Crown Minerals Completes Great South Basin Seismic Survey

NS Science has completed processing for DUN06, a seismic survey acquired in the Great South Basin by Crown Minerals earlier this year. The survey was acquired to assist in the promotion of the Great South Basin Blocks offer that is currently open, and due to close on 31 March 2007.

Data packs are available that contain SEGY and some interpretation of DUN06, as well as a number of new technical reports. A total of 3200 km of new data is available, the first such release to the industry since the early 1980s

DUN06 was the second survey acquired under the \$15 million budget approved by the New Zealand Cabinet in September 2004. Multiwave Geophysical was contracted to acquire the data using their 65 metre vessel the Pacific Titan. A 6 km long solid state streamer was used.

The bulk of DUN06 was acquired in a grid to the southeast of Dunedin in an area that had received little attention in earlier phases of exploration. In addition, two lines were acquired further south that cross the heart of the basin and tie to several wells.

The new data has allowed basement to be mapped for the first time. A series of lystric



The Pacific Titan in transit to the Great South Basin area southeast of Dunedin during the acquisition of new survey data. Picture courtesy: Crown Minerals.

faults have been revealed and sediment is seen as deep as 7 seconds seismic travel time, or about 12 km.

"This new seismic survey has already changed our understanding of the Great South Basin", GNS Science Frontier Basins Project Leader, Chris Uruski, said "Previous data showed only the crests of many fault blocks and now we can see how extensional processes worked in this region. The greater resolution of the new data allows better understanding of seismic facies, so that likely reservoirs may be more easily mapped."

The survey crossed the locations of five wells including Tara-1 and Toroa-1 that both had strong oil and gas shows, and Kawau-1A that was a gas discovery. Several indications of hydrocarbons are seen in a line that ties Kawau-1A with Toroa-1, but hydrocarbon indications are also seen in the northernmost line as close as 50 km from Dunedin.

DUN06 segy can be downloaded from the Crown Minerals website or contact crown. minerals@med.govt.nz to receive a copy on disk. Crown Minerals also has Geoframe, Kingdom and Landmark projects available that contain the industry reprocessing and about 7000 km of Crown Minerals reprocessing that was completed earlier this year.

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The Pacific Titan in transit to the Great South Basin area southeast of Dunedin during the acquisition of new survey data. Picture courtesy Crown Minerals.