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Legislative Audit and Fiscal Review Committee
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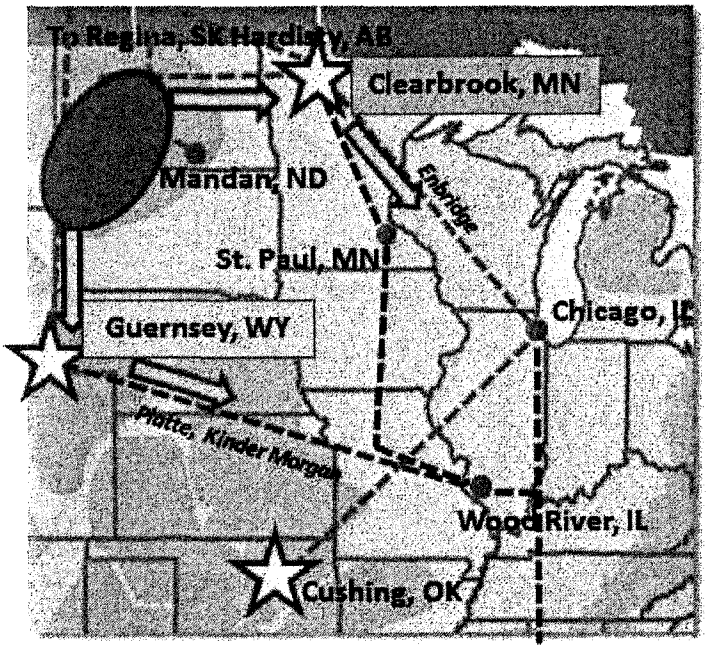
Benchmarks Versus Market Value

- **Benchmarks are standards or averages – don't always reflect current market conditions**
  - Brent (North Sea) – used to price most internationally traded oil
  - West Texas Intermediate – high quality domestic oil, in Cushing OK
  - Actual transactions will be conducted at rates higher and lower than the benchmark, based on negotiations between buyers and sellers under existing market conditions
  - Benchmarks do not always reflect the market forces that impact local prices

- **ND's benchmark or "basis price" for oil**
  - It is my understanding that historically a price of 90% of WTI has been considered to be a "basis price" or benchmark for ND oil
  - This benchmark reflects the most common market forces, such as the extra cost of shipping, that usually make ND oil worth less than WTI priced in Cushing, OK
  - What it really means is that **"on average, under normal conditions, the price of ND oil has sold for around 10% less than WTI, give or take a little"**
  - I will use 90% of WTI as ND's benchmark or "basis price" when talking about differentials for the remainder of this testimony

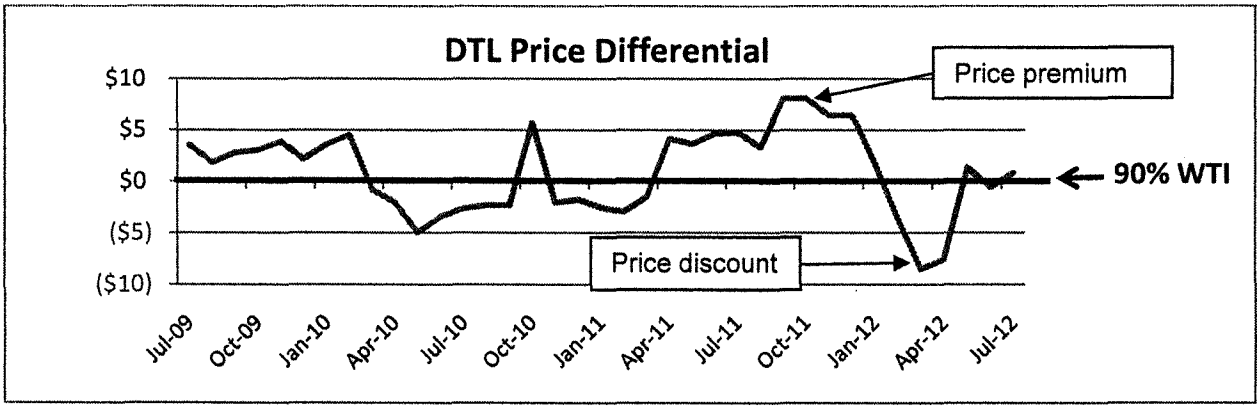


- **ND oil prices should be different than both the WTI and Brent prices**
  - Not close to national (WTI) or international (Brent) markets
  - Limited marketing opportunities, oil glut in Cushing, OK
  - Pipeline capacity issues/competition with Canadian oil
  - New rail shipping facilities
  - Local market conditions are what establish local market prices

