



ASX RELEASE

9 June 2009

DEGRUSSA PROSPECT - UPDATE

HIGHLIGHTS

- Primary sulphide mineralisation is high grade with copper values averaging 3.6% and with accompanying gold, silver, zinc and palladium.
 - Ground EM surveys have identified the zone of mineralisation and outlined a much larger anomaly to the north of the DeGrussa mineralisation.
 - Future work planned includes:
 - RC drilling commencing 9 June 2009;
 - further ground EM surveys in June 2009;
 - a diamond core drilling program commencing in early July 2009.
 - Given the propensity for this style of basemetal mineralisation to occur in groups of deposits, Sandfire is commissioning a regional airborne electromagnetic survey in late June to cover all the prospective stratigraphy in the Project area.
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Sandfire Resources NL (ASX: SFR; **Sandfire**) previously reported the discovery of copper-rich massive sulphide mineralisation at the DeGrussa Prospect, part of its wholly-owned Doolgunna Gold Project, some 130 kilometres north of Meekatharra in Western Australia. Further to these announcements, Sandfire has now received all analytical results from the RC drilling program completed in May 2009 and no further copper-rich sulphide mineralisation has been recorded. Drill hole DGRC109 (previously unreported) intersected oxide copper between 33 and 53 metres assaying 1.00 percent copper.

In summary, four holes were deep enough to intersect massive sulphide mineralisation. All four holes were located near the south-western end of the previously reported zone of near-surface gold mineralisation.

A further six holes intersected shallow zones of oxide copper and variously gold, silver, zinc and palladium enriched mineralisation, considered to be derived from the primary sulphide mineralisation.

The best of the sulphide mineralisation intersections, as previously reported, are set out below.

Hole DGRC101	22m from 96m to 118m of 3.6% copper, 3.8g/t gold and 13.4g/t silver (includes 5m of 17.4g/t gold from 115m) And 18m from 126m to 144m of 2.9% copper, 13.0g/t silver, 2.1% zinc and 1.0g/t palladium
Hole DGRC104	26m from 117m to 143m of 3.2% copper, 2.9g/t silver, 1.3% zinc and 2.4g/t palladium And 75m from 160m to 235m of 2.4% copper, 10.9g/t silver
Hole DGRC105	47m from 93m to 140m of 5.3% copper, 20.1g/t silver and 1.0% zinc
Hole DGRC106	22m from 106m to 128m of 4.9% copper, 15.4g/t silver and 0.5% zinc

The mineralisation style, chemistry and regional setting are consistent with a volcanogenic massive sulphide (**VMS**) basemetal deposit.

This type of mineralisation typically occurs in clusters of deposits or occurrences and Sandfire advises that most of the prospective stratigraphy within the Doolgunna Project is concealed by thick sequences of recent surficial sediments not readily explored by traditional prospecting techniques.

Ground Electromagnetic Survey

Since the Company's previous announcement on 21 May 2009, Sandfire has completed the ground electromagnetic (EM) survey and downhole EM surveys and interpretation of these survey results.

The surveys consisted of a downhole EM survey of five drill holes at DeGrussa out of the original 12 planned due to hole blockages. This work partially outlined an EM conductor, coinciding with the known mineralisation. A fixed loop EM survey over an 800 metre strike length was completed over the basemetal and gold DeGrussa Prospect. This ground survey identified a second larger conductor north of the known DeGrussa mineralisation. Modelling indicates both anomalies would be detectable by an airborne EM survey.

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In summary, the EM survey has located two conductive bodies; one related to the known copper-rich basemetal mineralisation identified by drilling, the other larger target of unknown source.

Planned Future Program

1. Commencing 9 June 2009 at DeGrussa, Sandfire will carry out a program of RC drilling deepening four of the previous drilled holes testing for sulphide mineralisation at depth and drilling a fifth hole to test the line of mineralisation to the southwest. The larger EM target to the north of DeGrussa will be tested initially by an inclined deep RC hole targeted central to the anomaly. EM surveying of all holes will be undertaken.
2. In late June 2009, an extensive airborne EM survey will be carried out over approximately 150 square kilometres of the Narracoota Volcanics and surrounds, most of which are concealed below transported recent sediments.

Further, a discrete ground EM survey is planned over the DeGrussa mineralisation shielded from the large EM anomaly.
3. In early July 2009, Sandfire will commence a substantial program of diamond core drilling to test the DeGrussa mineralisation at depth and along strike from the known area of basemetal mineralisation.

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AUSIMM Competent Person

Competent Person's Statement

The information in this report that relates to Exploration Results is based on information compiled by John Evans who is a Fellow of the Australasian Institute of Mining and Metallurgy. John Evans 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 of Reporting of Exploration Results, Mineral Resources and Ore Reserves. John Evans consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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