



take a closer look

BLM RAC Spring Meeting Colorado River Valley Field Office Exploration & Production Best Management Practices

David Grisso | Operations Field Leader
Silt | May 10 | 2012

Future oriented information

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In the interest of providing Encana shareholders and potential investors with information regarding the Company and its subsidiaries, including management's assessment of Encana's and its subsidiaries' future plans and operations, certain statements and graphs throughout this presentation contain "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 or "forward-looking information" within the meaning of applicable Canadian securities legislation. Forward-looking statements in this presentation include, but are not limited to, statements with respect to: projected 2011 total production and annual growth; estimated reserves and economic contingent resources; estimated net drilling locations; target to double production per share by 2014; expected benefits of resource play hub and gas factories; projected third parties and joint venture capital, including potential completion of joint venture with PetroChina; forecast growth profile for 2011 to 2014; ability to maintain investment grade credit ratings; ability to pay dividends; successful execution of Encana's business model; 2011 Corporate Guidance; forecast metrics; Company's expectations for future Debt to Capitalization and Debt to Adjusted EBITDA ratios; expected rates of return at various NYMEX gas prices; target to further reduce supply cost; projections with respect to future production, estimated reserves and resources, number of wells and other developments at various resource and emerging plays; projected first production at Deep Panuke; and expected future demand opportunities in transportation and power generation.

Readers are cautioned not to place undue reliance on forward-looking statements, as there can be no assurance that the plans, intentions or expectations upon which they are based will occur. By their nature, forward-looking statements involve numerous assumptions, known and unknown risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections and other forward-looking statements will not occur, which may cause the Company's actual performance and financial results in future periods to differ materially from any estimates or projections of future performance or results expressed or implied by such forward-looking statements. These assumptions, risks and uncertainties include, among other things: volatility of and assumptions regarding commodity prices; assumptions based upon Encana's current guidance; the risk that the Company may not conclude potential joint venture arrangements with PetroChina or others and raise third party capital investments; fluctuations in currency and interest rates; product supply and demand; market competition; risks inherent in the Company's and its subsidiaries' marketing operations, including credit risks; imprecision of reserves and resources estimates and estimates of recoverable quantities of natural gas and liquids from resource plays and other sources not currently classified as proved, probable or possible reserves or economic contingent resources; the Company's and its subsidiaries' ability to replace and expand reserves; marketing margins; potential disruption or unexpected technical difficulties in developing new facilities; unexpected cost increases or technical difficulties in constructing or modifying processing facilities; risks associated with technology; the Company's ability to generate sufficient cash flow from operations to meet its current and future obligations; the Company's ability to access external sources of debt and equity capital; the timing and the costs of well and pipeline construction; the Company's and its subsidiaries' ability to secure adequate product transportation; changes in royalty, tax, environmental, greenhouse gas, carbon, accounting and other laws or regulations or the interpretations of such laws or regulations; political and economic conditions in the countries in which the Company and its subsidiaries operate; terrorist threats; risks associated with existing and potential future lawsuits and regulatory actions made against the Company and its subsidiaries; and other risks and uncertainties described from time to time in the reports and filings made with securities regulatory authorities by Encana. Although Encana believes that the expectations represented by such forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct. Readers are cautioned that the foregoing list of important factors is not exhaustive. Forward-looking statements with respect to anticipated production, reserves and production growth are based upon numerous facts and assumptions including a projected capital program averaging approximately \$6 billion per year that underlies the long range plan of Encana which is subject to review annually and to revision for factors including the outlook for natural gas commodity prices and the expectations for capital investment by the Company, achieving an average drilling rate of approximately 2,500 net wells per year, Encana's current net drilling location inventory, natural gas price expectations over the next few years, production expectations made in light of advancements in horizontal drilling, multi-stage fracture stimulation and multi-well pad drilling, the current and expected productive characteristics of various existing resource plays, Encana's estimates of reserves and economic contingent resources, expectations for rates of return which may be available at various prices for natural gas and current and expected cost trends. Forward-looking information respecting anticipated 2011 Cash Flow, operating cash flow and pre-tax cash flow for Encana is based upon achieving average production of oil and gas for 2011 of between 3.475 to 3.525 billion cubic feet equivalent ("Bcfe") per day ("Bcfe/d"), commodity prices for natural gas of NYMEX \$4.50/Mcf to \$5.00/Mcf, crude oil (WTI) \$85.00/bbl to \$95.00/bbl, U.S./Canadian dollar foreign exchange rate of \$0.95 to \$1.05 and a weighted average number of outstanding shares for Encana of approximately 736 million. Assumptions relating to forward-looking statements generally include Encana's current expectations and projections made by the Company in light of, and generally consistent with, its historical experience and its perception of historical trends, as well as expectations regarding rates of advancement and innovation, generally consistent with and informed by its past experience, all of which are subject to the risk factors identified elsewhere in this presentation.

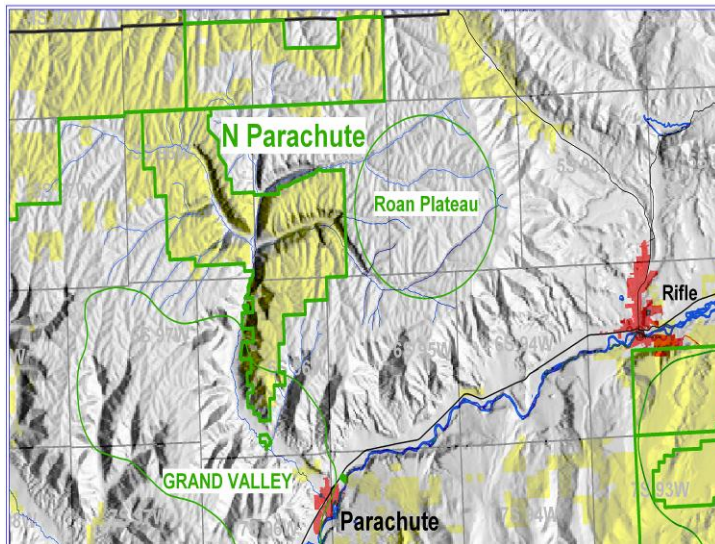
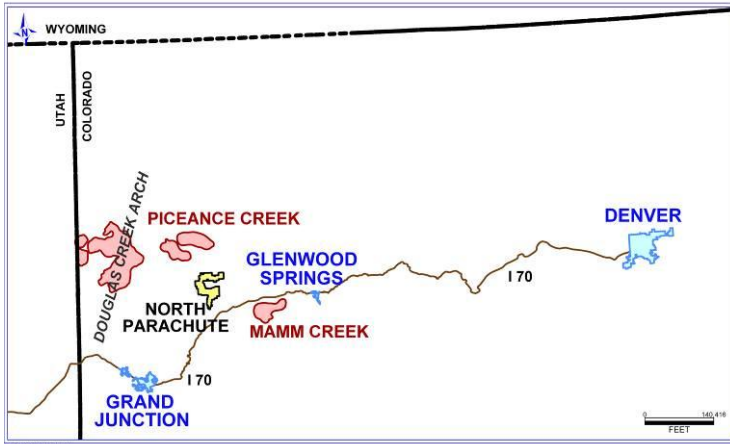
Furthermore, the forward-looking statements contained in this presentation are made as of the date of this presentation, and, except as required by law, Encana does not undertake any obligation to update publicly or to revise any of the included forward-looking statements, whether as a result of new information, future events or otherwise. The forward-looking statements contained in this presentation are expressly qualified by this cautionary statement.

Encana Piceance Operations

- Area orientation
- Geology
- Drilling
- Completions
- Water Management
- Production
- Reclamation

