

INTRODUCTION: PETROLEUM FUNDAMENTALS IN A LOW-PRICE ENVIRONMENT—WILL NORTH DAKOTA DEVELOP A FORMULA FOR LONG-TERM SUCCESS?

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I.	THE LOW PRICE ENVIRONMENT	239
II.	THE FUNDAMENTALS	242
	A. GEOLOGY	242
	B. PROFITABILITY	242
	C. LAW	243
III.	PETROLEUM SUCCESS FORMULA FOR NATIONS AND STATES	245
IV.	THIS SYMPOSIUM	246

I am honored to be asked to write an introduction to this important symposium. As I am writing this in early March 2015, much has happened in the last nine months, especially the sharp dip in oil prices since June 2014. The Achilles heel of the oil and gas sector has been price volatility—especially since the early 1970s.

I. THE LOW PRICE ENVIRONMENT

The key question: How long will these low prices last? I will not try to answer this question. Three rules govern the prediction of oil prices. Rule one: Do not predict oil prices. Rule two: If you cannot resist the temptation, then be sure to qualify and condition your oil-price prediction with a long list of assumptions and suppositions so that you can later explain why your prediction ended up so far off the mark. Rule three: If you do predict oil prices and happen, fortuitously, to predict correctly,

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never let anyone ever forget! My cautious North Dakota nature causes me to continue to adhere to Rule one.

A related and important question: Why have oil prices fallen so low and so fast? Answers vary from basic Economics 101 to the Game of Thrones. The former is more probable, although the latter might play a small supporting role. To have a credible answer, consider this question from the vantage point of the Kingdom of Saudi Arabia.

The Economics 101 answer: supply, demand, market share, and the Kingdom's long-term interest. The Kingdom has increased oil production to meet its own domestic demand, but contrary to popular thought, the Kingdom has not increased oil exports. In fact, it exported about 5.7% less oil in 2014 than it did in 2013.¹ The Kingdom simply refuses to cut its exports further.

The world produced about 92,000,000 barrels of oil per day in the fourth quarter of 2014—over 1000 barrels per second. The Kingdom furnished a little over 10% of this amount.² Historically, the Kingdom has supplied near 14% of the world's oil supply,³ and it does not want its market share further eroded. It followed this same practice of refusing to cut exports in the 1990s, resulting in prices as low as \$10 per barrel.⁴

The Kingdom can tolerate low prices for a long time. It will suffer about a \$106 billion budget deficit in 2015,⁵ but it has over \$730 billion of reserves.⁶ Thus, it could weather similar deficits for several years. Until Europe and Japan come out of recession, and until growth in China once again accelerates, and if India's economy continues to grow, then more oil demand may increase prices. In the short run, much oil is in "storage"—in Cushing, Oklahoma, in ocean-going oil tankers, and behind the pipes of uncompleted wells. Eventually this oil will be marketed, which will put further downward pressure on oil prices.

1. Wael Mahdi, *Saudi Arabia's Oil Exports Fell in 2014 in "Tough Year"*, BLOOMBERG BUS., Feb. 18, 2015, <http://www.bloomberg.com/news/articles/2015-02-18/saudi-arabia-s-oil-exports-fell-in-2014-in-tough-year->.

2. *Saudi Arabia Crude Oil Production*, YCHARTS, http://ycharts.com/indicators/saudi_arabia_crude_oil_production.

3. *Saudi Crude Oil Market Share*, SAUDI OIL PRODUCTION (Sept. 5, 2007), <http://saudioilproduction.blogspot.com/2007/09/saudi-crude-oil-market-share.html>.

4. Tim McMahon, *Historical Crude Prices*, INFLATIONDATA.COM (Dec. 17, 2014), http://inflationdata.com/Inflation/Inflation_Rate/Historical_Oil_Prices_Table.asp.

5. *Saudi "to Borrow to Finance Soaring Deficit," Says Report*, DAILYMAIL (Apr. 8, 2014), <http://www.dailymail.co.uk/wires/afp/article-3030265/Saudi-borrow-finance-soaring-deficit-says-report.html>.

6. Fareed Rahman, *Saudi Arabia can sustain for many years despite drop in oil prices*, GULF NEWS, Mar. 11, 2015, <http://gulfnnews.com/business/sectors/energy/saudi-arabia-can-sustain-for-many-years-despite-drop-in-oil-prices-1.1470413>.

The Kingdom's long-term interest is to remain a major energy player. Oil gives the Kingdom its only major role on the world stage. If Saudi oil becomes less influential, the Kingdom will play only a minor part in world affairs.

