

Skytop Drilling LLC Serving Central Kansas Area

A new contract drilling firm, **Skytop Drilling LLC** (Kansas License 34908), was recently formed by **Charles Reif**, President, **Marvin Reif**, Vice President, and **Tom Engel**, Vice President / Toolpusher.

Skytop Drilling's Rig No. 1 is equipped with an 87 ft LC Moore derrick with heavy duty drawworks and the capacity to drill to depths of 10,000 ft. The rotary rig will serve the Central Kansas region in and around Barton, Ellis, Graham, McPherson, Ness, and Rooks counties.

The company is headquartered at 2145 20 Road in Plainville, Kansas 67663. For more information or to schedule rig time contact Marvin Reif at 785-434-2028.

Domestic Crude Production Up 18.7% in Third Quarter

The **American Petroleum Institute** (API), Washington, D.C., reports domestic crude production increased 18.6 percent in September '13 and 18.7 percent in the third quarter, compared to 2012 figures. At nearly 7.8 million barrels per day, crude production saw its highest September output in 25 years. According to the latest reports from Baker-Hughes, Inc., the number of oil and gas rigs in the U.S. in September was 1,760, down from August count of 1,781.

Crude *oil stocks* ended the month at 365.3 million barrels— a 1.3 percent drop from the prior year but still the second highest September level in 33 years, since 1980. Stocks of motor gasoline ended up 9.3 percent from last year to 219.5 million barrels. Distillate fuel oil stocks ended at 128.2 million barrels, up 0.6 percent from year ago levels. Jet fuel stocks were down by 7.3 percent from the prior year.

U.S. *total imports* fell 4.4 percent from September 2012 to average just over 10.0 million barrels per day, marking the lowest level for the month in 17 years. Crude oil imports in September fell 3.3 percent from the prior year to average around 8.1 million barrels per day. Though the highest imports level in nearly a year, this was the lowest imports level for the month in 17 years, since 1996. Imports of refined products were down by 8.8 percent from September 2012 to average 1.9 million barrels per day. This was the lowest level for the month in 16 years.

The *refinery utilization rate* averaged 90.8 percent in September, down 0.5 percent from the prior month but up 3.2 percentage points from September 2012. API's latest refinery operable capacity was 17.820 million barrels per day, up 2.4 percent from last year's capacity of 17.400 million barrels per day.

Total U.S. *petroleum deliveries* (a measure of demand) increased by 2.7 percent from September 2012 to average just above 18.6 million barrels per day last month. For the third quarter, petroleum deliveries increased by 1.7 percent from the same period last year. "Demand for petroleum products remains consistent with a gradually improving economy," said API Chief Economist **John Felmy**. "Exports of refined products in particular continue to show strength over the previous year."

Gasoline demand rose 2.1 percent in September and 1.2 percent in the third quarter from 2012 levels to average 8.7 million barrels per day. Demand also rose in September for distillate (3.8 percent), "other oils" (5.8 percent), and jet fuel (1.5 percent). At nearly 1.4 million barrels per day, jet fuel demand was the second lowest for the month in 20 years, since 1993. September residual fuel oil demand, however, fell 38.3 percent to 232 thousand barrels per day. This was the lowest September level on record and just 36 thousand barrels higher than the all-time low of 196 thousand barrels per day set in December 2012.

Refinery gross inputs grew 6.2 percent from last September to the highest level for the month on record at nearly 16.2 million barrels per day. Exports of refined petroleum products rose 15.5 percent in September to the second highest level ever at nearly 3.7 million barrels per day. Gasoline production increased by 1.9 percent in September and 1.4 percent in the third quarter compared to last year. The production of 9.1 million barrels per day was the third highest September gasoline output on record. Distillate fuel production rose 8.1 percent from last year to a record for the month of 4.9 million barrels per day. This was also the second highest output level on record, just 104 thousand barrels below last month's all-time high of 5.0 million barrels per day. Year to date production of both gasoline and distillate reached all-time record highs in September, averaging just above 9.0 million barrels per day for gasoline and nearly 4.7 million barrels per day for distillate.

Horizontal Wells and the Mississippian Limestone Play

Excerpt from K. David Newell and Lawrence L. Brady Report

Editors Note: The following is an excerpt from an AAPG Energy Minerals Division Mid-Continent Report (Kansas contribution) recently authored by **K. David Newell** and **Lawrence L. Brady**, both with the Kansas Geological Survey in Lawrence, Kansas. The full report can be found on the KGS website: <http://www.kgs.ku.edu/PRS/PetroDB.html>.

Although about 765 horizontal wells have been drilled in Kansas over several decades, 2010 marked the beginning of a new era in drilling where staged massive hydro-fracturing was extensively utilized in long-reach horizontal wells. Most horizontal wells since 2010 have been drilled to access poorly drained reservoir compartments and low-permeable oil zones in Mississippian carbonates in southern Kansas, particularly in the tier of counties immediately north of the Oklahoma state line. This new engineering and geological play is dubbed the Mississippian Lime(stone) Play, or MLP.

The most prolific of all the MLP wells to date is SandRidge Exploration and Production's Bernice #1-17H well in sec 17-T35S- R7W. in Harper County, just north of the Oklahoma state line. Peak production of this well was 849 bbls/day and 1603 mcf/day in its 5th month of production in December 2011. In 23 months (production reported through June 2013), the well has produced 199,106 bbls of oil and 912,145 mcf of natural gas. Production for June 2013 from Bernice #1-17H was 1048 bbls (35 bbls/day) and 9646 mcf (322 mcf/day) of natural gas. This well remains the most prolific MLP horizontal well to date in terms of greatest monthly production and greatest cumulative production.

The number of intents-to-drill, which are posted on the website of the Kansas Corporation Commission (KCC), can provide an up-to-date monitoring of the types of wells that are soon to be drilled in Kansas. The number of horizontal wells in the southern part of the state gradually increased in 2011 and has gradually declined since mid-2012. Some companies, including Chesapeake Energy, Shell Oil Gulf of Mexico, and Apache Oil, gained acreage positions in Kansas, but then stated after initial drilling that they would not pursue the play any more in the state. SandRidge Exploration and Production LLC (Oklahoma City, OK) and Woolsey Operating Company LLC (Wichita, KS) continue to be active in the play, as are several other independents from Oklahoma, Texas, Kansas, and Colorado.

As of mid-October 2013 (and since May 2011), 694 intents-to-drill for horizontal wells have been permitted, and as of the June 2013 (the most recent publication of production data) 256 MLP horizontal wells (and 6 additional horizontal wells targeting other formations) have reported production. Production from these wells constituted 7.7 percent of Kansas oil and gas production as of June 2013. The other 92.3 percent of Kansas oil and gas production is produced from 48,298 oil wells and 24,118 gas wells.

The 262 modern horizontal wells in Kansas in June 2013 produced 262,426 bbls of oil and 2,075,303 mcf of natural gas. Overall gas-oil ratio for that month was 7.91 mcf/bbl. Cumulative production for these wells is 3,008,949 bbls and 22,966,739 mcf of natural gas (GOR = 7.63 mcf/bbl). Operators for these 262 producing wells are: SandRidge Exploration and Production LLC (169 wells), Shell Gulf of Mexico (31), Woolsey Operating Company LLC (12), Tug Hill Operating LLC (9) and Osage Resources LLC (7).