

De Grey Mining Ltd

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The Bold Explorer

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ASX/MEDIA RELEASE

SIERRA MORENA PROJECT – ROCK CHIP SAMPLES TO 23g/t Au and 3,240g/t Ag

HIGHLIGHTS

- **Bonanza gold and silver grades from newly discovered epithermal vein system at SM6 prospect**

De Grey Mining Ltd (**ASX:DEG**) has unveiled high-grade gold and silver results from exploration work carried out at its SM6 prospect, part of the Sierra Morena Project in Santa Cruz Province, Argentina.

Geological mapping, rock chip sampling and soil geochemistry has outlined two discrete NNW trending zones of epithermal quartz veining with **bonanza grade Au and Ag values**.

At the Eastern Zone, rock chip samples returned up to **23.3g/t Au and 3,240g/t Ag**. The zone consists of partially outcropping quartz veining and silicification with coincident Au-Ag-As-Hg-Sb anomalism (in soils) over a strike distance of approximately 725 metres.

The Western Zone consists of partially outcropping quartz veining and siliceous breccia with coincident Au-Ag-As-Hg-Sb anomalism (in soils) over a strike distance of more than **1.2 kilometres**. Rock chip samples have returned up to **7.2g/t Au and 755g/t Ag**.

Vein textures, alteration mineralogy, high Au-Ag-As values, and low base metal values indicate that the veins discovered so far represent the upper portions of a typical low sulphidation epithermal vein system.

De Grey's Managing Director Gary Brabham commented: *"SM6 is a virgin discovery by De Grey's team in Argentina and they are to be commended for their diligent work. It validates our pragmatic approach to exploration of the Company's large land position in the Deseado Massif and confirms the region's potential for new discoveries"*.

De Grey is progressing landowner access and statutory approvals necessary for drilling at SM6. Initial drill testing may be delayed until September 2012 as approvals may not be received prior to the onset of winter.

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EXPLORATION UPDATE – SIERRA MORENA PROJECT

In the 2010-2011 field season, De Grey completed a systematic stream sediment geochemical survey over the entire 140 sq km Sierra Morena Project. The project is located in the western part of the Deseado Massif, the geological terrane in Santa Cruz Province, Argentina, that is host to an increasing number of recently discovered high-grade, low-sulphidation epithermal gold-silver deposits.

Follow-up of a stream sediment geochemical anomaly, designated SM6, in the central part of the project area located exposures of a strong argillic alteration zone exposed in a 700 metre by 500 metre window through transported cover in an area of recessive weathering. Reconnaissance of the surrounding area revealed a number of epithermal quartz vein occurrences and isolated, smaller exposures of argillic alteration. Rock chip samples returned up to 14g/t Au and 24.4g/t Ag.¹

Detailed geological mapping, soil sampling and further rock-chip sampling have now been completed at SM6, outlining two N-NNW trending zones of epithermal quartz veining and silicification (Figure 1).

The Eastern Zone consists of quartz veining and silicification in discontinuous exposures over approximately 300 metres strike. The structure disappears beneath soil and scree cover to the north and south. Rock chip samples have returned up to **23.3g/t Au and 3,240g/t Ag**. A coincident Au-Ag-As-Hg-Sb anomaly in soils extends over a strike distance of approximately 725 metres.

The Western Zone, located about 250m to the west, consists of quartz veining and siliceous breccia in discontinuous exposures over approximately 450 metres strike length where rock chip samples have returned up to **7.2g/t Au and 755g/t Ag**. The western structure also disappears beneath soil and scree cover to the north and south but a second area of quartz veining about 300 metres to the south may represent a continuation of the same structure. Soil geochemistry outlines a coincident Au-Ag-As-Hg-Sb anomaly over a strike distance of more than 1.2 kilometres.

Vein textures (Figure 2), alteration mineralogy, bonanza grade Au-Ag values, and low base metal values indicate that the veins discovered so far represent the upper portions of a typical low sulphidation epithermal system.

In addition, geological mapping has outlined outlying areas of alteration and anomalous geochemistry over a N-S strike distance of more than 6 kilometres around SM6, indicating a hydrothermal system of significant extent. A rhyolite dome mapped in the north of the prospect area is significant in the context of Au-Ag mineralisation in the Deseado Massif.

