

“BEYOND THE BAKKEN”

FACTORS IMPACTING BAKKEN WELL ECONOMICS

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FORWARD LOOKING STATEMENTS & INFORMATION

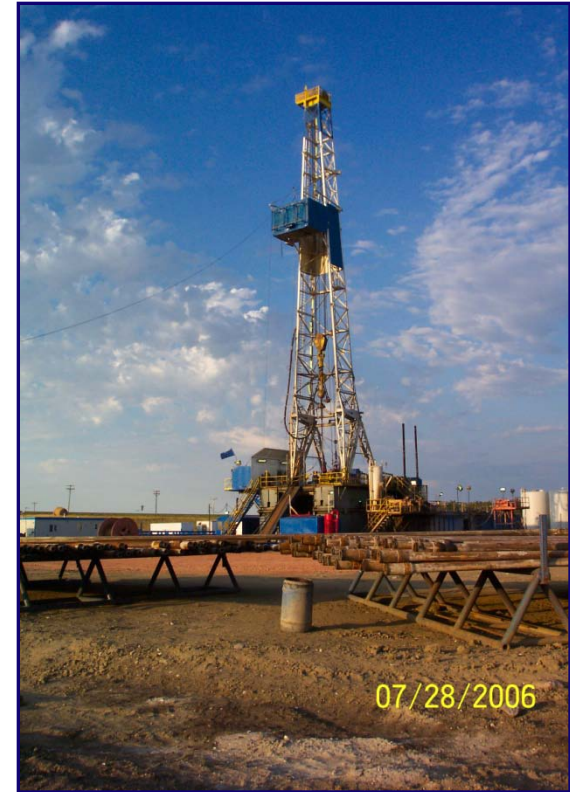
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- Nothing presented herein shall be considered representative of the exact methods employed by any single entity in making well decisions.

TARGET AUDIENCE

- Royalty Owners
- Entry-level Investors

EVALUATION CRITERIA

- Rig Availability
 - Rig Rates
 - Crew / Experience
 - Estimated Drill Time to Production
- Lease Expiration
 - Acreage
 - Operator
- Is There a Prospect?
 - Area Production Profile
 - Offset Wells
 - Is there a better use for the money?
 - International or Deepwater Projects?
 - Gas Shale?



COSTS INFLUENCING WELL ECONOMICS

- Rig Rate & Type
- Frac Cost & Availability
- Infrastructure Costs & Timing
 - Electrical
 - Oil Trucking or Pipeline
 - Gas Handling
- Monthly Operating & Downtime



COST CONTROL METHODS – FRONT END

- Long Term Contracts
 - Fixed Rates via Bid?
 - Incentives for schedule improvement?
 - What does operating agreement allow?
- Strategic Alliances / Sole Source
- Coordinate Drilling w/ Infrastructure
 - Confidential Information

