Brigham Exploration Announces Additional Montana Bakken Completions, Updates Core Acreage for Drilling Successes, and Provides Smart Pad Efficiency and Williston Basin Operations Update

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AUSTIN, Aug 8, 2011 - Brigham Exploration Company (NASDAQ: BEXP) announced additional Montana Bakken drilling successes with the completion of the Storvik 7-6 #1H and the Charley 10-15 #1H at early 24-hour peak rates of approximately 2,066 and 1,069 barrels of oil equivalent, respectively. Due to its recently announced positive well results in Eastern Montana, Brigham believes it has increased its de-risked acreage for the Bakken in Eastern Montana to approximately 33,500 net acres from its previously disclosed 24,400 net acres. As a result of the successes and incremental acreage acquisitions, Brigham has grown its de-risked acreage in the Williston Basin by approximately 10,800 net acres to a total of approximately 235,200 net acres, which represents an inventory of at least 794 net remaining drilling locations. Furthermore, to date Brigham has drilled 79 consecutive long lateral high frac stage wells in North Dakota with an average early 24-hour peak rate of approximately 2,803 barrels of oil equivalent. Brigham also provided an update on its Smart Pad efficiency initiatives and an update on its drilling and completion activities in the Williston Basin.

Montana Drilling / Completion / Acreage Update

Brigham announced the successful completion of the Storvik 7-6 #1H, which is located in Richland County, at an early 24-hour peak rate of approximately 2,066 barrels of oil equivalent (1,857 barrels of oil and 1.26 MMcf of natural gas). The Storvik 7-6 #1H was completed with 34 frac stages and is located approximately three miles to the north of the Johnson 30-19 #1H. Brigham also completed the Charley 10-15 #1H, which is located in Roosevelt County, at an early 24-hour peak rate of approximately 1,069 barrels of oil equivalent (917 barrels of oil and 0.91 MMcf of natural gas). The Charley 10-15 #1H was completed with 30 frac stages and is located approximately two miles to the east of the Gobbs 17-8 #1H, which was completed with 36 frac stages.

Based on results of the above wells and previously announced completions, Brigham now believes that it has de-risked approximately 33,500 net acres for the Bakken in Eastern Montana, which represents an approximate 37% increase in its Eastern Montana de-risked acreage. In total, Brigham now believes that it has de-risked approximately 235,200 net acres and has at least 794 net remaining drilling locations in its inventory in the Williston Basin.

Brigham is currently completing the Beck 15-10 #1H in Roosevelt County and is drilling the Glenn 28-33 #1H, which is located in Richland County. The Glenn 28-33 #1H is approximately eight miles to the west-southwest of the Voss 21-11H and will represent Brigham's westernmost completion in Richland County. Brigham is currently using a riglet to redrill the horizontal portion of the State Hardy 31-16H, which is also located in Richland County, and is a wellbore acquired in one of Brigham's recent acreage acquisitions. Brigham anticipates spudding approximately four additional wells in Montana during the remainder of 2011.

Smart Pad / Other Efficiency Initiatives

Brigham is early in the implementation of its Smart Pad drilling initiative, which along with other improvements are anticipated to reduce drilling and completion costs by 10 to 20%. Smart Pad drilling consists of drilling multiple wells from a single pad utilizing walking rigs, simultaneously fracture stimulating wells (i.e., zipper fracs) and consolidating equipment and services into centralized facilities.

To date, Brigham has completed drilling eight Smart Pad locations and anticipates that seven of its operated rigs will be drilling smart pads in August. For the remainder of 2011, approximately 70% of Brigham's wells will be drilled on Smart Pads. Efficiencies are currently being achieved by limiting the number of rig moves and the amount of rig up and rig down time for a Smart Pad location relative to an independent well.

Additional efficiencies will be achieved beginning later this year as three conventional rigs will be converted to walking rigs. Further, Brigham anticipates receiving two specially built walking rigs into its operated rig fleet in the first quarter of 2012 and two additional specially built walking rigs by July 2012. Brigham has the option to drop an equal number of less efficient conventional rigs upon receipt of the walking rigs. With walking rigs, Brigham will batch drill multiple wells and will achieve additional efficiencies by minimizing the changeover of drill pipe and mud systems.