North Parachute Ranch Piceance Basin, CO

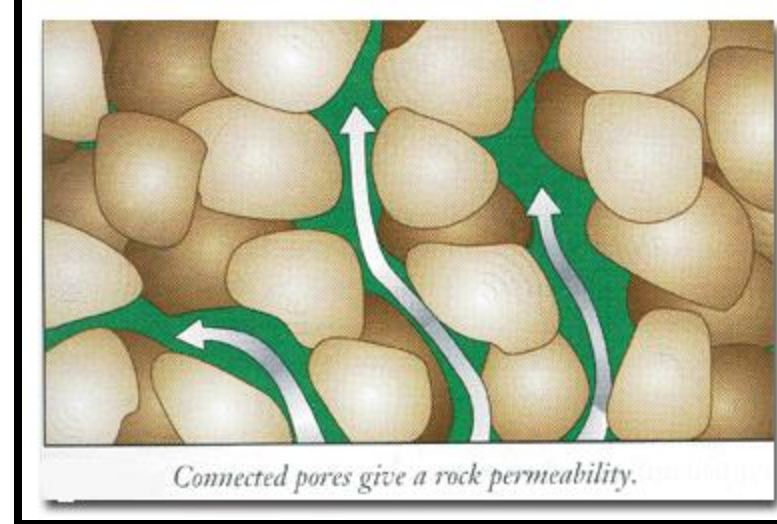
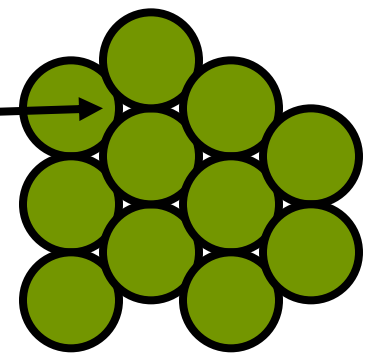
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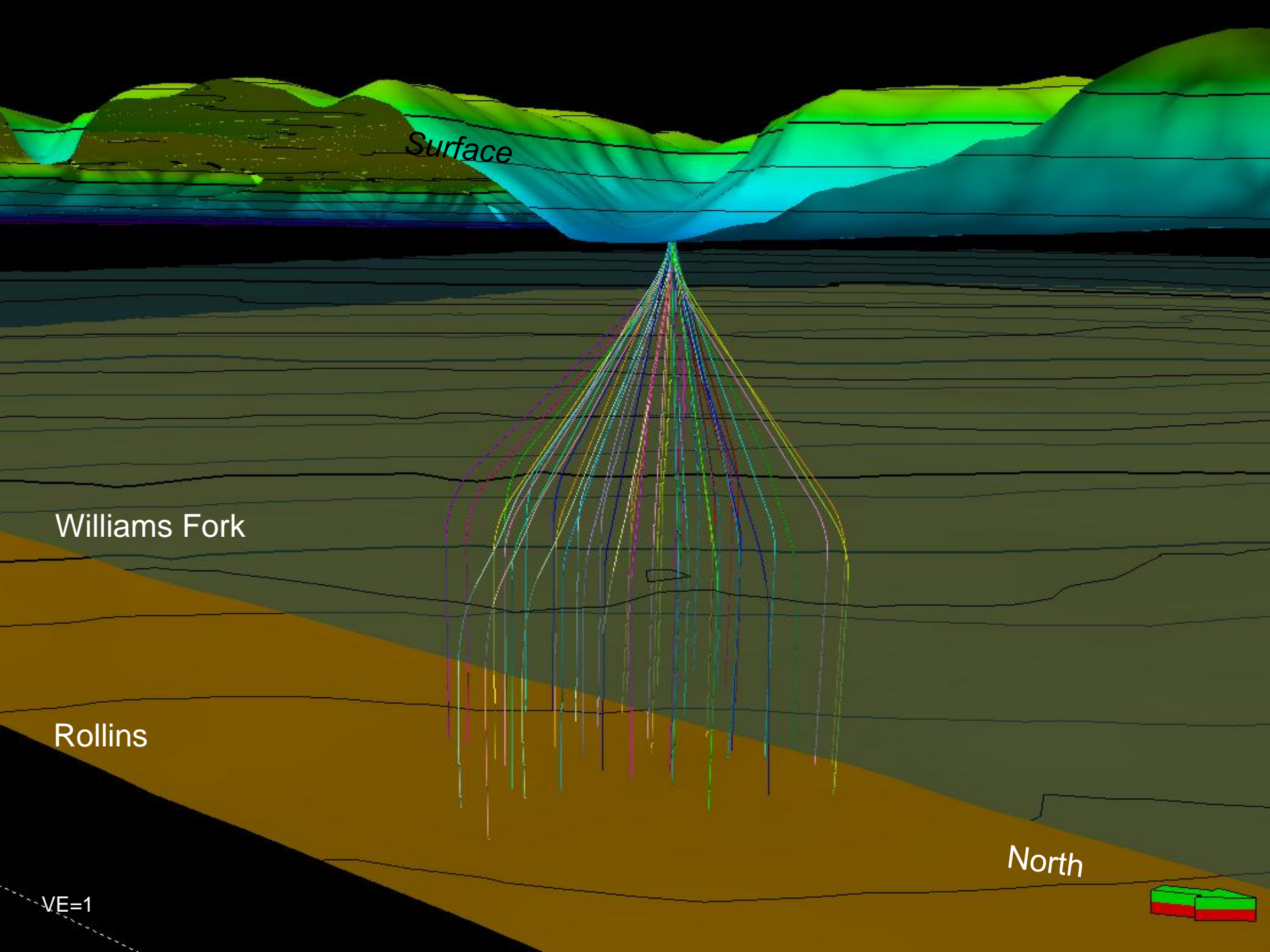
Geology

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- Oil & gas are found in **sedimentary rocks**
 - Rocks made up of particles
 - e.g. sandstones, limestones, shales
 - Sedimentary rocks have **pores**
 - Pores are generally water-filled
- Basic Rock Properties
 - Porosity** is the percentage of pore-to-rock volume (measure of rock's capacity to store fluids)
 - Permeability** is the capacity to transmit fluids



