



**ARDIDEN**

ASX/Media Announcement

5 January 2015

## HIGHLY SUCCESSFUL DRILLING PROGRAM COMPLETED AT MANITOUWADGE

*Preliminary assays and petrographic data returns excellent jumbo flake graphite results at Silver Star North prospect at Manitouwadge.*

**ASX: ADV**

**Capital structure:**

Ordinary shares  
607.4m

Options (Unlisted)  
41.5m (various)

**Shareholders:**

Institutional 12%  
Board/Mgt 16%  
Retail 72%

Top 20: 40%

Ardiden Limited  
Suite 6, 295 Rokeby Road  
Subiaco WA 6008  
Australia

Tel: +61 (0) 8 6555 2950  
Fax: +61 (0) 8 9382 1222

### Key Points:

- 2,000m drilling program completed at Manitouwadge Flake Graphite Project, Canada with the rig demobilised until early 2016.
- Preliminary drilling and assay results confirm the potential for development of a high quality jumbo flake graphite project with key outcomes including:
  - **Widths of up to 41.6m (true width ~30m) of graphitic gneiss intersected in drilling;**
  - **High grade assay results at the previously unexplored Silver Star North Project, including:**
    - **13.15m at 4.72% Cg (including 2.26m at 14.19% Cg) (MET-02)**
    - **18.0m at 4.52% Cg (including 2.07m at 12.5% Cg) (MET-02)**
    - **12.0m at 4.14% Cg (including 3.0m at 11.7% Cg) (EM 12-01)**
    - **6.0m at 4.59% Cg (including 1.0m at 9.1% Cg) (EM 12-01)**
    - **5.0m at 5.1% Cg (including 1.0m at 8.3% Cg) (EM 12-04)**
    - **41.6m at 2.71% Cg including 17m at 4.23% Cg (including 3m at 12.65% Cg) (EM 12-05)**
  - **Initial petrographic data from graphite sourced from Silver Star North indicates potential for jumbo (>300 microns) and super jumbo (>500 microns) flake size with graphite flakes measuring up to 4,200 microns confirmed to date (see below) – multiples larger than any identified at the project to date. Jumbo and super jumbo graphite attracts a significant price premium to fine and medium flake graphite.**
- **A drilling program is being planned for early 2016 to target a maiden resource at Silver Star North and to determine the extent and potential source of exceptionally high grade intercepts in holes MET-02, EM 12-01 and EM 12-05.**
- **Freeze-up is expected to take place in the coming weeks which will allow easy access to a number of additional currently unexplored areas which display similar geophysical properties to areas successfully tested to date.**
- **Assay results at Silver Star North indicate grades that are comparable or better than similar North American graphite projects.**

Ardiden Limited (ASX: ADV) is pleased to advise that the final 2015 drilling program has been completed at its flagship 100%-owned **Manitouwadge Graphite Project** in Ontario, Canada, with preliminary results identifying the Silver Star North prospect as a priority focus for resource definition and further significantly upgrading the potential scale and quality of the overall project.

The Manitouwadge Project is located in the Thunder Bay District, a leading mining jurisdiction in Ontario with key infrastructure including a skilled mining workforce, excellent infrastructure (including a rail line 10km from tenements) and sealed and logging roads providing good access to site. The project has excellent potential to provide high quality product to service growing North American graphite demand. The city of Thunder Bay is a mining, rail, port and infrastructure hub which is less than 100km from the US border and has existing port facilities which can also access the Atlantic and service European markets.

The goal of the current drill program was to assess and prioritise key targets for further drilling in 2016, with the aim of defining a maiden JORC compliant resource on the most prospective parts of the project. The program was a resounding success, with all objectives achieved, and results often exceeding initial expectation.

The Silver Star North Project has provided outstanding results to date, and will now become the initial target for delineating a maiden JORC compliant resource. Silver Star North represents less than 5 per cent of the EM anomaly strike length identified at Manitouwadge, highlighting the immense potential of the landholding. Ardiden intends to complete the next phase of drilling using existing cash reserves.

Exploration completed to date has confirmed high quality graphite coincident with strong EM anomalies along 10km of the potential 19.3km strike length identified using EM surveys. The remaining 9.3km of EM strike length was not tested in the current program and, remains highly prospective for additional discoveries during 2016 field programs.

Previous metallurgical testing taken from drill core at the Thomas Lake Road Prospect confirmed that up to 80% of the graphite is jumbo or large flake in size, and low cost gravity and flotation beneficiation produces graphite product of 96.8% Cg for jumbo flake and 96.8% Cg for large flake. Further metallurgical testwork will now be undertaken on drill core from the current program to confirm that high proportions of recoverable jumbo and large flake graphite are present at Silver Star North as indicated in petrographical studies completed in the current quarter.

