



SeaBridge Core Strategy

May 2015

Commentary

Opportunities in a Disrupted Oil Market: Building The Case for Laredo Petroleum (LPI) – A Gem in a Rising Basin

Worldwide Supply Response:

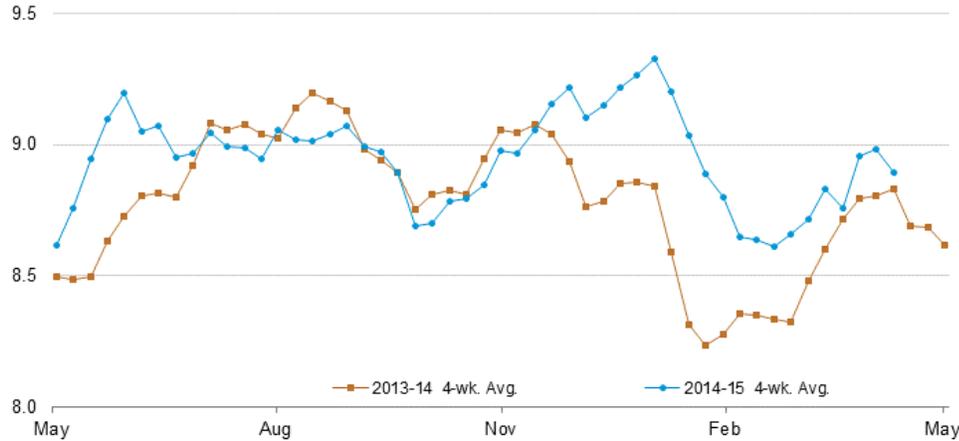
Last month, we highlighted the response from U.S. shale oil producers to the sharp decline in the price of oil that occurred in the latter half of 2014. We concluded that a 50% decline in the number of active oil rigs is likely to contribute to flat oil production or even a modest decline in production in the near future. Similarly, the Canadian Association of Oilwell Drilling Contractors forecasted a 41% reduction in active drilling rigs from 2014 to 2015. Outside North America, oil rig counts have also declined, except for the Middle East, which is flat year-over-year. From March 2014 to March 2015, Baker Hughes reported 8%, 16%, 7%, and 11% reductions in drilling activity in Africa, Asia-Pacific, Europe and Latin America, respectively. It is important to note that given the differences in oil fields, rig counts are not comparable as more rigs are required in shale oil drilling than in conventional fields. Overall, we believe these worldwide reductions in drilling should meaningfully restrain oil supply growth in the visible horizon.

Emerging Demand Response:

On the demand side, response is less visible as oil is used in many different ways and, therefore, is difficult to track. In addition, energy standards and conservation practices continue to put downward pressure on consumption. However, lower gasoline prices have somewhat stimulated demand growth in the U.S. market since late 2014 (Chart 1). Moreover, demand growth could continue as the summer driving season commences in May/June. Outside the U.S., unexpected pockets of demand strength have emerged as noted by the International Energy Agency, "European product demand, long in secular decline, swung back to growth in some markets in early 2015." According to the most recent OPEC report, Europe Big 4 (Germany, France, Italy and the UK) registered a 1.9% year-over-year increase in demand. Industrial production growth amid a recovering European economy could further boost demand in the short-term.

Chart 1:

