

De Grey Mining Ltd

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ASX/MEDIA RELEASE

WIDE ZONES OF MINERALIZATION IDENTIFIED FROM INAUGURAL DRILLING ATSM6

HIGHLIGHTS

- 8 holes for 1179.6 metres at the SM6 Prospect, Sierra Morena Project
- All holes on the Western Vein zone have intersected encouraging mineralization, alteration and textural evidence at relatively shallow depths.
- Textural and geochemical evidence suggests that the veining intersected is part of the upper levels of an epithermal system.
- Western Vein has wide zones of 10 to 60 metres true width multiphase vein brecciation with highly anomalous Au, Ag and As (SM-12-05)
- Deep penetrating geophysical survey to commence in February 2013 to assist in drill targeting for next phase

De Grey Mining Ltd (ASX: DEG) is pleased to provide an exploration update on the recently completed inaugural drilling at the SM6 Prospect, within the Sierra Morena Project area.

During December 2012, an 8 hole 1,179.6 metre diamond drilling programme was completed at the SM6 Prospect where previous surface sampling had discovered two sub-cropping zones of silicification and brecciation with high grade Au-Ag mineralisation associated with a large area of acid sulphate alteration, evidence of structural complexity and intrusive rhyolite domes.

At the Eastern Vein, De Grey completed 3 holes on one section to test sub-cropping high grade quartz veining, where surface sampling and mapping indicated the veining has developed along a NW trending fault zone interpreted over a 1.4km strike length. Previously reported surface sampling of this material returned up to 23.2g/t Au and 3,240.0g/t Ag, and most of the structure is covered by post-mineral soil and ash. Surface mapping suggested the Eastern Vein was controlled by a vertically dipping fault and shallow trenching dug during the drilling programme supported this interpretation.

Interpretation of drilling results however suggests that the vein on the section drilled, appears to be dipping approximately 55 degrees to the NE, and that only hole (SM-12-08) intersected the target vein. Vein breccia material intersected in SM-12-08 was observed over a 40cm interval, displaying encouraging multi-phase brecciation and clay alteration, with anomalous Au (25ppb) and Ag (5ppm Ag), and highly elevated arsenic (>4,000ppm As). This 40cm zone was sampled as part of a 1m sample (and hence grade is expected to have been substantially diluted by the incorporation of barren wall rock in the 1m sample). Character sampling of this 40cm interval will

be undertaken this month to get a more accurate indication of the geochemistry of the quartz vein material.



Figure 1: Quartz veining from SM-12-08 at 26.8m, showing multiphase brecciated chalcedonic textures.

Positive implications for the Eastern Vein are:

- Quartz veining and brecciation developed on the structure has been sampled on surface for over 600m.
- The shallow dipping Eastern Vein was only intersected with the final hole of the programme.
- **Textural and geochemical evidence suggests that the veining intersected is part of the upper levels of an epithermal system, and the veining displays multiphase brecciation, low temperature quartz types with very low base metal values**
- Shallower dipping portions (typically <60 degrees dip) of epithermal veins like that intersected in SM-12-08 are commonly poorly mineralised, whilst steeper portions are typically better mineralised. Therefore, steeper dipping portions of the Eastern Vein would be expected to yield higher Au/Ag grades
- Zones of dilation and hence greater vein development in epithermal systems are better developed at major lithological contacts, and as veining intersected in SM-12-08 is well above the basal contact of the Chon Aike Formation (with the underlying and more competent Bajo Pobre Formation). Excellent potential remains on this structure at major lithological contacts

At the Western Vein Zone, De Grey completed 5 holes on 3 sections testing 200m of the strike length where previous work located a zone of sub-cropping quartz veining and vein breccias associated with a north-south fault zone over a 450m strike length. This fault is interpreted to extend along strike over 800m, under shallow post mineral cover. Surface sampling and mapping indicated the fault may represent a N-S tension gash setting between two parallel NW faults.

