

## ***The Granite Wash: An Emerging Tight Sands Natural Gas Play in the U.S.***

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In 2009, shale dominated the natural gas news in North America as important new shale plays emerged and both reserves and production from shale grew impressively as did the associated field infrastructure to gather, process, treat, compress and connect the gas to major transmission systems. While shale will continue to excite E&P companies and capture the imagination of investors in 2010, its sister resource, tight sands gas, is likely to get increasing attention.

The North American tight sands natural gas resource is believed to be even vaster than the shale resource but is more challenging technologically, financially and operationally to profitably develop and produce. However, the resource is so great in scope and scale that attractive fields and basins do exist and several new ones may emerge over the next 24 months. The combination of substantial risk capital, operator sophistication, increased basin-specific experience and knowledge, technological and business process advances and, especially, much greater skill with hydraulic fracturing and horizontal drilling is impelling this renewed and strong interest in tight sands gas.

In recent weeks, the tight sands play known as the Granite Wash has emerged strongly and credibly. It is both an E&P (mostly "P") play and a midstream infrastructure opportunity. The weathering of granite over time gives the play its name. It is geographically rather extensive, located in the Northern Texas Panhandle and Western Oklahoma and gas is found in multiple zones (a characteristic and challenging feature of tight sands gas) at depths between 11,000 and 13,000 feet. In certain plays the gas is found as deep as 17,000 feet. The thickness of the deposition is reported to vary from 1500 to 3,500 feet according to a large independent currently drilling in the play.

At current field prices, the Granite Wash production yields very good rates of return, which is why independent E&P companies are converging on the area. The high liquids content of the gas significantly enhances producer economics. The high initial production (IP) rates help to front load cash throw off which provides a strongly positive bias to the rate of return and makes it better than several popular shale plays. The first year decline rate is reported to be 50 to 60 % (based on very limited production experience) compared with the 80% decline rate experienced with many shale plays. The expected drilling and completion costs range from \$5.5 to \$6.5 million which, given the anticipated cash flow profile of the wells, is not at all daunting.

At present, only a few independents are spending significant money in the Granite Wash but their population is expected to increase notably in 2010. The majors and mini-majors which usually follow the pioneering independents in both shale and tight sands are likely to enter once the metrics of the play are better established. Among the well known independents are Chesapeake Energy ([CHK](#)) and Forest Oil Corp. ([FST](#)) (both seem quite enthusiastic about this opportunity and believe it allows them to leverage core operating skills and experience) as well as St. Mary's Land and Exploration ([SM](#)) and Penn Virginia ([PVA](#)).

## Thinking Strategically

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As producer interest in the Granite Wash increases and production becomes significant, midstream investment opportunities naturally emerge. Gas gathering, including low-and mid-pressure gathering, and treatment and processing (because of the high liquids content) services will experience rapid growth. There will also be the need to connect the local systems and plants to high pressure long line transmission systems. Chesapeake Midstream, Frontier Energy, Markwest Energy Partners ([MWE](#)) and Eagle Rock Energy Partners ([EROC](#)) are already active in the Granite Wash midstream services market. Long distance, high volume, product take away capacity is provided by ONEOK Systems ([OKE](#)), Enogex ([OGP](#)) and Enterprise Product Partners ([EPD](#)).

The Granite Wash play typifies how rapidly and positively the US natural gas supply and transportation industry is changing and how quickly both the upstream and midstream American natural gas industries have become major strategic assets. Innovation, risk capital, business vision, individual passion, and the freedom to fail or succeed big are still very much features of the American oil and gas industry, which is why it remains a global leader.