U.S. gasoline demand
million barrels per day

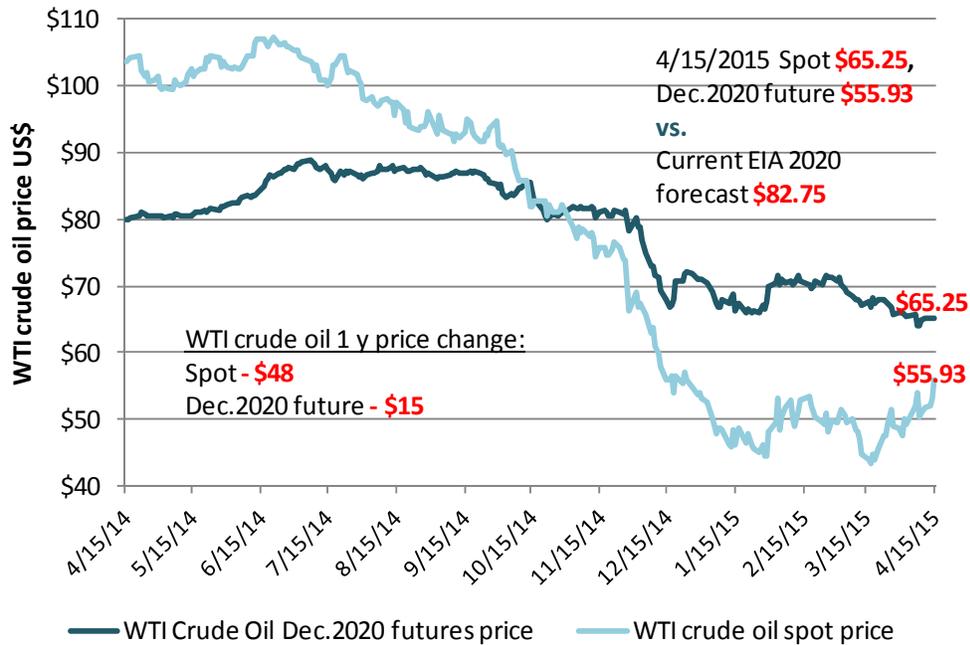


Source: U.S. Energy Information Administration (EIA)

Crude Oil Market to Balance with Reduced Price Expectations:

Crude oil prices seem to have responded favorably to the aforementioned developments and could gradually return the oil market to balance as soon as the second half of 2015. One risk to this expectation, however, could be an increase in Iranian exports if sanctions were to be lifted and Iran proved to be capable of ramping up its production and infrastructure quickly. Beyond the near-term, oil prices are likely to be lower and more stable in the coming years than the prior decade, in our view. Substantial shale resource potential, experience in exploiting shale reserves and technology advancements have given U.S. producers a greater ability to fulfill demand growth. Although gradual price recovery could encourage more drilling, continued productivity enhancement / cost reduction could keep the price of oil restrained. Chart 2 depicts changes in the spot price of West Texas Intermediate (WTI) crude oil price compared with 2020 futures prices over the past year. Despite a \$48 drop in the spot price, future prices have exhibited greater stability, declining only about \$15. The decrease in long-dated prices could be attributed to changes in expectations about equilibrium prices because of a perception of persistent growth in U.S. shale oil supply. Accordingly, the EIA's 2015 annual energy outlook points to \$82.75 per barrel in 2020. This represents a \$24 reduction from the agency's 2014 forecast.

Chart 2:



Source: Bloomberg and EIA

Investment Opportunities:

The question for investors is: Where are the opportunities amid oil market turmoil and reduced expectations regarding the long-run equilibrium oil price? We have outlined the attributes of our oil investments in many previous commentaries. In this note, we provide further details regarding Laredo Petroleum (LPI), a Permian Basin focused company:

1) The Permian Basin: the U.S. oil industry's next growth engine

The Permian Basin can be viewed as a “multilayer” cake with different geologic formations comprising the layers. These stacked layers of shale, high fracture rates, long history of oil production, and tremendous oil-in-place are the primary reasons that the Permian Basin is becoming America’s next oil growth engine now that the Bakken and Eagle Ford formations are slowing in response to lower oil prices. Recently, the EIA projected the first declines in crude oil production in the Bakken, Eagle Ford and Niobrara shale since it began reporting in Oct. 2013. Yet, the agency noted that the Permian, where as late as December 2013 half the operating rigs were vertical rigs rather than horizontal, still appears to be experiencing significantly larger productivity improvements than other basins. In general, average production from a vertical well is significantly less than that from a horizontal well.

