



ASX RELEASE

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ASX: MGV

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## Drilling commences on new targets at Menninnie Dam

- **Seven high priority, near surface silver-lead-zinc and copper-gold drill targets have been identified at Menninnie Dam, South Australia.**
- **Musgrave has commenced aircore drilling to test these targets.**

Musgrave Minerals Ltd ("Musgrave Minerals" or "the Company") (ASX: MGV) is pleased to announce the commencement of aircore drilling at the Menninnie Dam Project in the southern Gawler Craton region of South Australia (Figure 1).

Musgrave Minerals has entered into an Agreement with Menninnie Metals Pty Ltd, a wholly-owned subsidiary of Terramin Australia Limited (ASX:TZN) to earn a 51% interest in the Menninnie Dam Project in the first stage, and up to a 75% interest thereafter.

Musgrave has identified seven high priority VTEM (versatile time domain electromagnetic) anomalies (Figure 3) with co-incident surface silver geochemical anomalism. Follow up mapping, rock-chip sampling and infill soil geochemistry has been completed on the VTEM targets and surrounding areas identifying high priority targets for aircore drilling. Mineralised rock-chip samples containing up to 14.2g/t Ag, 0.15% Mo, 39ppb Au and 416ppm Cu have been identified from surface mapping.

Musgrave is targeting silver-lead-zinc and copper-gold-molybdenum mineralisation in this highly prospective, yet underexplored porphyry-epithermal field.

Musgrave has commenced drilling on seven high priority near surface targets. Approximately 60 drill holes for a minimum of 3,000m of aircore drilling is planned over the seven targets. Drill hole depths are expected to vary between 20 and 100m. The drilling program is expected to take between two to three weeks to complete with assay results available early next quarter.

Commenting on the Menninnie Dam targets the Company's Managing Director Rob Waugh said "The new targets generated from the recent airborne electromagnetic survey and regional geochemical and mapping work look very positive. This drill program will help define

the extent of mineralisation within the regolith, near surface weathered zone, at all seven targets and is a first pass drill test.”

The new targets are highly regarded with the **Erebus**, **Sidley** and **Frakes** prospects having widespread silver and lead anomalism in rock-chip samples and soil geochemistry coincident with high priority VTEM targets and outcropping epithermal veining. These prospects are only 5km south-west of the existing Menninnie Central and Viper deposits at Menninnie Dam (Figure 3).

Strong sericite, carbonate, pyrite alteration co-incident with anomalous silver, gold and molybdenum is also a priority target at **Tank Hill** and is consistent with the new porphyry-epithermal model Musgrave has for the project. The **Masaraga** and **Taal** VTEM targets also host anomalous molybdenum and copper from surface sampling (Figure 2). The **Spare Rib** target has anomalous silver and lead in rock-chip and soil samples coincident with a priority VTEM target.

Mr Waugh said “The exploration target model is porphyry-epithermal mineralisation similar to many large deposits globally including the huge Cadia-Ridgeway copper-gold deposit in New South Wales.”

Elsewhere, Musgrave Minerals is currently drilling the Pallatu nickel-copper sulphide targets on the 100% owned Deering Hills project.

Musgrave Minerals’ is in a very strong financial position to successfully follow-up any encouraging results identified at Menninnie Dam.

### **About Menninnie Dam**

The Menninnie Dam Project comprises five Exploration Licences covering a contiguous area of 2,471km<sup>2</sup> in the highly sought after and prospective Gawler Craton region of South Australia (Figure 1). Menninnie Dam is located approximately 100km west of Port Augusta and is well positioned in regards to infrastructure and proximity to the coast.

The Project hosts the Menninnie Central and Viper zones with an inferred mineral resource of 7.7Mt @ 27g/t Ag, 3.1% Zn, 2.6% Pb (\*estimated by Terramin Australia Limited in 2011 in accordance with the 2004 JORC code).

The Menninnie Dam Project is located in a new and very prospective silver province, only 20km east of Investigator Resources’ recent Paris silver discovery.

