



ASX RELEASE

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ASX: MGV

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## Diamond Drilling Commences at High Grade Break of Day Gold Prospect

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- **A diamond drilling program comprising up to 8 holes for 2,500m has commenced at Break of Day**
- **Drilling will focus on extending the high grade gold mineralisation down plunge and confirming the geological interpretation**
- **RC drilling of two new gold targets at Leviticus and Break of Day South will also be undertaken as part of the program**
- **Historical drilling at Leviticus intersected:**
  - **4.8m @ 26.8g/t Au from 58m, and;**
  - **3.5m @ 16.4g/t Au from 65m**

Musgrave Minerals Ltd ("Musgrave" or "the Company") (ASX: MGV) is pleased to announce the commencement of diamond drilling at the Break of Day gold prospect on the Cue project in the Murchison region of Western Australia (*Figure 2*).

The diamond drilling program will consist of reverse circulation ("RC") pre-collars and eight diamond drill holes for a total of approximately 2,500 metres. The objective of the diamond drilling is to extend the high grade mineralisation at depth, confirm the geological interpretations and to obtain preliminary rock density data required for future resource estimation.

First assay results are expected from mid-December.

Musgrave's objective is to increase the high grade gold resource to underpin studies that will demonstrate a viable path to development.

In conjunction with the diamond drilling Musgrave will undertake RC drilling at the Leviticus and Break of Day South gold prospects, utilising the RC drill rig completing the diamond pre-collars at Break of Day. The geological knowledge gained from Break of Day has been used to reinterpret historical drill intersections within the 20km extent of the under-explored Break of Day shear (*Figure 1*). Drilling will test a new sub-vertical interpretation for the gold lodes at two prospects; Leviticus and Break of Day South (*Figure 1*). Both the Leviticus and Break of Day South prospects are very sparsely drilled and have the potential to host similar high grade sub-vertical gold lodes to those discovered at Break of Day.

The Leviticus prospect is located approximately 2km south of Break of Day on the Break of Day shear.

Previous drill hole intersections at Leviticus include:

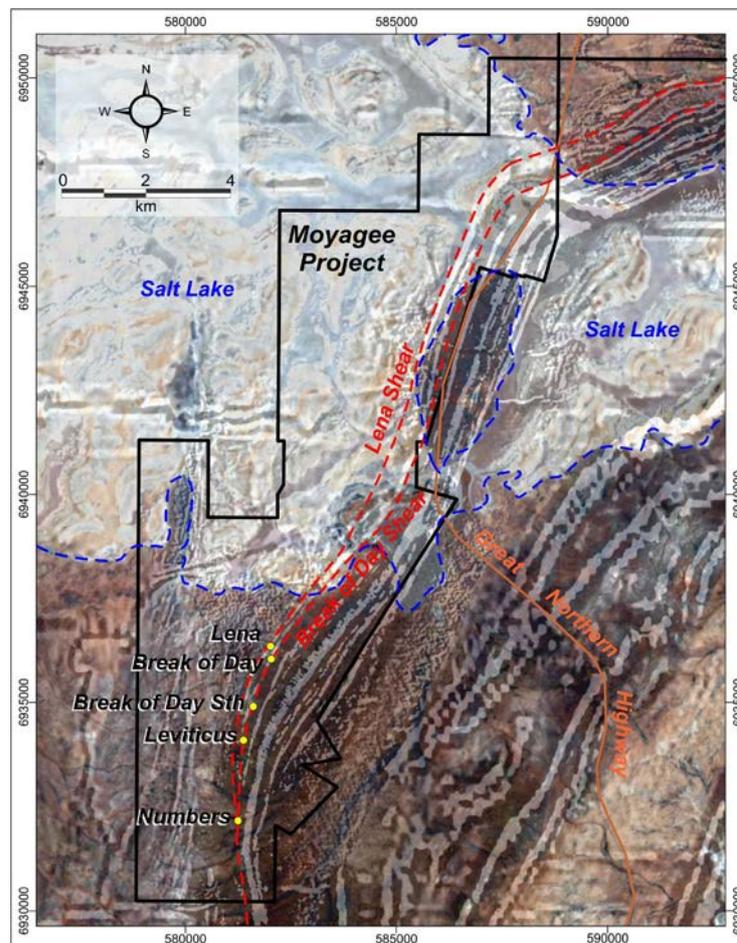
- 4.8m @ 26.8g/t Au from 58m down hole in 09MODD009;
- 3.5m @ 16.4g/t Au from 65m down hole in 09MODD009, including;
  - 1.0m @ 53.8g/t Au from 65m;
- 5.0m @ 7.1g/t Au from 71m down hole in 11MORC020; and
- 3.0m @ 15.8g/t Au from 11m down hole in MGRC131

