U.S. ENERGY® Development Corporation



U.S. Energy Panel Provides Update on the Energy Market and Outlook for Direct Energy Investors

Wednesday, March 25, 2020

U.S. Energy Development Corporation, one of the largest sponsors of direct oil and natural gas investments with more than \$1.4 billion deployed since 1999, hosted its second in a series of market updates for broker-dealers, wealth advisors, and investors on recent events impacting the oil sector and what energy companies and investors could see in the weeks and months ahead.

Panelists include:

Matthew lak, Executive Vice President and Director Todd Witmer, VP Geology & Business Development Tim Kelley, National Director of Sales

Notable discussions from the March 25th event are included below.

Moderator: Mr. lak, can you please walk us through the recent events in oil?



In addition to an already slowing global economy from COVID-19, the early March OPEC+ (Saudi Arabia and Russia) failure to reduce global oil supply effectively shocked the oil market.

Coronavirus concerns initially led to a deterioration in oil demand, while the failure of cooperation between Russia and Saudi Arabia caused another price decline from the perspective of supply.

The result? An epic collapse in the price of oil over a very short period of time. What we're witnessing in the oil market today is extremely similar to 2014: a significant and sudden

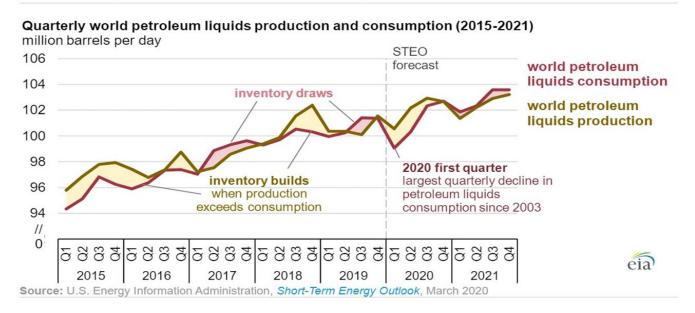
spread between global oil supply and demand. It doesn't take more than 1 or 2 million barrels a day in excess supply to create a massive and precipitous collapse in the price of oil.

Events like this where both demand and supply are unknown makes price forecasting difficult – there is no concrete numerator or denominator. However, we can lean on current market data and history to provide a little perspective on how the energy sector may react in the weeks and months ahead.

In their March 2020 short term energy outlook the Energy Information Administration (EIA) targeted a rebound in oil demand and shrinking oil supply toward the end of 2020 and into 2021. This is just one assumption, but provides the backdrop for our panel discussion today.

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OPEC shift to maintain market share will cause global inventory increases and lower prices



Moderator: Can Saudi Arabia, Russia, or the United States afford \$25 oil?

Mr. Witmer, commenting on how oil at \$25/barrel (b) impacts Saudi Arabia:



It's important to first establish why Saudi Arabia and Russia failed to agree on oil output. Saudi Arabia and Russia want to regain market share that was taken by U.S. shale – which became the top oil producing country in 2018.

It's known that Saudi Arabia has the lowest cost of production, or lifting cost, in the world. At less than \$10/b, one could assume they can sustain the low price environment. However, the breakeven oil price they need to balance their budget and satisfy their social programs is over \$80/b. By best estimates, Saudi Arabia can sustain about 2 years of oil at \$20/b before they feel significant financial pain.

When oil prices dropped in 2014, Saudi Arabia lost an estimated \$250 billion in revenue. With the current price of oil, it's estimated they could now lose \$30 to \$150 billion a year.

Saudi Arabia can't afford a long-term price war – and they've pretty much shown the world that's the case in the steps they've taken to diversify their economy in the last few years. For them, the market believes it's more of a question of how much pain are they willing to take, and for how long. At some point in time - and likely in the very near future - they'll need to take steps to cut production, which would help restore prices to more normal levels.

Mr. Kelley, commenting on how oil at \$25/b impacts Russia:



Russia's desires are pretty simple – keep oil prices low to regain market share.

