Integrating Geological Properties With Completions Techniques To Identify Sweet Spots And Fully Exploit Reservoirs Within Various Bakken Play Types

**May 30 - 31, 2012 | Denver | COLORADO**

**PLAY TYPES:** Understanding the Bakken as a geologically heterogeneous resource play with multi play types including Sanish, Elm Coulee, Nesson Anticline, Parshall, Three Forks and Saskatchewan.

**INTEGRATING GEOLOGY WITH COMPLETIONS:** Designing completions relative to field-specific reservoir characteristics to optimize production

**SWEET SPOT IDENTIFICATION:** Realizing common geological and reservoir characteristics of hot spots in the Bakken to identify highly productive new targets

**PRODUCTION PERFORMANCE:** Correlating production performance to completions variables and geological parameters to distinguish the effects of good geology from good completions

**EXTENT OF THE BAKKEN:** Analyzing the migration of oil and gas beyond the Bakken as it is currently defined to delineate new edges of the play and new opportunities

---

**Fleet Services Partner:**  
**Co Sponsor:**  
**Reservoir Analytics Partner:**

---

To register:  
(1) 800 721 3915  
info@american-business-conferences.com

www.bakken-tight-oil.com
Sponsorship And Exhibition Opportunities At ‘Bakken Tight Oil Congress 2012’

Need to generate new sales leads, launch a new product, engage key decision makers, build new future business relationships in key markets, or simply educate the industry about a new product? Then you need to exhibit at the ‘Bakken Tight Oil Congress 2012’. Our busy exhibit area is an integral part of the Summit and is an genuine practical value to delegates, who are looking for new solutions and technologies. Exhibiting at the conference will help you position yourself as a market leader and centre of excellence to the key decision makers in the industry.

For further information, please email: info@american-business-conferences.com
or call: (1) 800 721 3915

The Summit will be held at:

Marriott City Center Hotel
Denver | Colorado
1701 California Street,
Denver, CO 80202
(T) 303-297-1300
(F) 303-298-7474

City Area Airport:
Denver International Airport
For assistance or information with travel and accommodation please email: info@american-business-conferences.com

The Bakken Tight Oil Congress 2012 will for the very first time acknowledge the importance of recognizing the Bakken as a heterogeneous resource. Not to see it as a single homogenous Bakken Play but as a collection of unique Bakken play types. Understanding how a play type differs in stratigraphy, geology, and reservoir quality will allow producers to determine the specialized completion techniques necessary to exploit a particular target zone for maximized production.

Executives and leading experts in geology and completions will seek to integrate geological properties with completions techniques to help producers identify sweet spots and fully exploit reservoirs within the various Bakken play types.

Day one will start by delivering a case study on how a completions strategy has been actively tailored to field-specific reservoirs to enhance well performance. It will then look to differentiate between good completions and good geology to identify key well performance drivers. Presenters will also examine completions fluids, proppants, completions technology, well spacing, frac stages and reservoir management to determine best practices in the Parshall, Sanish, Three Forks, Saskatchewan and many more. The day will end by looking at the extent of interaction between the Three Forks and the Bakken to determine well density and spacing.

Day two will look at the implications of the Bakken’s heterogeneous petroleum system when identifying sweet spots. It will then evaluate the Bakken as a dolomite instead of a shale to understand what drives its productivity over other plays. The day will go on to deliver a break down of geological characteristics in various different plays including permeability and porosity, water saturation and brittleness to paint a picture of how geology differs across zones with different productivity.

It will weigh up the debate on natural fractures and reservoir heterogeneity to evaluate the relative importance of them in predicting production rates and in determining sweet spots. Last but not least, the conference will delineate the edges of the Bakken to determine the extent of the play and identify lucrative opportunities for the future.

It is no news that Bakken production figures surpassed the half a million barrel per day mark in November. We know that it will continue to surpass that. We also know that some parts of the Bakken are more productive than others but what we don’t know is WHY. Is it good geology or is it good completions? Can you turn an unproductive field into productive one with good completions? Can an area be productive solely because of superior geological characteristics?