But now consider the Game of Thrones answer. What happens if peace comes to Iraq or to Libya, if sanctions are lifted against Russia or Iran, if a more investor-friendly government comes to power in Venezuela, if expected investments in Mexico result in major new discoveries? Any one of these events would result in increased oil production. If all or even a few of these events occur, oil prices might collapse, and the Kingdom would be forced to further discount its price for oil in order to maintain market share.

Does the Kingdom benefit from punishing Russia, Iran, Iraq, and Venezuela? Yes. By discouraging development of those countries' vast oil resources, the Kingdom benefits fiscally. And because the Kingdom is not fond of the Russian, Iranian, and current Iraqi governments, it benefits psychologically. The Kingdom is certainly concerned about increased United States oil production and the prospect of United States crude oil exports. The Kingdom is perhaps ambivalent about Venezuela but is probably concerned about private investment in Mexico's upstream petroleum sector.

From a foreign-policy standpoint, even the United States benefits from low oil prices. The United States has placed sanctions on Russia, Iran, and Venezuela and is not happy with the current Iraqi government. But I doubt that the Kingdom is acting out of spite or is acting at Washington's behest. The world is too complicated for spite or conspiracy theories to work as intended. For example, Russia, like the Kingdom, is likely to be pleased about slowing shale development. Although rich in shale, Russia has large conventional oil and gas resources that it wants to export.

In the end, Economics 101 is the better answer. The Kingdom's oil production costs are among the lowest in the world—estimated from \$4.00 to \$5.00 per barrel⁷—so the Kingdom can make a profit on low oil prices long after other countries have ceased to profit. The Kingdom has historically been the world's swing producer; however, the cost of maintaining its excess production capacity is high. Time value of money realities are not favorable to maintaining large excess capacity. Thus, the

7. Steve Mufson, *How low can oil prices go? Welcome to the oil market's old normal*, WASH. POST, Jan. 12, 2015, <http://www.washingtonpost.com/blogs/wonkblog/wp/2015/01/12/how-low-can-oil-prices-go-welcome-to-the-oil-markets-old-normal/>.

Kingdom now seems content to let United States producers play the role of swing producer.

II. THE FUNDAMENTALS

Can the United States or its states do anything about the current state of oil prices? Not realistically. Oil and gas investors care about three fundamentals: geology, profitability, and law. These fundamentals have not changed, although operators may become somewhat more focused on fundamentals in a low-price environment.

A. GEOLOGY

States seeking oil and gas investment have no control over geology. The geology of an area is either favorable for oil and gas investment or not favorable. This fundamental was determined millions of years ago, although as shale plays have proven, technology breakthroughs can change geologic outlook from unfavorable to favorable.

B. PROFITABILITY

States have only limited influence on profitability. Profitability is a function of price and cost. Both lessors and states could influence profitability somewhat with more progressive fiscal terms that would adjust to changes in profitability. North Dakota's oil and gas tax regime could be more progressive—i.e., tied to profitability rather than gross production values—but true progressivity would mean that production tax percentages would increase when profitability is high and decrease when profitability is low. Simple tax relief may help in a very minor way, but such relief will come at a very high price to the state, which will be deprived of substitute assets for the loss of its hydrocarbon resources. Oklahoma, where I now live, was the world's largest crude oil producer throughout much of the 1910s and 20s. It still is one of the largest producers of natural gas in the United States, but Oklahoma ranks 48th in primary and secondary education⁸ and 46th in health and health care.⁹ Oklahoma long ago failed to establish a trust fund to substitute for its loss of petroleum resources.

8. *Quality Counts Introduces New State Report Card*, EDUC. WEEK RES. CENTER (Jan. 8, 2015), http://www.edweek.org/media/qualitycounts2015_release.pdf.

9. *Oklahoma*, AMERICA'S HEALTH RANKINGS, <http://www.americashealthrankings.org/OK>.

With the creation of the Interstate Oil Compact in 1935,¹⁰ market-demand prorationing provided an answer to unprofitable oil production. This Compact allowed producing states to set production quotas, much as OPEC states do today. Initially, market-demand prorationing worked because world production outside of the United States was largely controlled by secret anti-competitive agreements among the major oil companies. Ambitious independent companies began exploring for oil in the late 1940s and 1950s, destroying the effectiveness of these agreements. Nevertheless, during the 1950s, the effectiveness of the Compact, which purpose was to support domestic oil prices, was maintained because the United States was still the world's number one oil producer and Congress placed a tariff on imported foreign oil. It seems impossible to imagine the current Congress placing a tariff on oil imports.

