



ARDIDEN

ASX ANNOUNCEMENT

23 June 2017

SEYMOUR LAKE: DMS METALLURGICAL TESTWORK CONTINUES TO PRODUCE HIGH-GRADE LITHIUM CONCENTRATE

Grades of up to 6.43% Li₂O from latest lab DMS testwork confirms project's commercial potential

HIGHLIGHTS:

- **High-grade lithium concentrate of up to 6.43% Li₂O produced from latest lab Dense Media Separation (DMS) testwork on drill core samples from the Seymour Lake Lithium Project in Canada.**
- **High Li₂O recovery of 91% achieved.**
- **Variability testwork currently underway with a range of drilling hole samples from the North Aubry prospect.**
- **The most recent testwork again verifies that the spodumene particles are well-liberated at a very coarse particle size.**
- **Testwork is continuing to develop a suitable processing flowsheet.**

Diversified minerals explorer and developer Ardiden Limited (ASX: ADV) is pleased to advise that it has received further highly encouraging metallurgical testwork results from Independent Metallurgical Operations (IMO), based in Perth, Western Australia, for a composite bulk sample obtained from the North Aubry prospect at its majority-owned **Seymour Lake Lithium Project** in Ontario.

Ardiden confirms that the lab Dense Media Separation (DMS) tests conducted at a specific gravity of 2.80 produced an overall concentrate grade of 5.97% Li₂O with recovery of 90.8% (refer to Table 2 & 3).

The initial testing of the spodumene ore used a very coarse crush size of 9.5 mm which produced a concentrate of 6.43% Li₂O with a recovery of over 75%. Ardiden notes that the recovery was lower than expected due to a portion of the spodumene crystals being misplaced, as the lab Dense Media Cyclone had difficulty managing the coarse crush size.

Second stage of DMS tests produced the overall concentrate grade of 5.97% Li₂O with recovery of 90.8% at crushing size of 3.35mm. Staged crushing reduced the 0.5 mm material produced, therefore additional processing is not required.

The Company notes that the coarse spodumene concentrate will lead to reduced processing costs and will create a greater variety of potential applications, which in turn should attract premium prices from potential end-users, which may improve the project economic value.

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A comparison between the previous Heavy Liquid Separation (HLS) testwork conducted by IMO on these spodumene samples and this round of DMS testwork, found that the HLS test was conducted at a similar specific gravity of 2.70 and with a crush size of less than 3.35 mm. The HLS achieved a concentrate grade of 5.88% Li_2O and with a recovery of 83.0%, which is comparable to the results achieved with the DMS testwork.

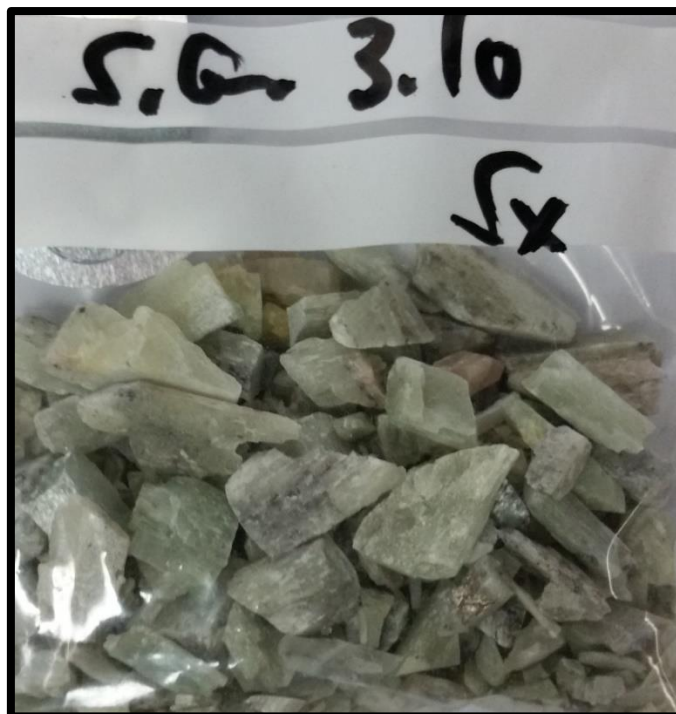


Figure 1. Sample of coarse lithium concentrate (Spodumene) created with DMS at the specific gravity of 3.10.

IMO also noted the significant presence of Micas in the spodumene concentrate sample at the coarse crushing size of 9.5mm. Ardiden will undertake additional testwork on the Micas to better understanding of the material and whether this material could improve the Li_2O recovery and concentrate grade.

