Zacks SCR Digest

May 28, 2015

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Potential Opportunity in Frac Sand Market: Select Sands

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Summary

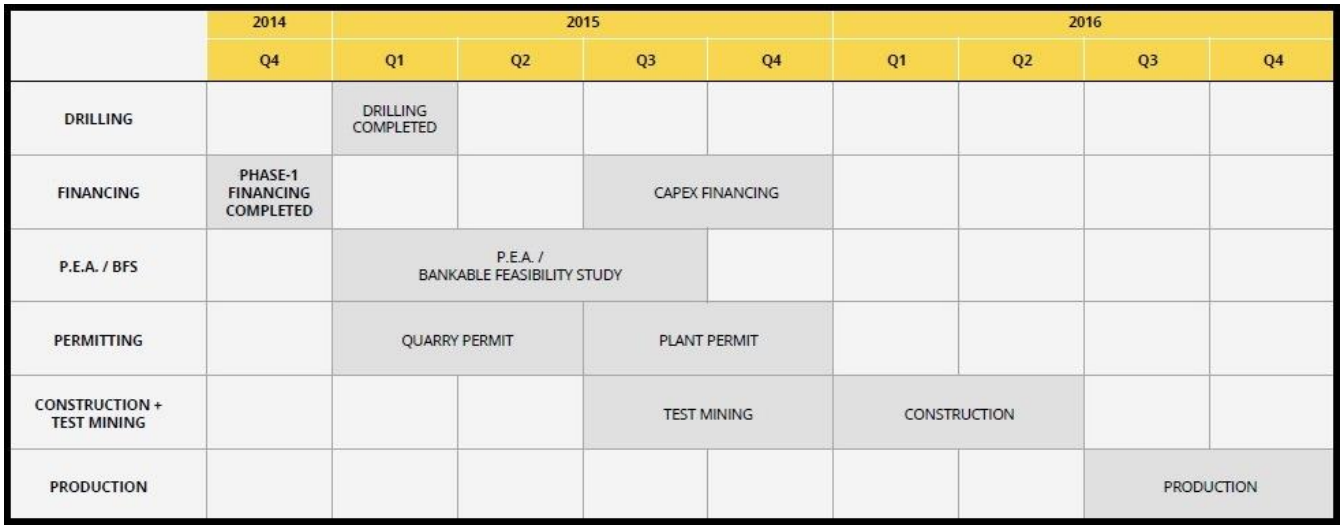
• Select Sands (TSXV: SNS, OTC:CLICF) is an early stage frac sand company engaged in the exploration and development of Sandtown, a frac sand property located in northeast Arkansas.
• The frac sand industry, currently under pressure, should provide leveraged investments to the recovery in oil and gas prices.
• With over 4,000 wells left behind pipe, dormant demand from DUCs (drilled-but-uncompleted-wells) could intensify the potential supply-demand imbalance when E&P companies begin to increase their capex budgets.
• Currently in the developmental stage, Select Sands' production is anticipated to be forthcoming at a potentially fortuitous time when demand for frac sand once again out strips supply
• Emerge Energy Services LP (EMES), Hi-Crush (HCLP), U.S. Silica (SLCA) and Fairmount Santrol (FMSA) might recover slowly with much of their legacy business under contract with negotiated price concessions.

In the natural resources sector, fluctuations of commodity prices can provide exceptional investment opportunities, especially when prices are under pressure. Recently, the oil patch endured considerable stress as oil prices declined from roughly $105 per barrel in June 2014 to a low of about $45 in the first quarter of 2015 and ultimately rebounding to around $60 today. This significant volatility is fertile ground for promising prospects and potentially oversized gains.

The frac sand market should provide leveraged investments to the recovery in oil and gas prices. **First**, advancements in horizontal drilling and hydraulic fracturing have been catalysts to the renaissance of U.S. oil and gas production. **Second**, sand is a crucial ingredient in the hydraulic fracturing process. **Third**, before the decline in oil and gas prices, the frac sand industry was enjoying a supply-demand imbalance resulting in solid double-digit volume growth (in the solid double-digit range in 2013 and 2014) and steadily increasing prices, primarily induced by increasing demand and inadequate supply. **Fourth**, the trend of further optimization techniques in fracking is resulting in higher usage of frac sand per well, especially fine-mesh sand. And **fifth**, sources of fine-mesh, spherical sand in proximity to tight oil and gas plays (where hydrocarbons are trapped within shale rock formations) are and will be the most desired suppliers of proppant due to the costs of transportation.

