



ASX RELEASE

27<sup>th</sup> August 2015

ASX: MGV

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## Exploration Update - Corunna

- **Anomalous lead, zinc and silver identified in aircore drilling at the Corunna project in South Australia**
- **Anomalous silver-lead-zinc zone identified over 300m strike and open to north and south**
- **Results include:**
  - **11m @ 1.0% Pb, 0.5% Zn and 4.2g/t Ag from 19m**
  - **6m @ 1.0% Pb, 0.2% Zn and 8.2g/t Ag from 14m**
  - **13m @ 0.6% Pb, 0.4% Zn and 7.2g/t Ag from 32m**
  - **22m @ 0.5% Pb, 0.2% Zn and 13.2g/t Ag from 17m**

Musgrave Minerals Ltd ("Musgrave Minerals" or "the Company") (ASX: MGV) is pleased to announce that it has intersected anomalous silver, lead, zinc and copper from aircore drilling at its wholly owned Corunna Project (EL5497).

The Corunna Project is in the emerging epithermal porphyry province of the Southern Gawler Craton which hosts the Menninnie Dam Zn-Pb-Ag deposit and the Paris epithermal silver deposit (Figure 1).

Aircore drilling tested six surface geochemical targets with best results being returned from Area 1 including 11m @ 1.0% Pb, 0.5% Zn and 4.2g/t Ag from 19m in drill hole COAC017; 6m @ 1.0% Pb, 0.2% Zn and 8.2g/t Ag from 14m in drill hole COAC018; 13m @ 0.6% Pb, 0.4% Zn and 7.2g/t Ag from 32m in drill hole COAC019 and 22m @ 0.5% Pb, 0.2% Zn and 13.2g/t Ag from 17m in drill hole COAC021.

49 holes were drilled (Figure 2) for a total of 1,740m with hole depth varying from 9m to 58m. All results are shown in Appendix 1.

The silver-lead-zinc anomalism in Area 1 is present in five drill holes over a strike length of 300m and open to both the north and south (Figure 3). Target Area 1 is at a potentially significant intersection of two major structures. All exploration data is currently being reviewed in preparation for further exploration to follow-up this encouraging result.

Musgrave Minerals Managing Director Rob Waugh said, “The anomalism is broad spaced and completely open in three directions. The association with our strongest conceptual and geochemical target at the intersection of the Uno fault and a significant north-east structure is consistent with our geological model. This is positive for our understanding of the mineralising processes within the region”.

The Corunna Project is located approximately 50km west of Port Augusta and is well positioned in regards to infrastructure and proximity to the coast.

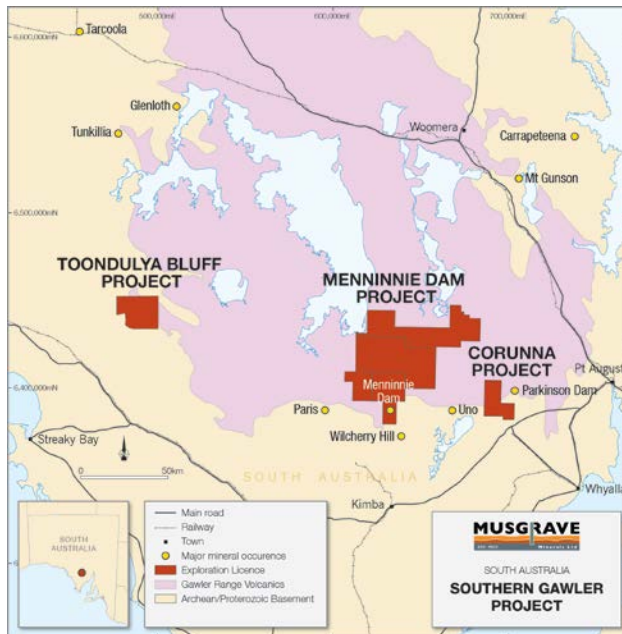


Figure 1: **Location of Musgrave’s Corunna Project in the Southern Gawler Craton**