The Break of Day South prospect is located approximately 1.4km south of Break of Day on the Break of Day shear.

Previous drill hole intersections at Break of Day South include:

- 3.0m @ 5.6g/t Au from 106m down hole in 11MORC026; and
- 8.0m @ 1.8g/t Au from 45m down hole in MGRC150

See *Table 1 of this announcement for historical drill hole details*



*Figure 1: Moyagee project location plan (landsat image draped over greyscale aeromagnetics) showing Break of Day, Break of Day South, Leviticus and the extent of the prospective Break of Day shear*

## ABOUT THE CUE PROJECT

The Cue Project ("The Project") is a Farm-In and Joint Venture Agreement with Silver Lake Resources Limited ("Silver Lake") (ASX: SLR) where Musgrave can earn up to an 80% interest. The Project consists of the Moyagee Gold and Hollandaire Copper Resources (see ASX announcement 25 November 2015, "Musgrave Secures Advanced Gold and Copper Project") and surrounding tenure in the highly prospective Murchison province of Western Australia (Figure 2). The Company has met its minimum expenditure commitment for the Cue Project and has commenced the Stage 1 Earn-In to acquire a 60% Joint Venture interest in the Project.

The Company believes there is significant potential to extend existing mineralisation and also discover new mineralisation within the Project area, shown by the recent success at Break of Day.

