (30 October 2015) the company has \$1.04m cash and no debt.

The company is fully funded for its upcoming drilling activities at Manitouwadge.

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# **Tenement Holdings**

Ardiden wishes to provide the following information in relation to additional information required by Listing Rule 5.3.3 Mining tenements held at the end of the September 2015 Quarter and their location.

Mining Interest ID	Location	Project	Interest
4274285	Everest Lake Area	Manitouwadge	100%
4274286	Everest Lake Area	Manitouwadge	100%
4274287	Everest Lake Area	Manitouwadge	100%
4271613	Flanders Lake Area	Manitouwadge	100%
4271624	Flanders Lake Area	Manitouwadge	100%
4279125	Flanders Lake Area	Manitouwadge	100%
4279611	Flanders Lake Area	Manitouwadge	100%
4274282	Olie Lake Area	Manitouwadge	100%
4274283	Olie Lake Area	Manitouwadge	100%
4274284	Olie Lake Area	Manitouwadge	100%
4279101	Olie Lake Area	Manitouwadge	100%
4279121	Olie Lake Area	Manitouwadge	100%
4279124	Olie Lake Area	Manitouwadge	100%
4268932	Olie Lake Area	Manitouwadge	100%
4268933	Olie Lake Area	Manitouwadge	100%
4268935	Olie Lake Area	Manitouwadge	100%
4268936	Olie Lake Area	Manitouwadge	100%
4268952	Olie Lake Area	Manitouwadge	100%
4268953	Olie Lake Area	Manitouwadge	100%
4268975	Olie Lake Area	Manitouwadge	100%
4268976	Olie Lake Area	Manitouwadge	100%
4269015	Olie Lake Area	Manitouwadge	100%
4269016	Olie Lake Area	Manitouwadge	100%
4268977	Ramsay Wright	Manitouwadge	100%
4268934	Thomas Lake Area	Manitouwadge	100%
4268978	Thomas Lake Area	Manitouwadge	100%
4268979	Thomas Lake Area	Manitouwadge	100%
SKP KPD #7	West Belitung, Belitung Island, Indonesia	Yinchen	30%*
IUP-OP #21	West Belitung, Belitung Island, Indonesia	Yinchen	30%*
IUP-OP #22	West Belitung, Belitung Island, Indonesia	Yinchen	30%*
IUP-OP #23	West Belitung, Belitung Island, Indonesia	Yinchen	30%*
IUP-OP #24	West Belitung, Belitung Island, Indonesia	Yinchen	30%*
IUP-OP #25	West Belitung, Belitung Island, Indonesia	Yinchen	30%*

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IUP-OP #26	West Belitung, Belitung Island, Indonesia	Yinchen	30%*
IUP-OP #27	West Belitung, Belitung Island, Indonesia	Yinchen	30%*
IUP-OP #28	West Belitung, Belitung Island, Indonesia	Yinchen	30%*
IUP-OP #29	West Belitung, Belitung Island, Indonesia	Yinchen	30%*

<sup>\*</sup> Ardiden signed definitive documentation to acquire 60% of Yinchen project interest in a jointly owned vehicle with Metalcorp / Tennant.

## **Competent Person Statement**

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.

**ENDS** 

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