The results from the final 2015 drilling program are highly encouraging and have significantly enhanced and continue to support the potential of the Manitouwadge Project to be developed into a supplier of the rapidly growing large and jumbo flake graphite markets.

**The market for graphite dependent products including lithium ion batteries (in which graphite is used as the anode) for the battery storage market (for utilities, business, households and electric vehicles) is expected to experience transformational growth over the next decade. Other growth markets for high quality graphite include expandable graphite, nuclear grade graphite and graphene / graphene oxide which all demand significant market premiums.**

### **Silver Star North Prospect**

A previous geophysical review undertaken by CSA Global identified Silver Star North as an area of potential graphite prospectivity, however no known previous exploration had been undertaken in this area.

The main part of the Silver Star North EM12 target is a complex, broad >800m long zone at the eastern end of a 3km trend that contains a mix of thick and thin dyke responses, some with strong in-phase responses in the VCA coils (thin conductive dyke type responses).

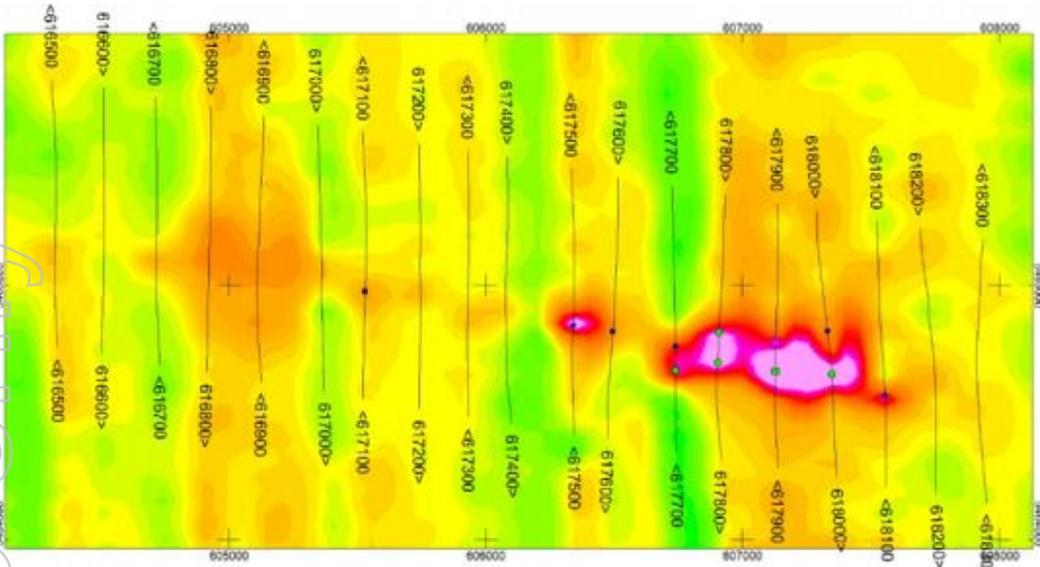


Figure 1: Silver Star North: Target EM12 image of 900Hz VCA in-phase response with OGS anomaly picks

Drilling undertaken along strike with the EM anomaly on Silver Star North has identified a graphitic gneiss with widths up to 41.6m (30m true width) and super jumbo flake graphite presence confirmed. The drilling targeted the central zone of the EM anomaly and remains open along strike and at depth.