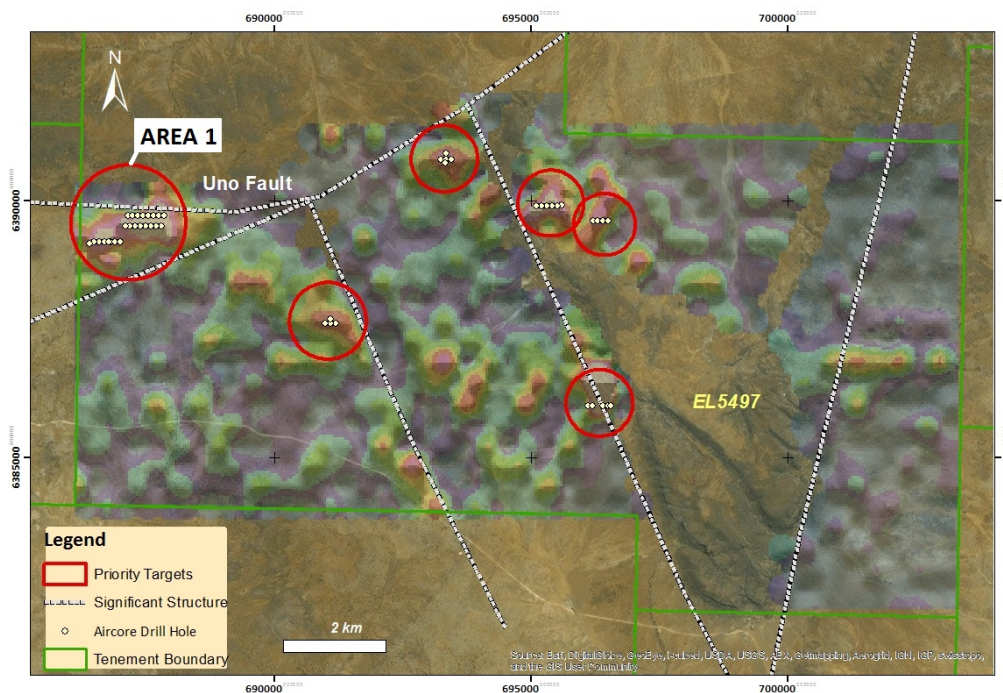


Figure 2: **High priority epithermal Ag-Pb-Zn-Cu targets shown on gridded silver soil geochemical image with landsat backdrop and aircore drill hole collars**



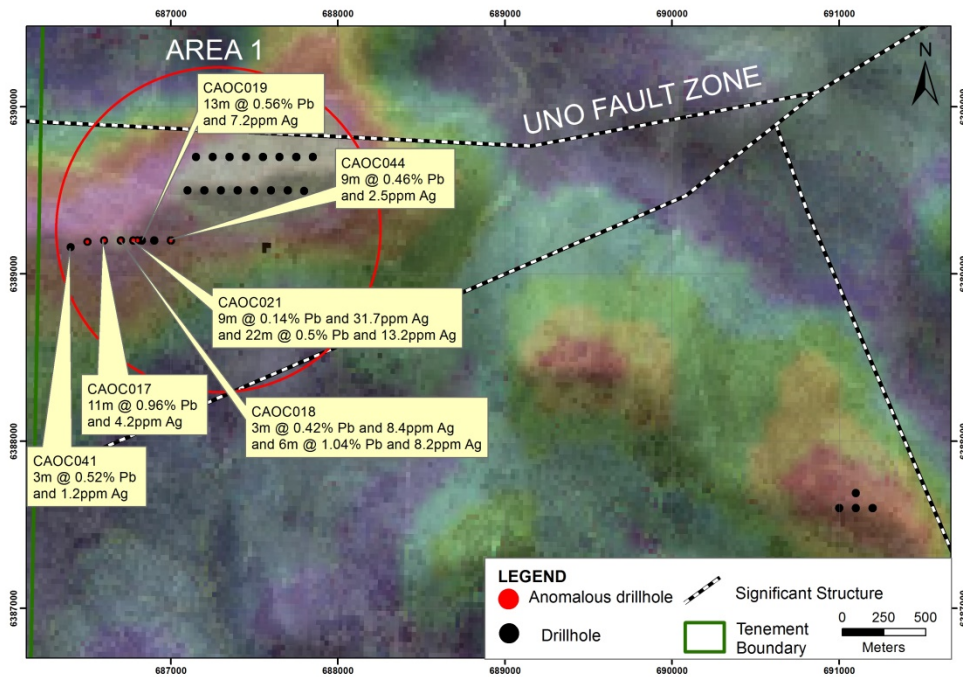


Figure 3: **Area 1 target and aircore drill hole collar locations with anomalous silver and lead assay results**

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**Competent Person's Statement**

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves 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.