Further efficiencies are being achieved via zipper fracs, which minimize the amount of frac crew moves and the amount of rig up and rig down time. Additionally, pressure pumping equipment is more efficiently utilized as perf and plug down time is minimized during a zipper frac. To date, Brigham has currently completed six zipper fracs and expects to continue to develop efficiency enhancements. During Brigham's recent two well zipper frac, comprised of the Larsen 3-10 #2H and the Lucy Hanson 15-22 #1H, approximately 6.4 stages were completed per day including move time for a total time to complete of 10.5 days, or 5.3 days per well. Additionally, Brigham recently completed its first three well zipper frac comprised of the Holm 9-4 #1H, the Holm 9-4 #2H and the Alger State 16-21 #1H. During the three well zipper frac, approximately 8.4 stages were completed per day including move time for a total time to complete of 11.6 days, or less than 4 days per well. For comparison, at a recent single well frac, approximately 3.6 stages were completed per day including move time for a total frac time of 9.0 days. It's estimated that Brigham was 75 to 130% more efficient in completing a two or three well zipper frac relative to an independent frac. Brigham anticipates that approximately 62% of its wells will be completed with zipper fracs during the remainder of 2011.

Brigham has completed mechanical field tests of new frac sleeve technologies provided by both Halliburton and Baker Hughes. For independently completed wells, the new technologies have the potential to eliminate wireline work associated with perf and plug for the initial stages, while initiating the development of fractures along the length of the wellbore. By fully utilizing pressure pumping equipment during independent fracs, the systems would allow Brigham to complete more wells per month. Brigham is currently completing wells that have approximately 15 stages, or half of the well, with new frac sleeves installed. The remaining half of the wellbores will be completed with perf and plug and production from these wells will be compared to direct offset wells that were completed entirely with perf and plug.

Lastly, Brigham is progressing the build out of its support infrastructure system consisting of crude oil, produced water and fresh water gathering lines and produced water disposal wells. The crude oil, produced water and fresh water systems serving Williams and McKenzie counties, North Dakota are expected to be operational near year-end 2011. In total, Brigham spent $33.2 million in 2010 and has budgeted to spend $87.1 million in 2011 on support infrastructure. In addition to reducing operating and maintenance expense as well as drilling well cap-ex, Brigham expects that these systems will provide greater control over the transportation of its fluid volumes, which were constrained during the second quarter due to the adverse weather conditions which limited truck access to Brigham's drilling and producing well locations. The systems will also significantly improve Brigham's access to the different oil markets.

Operated Drilling and Completion Update

Brigham's accelerated development of its acreage in North Dakota and Montana is proceeding with seven operated rigs drilling in Rough Rider, two operated rigs drilling in Ross and one operated rig drilling in Eastern Montana. Brigham plans to add two walking rigs in the first quarter of 2012.

In its Rough Rider project area, Brigham currently has a Three Forks well waiting on completion in each of McKenzie and Williams Counties. Brigham plans to spud an additional Three Forks well in McKenzie County in September.

Brigham currently has four wells flowing back, four wells fracing, and 10 wells waiting on completion. In the second quarter, Brigham brought on line to production a record 21 gross wells. To date, Brigham has completed 79 consecutive long lateral high frac stage wells in North Dakota at an average early 24-hour peak rate of approximately 2,803 barrels of oil equivalent.

Brigham is currently running two fully dedicated frac crews focused on completing Brigham operated horizontal wells in the Williston Basin. Brigham estimates that it will be capable of fracture stimulating and bringing on line to production a minimum of eight wells per month, with the goal of achieving 10 fracs per month due to the efficiencies gained by zipper fracs.

Management Comments

Bud Brigham, the Chairman, President and CEO, commented, “Despite the adverse weather experienced in North Dakota, our employees delivered sequential production growth of 8% in the second quarter that

resulted in record quarterly production volumes of 12,206 barrels of oil equivalent per day. Once weather conditions improved and we were able to fully realize the benefits of our ramp up in operated rigs and frac crews, our production in the Williston Basin surged to record levels, greater than 12,000 barrels of oil equivalent per day in June and in excess of 13,000 barrels of oil equivalent per day in July. We believe the continued ramp up in our production volumes during the second half of 2011 will allow us to achieve our previously forecasted full year 2011 guidance range of 14,000 to 16,000 barrels of total equivalent oil production per day.“

