



ASX RELEASE

4th November 2013

ASX: MGV

Musgrave confirms ground EM targets and commences drilling at Pallatu

- **Ground electromagnetic (EM) surveys have confirmed strong basement EM conductors at Pallatu on high priority nickel-copper sulphide targets**
- **Basement diamond drilling of high priority targets has commenced at Pallatu**

Musgrave Minerals Limited ("Musgrave Minerals" or "the Company") (ASX: MGV) is pleased to advise that a ground electromagnetic (EM) survey has confirmed the presence of strong basement conductors at the Pallatu nickel-copper sulphide targets on the Deering Hills Project (Figure 1) in the far north-west of South Australia.

Musgrave Minerals holds a 100% interest in licence EL5317 that hosts the high priority Pallatu nickel-copper sulphide targets.

Commenting on the EM survey the Company's Managing Director Rob Waugh said "This is a really positive step for the exploration of nickel-copper sulphides and a key decision point for drilling. Since massive nickel sulphides are a very strong conductor in bedrock the presence of the conductors in ground EM highlights the potential of these targets."

Musgrave has commenced drilling these high priority EM conductors. A minimum of 500m of diamond drilling is envisaged over at least three targets.

Mr Waugh said "The exploration target model is mafic/ultramafic hosted massive nickel-copper sulphide mineralisation similar to the large deposits at Voisey's Bay in Canada and Sirius' Nova deposit in the Fraser Range of Western Australia."

The ground EM targets cover a very prospective area of known Giles Complex gabbroic intrusives identified through an airborne VTEM (versatile time-domain, electromagnetic) survey. The conductors have a coincident gravity and magnetic response adjacent to known favourable Giles Complex host rocks. Giles Complex gabbroic intrusives are known to host nickel sulphide mineralisation elsewhere in the Musgrave Province.

19 Richardson Street, West Perth WA 6005

Telephone: (61 8) 9324 1061 Fax: (61 8) 9324 1014

Web: www.musgraveminerals.com.au Email: info@musgraveminerals.com.au

ACN: 143 890 671

To date, MGV has identified three high priority late-time basement conductors at Pallatu, 2, 3 and 4 (Figure 2). Ground EM surveys are continuing over the other Pallatu targets. Pallatu 2, 3 and 4 targets all model as near surface, strong, high conductance basement drill targets. All three targets model at less than 80m to top.

The diamond drilling program currently underway will drill test a number of the conductors confirmed through ground EM. Ground EM surveys are continuing and the number of holes drilled will be determined by the ongoing results of the ground EM and initial drill holes into Pallatu targets 3 and 4 (Figure 2).

