



ASX RELEASE

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ASX : MGV

Sulphide Intersected at Deering Hills: New Priority Targets Identified

- **Diamond drilling of initial targets at Deering Hills intersects blebby, disseminated and matrix sulphides**
- **Sulphides intersected from three separate EM targets**
- **31 new priority VTEM targets identified**
- **Follow-up of new VTEM targets planned for October, further drilling planned for November**

Musgrave Minerals Limited ("Musgrave Minerals") (ASX: MGV) is pleased to announce that it has identified a series of new targets at its Deering Hills Project in the Musgrave Province in far north South Australia.

Musgrave Minerals can report that drilling has intersected sulphides within variably textured mafic units interpreted to be Giles Complex mafic intrusives (the same host sequence to the Nebo-Babel Ni, Cu, PGM deposit in the West Musgrave) in three drill holes to date at its Deering Hills Project in South Australia (Figure 1).

The Deering Hills Project is situated on wholly-owned tenements in the centre of the Musgrave Geological Province located approximately 200km west of the Stuart Highway and Adelaide to Darwin railway line (Figure 1).

The sulphides occur as disseminated, blebby and matrix accumulations within the Interpreted Giles mafic intrusive feeder dykes (Figures 3 and 4). This is an extremely encouraging early result as it demonstrates that magmatic sulphides are present and validates the Company's exploration approach. Although the nickel and copper grades are low in the targets tested to date, these results demonstrate that the ore forming process are occurring within the area for nickel-copper sulphide accumulation and increase the potential for the area to host an economic deposit.

The mafic host rocks to the sulphide mineralisation show significant textural evidence that is similar to that seen in analogous styles of mafic magmatic sulphides mineralisation around the world, including Vale's Voisey's Bay Mine in Canada and BHP Billiton's Nebo-Babel deposit in the West Musgrave.

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The current drilling has been undertaken on six late time electromagnetic (“EM”) conductors identified from airborne and ground EM surveys. Six EM targets have been drill tested with seven drill holes for a total of 1,135 metres. Drilling of additional targets is continuing with further assays pending. Details of the drill holes completed to date are provided in Appendix 1.

New Targets Identified

Musgrave Minerals recently conducted a versatile time-domain electromagnetic (“VTEM”) survey across the Deering Hills Project and identified 31 new priority targets (Figure 5). The targets are all located in areas of thin sand cover, which have never been previously explored. The context of these initial results is extremely encouraging.

Follow-up reconnaissance field checking has commenced on these VTEM targets. The East Pallatu target (Figure 5) has been field checked and occurs in an area of thin sand cover. Mafic Giles Complex rocks sub-crop just to the south of the target. Minor ironstone float is visible at surface with an initial surface assay returning anomalous nickel, copper and cobalt which may represent the weathered product of mineralization at surface.

All VTEM targets are currently being prioritised for follow-up exploration which will include soil geochemistry and ground EM in preparation for drilling.

Musgrave Minerals Managing Director Rob Waugh said: “We are encouraged by these early results from our first round of drilling at Deering Hills. The textures identified in the core from the sulphides bearing Giles host rocks are very positive. They show that the right processes are occurring within the area for nickel-copper sulphide accumulation and increase the potential for the area to host an economic deposit.

“It is also evident that the systematic exploration methodology Musgrave Minerals has implemented is effective in exploring the project area.

“The new VTEM targets have highlighted that the project area is very prospective and we are eagerly looking forward to drill testing these new targets.”

Planned Program at Deering Hills

A regional geochemical and gravity survey is being planned for October with follow-up ground EM of individual VTEM targets, also planned for October that will help prioritise targets for drill testing.

A reverse circulation (RC) drilling program will be undertaken in November to test these new targets for nickel-copper mineralisation.

Mr Waugh said the company looked forward to providing further updates to investors as results become available.

