

# Director's Cut

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Aug Oil 28,246,774 barrels = 911,186 barrels/day  
Sep Oil 27,958,190 barrels = 931,940 barrels/day (preliminary)(NEW all-time high)  
867,123 barrels per day or 93% from Bakken and Three forks  
64,817 barrels per day or 7% from legacy conventional pools

Aug Gas 31,246,547 MCF = 1,007,953 MCF/day  
Sep Gas 31,811,414 MCF = 1,060,380 MCF/day (preliminary)(NEW all-time high)

Aug Producing Wells = 9,475  
Sep Producing Wells = 9,682 (preliminary)(NEW all-time high)  
5,889 or 61% are now Bakken – Three forks wells  
3,793 wells or 39% produce from legacy conventional pools

Aug Permitting: 276 drilling and 0 seismic  
Sep Permitting: 287 drilling and 2 seismic  
Oct Permitting: 267 drilling and 5 seismic (all time high was 370 in 10/2012)

Aug Sweet Crude Price = \$93.97/barrel  
Sep Sweet Crude Price = \$92.96/barrel  
Oct Sweet Crude Price = \$85.16/barrel  
Today Sweet Crude Price = \$71.25/barrel (all-time high was \$136.29 7/3/2008)

Aug rig count 183  
Sep rig count 183  
Oct rig count 183  
Today's rig count is 185 (all-time high was 218 on 5/29/2012)  
Operators have indicated plans to add 5-10 rigs by year end

## Comments:

The drilling rig count was unchanged from Aug to Sep and the number of well completions rose sharply from 153 to 207, resulting in a 2% increase in oil production. However, drilling crews drilled approximately 1.5 wells for every well that completion crews put on production. Industry reports that this is a result of batch processing on multi-well pads. Days from spud to initial production remained steady at just over 100. The uncertainty surrounding federal policies on taxation and hydraulic fracturing regulation continues to make investors nervous.

More than 95% of drilling still targets the Bakken and Three Forks formations.

We estimate that at the end of Sep there were about 520 wells waiting on completion services, an increase of 90.

Crude oil take away capacity is expected to be adequate as long as rail deliveries to coastal refineries keep growing.

Rig count in the Williston basin is stable. Utilization rate for rigs capable of +20,000 feet remains about 90%, and for shallow well rigs (drill to 7,000 feet or less) about 60%.

Drilling permit activity was up in September and October as we help operators plan for winter. The goal is to have a sufficient permit inventory to accommodate multi-well pads through the end of load restrictions in 2014 as well as the time required to deal with federal hydraulic fracturing rules if required.

The number of rigs actively drilling on federal surface in the Dakota Prairie Grasslands remains at 0.

Activity on the Fort Berthold Reservation is as follows

24 drilling rigs (6 on fee lands and 18 on trust lands)

289,330 barrels of oil per day (121,667 from trust lands & 167,663 from fee lands)

1,055 active wells (805 on trust lands & 250 on fee lands)

115 wells waiting on completion

291 approved drilling permits (276 on trust lands & 15 on fee lands)

2,314 additional potential future wells (1,473 on trust lands & 841 on fee lands)

Seismic activity is up with 7 surveys active/recording, 0 remediating, 1 suspended, and 2 permitted. There are now 4 buried arrays in North Dakota for monitoring and optimizing hydraulic fracturing.

North Dakota leasing activity is very low, consisting mostly of renewals and top leases in the Bakken - Three Forks area.

US natural gas storage is now 1.5% above the five-year average indicating continued low prices for the foreseeable future. Natural gas production increased 5% versus the 2% increase in oil production. This is consistent with the Bentek study that shows gas / oil ratios increasing over time. North Dakota shallow gas exploration is not economic at near term gas prices.

The price of natural gas delivered to Northern Border at Watford City is down \$0.27 to \$3.07/MCF. This results in a current oil to gas price ratio of 23:1, but the high liquids content makes gathering and processing of Bakken gas economic. The percentage of gas flared is back down 1% to 29%. The historical high was 36% in September 2011.

Draft BLM regulations for hydraulic fracturing on federal lands were published last year. BLM received over 177,000 comments and withdrew the rule. A new proposed rule was published in the federal register on May 24, 2013 and the comment period ended August

23, 2013. This time BLM received 1.2 million comments. Thanks to all who provided comments in support of a “states first” policy.

Draft EPA Guidance for permitting hydraulic fracturing using diesel fuel was also published last year. EPA received over 97,000 comments and is reported to have sent the final guidance document to OMB in September.