All holes drilled into the Western Vein system intersected a steeply dipping zone of multiphase hydrothermal brecciation that is up to **25m true width** on the southern-most line (Holes SM-12-06 & SM-12-10) widens to **60m true width** on the central line (Holes SM-12-05 & SM-12-09) and pinches to **10m true width** on the northern line (Hole SM-12-07). The zone has been intersected from near surface (8m vertical below surface on hole SM-12-06) to approximately **110m vertical depth** in hole SM-12-05.

The presence of quartz-adularia vein clasts within the hydrothermal breccia, presence of rhyolite dykes and porphyritic fragments, strong clay alteration and highly anomalous Au-Ag-As geochemistry throughout (hole SM-12-06 this zone returned 52m @ 77ppb Au, 4.3g/t Ag and 1,318ppm As), it is interpreted that the zone represents an eruption breccia, which are commonly developed at higher levels above chalcedony-ginguro Au-Ag fissure veins.

All drilling in the Western Vein zone have intersected encouraging mineralisation, alteration and textural evidence at relatively shallow depths in a large and complex epithermal system.

A geophysical survey over the SM6 Prospect is planned (IP & CSAMT) to assist in defining targets of highly resistive bodies at depth (>100m vertical below surface) within the structures defined by this drilling. This geophysical programme of approximately 4 weeks is expected to commence in February. Targets generated from this work will be the subject of a 2nd round of diamond drilling at SM6 prior to the onset of winter.

De Grey Executive Chairman Peter Batten commented “De Grey has been fortunate to locate SM6 in what is considered a very early stage in the exploration of an epithermal system. The drilling has highlighted the significance of the Western Vein with large anomalous zones intersected in the drilling suggesting good volume potential deeper in the system. The Eastern Vein has proved more elusive but the drilling and trenching has provided definitive locations for the surface position of the structure and a much shallower dip than expected. With the clear definition of the epithermal structures and the highly anomalous and encouraging assays the next step is to target within this system the potential position of the gold-silver zone and the best way to achieve this is with geophysics.”

Hole	East	North	Elevation	Azimuth	Dip	Depth
SM-12-03	2418204	4687453	680	45	-60	140.00
SM-12-04	2418186	4687436	681	45	-60	233.15
SM-12-05	2418080	4687325	670	270	-60	170.15
SM-12-06	2418068	4687250	664	270	-60	110.00
SM-12-07	2418069	4687402	677	125	-60	86.15
SM-12-08	2418230	4687521	680	225	-60	70.15
SM-12-09	2418080	4687325	673	270	-70	217.75
SM-12-10	2418068	4687250	662	270	-78	152.25

Table 1 – SM6 Drillhole locations

Hole	From	To	Metres	Au (ppb)	Ag (ppm)	As (ppm)
SM-12-05	20.00	125.00	105	25.0	3.00	436
SM-12-06	7.00	59.00	52	77.0	4.30	1318
	65.00	69.00	4	100.0	3.75	4190
SM-12-07	23.50	29.50	6	32.0	1.00	785
	53.00	75.00	22	28.0	1.50	420
SM-12-08	25.60	30.60	5	14.0	2.40	166
SM-12-09	8.90	13.90	5	17.6	2.40	366
	26.25	31.25	5	21.0	1.80	622
	46.50	103.50	57	8.5	2.00	190
	110.50	121.50	11	12.0	2.45	227
SM-12-10	10.30	18.30	8	104.0	6.00	338
	29.40	48.40	19	80.0	4.50	1327
	63.30	103.30	40	20.0	2.40	127

Table 2 – Significant intersection from SM6

*Samples were analysed by ALS Minerals Laboratories, Mendoza, Argentina. Au was analysed using fire assay and AAS finish of a 30g nominal sample weight. Ag and all other elements (33) were analysed using aqua regia digestion with ICP-AES finish. Note that the aqua regia digestion is limited to determining the acid leachable portion of the elements. Any assays within defined sample intervals that reported less than detection limits were assigned a value of zero (0) when used for calculation of intercepts presented above.