C. LAW

Law is the least important of the three fundamentals. No investment will occur without favorable geology and profitability, but an uninviting legal regime can put a brake on what otherwise might be an inviting oil and gas prospect. Law should provide stability and certainty and facilitate efficient operations. Oil and gas investment is an up-front investment with a long-term rate of return. Providing stability and certainty of law and facilitating efficiency will encourage investment. Weakness in one or more of these attributes will discourage investment. Of these, the most important is facilitating efficiency.

For some states, efficiency has been hard to assure. Efficiency requires a balance of regulatory and tax laws that encourage investment while at the same time discouraging largely speculative oil and gas holdings. Operators who invest should have the certainty and stability of being able to work that investment throughout its economic life, but they should not be allowed to hold on to properties that they have not developed for indefinite speculative periods at the expense of efficient and prudent development. Finding the right balance is difficult but essential to promoting long-term oil and gas economic growth.

A state can best facilitate efficient petroleum operations by adopting regulatory practices that allow producers to take full advantage of the latest technology. North Dakota has largely achieved this with its modern drilling-unit practices. Conservation agencies in several states have had

10. *About Us*, INTERSTATE OIL & GAS COMPACT COMMISSION, <http://iogcc.publishpath.com/history>.

great difficulty adapting their drilling-unit practices to new horizontal drilling technologies that allow for lengthy and multiple lateral well bores because of statutory constraints and political infighting among stakeholders. The regulatory challenge is to accommodate the latest technology without compromising best health, safety, and environmental petroleum operation practices.

One further drilling-unit reform that North Dakota should at least consider is amending its drilling-unit statute so that only the land within a drilling unit, and perhaps only the productive reservoir within the unit, would be considered held by production for purposes of perpetuating leases beyond a certain time period. Several states, including Kansas and Oklahoma, made this reform decades ago.

To address speculation in severed minerals, North Dakota should levy a tax on severed mineral interests, which quickly become fractionalized into near worthless shares over time, impeding development while sometimes interfering with high-value surface uses. If the taxes are not paid, then the surface owner should be allowed to acquire tax title to the minerals upon payment of the back taxes. I mention this tax under the “Law” banner, not the “Profitability” banner, because the primary purpose of this reform is to discourage speculative mineral severances.

To further address mineral severances, the state’s dormant mineral statute should be amended to end a party’s interest in dormant minerals automatically once the dormancy period, which should be shortened to ten years, has lapsed. At most, a quiet-title action should be necessary for the sole purpose of confirming that the dormancy period has lapsed. The owners of dormant mineral rights should not be able to revive them by filing a late claim after notice from the surface owner.

Severed mineral interests are undesirable because they quickly become divided into increasingly smaller fractions through generational transfers. Once this happens, the mineral interest become like Humpty Dumpty—the fractions cannot easily be put back together again. Practically speaking, fractionalized minerals become the modern equivalent to the fee tail estate—an estate long barred or greatly limited by statutes in nearly all states.

Curtailing these speculative fractional interests would also facilitate efficient petroleum operations because an operator could more easily obtain the full share, or at least the lion’s share, of the working interest in drilling-unit tracts by dealing with a smaller number of surface owners who, over time, would come to own much of the mineral interests. An operator who is actually planning to drill a well rather than speculate on leases

would not have to carry so many unleased interests and competing lessees. In addition to minimizing speculation and promoting efficiency, these reforms would, in the long term, make surface owners friends, not foes, of petroleum development because they would, over time, garner a larger share of the mineral interest beneath their properties.

III. PETROLEUM SUCCESS FORMULA FOR NATIONS AND STATES

In *THE PLUNDERED PLANET: WHY WE MUST—AND HOW WE CAN—MANAGE NATURE OF PROSPERITY*,¹¹ Dr. Paul Collier, a professor of economics and public policy at Oxford University, addresses how nations can achieve sustainable natural resource fiscal and legal regimes. Although his book is aimed largely at resource-rich developing nations, it should be required reading for natural resource policy makers in each of the petroleum producing states of the United States. Dr. Collier is a strong advocate of developing a nation's natural resources—whether agriculture, forests, oil, gas, or minerals. But in so doing, he provides one formula for success and three formulas for failure. The first failure is a given: a state that has no natural resources will necessarily fail. But a nation with resources can fail in two other ways:

Nature + Technology – Regulation = Plunder

Nature – Technology + Regulation = Hunger¹²

The successful formula:

