



ASX ANNOUNCEMENT

5th April, 2007

Acquisition of Tenement in the Musgrave Province And Purchase of Drilling Rig

In accordance with its strategy to expand and accelerate activities in the Musgrave Province of South Australia PepinNini has acquired an additional exploration licence EL 3536 Pine Ridge from Rio Tinto Exploration Pty Limited (Rio Tinto). The acquisition is subject to Ministerial approval of the transfer of the tenement and the approval of Anangu Pitjantjatjara, the Traditional Owners of the Land.

The Company has also purchased a new drilling rig to be dedicated to investigating the nickel copper sulphide targets already identified within EL 3536 and within its other granted tenement EL 3368. The Longyear LF90D conventional diamond drilling rig is scheduled to arrive from Canada in early May and is specifically suited to exploration of the nickel targets being investigated by PepinNini in the Musgrave Province. Specialist drilling management company Fullbore Pty Limited has been contracted to operate and maintain the rig.

Exploration Licence EL 3536 – Pine Ridge

EL3536 covers 1,382 km² of the eastern portion of the poorly explored Mesoproterozoic Musgrave Province of South Australia. The basement rocks covered by the licence are considered prospective for Broken Hill style base metal deposits, Olympic Dam style Iron Oxide Copper Gold (IOCG) deposits, and Voisey's Bay style magmatic Nickel-Copper sulphide deposits.

Very little historic exploration has occurred in the region. Initial investigations by the South Australian Department of Minerals and Energy (SADME) during the 1960's and early 1970's identified at least seventeen prospect locations with indications of nickel and/or copper mineralisation.

Mineral exploration was excluded from the Anangu Pitjantjatjara Lands during the Land Rights Movement from the mid 1970's up until the late 1990's when Rio Tinto was awarded the first exploration access to the district in almost 25 years.

Rio Tinto has held the exploration licence since 1999 and has spent in excess of A\$1.1 million on airborne magnetics, airborne electro-magnetics, ground geophysics, sampling and drilling. The magnetic data reveals fractionated Mesoproterozoic granites (Pitjantjatjara Supersuite) in the northern parts of the tenement suggesting good potential for IOCG (Olympic Dam) mineralisation

styles, whilst the high grade Mesoproterozoic metasediments and metavolcanics (Birksgate Complex) are analogous to the Willyama Supergroup rocks which host the world class Ag-Cu-Pb-Zn deposits of Broken Hill.

PepinNini intends to initially focus exploration on the Nickel-Copper potential of known ultramafic bodies and will expand the regional investigation to generate valid iron oxide copper gold (IOCG) and base metal (Broken Hill Style) targets.

The information in this report that relates to Exploration Results is based on information compiled by Norman Kennedy BSc MAusIMM. Norman Kennedy is the Managing Director of PepinNini Minerals Limited and has sufficient experience which 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". Norman Kennedy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

For further information please contact:

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Note: Additional information on PepinNini Minerals Limited can be found on the website:
www.pepinnini.com.au



Longyear LF90D Conventional Diamond Rig purchased to investigate Nickel/Copper sulphide targets in the Musgrave Province.

Pepinini Exploration Tenements Musgrave Province Project – South Australia REGIONAL LOCATION PLAN

