

Use of Gravity Data to Enhance Seismic Depth Migration

Mark E. Weber, Brian S. Anderson, and Barry C. Wiggins

Fugro-LCT, Inc., Houston, Texas

Seismic depth migration continues to be an important, but expensive, tool for reducing exploration risks. Newly acquired high-resolution gravity data provide a low-cost method to enhance the seismic depth migration process by providing an independently measured constraint to the seismic velocity model. State-of-the-art commercial software tools enable rapid integration of the gravity and

seismic data. In many geologic settings, integrated density/velocity modeling yields a more accurate velocity model than can be derived from the seismic data alone. A case study is presented to illustrate both steps employed in the data integration process and the resulting improvement in depth-migrated seismic data.

Notes