<http://energy.usgs.gov/factsheets/Petroleum/section2.html>





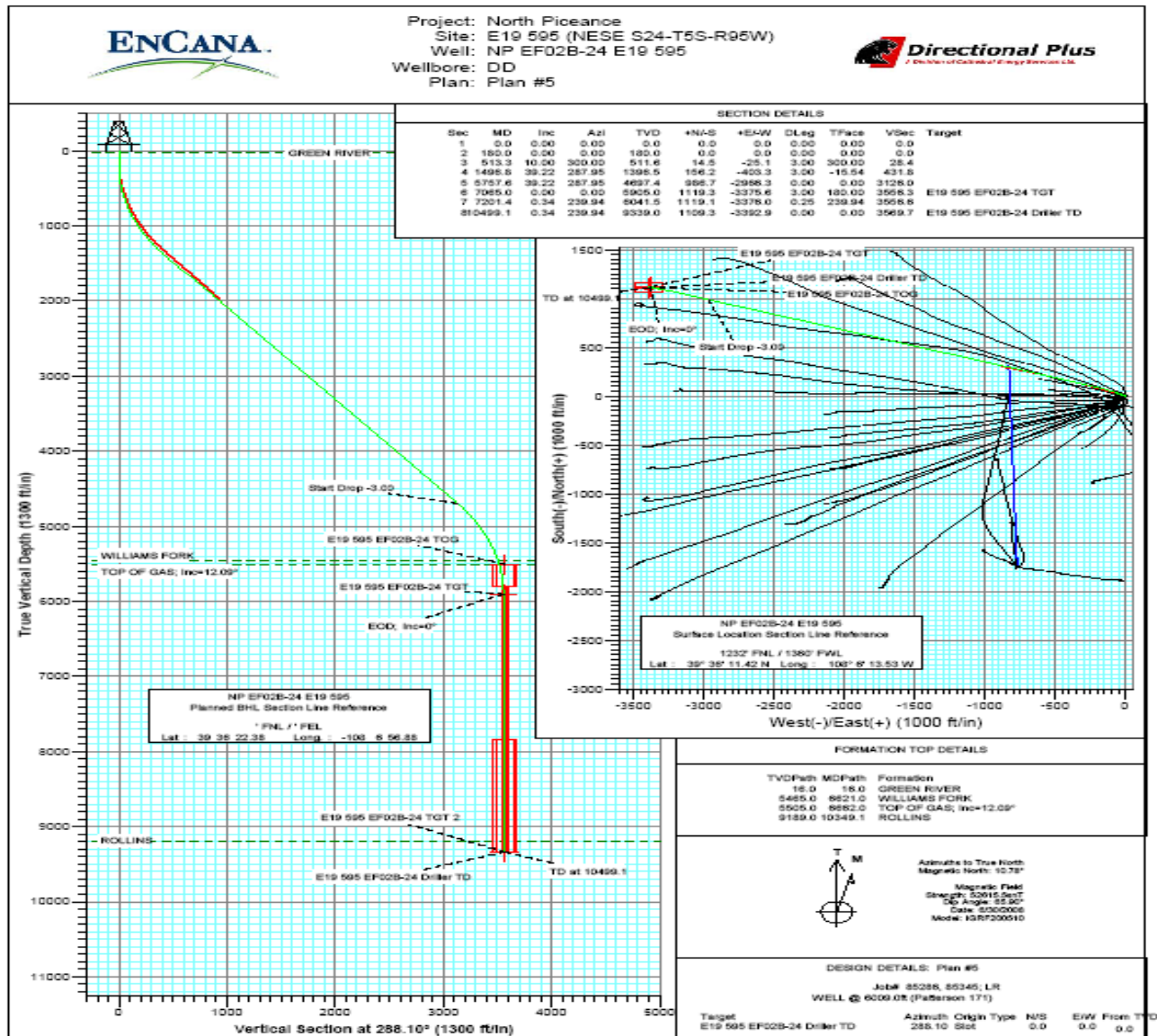
Rollins

North



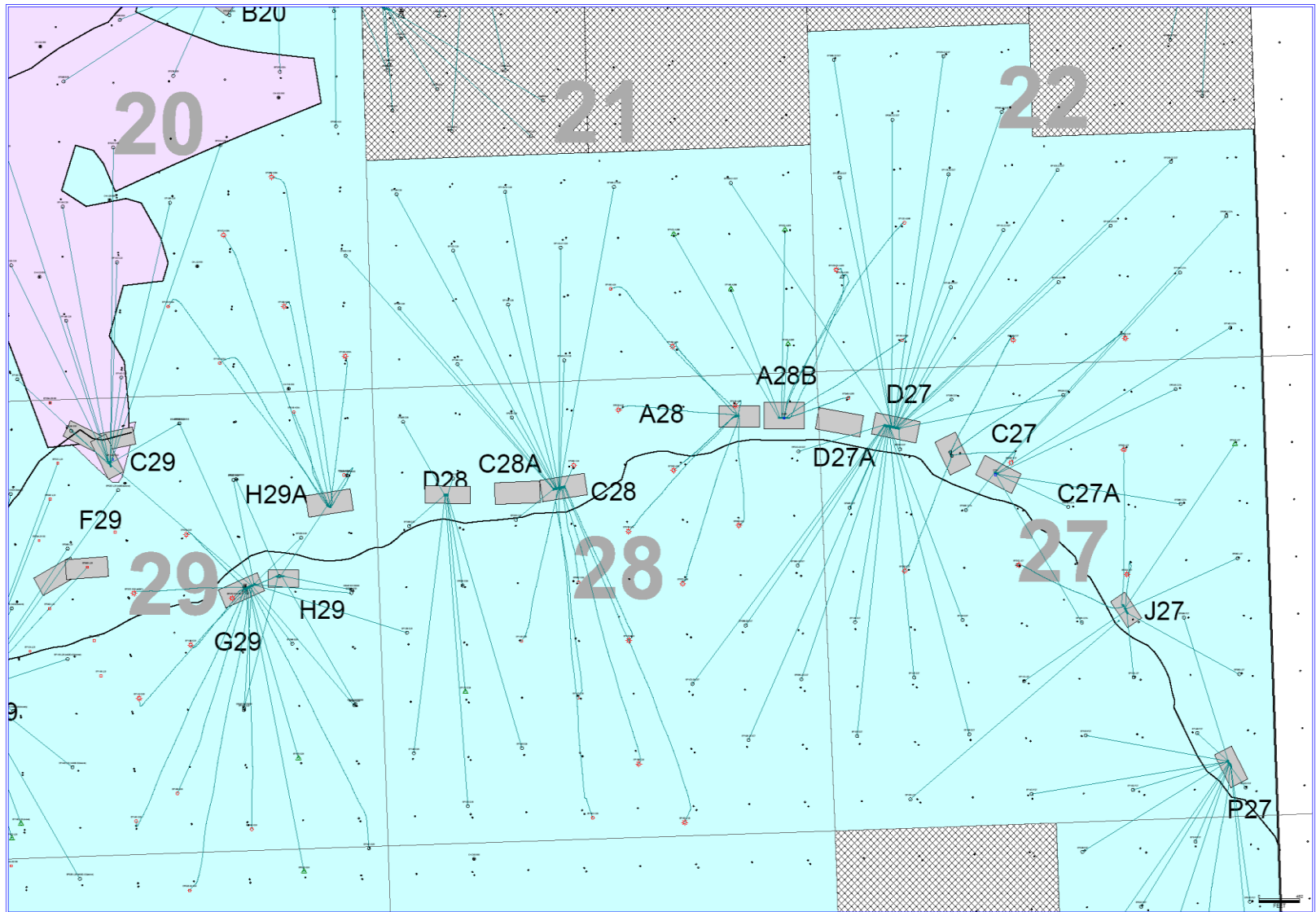
Directional Plan and Spider Plot

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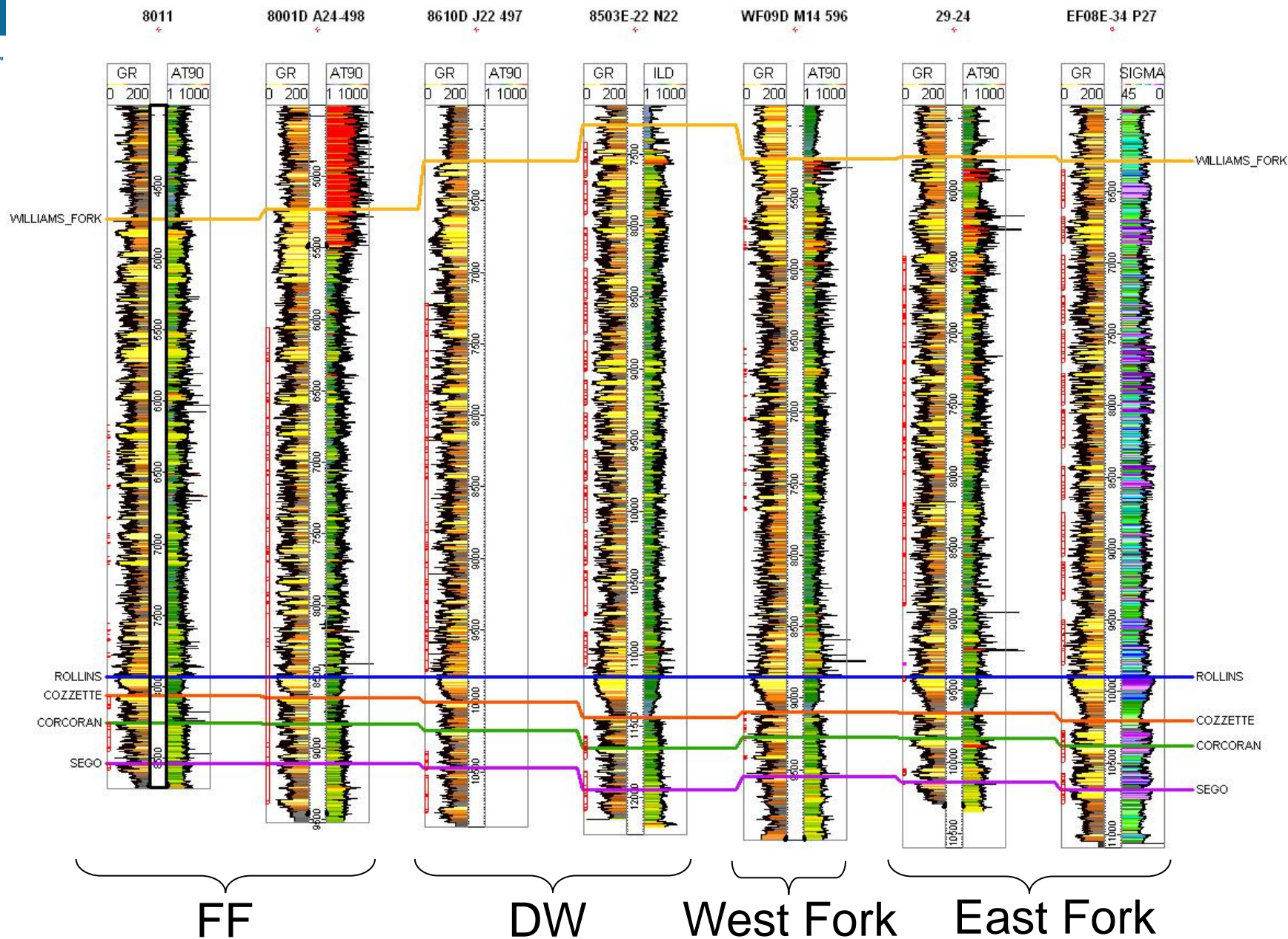
North Parachute Ranch Well Pads

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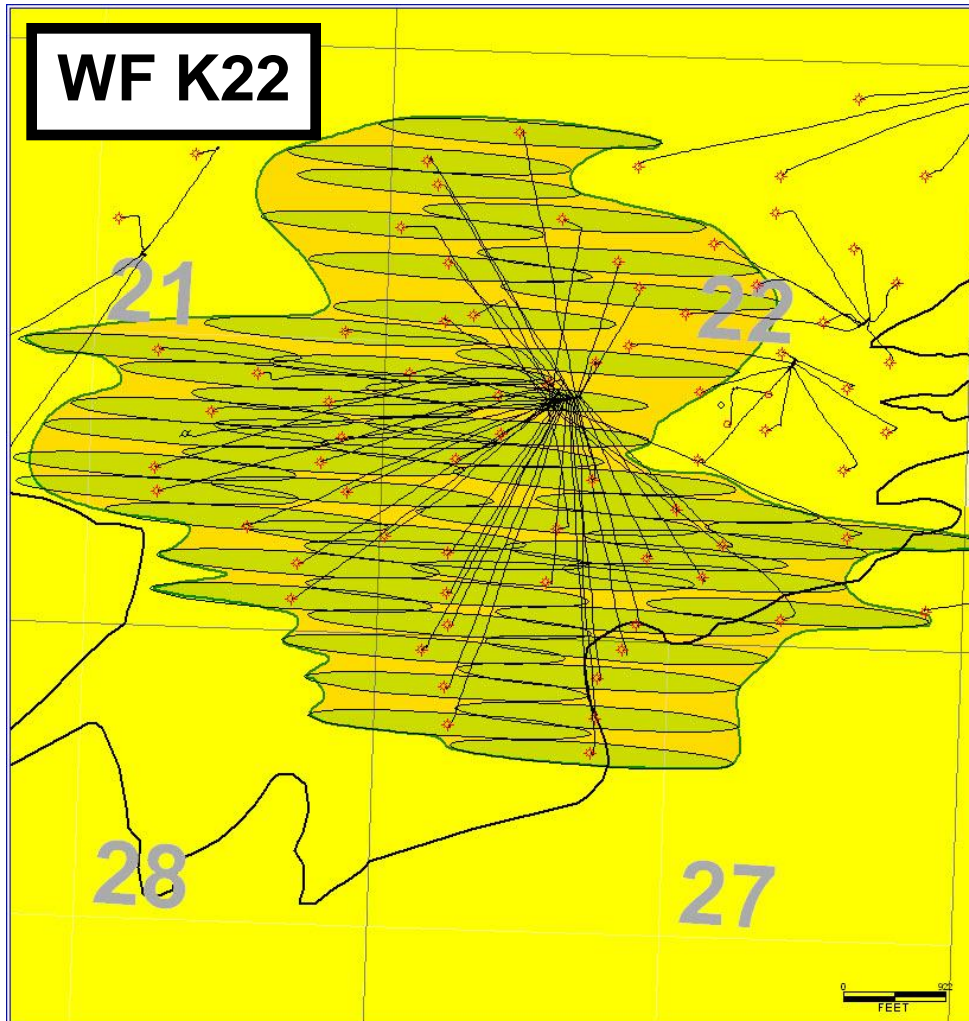
Regional Cross Section

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Pad Drilling – Advantages

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- 52 Wells
- Effectively draining ~640 Acres from 1 Pad!
- Optimizes recovery in extremely difficult topographic setting
- Significant reduction in surface disturbance
 - .16 Acre / well

Drilling



Simultaneous Operations

North Piceance

- Process and Evolution
 - Started 6 years ago.....
 - Came up with a list of items for our critical path to follow
 - Established a chain of command for the well site
 - Included supervisors input from drilling, completion, production, construction and mid-stream
 - Included all supervisors for related service companies/vendors that would be on site
 - Included EHS and 24/7 Safety supervision
 - List generated by asking the simple question “What keeps you up at night?”