Furthermore, large areas of scree and alluvial cover occur throughout the SM6 area which gives further scope for blind epithermal veins being discovered in the future.

Landowner access and statutory approvals are currently being sought and are required prior to drilling at SM6. Initial drill testing may be delayed until September 2012 as approvals may not be received prior to the onset of winter.

Sierra Morena is subject to a purchase option agreement with private company Minera Sudamericana S.A., the terms of which have been described in previous releases.²

¹ Refer to ASX release dated 8 December 2011 "Exploration Update – Sierra Morena Project, Argentina".

² Refer to ASX release dated 15 July 2010 "De Grey Launches Argentina Exploration".

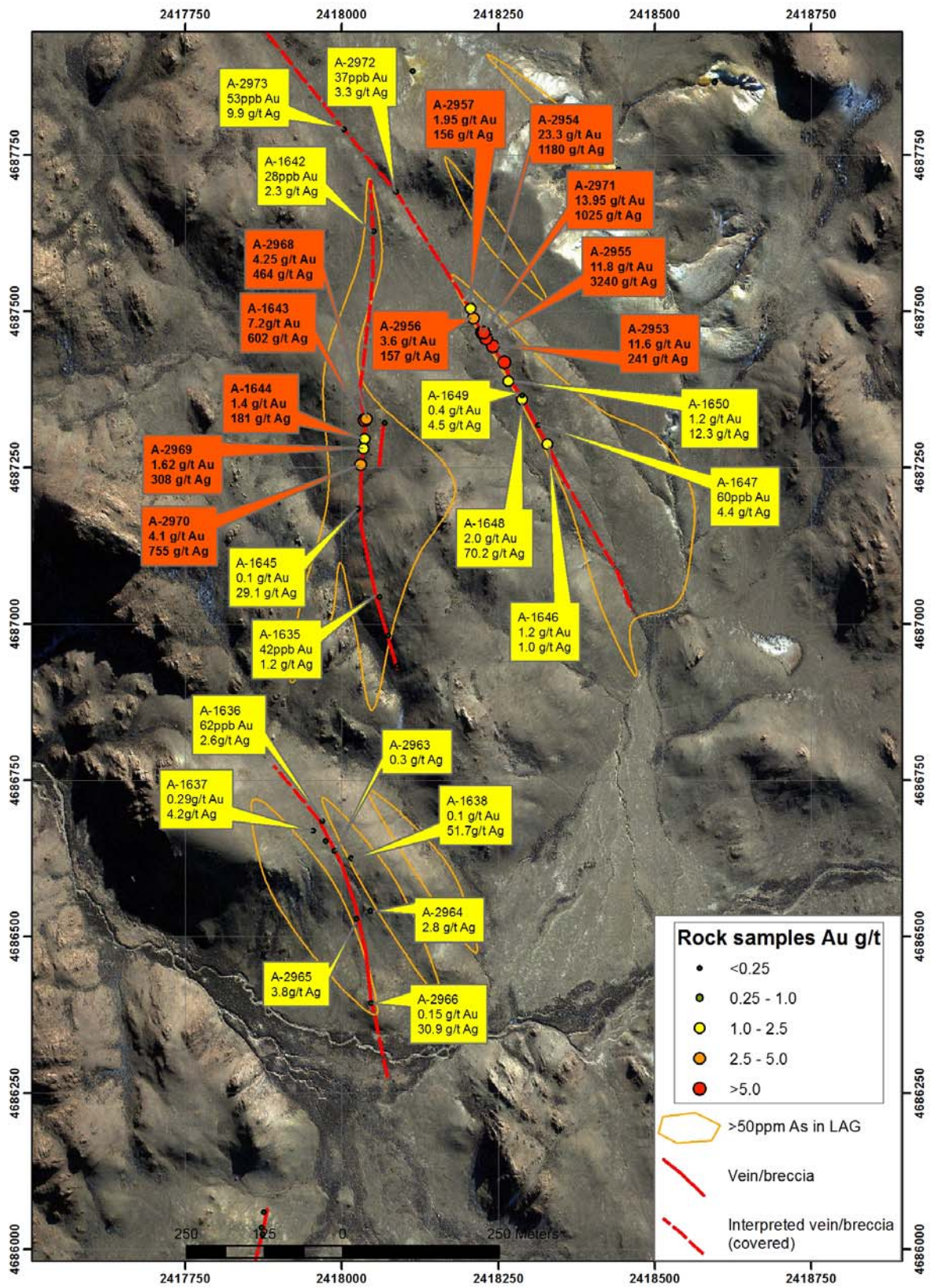


Figure 1: Sierra Morena SM6 target, rock sample results



Figure 2: Cockade texture in epithermal quartz veins, SM6

Sample	East	North	Au (ppm)	Ag (ppm)	As (ppm)	Hg (ppm)	Mo (ppm)	Pb (ppm)	Sb (ppm)
A1635	2418060	4687043	0.042	1.22	2150	0.139	22.2	52	21
A1636	2417968	4686685	0.062	2.62	739	0.349	41.5	58.2	15.5
A1637	2417954	4686669	0.291	4.24	244	0.039	32.8	32.7	5.59
A1638	2418014	4686625	0.130	51.7	977	0.376	28.3	54.5	6.82
A1642	2418051	4687628	0.028	2.32	449	0.016	13.55	16.45	2.87
A1643	2418036	4687326	7.17	602	381	0.607	61.5	106	53.4
A1644	2418036	4687296	1.43	181	239	0.434	27.1	43.2	22.2
A1645	2418026	4687184	0.133	29.1	456	0.164	23.3	35.6	15.45
A1646	2418328	4687288	1.22	1.065	83.4	0.03	5.14	7.73	1.64
A1647	2418313	4687318	0.060	4.36	181.5	0.071	9.38	74.7	1.59
A1648	2418288	4687359	2.05	70.2	1795	1.25	9.39	620	25.1
A1649	2418288	4687365	0.404	4.55	410	0.229	4.03	395	7.94
A1650	2418266	4687388	1.22	12.3	323	0.3	20.5	245	13.3
A2953	2499791	4698699	11.65	241	418	6.5	16.45	354	25.5
