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ASX: MGV

New Targets Identified at Menninnie Dam

- **Airborne geophysical survey (VTEM) identifies anomalies co-incident with silver geochemical targets at Menninnie Dam, South Australia**
- **13.3g/t silver identified in surface rock-chip samples on the new Erebus target where there has been no drilling to date**
- **Further assays received from the Tank Hill drilling program including:**
  - **2m @ 4.2% Zn, 0.9% Pb, 267g/t Ag, 0.44g/t Au**
- **Analysis of graphitic zones intersected in RC drilling at the Mannequin prospect returned:**
  - **10m @ 6.3% Total Graphitic Carbon**

Musgrave Minerals Ltd (Musgrave Minerals) (ASX: MGV) is pleased to provide the following exploration update from its Menninnie Dam Project in the southern Gawler Craton region of South Australia (Figure 1).

Musgrave has recently flown a 398 line km airborne VTEM (versatile time domain electromagnetic) survey at Menninnie Dam. The survey has identified seven high priority targets co-incident with surface silver geochemical anomalism (Figure 2). Mineralised rock-chip samples up to **13.3g/t Ag** have been identified within a strongly altered epithermal zone at the Erebus target. The Erebus geochemical anomaly, where there has been no drilling to date is approximately 1.5km in diameter and is co-incident with high quality VTEM anomalies (Figure 2).

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A follow-up drilling program of six reverse circulation (RC) drill holes and a single diamond hole at Tank Hill has returned encouraging assay results (Figure 3 and 4). Drill hole MDRC44 intersected **2m @ 4.2% Zn, 0.9% Pb, 267g/t Ag, 0.44g/t Au** from 138m down hole in fresh rock within a broader zone of 22m @ 0.7% Zn, 0.4% Pb, 44g/t Ag, 0.09g/t Au, from 126m down hole. Current interpretation suggests that the true width of the mineralisation will be approximately 70-80% of the intersection widths. Mineralisation remains open to the northwest. All drill results for the recent RC and diamond drilling program are reported in appendix 1.

This recent RC and diamond drilling program at Tank Hill focused on following up the encouraging zinc-silver-gold and lead intersection in MDRC39 (6m @ 4.9% Zn, 0.7% Pb, 62g/t Ag, 1.2g/t Au), (refer MGV ASX release dated 8 April 2013).

The Tank Hill mineralisation is only 5km north-east of the existing Menninnie Central and Viper deposits at Menninnie Dam. The Menninnie Dam Project is located in a new and very prospective silver province, only 20km east of Investigator Resources' recent Paris silver discovery.

Further analysis of graphitic zones intersected in drill hole MDRC32 has returned **10m @ 6.3% TGC** (total graphitic carbon). No grain size or carbon quality information is available at this stage. The graphite is co-incident with a strong airborne VTEM conductor identified at the Mannequin target (Figure 3).

"The mineralisation discovered to date at Tank Hill is encouraging and further work is required to determine the full extent of the zone", Managing Director Rob Waugh said.

"The new targets generated from the recent airborne electromagnetic and regional geochemical surveys look very positive and will be a focus for exploration over the coming months."

Follow-up exploration will include additional mapping, rock-chip sampling and infill soil geochemistry to better define targets for drill testing.

About Menninnie Dam

In October 2012, Musgrave Minerals 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.

The project comprises five Exploration Licences covering a contiguous area of 2,471km^2 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 Menninnie Dam 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).

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

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

Inferred Resource (at 2.5% Pb+Zn cut-off) as at 15 February 2011

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 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.

About Musgrave Minerals

Musgrave Minerals Ltd is an active Australian base metals explorer with a massive exploration footprint in the Musgrave Province in South Australia, with tenements covering an area of approximately 50,000km^2. 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. Musgrave has a powerful shareholder base with six mining and exploration companies participating as cornerstone investors.