The lab DMS testwork results from the drill core samples provided to IMO, have again indicated that the spodumene particles are well liberated at vary coarse particle size. Additional phase of testwork is more comprehensive and being undertaken on a broad range of ore samples with a range of head grades and locations. These tests will assist Ardiden to identify the most appropriate process to recover Li_2O from the spodumene ore at the Seymour Lake project.

Ardiden considers these current laboratory DMS tests to be extremely encouraging, having replicated similar results to those obtained from the earlier HLS metallurgical tests, announced on 9 February 2017, which demonstrated the ability to produce very high-grade lithium concentrate with grades of up to **7.73% Li_2O** .

The composite sample was obtained by combining drill cores from three separate locations across the North Aubry Prospect (refer to Figure 2).

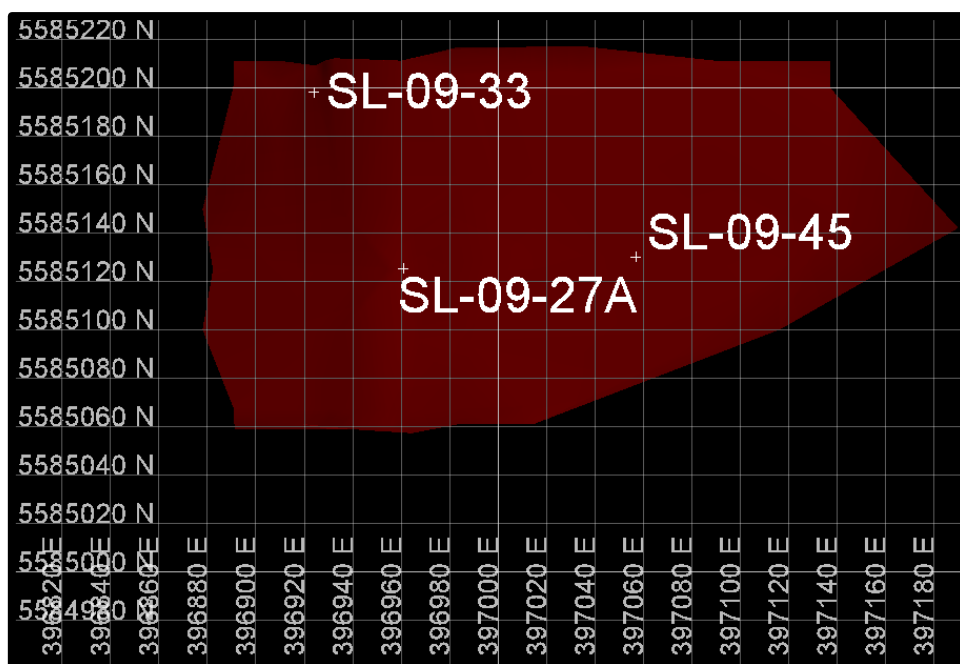


Figure 2. Overview showing the drill hole locations at North Aubry prospect at the Seymour Lake Lithium Project.

Ardiden confirms the laboratory DMS tests has again provided additional specific data which helps to determine the physical properties of samples and provides guidance with characterising the parameters of ore processing. The lab DMS tests also help to predict the recovery of Li_2O .

The DMS tests were conducted on the composite sample of drill cores obtained from diamond drill holes SL-09-33, SL-09-27A and SL-09-45 and after crushing to 100% and passing 9.5mm, 6.7mm and 3.35mm.

The interpolated recoveries and Li_2O concentrate grade at each crush size for the samples are tabulated below in Tables 2 and 3 below.

Ardiden notes these are highly encouraging results for preliminary DMS assessments. Metallurgical variability of the deposit will be investigated in future test work programs.

The next phase of the metallurgical testwork program will allow Ardiden to investigate the lithium recovery and various extraction process options including gravity, flotation and magnetic separation processes to develop an optimum process flowsheet for the project.

Ardiden looks forward to providing further updates as they come to hand.

ENDS

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About Ardiden Ltd

Ardiden Limited (ASX: ADV) is an emerging international strategic metals company which is focused on the exploration, evaluation and development of multiple projects located in the established mining jurisdiction of Ontario, Canada.

The 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% Li₂O. These high-grade pegmatite structures have been defined over a 5km strike length.

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 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 testwork indicated that up to 80% of the graphite at Manitouwadge is high value jumbo or large flake graphite. Testwork 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.

