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WHAT THE DATA TELLS US ABOUT HYDROCARBON PRODUCTION

Curtis Talley Jr. Farm Management Educator Michigan State University

I thought it might be interesting to compare what our energy picture looked like in 2003 with today. Do you think it has changed?

Where we were in 2003:
In his testimony to the Federal Reserve board dealing with natural gas supply and demand issues in 2003, Chairman Alan Greenspan stated that very tight natural gas supplies had caused a sharp increase in natural gas prices. “Canada, our major source of imported natural gas, has had little room to expand shipments to the United States, and our limited capacity to import liquefied natural gas (LNG) effectively restricts our access to the world’s abundant supplies of gas. Given notable cost reductions for both liquefaction and transportation of LNG, significant global trade
is developing. And high gas prices projected in the American distant futures market have made us a potential very large importer.”¹

Crude oil imports were 9.65 million barrels per day; domestic production was 5.74 million barrels per day.²

WHERE WE ARE TODAY:

“The world is being remade. Britain, Germany and Spain recently repealed or rejected fracking bans. Now Russia’s energy power looks set to shrink and shrink even as Russia desperately seeks Western technology to develop its own vast shale potential.”³

“The nation is awash in so much natural gas that electric utilities, which burn the fuel in many generating plants, have curbed rate increases and switched more capacity to gas from coal. Companies and municipalities are deploying thousands of new gas-powered trucks and buses, curbing noxious diesel fumes and reducing the nation’s reliance on imported oil. And companies like fertilizer and chemical makers, which use gas as a raw material, are suddenly finding that the United States is an attractive place to put new factories, compared with, say, Asia, where gas is four times the price.”⁴

Spurred by the use of hydraulic fracturing or fracking in shale rock deposits, U.S. oil production has jumped from 5.0 million barrels per day in 2008 to 7.4 million last year and is expected to average 8.5 million this year and 9.3 million next year, according to the EIA, the analytical arm of the Department of Energy.⁵

Do Landowners and Mineral Owners Negotiate Oil and Gas Leases?
Curtis Talley Jr. Farm Management Educator Michigan State University

As of August of 2013, Michigan State University Extension had organized or assisted in a total of 52 public educational meetings with 5,581 attendees and an average of 107 attendees per meeting. A random sample of 130 people from 19 counties was selected from the meeting sign-in sheets to receive a written, follow-up confidential survey. The goal was to determine what, if anything had occurred regarding oil and gas leasing on their property since they had attended an educational meeting. The surveys were mailed on August 20, 2013. When each survey was returned, it was given an i.d. number and the data entered and accumulated. Participants were asked questions about the bonus, a cash payment that is paid to the mineral owner after lease signing. It is paid for each mineral acre in the lease. Following are the questions and aggregated answers.

¹ Testimony of Alan Greenspan Chairman of the Federal Reserve Board before the Committee on Energy and Commerce, U.S. House of Representatives June 10, 2003
² Annual Energy Review 2003; Energy Information Administration p. 121
³ The Wall Street Journal July 30; “How Virginia Became the Oil Patch by Holman W. Jenkins Jr.
⁵ Wendy Koch. “U.S. Oil Production in 2015 to be highest since 1972”, USA Today/Money, July 8, 2014
**What was the initial bonus payment offer?** Some of the respondents chose not to answer this question while others stated that they had signed a confidentiality agreement and could not provide that information. For those who supplied an offer amount, the average initial offer was $51.34 per acre, with a range of $15 to more than $100.

**Did the bonus payment increase due to lease negotiations?** The survey compared the average initial bonus payment per acre offered to the bonus paid due to lease negotiations. Only the answers from those landowners who eventually signed a lease were included. Twenty-nine percent of the respondents stated they did not sign a lease because either their income or other contract term goals were not met. Twenty-two percent of those who answered did not negotiate an increase, while 83 percent did negotiate for better terms. Negotiations lead to a bonus payment increase that averaged $34.89 per acre, or an increase of 68 percent.

**What was the initial royalty offer?** An offer of 1/8 (.125) was received by 97%. An offer exceeding 1/8 was received by 3%.

**What as the final royalty negotiated?** The survey compared the average initial royalty offer of 12.5% with the final offer to determine if there was an increase due to lease negotiations. Only the answers from those landowners that eventually signed a lease were included. Sixteen percent of the respondents chose not to answer this question, with some indicating they had signed a confidentiality agreement and could not provide that information. An additional sixteen percent stated there was no increase in the royalty, while 67% stated they negotiated for better terms. Fifty-four percent negotiated the royalty to a range of 12.6 to 16.7% (1/6). Thirteen percent negotiated the royalty to a range of 16.8% to 18.8%. No respondents indicated a royalty greater than 18.8%.

The average royalty was increased to .153 or 15.3%. This is an increase of 22.4% from the initial offer of 12.5%.

To translate these results into dollar terms, we will use a “sample well.” For the sample well we will assume the landowner was the sole owner of 40 acres and a successful well was drilled that produced 25 barrels/day. It operated for 200 days during the year and the oil sold for $90/barrel. This well will produce $450,000 in gross income (25 barrels/day x 200 days x $90/barrel = $450,000) in the first year. If the royalty was 1/8 or .125 the mineral owner would receive $56,250 the first year ($450,000 x .125 = $56,250.) prior to any post-production cost deductions.