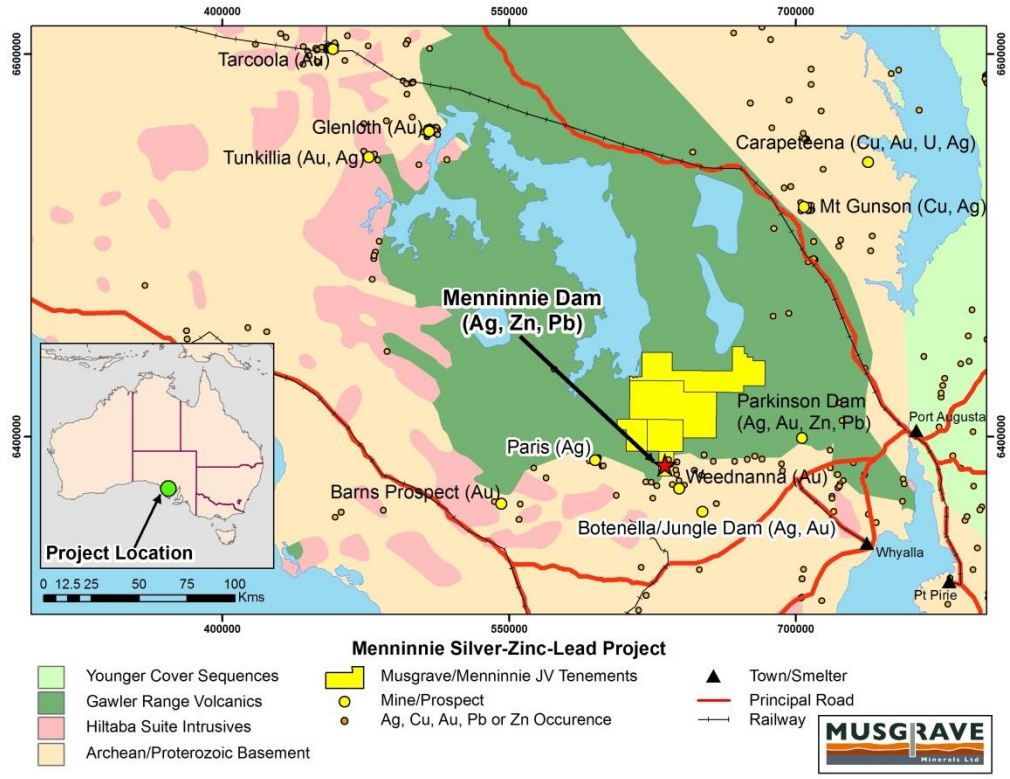

Figure 1: ***Location of the Menninnie Dam Project, South Australia***