Differential versus Discount

- **Discount means less - Differential means different**
  - In ND we are experiencing a differential from the 90% of WTI benchmark, not a discount
  - Average price received by DTL for state and trust royalties is different than 90% of WTI, but it is not always less
  - The price received for each individual well is different than the benchmark because the price is determined by negotiations between sellers and buyers (up to $15/bbl for any given month).
  - Some sellers are better than others at marketing their products, some sell using long-term contracts while others sell on the spot market, others invested in rail facilities that allow them to now receive higher prices on the east, west and gulf coasts
  - As a general rule it makes sense for the operator to try to get the best price possible, as the operator/seller owns a bigger share of revenues than the royalty owner

- **Differential means both discounts and premiums**
  - When oil is selling at a discount to 90% of WTI, it doesn't mean that operators/sellers are selling at one (higher) price and then paying ND royalty owners at a lower, or discounted, price
  - What it means is that market forces are driving down the price of ND oil below that "normal" 90% of WTI standard and that the actual cash changing hands for those sales are occurring at a rate less than that standard or benchmark
  - The same holds true when oil is sold at a premium; in the case of a premium, market factors (such as the ability to sell oil via rail) result in the actual cash changing hands to be more than the standard or benchmark



- **DTL Average Price Received Versus 90% of WTI**
  - The chart above shows the difference between the average price per barrel of oil received by the DTL from non-unitized wells over the past 3 years and the ND basis price of 90% of WTI
  - It reflects the average monthly premium or discount received by the DTL per barrel of trust oil sold
  - Over the past 3 years the average monthly price received by the DTL for oil has ranged from a high of an $8 premium to a low of an $8 discount as compared to the 90% of WTI benchmark
  - Recent estimates indicate that the DTL has received a net premium of more than $3.9 million over the past 3 years as compared to what would have been received had the DTL received a price of 90% of WTI

- **February through April 2012 –Price Differential Grows**
  - From February through April, the price of ND crude was hit hard by a number of factors that caused the discount to the 90% of WTI basis price to grow dramatically; the discount to 90% of WTI was just over $8 in March.

- A warm winter resulted in larger than expected increases in production of both Canadian and Bakken oil, while a delay in reversing the Seaway pipeline added to the glut of oil in Cushing; all these factors put downward pressure on ND oil prices
- It is my understanding that the straw that broke the camel's back was the unplanned shutdown of a 100,000 bpd refinery in Whiting, IN
- ND oil prices fell dramatically as compared to WTI in Cushing (and thus as compared to 90% of WTI) as supply far outweighed demand

- **May through July 2012– Stable Prices and Smaller Differentials**
  - During the late-spring and summer of 2012, discounts disappeared and prices stabilized right around the 90% of WTI ND basis price
  - The primary reason for this is rail shipping facilities
  - Outgoing rail shipping capacity in ND was 275,000 bpd at the end of 2011; it was over 400,000 bpd by mid-summer and could reach 730,000 bpd by the end of 2012
  - At the same time, rail offload facilities in New York, Pennsylvania and Louisiana are also expanding markets for crude shipped by rail
  - The benefits of rail are twofold; oil sold outside of glutted Midwest markets gets a much better price, while sending less crude to Cushing and other Midwest markets actually reduces the surplus of oil in those markets and thus increases the price locally
  - In fact, a recent Wall Street Journal article (attached) states that Bakken oil is actually trading at a premium to the WTI benchmark (not 90% of WTI) and that it is likely to continue to trade at a premium to WTI for another year

