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Shale Gas Profits Will Rocket in 2011

BY DR. KENT MOORS, EDITOR, *OIL & ENERGY INVESTOR*

Dear Reader,

Shale is no longer “the future” of natural gas. It’s now. And it’s paying-off (in profits) for those smart enough to get into the industry quickly.

Conventional natural gas wells around the globe are running out. And they’re being replaced by new shale wells on an almost daily basis.

Shale now accounts for one-third of America’s total natural gas resources. That’s nearly 700 trillion cubic feet of shale gas sitting under the United States waiting to be pumped out at a profit. And those profits are driving a feeding frenzy.

Those who know where to look in shale gas will find staggering gains. Are you one of them?

Let me show you the ropes and give you today’s five best shale gas plays...

Big-Time Shale

Shale gas is so important to America’s energy future that the Department of State (DOS) has developed an organization just to promote shale gas both in and outside of the country.

The DOS project, the Global Shale Gas Initiative (GSGI), was designed to export America’s experience in shale production around the world.

GSGI recognizes two very important developments in the energy markets.

First, shale is going to significantly change where the world gets its energy. As game-changers go, this one is huge.

According to **Halliburton Company** (NYSE:HAL) estimates, shale-gas deposits favor North America, Continental Asia, and North Africa, leaving current Russian natural-gas titan **Gazprom OAO** (OTC:OGZPY) with little resources to call upon in its native land or outlying Eastern Europe.

Second, it may just be the most significant opportunity for the export of American hydrocarbon technology

and know-how to come along in generations. American companies developed many of the industry standard practices in shale-gas mining. And the U.S. is now happy to share that information, at a price.

Both of these developments are going to provide major advantages for the rest of the world... and major profits for investors.

The Nuts and Bolts of Shale Gas

Unlike traditional deposits, natural gas in shale formations is not contained under pressure in a big underground chamber or built up as the result of an oil deposit. It is held inside large shale shelves. And drillers must crack the rock open before gas will flow out of the shale.

That cracking is accomplished by moving millions of gallons of water and chemicals (these chemicals make up half a percent of the fluid) into the shale formation under high pressure, breaking the rock at key points to release the trapped natural gas. This is known as the fracturing, or “fracking”, process.

Since shale gas extraction includes an extra step, the mining process costs more than that for conventional gas. And until a few years ago, the fracking process was too expensive for most companies to consider. But innovations by Halliburton, which owns the patent on basic fracking, and the development of horizontal drilling have made the process lucrative.

Like fracking, horizontal drilling is a relatively new procedure that costs more in the short-term but increases yields considerably in the long-term. Horizontal, or directional, drilling is exactly what it sounds like. When a company drills into an oil or gas reserve, it turns the drill, angling it until its lying parallel with the oil or gas bed. And while this does mean higher costs for drilling, it also means higher production rates once the well starts up.

In a U.S. Department of Energy report, Oryx Energy Company Chairman Robert Hauptfuhrer noted that costs for his horizontal wells were 50% more than their vertical counterparts. But his company has three, five or more times the daily production and reserves than he would with a vertical well.

Production from conventional (or freestanding) gas fields in both the United States and Canada is declining. That means domestic volume will turn to unconventional sources. And leading the list is shale gas.

Moving forward, production from new oil and gas shales will provide considerable options for plays in exploration and production (E&P) companies, as well as in technical providers.

Yet this is hardly a North American play only.

Shale gas is already under development in Western Europe, and plans are advancing quickly for major projects in China. However, geology tells us the MENA region (the Middle East and North Africa) may well hold more shale than any other area on Earth.

Three Keys to Shale Gas

There is no question North Africa is excited about its shale prospects. Yet several of the countries have had difficulty identifying projects.

That has led the Tunisian oil and gas authority – the Entreprise Tunisienne d’Activités Pétrolières (ETAP) – to organize a workshop devoted to unconventional gas this year.

Only a few potential deposits of shale gas have been identified thus far in Tunisia. But on the other hand, the

country has a number of tight gas reservoirs that are hard to exploit because they lack natural links leading to drilled wells. The reserves must be artificially stimulated in order for the gas to be extracted.

Tight gas – like shale gas – requires hydro-fracking and horizontal drilling. Thus far, deposits have been identified in Tunisia on blocks under development by Italian major **Eni** (NYSE:E), **Austrian state company OMV** (LSE:OMKH-EUR.UK; OTC:OMVKY), **Pioneer Natural Resources** (NYSE:PXD), and several smaller private companies.