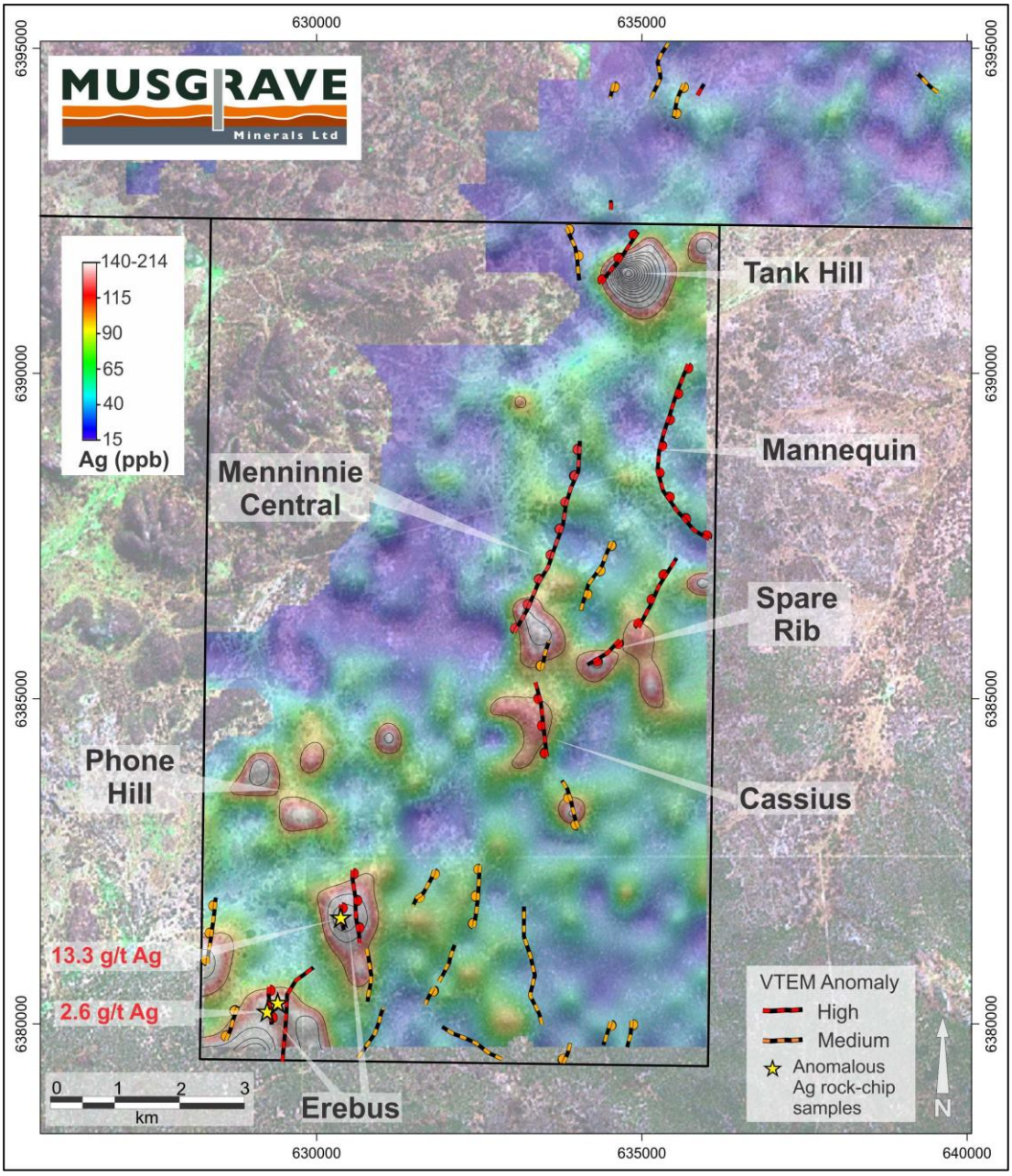

Figure 2: ***Menninnie Dam Priority VTEM anomalies on Silver Soil Geochemical Image***