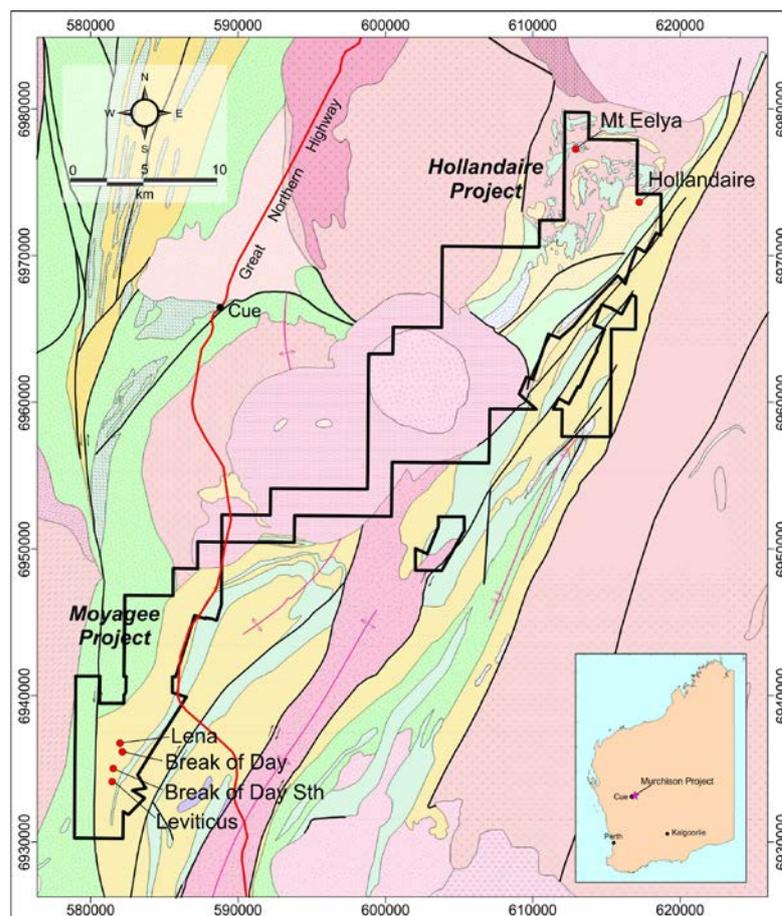


Figure 2: Cue Project location plan

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### About Musgrave Minerals

Musgrave Minerals Limited is an active Australian gold and base metals explorer. The Cue Project in the Murchison region of Western Australia is an advanced gold and copper project. Musgrave's focus is to increase gold and copper resources through discovery and extensional drilling to underpin studies that will demonstrate a viable path to development in the near term. Musgrave also holds the highly prospective Mamba Ni-Cu sulphide project in the Fraser Range of Western Australia and an active epithermal Ag-Pb-Zn-Cu project in the prospective silver and base metals province of the southern Gawler Craton of South Australia and a large exploration footprint in the Musgrave Province in South Australia. Musgrave has a powerful shareholder base with four mining and exploration companies currently participating as cornerstone investors.

### Competent Person's Statement Exploration Results

The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled and/or thoroughly reviewed by Mr Robert Waugh, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM) and a Member of the Australian Institute of Geoscientists (AIG). Mr Waugh is Managing Director and a full-time employee of Musgrave Minerals Ltd. Mr Waugh has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration to qualify 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 Waugh consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Table 1: Summary of Historical Drill Hole Locations and Significant Assay Intervals at Leviticus and Break of Day South**

Drill hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (degrees)	Dip (degrees)	RL (m)	Total Depth (m)	Sample Type	From (m)	Interval (m)	Au (g/t)	Drilled by
MGRC150	RC	Break of Day South	581433	6934761	308	-60	421	70	Individual 1m	45	8	1.8	Molopo Australia Ltd
11MORC026	RC	Break of Day South	581456	6934747	302	-60	423	120	Individual 1m	106	3	5.6	Silver Lake Resource Ltd
MGRC131	RC	Leviticus	581333	6934111	308	-60	431	50	Individual 1m	11	3	15.8	Molopo Australia Ltd
						including			Individual 1m	11	1	42.0	
MRB1280	RAB	Leviticus	581348	6934104	308	-60	431	60	Individual 1m	33	9	3.6	Perilya Ltd
09MODD009	Diamond	Leviticus	581367	6934097	305	-60	431	120	Individual 1m	58	4.8	26.8	Silver Lake Resource Ltd
									Individual 1m	65	3.5	16.4	
									Including			Individual 1m	
11MORC020	RC	Leviticus	581377	6934088	300	-60	432	132	Individual 1m	79	5	7.1	Silver Lake Resource Ltd
MGRC182	RC	Leviticus	581384	6934081	308	-60	432	160	Individual 1m	125	3	5.9	Perilya Ltd

#### Notes to Table 1(a)

1. An accurate dip and strike and the controls on mineralisation are only interpreted and the true width of mineralisation is not yet confirmed although it is likely be 30-80% of the intersection widths
2. At Leviticus and Break of Day South individual samples (maximum 1 metre) were analysed using a 25g fire assay with ICP-MS (inductively coupled plasma - mass spectrometry) finish gold analysis (0.01ppm detection limit)
3. g/t (grams per tonne), ppm (parts per million), ppb (parts per billion), X = below detection limit
4. NSA (No Significant Assay) – No gold assay above 1g/t
5. Assay intersections are continuous zones with less than 1 metre of internal dilution.
6. No high grade cut-off has been applied to individual assays
7. g/t (grams per tonne)
8. Au is the chemical symbol for gold