2) Laredo Petroleum (LPI): driving economic returns in a lower oil price environment

Laredo was founded in 2006 by Randy Foutch, Chairman and CEO, who, prior to Laredo, formed, built and sold three private oil and natural gas companies. The Company was capitalized by Warburg Pincus, a global private equity firm, which partnered with Mr. Foutch on two previous successful ventures. Laredo employs the same fundamental business strategy executed by Mr. Foutch’s previous companies: to create significant

economic value through growth in reserves, production, and cash flow. With significant resource potential on hand, but with limited capital, Laredo primarily targets five shale layers within its Permian acreage: the Upper, Middle and Lower Wolfcamp, Cline, and, more recently, the Canyon formation. These five layers comprise a shale pay zone that is approximately 2,400 feet thick. Secondary shale layers include the Spraberry, Strawn, and ABW, which together are 2,000 feet thick. As a comparison, the well known Williston Basin in North Dakota is comprised of two shale pay zones, the Bakken and the Three Forks formations, which are only 150 feet thick.

Despite volatility in oil prices, Laredo thoughtfully hedged nearly all of its 2015 oil production at \$81. This should afford Laredo the financial flexibility to continue to create significant value by a) enhancing economic returns, and b) increasing reserves and resource potential by leveraging the geological advantage of its multiple stacked shale formations.

While exploration companies do not have control over commodity prices aside from short-term hedging, Laredo's managers are pulling several levers to achieve returns on investment in a \$50 oil price environment that can rival returns that it produced at last year's \$90 oil price. Chart 3 depicts the sensitivities of return on estimated ultimate recovery (EUR), drilling and completion costs (D&C), and lateral length for a typical Upper Wolfcamp well. Based on drilling data, the company confirmed 46% EUR enhancement (from 758 MBOE to 1,110 BOE) by increasing the lateral length of its horizontal wells from 7,500 ft to 10,000 ft. In addition, efficiency gains from Multi-Well Pad drilling over Single-Well Pad drilling, which was initiated in 2013, enabled production growth, reduced cycle time and costs, and enhanced returns by another 5% to 36%. Clearly, Laredo is still in the early stages of optimizing well performance and working towards an additional 10% increase in EUR and/or reduction in D&C, either of which is expected to return well economics close to that which were achieved when the price of oil was \$90 per bbl.

As of year-end 2014, Laredo had proved reserves of 247 million barrels of oil equivalent (BOE). The company identified an un-booked resource potential of more than 4 billion BOE, which are from its primary targets only (i.e. not including Spraberry, Strawn and ABW formations). This is about 16 times its current proved reserves. Approximately 2 billion BOE of the un-booked resource potential is characterized as Development Ready, which means it is ready to be developed based on technical analysis, drilling results, and infrastructure availability. The company believes the majority of the 2 billion BOE could be considered proved reserves if it were not for the Securities and Exchange Commission (SEC) five-year development rule. A \$3 billion market capitalization company simply does not have sufficient cash flow to drill fast enough to prove 2 billion BOE within 5 years. To put the required investment into context, Laredo expects to spend \$2.3 billion to develop current proved undeveloped reserves of 141 million BOE. Clearly, such great resource potential is much more valuable for a larger oil company who can accelerate development and lock in much higher net present value.

Chart 3:

	2013 UWC	2015 Upper Wolfcamp (UWC)			
		Lateral length	+10% on EUR	Pad drilling	-10% D&C
Lateral length (ft)	7,500	10,000	10,000	10,000	10,000
EUR (MBOE)	758	1,110	1,221	1,110	1,110
D&C (\$MM)	\$7.8	\$7.3	\$7.3	\$6.9	\$6.2
Crude price	\$90	\$50	\$50	\$50	\$50
Natural gas price	\$3.75	\$3.00	\$3.00	\$3.00	\$3.00
Rate of return estimate	47%	31%	45%	36%	46%

Source: Laredo Petroleum

EUR: Estimated ultimate recovery is an approximation of the quantity of oil or gas that is potentially recoverable or has already been recovered from a reserve or well. D&C: Drilling and Completion (costs)