Select Sands (TSXV: SNS, OTC:CLICF) is an early stage frac sand (oil & gas proppant) company engaged in the exploration and development of a frac sand property (Sandtown) located in northeast Arkansas. In October 2014, the company entered into an option to acquire a 100% interest in the 520 acre prospective property, which can be acquired by Select Sands through the payment of $936,000, of which $200,000 has already been paid with the balance due on or before April 25, 2016 (which can even be delayed until April 25, 2018 under different payment terms).

The Sandtown quarry site is underlain by the St Peter Sandstone Formation. This well-known formation is host to a number of producing Tier 1 frac sand operations including ones owned by Hi Crush and US Silica. A **phase 1 drilling program** was conducted on the northern 200 acres of the 520 acre property in December 2014, followed by a resource definition **phase 2 infill drilling program** in February and March 2015. All drill holes except one encountered high purity (99% SiO2) silica (30/50 mesh 7K, 40/70 mesh 9K and 100 mesh 10K) over intervals averaging 52 feet with the longest intersect being 110 feet, which incidentally was open-ended. A Quarry Mining Permit Application was submitted to the Arkansas Department of Environmental Quality on April 16, 2015, and within three weeks, an unconditional 5-year **Authorization to Quarry** was received. The company has commissioned Tetra Tech to complete a NI 43-101-compliant resource calculation and a preliminary economic assessment (PEA). Based on the drilling campaigns, management's non NI 43-101 compliant resource estimate is 8-10 million tonnes of frac sand.

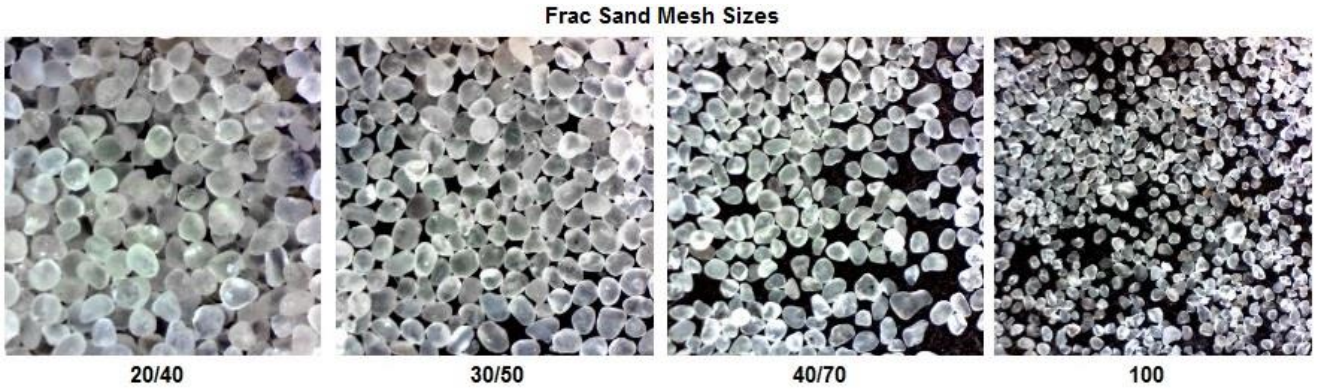


Management anticipates starting construction of the quarry and related processing facilities (wet and dry plants, along with drying and screening plants) in the first half of 2016, which is expected to be funded through debt/equity instruments. **Production is estimated to commence in the second half of 2016**. In the meantime, starting in the third quarter of 2015, management anticipates performing a test mining program using bulk samples, which will be processed by third party plants.

The Sandtown frac sand asset has **two competitive attributes** which should enable management to achieve its objective of establishing Select Sands as a supplier of premium frac sand: One, Sandtown appears to be a **prospective Tier 1 frac sand asset** with fine grade (40/70 & 100 mesh) sand that can be easily monetized as the trend towards finer mesh sand completion methods is adopted in the oil and gas industry and oil as prices improve. Two, **the location of Sandtown** is competitively advantaged for delivery of frac sand to the Permian and Eagle Ford Basins in Texas.