Simultaneous Operations

North Piceance

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- Process and Evolution (continued)
 - Utilized the EnCana Risk Matrix and mitigated all issues
 - Narrowed down our list to what was safe and manageable
 - Implemented the use of check off sheets and Sim-Ops hazard workbook
 - Supervisors must sign off daily for the operations planned
 - Assign a designated sim-ops engineer to do quarterly reviews and the team must approve any changes using the Management of Change process.

Simultaneous Operations

Quad Design: Cellars and mouse holes

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Simultaneous Operations Fit for Purpose Rig

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Simultaneous Operations Perforate and Frac

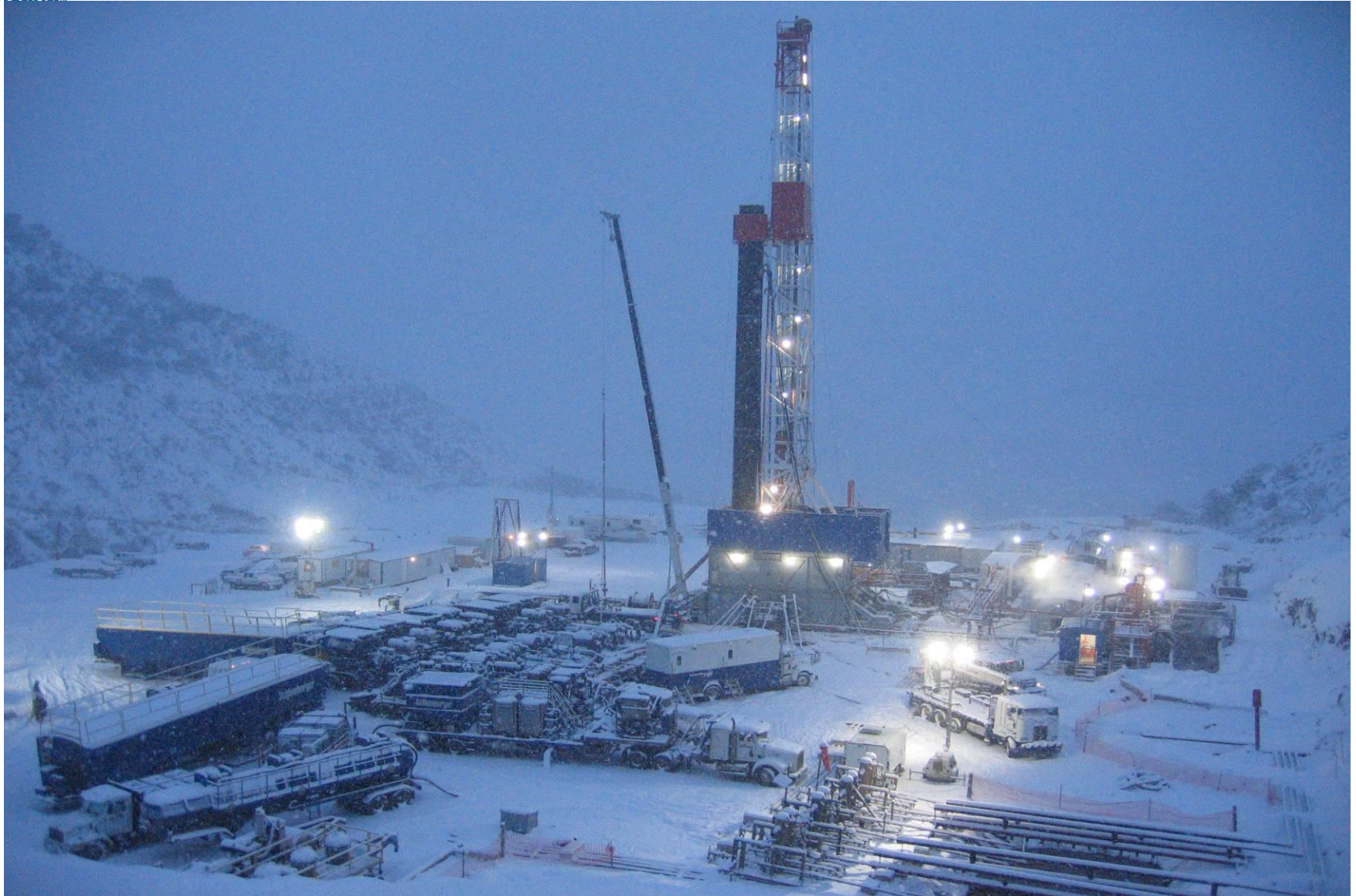
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Simultaneous Operations

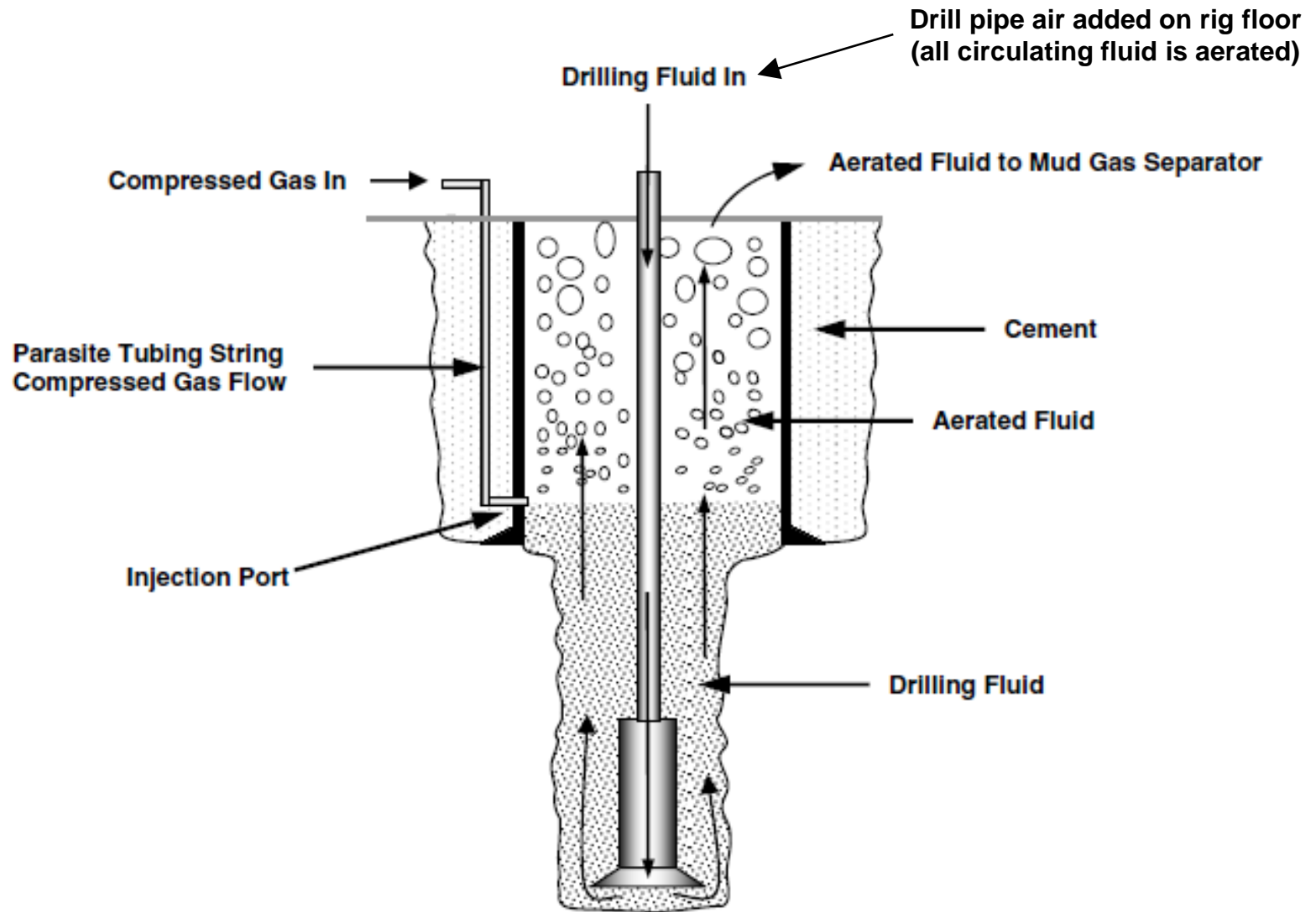
Winter Perforate and Frac

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Aerated Mud Drilling Cross-section