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## JORC TABLE 1

### Section 1 Sampling Techniques and Data

Criteria	Explanation	Commentary
Sampling techniques	<i>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.</i>	Sampling is undertaken using standard industry practices at the time of drilling. All historical reverse circulation ("RC"), aircore and Rotary Air Blast ("RAB") samples were split to 1-3kg in weight through a cyclone or riffle splitter.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	All co-ordinates are in UTM grid (GDA94 Z50) and have been either surveyed or measured by hand-held GPS with an accuracy of >±5 metres.
	<i>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 1m samples from which 3kg 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 (eg submarine nodules) may warrant disclosure of detailed information.</i>	Historical reverse circulation ("RC"), aircore and Rotary Air Blast ("RAB") samples were collected at 1 metre intervals for all drill holes. One metre individual samples were submitted for analysis. All one metre samples were split to 1-3kg in weight. The sample size is deemed appropriate for the grain size of the material being sampled and the stage of the exploration process.  Samples are analysed using a 25g fire assay with ICP-MS (inductively coupled plasma - mass spectrometry) finish gold analysis (0.01 ppm detection limit).
Drilling techniques	<i>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).</i>	Historically Silver Lake Resources Ltd (SLR) undertook RC drilling at Break of Day with a number of companies intermittently drilling prior to 2008 including Molopo Australia Ltd and Perilya Ltd. A combination of historical RAB, aircore, RC and diamond drilling has been utilised by multiple companies over a thirty year period across the broader project area.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Drill hole sample weights are observed and noted in a field log.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Drillers use industry appropriate methods to maximise sample recovery and minimise downhole contamination. Efforts are taken using compressed air to maintain a dry sample where possible.
	<i>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.</i>	No significant sample loss or bias has been noted. Where voids or historical stopes have been intersected in drilling these have been logged and recorded.
Logging	<i>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.</i>	All geological, structural and alteration related observations are stored in the database.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Logging of lithology, structure, alteration, mineralisation, colour and other features of core or chips is undertaken on a routine 1m basis.
	<i>The total length and percentage of the relevant intersections logged.</i>	All drill holes are logged in full on completion.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	A single diamond hole was completed at the Leviticus prospect by Silver Lake Resources in 2009. The core was cut with half core submitted for gold analysis.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	RC, aircore and RAB samples were routinely cyclone or riffle split and kept dry where possible.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Drill sample preparation and base metal and precious metal analysis is undertaken by a registered laboratory.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	The records for historical QA/QC are not available.
	<i>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.</i>	The records for historical QA/QC are not available.

	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample sizes are considered appropriate for grain size of sample material to give an accurate indication of gold mineralisation. A sample is collected from full width of the sample interval to ensure it is representative of sample lithology.
<i>Quality of assay data and laboratory tests</i>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	One metre individual samples are analysed for all RC, aircore and RAB drill holes. Diamond core was sampled on geological intervals between 0.25 and 1.0 metre sample width. Analysis is by 25-40g fire assay with ICP-MS finish for gold. This methodology is considered appropriate for gold at the exploration phase.
	<i>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.</i>	No geophysical tools were used to estimate mineral or element percentages.
	<i>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.</i>	The records for historical QA/QC are not available.
<i>Verification of sampling and assaying</i>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Samples are verified by the geologist before importing into the main database (Datashed). Intersections are verified by two staff members.
	<i>The use of twinned holes.</i>	No twin holes have been drilled.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary data was collected using a standard set of templates and codes for each company. Geological sample logging was undertaken on one metre intervals for all RC, aircore and RAB drilling and at geological intervals for diamond core with colour, structure, alteration and lithology recorded for each interval. Data is verified before loading to the database. Geological logging of all samples is undertaken.
	<i>Discuss any adjustment to assay data.</i>	No adjustments or calibrations are made to any assay data reported.
<i>Location of data points</i>	<i>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.</i>	All maps and locations are in UTM grid (GDA94 Z50) and have been surveyed or measured by hand-held GPS with an accuracy of $>\pm 5$ metres. Down hole surveys are undertaken using the spear method at 20-60m intervals.
	<i>Specification of the grid system used.</i>	Drill hole and sample site co-ordinates are in UTM grid (GDA94 Z50) and converted from local grid references.
	<i>Quality and adequacy of topographic control.</i>	Historical drill hole collars and RL's are surveyed by qualified surveyors in most instances. Hand held GPS is used for exploration drill holes in some instances with an accuracy of $\pm 5$ metres.
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	Variable drill hole spacings are used to adequately test targets and are determined from geochemical, geophysical and geological data together with historical drilling information.
	<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>	There is a current JORC 2004 mineral resource at Break of Day, Lena Leviticus and Numbers defined by Silver Lake Resources. The Mineral Resources and Ore Reserve estimate at Break of Day and Leviticus was first prepared and disclosed in accordance with the 2004 Edition of the Australian Code of Reporting of Mineral Resources and Ore Reserves (JORC 2004) and have not have not been updated since to comply with JORC 2012 on the basis that the information had not materially changed since it was last reported. For further details refer to SLR ASX announcement 28 August 2015: "Mineral Resources-Ore Reserves - August 2015".
	<i>Whether sample compositing has been applied.</i>	There is no evidence of any historical sample compositing
<i>Orientation of data in relation to geological structure</i>	<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>	Drilling is designed to cross the mineralisation as close to perpendicular as possible. Most drill holes are designed at a dip of approximately -60 degrees. The mineralisation at Leviticus and Break of Day South has been re-interpreted at dip sub-vertically between 80 degrees to 75 degrees to the west. The true width of historical drill intersections are not known but interpreted to be between 20-80% of the drill intersection width.
	<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>	No orientation based sampling bias is known at this time.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	No historical chain of data is available.
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No external audits or reviews of modelling techniques and data have been undertaken.