*\* JORC (2004 Edition)-compliant inferred resource for the Menninnie Central and Viper deposits was reported by Terramin Australia Limited (ASX: TZN) on 1<sup>st</sup> March 2011*

<b>Zone</b>	<b>Tonnes x10<sup>3</sup></b>	<b>Zn (%)</b>	<b>Pb (%)</b>	<b>Ag (g/t)</b>	<b>Pb+Zn (%)</b>
<b>Total Menninnie Central</b>	<b>5,240</b>	<b>3.5</b>	<b>2.7</b>	<b>28</b>	<b>6.1</b>
<b>Total Viper</b>	<b>2,460</b>	<b>2.3</b>	<b>2.4</b>	<b>24</b>	<b>4.8</b>
<b>Total Menninnie Central and Viper</b>	<b>7,700</b>	<b>3.1</b>	<b>2.6</b>	<b>27</b>	<b>5.7</b>

*Inferred Resource (at 2.5% Pb+Zn cut-off) as at 15 February 2011  
MGV is not aware of any new information that would affect the material nature of this resource calculation.*

#### **\*Competent Person’s Statement**

*The information in this report that relates to Mineral Resources or Ore Reserves is based on information 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 2004 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.*

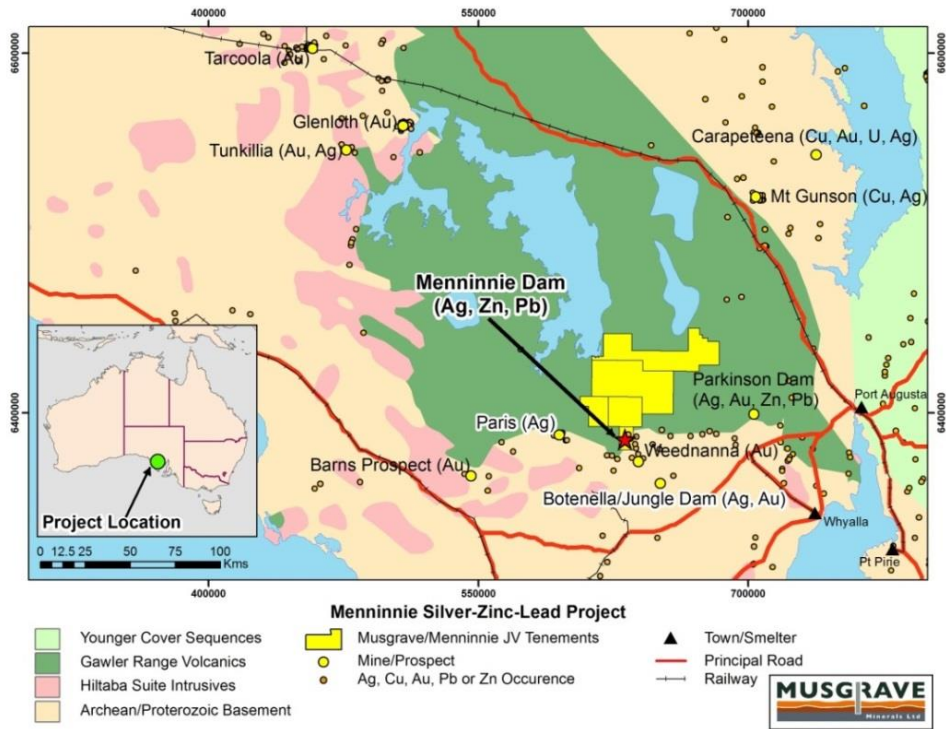


Figure 1: **Location of the Menninnie Dam Project, South Australia**



Figure 2: **Photo of Menninnie Dam exploration area.**



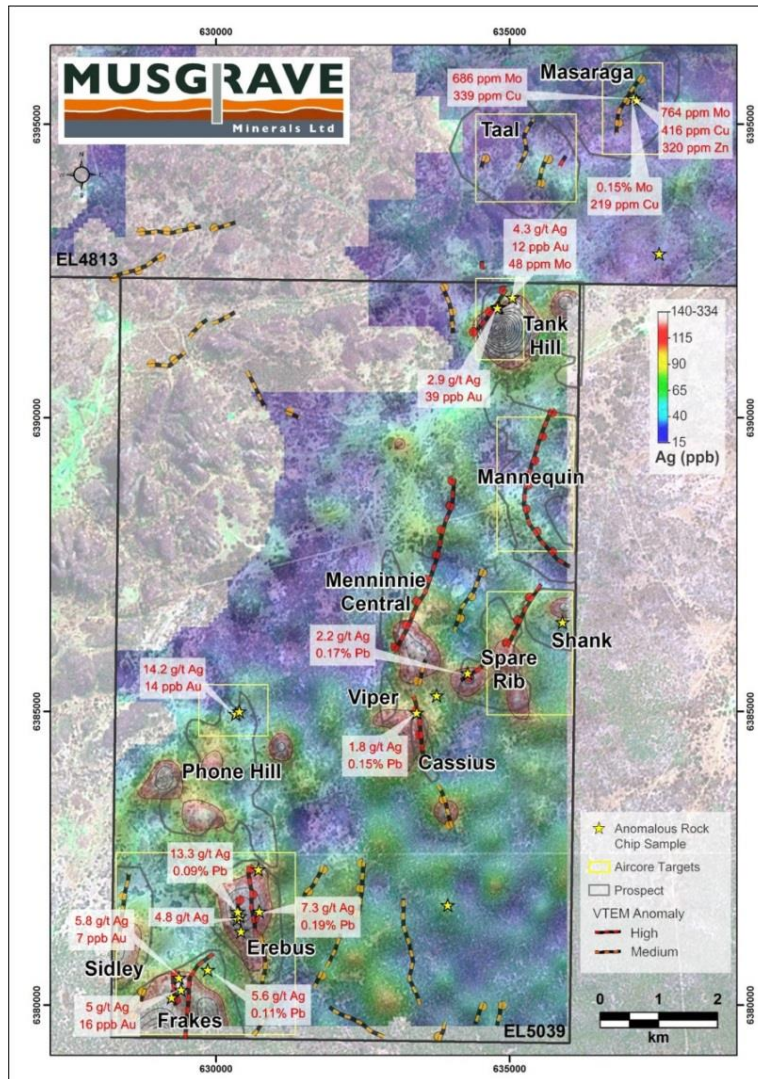


Figure 3: **Location of Menninnie Dam prospects with anomalous rock-chip sample results and VTEM targets on silver soil geochemical grid and ortho-image.**

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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 50,000km<sup>2</sup>. The Company also has an active advanced stage exploration project, Menninnie Dam in the prospective silver and base metals province of the southern Gawler Craton of South Australia. Musgrave has a powerful shareholder base with six mining and exploration companies participating as cornerstone investors.

**Musgrave 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>	No sampling yet undertaken
	<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 has commenced but no sampling has yet been undertaken.
<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 has commenced but no sampling has yet been undertaken.
<i>Drill sample recovery</i>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Aircore drilling has commenced but no sampling has yet been undertaken.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Aircore drilling has commenced but no sampling has yet been undertaken.
	<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 previously been observed.
<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>	Aircore drilling has commenced but no logging has yet been undertaken.
	<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>	Aircore drilling has commenced but no sampling has yet been undertaken.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Aircore drilling has commenced but no sampling has yet been undertaken.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Aircore drilling has commenced but no sampling has yet been undertaken.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Aircore drilling has commenced but no sampling has yet been undertaken. 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>	Aircore drilling has commenced but no sampling has yet been undertaken.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Aircore drilling has commenced but no sampling has yet been undertaken.
<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>	Aircore drilling has commenced but no sampling has yet been undertaken.
	<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>	Aircore drilling has commenced but no sampling has yet been undertaken.