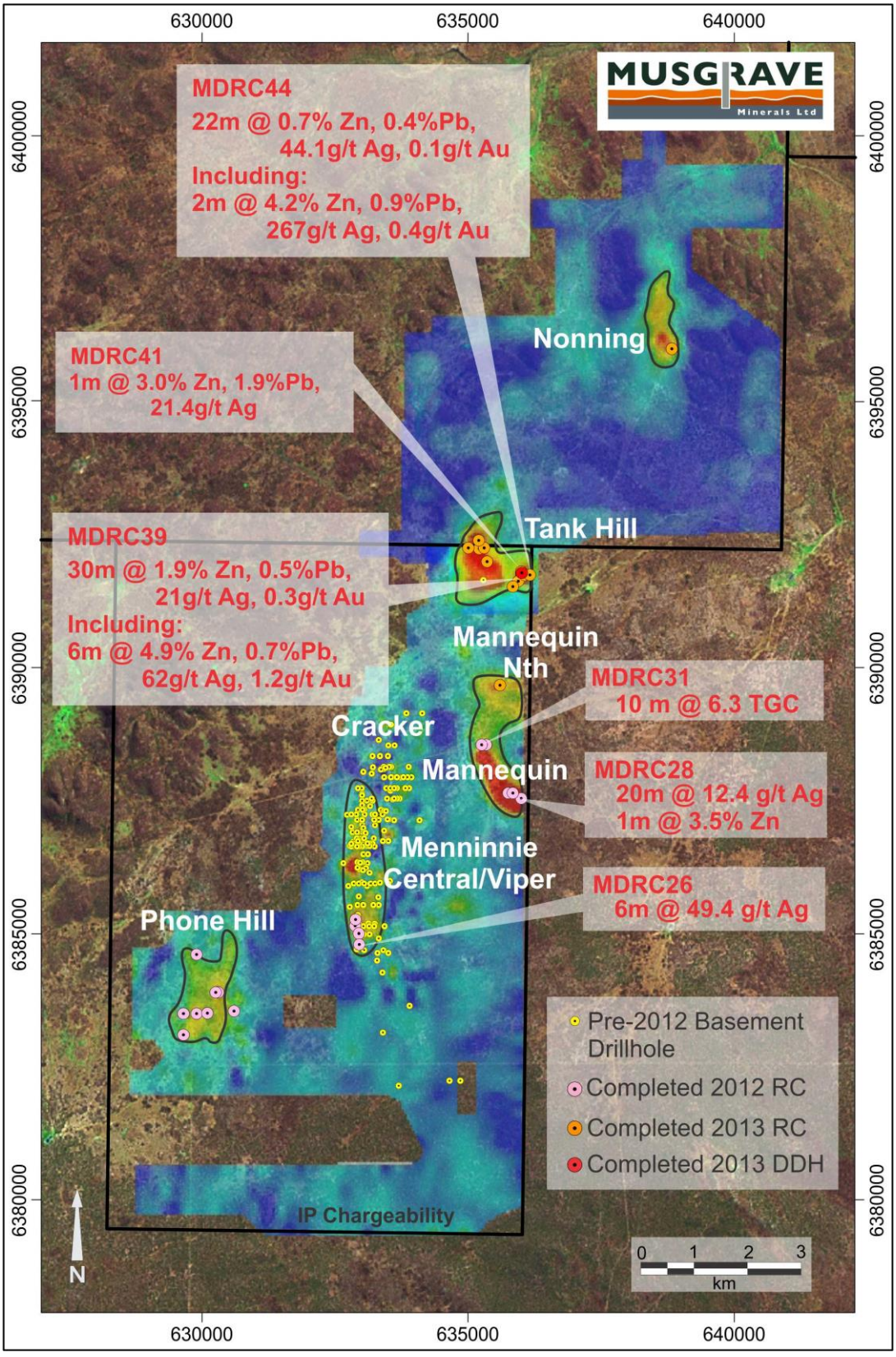

Figure 3: ***Menninnie Dam Drill Hole Locations on IP Chargeability Image and Landsat Background***

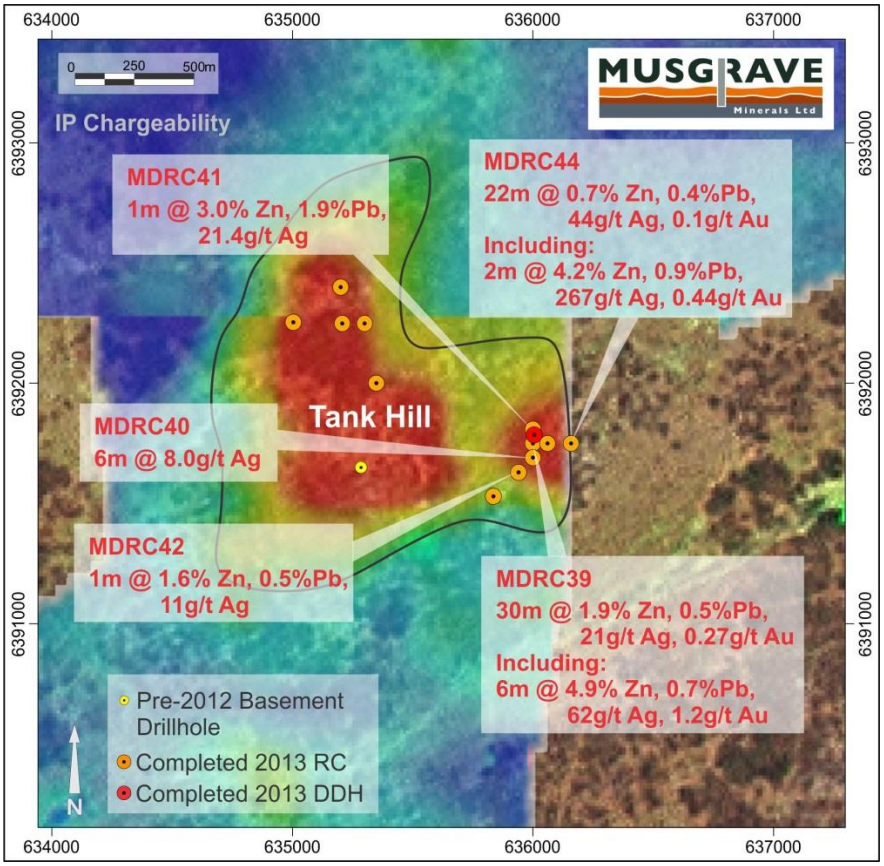

Figure 4: ***Tank Hill Drill Hole Locations on IP Chargeability Image and Landsat Background Showing MDRC39***