ETAP would like to hammer out a contractual framework to organize exploration for unconventional gas. Morocco's ONHYM (Office National des Hydrocarbures et des Mines), a national agency overseeing oil, gas, and mining, is sitting on two shale oil deposits totaling approximately 37 billion barrels. And Sonatrach, the Algerian state company, is probably furthest along in the region – having already spudded (begun drilling) test wells and identified shale gas reserves at the Belkacem-Boumediene deposits.

But everybody in the region needs three things: 1) a plan; 2) access to technology; and 3) help in developing what are likely to be very large blocks. That is why they're turning to the Department of State's GSGI to help. And it will.

U.S. Know-How, U.S. Shale

If you're looking for something a little closer to home, boy do I have a deal for you. The best bang for you buck in the States is the Marcellus Shale Play (MSP). This natural gas-rich deposit forms a huge "C" beginning in the center of southern New York, extending across central and western Pennsylvania and ending in West Virginia.

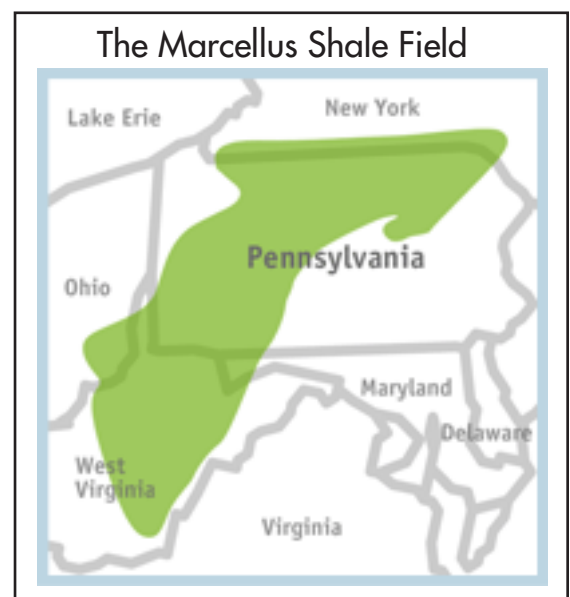
This may be the mother lode. The operating companies think so and have been moving in for more than two years. About 60% of the production is probably coming from Pennsylvania, with the rest being tapped in New York and West Virginia.

The volume of natural gas expected from the MSP has increased considerably from original estimates. Early projections were generous; they calculated the volume of known shale (the rock itself) and then applied percentages of extracted gas from the Barnett – the Texas shale gas deposit near Fort Worth that is currently the largest producer in the country.

But then drilling results at Marcellus started coming in... higher pressure, greater extracted volume, and deeper pay zones (the area in the rock where the gas actually resides) than anticipated. Oh yes, and one other result of note – a 100% hit rate – no dry holes. The number of wells will increase dramatically by the end of 2011. I am estimating as many as 8,000 by the end of the year and tens of thousands within the following 12 months.

Some experts are now suggesting that the technically available MSP gas amounts to between 300 and 500 trillion cubic feet (tcf). To put that in perspective, the entire U.S. demand in 2010 will be about 23 to 24 tcf. Without a doubt, the MSP could be a game-changer of the first magnitude as we look for genuinely domestic sources of energy.

Along with the immense size comes cheaper extraction costs. While many other shale fields in the U.S. may



require contracts of \$10 or more per 1,000 cubic feet of natural gas, Marcellus will take a contract price of \$8.

Action to Take: More than 50 operating companies have already moved into the Marcellus. But here are the companies you should watch:

- **Range Resources Corp. (NYSE:RRC)**, the first driller in Marcellus.
- **Chesapeake Energy Corp. (NYSE:CHK)**, flush off a joint venture with **Norwegian StatoilHydro ASA (NYSE:STO)** and holder of the most lease territory.
- Independents **Anadarko Petroleum Corp. (NYSE:APC)**, **EOG Resources Inc. (NYSE:EOG)**, and **Ultra Petroleum Corp. (NYSE:UPL)**. These three have positioned themselves well to phase in major drilling programs.

Sincerely,



Kent

Dr. Kent Moors has been advising the world's largest and most active energy producers and buyers for 31 years, including six of the world's top 10 oil companies and high-level government officials from the U.S., Russia, Kazakhstan, the Bahamas, Iraq, and Kurdistan. Business clients include the Bank of England, Citicorp, AT&T, Deutsche Bank, the European Bank for Reconstruction and Development, the Russian Central Bank, and Westinghouse.

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