Economics largely favor Russia. They'll be successful in destroying weaker U.S. shale companies - and probably challenge Saudi Arabia, too - if the price of oil stays at the current level. Russia's breakeven to balance their budget is about half that of Saudi Arabia, at \$42/b; therefore, they're in a much stronger position to sustain a lower-for-longer oil price.

It's also worth highlighting that Russia's oil is priced in the ruble and Saudi's is priced in U.S. dollars. When crude futures dropped by nearly 60%, that helped knock the ruble to its weakest level since 2016. This subsequently lowers Russia's production costs – or lifting costs – down toward the single digits, which rivals that of Saudi Arabia.

	Russia	Saudi Arabia
Production Capacity (per day):	11 million	8 million (claim they can increase up to 13 million)
Lifting Costs: Reported 2016	\$19.21	\$8.98
Breakeven Oil Price:	\$42	\$20
Oil Price Needed to Balance Budget:	\$42	\$84
Ability To Sustain \$25 Oil:	10 Years	2 Years
Additional Considerations:		 Aramco Value Destruction Selling to Europe at \$12/barrel discount

Both want US Production To Decline / Increased Market Share

Mr. lak, adding closing comments to the panel question:

Most pundits would agree that Saudi Arabia has the weaker hand.

However, for Russia there's also big pressure on Putin to not let the country go into a recession – but oil that's below \$30 is a recession for Russia. Thus, while Russia may be in a better financial position, they also have a lot more at risk politically than Saudi Arabia does over the long-term.

Bottom line, neither country is a clear-cut winner and neither can afford a sustained and protracted lower oil price environment.

Moderator: What is the outlook for US Shale Producers with oil at \$20, \$30 or \$40 a barrel?

Mr. Witmer, commenting on the view from U.S. shale producers:

Twenty-dollar oil is pretty much destructive for all US producers. You'll see oil and gas companies immediately taking measures to slash their CAPEX (Capital Expenditures) for new projects – especially in the near term. This means cutting rigs, cutting frac crews, shutting in oil wells that are cash flow negative, etc. Essentially, every measure to reduce their expenses and conserve cash will be the steps to survive the short term. This will look different for each company, but domestic production will drop.

What's interesting is that when prices reach today's level, companies get creative and find ways to become more efficient. We saw this in the last oil price drop – through the development of technology, streamlining processes, and just better overall capital discipline. Operators found a way to do things faster and more cost effectively. Contrary to Saudi Arabia's intent in 2014 when they flooded the oil market, this actually helped the U.S. to gain global market share and become the global leader of daily oil production. It's a big part of why Saudi Arabia abandoned the strategy by 2016 and I would expect to see a similar outcome this time.

"As prices begin to recover from current lows, you'll start to see sellers emerge. Based on my experience, that's probably around the \$30/b level"

While \$20-oil may be destructive, the reality is that we're not too far from the point where we'd expect to see U.S. shale producers snap-back in terms of both new drilling and acquisition activity.

No company wants to sell at what they perceive to be the bottom of the market,

so as prices begin to recover from current lows, you'll start to see sellers emerge. Based on my experience, that's probably around the \$30/b level. Just as last time, we'll start to see assets becoming available in phases as prices improve and as each company weighs their individual economics and financial need to sell.

As oil prices get back into the \$30s and \$40s, new operations in each area will begin to pick up drilling rigs at different prices. It's likely that as economics improve, you'll see the Permian recover first due to low operating costs there, with other basins not too far behind – notably the Powder River Basin and the Eagle Ford. Economics in those regions are strong even at current price levels.

Mr. Kelley, commenting how U.S. producers will approach the downturn from a capital perspective:

Individual company response will largely depend on what type of firm we're talking about - public or private.

In the public arena, we can expect the response will be to preserve short-term cash, manage liquidity, and protect the dividend. Large acquisitions like Occidental Petroleum's \$57 billion acquisition of Anadarko that took place in 2019 are highly unlikely as the debt burden alone is overwhelming.