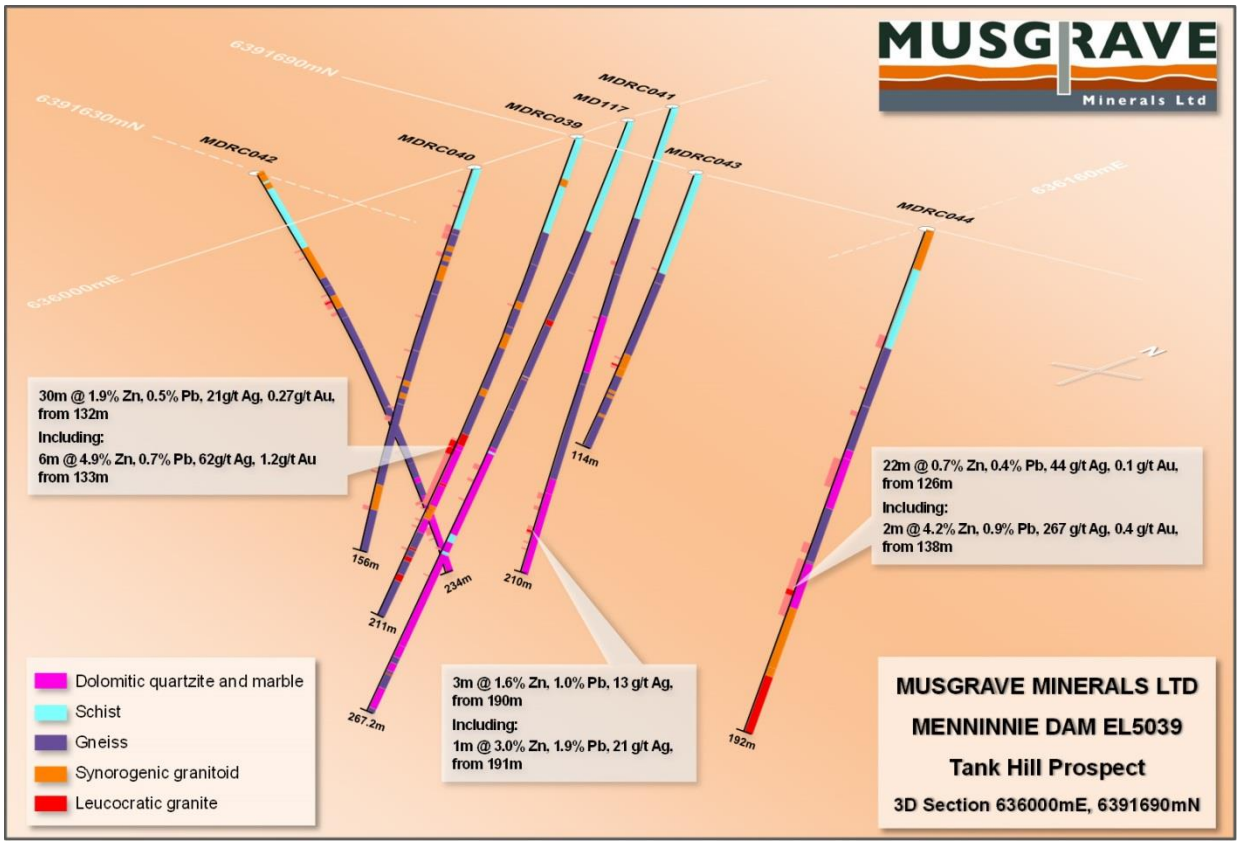

Figure 5: ***Tank Hill Drilling Shown in Three Dimensions***

Appendix 1: ***Summary of New RC 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)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)
MDRC33	RC	Tank Hill	635207	6392249	277	-60	265	198	149	1	0.72	0.06	2.9	0.02
MDRC34	RC	Tank Hill	635003	6392255	97	-60	265	151	NSA					
MDRC35	RC	Tank Hill	635297	6392267	277	-60	268	158	NSA					
MDRC36	RC	Tank Hill	635194	6392406	270	-60	268	109	NSA					
MDRC37	RC	Tank Hill	635346	6391986	270	-60	273	199	125	3	0.34	0.04	5.70	0.03
MDRC38	RC	Mannequin North	635593	6389679	270	-60	220	121	51	1	0.04	0.01	5.10	0.02
									56	1	0.06	0.02	**10.10**	0.02
									66	1	0.59	0.22	1.20	0.02
									84	4	0.03	0.03	5.10	-
									91	1	0.04	0.03	4.60	0.02
									95	1	0.06	0.02	4.70	-
									97	2	0.05	0.03	4.75	-
									101	1	0.07	0.26	9.10	-
MDRC39	RC	Tank Hill	636002	6391753	180	-60	261	211	132	30	1.90	0.46	20.51	0.27
							including		133	**6**	**4.92**	**0.74**	**62.13**	**1.17**
MDRC39	RC	Tank Hill	636002	6391753	180	-60	261	211	168	1	0.47	0.20	17.30	0.03
									181	1	0.47	0.05	3.80	0.10
MDRC40	RC	Tank Hill	635998	6391696	180	-60	262	156	10	1	0.01	0.56	0.90	-
									16	1	0.01	0.46	0.70	-
MDRC40	RC	Tank Hill	635998	6391696	180	-60	262	156	24	6	0.06	0.26	7.93	0.03