Sand Quality

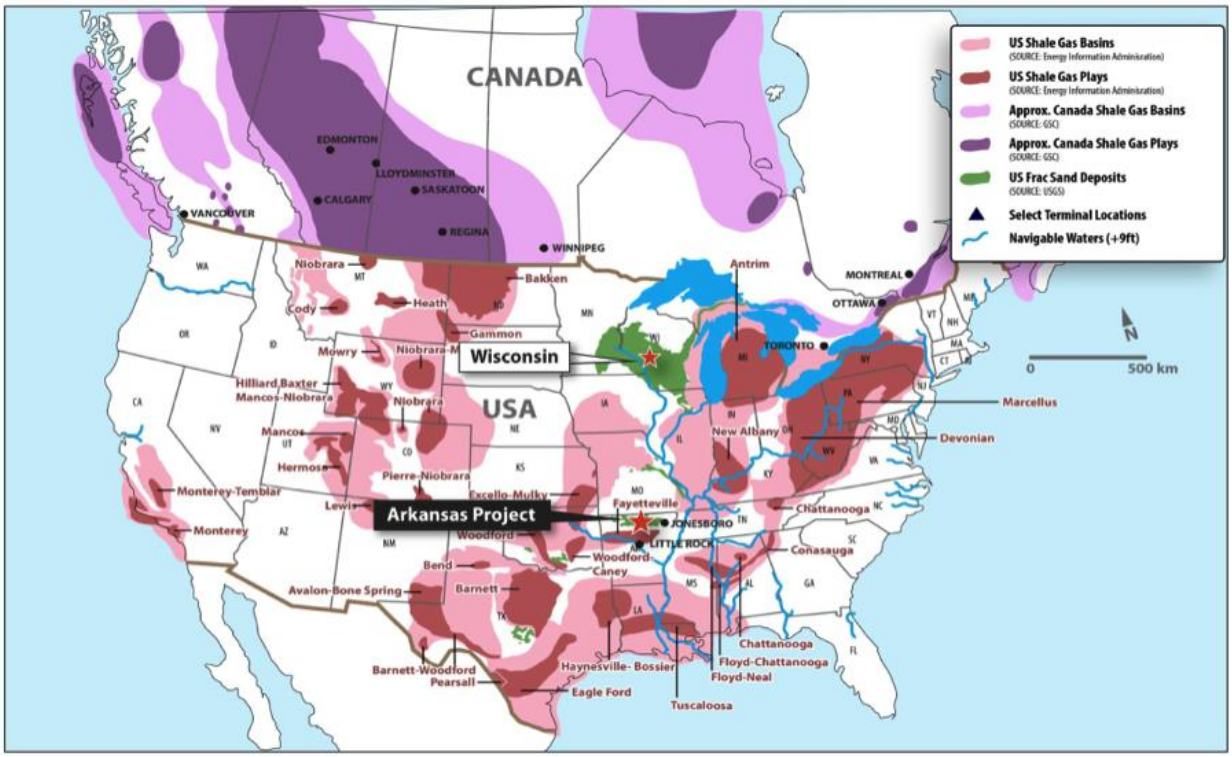
Commercial-grade frac sand has certain mandatory attributes pertaining to shape, size, purity levels and crush strength in order to be effectively used in the recovery of oil and natural gas as frac sand. Simplistically, frac sand must be crush resistant in order to stay intact under pressure and properly shaped to allow oil and gas to flow through the rock fractures to pipe. Normally, hydraulic fracturing requires of the highest quality, premium sand known as Tier 1 (aka Northern White, White, Southern White or Ottawa White). Lower grades are known as Tier 2 and Tier 3.



Finer grade, Tier 1 frac sands (40-70 and 100 mesh) are used heavily in both oil and liquid gas hydraulic stimulation processes. Drill core samples were sent to Stim-Labs for analysis, and the results indicated the 40/70 mesh and 100 mesh grades met or exceeded API Tier 1 proppant (frac sand) specifications.