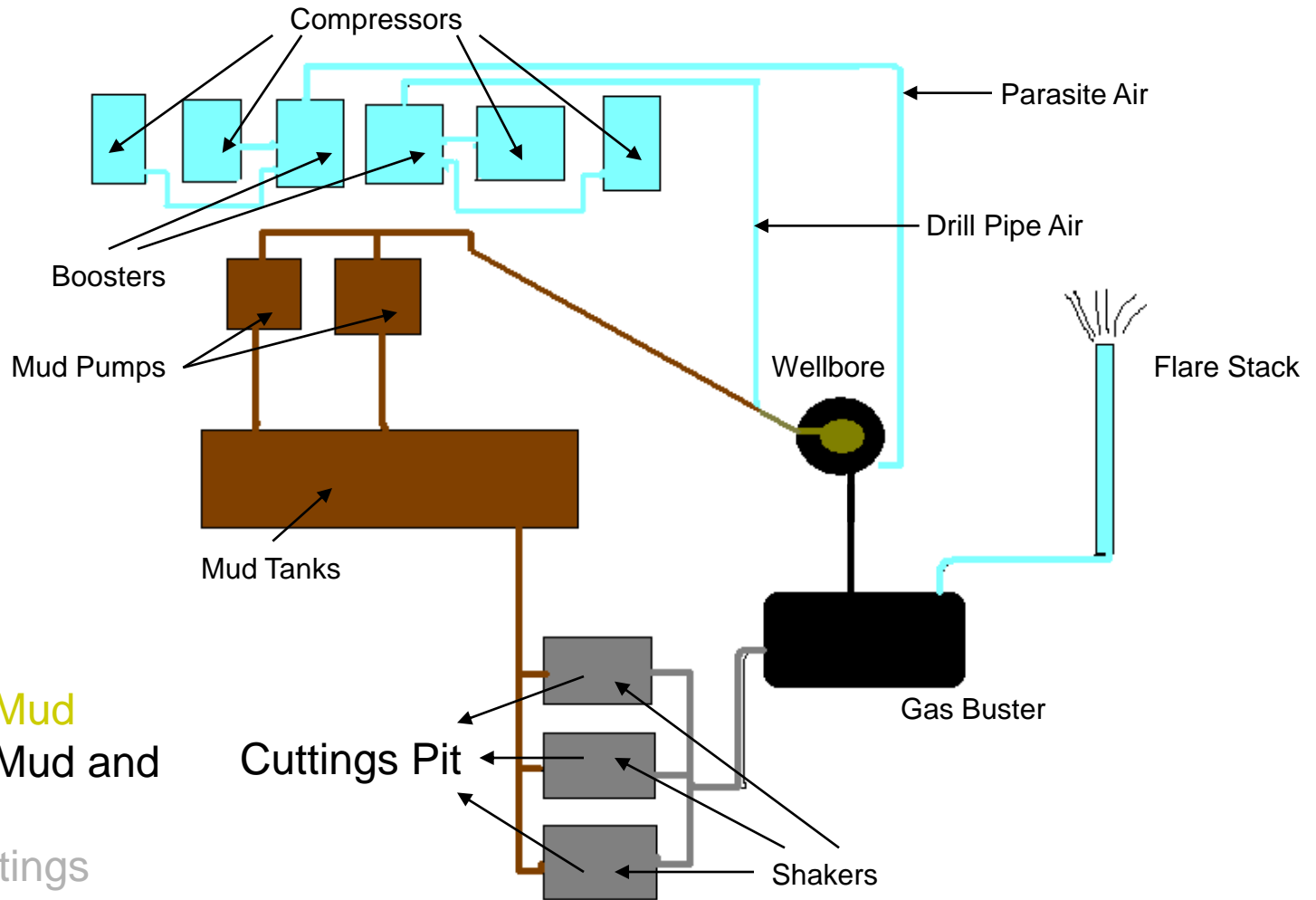
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Paul D. Scott, SPE, ConocoPhillips, "Real-Time Monitoring of Downhole ECDs for Parasite Aeration Using a Simple Spreadsheet Calculation"

Aerated Mud Drilling Schematic

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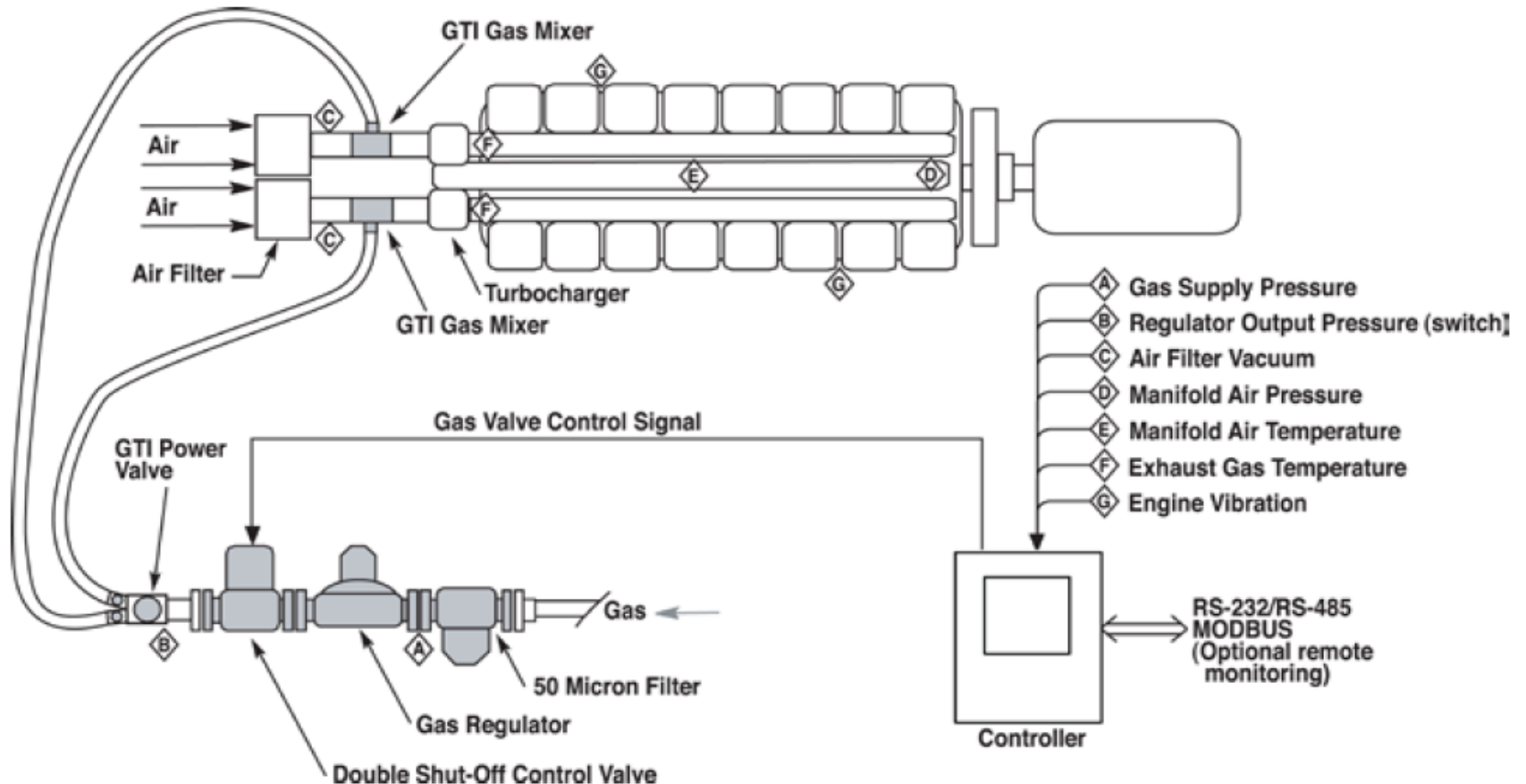
Parasite Running

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Duel Fuel Install on Patterson Rigs 306 & 308

- Installed Altronic system on rig engines (3)



- Converted Boilers to use Natural Gas Burners in place of Diesel Fired.

Future Plans

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• Convert Air Equipment on Rigs 306 & 308 (Plateau), ~750 gpd



- Convert Patterson Rig 303 to Dual Fuel (Valley)
- S&W Set up Local Support
- Altronic – New Variable Valve on New Equipment & Retrofit Existing

Completions



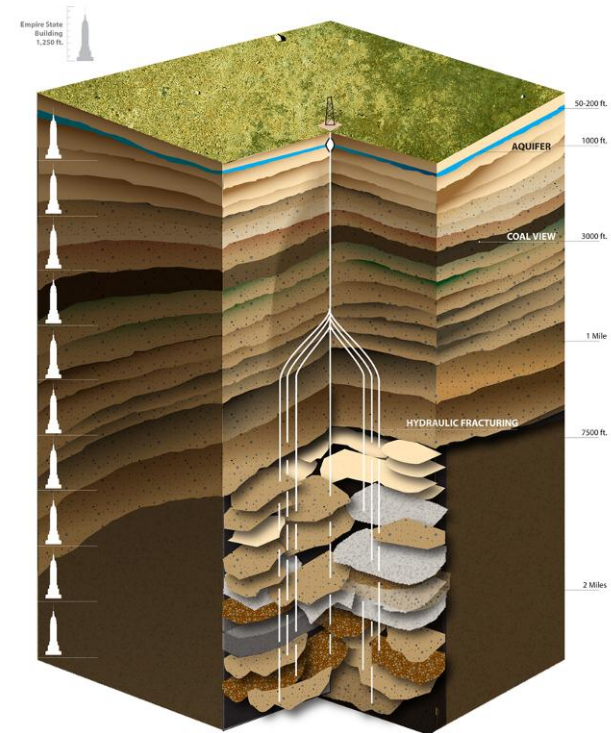
Why “Frac” a Well?