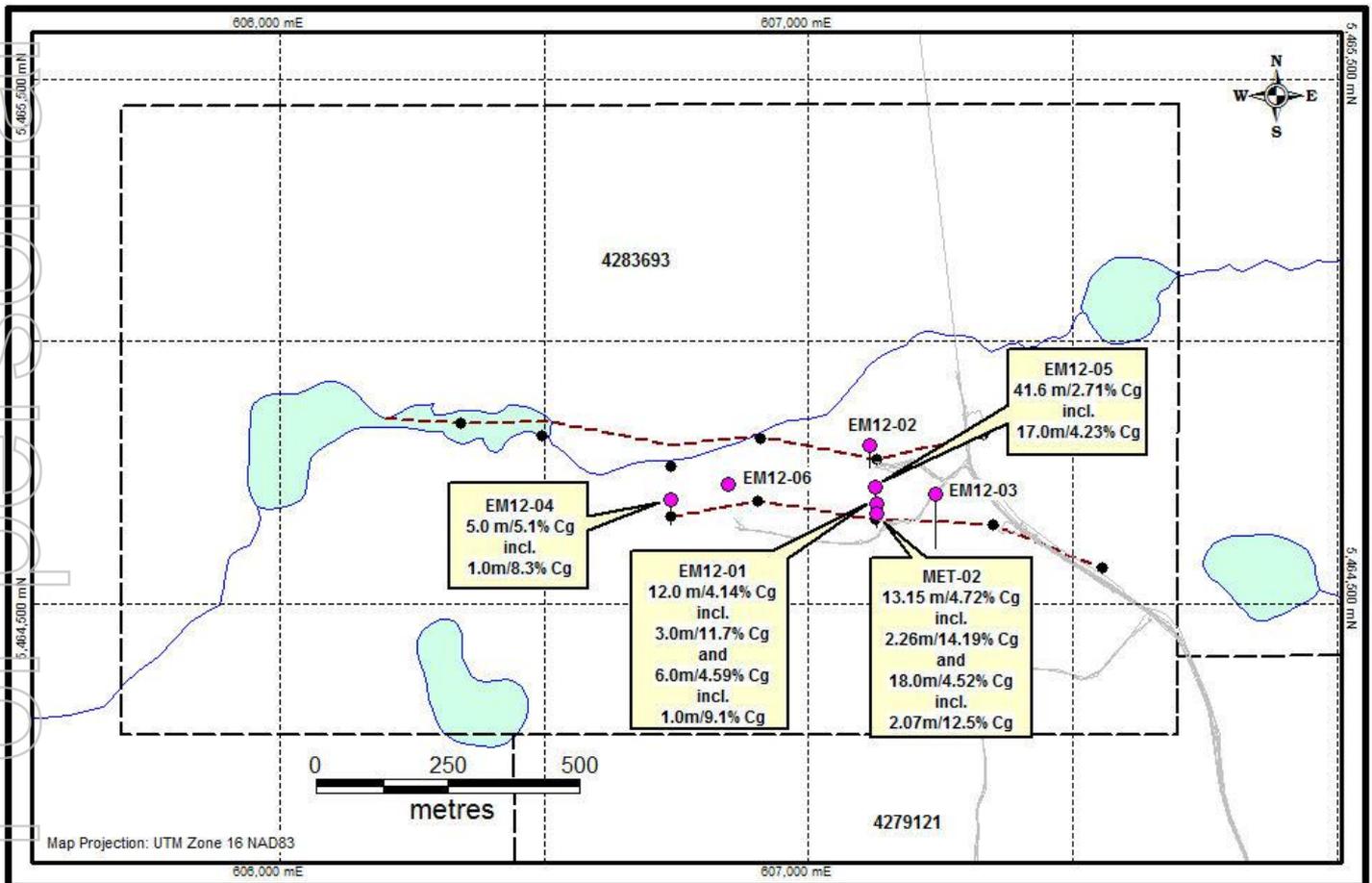


Figure 2: Silver Star North with drill holes and grades noted

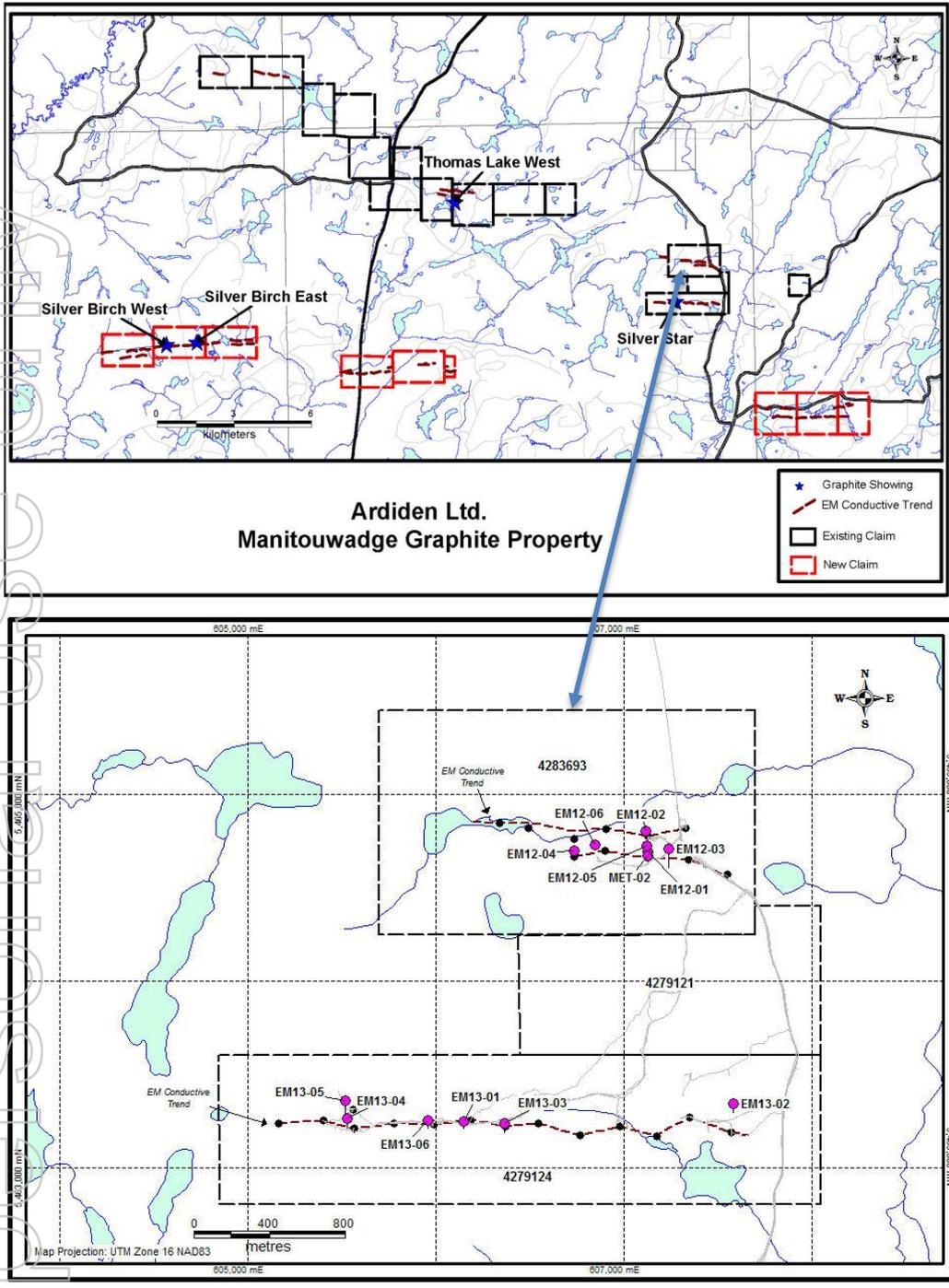
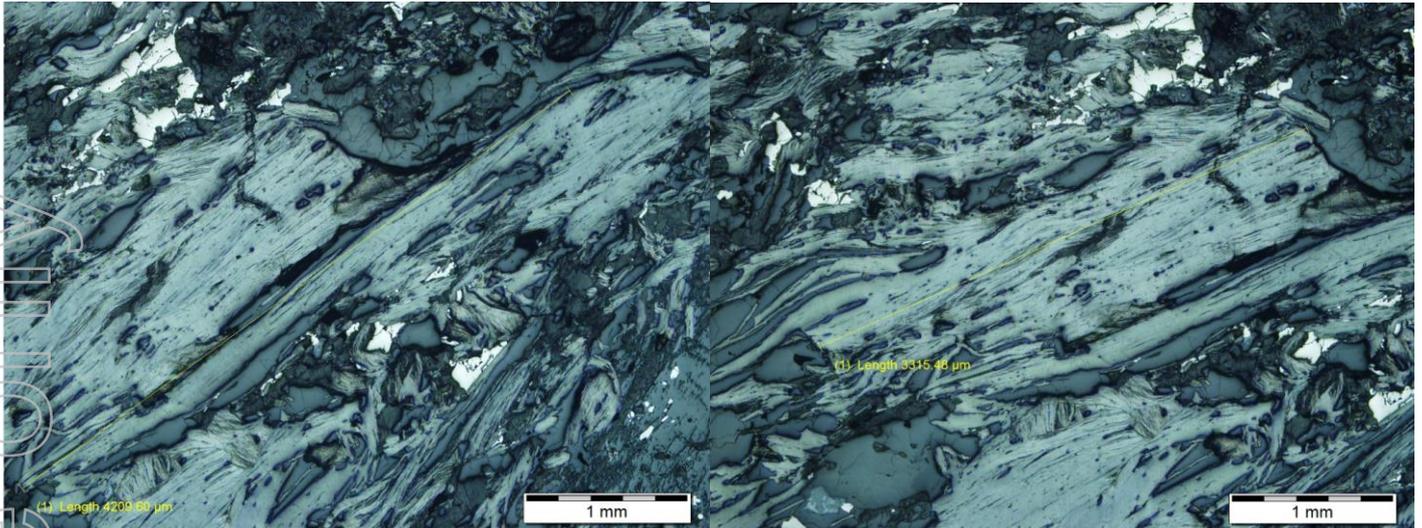


Figure 3: Manitowadge Graphite Project showing 19km of EM anomalies (in red in upper diagram) with graphite prospectivity. Silver Star North (EM12) prospect is shown as one of the Eastern EM anomalies

Testing of core from EM 12-05 (from Silver Star North) by Vancouver Petrographics indicates the occurrence of jumbo (>300 microns) and super jumbo (> 500 microns) flake graphite, with maximum flakes sizes up to 4,200 microns identified (see Figure 4 showing drill core from EM 12-05 indicating flake sizes of 4,200 and 3,300 microns respectively). Jumbo and Super jumbo flake sizes attract a significant premium per tonne to fine and medium flake graphite.



