
The Discovery, Reservoir Attributes, and Significance of the Hawkville Field and Eagle Ford Shale Trend, Texas

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ABSTRACT

The Hawkville (Eagle Ford Shale) Field encompasses a 124 mile long by 25 mile wide oblong shaped portion of the Cretaceous platform, reaching from Webb County, Texas, on the southwest into Live Oak County, Texas, on the northeast. Thickness of the Eagle Ford across the field varies from 125 to 320 feet, with the entire section classified as net pay with good reservoir quality. Wireline log analysis and whole core data indicate 8-10% effective gas filled porosity, permeability in the range of $1.0-1.5 \times 10^{-3}$ md (millidarcies), and gas saturation exceeding 80%, with the range of free gas in place from 140-212 BCF (billion cubic feet) per section.

The Eagle Ford Shale had less than 15 well penetrations in this particular area prior to the discovery; however, this well control, along with 2D seismic data, allowed for the recognition of specific geologic boundaries that defined the distinct accumulation. Production from the Eagle Ford ranges from dry gas to gas/condensate with a range of 10-120 BC/MMCF (barrels of condensate per million cubic feet of gas).

Since the discovery of Hawkville Field in October 2008, over thirty wells had been completed in the field by January 2010, with activity spreading across a large halo around the field to include five additional counties. The future activity will yield a much more complete understanding of the structure and stratigraphy of the entire Eagle Ford Formation and its relationship to commercial production.