Current DTL Royalty Enforcement Efforts

- **Oil and gas activity on DTL minerals continues to grow**
  - The DTL owns an interest in 2,089 producing wells as of June 30, 2012, up from approximately 500 producing properties four years earlier
  - The DTL processed over 13,000 revenue records in FY 2012, of which over 6,900 were royalty records; these are increases of 48% and 97% respectively over four years ago
  - Approximately $200 million of oil and gas royalties were earned by DTL during FY 2012; this compares to the approximately $56.3 million earned during FY 2009
  - DTL is currently adding anywhere from 50 – 80 wells per month to its inventory of producing properties

- **Revenue Compliance Division**
  - In 2011 the DTL established the Revenue Compliance Division
  - Experienced auditor hired - first task: review and improve DTL internal controls to take into consideration the huge increase in revenues the DTL was experiencing
  - Revenue processing/collections functions were centralized under the control of the Revenue Compliance Division; previously revenue collections were handle by each division in the DTL

- **Royalty auditor hired**
  - In November 2011 the DTL hired an auditor to focus on royalty collection efforts
  - Initial efforts were focused on getting the system in place to create and send out notices to royalty payers
  - To date much of the effort has been relatively manual due limitations of current royalty computer system
  - Current efforts have focused on ensuring that DTL is paid for all production from state minerals and that it is paid in a timely manner

- Sales volumes are being compared to data reported to Oil and Gas Division, if not paid when due, late payment charges are assessed
- To date these efforts have generated over $6.0 million of additional revenue for the DTL; companies are also doing a much better job of paying royalties on a timely basis

- **Efforts to improve royalty systems and royalty management/audit efforts**
  - Limitations to the current royalty computer system are hindering royalty management efforts as transaction volumes increase; DTL needs to further automate the royalty reporting process and improve revenue compliance efforts
  - Staff is currently working on enhancing and improving the DTL's royalty management system; changes will improve both royalty reporting and royalty management/audit functions
  - Staff will be traveling to Oklahoma City and Austin, TX in November to meet with staff of two highly automated and successful royalty management programs
  - Expect to have improved royalty reporting/management system in place within the next year or so; once improved systems are in place, it is expected that audit efforts will expand to address pricing and other royalty issues

DTL Efforts Related to Price Differential

- **Contractual Arrangement**
  - Royalties are owed as a result of a contractual agreement (lease) between the DTL and the lessee
  - DTL lease states that royalties should be paid on the highest market price paid for similar oil in the area where produced and when sold, or the gross proceeds of the sale of oil, whichever is greater
  - THE DTL royalty clause does not reference WTI or Brent crude prices, thus, it doesn't matter what the price of WTI or Brent crude is, what matters is the price being paid for oil in ND
  - If the DTL thinks a oil company owes additional royalties whether for pricing issues, missing volumes or whatever reason, it would be up to the DTL to sue the oil company for failure to comply with the contract
  - There is no law, industry group or government body that I'm aware of that regulates or enforces the royalty provision of oil and gas leases; resolving contractual disputes is a civil issue.

- **To date no action has been taken by the DTL to reduce or eliminate the price differential of oil produced on state lands**
  - To date the DTL's analysis leads staff to believe that as a whole, and over time, the DTL is actually receiving, on average, a premium over the 90% of WTI benchmark or price basis
  - Analyzing pricing issues with our current computer system would be very difficult and time consuming; until the system is updated, the Revenue Compliance Division will focus efforts on compliance related functions.
  - When audit efforts expand to include detailed analysis of pricing issues involving DTL leases, those efforts will most likely focus on the highest market price paid for oil in the area, not 90% WTI or any other benchmark
  - As a royalty owner, there is very little the DTL can do to change the dynamics of oil markets; like other royalty owners, the DTL generally receives a royalty payment based on the value received by the operator of a well

Bakken Crude Prices Rise as Railroad Reach Grows (Wall Street Journal, 10/4/12)
By BEN LEFEBVRE

HOUSTON—The rapidly growing crude-oil flow out of North Dakota has broken out of its transportation bottleneck thanks to an expanding railway network, lifting prices for the crude and profits for those who pump it.