## Section 2 Reporting of Exploration Results

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	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 Break of Day prospect is located on granted mining lease M21/106, and Break of Day South and Leviticus on E58/335. The primary tenement holder is Silver Lake Resources Ltd. Musgrave minerals commenced a Farm-In and Joint Venture on the project on 24 November 2015 (see MGV ASX announcement 25 November 2015: "Musgrave Secures Advanced Gold and Copper Project". The Mt Eelya prospect is located on granted exploration licence E20/608 and the primary tenement holder is Silver Lake Resources Ltd. The Hollandaire and Hollandaire West deposits are located on E20/699 and the primary tenement holder is Cue Minerals Pty Ltd a 100% subsidiary of Silver Lake Resources Ltd. The Hunky Dory prospect is located on granted mining leases M20/225, M20,245, M20/277 and the primary tenement holder is Silver Lake Resources Ltd. Purple Rain is located on M58/224 and the primary tenement holder is Silver Lake Resources Ltd. The Cue project tenements consist of 31 licences (Lena and Break of Day is M21/106 and Hollandaire E20/699) as outlined in the Farm-In and Joint Venture Agreement. The tenements are subject to standard Native Title heritage agreements and state royalties. Third party royalties are present on some individual tenements.
	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.	The tenements are in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Historical drilling, soil sampling and geophysical surveys have been undertaken in different areas on the tenements intermittently by multiple third parties over a period of more than 30 years. At Moyagee historical exploration and drilling has been undertaken by a number of companies and most recently by Silver Lake Resources Ltd in 2009-2011.
Geology	Deposit type, geological setting and style of mineralisation.	Geology comprises typical Archaean Yilgarn greenstone belt lithologies and granitic intrusives. Two main styles of mineralisation are present, typical Yilgarn Archaean lode gold and volcanic massive sulphide (VMS) base metal and gold mineralisation within the Eelya Felsic Complex.
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: eastings 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.	All relevant historical drill hole information has previously been reported by Silver Lake Resource Ltd.
Data aggregation methods	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.	All significant new drill hole assay data are reported in this release. No cut-off has been applied to any sampling.
	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.	All significant drill hole assay data are reported in this release. No cut-off has been applied to any sampling.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been reported.
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 (e.g. 'down hole length, true width not known').	True widths are not known but is expected to vary between 20-80% of the intersection width.

<i>Diagrams</i>	<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>	Diagrams referencing historical data can be found in the body of this report.
<i>Balanced reporting</i>	<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>	No new data is available. All data is a summary of significant historical information.
<i>Other substantive exploration data</i>	<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>	All material results from geochemical and geophysical surveys and drilling related to these prospects has been reported or disclosed previously by historical tenement holders.
<i>Further work</i>	<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>	A range of exploration techniques will be considered to progress exploration including additional surface sampling and drilling.
	<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>	Refer to figures in the body of this announcement.