For further information:

Peter Batten

De Grey Mining Limited

Ph: +61 8 9285 7500

The information in this report that relates to exploration results is based on information compiled by Mr Glenn Martin, who is a Member of the Australasian Institute of Mining and Metallurgy and a full time employee of De Grey Mining Limited. Mr Martin has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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" (The JORC Code). Mr Martin consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

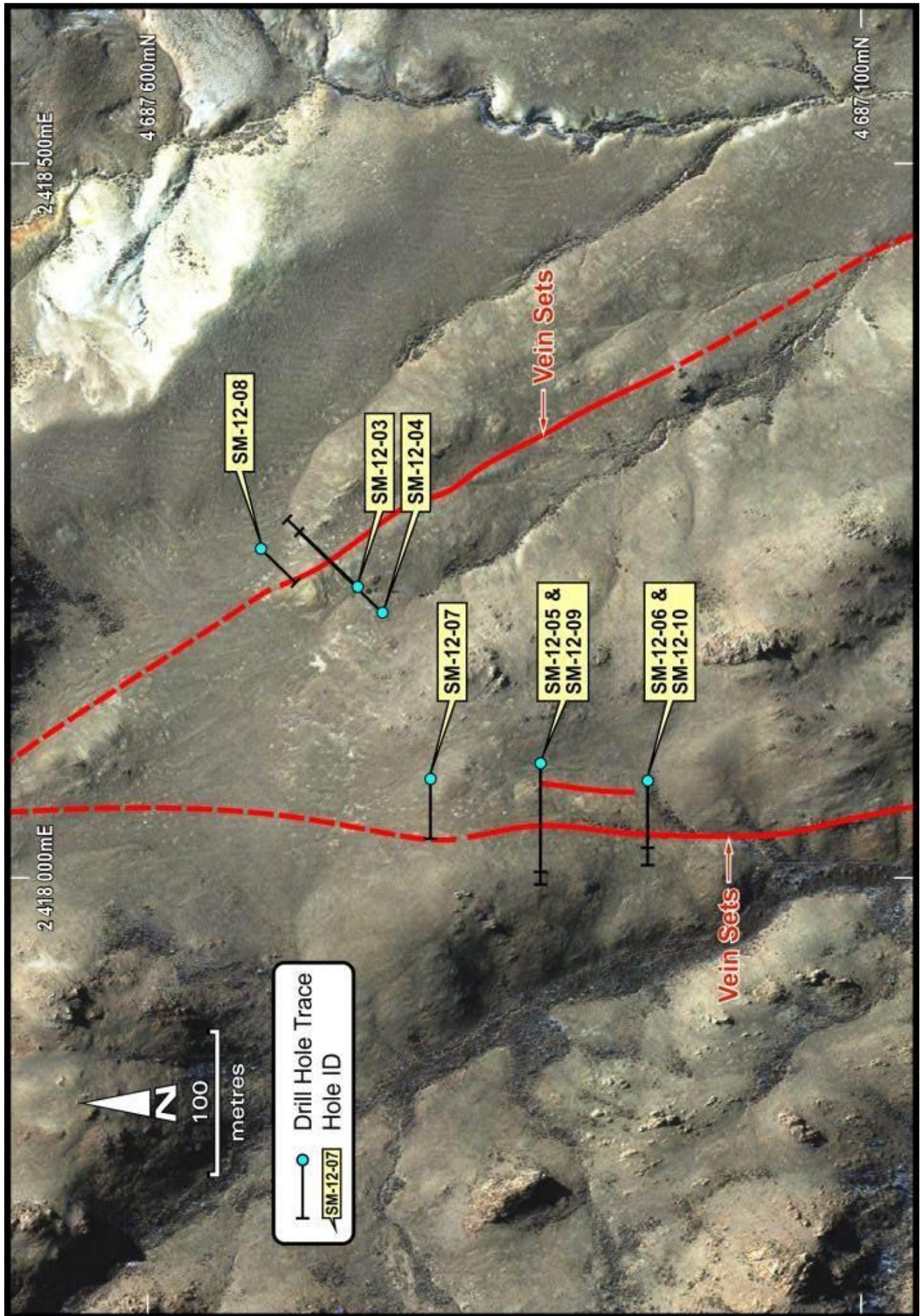


Figure 2. Drillhole Location Plan

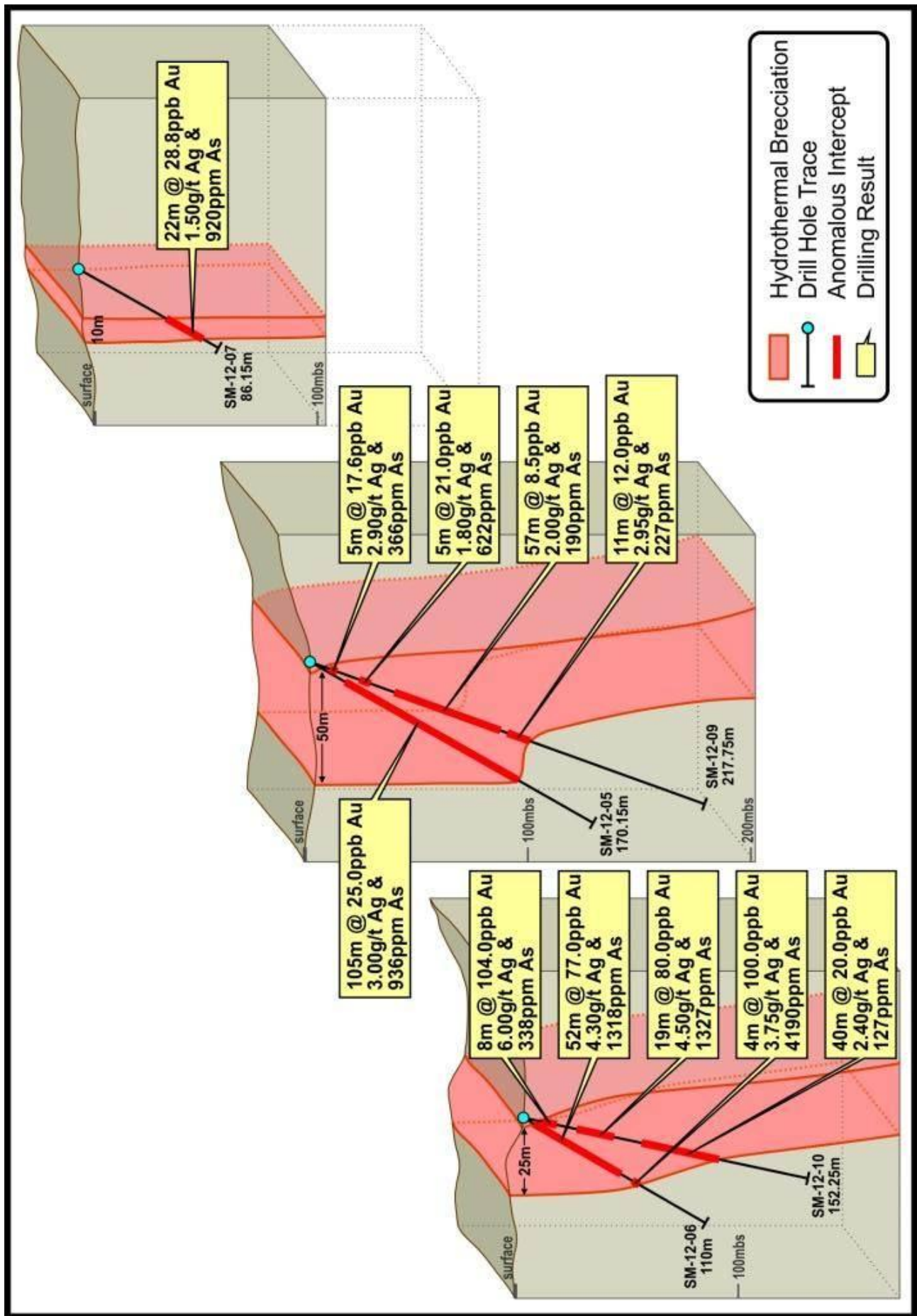


Figure 3. Stacked Sections Western Vein (stylized)