



## Prestack Depth Migration for "Easy" Onshore Plays?

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### Abstract

Traditionally, prestack depth migration (PSDM) was considered an exotic technology, applicable only for imaging "complex" geology. Offshore subsalt imaging drives the use of the most advanced PSDM technologies, like Reverse-Time depth Migration (RTM). However, given the recent resurgence of onshore exploration, we ask: can PSDM make an impact on "easy" onshore plays? We present an unconventional oil shale (Niobrara) case study which convincingly illustrates three key reasons for (re)considering PSDM:

- 1) Remove false time structures caused by lateral variations in velocity.
- 2) Improve focusing of dipping beds and faults.
- 3) Improve the accuracy of seismic attributes.

### Bio

Morgan Brown is CEO of Wave Imaging Technology Inc., a specialty seismic processing company leading the onshore depth imaging trend. Brown worked in Geophysical R&D positions for Hess and 3DGeo before joining WIT. He holds a B.A. in applied math from Rice University and a Ph.D. in geophysics from Stanford University. He has 15 years of experience in depth imaging.

