



Influence of static corrections in seismic processing for Prestack Kirchhoff depth migration (PSDM)

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Correcting near-surface velocity variations is an essential step in land seismic data processing sequence. Changes in elevation and near surface velocity introduce variations in the arrival times of refraction at the receivers. Static corrections attempt to remove near-surface effects by applying a simple time shift (or "static") to each seismic trace to align corresponding events before stacking. Due to their shallow occurrence in the seismic data, the static effects of these near-surface complexities are not suitably resolved by migration velocity analysis hence in controversial near-surface model. Prestack depth migration (PSDM) is the most theoretically accurate seismic processing technique for representing the subsurface. One great Issue limiting the success of PSDM have included inaccurate geologic models combined with near-surface and topography effects. Therefore further data processing steps in depth domain can be consider inaccurate for representing the subsurface.