About Musgrave Minerals

Musgrave Minerals Ltd has a massive exploration footprint in the Musgrave Province in South Australia, with tenements covering an area of approximately 50,000km² – which equates to approximately 5% of the State. The Company has a powerful shareholder base with six mining and exploration companies participating as cornerstone investors.

The Musgrave Province is one of the last under-explored exploration frontiers in Australia and is prospective for a number of commodities. The centrepiece is the recognition of, and access to, the unexplored potential of the Giles Complex, a 1080Ma aged mafic-ultramafic layered intrusive complex that hosts significant nickel and copper sulphide deposits (such as the Nebo/Babel deposit) in the Western Australian portion of the Province.

Musgrave Minerals recently completed a successful IPO raising \$20 million before expenses and listed on the Australian Securities Exchange on 29 April 2011.

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The information in this report that relates to Exploration Results is based on information compiled by Mr Robert Waugh. Mr Waugh is a member of the Australasian Institute of Mining and Metallurgy (AusIMM) and a member of the Australian Institute of Geoscientists (AIG). Mr Waugh is Managing Director of Musgrave Minerals Limited. Mr Waugh has sufficient industry experience 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 their information in the form and context in which it appears.

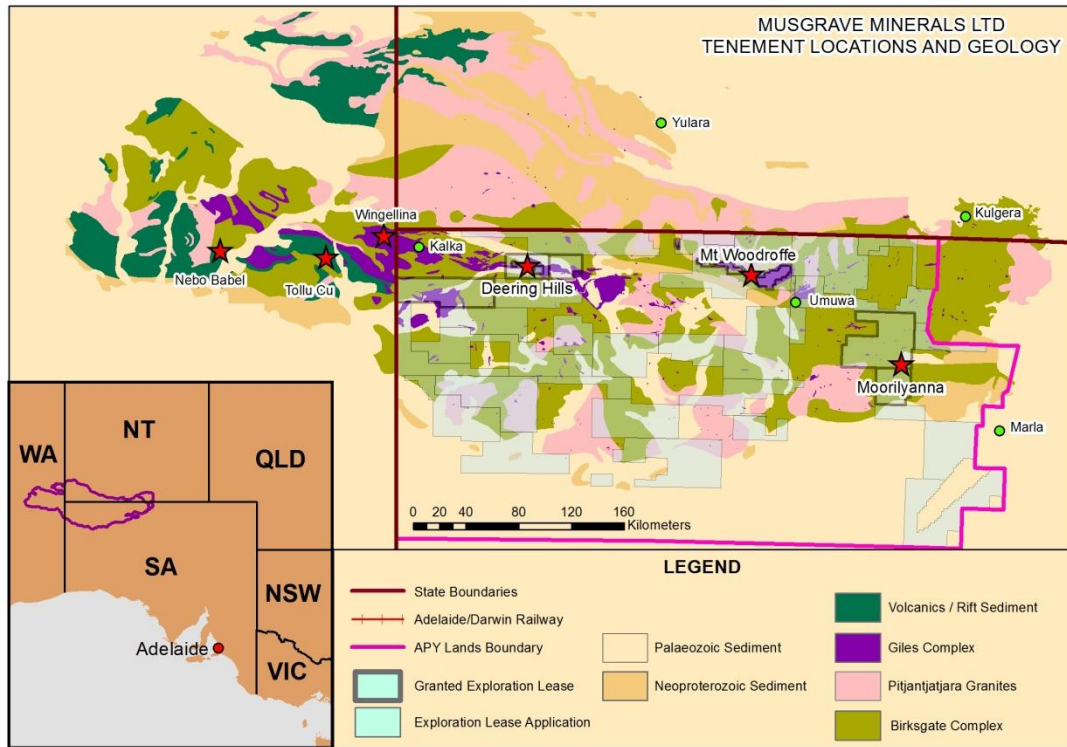


Figure 1: Location of Deering Hills Project Area



Figure 2: Diamond Drilling at Deering Hills

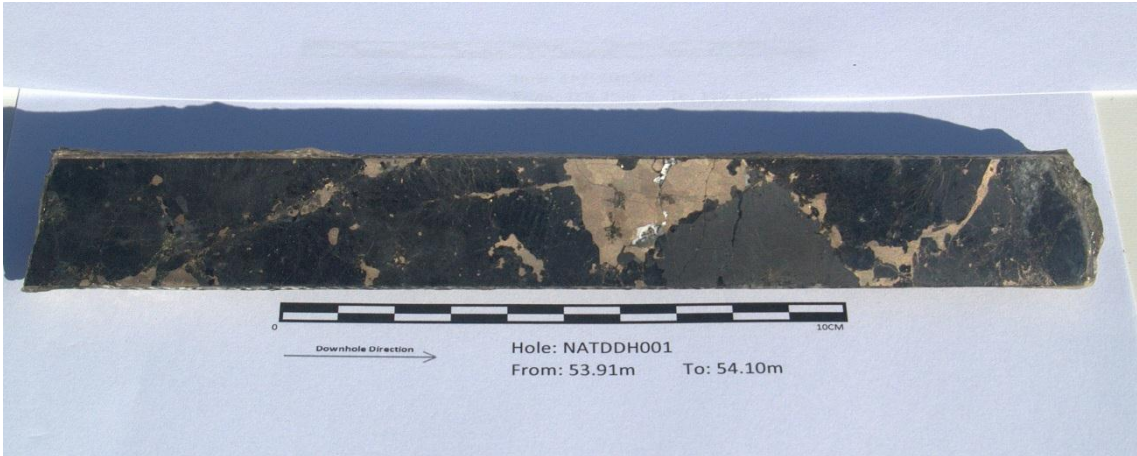


Figure 3: Example of Blebby and Matrix Sulphides in Drill Core at Na'Toth in NADDDH001 from Deering Hills



Figure 4: Example of Disseminated Sulphides in Drill Core at Na'Toth in NADDDH001 from Deering Hills