**Figure 4: Petrographic slices from EM 12-05 – Flake size of 4,209 micron on left and 3,315 micron on right. Super jumbo graphite is defined as graphite with a flake size of >500 microns. (Source: Vancouver Petrographics)**



**Figure 5: Graphite core from current drilling at Manitouwadge graphite project in Ontario, Canada (Hole EM 12-05 at Silver Star Prospect)**

High grade assay results from the Silver Star North project include:

- **MET-02 – 13.15m at 4.72% Cg (including 2.26m at 14.19% Cg)**
- **MET-02 – 18.0m at 4.52% Cg (including 2.07m at 12.5% Cg)**
- **EM 12-01 – 12.0m at 4.14% Cg (including 3.0m at 11.7% Cg)**
- **EM 12-01 – 6.0m at 4.59% Cg (including 1.0m at 9.1% Cg)**
- **EM 12-04 – 5.0m at 5.1% Cg (including 1.0m at 8.3% Cg)**
- **EM 12-05 – 41.6m at 2.71% Cg - includes 17m at 4.23% Cg (including 3m at 12.65% Cg)**

Assay results from the current drill program are provided in Appendix 1.

A key focus of a future drilling program will be to determine the extent and potential source of the exceptionally high grade intercepts recorded in MET-02, EM 12-01 and EM 12-05.

The assays returned to date indicate comparable or better grades than other similar North American graphite projects (see figure 6 below).

Company Name	Symbol (TSX)	Project	Location	Mkt Cap (\$Am)	Resources (m tonnes) Measured & Indicated	Grade (Cg %)	Resources (m tonnes) Inferred	Grade (Cg%)
Zenyatta Ventures	ZEN.V	Albany	Ontario,Canada	50	25.1	3.89%	20.1	2.20%
Alabama Graphite	ALP.V	Coosa Bissett Creek	Alabama, USA	20	78.5	2.39%	79.4	2.56%
Northern Graphite	NGC.V	Creek	Ontario,Canada	11	69.8	1.74%	24	1.65%

**Figure 6: comparison table for North American graphite players indicating resource, grade and market cap as at 31 December 2015**

### Other Graphitic Zones at Manitouwadge

In addition to the outstanding results at Silver Star North, assays from exploratory drilling at Thomas Lake and Silver Star South are also set out in Appendix 1 and present additional opportunity for further development into resource status.

A 150kg surface sample was sourced from Thomas Lake during the Northern summer which graded 11.4% Cg. In addition, grab samples at Silver Birch and Silver Star South grading up to 16.8% Cg and 11.8% Cg respectively were sourced during the October 2015 ground sampling program.

Visual graphite has been intersected during drilling at the Silver Birch showing with assay results pending. The most south-eastern EM anomalies and central southern anomalies have not been tested during the current program and are expected to be tested during 2016.

### Next Steps

The company intends to undertake the following works in the new year:

- *Plan and complete a further drilling program at Silver Star North with the aim of delineating a maiden JORC Compliant resource and determining the extent and potential source of exceptionally high grades encountered in MET-02, EM 12-01 and EM 12-05;*
- *Undertake further metallurgical test work on drill core extracted from the current program;*
- *Continue exploration of a number of untested EM anomalies (over 9km remains to be tested);*
- *Provision of graphite samples to potential customers and end users and commencement of negotiations for offtake; 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:**

### **Investors:**

**Ardiden Ltd**

Tel: +61 (0) 8 6555 2950

### **Media:**

**Nicholas Read – Read Corporate**

Mobile: 0419 929 046

## **About the Manitouwadge Project**

The 5,300 Ha Manitouwadge Jumbo Flake Graphite Project is located in Ontario, Canada. The Project has a 19km 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.