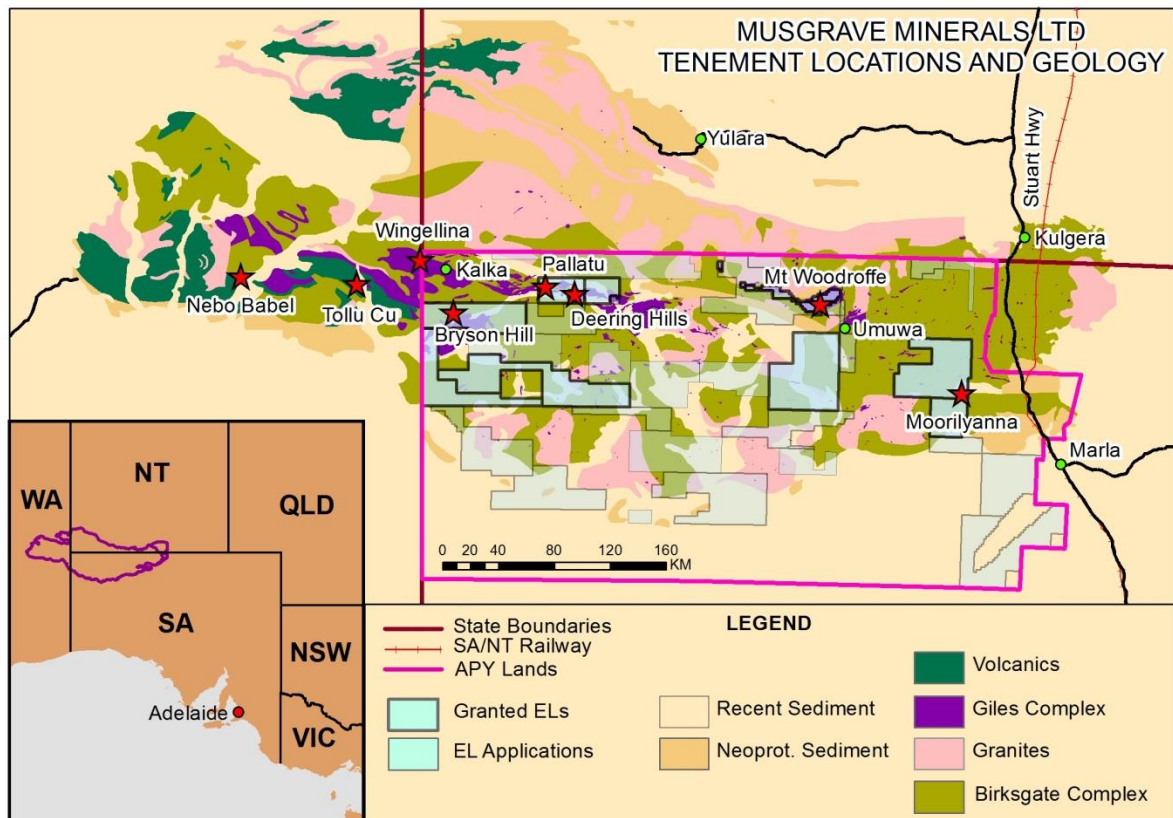


Figure 1: **Location of Musgrave Minerals' Exploration Licences in the Musgrave Province**

Elsewhere in the Musgrave region, Musgrave Minerals has recently identified the highly prospective Smeagol nickel-copper sulphide gossan on the Bryson Hill project and has successfully completed a heritage survey to enable ground EM and drilling.

Musgrave Minerals' is in a very strong financial position with more than \$8.5M million in cash. Our unique knowledge of the region, use of new technologies, systematic and efficient approach to exploration and strong cash position means we are well placed to successfully follow-up on the encouraging results identified at Pallatu.

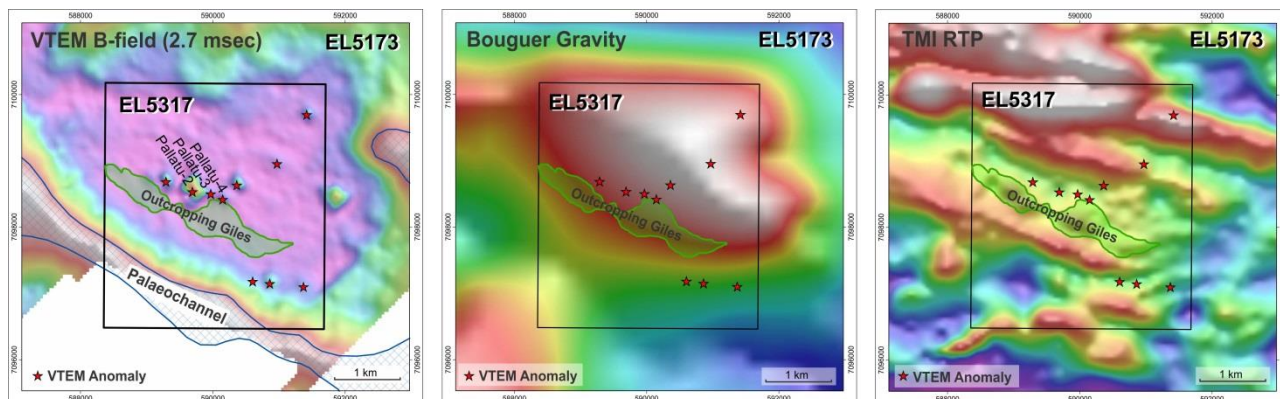


Figure 2: **Image showing new Pallatu licence with VTEM targets, co-incident bouguer gravity anomaly and magnetic anomalies in relation to the known Giles Complex mafic/ultramafic intrusives. The remainder of the licence is under shallow sand cover.**