Additionally, for North American Exploration & Production (E&P) companies there are major bills coming due. They have almost \$90B in debt that will mature this year, continuing into 2023 & 2024. Pipeline companies have an additional \$125B in debt coming due over the same period. With this debt overhang, and financing being relevant to a tight window – we are left to expect multiple bankruptcies – not just this year, but in years to come. Access to capital markets to finance activities will be tough and servicing existing debt for many may be near impossible.

Mr. lak, commenting on the view from Private Equity and Direct Energy Investors:

For years energy companies have stated that there needs to be a final capitulation event in the oil and gas sector. We needed it years ago when many companies turned equity into debt, and debt holders took over the equity and kicked the can down the road because they didn't want to take losses.

The number of 'zombie' companies, both public and private, following the 2014 oil price downturn was incredible. These companies could survive in the \$40s and \$50s, but it's unlikely they will in the \$20s and \$30s. There are going to be substantial losers – not just in corporations, but in those who bought and issued debt.

For anyone who closely follows the oil and gas sector like we do, you already know that high-leverage ratios and debt burdens have been one of the largest threats to oil and gas companies in recent years. U.S. Energy's ability to

reduce our debt has put us in a strong financial position relative to others in our industry, and will allow us to achieve growth even during a period of less-than-stellar oil pricing.

To Todd's point earlier, while \$20 oil may be too low to see significant activity anywhere in the energy sector, once we start to see a price recovery – and this could be sooner than some would expect - we expect to see immense "While \$20 oil may be too low to see significant activity anywhere in the energy sector, once we start to see a price recovery - and this could be sooner than some would expect - we expect to see immense buying opportunities."

buying opportunities. To buy assets at \$20 oil that have a present value of cash flow at a negative – that's tough. You can't buy negative cash flow. But as oil prices rise we'll be hyper-focused on buying assets.

These are the conversations we're having right now with our institutional and private equity partners to essentially have 'dry powder' as the market comes back. Expect similar opportunities for direct energy investors.

When it comes to new drilling, we are really focused on drilling in areas with predictable reservoirs and high degrees of economic success. We've been extremely fortunate to have acquired acreage over the last several years that can be profitably drilled even at today's lower oil price.

Lastly, I think it is worth noting that while lower oil prices might be viewed as a threat to others in the energy sector, we have consistently found in the past that sudden changes in energy cycles have created some of the best opportunities for investors in our 40-year history. Over the past 15 years, we have developed a reputation as an innovator of financial planning ideas and strategies. I believe that with the current oil pricing cycle and opportunities like those created in the recently passed CARES Act, we will be able to introduce new financial planning concepts that allow our partners to capitalize on the future of the energy sector.

You can access the full recording here: https://register.gotowebinar.com/recording/7375700326786411266 or contact U.S. Energy directly at 800-636-7606 | www.usedc.com

U.S. ENERGY Development Corporation

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Risk Factors:

Oil and natural gas partnerships are an inherently speculative activity. An investment in the partnerships involves a high degree of risk and is suitable only if you have substantial financial means and no need of liquidity in your investment. You should carefully consider the following factors and other information in the private placement memorandum before deciding to invest in the partnership.

Ownership in oil and natural gas wells involves the risk that the wells will not provide enough revenue to return the amount of your investment.

The revenues are directly related to the ability to market the oil and gas and their price, which is volatile and cannot be predicted. If oil

and/or gas prices decrease, then your investment return will decrease. If you choose to invest as an investor general partner, then you will have unlimited liability during the drilling of the wells for partnership obligations until you are converted to a limited partner. However, you will continue to have the responsibilities of a general partner for partnership liabilities and obligations incurred before the effective date of the conversion.

There is a lack of liquidity or a market for these units.

Total reliance on the managing general partner and its affiliates. You may owe taxes in excess of your cash distributions from the partnership.

The investor's deduction for intangible drilling costs may be limited for purposes of the alternative minimum tax.

Distributions may be a return of capital.

The foregoing is not a complete list of all the risks related to oil & gas investments. See "Risk Factors," in each applicable Private Placement Memorandum.