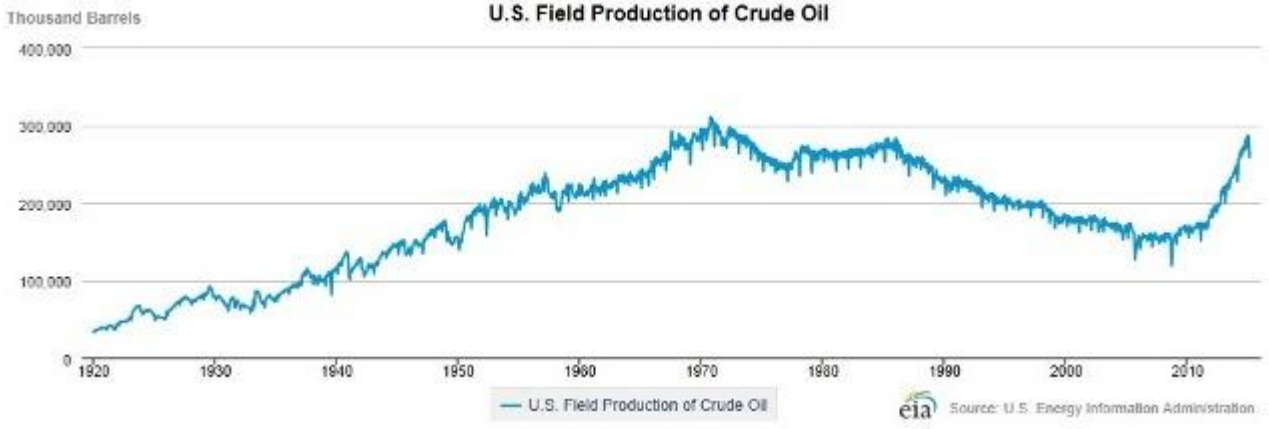
Logistics

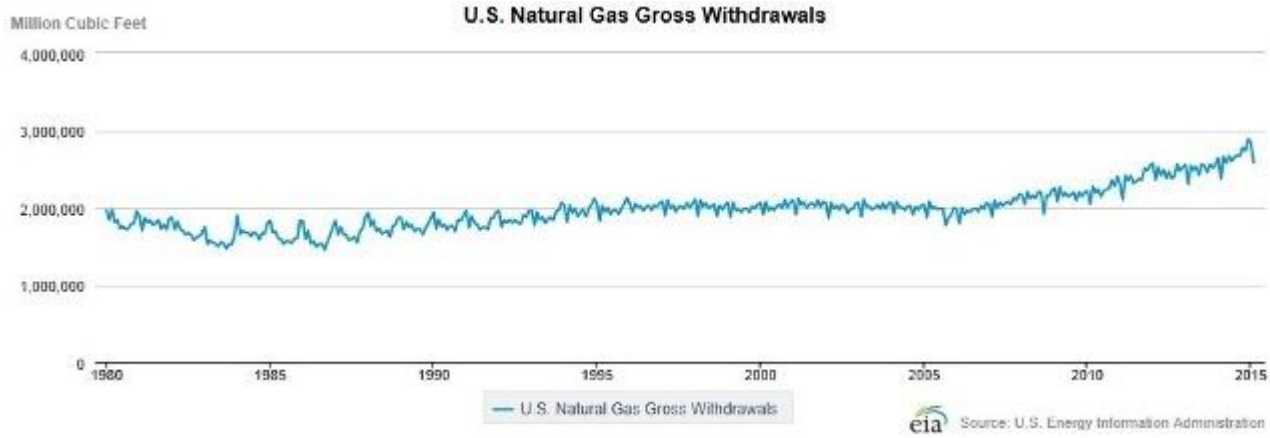
Select Sands has a **geographic advantage** to serve the Eagle Ford and Permian Basins in south and west Texas, respectively. Major competitors with mines/quarries in the favorable geology setting of Wisconsin, Minnesota and Illinois are at a serious logistical disadvantage in supplying the oil and gas fields of Texas. The distance of transportation is a key cost factor, since logistics can account for up to 60% of delivered cost of frac sand. And in general, sand resources in Texas produce Tier 2 and Tier 3 sand, which are unsuitable in the fracking process, and the Tier 1 sand deposits in Texas (known as Texas Gold) are insufficient to meet local demand.



Secular Growth in Oil & Gas Industry

The **domestic oil and gas business** is currently in the midst of a **resurgence of production**, primarily due to advances drilling and completion technologies, especially horizontal drilling and hydraulic fracturing (or fracking). Previously, unconventional tight oil and shale gas resources were uneconomic to recover.





