"SUPER 2D", INNOVATIVE SEISMIC REPROCESSING: A CASE HISTORY

R. BURNSTAD
GEOPHYSICAL SERVICES INC.,
SINGAPORE

The "Super 2D" processing sequence involves taking a randomly oriented grid of multi-vintage 2D seismic data, reprocessing to tie the data where required, then interpolating the data set to a regular grid suitable for 3D processing and interpretation. The case history used to illustrate the process is an Alberta data set provided by a Canadian oil company. This volume comprises fifteen 2D seismic lines collected and processed over a period of six years by a variety of contractors. Field conditions, advances in technology and changing objectives combined to result in a data set that, while densely sampling a small area, did not tie well enough to be interpreted as a whole. Therefore the first objective of reprocessing was to resolve mistie problems. The data processing sequence did resolve all the mistie issues and produced a standardized data volume. This data volume was now suitable for the second stage of this sequence, that is interpolating to a regular grid and subsequent 3D processing. In this case, the volume was 3D migrated, filtered and scaled. The full range of 3D displays and 3D interpretation products can now be used. This, along with standardizing the data set and improving the spatial location of events via 3D migration are the key results of the "Super 2D" sequence

Warta Geologi (Newsletter of the Geological Society of Malaysia), Vol. 13, No. 6, November-December 1987