The Wisa Lake Lithium project (under option to acquire 100%) 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 Bold Properties project (under option to acquire 100%) 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 all-weather 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 grades of up to 0.33% cobalt, 5.54% copper and 0.73% nickel, confirming the significant exploration potential.

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

Competent Person's Statement

The information in this report that relates to exploration results for the Seymour Lake Lithium project and is based on, and fairly represents, information and the supporting geological information and documentation in this announcement and has been reviewed by Mr Robert Chataway who is a member of the Association of Professional Geologists of Ontario. Mr Chataway is not a full-time employee of the Company. Mr Chataway is employed as a Consultant Geologist. Mr Chataway 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" (the JORC Code). Mr Chataway 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.



Table 1. Drilling Hole co-ordinates and information for drill holes SL-09-33, SL-09-45 and SL-09-27A at Seymour Lake Lithium Project.

Hole ID	East	North	Total Depth (m)	Azimuth	Dip	From (m)	To (m)	Interval (m)	Description
SL-09-33	396921	5584973	114	0	-90	15.80	23.10	7.30	Spodumene Nb/Ta Pegmatite
SL-09-45	397054	5584905	126	0	-90	48.00	55.20	7.20	Spodumene Nb/Ta Pegmatite
SL-09-27A	396958	5584900	95	0	-90	64.33	66.74	2.41	Spodumene Nb/Ta Pegmatite

Table 2. Lithium Stream Grades

Stream	Mass%	Al2O3	BeO (ppm)	CaO	Fe2O3	K2O	Li2O	MgO	Na2O	Nb2O5 (ppm)	SiO2	Ta2O5 (ppm)	LOI - 1000
-9.5mm DMS Sinks (+2.80 Sg)	31.3	23.85	292	0.5	1.16	0.9	6.43	0.14	0.69	204	68	312	0.68
-3.35mm DMS Sinks (+2.80 Sg)	9.4	20.47	691	0.6	1.22	1.8	4.44	0.16	1.03	305	65.4	395	1.02
Total DMS Sinks (+2.80 Sg)	40.7	23.07	384	0.52	1.17	1.11	5.97	0.14	0.77	227	67.4	331	0.76
-9.5mm DMS Feed: -0.5mm Fraction	7.9	14.45	328	0.8	0.64	1	1.44	0.1	5.56	193	61	281	0.73
-9.5mm DMS Floats (-2.80 Sg): -0.5mm Fraction	11.2	14.39	475	0.6	0.95	1.8	0.73	0.11	5.26	194	74.4	220	0.64
Total DMS: -0.5mm Fraction	19.1	14.41	414	0.68	0.82	1.47	1.03	0.11	5.38	194	68.87	245	0.68
-3.35mm DMS Floats (-2.80 Sg)	40.1	10.32	636	0.3	0.43	2	0.12	0.06	4	95	80.9	144	0.51
Total -0.5mm and -3.35mm Floats (-2.80 Sg)	59.3	11.64	564	0.42	0.56	1.83	0.42	0.07	4.45	127	77.02	177	0.56
Calculated Head	100	16.3	491	0.46	0.81	1.54	2.68	0.1	2.95	168	73.1	240	0.64
Assay Head		16.21	563	0.5	0.83	1.7	2.55	0.1	2.59	176	72.1	237	0.65

Table 3. Lithium Stream Metal Recoveries

[illegible]

Table 1: Seymour Lake Lithium Project (Claim Title 1245661)

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"> Nature and quality of sampling (e.g. 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 (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g 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 (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Diamond Drill Core was cut in half using a core saw along the core axis. Bagging of the half core samples was supervised by a geologist to ensure there are no numbering mix-ups. One tag from a triple tag book was inserted in the core tray in the position of the sample interval. Standard sample intervals averaged 1 m. Sampling continued through intervening barren rock (if less than 10m width) where multiple Spodumene Pegmatite zones were intersected The sample preparation and assaying techniques are industry standard and appropriate for this type of mineralisation.
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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). 	<ul style="list-style-type: none"> Diamond wireline core drilling. The drill core size is CHD 76, core diameter is 43.5 millimetres Drill holes were orientated using the Reflex ACT II RD core orientation tool
Drill sample recovery	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The sample interval of core was measured and recorded along with a description and incorporated in the completed drill logs. Core within the mineralised zone tended to be uniform and competent so loss was minimal and samples represent the true nature of the mineralisation No relationship between sample recovery and grade is evident.
Logging	<ul style="list-style-type: none"> 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. Whether logging is qualitative or quantitative in nature. Core (or costean, 	<ul style="list-style-type: none"> Samples represent half the core width, and are logged in detail to support appropriate Mineral Resource estimation at a later stage of exploration.