<i>Verification of sampling and assaying</i>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Aircore drilling has commenced but no sampling has yet been undertaken.
	<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>	When drill holes are completed primary data will be collected using a standard set of Excel templates on a Toughbook laptop computer using lookup codes. Geological logging is undertaken on one metre intervals with colour, structure, alteration and lithology recorded for each interval. Data is verified before loading to a CSA Global database.
	<i>Discuss any adjustment to assay data.</i>	No assay data has yet been received
<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 surveys are undertaken on aircore drill holes. Drill hole dips vary.
	<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 regolith 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>	No sampling has yet been undertaken.
<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>	No sampling has yet been undertaken although future chain of custody will be managed by MGV.
<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

<b>Criteria</b>	<b>Explanation</b>	<b>Commentary</b>
<i>Mineral tenement and land tenure status</i>	<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>	All aircore drilling has been within joint venture tenement EL5039 and EL4813 within the Menninnie Dam Project area. MGV is earning an initial 51% interest in the project with TZN.
	<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>	The tenements are in good standing and no known impediments exist.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Some historical drilling has been undertaken in different areas on the tenements by MGV and third parties but none has directly tested the current targets.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	Musgrave is exploring for multi commodity style deposits consistent with an interpreted porphyry-epithermal type model.
<i>Drill hole information</i>	<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>• 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> </ul>	A summary of drill collars and other drill hole information will be presented when drilling results are received and reported.

	<ul style="list-style-type: none"> <li>• hole length.</li> </ul>	
Data aggregation methods	<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>	Aircore drilling has commenced but no sampling has yet been undertaken.
	<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>	Aircore drilling has commenced but no sampling has yet been undertaken.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalent values are currently used for reporting of exploration results.
Relationship between mineralisation widths and intercept lengths	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><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></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	<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>	Refer to figures 1 and 2 in body of this announcement.
Balanced reporting	<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>	Aircore drilling has commenced but no sampling has yet been undertaken.
Other substantive exploration data	<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 have previously been reported.
Further work	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	A range of exploration techniques are being considered to progress exploration including additional 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 figure 2 in the body of this announcement.