To fully exploit this phenomenal resource, it is imperative that industry dismiss the ‘one size fits all’ mentality for completion styles in exchange for tailored completions for specific reservoirs across the varying play types. The only way to do this is to truly understand how geologically varied reservoirs can be across all the different play types within the Bakken.

www.bakken-tight-oil.com
**Day One Wednesday May 30 2012**

**Chair's Opening Remarks**

**8.50 Chair's Opening Remarks**

**KEYNOTE: UNDERSTANDING DIFFERENT PLAY TYPES**

**10.00 Integrating Geological Properties With Completion Techniques To Determine The Most Effective Technical Applications For Each Play Type Within The Bakken**

- Delivering a case study on how the tailoring of completion techniques to field-specific petrophysical and geomechanical properties have enhanced well performance.
- Analyzing the multiple formations to determine if a field will be successfully developed on shorter or longer laterals for optimized oil recovery.
- Looking at success and failures of past performance across operators to determine the right style of completion and exploitation for a particular zone.
- Emphasizing how a targeted completion strategy can enable poor reservoir quality rocks to produce successful wells.

Rob Sterling, Chief Geologist, Circle Resources

**9.30 Question & Answer Session**

**KEYNOTE TWO: DIFFERENTIATING GEOLOGY FROM COMPLETIONS**

**9.40 Understanding How To Differentiate Between Good Completions And Good Geology To Identify Key Well Performance Drivers**

- Understanding predictable geological elements present in a productive area in order to isolate a good completion from good rock.
- Relating real live well performance statistics back to mapping, geophysical and log parameters to determine causal effects.
- Understanding if it’s completion or geology that makes the Parshall play incredibly productive.
- Realizing how some play types in the Bakken may be described as “completions driven” to determine how to optimize completions.

Timothy Benten, VP Geosciences, GMX Resources

**10.10 Question & Answer Session**

**10.20 Morning Refreshments In Exhibition Showcase Area**

**COMPLETIONS TECHNOLOGY: SASKATCHEWAN PERSPECTIVE**

**10.50 Understanding How Wells Are Being Engineered By Operators Gaining High UR’s To Determine Optimum Frac Technology To Use**

- Calculating the incremental costs of sliding sleeve vs. plug and perforation yield to decide the economic benefit of each.
- Understanding different types of completions and how effective they have been in various fields to ensure the right choice of completions for a particular zone.
- Understanding what spacing between packers (250, 300 or 500 feet) has proved most successful in optimizing fracs and increasing economic return.
- Understanding if you are getting long, linear fractures or fractures closer to the well bore to deduce how effectively the reservoir is being stimulated.

Rene LaPrade, SVP Operations, PetroBakken Energy Ltd.

**11.20 Question & Answer Session**

**EXAMINING THE THREE FORKS TO DETERMINE IT’S QUALITY AS A RESOURCE AND ENABLE BETTER PLANNING IN THE DEVELOPMENT STAGES**

**1.50 Analyzing The Extent Of Interaction Between The Three Forks And The Bakken During Stimulation To Determine Well Density And Spacing**

- Evaluating how much, if any, Bakken oil is captured when a Three Forks well is stimulated to determine the extent of interference and densification of wells drilled to enable operators to optimize development.
- Analyzing reservoir stimulators to show the drainage on each well and ensure correct well orientation and density drilling in the future.

Mark Pearson, President, Liberty Resources LLC

**1.40 Question & Answer Session**

**12.00 Question & Answer Session**

**12.10 Lunch In Exhibition Showcase Area**

**USING GEOLOGICAL COMPONENTS TO TAILOR STIMULATION STRATEGIES AND OPTIMIZE COMPLETIONS WITHIN A PARTICULAR PLAY TYPE**

**Chaired By: Mitch Meyer, VP Geology, Three Forks Resources LLC**

**8.50 Chair's Opening Remarks**

**9.30 Question & Answer Session**

**9.40 Understanding How To Differentiate Between Good Completions And Good Geology To Identify Key Well Performance Drivers**

- Understanding predictable geological elements present in a productive area in order to isolate a good completion from good rock.
- Relating real live well performance statistics back to mapping, geophysical and log parameters to determine causal effects.
- Understanding if it’s completion or geology that makes the Parshall play incredibly productive.
- Realizing how some play types in the Bakken may be described as “completions driven” to determine how to optimize completions.

Timothy Benten, VP Geosciences, GMX Resources

**10.10 Question & Answer Session**

**10.20 Morning Refreshments In Exhibition Showcase Area**

**COMPLETIONS TECHNOLOGY: SASKATCHEWAN PERSPECTIVE**

**10.50 Understanding How Wells Are Being Engineered By Operators Gaining High UR’s To Determine Optimum Frac Technology To Use**

- Calculating the incremental costs of sliding sleeve vs. plug and perforation yield to decide the economic benefit of each.
- Understanding different types of completions and how effective they have been in various fields to ensure the right choice of completions for a particular zone.
- Understanding what spacing between packers (250, 300 or 500 feet) has proved most successful in optimizing fracs and increasing economic return.
- Understanding if you are getting long, linear fractures or fractures closer to the well bore to deduce how effectively the reservoir is being stimulated.