Horizontal drilling is an oil recovery technique by which a vertical borehole bears off on an arc and continues at a near-horizontal direction through a targeted hydrocarbon reservoir in order to maximize the exposure of reservoir rock to the well bore's surface. The horizontal lateral portion of the well bore is then perforated and fracked in the same manner as a conventional vertical well. Horizontal displacements have extended to over 10,000 feet, though in general the lateral passes through 3,000 to 5,000 feet of the prospective formation. As a result, a greater length and area of the producing formation exposed to the well bore. In addition, the surface footprint of the oil and gas operation is reduced since there is no need to drill many closely-spaced vertical wells.

Hydraulic fracturing is process that creates additional fissures in the hydrocarbon-bearing rock formations. After the perforation of the steel and cement casings in the well bore, additional spaces of porosity and permeability are created by fracking. A slurry of water, proppant and chemicals is injected under high pressure through the perforations into the targeted production zone. The fill material fractures the rock and creates additional fissures to better release and extract oil and gas held by the formation. The fissures are propped open with proppant, primarily **frac sand** (92% share) but also resin-coated sand (4%) and ceramic (4%), in order to prevent the newly created pathways from collapsing and to increase the flow rate of hydrocarbons from the source rock. The newly established path of higher permeability permits hydrocarbons to migrate to the wellbore.

New production from unconventional resource plays in shale formations have dramatically increased North American oil and gas production. Horizontal drilling techniques and hydraulic fracturing have opened up huge deposits of hydrocarbons previously untapped in tightly locked shale deposits. In addition, older wells can be reworked by re-fracturing reservoir rocks to revitalize production.

Frac Sand Industry

Sand is a crucial ingredient in the hydraulic fracturing process. The Freedonia Group, a market research organization, reported (in the latest report publicly available) that raw frac sand consumption in North America increased at a 34.3% CAGR from 5.6 million tons in 2007 to 26.8 million tons in 2012. Over the same time period, supply and transportation constraints caused prices to rise from $48 to $58 per ton. By the fourth quarter of 2014, the average selling price per ton had increased to between $70 and $84.

The frac sand industry is represented by several public companies: Emerge Energy Services LP (EMES), Hi-Crush (HCLP), U.S. Silica (SLCA) and Fairmount Santrol (FMSA). CARBO Ceramics (CRR) manufactures and sells ceramic proppants, resin-coated ceramic and resin-coated sand proppants. Other important sand companies include EOG Resources (fourth largest in terms of capacity, but is a captive operation supplying internal frac sand demand) and Preferred Sands (which acquired Winn Bay in 2012, and in turn was acquired by KKR in 2014). Also, there are new entrants into the market, such as Victory Nickel (NI.TSX) and emerging companies like **Select Sands**.

The group exhibits high beta relative the industry and high alpha relative to the market as a whole, both for fundamental reasons. High alpha is illustrated by Emerge Energy Services and U.S. Silica rallying 786% and 220%, respectively, from May 2013 to their peaks in August/September 2014. Their high beta is exemplified by Emerge Energy Services having declined over 70% from above $140 to $40 during the recent downturn in oil prices while Hi-Crush dropped 57% from over $70 to around $30. Due to the **industry's current attractive valuation** after significant price declines over the last nine months, frac sand stocks provide leveraged exposure to the improvement of oil prices.

Though forecasts for the rate of long-term growth of frac sand demand has been tempered by the decline in exploration and development activity and wells behind pipe (completion by fracking having been forgone after the well has been drilled), certain fundamental factors bolster the expectation increased use of frac sand. Some specific drivers are:

- An increased number of wells with horizontal laterals (that require fracking) to exploit shale formations
    - In 2014, the number of horizontal (Hz) wells fracked increased 9%
- Workovers that include hydraulic fracturing (and the use of frac sand) in order to lengthen useful lives of legacy wells
- A continued shift towards fracking wells exclusively with frack sand
    - 77% of Hz wells were utilized only sand during completion as of 2Q 2014
- The lengths of horizontal laterals are increasing
- The stage widths within horizontal laterals (length between perforation intervals) are decreasing resulting in more stages per well
    - The number of Hz frack stages increased 19% in 2014.
- The increase of the amount of frac sand used per stage
- Technological innovation and further optimization of drilling and completion (D&C) techniques
    - Contribution to the long-term growth in the number of wells fracked
- A continued transition to pad/batch drilling
    - More laterals per pad increases recovery factor per section

The evolution of hydraulic fracturing treatments not only is increasing the amount of frac sand utilized per well, but also is migrating the type of towards finer-grained 40-70 and 100 mesh sand. For example, US Silica is seeing proppant intensity increasing with 15% to 20% (on average) more sand used per well.