Figure 3: **Photo of ground EM crew and diamond drill rig setting up at Pallatu.**

Enquiries:

Robert Waugh
Managing Director
Musgrave Minerals Ltd
0439 955 415

Robert Gundelach
Investor Relations
NWR Communications
0451 896 420

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 50,000km². 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

| Criteria | Explanation | Commentary |
|-----------------------|---|---|
| Sampling techniques | <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 Z52) and have been measured by hand-held GPS with an accuracy of ± 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> | Diamond drilling has commenced but no sampling has yet been undertaken. |
| Drilling techniques | <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> | Diamond drilling has commenced but no sampling has yet been undertaken. |
| Drill sample recovery | <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> | Diamond 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> | Diamond 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. |
| 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> | Diamond 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 core and RC chips is undertaken on a routine basis but has yet to commence. Both wet and dry photography of diamond core is undertaken on a tray by tray basis. |
| | <i>The total length and percentage of the relevant</i> | All drill holes are logged in full on |

| | | |
|---|---|--|
| | <i>intersections logged.</i> | 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> | Diamond drilling has commenced but no sampling has yet been undertaken. Diamond core is cut and sampled on geological intervals. A diamond core saw is routinely used to cut the core and selected half core intervals are submitted for analysis. |
| | <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> | RC pre-collars are sometimes used to penetrate through unconsolidated near surface material. These samples are cyclone split at 1m intervals and tube sampled if anomalous readings are identified using the hand held XRF. All measures are taken to maintain a dry sample although some samples are wet when significant groundwater is intersected. |
| | <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> | Diamond 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> | Diamond 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> | Diamond 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> | Diamond 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> | Diamond 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> | Diamond 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> | Diamond 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 MGW. |
| | <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 sample logging was undertaken on one metre intervals (RC-Precollar) and geological intervals for diamond core with |

| | | |
|--|---|---|
| | | colour, structure, alteration and lithology recorded for each interval. Data is verified before loading to a CSA Global database. Geological logging of diamond core has not yet commenced |
| | <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 Z52) and have been measured by hand-held GPS with an accuracy of ± 4 metres. Down hole surveys are undertaken for all RC and diamond drill holes utilising a single shot camera recording at intervals varying between 12 and 30m. Drill hole dips vary. |
| | <i>Specification of the grid system used.</i> | Drill hole co-ordinates are in UTM grid (GDA94 Z52) |
| | <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. Ground EM lines were optimally positioned to survey individual targets. Both moving loop and fixed loop ground EM configurations were used with variable 25-50m station spacings to allow accurate conductor models to be derived. |
| | <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 MGCV. |
| <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 |
|---|--|--|
| <i>Mineral tenement and land tenure</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</i> | All diamond drilling has been within wholly owned MGCV tenement EL5317 within the Musgrave Project area. The tenements are APY aboriginal freehold lands. |

| | | |
|---|--|---|
| <i>status</i> | <i>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 licence to operate in the area.</i> | The tenement is 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> | No historical drilling has been undertaken by any third party that is relevant to 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 low MgO magmatic Ni-Cu systems. |
| <i>Drill hole Information</i> | <p><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></p> <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> | A summary of drill collars and other drill hole information will be presented when drilling results are received and reported. |
| <i>Data aggregation methods</i> | <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> | Diamond drilling has commenced but no sampling has yet been undertaken. No previous drilling has been undertaken in this tenement. |
| | <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> | Diamond drilling has commenced but no sampling has yet been undertaken. No previous drilling has been undertaken in this tenement. |
| | <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. |
| <i>Relationship between mineralisation widths and intercept lengths</i> | <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. |
| <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> | Refer to figures 1, 2 and 3 in body of this announcement. |
| <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</i> | Diamond drilling has commenced but no sampling has yet been undertaken. No previous drilling has been undertaken in this |

| | | |
|---|--|---|
| | <i>be practiced to avoid misleading reporting of Exploration Results.</i> | tenement. |
| <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 related to these prospects have previously been reported. |
| <i>Further work</i> | <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 figures 2 and 3 in the body of this announcement. |

