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THE NEWSLETTER OF THE BDO NATURAL RESOURCES PRACTICE

NATURAL RESOURCES RECORD

THE VALUATION OF OIL AND GAS PROPERTIES

Are they really worth 3x annual cash flow?

By Alan B. Harp, Jr., CFA, ASA, Senior Managing Director, HFBE, Inc., Houston, Texas

HFBE is a leading valuation firm providing valuation services to both privately held and publicly traded companies, including those in the oil & natural gas industry. Alan Harp has more than 20 years of experience in determining the fair market value of interests in closely held businesses and specializes in the valuation of oil and gas interests and entities.

Valuing oil and gas properties held by individuals or estates at three times annual cash flow (3x Cash Flow) has been a widely used rule of thumb for decades. More sophisticated users of the rule might apply it only to working interests and apply a higher (say 5x) multiple for royalty or overriding royalty interests. The convention is to simply multiply the trailing twelve-month cash flow figure generated by the subject property or collection of properties by three and the result presumably represents the market value of such properties. Countless CPAs and attorneys have filed estate or gift tax returns using this methodology. Furthermore, many bank trust departments regularly use this methodology when valuing oil and gas properties.

Because the approach is so simple and avoids petroleum engineering or appraisal fees, it is widely used, particularly for smaller, nominal properties. However, this rule of thumb is often applied in situations beyond its useful bounds and can result in conclusions that differ dramatically from the actual market value of the subject properties.

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DID YOU KNOW...

In the last 10 years, master limited partnerships (MLPs) in the energy industry have continually outperformed the market, reporting annualized returns of 17% according to the ***Alerian MLP Index*** (a benchmark index comprised of 50 of the largest energy MLPs), while the S&P 500 reported an average return of just over 3%.

Global investment in renewable energy sources grew by 32% during 2010 to reach a record level of $211B according to the UN's ***Global Trends in Renewable Energy Investment 2011 report***.

The ***Wall Street Journal*** reported that Google and Citigroup will each invest an additional $102 million in the Alta Wind Energy Center, a wind farm based in Tehachapi, California expected to become the nation's largest wind-energy provider by the end of this year.

Director pay in the energy industry is up 5.9%, the second highest increase among the eight industry sectors tracked in ***The BDO 600: 2011 Survey of Board Compensation Practices of 600 Mid-Market Public Companies***. The increase speaks to the strength of the sector in 2010 linked to surging oil prices which allowed companies to compensate directors for increasing workloads. Energy industry directors receive an average $139,930 in total compensation, surpassed only by directors in the technology industry.

Venezuela's proven oil reserves have surpassed Saudi Arabia's for the first time, making it the most oil-rich nation in the world, according to the ***Organization of Petroleum Exporting Countries***.

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THE VALUATION OF OIL AND GAS PROPERTIES

THE LIKELY ORIGIN OF THE 3X CASH FLOW RULE OF THUMB

The 3x Cash Flow rule gained significant traction decades ago in oil and gas producing regions like Texas and Oklahoma where legacy oil fields had relatively predictable declines. Property buyers probably set the acquisition standard based on their expectation of field declines, and their desire to create some margin for error (not having sufficient time or resources to perform detailed due diligence) as well as earn a spread for making a market in the interest. As the interests were passed down through family lines and further fractionalized, the cash flows were likely less material and the sellers many times not sophisticated enough to know whether they were receiving fair value for their properties.

THE IMPACT OF TECHNOLOGY

Technological advances in recent decades have increased the value of oil and gas properties. The combination of horizontal drilling with hydraulic fracturing have unlocked the enormous "shale" plays – the Barnett Shale in the late 1990s/early 2000s and more recently, the liquids-oriented Bakken/Three Forks and Eagle Ford Shales during 2009 and 2010. This and other technology has breathed new life into legacy oil and gas producing regions in the U.S. Also, the advent of the auction houses such as EnergyNet, Inc. (EnergyNet) or The Oil and Gas Asset Clearinghouse have increased the efficiency of the market for oil and gas properties resulting in higher values.