							including		25	1	0.07	0.49	**19.70**	0.12
MDRC40	RC	Tank Hill	635998	6391696	180	-60	262	156	35	2	0.03	0.08	4.60	0.04
									61	1	0.44	0.06	1.90	-
									75	1	0.64	0.10	2.50	-
									86	1	0.76	0.19	6.40	0.11
									98	1	0.37	0.06	9.00	0.03
									102	2	0.57	0.07	2.35	0.01
									124	1	0.31	0.04	5.90	-
MDRC41	RC	Tank Hill	636003	6391814	180	-60	262	210	70	2	0.05	0.35	5.80	0.05
									95	1	0.02	0.01	4.00	0.23
									101	1	0.13	0.26	8.60	0.18
									174	3	0.07	0.02	6.30	0.10
									180	2	0.21	0.71	21.40	0.33
									189	1	0.09	0.13	**10.90**	-
MDRC41	RC	Tank Hill	636003	6391814	180	-60	262	210	190	3	**1.58**	**1.04**	**12.60**	0.01
							including		191	1	**3.03**	**1.91**	**21.40**	-
MDRC41	RC	Tank Hill	636003	6391814	180	-60	262	210	196	1	0.39	0.26	6.60	-
									199	1	0.30	0.10	7.50	0.06
MDRC42	RC	Tank Hill	635942	6391633	180	-60	260	234	41	1	0.00	0.03	6.40	0.10
									45	1	0.51	0.04	0.70	-
									66	1	0.29	0.18	4.50	0.02
MDRC42	RC	Tank Hill	635942	6391633	180	-60	260	234	69	5	0.67	0.33	6.54	0.04
							including		70	1	**1.55**	0.48	**10.50**	0.01
MDRC42	RC	Tank Hill	635942	6391633	180	-60	260	234	76	2	0.24	0.13	4.85	0.02
									157	1	0.46	0.04	0.90	-
									188	2	0.06	0.03	9.45	-
									204	5	0.03	0.01	5.42	0.13
									211	1	0.01	0.01	4.80	0.11