**About Musgrave Minerals**

Musgrave Minerals Ltd is an active Australian base metals explorer with a large exploration footprint in the Musgrave Province in South Australia, with tenements covering an area of approximately 40,000km<sup>2</sup>. The Company also has a new Ni-Cu sulphide project in the highly prospective 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. Musgrave has a powerful shareholder base with four mining and exploration companies currently participating as cornerstone investors.



## Appendix 1: Summary of Corunna Aircore Drill Hole Locations and Significant Results

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Az	Dip (degrees)	RL	Total Depth (m)	From (m)	Interval (m)	Pb (%)	Zn (%)	Cu (%)	Ag (ppm)
CAOC001	AC	Regional	687798	6385745	0	-90	221	47.00	NSA					
CAOC002	AC	Regional	687699	6385745	0	-90	223	58.00	NSA					
CAOC003	AC	Regional	687599	6385745	0	-90	224	27.00	NSA					
CAOC004	AC	Regional	687500	6389499	0	-90	224	52.00	NSA					
CAOC005	AC	Regional	687400	6389500	0	-90	226	33.00	NSA					
CAOC006	AC	Regional	687300	6389500	0	-90	227	18.00	NSA					
COAC007	AC	Regional	687200	6389500	0	-90	228	45.00	NSA					
COAC008	AC	Regional	687100	6389500	0	-90	227	30.00	NSA					
COAC009	AC	Regional	687150	6389700	0	-90	228	39.00	NSA					
COAC010	AC	Regional	687250	6389700	0	-90	227	46.00	NSA					
COAC011	AC	Regional	687350	6389700	0	-90	226	40.00	NSA					
COAC012	AC	Regional	687450	6389700	0	-90	224	38.00	NSA					
COAC013	AC	Regional	687550	6389700	0	-90	223	28.00	NSA					
COAC014	AC	Regional	687650	6389700	0	-90	225	48.00	NSA					
COAC015	AC	Regional	687750	6389700	0	-90	223	51.00	NSA					
COAC016	AC	Regional	687850	6389700	0	-90	222	48.00	NSA					
COAC017	AC	Regional	686600	6389200	0	-90	230	50.00	19	11	0.96	0.48	0.05	4.2
COAC018	AC	Regional	686700	6389200	0	-90	229	42.00	8	3	0.42	0.07	0.04	8.4
									14	6	1.04	0.21	0.04	8.2
COAC019	AC	Regional	686800	6389200	0	-90	228	45.00	32	13	0.56	0.39	0.02	7.2
COAC020	AC	Regional	686825	6389200	0	-90	228	40.00	NSA					
COAC021	AC	Regional	686775	6389200	0	-90	229	48.00	6	9	0.14	0.07	0.07	31.7
									17	22	0.51	0.25	0.02	13.2
COAC022	AC	Regional	691200	6387600	0	-90	215	30.00	NSA					
COAC023	AC	Regional	691100	6387600	0	-90	218	42.00	NSA					
COAC024	AC	Regional	691000	6387600	0	-90	218	39.00	NSA					
COAC025	AC	Regional	691100	6387690	0	-90	217	39.00	NSA					
COAC026	AC	Regional	696100	6386000	0	-90	219	9.00	NSA					
COAC027	AC	Regional	696190	6386000	0	-90	219	13.00	NSA					
COAC028	AC	Regional	696400	6386000	0	-90	218	22.00	NSA					
COAC029	AC	Regional	696490	6386012	0	-90	219	22.00	NSA					
COAC030	AC	Regional	696550	6386000	0	-90	223	30.00	NSA					
COAC031	AC	Regional	696200	6389600	0	-90	229	30.00	NSA					
COAC032	AC	Regional	696300	6389600	0	-90	225	27.00	NSA					
COAC033	AC	Regional	696400	6389600	0	-90	224	30.00	NSA					
COAC034	AC	Regional	696500	6389600	0	-90	222	24.00	NSA					
COAC035	AC	Regional	695585	6389911	0	-90	237	39.00	NSA					
COAC036	AC	Regional	695500	6389900	0	-90	240	36.00	NSA					
COAC037	AC	Regional	695400	6389900	0	-90	244	33.00	NSA					
COAC038	AC	Regional	695300	6389900	0	-90	245	33.00	NSA					
COAC039	AC	Regional	695200	6389900	0	-90	245	36.00	NSA					
COAC040	AC	Regional	695100	6389900	0	-90	248	27.00	NSA					
COAC041	AC	Regional	686500	6389192	0	-90	232	44.00	33	3	0.52	0.15	0.02	1.2



Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Az	Dip (degrees)	RL	Total Depth (m)	From (m)	Interval (m)	Pb (%)	Zn (%)	Cu (%)	Ag (ppm)
COAC042	AC	Regional	686400	6389160	0	-90	234	49.00	NSA					
COAC043	AC	Regional	686900	6389200	0	-90	228	36.00	NSA					
COAC044	AC	Regional	687000	6389200	0	-90	227	36.00	21	9	0.46	0.07	0.02	2.5
CAOC045	AC	Regional	693250	6390800	0	-90	226	33.00	NSA					
COAC046	AC	Regional	693350	6390800	0	-90	230	19.00	NSA					
COAC047	AC	Regional	693450	6390800	0	-90	229	27.00	NSA					
COAC048	AC	Regional	693333	6390720	0	-90	225	33.00	NSA					
CAOC049	AC	Regional	693346	6390915	0	-90	232	29.00	NSA					

**Notes**

1. An accurate dip and strike and the controls on mineralisation are yet to be determined and the true width of the intercepts is not yet known
2. All intervals recorded in Appendix 1 above are >10ppm Ag or 0.3% Pb, or 0.3% Zn, or 0.3% Cu or 0.2ppm Au and contain no more than 1m of internal dilution
3. Hole CAOC021 interval 6-9m analytical result is determined from a 3m composite sample and this anomalous results was not re-sampled on 1m intervals (as were anomalous results in holes CAOC017, CAOC018, CAOC019, CAOC021 and CAOC041 were)
4. Hole CAOC044 analytical result is determined from (3) 3m composite samples and these anomalous results were not re-sampled on 1m intervals (as were anomalous results in holes CAOC017, CAOC018, CAOC019, CAOC021 and CAOC041 were)
5. NSA (no significant assay) – No assay above 10ppm Ag or 0.3% Pb or 0.3% Zn or 0.3% Cu or 0.2ppm Au
6. No high grade cut was used
7. g/t (grams per tonne)
8. ppm (parts per million)
9. ppb (parts per billion)
10. X = below detection limit



**Corunna Project**  
**JORC TABLE 1**  
**Section 1 Sampling Techniques and Data**

<b>Criteria</b>	<b>Explanation</b>	<b>Commentary</b>
<i>Sampling techniques</i>	<i>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.</i>	Sampling is undertaken using standard industry practices.  Aircore sample intervals are set at 3m composites and sampled on site, before being transported and analysed in Adelaide. Anomalous intervals were re-sampled at 1m intervals. A handheld XRF device is utilized to determine composite sample intervals.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	Drill hole co-ordinates are in UTM grid (GDA94 Z53) and have been measured by hand-held GPS with an accuracy of $\pm 4$ 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>	Aircore drilling was used to obtain samples which were analysed at intervals of between 1m and 3m. Samples were pulverized and analysed using MS/ICP for base metals and precious metals.  Individual samples weigh less than 3kg to ensure total preparation at the laboratory pulverization stage. The sample size is deemed appropriate for the grain size of the material being sampled.
<i>Drilling techniques</i>	<i>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).</i>	Aircore drilling was used with a blade and RC was used to penetrate hard zones within the regolith.
<i>Drill sample recovery</i>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Only visual sample recovery methods were used.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	An effort was undertaken to ensure samples stayed dry and were collected using a PVC tube.
	<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 bias has been observed between sample recovery and grade.
<i>Logging</i>	<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 drill samples are undertaken on a routine basis.
	<i>The total length and percentage of the relevant intersections logged.</i>	All drill holes are logged in full on completion.
<i>Sub-sampling techniques and sample preparation</i>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No core sampling has been undertaken.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	All intervals are tube sampled.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Sample preparation and base metal and precious metal analysis is undertaken by Intertek Genalysis, in Wingfield, South Australia. Sample preparation by dry pulverisation to 90% passing 75 micron.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Field QC procedures involve the use of certified reference standards, duplicates and blanks at appropriate intervals.
	<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>	Sampling was carried out using MGV protocols and QAQC procedures as per industry best practice. Duplicate samples are routinely checked against originals.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample sizes are considered appropriate for the commodities and elements explored and analysed for.
<i>Quality of assay</i>	<i>The nature, quality and appropriateness of the assaying and</i>	Drill sample analysis is undertaken by Intertek Genalysis, in Wingfield, South Australia, multi-

