

Squeezing More Information out of 3D Seismic Data with a Match Filter and Possibly Squeezing More Oil Out of Oil Pools

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Abstract/Excerpt

3D seismic surveys and earlier 3D surveys in particular often contain information that is beyond visual resolution and therefore hidden from the interpreter. Signal processing on the workstation using what might be termed “geological based seismic deconvolution” has the potential to enhance the resolution to the point that this hidden information can be made visible and incorporated into the interpretation.

A 1989 3D dataset over a portion of the Sturgeon Lake field is match filtered to a single well to improve the resolution and the subsequent interpretation shows the main reef has “back stepped” from the lower D3 and that this lower stage is in an up dip position that has not been drilled.