Project 1

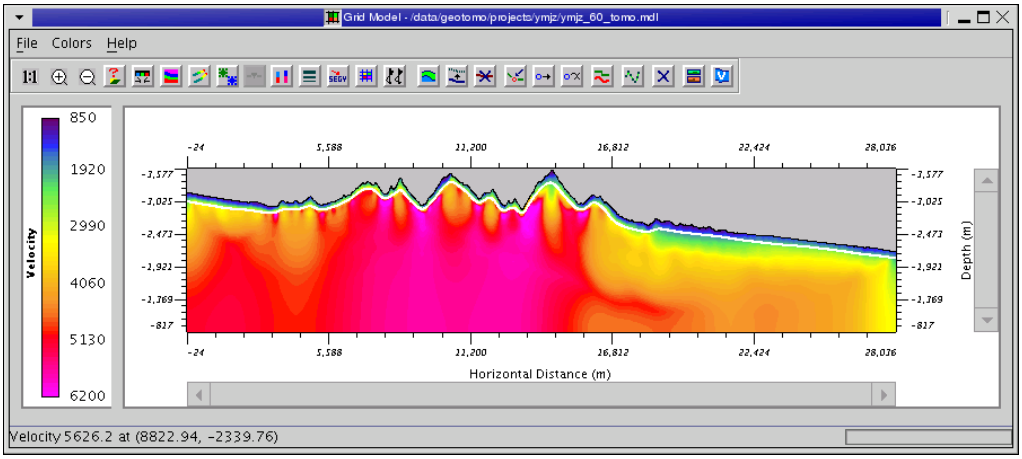
2D Finite-Difference Simulation for Studying Topography Effects

This project involves some numerical implementation that leads to an improved free-surface implementation, and also testing the topography effects by using an existing approach in TomoPlus. A real dataset with near-surface velocity model is provided so that it can test against real situation. This real dataset is very unique, because it is collected on very rough topography, and the recording length is over 28 km, a fixed common-spread receiver array.

Goal 1: apply acoustic finite-difference modeling approach in TomoPlus to test free surface response, and check with real data, identify any issues and problems.

Goal 2: apply elastic finite-difference modeling approach with new free-surface implementation to test free-surface response, and compare with acoustic results, and real data, and hope to draw any conclusion.

Data and Materials Offered:
ymjz151_dats.sgy
ymjz_tomo_07_dx5_d1000.mdl
ymjz_01.tt
Yumen_modeling_imaging.ppt



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