



EERCSM

Critical Challenges.

Practical Solutions.



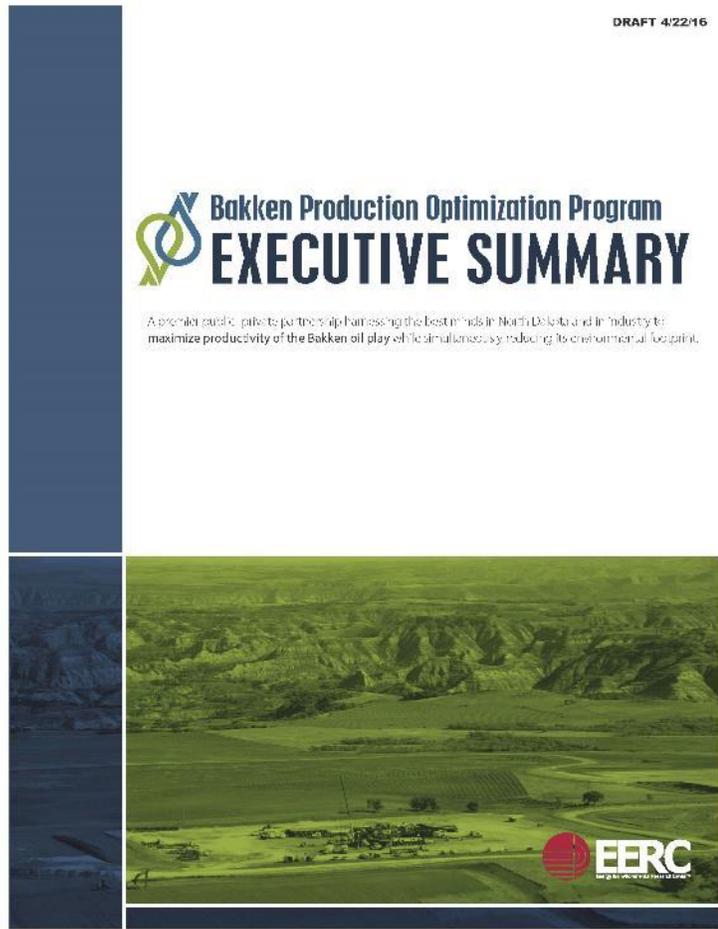
Bakken Production Optimization Program

An Executive Summary of Progress to Date

John Harju
VP, Strategic Partners

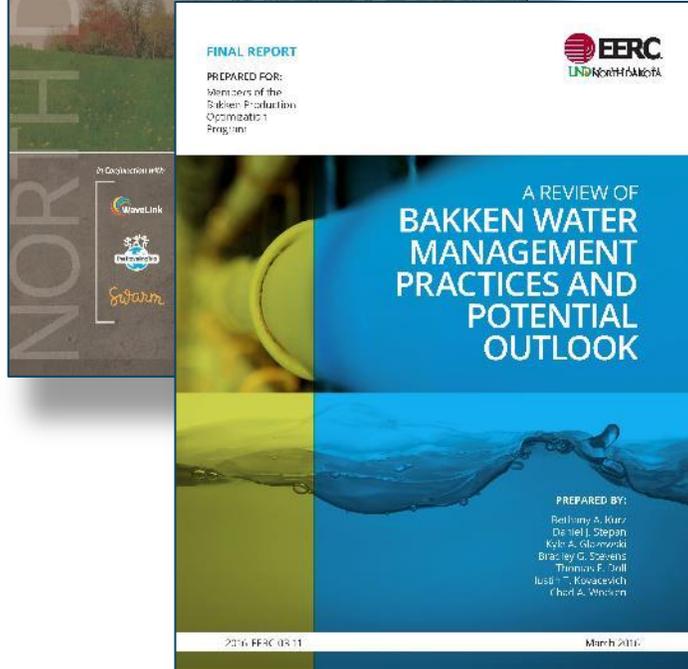
Monday, May 9, 2016

Bakken Production Optimization Program



- Kickoff July 2013
- Program has generated substantial value over the past three years
 - Hawkinson Project
 - Flaring reduction
 - TENORM waste disposal
 - Water management
 - Spills remediation
 - Facilitation of industry discussions on reservoir production optimization
- Now in final months of 3-year program ... end June 30, 2016
- EERC will propose a 3-year, \$6M program extension during June 2 OGRP round

BPOP Example Products



Flaring Solutions Technology – Search

In order to support Bakken oil producers, the Energy & Environmental Research Center (EERC) supplied technical and economic information regarding gas utilization technologies.

Information in the database was entered by vendors, and the EERC makes no claims as to the accuracy of the information. For more information, please contact Flaring_Solutions@undeerc.org.

Information can be queried by technology type and sorted by column. Users can view/print individual entries. To view/print a vendor's uploaded documents, the user must open the document.