The growing availability of the North Dakota crude demonstrates how new sources of crude unleashed by hydraulic fracturing are rapidly changing the U.S. oil market and could help drive down the need for oil imports at refineries along the coasts.

Hess Corp., HES +0.19%EOG Resources EOG +1.12%and others had until recently produced more oil out of North Dakota's Bakken shale formation than pipelines and rail cars could haul, leading to a regional supply glut and discounted prices for the crude. Most Bakken crude that did travel through pipelines wound up at the Cushing, Okla., oil storage hub, which is under its own glut because of the recent boom in U.S. oil production resulting from hydraulic fracturing.

The average Bakken discount since November 2011 was $7 below U.S. crude benchmark West Texas Intermediate, and reached $28 in February, according to Platts data.

But in September, Bakken oil prices traded at a premium to WTI for the first time in nearly a year, and some analysts say the premium could continue for another year. Although this might bruise the profit margins for some Midwest refiners, it could offer relief at the pump for drivers along the coasts whose fuel depends on more expensive, imported crude.

Much of the credit goes to the newly developed system of rail lines and terminals built by Tesoro Corp., TSO -2.17%EOG, Statoil STL.OS +0.28%ASA and others, which have started hauling the crude from its geographically isolated source to refineries all over the country.

"Rail terminals are enabling shipments to St. James [Louisiana], East Coast and West Coast terminals, avoiding the traffic jam" at Cushing, said Rusty Braziel, president of energy consulting firm RBN Energy. "This has pulled some barrels out of the pipelines and resulted in an overall tightening of the supply-demand balance."

Oil production from the shale formation reached 675,000 barrels a day in July, an all-time high and more than twice as much as could be carried by pipeline, according to the latest data from the North Dakota Department of Mineral Resources.

But as more rail lines and terminals have been built in North Dakota and surrounding states, Bakken oil has still become available to more buyers, boosting its price. Statoil said in August it is leasing more than 1,000 railroad cars to carry crude oil from North Dakota to refiners across North America. Railroad crude-takeaway capacity has more than doubled in the past year, to about 400,000 barrels a day, according to Raymond James analysts.

Its wider reach is benefitting coastal refiners that had been dependent on more expensive imported crude, but dull the edge for those in the Midwest that had depended on its formerly steep discounts to WTI to pad their profit margins.

"We have a big flexibility built into these crude-by-rail systems," said Bill Thomas, president of EOG Resources, which produced 56,400 barrels of oil equivalent a day in

the Bakken last year and has spent three years building rail systems out of North Dakota. "We really take most of our crude mostly from the Bakken to the Gulf Coast and get a really good price," he said in a conference call with investors.

The Bakken premium will likely last until late 2013, when TransCanada Corp., TRP.T -1.13%Enterprise Products Partners LP EPD -0.78%and other pipeline companies finish projects that will expand the amount of crude oil flowing out of the Cushing oil hub, according to a recent Raymond James report.

Once pipelines are in place, WTI will flow more efficiently to the U.S. Gulf Coast refining hub, and Bakken crude prices will fall back while producers search for other markets for their crude, said Raymond James energy analyst Stacey Hudson. At that point, Bakken crude will once more have to fight for room in the marketplace.

"The question is, where do you want to send your Bakken barrels once Cushing gets fixed?," Ms. Hudson said.

More-expensive Bakken crude eats into the advantage some refiners with ready access to it had. Tesoro, whose refineries in Mandan, North Dakota, and Anacortes, Wash., use the crude extensively, is especially apt to see its profit margins shrink as the Bakken price rises.

"There are a few refiners like Tesoro's Mandan refinery that are not enjoying as big a discount as they were last year," RBN Energy's Mr. Braziel said.

But Valero Energy Corp. VLO -0.98%and other refiners still prefer it to the more expensive coastal crude, yet another grade of oil and one which can still cost up to $20 more than Bakken.

"There's still incentive to run it," said Bill Day, spokesman for Valero, which runs 140,000 barrels a day of Bakken crude at its refinery in Memphis, Tenn.