Rene LaPrade, SVP Operations, PetroBakken Energy Ltd.

**11.20 Question & Answer Session**

**CROSS-EXAMINING CHANGES IN PRODUCTION PERFORMANCE RESULTING FROM VARIOUS WELL SPACING TO DETERMINE THE OPTIMUM NUMBER OF FEET TO DRAIN EACH SECTION**

**11.30 Realizing What Drives The Decision For Well Spacing To Design Development Plans For Obtaining Maximum Drainage Per Unit**

- Looking at a cross section of different operators number of wells per foot to draw comparisons relative to production performance.
- Reviewing how many wells and what spacing is required to efficiently drain the section to determine the cost of drilling 2 versus 5 wells.
- Understanding results seen from interference, lack of interference and densification of wells drilled to enable operators to optimize development.
- Analyzing reservoir stimulators to show the drainage on each well and ensure correct well orientation and density drilling in the future.

Stan Wilson, Manager Northern Region - Resource Development, Continental Resources Inc.

**12.00 Question & Answer Session**

**12.10 Lunch In Exhibition Showcase Area**

**PERFORATING**

**13.00 Environmental Permitting in the Bakken**

- Understanding the differences between Canadian and US requirements, to most efficiently manage risks and develop your acreage position.
- An overview of Canadian requirements for environmental impact assessment and associated permitting.
- An overview of the US regulatory requirements, including applicability based on land ownership.
- Delivering a case study of permitting in Saskatchewan.
- Comparing the equivalent requirements if that site had been in the US.

Trent Miller, Golder Associates Inc

Brad Novacosky, Golder Associates Inc

**3.20 Question & Answer Session**

**3.30 Reviewing A Producer’s Successes And Failures With Different Completion Fluids To Determine The Optimum Fluid System For The Field**

- Looking at micro-seismic analysis, temperature logs and fracture modeling to understand what drives initial fluid system choice.
- Analyzing the cost against short and long-term performance results of cross-link gels vs. slick water to compare the production potential of both.
- Understanding the pumping volumes necessary for specific reservoir conditions to enable maximum well performance.
- Exploring the impact a hybrid of different fluids can have in enhancing efficiency and optimizing completions.

Chris Faulkner, CEO, Breitling Oil & Gas

**3.40 Chair’s Closing Remarks**

**3.45 To Register**

(1) 800 721 3915
info@american-business-conferences.com

www.bakken-tight-oil.com
RESERVOIR CHARACTERIZATION: Understanding The Lithology, Mineralogy, Petrophysics, Britteness And Water Saturation Across The Distinct Play Types Within The Bakken

UNDERSTANDING THE LITHOLOGY, MINERALOGY, PETROPHYSICS, BRITNESSNESS AND WATER SATURATION ACROSS THE DISTINCT PLAY TYPES WITHIN THE BAKKEN

Chaired By: Terry McCallum, VP Exploration & COO, Torquay Oil Company

8.50 Chair’s Opening Remarks

SWEET SPOT IDENTIFICATION

9.00 Recognizing The Production Implications Of The Bakken’s Heterogeneous Petroleum System When Identifying Sweet Spots
• Understanding how depth, pressure and water saturation differ between the rich Parshall field and less productive play types to determine the ‘must have’ geological parameters
• Correlating geological parameters to production performance to derive strong trends and enhance performance via geological targeting
• Analyzing the success of using tools such as logs or LWD’s and deriving their adequacy in steering an operator into the right lateral placements
• Mapping hydrocarbon saturation in a regional sense across North Dakota, Montana and Canada to avoid the cost of drilling in unproductive ones
Robin Pilcher, Senior Geological Advisor & Geoscience Team Lead, Hess Corporation

9.30 Question & Answer Session

9.40 Using Reservoir Analytics And Sweet Spot Mapping To Understand And Determine Optimum Productive Zones
Murray Roth, President & Co-founder, Transform Software & Services Inc.