<i>data and laboratory tests</i>	<i>laboratory procedures used and whether the technique is considered partial or total.</i>	element analysis by four acid total digest (hydrochloric, nitric, perchloric and hydrofluoric acid) and ICP-OES and ICP-MS to acceptable detection limits. Analysis for a total of 34 elements is recorded.
	<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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	In addition to MGV standards, duplicates and blanks, Genalysis incorporate laboratory QAQC including standards, blanks and repeats as a standard procedure. Certified reference materials that are relevant to the type and style of mineralisation targeted are inserted at regular intervals.
<i>Verification of sampling and assaying</i>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	At least two company representatives verify significant intersections including either, the Managing Director, Exploration Manager, Chief Geologist or Senior Geologist.
	<i>The use of twinned holes.</i>	No twin holes have yet been drilled by MGV.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary data is collected using a standard set of Excel templates on a Toughbook laptop computer using lookup codes. Geological sample logging was undertaken on one metre intervals for aircore drilling with colour, structure, alteration and lithology recorded for each interval. Data is verified before loading to a CSA Global database. Geological logging of all samples was undertaken.
	<i>Discuss any adjustment to assay data.</i>	No adjustments or calibrations were made to any assay data reported by MGV.
<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 Z53) and have been measured by hand-held GPS with an accuracy of $\pm 4$ metres. No down hole survey data was collected. All holes are vertical.
	<i>Specification of the grid system used.</i>	Drill hole co-ordinates are in UTM grid (GDA94 Z53)
	<i>Quality and adequacy of topographic control.</i>	Drill hole RL's are approximate using hand held GPS.
<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.
	<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>	The mineralisation has not yet been demonstrated to have sufficient continuity to support the definition of Mineral Resource and Reserves under the classification applied under the 2012 JORC Code.
	<i>Whether sample compositing has been applied.</i>	Composite samples on 3m intervals were undertaken outside visually mineralised zones to determine background responses.
<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>	The precise dip and strike of the mineralisation is not yet known and it is unclear at this stage whether any sampling has a set bias.
	<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>	Chain of custody is managed by MGV. Samples are stored on site and transported to Intertek Genalysis in Wingfield, South Australia by a licenced reputable transport company. When at Genalysis samples are stored in a locked yard before being processed and tracked through preparation and analysis using the Lab Track system.
<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 modeling 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.	All aircore drilling has been within EL5497. MGV is the 100% owner of the tenement.
	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.	Some historical drilling has been undertaken in different areas on the tenements by MGV and third parties but none is directly relevant to the current targets.
Geology	Deposit type, geological setting and style of mineralisation.	Musgrave is exploring for multi commodity style deposits consistent with an interpreted porphyry-epithermal type model.
Drill hole Information	<p>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:</p> <ul style="list-style-type: none"> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> </ul>	A summary of drill collars and other drill hole information is presented in appendix 1.
Data aggregation methods	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.	Cut off grades used for the reported intervals in Appendix 1 are: >10ppm Ag or 0.3% Pb or 0.3% Zn or 0.3% Cu
	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 intervals recorded in Appendix 1 are >10ppm Ag or 0.3% Pb or 0.3% Zn or 0.3% Cu and contain no more than 1m of internal dilution.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are currently used for reporting of exploration results.
Relationship between mineralisation widths and intercept lengths	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p> <p>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').</p>	An accurate dip and strike and the controls on mineralisation are yet to be determined and the true width of the intercepts is not yet known.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Refer to figures and Appendix 1 in body of this announcement.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All drill holes are shown in Appendix 1 and all significant results are reported.
Other substantive exploration data	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.	All material results from geochemical and geophysical surveys and drilling related to these prospects have previously been reported.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	A range of exploration techniques are being considered to progress exploration including additional drilling.
	Diagrams clearly highlighting the areas of possible extensions,	Refer to figures in the body of this announcement.



	<i>including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	
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