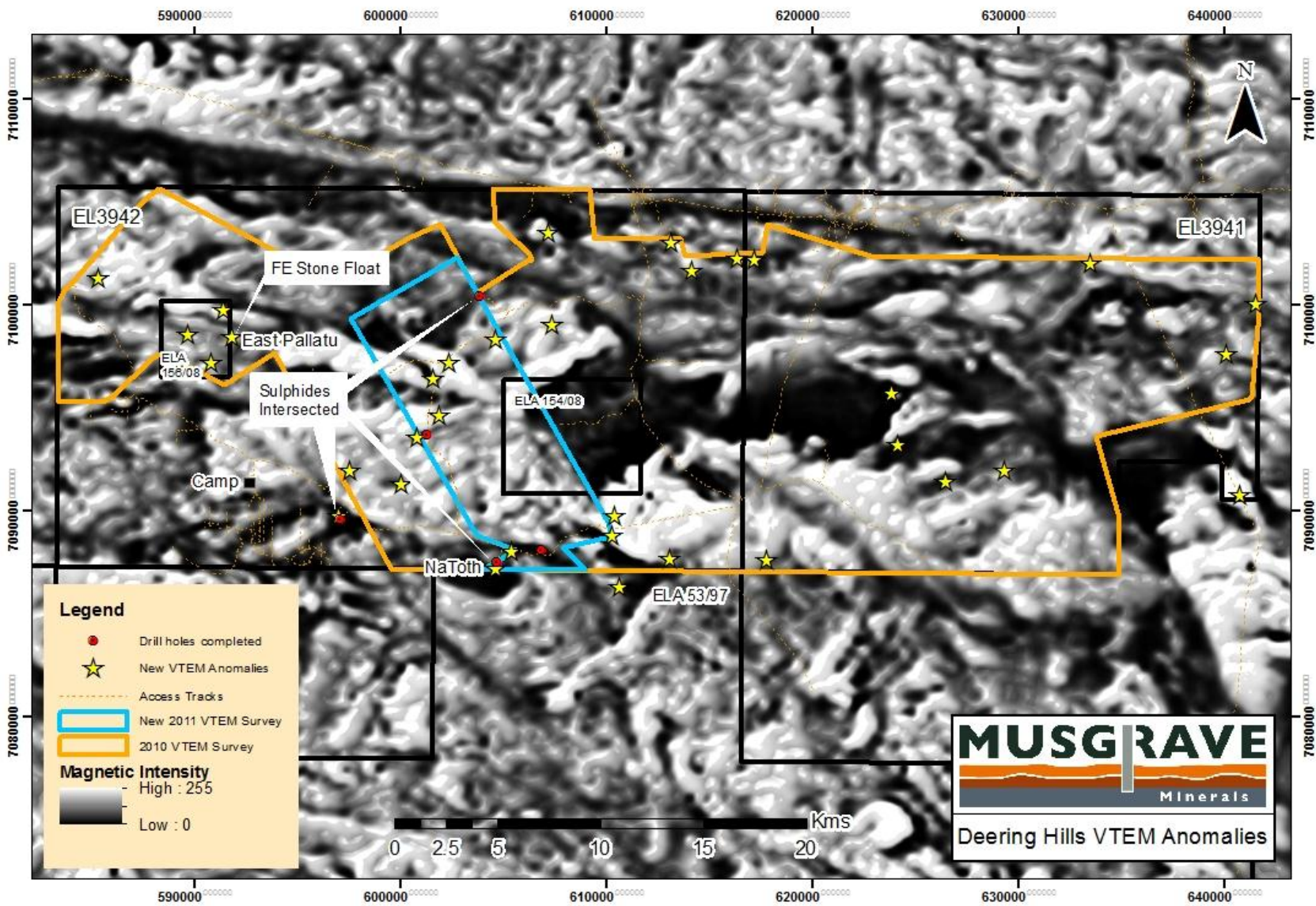


Figure 5: Location of New VTEM Targets at Deering Hills Showing VTEM Survey Areas on Greyscale Aeromagnetic Image

Appendix 1: Summary of Deering Hills Drill Hole Locations and Results

Drill Hole ID	Easting (m)	Northing (m)	Azimuth (degrees)	Dip (degrees)	Total Depth (m)	Maximum Cu (ppm)	Maximum Ni (ppm)	Combined Pt, Pd & Au (ppb)
LYTDDH001	294655	7024417	195	60	211	419	171	14
IVADDDH001	597081	7089885	55	60	342	468	369	34
TLADDDH001	601451	7093830	305	60	81	73	204	20
ZATDDH001	604400	7099800	305	60	168	524	115	19
NATDDH001	604620	7087290	130	60	90	819	167	19
NATDDH002	604385	7087335	150	60	183	Pending	Pending	Pending
TLADDDH002	601445	7093800	330	60	60	Pending	Pending	Pending

Notes

1. Co-ordinates are in UTM grid (GDA94 Z52) and have been measured by hand-held GPS
2. Drilling was undertaken utilising a Boart Longyear LF90 skid mounted diamond drilling rig.
3. Drilling utilised a combination of RC pre-collar and diamond drilling with standard HQ and NQ core diameters
4. All samples are quarter core and are split using a diamond core saw
5. Individual samples are defined on geological intervals with no individual interval greater than 2m
6. Sample preparation and sample analysis is undertaken by Intertek Genalysis, Alice Springs, Northern Territory and Wingfield, South Australia respectively
7. Sample preparation by dry pulverisation and nickel, copper analysis by ICP-OES and ICP-MS to 0.5ppm
8. An accurate dip and strike of the mineralisation is yet to be determined and the true width of the intercepts is not yet known
9. PPM (parts per million)
10. PPB (parts per billion)