



Shale Energy

Modern Day Gold Rush

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Introduction

Shale Energy is all over the news these days. Areas like North Dakota and South Texas are experiencing the likes of a modern day California Gold Rush. What does all this mean? What is all the fuss about? Sedimentary rock known as “shale” containing a significant amount of Kerogen, a solid organic mixture from which hydrocarbons are produced is called shale oil. Due to the current barrel price of crude oil throughout the world, shale oil is gaining more attention. Adding the advancements of hydrofracturing coupled with horizontal drilling techniques make extracting shale oil much more attractive. The United States holds some of the largest known deposits of shale.

Let's not confuse oil shale from shale oil. Shale oil is an alternative to conventional crude oil. Shale oil which sometimes is referred to as “tight oil” occurs naturally in shale formations. Shale formations such as Bakken, Eagle Ford, Niobrara, and Pierre Shale are examples of oil bearing shale formations. These formations or shale plays produce oil and natural gas using this new hydrofracturing technology. This shale oil which is also known as unconventional oil and the natural gas are now being used as feedstock for current refineries. Shale oil goes through the same refining process as conventional crude oil.



The advancements in drilling techniques and the current market conditions for crude have produced an environment where shale energy is a viable alternative to conventional oil. Once wells are tapped companies race to get this oil to market as fast as possible to take advantage of the current market for oil. In many cases there is no existing infrastructure (i.e. pipeline) to transport the product to the refineries. While many pipeline projects are in the works, numerous governmental and environmental regulations are delaying this much needed infrastructure. Energy suppliers are anxiously seeking alternative methods of transporting this shale oil to market. Here is where Carbis can help.

Let's follow the oil from the well to the refinery. Traditionally conventional oil is usually transported via a pipeline from a well to a terminal and ultimately to a refinery. Due to lack of infrastructure, transporting shale oil from the well to a refinery is a bit more involved. One alternative is to transport the shale via truck to a local terminal for temporary storage. Or in some situations short pipelines are laid to get the shale oil from the oil field to a depot station (terminal) where it is temporarily stored in large tanks or transferred directly to railcars to be transported cross country. At the next destination, the oil is either off loaded into another storage tank or into a pipeline or transloaded directly into tank trucks for local transport to a nearby refinery.

At each stage of this custody transfer process oil is being measured. It is measured when it is loaded in trucks or pipeline from the well. It is measured again when it enters the storage tanks and measured again as the oil is loaded into railcars. As the oil makes it way from the rail terminal to the refinery, it is measured another time. And so on and so forth. This oil could be transferred and measured four to six times prior to reaching the refinery. All this movement is a carefully calculated schedule of moves that hinges on the success of the previous effort. Any disruption in the process will create a domino effect leading all the way back to the oil well. The ramifications of such a disruption could be financially and logistically catastrophic to the company's production schedule and expected ROI.



As these suppliers increase production of the shale energy many suppliers are facing logistical challenges in securing the resources necessary to move this much needed supply of unconventional oil to market. The demand for tank trucks, railcars, and the facilities to

load and unload these vehicles is a race within itself. As investors see the potential for major returns there is a rush to be first to market. Add to the mix of logistical issues the challenges of weather and the limited available resources in many of these areas will lead us back to the open remarks of a modern day California Gold Rush. North Dakota, home of the Bakken play, has man camps being erected just to house the many contractors and operators needed to supply these operations.

Solutions, previously thought of as temporary, are now being considered as viable permanent alternatives. Timelines are tight, delays cost money, and redoing work is unthinkable. Investors are expecting returns as quickly as possible and suppliers have clients screaming for them to do more with less and quicker. Project planning, solution development, and implementation are critical factors in determining the success of getting this new source of energy to market and achieve the investment objectives of those providing the capital.

Carbis is helping major energy suppliers bring the shale energy to market. Carbis recently completed a 6 lane truck terminal in the Eagle Ford play, located outside Asherton, Texas as well as two 26 spot railcar terminals in St James, Louisiana. Carbis is engaged in two railcar projects in the Bakken play and has active projects in the Niobrara play, outside of Denver, Colorado. Pete Singleton, Carbis' Vice President of Sales and Market Development, announced the formation of Carbis' Strategic Markets Team. Carbis' Strategic Markets Team focuses on providing the solutions needed to meet the challenges of the Shale Energy industry. "Carbis is positioned well to service the Shale Energy Industry with over 50 years of experience designing and fabricating fully integrated bulk loading systems. Our clients are demanding partners that take an active approach to meeting their unique needs and are able to

consistently meet critical project timelines. Solutions are more complex than ever before and clients demand that the suppliers are reliable throughout the process”, comments Neal Sears, Carbis Strategic Markets Team member.

Companies plan to add several custody transfer terminals throughout 2012. “Like most capital investment projects, the project’s budget is limited and the operational dates are aggressive. Clients in this market are looking for a comprehensive and reliable solution.” speaks Ray Hagemann, Carbis Strategic Markets Team

member. “Clients are looking for the complete integration that Carbis offers; the safe access system or loading rack, the bulk loading system, which may include loading arms and skids to grounding monitoring, and spill containment systems. How these systems integrate is critical to the sites ability to operate efficiently.”

Carbis Inc. headquartered in Florence, South Carolina is a leading supplier of bulk loading systems serving many of the world leading industrial facilities. The Strategic Markets Team is located in Carbis’ regional office in Raleigh, North Carolina.

