

## Revitalizing an older 3D dataset using updated reprocessing techniques

C. Black, B. Andersen, California Resources Corporation

The THUMS 3D was acquired over the offshore part of the Long Beach Unit (Wilmington Field) in 1995 by Arco. The 3D data has been used from time to time to evaluate some deeper projects, however, despite multiple reprocessing efforts, it has failed to provide enough detailed imaging of the complex normal faulting in the shallower zones to the extent that geologists and engineers have, over the years, only depended on well control to place infill wells in established reservoirs of Ranger-Ford age.

In 2014, the THUMS 3D was reprocessed, applying refraction statics to this transition zone type data, 5D interpolation, and pre-stack depth migration. Over the past 6 months, the reprocessed dataset is providing much improved images of faulting even at the shallower depths of the prolific Ranger reservoirs at 3000-3500 ft depth despite the low fold afforded by the old 3D survey. It is allowing new insights into fault patterns that were thought completely defined by workers over the past 2 decades and helping delineate new drilling locations in these mature reservoirs.

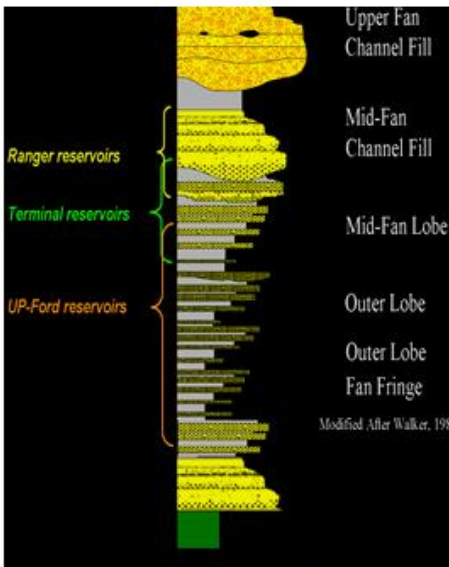


Fig 1. Stylized stratigraphy of the Long Beach Unit, east Wilmington Field

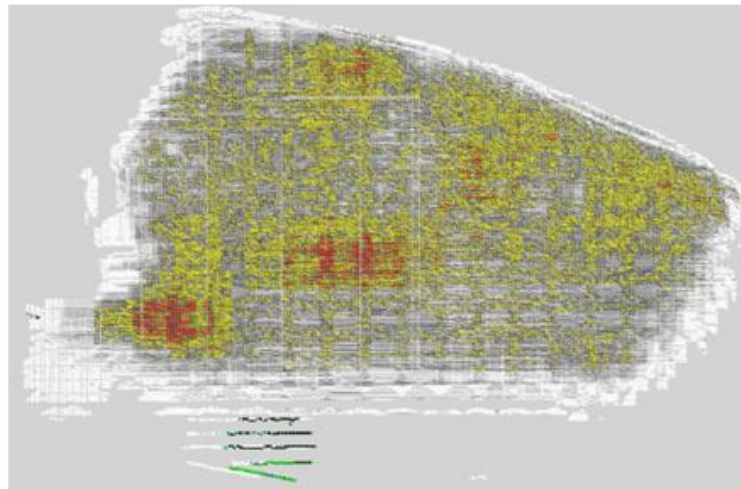


Fig 2. Thums 3D fold, limited to offsets 0-3000 ft