Pre-stack depth migration using high quality velocity interval fields improves the AVO and inversion response.

**PSTM DATA AVO INTERCEPT STACK**

High angle sand injectites at 1800ms cannot be accurately imaged by time migration

**PSDM DATA AVO INTERCEPT STACK**

High angle sand injectites at 1800ms are fully resolved using depth migration

**PSTM DATA INVERSION TO P-IMPEDANCE**

The high impedance sands identified in the well are poorly imaged by time migration

**PSDM DATA INVERSION TO P-IMPEDANCE**

The high impedance sands are imaged properly by the depth migration and there is an excellent tie between the well impedance and the seismic inversion

**TYPICAL INTERVAL VELOCITY FIELD**

The interval velocities are incorrect as they do not correspond to the reflector geometry and are geologically unrealistic

**SIP INTERVAL VELOCITY FIELD**

The interval velocities correspond to the reflector geometry and are geologically reasonable which yields optimum depth migration with preservation of seismic amplitudes for AVO and seismic inversion