Nature + Technology + Regulation = Prosperity¹³

In short, Collier argues that nations (states) must provide for the safe and efficient use of modern technology to facilitate the efficient development of its resources.¹⁴ Regulation is essential to protect health, safety, and the environment, as well as to assure the nation (state) a fair return on its depleting resource base, which return must be treated as a substitute capital asset. Lawmakers should implement this successful formula. To date, the lawmakers of most nations (and states) have failed to do so. A few, most notably Norway, appear to have succeeded. Norway has succeeded by embracing new technologies, by requiring developers to use best health, safety, and environmental practice, and by not relying on petroleum revenues for funding the baseline governmental budget. I

11. DR. PAUL COLLIER, *THE PLUNDERED PLANET: WHY WE MUST—AND HOW WE CAN—MANAGE NATURE OF PROSPERITY* (2010).

12. *See generally id.*

13. *See generally id.*

14. *See generally id.*

sincerely hope that North Dakota will succeed, not fail. Although the state has created a trust fund for some petroleum tax revenues, the budget difficulties facing the legislature at the time this introduction was written indicate that the state has become too dependent on petroleum taxes to fund basic government functions and services.

IV. THIS SYMPOSIUM

This symposium issue addresses several important issues. Professor David Pierce has written extensively in recent years on the doctrine of correlative rights. He convincingly argues that the doctrine can be used effectively to resolve thorny issues surrounding the use of subsurface strata. He has applied the correlative rights analysis to address issues, such as frac fissures that cross boundary lines, “frac hits” that impact existing wells in a reservoir, and subsurface waste disposal.

Mark Christiansen is not only a first-rate oil and gas litigator, he is a superb oil and gas law scholar. He thoughtfully analyzes several opinions of the North Dakota Supreme Court rendered in 2014 involving disputes between landowners and oil and gas lessees and operators, the interpretation of oil and gas leases, surface-use rights, North Dakota’s dormant mineral act, the status of claims for unpaid royalties in bankruptcy, and alleged frivolous lawsuits.

Timothy Dowd is a master oil and gas title lawyer with title expertise in numerous states. He frequently speaks about thorny title issues encountered in oil and gas plays throughout the country. Attorneys and landmen encounter a myriad of these problems and resolution of problems varies from state to state. A “Top 10” list is inadequate to the task, so he settled on a “Top 50” list of common and important title issues. His paper is aimed at assisting lawyers and landmen in recognizing potential problems in the examination of oil and gas titles.

Blaine Johnson, an expert on North Dakota title associated with a leading North Dakota and Montana oil and gas law firm, examines the doctrine of after-acquired title, North Dakota’s Marketable Record Title Act, and the alienation of homestead—three areas of real property law that, on the surface, seem simple and easily applied but below the surface are fraught with problems and unintended consequences. His article addresses the history and development of each of the three topics, discusses the current application of North Dakota real property law in conjunction with recent legislative changes, and also suggests changes to the laws. Importantly, his article provides lawyers with reasoned advice for the development and betterment of their real property practice.

Jessica McDonald and Zachary Wallen, both affiliated with a leading oil and gas law firm from the Eastern shale regions of the United States, survey case law on habendum-clause interpretation throughout the United States. Their survey amplifies jurisdictional variations and identifies similarities in case law. Given the variations in case law regarding whether a lease is held by production, developers must anticipate challenges from lessors and prepare themselves for fact-specific litigation and differing results from state to state. Operators seeking to develop shale plays may purchase long-existing oil and gas leases by assignment. Because the lease primary terms have expired, purchasers must be satisfied that the secondary terms are still in effect—especially if they pay a large acquisition price. Moreover, if they purchase only the shale or deep rights associated with the leases, they need to be sure that the lease stays effective for a sufficient amount of time to allow them to complete a shale well. Savvy lessors will be eager to challenge the continuing validity of such leases because they would prefer to issue a new lease for a large bonus and perhaps more lessor-oriented terms. The resulting dispute will often turn on whether the lease is still held by production.

Jessie Liebe, a UND law student, discusses *Tank v. Citation Oil & Gas Corp.* wherein the North Dakota Supreme Court held that the drilling operations clause of an oil and gas lease had failed to preserve the operator's right to extend the lease beyond the unit boundary for the well due to lease's retained-acreage clause, erroneously identified by the court as a Pugh clause. A Pugh clause is a lessor-oriented addition to a lease pooling clause. A retained-acreage clause, such as the one in *Tank*, amends the lease habendum clause to limit the acreage perpetuated by a well to that portion of the lease included within the unit for that well.