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- Increases rate at which fluids are produced
 - By increasing the surface area of the formation/reservoir exposed to the wellbore
- Reasons for different permeabilities
 - Low permeable reservoirs – The rocks require hydraulic fracturing to produce at economical rates
 - Medium permeability reservoirs – Fractures accelerate recovery from wells
 - High permeability reservoirs – To bypass near wellbore drilling damage

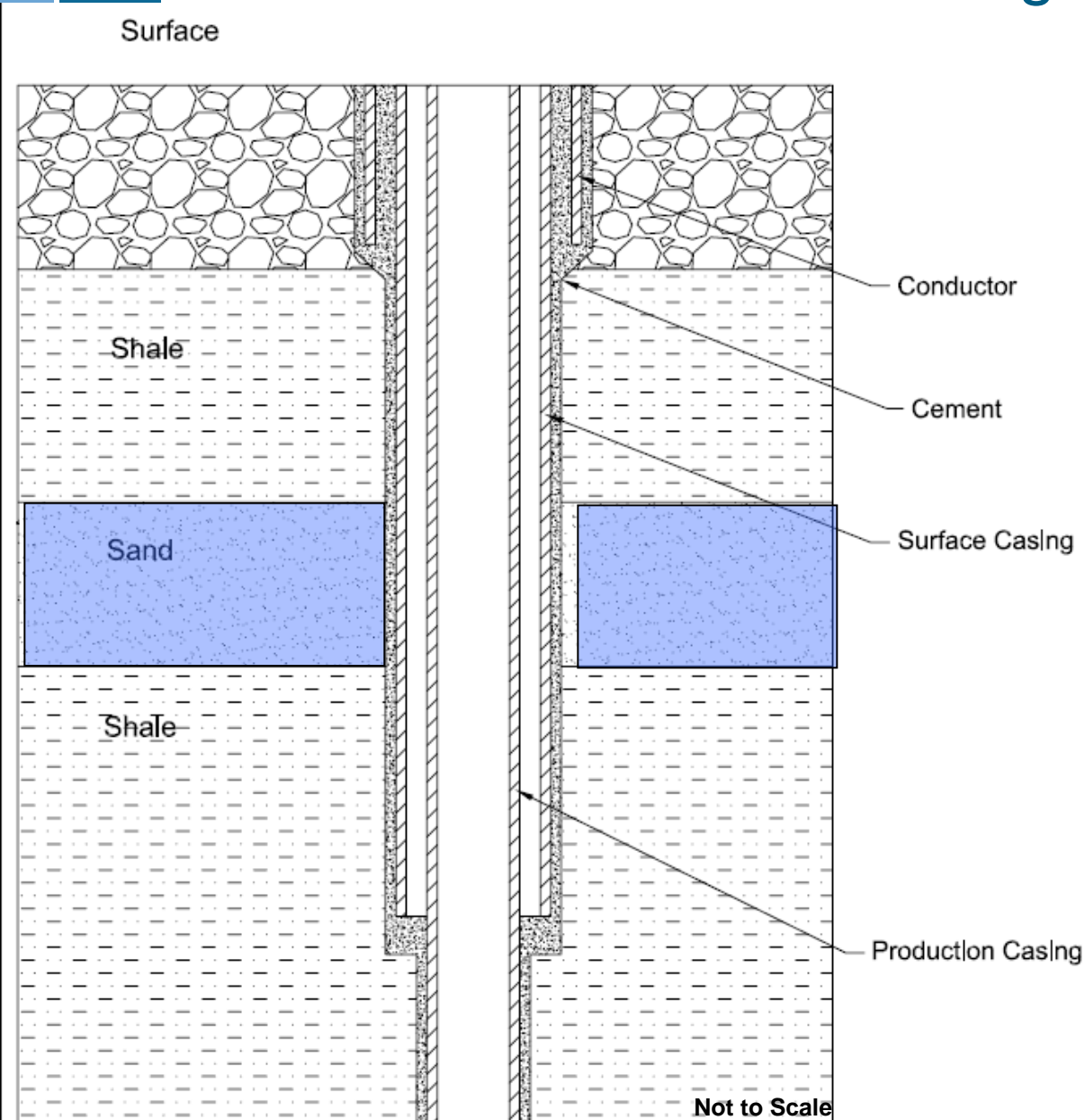


Going Deep:
WELL STIMULATION TECHNOLOGY DEPLOYED
THOUSANDS OF FEET BELOW THE WATER TABLE.



<http://www.energyindepth.org/hydraulic-frac-graphic.jpg>

Protecting Fresh Water Aquifers



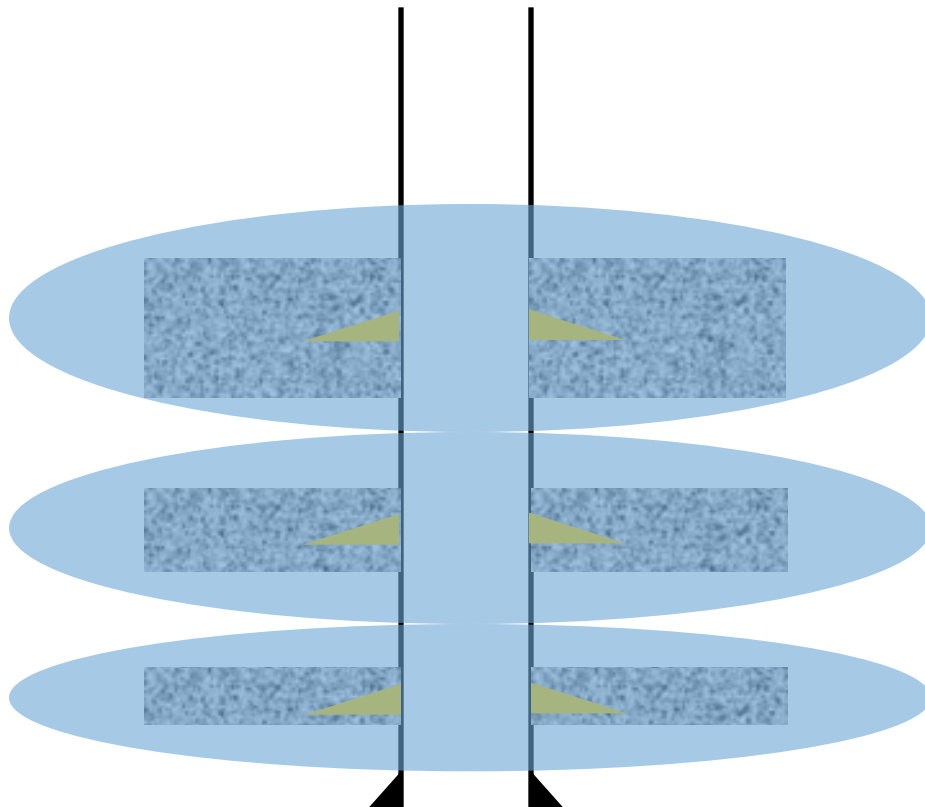
- Casing and cement creates barriers between ground water and production of hydrocarbons
- Surrounding shale is a barrier to hydraulic fracturing above the target sand or shale interval
- Thousands of feet of sand, shale, sometime limestone between hydraulically fractured rock and fresh water aquifers
- Wellbores are properly cased and checked before hydraulic frac process starts
- Frac jobs are monitored and sometimes seismically mapped
- Generally, fluids pumped into the rocks breakdown and flow back to surface with gas production

2011 Encana Completions

Completion Optimization

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- New Completion Methodology



- Operation Order

- Perforate
- Larger Volume Fracs
 - ~~Surfactant~~
- Induced Stress Diversion
 - ~~Bridge Plugs~~
- Repeat Stages
- Casing Flow
 - Dead String Land (6 Months)

Fit for Purpose Frac Crew - Bayou

- Bayou - 1 year >500,000 man hours with no recordable injuries
- Volume of water pumped in One day with One Crew 111,796 bbls (4,695,432 gal) 9 stages
- Max Rate (bpm) for Blender 100.56 bpm (for 3 seconds)
 - 98.8 bpm (4-20-12) for entire job
- Max Average Rate (bpm) for entire day
 - 92 bpm, April 20, 2012, PE25 pad
- Max Average Rate for entire Pad
 - 89.5 bpm, average Pe25

Fit for Purpose Frac Crew - Bayou

- Well performance is still improving with more water pumped
- Cycle time per well is at 1 day or less (may vary by area) compared to 7 days just 5 years ago
- Started 24 hour operations April of 2011
- Recycled rates on site have improved (sustaining about 40% reduction in water required when possible)

Simultaneous Operations Protective Cages for Producing Wells

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Water Management



2011 Encana Water Management & Handling

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- 2011 North Piceance
- Total Water Handled ~ 40,460,000 bbls, Avg = 3,372,000 bbls/mo
- Average Handling Cost ~ \$0.39/bbl
- Saves 400,000 Truck Loads per Year!



Piceance Water Treatment

- Four Centralized Piceance Basin Water Treatment Facilities
 - Treated to remove solids and free hydrocarbons to reduce air emissions (DAF)
 - Recycled processed water for fracing
 - Treating capacity of 63,000 bbls/d
 - Total storage capacity of 1.2 million bbls
- Encana has built hundreds of miles of permanent water pipelines
 - Approximately 300 miles of water lines
 - More efficient than trucking
 - Less environmental risk
 - Satellite drop stations to reduce traffic and lower risks

Production





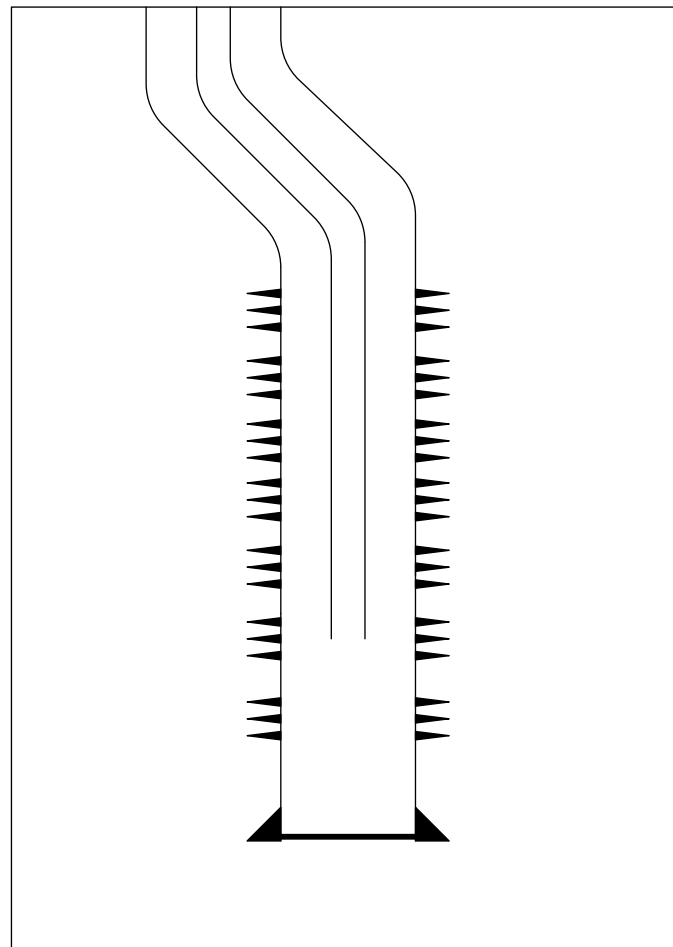
Production BMPs

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- 3 Phase Gathering Encana North Parachute Ranch
 - Reduce truck traffic
 - Reduce production equipment footprint
 - Central facilities enable better technology to control emissions
- Challenges
 - Regulatory approval of multiple lease comingling
- Gas Lift
 - Optimize production of high GOR wells
 - Increases EUR
 - Reduces emissions from unloading wells (venting)
 - Reduces Lease Operator Traffic (maintenance trips)