Filter Results

NGL Recovery Power Production CNG or LNG Other Technology

VIEW ALL SELECTIONS

	COMPANY NAME	CONTACT PERSON	NGL	POWER	CNG	OTHER	ECONOMICS	DOCUMENTS
<input checked="" type="checkbox"/>	View AmeriFlare	Wes Livingston	Complete	Complete	Complete	Complete	Complete	1
<input type="checkbox"/>	View Bakken Frontier, LLC	Toby Schweitzer	Complete	Complete	Complete	Complete	Complete	4
<input type="checkbox"/>	View Blaise Energy	Mark Wald	Complete	Complete	NA	Complete	Complete	1
<input type="checkbox"/>	View BluBox Energy	Jay nance	NA	Complete	NA	NA	NA	0

AmeriFlare
Santa Rosa, CA 95405
Wes Livingston
678-480-9648 | Wes@ameriflare.com

Natural Gas Liquids (NGL) Recovery

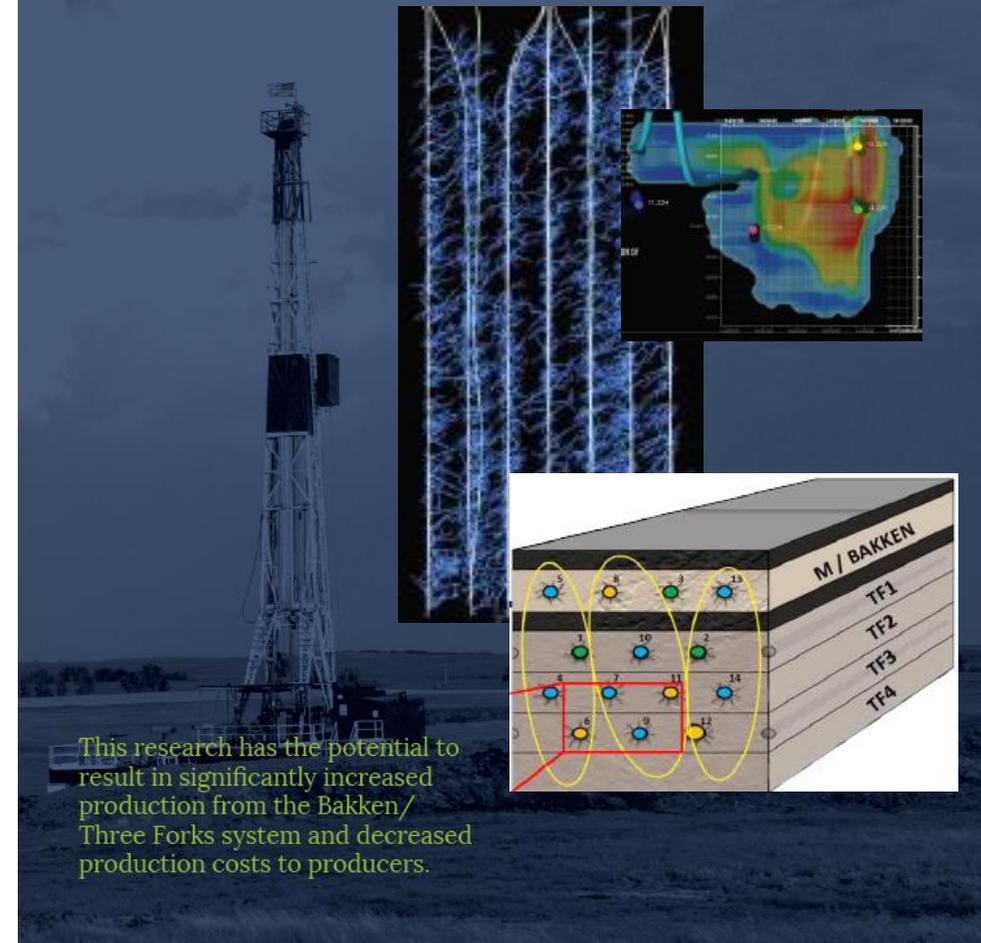
Supply Gas Quantity: 250-500+
Supply Gas Quality: None
Supply Gas Pressure: varies
Turndown Capacity: varies
Equipment Footprint: varies (30 x 50)
Separation Principle: Low temperature refrigeration using air cooled condensation
Product Conditions: 250 psi, 100 F, liquid, mostly C3+
Lean Gas Conditions: Full original methane content with optional ethane C4+
Infrastructure Requirements: System is powered by AmeriFlare generators running on natural gas. AmeriFlare generators can also power the purgjack. No utility power is required for the system.

Hawkinson Project

Major Project Conclusions

- The Bakken and Three Forks Formations represent unique and distinct reserves.
- Producers must drill on a denser spacing than 1320' within the same formation to maximize production from the DSU.
- 200' heel/toe setbacks result in uncaptured resources.
- Significant undrained resources remain along section lines.
- Fracture asymmetry results from pressure depletion and induced stresses.
- Stimulations are well contained within the Bakken petroleum system.
- Maximum positive curvature is the seismic attribute best suited to predict well performance.

THE “HAWKINSON PROJECT”



BPOP Public Outreach

More to come ...



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THANK YOU!



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