10.00 Question & Answer Session

UNDERSTANDING THE GEOLOGICAL COMPONENTS THAT LEND THEMSELVES TO BETTER PRODUCTIVITY TO ACCURATELY DETERMINE WHERE TO DRILL THE WELLS

10.10 Exploring The Lithological Differences Between The Bakken And Other Resource Plays To Understand The True Source Of Its Productiveness
• Assessing petroleum system considerations: maturity, expulsion, fracturing, and migration and how they relate to the Bakken/Three Forks sub-plays
• Examining facies, fracturing, and completions and how they affect productivity
• Understanding Bakken productivity relative to thermal maturity and implications for assessing other resource plays
• Using understanding of the Bakken to discover other resource plays with similar characteristics and production potential
• Comparing the Bakken and the Des Moines of the Lusk Embayment
Kevin Brown, Rockies Exploration Manager, WhiMar Exploration Company

10.40 Question & Answer Session

10.50 Morning Refreshments In Exhibition Showcase Area

PERMEABILITY AND POROSITY: MIDDLE BAKKEN & THREE FORKS PERSPECTIVE

11.20 Studying Free-Fluid Porosity Systems In The Middle Bakken And Upper Three Forks Reservoirs To Understand Spatial Variability
• Analyzing permeable porosity networks present in the Middle Bakken and Three Forks reservoirs to understand how they vary vertically and laterally. Across the basin
• Looking at conventional porosity tools and measurement techniques to realize that they do not always allow us to identify the presence of reservoir quality rocks
• Using Magnetic Resonance Imaging logs to characterise permeable porosity systems and predict good well productivity
• Understanding how regional subsurface mapping of free-fluid porosity quantities provides a reliable means of identifying areas of high-grade reservoir rocks
Jan Payne, Senior Geologist, Kodiak Oil & Gas

11.50 Question & Answer Session

BRITTENESS & THICKNESS: ELM COULEE, WEST OF NELSON & EAST OF NELSON

12.00 Understanding The Importance Of Measuring Britteness And Thickness Across Different Play Types To Determine Prospective
• Looking at Elm Coulee, Parshall and west of the Nelson Anticline to understand the history of some of the key play types
• Analyzing brittleness and fractures to determine reservoir productivity limits
• Studying vertical and horizontal leakage to predict migration
• Understanding the clay, carbonate and sand content to determine the extent of variability across these different play types
Michael Lewis, President, Julifield LLC

12.30 Question & Answer Session

12.40 Lunch In Exhibition Showcase Area

FLUID SYSTEMS:

BAKKEN & THREE FORKS PERSPECTIVE

1.40 Understanding The Importance Of The Fluid Systems Aspects Of The Bakken-Three Forks To Determine Production Potential
• Understanding the nature and implications of reservoir pressure and overpressure in the Bakken petroleum system
• Extrapolating from sparse PVT data to predictive maps to analyze fluid properties
• Realizing the impact of highly variable formation volume factors on production performance
• Looking at the integration of fluid system data with reservoir and structural factors to rank production potential
Robin Pilcher, Geoscience Team Lead & Senior Geological Advisor, Hess Corporation

2.10 Question & Answer Session

EXPLORING THE DEBATE ON NATURAL FRACTURES TO CONCLUDE THEIR RELATIVE IMPORTANCE ON PRODUCTION RATES

NATURAL FRACTURES

2.20 Debating Whether Or Not High Density Natural Fractures Mean Better Fracturability To Understand The Importance When Targeting Sweet Spots
• Understanding what causes fractures and micro-fractures to understand if it is source rock generated or tectonic
• Understanding the genesis of a fracture and if it is more localized or regionally pervasive to establish the exploration risk
• Using capital luminescent techniques to spot and evaluate micro-fractures and begin to deduce the relative importance of them on production rates
• Understanding the economic implications of not needing to put as many fracs into a heavily fractured reservoir
Terry Engdahl, Professor Geoscience, Appalachian Black Shale Group
Ralph Allen, VP Exploration, Canadian Energy Exploration2.30 Question & Answer Session

3.00 Question & Answer Session

SCRUTINIZING RESERVOIR HETEROGENEITY ACROSS THE BAKKEN RESOURCE TO UNDERSTAND THE IMPACT ON PRODUCTION

RESEVER HETEROGENEITY: BAKKEN & THREE FORKS

3.40 Analyzing Reservoir and Production Discrepancies Across The Bakken And Three Forks Formation To Determine Levels Of Heterogeneity
• Looking at different depositional environments to understand their function in creating reservoir heterogeneity
• Understanding how reservoir differentials across different Bakken reservoirs is related to diagenesis to deduce origins or heterogeneity
• Scrutinizing implication of diversified reservoirs on drilling and production techniques to ensure optimum exploitation is achieved
Michael Hendricks, Petroleolog, Julifield LLC