According to PacWest Consulting Partners, around 5 million pounds of frac sand is utilized during the fracking of a typical shale oil well. Some oil service companies, such as Halliburton, are experimenting with fracturing techniques that consume 20 million pounds of frac sand in a single well.

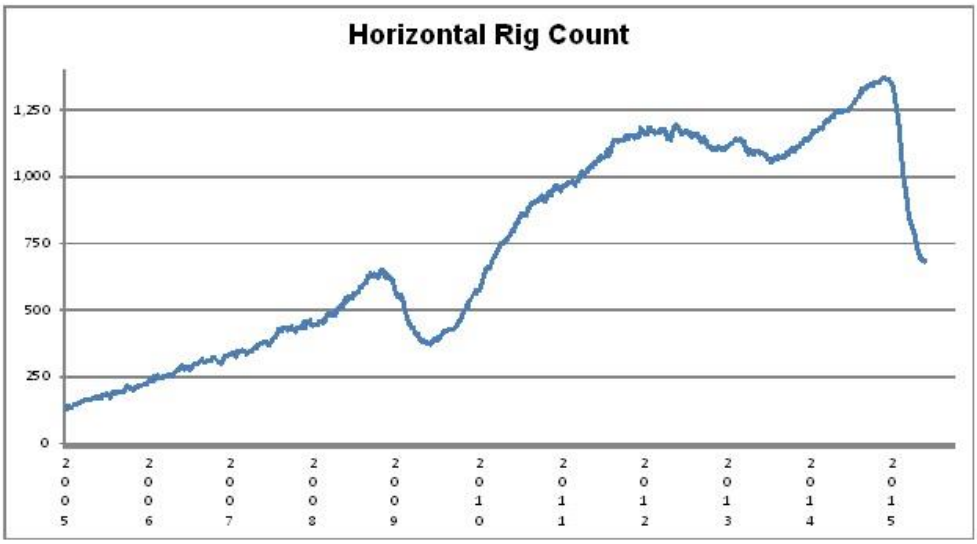
Current State of Frac Sand Industry

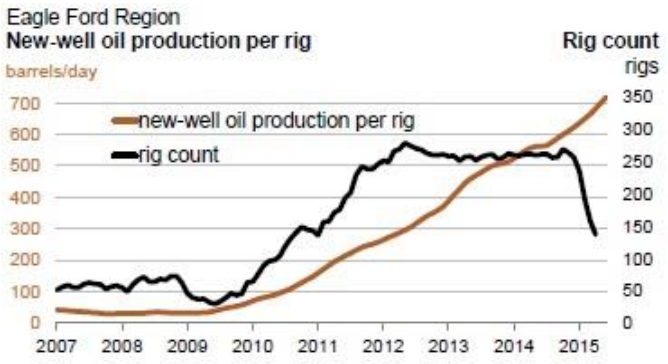
The environment of lower oil and gas prices during the last three quarters has impacted the drilling and completion plans of Exploration and Production (E&P) companies. As a result of the growth in domestic oil production combined with OPEC's decision not to cut oil supply targets, oil prices plummeted over 50% between June 2014 and January 2015, and E&P companies responded by reducing capital spending, implementing cost reduction plans, instituting layoffs and postponing the drilling of new wells and also the completion of recently drilled wells. We estimate that over 4,000 wells have been left behind pipe. However, as oil prices recover, E&P companies are expected to re-accelerate their development of certain core tight oil plays, specifically in the Bakken, Eagle Ford, Niobrara, Permian and Appalachia Basins.