Appendix 1 November/ December 2015 Assay results by hole (see JORC TABLE 1 for more details)\*

Hole_ID	Sample_Number	From	To	Length	C_pct
MET-02	170001	12	15	3	10
MET-02	170009	22	23	1	3.58
MET-02	170012	25	26	1	3.87
MET-02	170015	28	29	1	3.58
MET-02	170021	33	34	1	2
MET-02	170024	36	37	1	6.26
MET-02	170026	38	39	1	2.93
MET-02	170027	39	40	1	2.51
MET-02	170029	41	42	1	1.58
MET-02	170039	51	52	1	1.52
MET-02	170040	52	53	1	2.91
MET-02	170041	53	54	1	3.55
MET-02	170042	54	55	1	3.79
MET-02	170043	55	56	1	4.43
MET-02	170044	56	57	1	6.01
MET-02	170046	58	59	1	3.81
MET-02	170049	60.89	62	1.11	17.2
MET-02	170051	62	63.15	1.15	11.3
MET-02	170062	72	73	1	1.61
MET-02	170063	73	74	1	5.99
MET-02	170064	74	75	1	3.46
MET-02	170066	76	77	1	7.18
MET-02	170068	78	79	1	9.75
MET-02	170069	79	80	1	4.83
MET-02	170071	81.33	81.7	0.37	14.9
MET-02	170072	81.7	82.7	1	2.68
MET-02	170073	82.7	83.7	1	14.5
MET-02	170074	83.7	84.77	1.07	9.76
MET-02	170078	88	89	1	8.9
MET-02	170079	89	90	1	1.62
EM12-01	1099855	17.65	18.65	1	10.6
EM12-01	1099856	18.65	19.65	1	11
EM12-01	1099857	19.65	20.65	1	13.5
EM12-01	1099862	23.65	24.65	1	1.86
EM12-01	1099863	24.65	25.65	1	1.6
EM12-01	1099864	25.65	26.65	1	1.65
EM12-01	1099865	26.65	27.65	1	3.85
EM12-01	1099866	27.65	28.65	1	3.16
EM12-01	1099867	28.65	29.65	1	1.82
EM12-01	1099883	43.65	44.65	1	4.98
EM12-01	1099885	45.65	46.65	1	1.69
EM12-01	1099887	47.65	48.3	0.65	4.71
EM12-01	1099891	51.3	52.3	1	2.79
EM12-01	1099892	52.3	53.3	1	8.15
EM12-01	1099893	53.3	54.3	1	2.95
EM12-01	1099894	54.3	55.3	1	9.13
EM12-01	1099896	56.3	57.3	1	3.86

EM12-01	1099898	58.3	59.3	1	2.56
EM12-01	1099901	60.3	61.3	1	5.88
EM12-02	1099913	21	22	1	1.81
EM12-02	1099914	22	23	1	1.9
EM12-02	1099915	23	24	1	2.18
EM12-02	1099918	26	27	1	1.52
EM12-02	1099922	29	30	1	1.87
EM12-03	1099983	87.25	88.25	1	2.66
EM12-03	1099984	88.25	89.25	1	6.26
EM12-03	1099988	92.25	93.25	1	1.93
EM12-03	1099989	93.25	94.25	1	4.46
EM12-03	1099990	94.25	95.25	1	1.98
EM12-03	1099991	95.25	96.25	1	2.58
EM12-03	1099992	96.25	97.25	1	1.61
EM12-03	1099993	97.25	98.25	1	2.77
EM12-03	1099994	98.25	99.2	0.95	3.14
EM12-03	1099997	103	105	2	1.64
EM12-03	1099519	116	117	1	7.62
EM12-03	1099521	117	118	1	2.37
EM12-03	1099522	118	119	1	2.4
EM12-03	1099526	122	123.5	1.5	3.42
EM12-03	1099529	126.5	128	1.5	2.49
EM12-03	1099535	135.5	137	1.5	2.25
EM12-03	1099539	141.5	143	1.5	4.62
EM12-04	1123501	17.25	18	0.75	3.95
EM12-04	1123503	19	20	1	2.27
EM12-04	1123507	23	24	1	1.95
EM12-04	1123512	28	29	1	2.03
EM12-04	1123518	34	35	1	2.07
EM12-04	1123519	35	36	1	1.58
EM12-04	1123520	36	36	0	2.34
EM12-04	1123521	36	37	1	1.63
EM12-04	1123525	40	41	1	2.33
EM12-04	1123526	41	42	1	5.97
EM12-04	1123527	42	43	1	3.6
EM12-04	1123528	43	44	1	3.57
EM12-04	1123529	44	45	1	8.33
EM12-04	1123530	45	46	1	4.12
EM12-04	1123532	47	48	1	1.91
EM12-04	1123535	50	51	1	1.52
EM12-04	1123537	52	52.72	0.72	2.03
EM12-05	1099931	50.9	51.9	1	5.82
EM12-05	1099934	53.9	54.9	1	2.43
EM12-05	1099935	54.9	55.9	1	6.24
EM12-05	1099936	55.9	56.9	1	2.4
EM12-05	1099937	56.9	57.9	1	2.88
EM12-05	1099939	58.9	59.9	1	3.05
EM12-05	1099941	59.9	60.9	1	3.05
EM12-05	1099942	60.9	61.9	1	1.95
EM12-05	1099945	63.9	64.9	1	1.94
EM12-05	1099946	64.9	65.9	1	10
EM12-05	1099947	65.9	66.9	1	8.46