Typical Well Design

- “S” shaped vertical geometry
 - Vertical Section: 0' – 4,500' +
 - Angle: 0 – 45 degrees
- TD: 8,000' – 13,000' MD
- 1,500' – 3,500' gross perf interval
- 4-1/2" casing
- 2-3/8" tubing
 - Landed 67% through perfs



Reclamation



K22 Pad Reclaimed

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Interim Reclamation

encana™



■ PG30

- First years growth after initial annual weed deadheading with line trimmers.
- Final reclaim area maximized, limiting future reclaim work.
- Fenced from cattle, horses and heavily utilized as winter range by wildlife.
- CDPHE & COGCC compliance in first growing season reducing cost of ownership.

Interim Reclamation

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■ F320U

- More forage for winter grazing than surrounding undisturbed landscape
- Fenced from cattle, horses and heavily utilized as winter range by wildlife.



Divide Creek Final Reclaim

Highlights

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- Accelerated seral succession and unprecedented plant diversity
- Outstanding VRM
- Proved usefulness of flexible limits
- Resolved logistics issues
- Resolved compaction issues
- Approx. 4000' & 5 ac. in 4.5 days
- Earthwork cost \$4,320.00 plus mobilization
- Seeding cost \$26,000.00
- Aggressive weed management took place prior to first USFS visit in 2011



Divide Creek Final Reclaim

Plant diversity above and beyond specified seed mix

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June 2011

Visual Resource Management & Landforming

encana™

PI19



Visual Resource Management & Landforming

encana™

- **F320U**



Visual Resource Management & Landforming

encana™

- **PM19**



Visual Resource Management & Colorant

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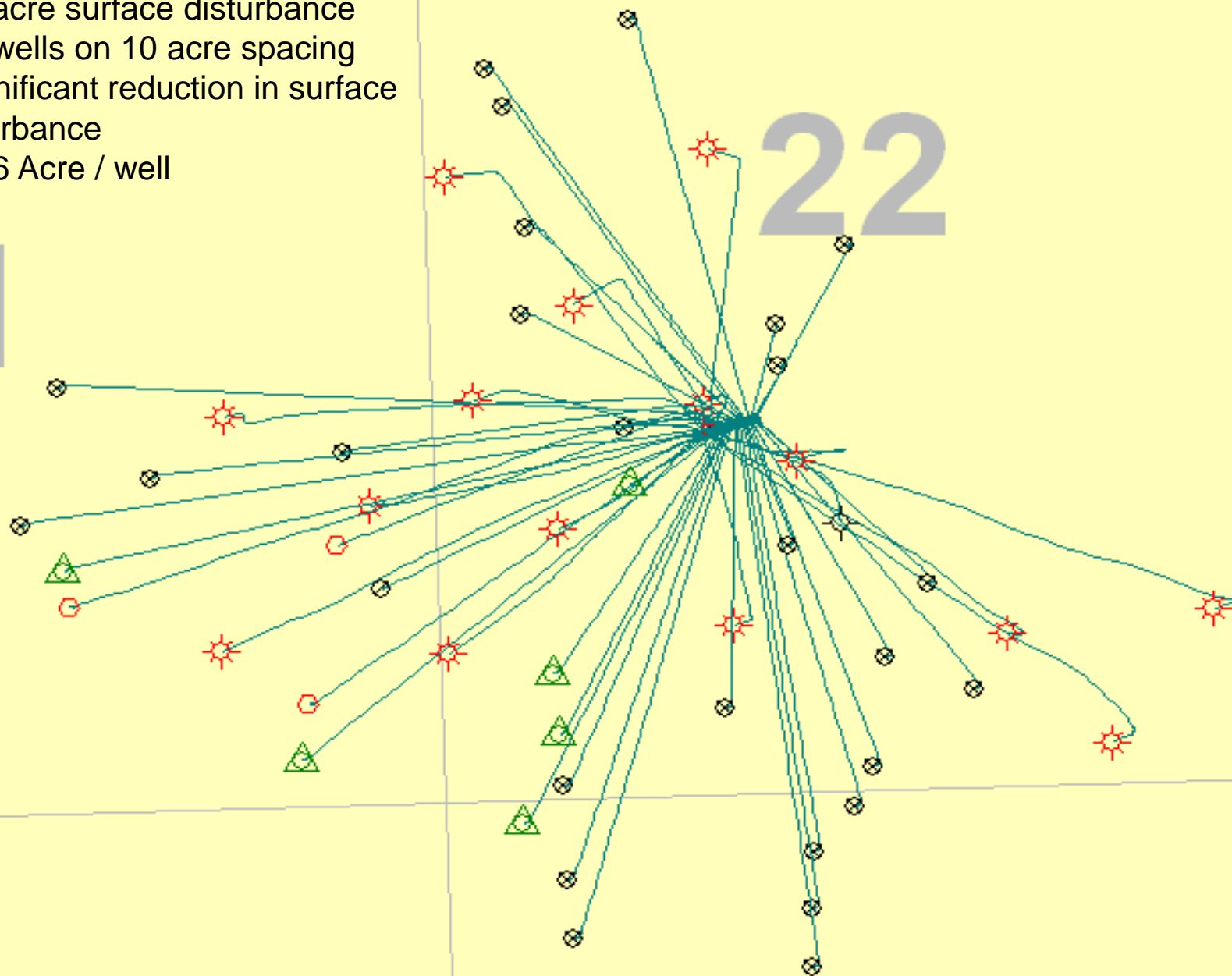
- RA11



- ≈8 acre surface disturbance
- 52 wells on 10 acre spacing
- Significant reduction in surface disturbance
- 0.16 Acre / well

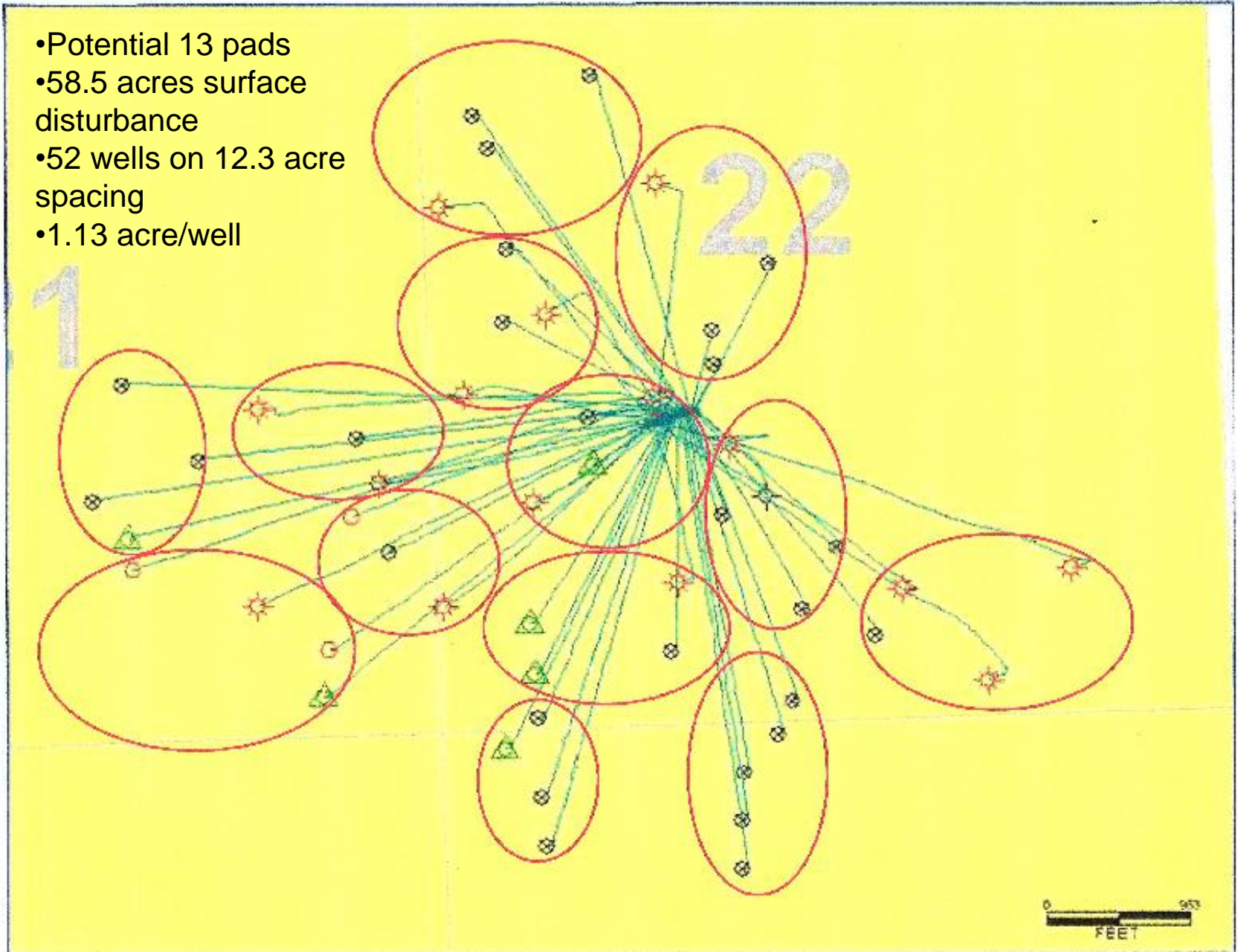
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0 953
FEET

