

Neptune to begin offshore Kermadec minerals exploration

9 May 2007 - Neptune Minerals plc, an international explorer for gold, silver, copper, lead and zinc in massive sulphide deposits found on underwater seamounts, plans to start work this month on a second round of exploration in licence areas in northern New Zealand offshore waters.

Neptune Minerals says it is to carry out high resolution seafloor mapping and sampling of its seafloor massive sulphide (SMS) targets using a deepwater technical survey vessel, SV Geosounder.

The ship comes equipped with the workhorse of the exploration programme, a remotely operated vehicle (ROV) capable of operating in water depths of up to 3000 metres. Tauranga port will be used as base for Neptune's Kermadec 07 exploration programme.

Neptune Minerals, which was listed on the London Stock Exchange's Alternative Investment Market (AIM) in October 2005, carried out the world's first drilling of SMS targets in late 2005 in its Kermadec Prospecting Licence 39 195.

In the 2005 programme 23 core holes were drilled, with a total drilled depth of 103 metres, and 30 seafloor samples collected. Assays, petrophysical measurements and high resolution core mineralogy were undertaken.

An aggregate sample from SMS chimneys submitted for metallurgical properties had an average metal content of 11.2g/t gold, 122 g/t silver, 8.1% copper, 5% zinc and 0.5% lead.

The Kermadec permit PL 39 195 was renewed in November 2006 to cover a 3447 square kilometres area. Neptune says the licence contains 12 main seamounts and seamount complexes in the southern third of the Kermadec Volcanic Arc.

The Kermadec licence also covers a number of prospective structural features in the Havre Trough, the back-arc basin adjacent to the Kermadec Arc.

Neptune's second licence, the 47,110 square kilometres Monowai PL 39 194, granted in January 2006, covers the northern two thirds of the Kermadec Arc extending to the Tongan border of New Zealand's exclusive economic zone.

The Monowai licence covers upwards of 40 sparsely researched seamounts as well as prospective back-arc structural features similar to those found in the southern Kermadec licence, Neptune says. But a number of located sites have indications of SMS mineralisation.

The third Neptune licence, the 13,030 square kilometres Colville PL39 205, covers the southern one-third of the Colville Ridge, a feature running parallel with and west of the Kermadec Arc. Neptune says the Colville Ridge is considered to be a remnant arc and is prospective for older, inactive SMS deposits.

Neptune Minerals has approved expenditure of about \$US5 million this year for the Kermadec project.

Neptune says the survey in 2005 proved valuable in improving SMS exploration methods.

Seventy line kilometres of detailed multibeam (swath) bathymetry data was acquired by flying the remotely operated vehicle at 50 metres and 200 metres above the seafloor.

An accuracy of 1-2 metres in seafloor resolution was achieved and clearly showed inactive chimney fields with the potential for significant SMS accumulation. These areas had not been discovered by previous research and will be the focus in follow-up exploration, Neptune says.

The company says it is not targeting the active hot vents on the volcanic seamounts which attract active biological life. These "black smoker" chimneys were still too active for mineral assessment.

Neptune is also applying for other exploration permits in the large area of the 'Pacific Ring of Fire' between New Zealand and Japan. The company has applications pending in the territorial waters of Japan, Papua New Guinea, Vanuatu, and the Marianas as well as off Italy in the

Mediterranean Sea.

Source: Neptune Minerals