POTENTIAL DISTORTIONS IN VALUATION

Sophisticated buyers and sellers of oil and gas properties know that there can be significant value attributable to non-producing properties. Use of the 3x Cash Flow multiple applied to a collection of producing and non-producing properties implicitly gives little or no value to the non-producing properties. Consider a 1,000 acre mineral tract in the Eagle Ford or Marcellus shale that has been producing cash flow of approximately $100,000 per year from a non-shale depth. Under the rule, the minerals would have an implied value of $300,000. A closer examination might show that the property has significant upside potential related to the shale play and that the lease bonus on the shale depth minerals alone might approximate $2,500 to $5,000 per acre or $2.5 to $5 million on a 1,000 acre tract. Clearly, the magnitude of such a lease bonus (and the expected royalty cash flow stream from future production) implies a substantially higher value for the property than the rule of thumb approach.

MARKET DATA

In a recent issue of *Oil and Gas Investor*, Bill Britain, the President and CEO of EnergyNet, reported that cash flow multiples on royalty and over-riding royalty interests auctioned from January 2007 to June 2010 ranged from a low of 54 months (4.5x annual cash flow) for Gulf Coast properties (typically, short lived properties), to about 90 months or higher (7.5x annual cash flow) for Permian, Mid-Continent, and ArkLaTex properties. The properties sold at auction are typically broken into the lowest definable strategic unit and are therefore undiversified and do not include a non-producing component. Mineral portfolios that have upside potential through significant non-producing acreage positions trade at even higher valuation multiples. In March 2010, Dorchester Minerals, LP acquired a diverse collection of producing and non-producing royalty and mineral properties (the Maecenas properties) located in 206 counties in 17 states (mostly Texas and North Dakota) at about 11x annualized cash flow.

CONCLUSION

Use of the 3x Cash Flow rule of thumb could grossly understate value if the subject property base includes a significant amount of non-producing minerals and especially if those minerals have significant known upside potential (located in or near an active shale play, for example). For smaller properties where engineering studies are not available, the auction house data on specific transactions is useful for valuation purposes but such data is not publicly available and is difficult to obtain. Ultimately, the location and other characteristics (type of interest – royalty vs. working, diversification by geography and by operator, "upside" potential, and years of production history) should be considered in the valuation of the subject properties.

For more information on the valuation of oil and gas properties, please contact Alan Harp at aharp@hfbe.com.

BDO SPOTLIGHT:

Q&A with Ted Vaughan, Assurance Partner, Dallas

What led you to the Natural Resources practice at BDO?

I was drawn to BDO overall because of the high caliber of professionals and the opportunity to work with some of the best in the field. I've been fortunate to learn from and work alongside individuals who possess a great depth of experience, practical business knowledge, and admirable work ethics. A large midstream client in 2008 drew me into the Natural Resources practice; I was asked to run the team based on my experience in international engagements and cross-country coordination for large, complex transactions. I enjoy the global nature of the industry, and being part of a growing international practice.

What challenges lie ahead for the natural resources industry?

Energy demand is first and foremost on everyone's mind. Demand is expected to grow by 60% on a global basis by 2030 and we must change to keep up. In the near term, supplying this demand will be based principally on fossil fuels, which are transported by midstream. Until our infrastructure is able to support alternative energy on a larger scale, our reliance on fossil fuels will magnify other problems we face, including environmental and geopolitical concerns, and the rising cost of gas.

What role will the midstream sector play in the development of alternative energy infrastructure?

The midstream segment is still almost exclusively focused on oil and gas facilities. The question that midstream companies have to answer now is: how do you transfer wind, solar or other types of alternative energy to a central location, and what role can midstream play in that process? As renewable energy becomes more cost-efficient to produce, we'll start to see growing interest and investment in alternatives from pipeline and other midstream transportation companies.