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Az	Dip (degrees)	RL	Total Depth (m)	From (m)	Interval (m)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)
MDRC43	RC	Tank Hill	636066	6391747	180	-60	258	114	40	1	0.17	0.05	4.60	-
									77	1	0.32	0.09	6.40	-
									80	1	**1.34**	0.05	1.00	-
									81	1	0.28	0.05	4.00	-
MDRC44	RC	Tank Hill	636167	6391751	180	-60	264	192	41	5	0.01	0.02	7.50	0.21
									61	1	0.11	0.08	**16.30**	0.09
									70	2	0.19	0.07	6.25	0.04
MDRC44	RC	Tank Hill	636167	6391751	180	-60	264	192	88	6	0.39	0.42	23.72	0.06
							including		89	1	0.60	**1.69**	**88.50**	0.07
MDRC44	RC	Tank Hill	636167	6391751	180	-60	264	192	120	4	0.39	0.17	8.10	-
MDRC44	RC	Tank Hill	636167	6391751	180	-60	264	192	126	22	0.71	0.38	44.1	0.09
							including		**138**	**2**	**4.17**	**0.87**	**267**	**0.44**
MDRC44	RC	Tank Hill	636167	6391751	180	-60	264	192	143	5	0.19	0.19	**10.50**	0.05
MDRC45	RC	Tank Hill	635838	6391532	270	-60	262	96	NSA					
MD117	Diam	Tank Hill	636002	6391785	180	-60	262	267	156.00	2.50	0.30	0.07	5.4	0.11
									162.50	1.50	0.22	0.09	9.2	0.08
									171.50	1.00	0.71	0.18	13.7	0.04
									194.18	0.82	0.05	0.07	7.5	0.11
									206.15	0.70	0.34	0.15	13.3	0.04
NORC01	RC	Nonning	638829	6395996	270	-60	235	103	NSA					

Drill Hole ID	Drill Type	Prospect	Easting (m)	Northing (m)	Azimuth (degrees)	Dip (degrees)	Total Depth (m)	From (m)	To (m)	Interval (m)	TGC (%)
MDRC 31	RC	**Mannequin**	**635247**	**6388556**	**270**	**-60**	**132**	**44**	**45**	**1**	**7.1***
								60	**70**	**10**	**6.3**
MDRC 32	RC	**Mannequin**	**635337**	**6388557**	**270**	**-60**	**90**	**70**	**75**	**5**	**5.9**
								85	**87**	**2**	**6.2***

Notes

1. ** Previously reported results*
2. *Co-ordinates are in UTM grid (GDA94 Z53) and have been measured by hand-held GPS with an accuracy of ±4 metres.*
3. *Drill hole RL's are approximate using hand held GPS*
4. *Drilling was undertaken using the reverse circulation (RC) method utilising a UDR650 drilling rig*
5. *All samples are chips and are homogenously split using a cyclone slitter and are analysed as 5m composites or individual 1m samples*
6. *Individual 1m samples were analysed where elevated base metals or favourable alteration was identified*
7. *Individual samples weigh less than 3kg to ensure total preparation at the laboratory pulverization stage*
8. *The sample size is deemed appropriate for the grain size of the material being sampled*
9. *Sampling was carried out using MGV protocols and QAQC procedures as per industry best practice*
10. *Field QC procedure involve the use of certified reference standards, duplicates and blanks*
11. *Sample preparation and base metal and precious metal analysis is undertaken by Intertek Genalysis, in Wingfield, South Australia*
12. *Sample preparation by dry pulverisation and multi element analysis by four acid digest (hydrochloric, nitric, perchloric and hydrofluoric acid) and ICP-OES and ICP-MS to acceptable detection limits and Au by FA25/MS*
13. *Analysis for a total of 37 elements is recorded including possible deleterious elements such as arsenic*
14. *Sample preparation and total graphitic carbon analysis was undertaken by Intertek Genalysis, in Maddington, Western Australia*
15. *Sample preparation by dry pulverisation and total graphitic carbon analysis by CS Analyser to 0.1%TGC*
16. *Total sample weights are not recorded in reconnaissance drilling and as such sample recovery is not accurately measured*
17. *Geological sample logging was undertaken on one metre intervals with colour, alteration and lithology recorded for teach interval*
18. *Field data is collected using excel templates on Toughbook laptop computers*
19. *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*
20. *All intervals recorded above 0.4% Zn and containing no more than 1m of internal dilution below 0.4% Zn*
21. *High grade interval is above 1.0% Zn*
22. *NSA (no significant assay) – No assay above 4g/t Ag, 0.4% Zn or 0.4% Pb or 5.0% TGC*
23. *No high grade cut was used*
24. *g/t (grams per tonne)*
25. *ppm (parts per million)*