4.10 Question & Answer Session

MAPPING THE EDGES OF THE BAKKEN TO IDENTIFY ANY NEW FRONTIERS AND ASSESS THE GROWTH POTENTIAL OF THE PLAY

EXTENT OF THE BAKKEN

4.20 Delineating The Edges Of The Bakken To Determine The Extent Of The Play And Identify Lucrative Opportunities For The Future
• Defining ‘what is the Bakken?’ and where it is producing to highlight the extent of the play as we currently know it
• Looking at vertical migration and face change to evaluate if Bakken oil and gas has spilled into new unestablished zones and assess potential for new entrants
• Predicting where the next Bakken is going to be and is it’s reservoir quality to forecast the movement of rigs to those new frontiers
Steven Sonnenberg, Professor and Boettcher Chair in Petroleum Geology, Colorado School Of Mines

4.50 Question & Answer Session

5.00 Chair’s Closing Remarks And End Of Conference

www.bakken-tight-oil.com
I would like to register the delegate(s) below for the 2 day conference Bakken Tight Oil Congress 2012

### DETAILS

#### PLEASE USE CAPITALS

<table>
<thead>
<tr>
<th>Delegate 1</th>
<th>Delegate 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>Position</td>
<td>Position</td>
</tr>
</tbody>
</table>

#### PLEASE photocopy for multiple delegates

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Organization</th>
<th>Address</th>
<th>Country</th>
<th>Zip/Postal Code</th>
<th>Telephone</th>
<th>Fax</th>
<th>Email</th>
<th>Signature</th>
</tr>
</thead>
</table>

### DELEGATE RATES

We have team discounts so you can involve your whole organization or team

#### DELEGATE FEES

Guests are responsible for their own travel and accommodation arrangements

<table>
<thead>
<tr>
<th>Standard Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2 Day Conference</strong></td>
</tr>
<tr>
<td>I would like to order the presentations on CD, including audio files</td>
</tr>
</tbody>
</table>

### PAYMENT

Payment must be received in full prior to the event.

- **Check**
  - I enclose a cheque in US Dollars payable to London Business Conferences for $ 

- **Payment by Wire Transfer**
  - A copy of the bank transfer document should be attached to your registration form so appropriate allocation of funds can be made to your registration.

**Bank Name:** Barclays Bank  
**Account Name:** London Business Conferences  
**Account Number:** 42331166  
**SWIFT/BIC:** BARCGB22  
**IBAN:** GB59BARC20982142331166  
**EIN:** 98-0514924

Please charge my  
- ☐ Visa  
- ☐ American Express  
- ☐ Mastercard

**Amount:** $

**Card number:**  

**Expiry date:**  

**Security Code / CVV (required):**  

**Signature of card holder:**

---

### Terms and Conditions

The conference is being organized by American Business Conferences, a division of London Business Conferences Ltd, a limited liability company formed under English company law and registered in the UK no. 5090859.

Cancellations received one calendar month (or the previous working day whichever is the earliest) before the event will be eligible for a refund less $150 administration fee. Cancellations must be made in writing. After that point no refund can be made. If you are unable to attend, no refund can be given but you may nominate a colleague to take your place. American Business Conferences reserves the right to alter or cancel these speakers or program. Receipt of booking form, inclusive or exclusive of payment constitutes formal agreement to attend and acceptance of the terms and conditions stated.

If you are claiming the early booking discount this may not be used in conjunction with other discounts advertised elsewhere. We would like to keep you informed of other American Business Conferences products and services. This will be carried out in accordance with the Data Protection Act. Please write to the Head of Marketing, American Business Conferences at the address below if you specifically do not want to receive this information. American Business Conferences, 2300 M Street, NW, Suite 800, Washington, DC 20037, USA. American Business Conferences will not accept liability for any individual transport delays and in such circumstances the normal cancellation restrictions apply. American Business Conferences is a Division of London Business Conferences Limited, Registered in England No. 5090859 EIN: 98-0514924

---

### HOW TO REGISTER

Please Return Your Completed Registration Form To Our Customer Service Team

<table>
<thead>
<tr>
<th>Call</th>
<th>Fax</th>
<th>Email</th>
<th>Online</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 800 721 3915</td>
<td>(1) 800 714 1359</td>
<td><a href="mailto:info@american-business-conferences.com">info@american-business-conferences.com</a></td>
<td><a href="http://www.bakken-tight-oil.com">www.bakken-tight-oil.com</a></td>
<td>44-46 New Inn Yard, London, EC2A 3EY, United Kingdom</td>
</tr>
</tbody>
</table>

---

www.bakken-tight-oil.com