The survey results indicated an average increase to .153 or 15.3%. Mineral owner’s income produced would be $450,000 x .153 = $68,850 the first year prior to any post production cost deductions.
By negotiating an increase to the royalty, the income, on average was increased $12,600 the first year of production ($68,850 - $56,250 = $12,600). This proportionate increase would occur each year of production.

**How many acres of cropland do you own?** The average of the participants surveyed reported cropland ownership of 323 acres.

*Future articles will address the results of the remaining subject areas of the survey, such as post production costs.*

**Where Oil and Gas Drilling is Occurring in Michigan and Some Results**

Curtis Talley Jr. Farm Management Educator Michigan State University

I thought I would take some excerpts from the *Michigan Oil and Gas News* to give you an idea of what is occurring in Michigan.

Axia Energy is reportedly drilling the Pease 20-234 in Climax Township of Kalamazoo County. It is the second well on a 160 acre unit and is a directionally drilled well. Axia has proposed nine Trenton formation drilling tests in this vicinity. The Pease 20-24 was the first drilled well and produced 9,024 barrels of oil during the months of May through July 2014.

Mecosta County; W.B. Osborn Oil & Gas Ops. Ltd. McCall 4-17 drilled 4200 feet deep to the Dundee formation. 45 barrels per day oil, 10.5 mcf gas and 31 barrels of water.

Osceola County; W.B. Osborn Oil & Gas Ops, Ltd. Bieri 1-32 drilled 4200 feet to the Dundee formation. Dry and plugged.

Washtenaw County; Paxton Resources LLC; Muscat A3-9 HD1 3906 feet (horizontally drilled) Trenton Black River formation; 50 barrels per day oil, 90mcf gas and 0 water.

Washtenaw County; Paxton Resources LLC; Muscat B-3-16 HD1; 3254 feet; Trenton Black River; oil; rate not reported.

Livingston County; Southwest Gas Company; Lounsbery 1-17-HD2; Gas storage in Niagran formation

Kalamazoo County; Axia Energy; Fritz 19-42; dry and plugged

Jackson County; West Bay Exploration; Haystead 9 SWD; brine disposal in Niagran formation

Hillsdale County; Savoy Energy LP; Schroeder 1015B HD1 (horizontally drilled) dry and plugged
Oceana County; West Bay Exploration; Deruiter 1-8; Detroit River formation; dry and plugged

The Trenton-Black River fields in southern Michigan that were discovered in the past five years lead the way in crude oil production in Michigan. The combined output from the Napoleon, Adrian, Columbia 14 and Saline fields accounted for nearly 40% of all crude oil produced in the state in the first quarter of 2014.

The Napoleon Field in Jackson County discovered in 2008 by West Bay Exploration was the top producing oil field in the state during the first quarter of 2014. It produced more than 380,000 barrels of oil from 52 wells.

In Lenawee County, the Adrian Field had 39 wells on production during March and produced more than 176,000 barrels of oil in the first quarter of 2014.

Another newer field is Savoy’s Columbia 14 Field in Columbia Township of Jackson County. Its four wells made a total of more than 73,000 barrels of oil in the first quarter of 2014.

Landowner Informational Meetings
There is a large natural gas transmission pipeline planned to cross portions of southeast Michigan which include Lenawee, Monroe, and Washtenaw counties. As a result of landowner requests for information to assist them in understanding and negotiation easements and rights of way, we have added a category titled Easements and Rights of Way to the MSU Extension oil and gas web page http://msue.anr.msu.edu/program/info/oil_and_gas. Resources include the presentation Curtis made at the workshop discussed below.

The topic of the most recent educational workshop was Landowner Pipeline Easements. Michigan State University Extension and Atlas Township in Genesee County sponsored a public meeting for landowners to educate them on the following topics:

- **Easement agreement terms and Negotiation**
- **Appraisal and Valuation of Property Impacted by Pipeline Construction**
- **Legal Considerations of Pipeline Easements**

Curtis Talley, Farm Business Management Educator, Michigan State University Extension discussed:

- Easement terms and landowner input
- What should a landowner think about when reviewing an easement offer?
- 1929 Crude Oil and Petroleum Act and Landowners

Tim Laurencelle, president of Laurencelle Appraisal Company discussed:

- How is the value of my land determined before and after pipeline construction?
- What should a market value appraisal of my land include?
- How are appraisals used in the condemnation process?
What if I do not agree with the company appraisal?

*Boris Yakima, Partner in Monaghan PC Attorneys and Counselors Bloomfield Hills addressed:*  
- What does the power of eminent domain mean?  
- What rights does a landowner have when a company has the power of eminent domain?  
- What steps must a company follow when acquiring property through eminent domain?

*Kimberly Savage of Savage Law PLC in Haslett* added to the information Mr. Yakima presented and described her experiences working with landowners to negotiate pipelines easements in southeast Michigan in the last couple of years.

The meeting was held on Thursday, October 30, 2014, 6:00 – 9:00 p.m. at the Goodrich Middle School 7480 Gale Road, Goodrich, MI with attendance of 271.

**Please Share Your Oil and Gas Experiences**  
The editor is very interested in hearing both your positive and negative experiences dealing with oil and gas leasing or production. All information is kept confidential and is combined with data from other landowners to analyze the effectiveness of the educational effort. Report your experiences to the editor by phone at 231-873-2129 or talleycu@anr.msu.edu e-mail.