2. Modeling the 410-LVL Double Gradient Shale (DGS) Velocity Models

3. Modeling Results

4. Global Waveform Stack as a Mean to the 410-LVL

5. Interpretation

6. Summary & Outlook

Characterizing the 410-km Discontinuity Low-Velocity Layer Beneath the LA RISTRA Array in the American Southwest

John Jasbiniec, Ken Duerer, Steven Hansen and Zhu Zhang

Department of Geology & Geophysics, University of Wyoming

Abstract

The 410 km density contrast to form a gravitationally stable melt layer. If the water content of the melt exceeds 7%, then the melt is predicted to be positively buoyant with respect to the 310 km discontinuity to the NW of the LA RISTRA Array using RISTRA 1.5 data. The crust is denoted by the grey shaded region.

The arrows marked (1) and (2) in the same tomogram denote the possibility that the low velocity melt-volumes, or blobs, above the 410 km discontinuity may manifest diapirs shed upwards from the melting region of Wilson & Aster 2005. The crust is denoted by the grey shaded region.

Preliminary results are shown in the gray box.

The arrows marked (1) and (2) in the same tomogram denote the possibility that the low velocity melt-volumes, or blobs, above the 410 km discontinuity may manifest diapirs shed upwards from the melting region of Wilson & Aster 2005. The crust is denoted by the grey shaded region.

The arrows marked (1) and (2) in the same tomogram denote the possibility that the low velocity melt-volumes, or blobs, above the 410 km discontinuity may manifest diapirs shed upwards from the melting region of Wilson & Aster 2005. The crust is denoted by the grey shaded region.

The arrows marked (1) and (2) in the same tomogram denote the possibility that the low velocity melt-volumes, or blobs, above the 410 km discontinuity may manifest diapirs shed upwards from the melting region of Wilson & Aster 2005. The crust is denoted by the grey shaded region.

The arrows marked (1) and (2) in the same tomogram denote the possibility that the low velocity melt-volumes, or blobs, above the 410 km discontinuity may manifest diapirs shed upwards from the melting region of Wilson & Aster 2005. The crust is denoted by the grey shaded region.

The arrows marked (1) and (2) in the same tomogram denote the possibility that the low velocity melt-volumes, or blobs, above the 410 km discontinuity may manifest diapirs shed upwards from the melting region of Wilson & Aster 2005. The crust is denoted by the grey shaded region.