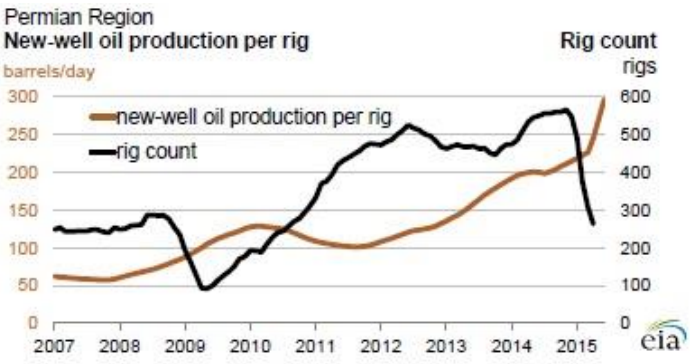
Frac sand companies are now operating under challenging market conditions. During the first quarter, on average, sand volumes declined roughly 30% to 40% on a sequential quarterly basis, though on a year-over-year (YOY) basis, most frac companies experienced increases in both volume and revenues. YOY comparisons reflect both the intermediate- and long-term growth aspects of the industry while sequential results reveal the quickness of the downturn in the oil and gas markets. Also, new capacity that came online in 2014 exacerbated the pressure on pricing. Obviously, the industry is currently exposed to near-term headwinds. Managements of several large frac sand companies have announced capacity expansion delays or outright cancelations, which will aid in the ultimate recovery of the industry. Also, usually these types of actions are indicative that the nadir is coming closer.

Drilling Activity

Drilling activity increased significantly from 2009 to mid-2014. With sand demand being increasingly responsive to horizontal completions, analysis of the Baker Hughes data indicates that the US horizontal rig count troughed at 372 in June 2009 and steadily increased to 1,372 in November 2014. Since that zenith, the US horizontal rig count has declined by 50.2% to 683 as of May 22nd. While the rate of decline is decelerating, uncertainty remains as to the timing and depth of the bottom and the subsequent recovery. Ultimately, the recovery of the drilling sector depends upon many factors, including commodity prices, the overall health of the US economy, etc. For the charts below, it is apparent that the overall rig count in the Eagle Ford and Permian Basins mimic the US horizontal rig count.







Latent Demand - DUCs

Many oil and gas wells were drilled in 2014 but not completed. When oil prices recover or even stabilize at an economic level, fracking activity will ramp up, driving increased demand for frac sand. **Estimates for the drilled-but-uncompleted-wells (DUCs) range from 3,000 to 5,000 wells**. These candidates for hydraulic fracturing create a significant backlog of frac sand demand. Though the precise timing is hard to predict, it is not inconceivable that there may be a convergence of demand for frac sand from both DUCs and a reacceleration of drilling activity simultaneously.

Conclusion

The domestic oil and gas business is currently in the midst of a production renaissance, primarily due to the employment of improved drilling and completion techniques, such as horizontal drilling and fracking, which have opened up huge deposits of hydrocarbons that were previously locked in shale deposits. Prior to the commodity price declines, the availability of frac sand was constrained by inadequate supply and insufficient logistical transport capacity, which led to increased prices and delivery delays. As drilling and completion activity resumes, tightening market conditions should again result in robust frac sand demand and price increases, primarily from evolving hydraulic fracturing techniques that require increasing amounts of frac sand. In addition, the currently dormant demand from DUCs should intensify the potential supply-demand imbalance.

We are optimistic about the prospects for continued and growing extraction of oil and gas from shale formations.
Frac sand companies are leveraged to the completion activity of oil and gas wells. Many of the frac sand majors have a significant portion of production capacity (over 75%) under contracts, which limits their exposure to the prospective upturn. However, Select Sands is still in the development stage with production anticipated to be forthcoming at a potentially fortuitous time when demand once again out strips supply. In addition, the price concessions secured by E&P companies during the downturn in energy prices may mute the initial phase of the recovery of the frac sand industry while **a greenfield sand company, like Select Sands, should fully benefit in an upswing of demand and pricing**.

Lastly, the acquisition of the Sandtown property would generate synergies within other larger frac sand companies; therefore, Select Sands appears to an attractive acquisition candidate. It appears that a prospective Tier 1 frac sand asset can be easily monetized as oil and gas prices improve, or possibly even before. The industry is ripe for M&A activity. Preferred Sands acquired Winn Bay in 2012, and in turn was acquired by KKR in 2014. Additional consolidation occurred in the last couple of years with Hi-Crush acquiring D & I Silica, LLC in June 2013 and U.S. Silica acquiring Cadre during the second quarter of 2014. **Additional consolidation is expected**.