What industry trends are you keeping a close eye on?

Safety will remain a major focus for the second half of 2011. The Gulf oil spill and the nuclear reactor explosion in Japan put a spotlight on safety concerns, leading to new regulatory and compliance issues that are still being hashed out. In addition, the rising price of oil weighs heavily on the industry as a whole. According to the International Monetary Fund, there has been a 42% increase since June of 2010. Limited resources, combined with new concerns and regulations, means that it's unlikely we'll see a considerable price drop in the near future.

What developments inside of BDO Natural Resources excite you?

Global coordination is a major focus for us right now and has already brought about some exciting new engagements this year [see sidebar]. We've seen this across all of the industry subsectors, including mining, midstream and E&P. I'm personally working on coordinating BDO's international go-to-market strategy with our partner firm in Calgary. We can expect to see similar strategies unfolding with Mexico, China, Europe, the Middle East and others as we further develop our industry presence and depth of professional resources across country lines. This way, our clients based in the U.S. doing business around the globe—or vice versa—have BDO looking at all operations and understanding the company from a global standpoint.

For more information on BDO's work in the midstream sector, please contact Ted Vaughan at tvaughan@bdo.com.

BDO TAKES OILTANKING PARTNERS LP THROUGH IPO PROCESS

Oiltanking Partners LP (NYSE: OILT), a Houston-based petroleum storage company and BDO client for more than 20 years, was pleased to have BDO on board to take them through the IPO process in July 2011. The company filed on July 14, raising more than $215 million through an initial public offering of 10 million limited partnership units. "We are thrilled to have been a part of a successful IPO for Oiltanking Partners," said Jeff Bugenhagen, partner in the BDO Houston office who oversaw the project. "We were very pleased to be able to leverage our experience with MLPs for companies throughout the energy industry to help OILT have a successful offering."

2011 CALENDAR

The following is a list of upcoming natural resources conferences and seminars:

AUGUST

August 14- 18
The Oil and Gas Conference
The Westin Denver Downtown
Denver, CO

August 16- 18
Deepwater Intervention Forum
Galveston Convention Center at The San Luis Resort
Galveston, TX

August 17-19
Summer NAPE Expo
George R. Brown Convention Center
Houston, TX

August 25-26
IADC Well Control Conference of the Americas & Exhibition
Westin Riverwalk Hotel
San Antonio, TX

SEPTEMBER

September 12-13
Enhancing Shale Oil & Gas Development Strategies
Doubletree Denver Tech Hotel
Denver, CO

September 25-27
IQPC 3rd eDiscovery for Oil & Gas
The Omni Houston Galleria Hotel
Houston, TX

September 26-28
OGIS San Francisco
The Palace Hotel
San Francisco, CA

September 27-28
4th Annual Exploration & Production Technology Summit
The Woodlands Waterway Marriott Hotel & Convention Center
Houston, TX

OCTOBER

October 9-12
30th USAEE/IAEE North American Conference
Capital Hilton Hotel
Washington, DC

October 11-13
Deep Offshore Technology International Conference & Exhibition
Hilton Riverside
New Orleans, LA

October 10-12
NPRA 2011 Q&A and Technology Forum
JW Marriott San Antonio Hill Country Resort & Spa
San Antonio, TX

October 25-27
Louisiana Gulf Coast Oil Exhibition (LAGCOE)
The Cajundome & Convention Center
Lafayette, LA

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BDO'S NATURAL RESOURCES INDUSTRY PRACTICE

BDO's Natural Resources industry practice provides assurance, tax and advisory services to emerging and established businesses in the United States and all over the world who are involved in both the traditional and alternative energy industries. Our clients often operate across borders either raising capital or making acquisitions abroad. Our extensive industry knowledge is supported by our international network of 1,082 offices in 119 countries, allowing us to provide a consistently high level of service wherever our clients do business.

ABOUT BDO

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