3) Laredo Petroleum: a deep value acquisition candidate

The market currently values Laredo at about \$4.5 billion (as of April 20, 2015: \$3.2 billion market cap and \$1.3 billion long-term debt). Based on the SEC's standard measure, Laredo's proved reserves have a net present value of \$3.2 billion after tax at a 10% discount rate (PV10). This measure begins with oil & natural gas reference prices of \$91.48 and \$4.25, respectively. Adjustments are then made for each lease based on quality, transportation fees, and regional price differentials. In 2014, the Company's realized price was \$89.57 for oil and \$6.39 for natural gas. The gas realization was substantially higher than the reference rate for the region because Laredo's natural gas is rich in natural gas liquids, which command a market price premium relative to natural gas. Clearly, in a \$50 oil price environment, the standard measure of proved reserves would be significantly discounted. However, as we have illustrated, Laredo has demonstrated significantly improved well economics via longer laterals and Multi-Well Pad drilling. Further cost reductions and/or recovery rate enhancements appear achievable to return these wells to similar economics as they enjoyed in a higher oil price environment. More importantly, the company's Development Ready resource potential of 2 billion BOE could be considered proved undeveloped reserves if wells could be drilled within 5 years. Compared with 141 million BOE proved undeveloped reserves with an after tax PV10 (year-end 2014) of roughly \$1.3 billion, 2 billion BOE could be worth \$18 billion (5 times the current stock price) assuming similar development costs and characteristics. Of course, these 2 billion BOE could be worth only \$7 billion (1.8 times the current stock price) if discounted by another 10 years. A mid-cap oil company could have the potential to develop this resource potential within a shorter time period, and perhaps would be willing to pay a significant price premium over the market value for this potential. In addition, although we cannot reasonably estimate the value of Laredo's additional 2 billion BOE commercially not confirmed resource potential as well as the economic potential from its secondary targeted layers, these could represent significant upside to an acquirer.

Our goal in publishing this note, however, was not to determine a value for Laredo if it were to be acquired as there are simply too many variables to determine an accurate valuation. Rather, our intention in presenting our analysis is simply to demonstrate with an actual case study the learning curve effect that is driving the shale phenomenon in the U.S. As we have stated in many publications over the past few years, as exploration companies gain more experience in developing their shale resources, the productivity and, therefore, profitability of these operators is growing at an accelerating rate. Although we expect the price

of oil to regress to an equilibrium price that is higher than at present, but lower than last year's peak, **U.S. exploration companies active in the better shale formations may not need higher prices to earn attractive returns on capital.**

Definitions:

Proved Reserve: Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geosciences and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time. Source: Laredo 2014 10K

PV10: PV-10 is equal to the standardized measure of discounted future net cash flows at the applicable date, before deducting future income taxes, discounted at 10 percent. Because there are many unique factors that can impact an individual company when estimating the amount of future income taxes to be paid, the use of a pre-tax measure is valuable for comparing the relative size and value of reserves among companies. However, PV-10 does not purport to present fair value of the oil and natural gas reserves. An estimate of fair value would take into account, among other things, the recovery of reserves not presently classified as proved, the value of proved properties, and consideration of expected future economic and operating conditions. Source: Laredo February 26, 2015 press release

SEC 5-year Rule: Specific "5 year rule" is a SEC disclosure requirement in Regulation S-X 210.4-10 "Modernization of Oil and Gas Reporting Regulations: Final Rule" (January 2009). Undeveloped projects should be developed within 5 years of the initial proved reserves booking, unless specific circumstances are met. For a project to be "developed", the category should progress from undeveloped to a developed status (i.e. producing, shut-in, or behind pipe). Certain projects require more than 5 years to develop – specific circumstances may justify booking proved undeveloped reserves as an exception to the 5 year rule. Source: <https://www.sec.gov/divisions/corpfin/guidance/oilandgas-interp.htm>; http://www.ryderscott.com/WP/wordpress/wp-content/uploads/2014/03/7_ReservesConf10_5YR_Rule_for_PUDs_Fitzgerald_Presentation.pdf

Fracture Rate: The extent to which the hydraulic fracturing process is more or less effective due to natural fractures in the shale.

4/30/15

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Disclosure:

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