EM12-05	1099948	66.9	67.9	1	19.5
EM12-05	1099956	74.9	75.9	1	6.31
EM12-05	1099957	75.9	76.9	1	2.85
EM12-05	1099961	78.9	79.9	1	2.12
EM12-05	1099962	79.9	80.9	1	1.87
EM12-05	1099966	83.9	84.9	1	4.34
EM12-05	1099968	85.9	86.9	1	3.59
EM12-05	1099971	88.9	89.9	1	1.9
EM12-05	1099972	89.9	90.5	0.6	4.79
EM12-05	1099973	90.5	91.5	1	4.13
EM12-05	1099974	91.5	92.5	1	2.65
EM12-06	1123542	29.23	30	0.77	1.8
EM12-06	1123548	35	36	1	1.76
EM12-06	1123549	36	37	1	1.58
EM12-06	1123551	38	39	1	1.89
EM12-06	1123552	39	40	1	1.75
EM12-06	1123557	44	45	1	1.69
EM12-06	1123563	49	50	1	3.71
EM12-06	1123564	50	51	1	2.39
EM12-06	1123565	51	52	1	1.73
EM12-06	1123566	52	53	1	4.28
EM12-06	1123567	53	54	1	3.8
EM12-06	1123572	58	59	1	4.36
EM12-06	1123573	59	60	1	2.69
EM12-06	1123578	64.82	66	1.18	1.91
EM12-06	1123579	66	67	1	1.87
EM12-06	1123586	72	72.9	0.9	2.27
EM13-01	1099734	14.66	15.66	1	3.84
EM13-01	1099737	17.66	18.35	0.69	1.61
EM13-01	1099754	50.5	51.5	1	1.98
EM13-02	1099668	33.25	34.15	0.9	1.89
EM13-02	1099678	44.1	44.9	0.8	2.43
EM13-02	1099688	58.65	59.65	1	1.75
EM13-03	1099697	10.96	11.96	1	5.28
EM13-03	1099698	11.96	12.96	1	4.52
EM13-03	1099705	45.42	46.42	1	2.8
EM13-03	1099707	47.42	48.42	1	4.33
EM13-03	1099708	48.42	49.42	1	3.91
EM13-03	1099709	49.42	50	0.58	1.8
EM13-03	1099723	64.15	65.15	1	5.65
EM13-03	1099725	66.15	66.9	0.75	2.04
EM13-04	1099785	32	33	1	1.89
EM13-04	1099788	35	36	1	2.53
EM13-04	1099790	37	38	1	2.88
EM13-04	1099791	38	38.4	0.4	7.96
EM13-05	1099764	28.62	29.62	1	3.36
EM13-05	1099765	29.62	30.62	1	2.37
EM13-05	1099766	30.62	31.62	1	1.74
EM13-05	1099767	31.62	32.62	1	2.78
EM13-05	1099768	32.62	33.48	0.86	2.89
EM13-05	1099771	35.45	36.6	1.15	2.84
EM13-06	1099848	48.14	49.14	1	2.42

MG-19					NSI
MG-20	1099623	39.9	41	1.1	3.5
MG-20	1099624	41	42	1	2.68
MG-20	1099625	42	43	1	1.63
MG-20	1099626	43	44	1	1.96
MG-20	1099630	47	48	1	1.51
MG-20	1099631	48	49	1	2.23
MG-20	1099632	49	50	1	2.43
MG-20	1099646	64.28	65.03	0.75	2.69
MG-21	1099601	32.2	33.2	1	2.7
MG-21	1099612	42.31	43.31	1	1.65
MG-21	1099614	44.31	45.31	1	2.58
*grades > 1.5% shown					

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## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Core was split using a hydraulic splitter along a plane perpendicular to the foliation within the host rock gneiss.</li> <li>Bagging of the samples was supervised by a geologist to ensure there are no numbering mix-ups.</li> <li>One tag from a triple tag book was inserted in the core tray in the position of the sample interval.</li> <li>Standard sample intervals averaged 1 m.</li> <li>Sampling continued at least 1 m past the graphite zone within the core, even if it is truncated by a later pegmatite intrusion. This is required in order to close off each zone for future resource modeling purposes.</li> <li>Sampling continued through intervening barren rock (if less than 10m width) where multiple graphite zones were intersected.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Diamond wireline core drilling.</li> <li>Core size is BTW, core diameter is 40.7 millimeters</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sample intervals of core is measured and recorded along with descriptions in the completed drill log.</li> <li>Core within the mineralised zone tends to be massive and competent so loss is minimal and samples represents the true nature of the samples</li> </ul>
Logging	<ul style="list-style-type: none"> <li>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 studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Samples represent half the core width, and are logged in detail to support appropriate Mineral Resource estimation at a later stage of exploration.</li> </ul>