A2954	2499926	4698649	23.30	1180	1035	31.3	22.5	587	202
A2955	2499969	4698662	11.85	3240	401	11.55	143.5	228	46.3
A2956	2501019	4698460	3.60	157	94.7	9.08	1.77	62.5	3.98
A2957	2500904	4698528	1.95	156	597	6.9	6.3	230	32.3
A2958	2419079	4685976	0.035	1.97	11	0.102	1.54	11.15	1.095
A2963	2486819	4686208	0.009	0.317	1085	0.04	41	18.2	6.06
A2964	2486505	4686062	0.047	2.81	1070	0.064	20.4	13.7	6.92
A2965	2486491	4686061	0.040	3.77	733	0.094	14.5	13.55	6.01
A2966	2486090	4686006	0.155	30.9	486	0.082	10.8	19.95	5.37
A2968	2418039	4687328	4.25	464	507	0.92	70.7	145	42.1
A2969	2418034	4687280	1.62	308	116.5	0.057	19.2	45.2	39
A2970	2418030	4687255	4.11	755	221	0.305	49.8	135	24.3
A2971	2418226	4687466	13.95	1025	610	11.15	9.88	403	46.7
A2972	2418086	4687691	0.037	3.28	101	0.044	36.5	17.95	8.33
A2973	2418003	4687791	0.053	9.93	117	0.074	9.79	72.5	35.7

Table 1: Sierra Morena – Significant Rock Chip Sample Results, Santa Cruz, Argentina

*Samples were analysed by ALS Minerals Laboratories, Mendoza, Argentina. ICP Mass Spectrometer analysis of 30g sample split from original 500gm (minimum) sample after Aqua Regia digestion for ultra-low determinations. Basic suite of elements consisted of 51 elements including those listed above. Note that some elements will report partial concentrations due to the presence of refractory minerals. Samples that returned >10000ppb Au (>10g/t Au) were re-assayed using 30g Fire Assay with gravimetric finish. Samples that returned >100ppm Ag (100g/t) were re-assayed using aqua regia with AAS finish. Samples that returned >1500ppm Ag (1500g/t Ag) were re-assayed using 30g Fire Assay with gravimetric finish.

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. 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.