- Potential 13 pads
- 58.5 acres surface disturbance
- 52 wells on 12.3 acre spacing
- 1.13 acre/well

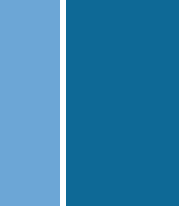


Future Energy Issues

- **Power Density** – power produced per unit of area
 - Average U.S. Gas Well = 288 HP/acre
 - Solar = 36 HP/acre
 - Wind Turbines = 6.4 HP/acre
 - Biomass-fueled power plant = 2.1 HP/acre
 - Corn ethanol = 0.26 HP/acre (40% of US corn production!)
- **Capacity Factor (CF)** – percentage run time
 - Solar CF = 22 - 27%
 - Wind CF = 10 - 40% (Texas wind CF ~ 9%)
 - Natural Gas = 95%+

Wind and Solar require 100% back-up (redundant) generation

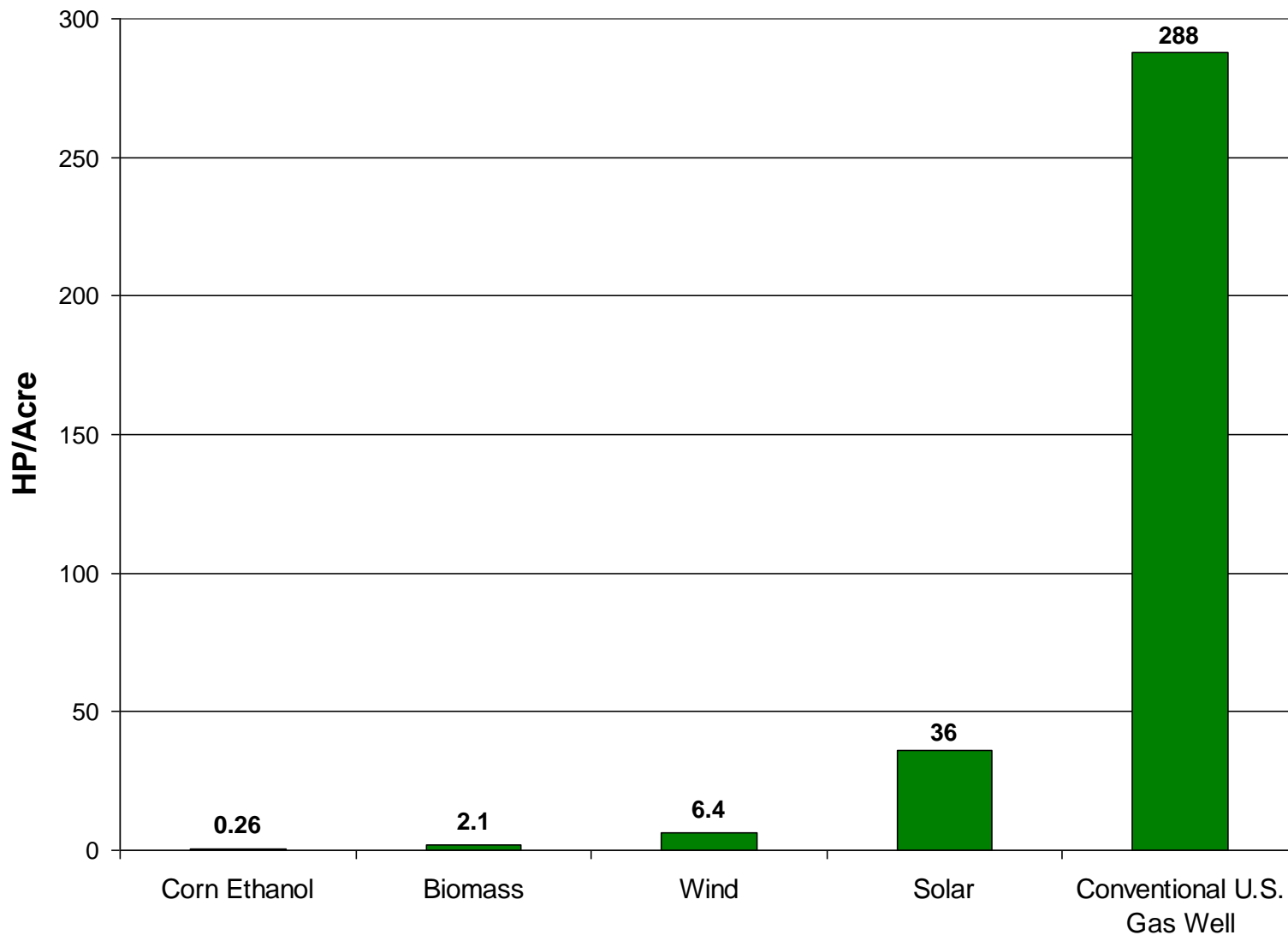
***The public will make up their own mind regarding future energy choices.
But making choices involves reading the “consumer label” – once informed,
people will make their own choices.***



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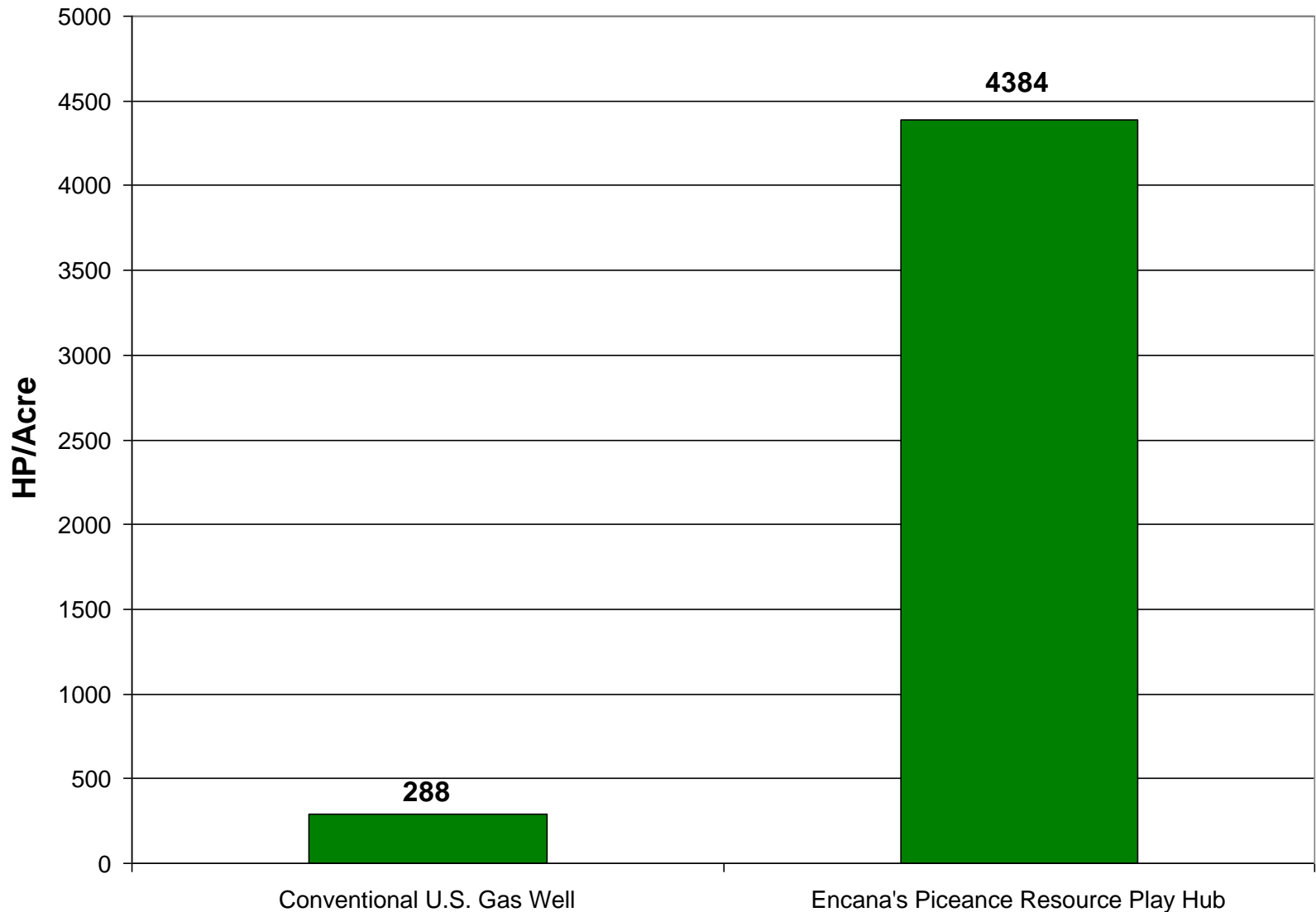
Power Density (HP/Acre)

Renewables and Natural Gas



Power Density (HP/Acre)

Conventional Natural Gas and Encana's Resource Play Hub



Questions?

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