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Core is split in half using a pressure hydraulic splitter with the remaining half retained in the core tray.</li> <li>Mineralisation is massive and relatively uniform so assay samples closely represent the in situ material.</li> <li>Samples taken average 1 meter intervals and are appropriate for the flake sized material being sampled</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Core samples were analysed by Actlabs in Thunder Bay, Ontario Canada a SCC (Standards Council of Canada) accredited laboratory.</li> <li>Certified reference material (CRM) was inserted a rate of one every 20 drill core samples. CRM samples were obtained CDN Resource Laboratories Ltd of Langley BC. Three grades were obtained 1.01, 2.39 and 3.12 C%. The CRM selected was based on the best visual grade estimate of the core.</li> <li>Blanks were inserted randomly and contained pegmatite obtained from other core known not to contain graphite.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Drill logs and sample information is documented and stored digitally in field laptop units and backed up at the Stares Contracting exploration office located in Thunder Bay, Ontario</li> <li>Holes have not been twinned at this early stage of exploration.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes are located with handheld WAAS enabled handheld GPS units (+/- 3m accuracy) set for recording UTM NAD83 Zone 16 projection coordinates.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Core samples of the graphite mineralised zone are taken at approximately 1 meter intervals and deemed appropriate to represent the in situ nature of the mineralization.</li> <li>Compositing has not been applied at this early stage of exploration.</li> </ul>

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	<p><i>applied.</i></p> <ul style="list-style-type: none"> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Flight lines are orientated perpendicular to stratigraphy in the areas of interest.</li> <li>• Drill holes are designed to intercept the mineralised zone as close to true width as possible to avoid sampling bias.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples were bagged and tagged by contract personnel and transported directly to the accredited laboratory.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The DIGHEM data have been reviewed and interpreted by a qualified geophysicist, Mr. Dave Johnson.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>• <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.</i></li> <li>• <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All claims are in good standing and are 100% owned by Ardiden. These include claims 4268977, 4268978, 4268979, 4268934, 4268933, 4268952, 4268932, 4268953, 4268975, 4268976, 4268935, 4279101, 4279121, 4279124, and 4279125.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The previous ground horizontal EM survey was carried out by Rare Earth Minerals Inc. and reported by Felix, 2012, Technical report on the Manitouwadge graphite exploration property at Manitouwadge, Ontario, Canada. 35 p.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Archean meta-sedimentary graphite</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>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</i></li> </ul>	<ul style="list-style-type: none"> <li>• An assessment of the helicopter EM data has indicated a general correlation between electromagnetic conductance and the presence of graphite mineralization in bedrock, as described by Johnson, 2015, Ranking of airborne electromagnetic targets, Manitouwadge graphite project, Ontario, Canada, 25 p.</li> <li>• Drill hole information including Easting and Northing of drill collars, elevation, dip and azimuth and down hole length and interception depth has been documented.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>understanding of the report, the Competent Person should clearly explain why this is the case.</i>	
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li><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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>With only %C reported and homogeneity of the mineralised material sample intervals for the most part are kept at near the 1 meter interval.</li> <li>Weighted averaging calculations were used when sample intervals were not uniform.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralised zones are steeply dipping and drilling is designed to intercept perpendicular to the zones as closely as possible.</li> <li>Drill dips are initially at -45 degrees so drill intercepts of steeply dipping mineralization represents close to 90% of true width.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>See body of the release for the locations of EM conductors relative to Ardiden claims.</li> <li>Drill cross section and plan maps will be generated once assay result have been received.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The EM data shown in this release is only a small part of a much larger dataset compiled by the Ontario Geological Survey in 2002 and released as Geophysical Data Set 1205 - Revised.</li> <li>Drill intercepts with very high grade will be noted as a Data subset to avoid misleading information.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><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; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>Emphasis has been placed on determining grain size characteristics of graphite flakes and beneficiation testing, as per Item 49 of the 2012 edition of the JORC Code. The results of these tests have previously been reported.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Further drilling is planned to test the lateral extension and depth extension of the Silver Star North mineralised zone.</li> <li>Further drilling of geophysical targets is planned following ground surveys to try and confirm the source of selected airborne EM anomalies.</li> </ul>