

**Sugg-A-142L Wolfcamp Core:
API# 42-383-36238
Reagon County, TX**

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The Wolfcamp Formation in northeastern Reagan County has been commercially oil-productive from organic-rich shale reservoirs for more than 50 years. 345 feet of whole core was collected from the upper portion of the Wolfcamp Formation in the Sugg-A-142L well in an effort to characterize the rock properties and hydrocarbon potential. Evaluation of the core has been comprehensive and analysis methods included gas desorption, source rock geochemistry, rock properties, and fluid saturation determinations. The lithofacies and natural fractures have also been described.

The core indicates that the productive upper Wolfcamp reservoir interval is dominated by basin plain shale and argillaceous limestone debris. Within the cored interval, measured TOC ranges from 1.4-9% (4.9% average) and the interval has an oil-window thermal maturity. The gas desorption analysis indicates that the entire interval is hydrocarbon saturated, with samples averaging 81 SCFG/ton. Dean-Stark extraction using GRI standards for shale indicate the upper Wolfcamp interval has average saturations of 44% Sw, 33% So, and 23% Sg. Volumetric analysis using core and open-hole log data indicate that the cored portion of the Wolfcamp shale reservoir interval contains 28 MMBOIP per square mile plus 58 BCFGIP per square mile.