Criteria	JORC Code explanation	Commentary
	<p>channel, etc) photography.</p> <ul style="list-style-type: none"> The total length and percentage of the relevant intersections logged. 	
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Core is split in half using a core saw with the remaining half retained in the core tray. Mineralisation is massive and relatively uniform so assay samples closely represent the in-situ material. Samples were taken on an average of 1 meter intervals and were determined to be appropriate for the mineralised material being sampled
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> 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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	<ul style="list-style-type: none"> All samples will be analysed by Actlabs in Thunder Bay, Ontario Canada a SCC (Standards Council of Canada) accredited laboratory. The assay technique will be FUS-Na202 Quality control procedures included the insertion of certified standards and blanks into the sample stream. Results of the Heavy Liquid Separation tests are outlined in Table 3.
verification of sampling and assaying	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drill logs and sample information is documented and stored digitally in field laptop units and backed up on the Ardiden server.
Location of data points	<ul style="list-style-type: none"> 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. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> Drill holes were located with handheld WAAS enabled handheld GPS units set for recording UTM NAD83 Zone 16N projection coordinates. Drill holes were orientated using the Reflex ACT II RD core orientation tool

Criteria	JORC Code explanation	Commentary
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>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.</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • Core samples of the mineralised zone were taken at approximately 1 meter intervals and deemed appropriate to represent the in situ nature of the mineralization. • Further drilling and sampling will be required to adequately establish the geologic and grade continuity for any Mineral Resource and Ore Reserve estimation procedure.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> • <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> • <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> 	<ul style="list-style-type: none"> • Drill hole locations were designed to intercept the mineralised zone as close to true width as possible to avoid sampling bias.
<i>Sample security</i>	<ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> • Samples were secured and delivered to the assay lab under chain of custody controls by the Caracle Creek Consulting group
<i>Audits or reviews</i>	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> • No audits or reviews of sampling techniques have been conducted

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>	<ul style="list-style-type: none"> • <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> • <i>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.</i> 	<ul style="list-style-type: none"> • All claims in the Seymour Lake Lithium project are in good standing and these include claims 1245661 1245648 1245662 1245664 1245646, which are 100% owned by Stockport Exploration Inc. Ardiden has exercised option to acquire 100% ownership of the project claims. • Ardiden staked and owns additional claims around the project including claims: 4270593, 4270594, 4270595, 4270596, 4270597, 4270598, 4279875, 4279876, 4279877, 4279878, 4279879, 4279880, 4279881, 4279882, 4279883, 4279884, 4279885, 4279886, 4279887, 4279888, 4279889, 4279890, 4279891, 4279869, 4279870, 4279871, 4279872, 4279873 and 4279874

Criteria	JORC Code explanation	Commentary
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<ul style="list-style-type: none"> Other parties have not appraised the exploration carried out to date
<i>Geology</i>	<ul style="list-style-type: none"> <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> Seymour Lake 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 variably steeply dipping pegmatite dykes and and sills.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <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"> <i>easting and northing of the drill hole collar</i> <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> <i>dip and azimuth of the hole</i> <i>down hole length and interception depth</i> <i>hole length.</i> <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 understanding of the report, the Competent Person should clearly explain why this is the case.</i> 	<ul style="list-style-type: none"> See Table 1 and Figure 2 for the location of the drill collars and other drill hole information.
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i> <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> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> With the homogeneity of the mineralised material, sample intervals for the most part were kept at one metre intervals
<i>Relationship between mineralisation widths and</i>	<ul style="list-style-type: none"> <i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not</i> 	<ul style="list-style-type: none"> Mineralised zones were determined to be shallow dipping and drill holes were drilled at -60 degrees so that drilling orientation bias was minimised

Criteria	JORC Code explanation	Commentary
<i>intercept lengths</i>	<i>known’).</i>	
<i>diagrams</i>	<ul style="list-style-type: none"> <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> 	<ul style="list-style-type: none"> See Figure 2 for the location of the drill hole collars.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <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> 	<ul style="list-style-type: none"> No comprehensive report has been completed to date to include the latest Ardiden exploration results.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <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> 	<ul style="list-style-type: none"> All meaningful and material data is reported
<i>Further work</i>	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <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> 	<ul style="list-style-type: none"> Refer to text within the report.