Bud Brigham continued, “Our Smart Pad efficiency initiatives, and midstream build out that is currently underway and expected to come on line near year-end, should allow us to mitigate most of the weather issues experienced in the past in the upcoming winters and thaw periods. By drilling multiple wells from a Smart Pad, we will keep our operated rigs and frac crews more efficiently utilized, due in part to reduced transportation and rig up and rig down times, as well as reduced dependence on trucks. Our midstream gathering system will provide very significant competitive advantages. For example, this gathering system will allow us to move oil and produced water volumes off the majority of our locations to ensure we can keep most of our producing wells on line regardless of the weather. Further, the transport of fresh water out to our frac jobs will enable us to continue to frac most of our completing wells in order to continue to bring production on line consistently throughout the year, at times when other operators without such systems will be challenged.“

Bud Brigham continued, “I'm particularly pleased with the entrepreneurial spirit our operations group has demonstrated on our zipper frac designs and operations. Our zipper fracs helped us to achieve sequential production growth in the second quarter 2011 during a period of difficult operating conditions in the Williston Basin. They demonstrated the benefits of a two well zipper by completing 6.4 frac stages per day relative to 3.6 when fracing a single well. Our engineers continue to work with service providers to evolve and improve the zipper frac process in order to achieve further efficiencies. For example, over the weekend we completed our first three well zipper frac at our Holm 9-4 #1H, the Holm 9-4 #2H and the Alger State 16-21 #1H Smart Pad and completed approximately 8.4 frac stages per day and completed the entire frac of all three wells in under 12 days including move time. We estimate that we were 130% more efficient in completing the three well zipper frac procedure relative to a single well frac.“

Bud Brigham concluded, “The second half of 2011 is filled with catalysts for future growth and in my view will be one of the most exciting periods of potential net asset value growth for our stockholders. First, we will bring on line three additional Three Forks wells in Rough Rider that, if successful, would further delineate the economics on up to 500 incremental net drilling locations, which would represent an incremental seven years of drilling inventory at our 2011 operated drilling pace. Second, we will spud five well density pattern tests in both Rough Rider and Ross to test the potential to increase the number of Bakken and Three Forks wells in our spacing units. Our micro seismic analysis of our frac jobs, combined with the production performance will help us to determine whether we have the ability to increase our inventory by up to 25%. Third, we will drill an incremental four wells in Eastern Montana. Fourth, we anticipate fracing two wells using new technology frac sleeves that have the potential to revolutionize the frac process by replicating the benefits of perf and plug while achieving the time efficiencies of standard frac sleeves. Fifth, near year-end we will bring on line our midstream gathering system that will generate substantial economic benefit and make many facets of our drilling and completion operations more efficient. Overall, the next five months will be filled with new data and potential for our stockholders.“

About Brigham Exploration

Brigham Exploration Company is an independent exploration, development and production company that utilizes advanced exploration, drilling and completion technologies to systematically explore for, develop and produce domestic onshore oil and natural gas reserves. For more information about Brigham Exploration, please visit our website at www.bexp3d.com or contact Investor Relations at 512-427-3444.

Forward-Looking Statement Disclosure

Except for the historical information contained herein, the matters discussed in this news release are forward-looking statements within the meaning of the federal securities laws. Important factors that could cause our actual results to differ materially from those contained in the forward-looking statements include early initial production rates which decline steeply over the early life of wells, particularly our Williston Basin horizontal wells for which we estimate the average monthly production rates may decline by approximately 70% in the first twelve months of production, our growth strategies, our ability to successfully and economically explore for and develop oil and gas resources, anticipated trends in our business, our liquidity and ability to finance our exploration and development activities, market conditions in the oil and gas industry, our ability to make and integrate acquisitions, the impact of governmental regulation and other risks

more fully described in the company's filings with the Securities and Exchange Commission. Forward-looking statements are typically identified by use of terms such as “may,“ “will,“ “expect,“ “anticipate,“ “estimate“ and similar words, although some forward-looking statements may be expressed differently. All forward-looking statements contained in this release, including any forecasts and estimates, are based on management's outlook only as of the date of this release, and we undertake no obligation to update or revise these forward-looking statements, whether as a result of subsequent developments or otherwise.

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