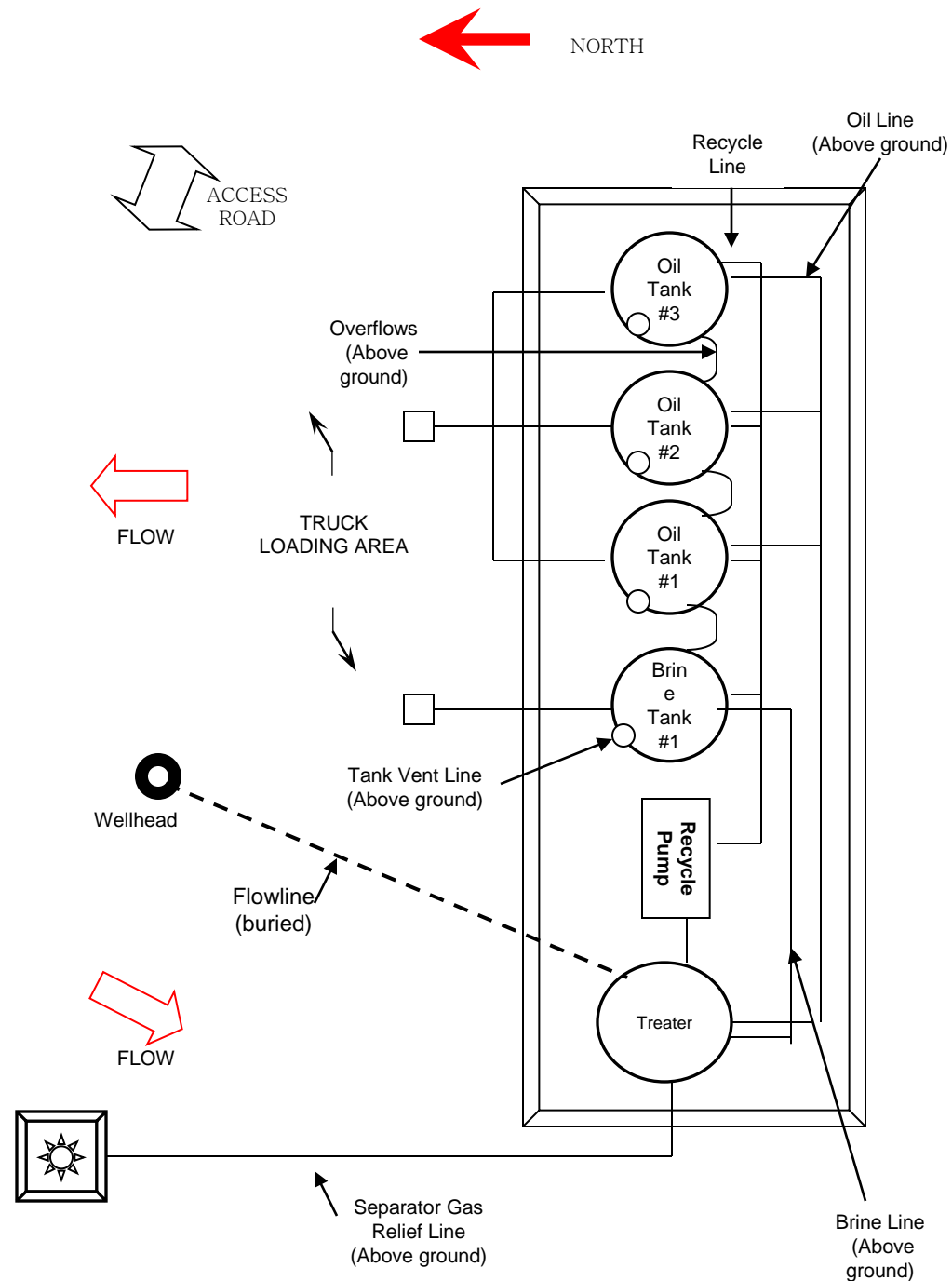
COST CONTROL - PRODUCTION

- Standardized Procedures
- Planned Maintenance
- Experienced Field Personnel
- Fit for Purpose Equipment
 - Available Spare Parts
 - No serial #'s 1 or 2
 - North Dakota proven

Standardized Well Site Design

Benefits include:

- Reduced set up time for tank battery
- Order electrical service in advance of construction
- Bulk order discounts for basic equipment
- Operators familiar with site setup and safety



INFLUENCES ON CONTINUING WELL ECONOMICS

“It’s All About The Oil”

Sample Well Revenue	Oil	Residue Gas	NGL's
Example: Well “A” (gross market)	\$80,000	\$5,000	\$15,000
Revenue By Commodity (%)	80%	5%	15%
Costs to Reach Market	X	X	X
Other Revenue Reductions:			
Taxes	X	X	X
Royalty	X	X	X
Operating Cost	X	X	X
External Influences	X	X	X

EXTERNAL INFLUENCES

- Market
- Regulation
- Transportation
- Infrastructure
- Price

MARKET: PARTY WILLING TO BUY A SPECIFIC PRODUCT

- Oil

- Refinery required to make the desired product. (World Commodity)
 - Gasoline, Diesel, etc...

- Gas

- Several markets – utility (home heating), power generation, industrial. (Regional Commodity – except for LNG)
- Gas Processing Plant typically required to make produced gas stream merchantable

- Natural Gas Liquids (NGL)

- Recovered products entrained in produced gas stream
 - Propane – chemical, home heating and crop drying.
 - Butanes plus – Refinery or Chemicals
 - Ethane – Chemicals Only (not all plants)

REGULATION:

LAW, RULE OR ORDER PRESCRIBED BY AUTHORITY

- Federal
 - FERC, EPA, Congress
- States
 - NDIC, Fish & Wildlife, State Land Office
- Local
 - County Commissioners, Mayors, Town Councils



Outside influences constantly changing rules which business must follow.

- Track/ Monitor Changes
- Help set policies which balance business & public welfare

TRANSPORTATION: THE BUSINESS OF CONVEYING GOODS

- Products which must be transported from wellhead?
 - Oil: Truck, Pipeline, Railcar
 - Gas: Pipeline (low pressure gathering line)
 - Water: Frac & Produced
- What factors impact prices for goods bought or sold?
 - NYMEX (Futures)
 - Market Access (Transportation Access)
 - Timing of Fracs
 - Amount 3rd Party is Willing to Pay



INFRASTRUCTURE: BASIC PHYSICAL SYSTEMS OF A BUSINESS OR AREA

- Supply Chain in Place?
 - Well site equipment in stock?
 - Can tools & people be delivered timely?
 - Housing, fuel, vehicles
 - Frac Availability
- Roads, Pipelines, Electric
 - Status of each?
 - Maintenance scheduled?

PRICE:

WHAT A PARTY IS WILLING TO PAY FOR GOODS OR SERVICES

- Hydrocarbon Export
 - Oil – Truck vs Pipeline
 - Cost of each
 - Benefits?
 - Gas – Flare vs Gathering
 - Pipeline Quality Reside
 - Recovered NGL's – outlet
 - H₂S and CO₂ Issues?
 - Capacity in area plants
 - Connection Costs
 - Water Disposal
 - Frac (100 barrels/Truck)
 - Produced Water & Disposal Costs



PRICE – (CONTINUED)

- Credit: The ability of a buyer to repay the seller.
 - Will / can a party pay for purchased oil?
 - How long has the Buyer been in business?
 - Financial reviews?



CONCLUSION

- Most companies use some type of economic analysis
 - No two will be identical
 - Have a basic plan from which to work
- Stakeholders should work together to compile the best information available
- Control as many of the variables as possible
 - If a commodity price can be locked in, should you?
 - Is a “hedged price” required for financing?
 - Can you lock in drilling and operating costs?
 - Hedge commodity at the same time?
 - Manage cash flows