

# ENERCOM



**SAMSON**  
OIL & GAS LIMITED

SFO, FEBRUARY 2015



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# DISCLAIMER

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The presentation contains forward-looking information within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including statements regarding potential drilling programs, the success of the company's business, as well as statements that include the words "believe, expect, anticipate" or similar expressions. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of Samson Oil & Gas Limited to differ materially from those implied or expressed by such forward-looking statements.

A description of the risks and uncertainties that are generally attendant to Samson and its industry, as well as other factors that could affect Samson's financial results, are included in the Company's report to the U.S. Securities and Exchange Commission on Form 10-K, which is available at [www.sec.gov/edgar/searchedgar/webusers.htm](http://www.sec.gov/edgar/searchedgar/webusers.htm).

This presentation was prepared as of February 18th and Samson Oil & Gas Limited assumes no responsibility to update the information included herein for events occurring after the date hereof.

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The reserves quoted in this presentation were estimated by Ryder Scott Company ("RSC"), an independent petroleum reserves engineering consulting firm based on the definitions and disclosures guidelines contained in the Society of Petroleum Engineers, World Petroleum Council, American Association of Petroleum Geologists and Society of Petroleum Evaluation Engineers Petroleum Resources Management Systems.

Information contained in this report relating to hydrocarbon reserves was compiled by the Managing Director of Samson Oil & Gas Ltd., T M Barr a Geologist who holds an Associateship in Applied Geology and is a fellow of the Australian Institute of Mining and Metallurgy who has 35 years relevant experience in the oil & gas industry. of the material contained herein prior to making a decision to trade Samson's securities.

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# SAMSON OVERVIEW

Samson Oil & Gas Limited is a dual national Australian/American oil and gas company holding extensive development and exploration acreage in the USA.

KEY INFORMATION	 ASX	 NYSE MKT
Exchange / Ticker – Dual Listed	SSN	SSN
Market Capitalization <sup>(1)</sup>	A\$ 39.7 m	US\$ 35.5 m
Shares Outstanding <sup>(2,3)</sup>	FPO 2,837m <sup>(2)</sup>	ADS 141.9m <sup>(3)</sup>
Average Daily Trading Volume <sup>(4)</sup>	1.7m shares	0.5m ADR's
Average Daily Trading Value <sup>(4)</sup>	A\$12k	US\$126k
Listed Options Outstanding <sup>(5)</sup>	229.7m options	
Cash <sup>(6)</sup>	US\$3.9 million	
Debt <sup>(7)</sup>	US\$17.5 million	
Production (December, 2014)	675 BOEPD	
Proved Reserves (NPV <sub>10</sub> ) <sup>(8)</sup>	1.77 MMBOE, \$ 39.4 m	
Oil as Percent of Total Production <sup>(9)</sup>	84%	

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1. As at Feb 13<sup>th</sup> 2015
2. FPO – Fully Paid Ordinary shares
3. ADS - American Depository Shares (each ADS represents 20 FPO shares and are included in FPO count)
4. For the three months ended Feb 13<sup>th</sup> 2015
5. SSN also has 72.5 million unlisted options with various exercise prices and expiry dates
6. As at Dec 31<sup>st</sup> 2014
7. As at Dec 31<sup>st</sup> 2014
8. Ryder Scott as at December 31<sup>st</sup>, 2014, NYMEX pricing
9. 3 Months to December 31<sup>st</sup> 2104

# OIL PRICE

- The slide in oil price to below \$45 has had the following consequences for Samson:
  - Curtailment of North Stockyard infill program.
  - Timely because the middle Bakken and Three Forks 1 drilling is complete.
  - Able to examine production performance in the TF2 from the initial well into that horizon (Bootleg 8).
  - Frontier 24 laid down with no penalty.
  - Reduction in G&A costs.
  - Focus on two projects which respond to a \$50 oil price.
  - Hedge program working with MTM value of \$2.6 million

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# OIL PRICE

- Price slide has been effective in the industry in two aspects:
  - Rig lay downs most seen since BHI have been keeping data.
  - Service providers reacting to stay in business.
    - Last two fracks initially priced at \$3 million actual cost \$1.7 million
    - Rig day rates have retreated by at least 15% to \$17,000 from \$20,000 per day

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# OIL PRICE

- Samson has two projects that “work” at a \$50 price point:
- Bluff
  - The Bluff Project is very attractive at a \$50 per bbl oil price.
  - Key elements of trap and reservoir known.
- New Play
  - Geology and engineering of this play is well understood and viable based on offset production evidence.
  - Commercial arrangements to bring project to a final position involves a State authority, a publically traded company and a private entity.
  - Arrangements with the State authority have been completed but will ultimately depend on the agreement of the two commercial entities.

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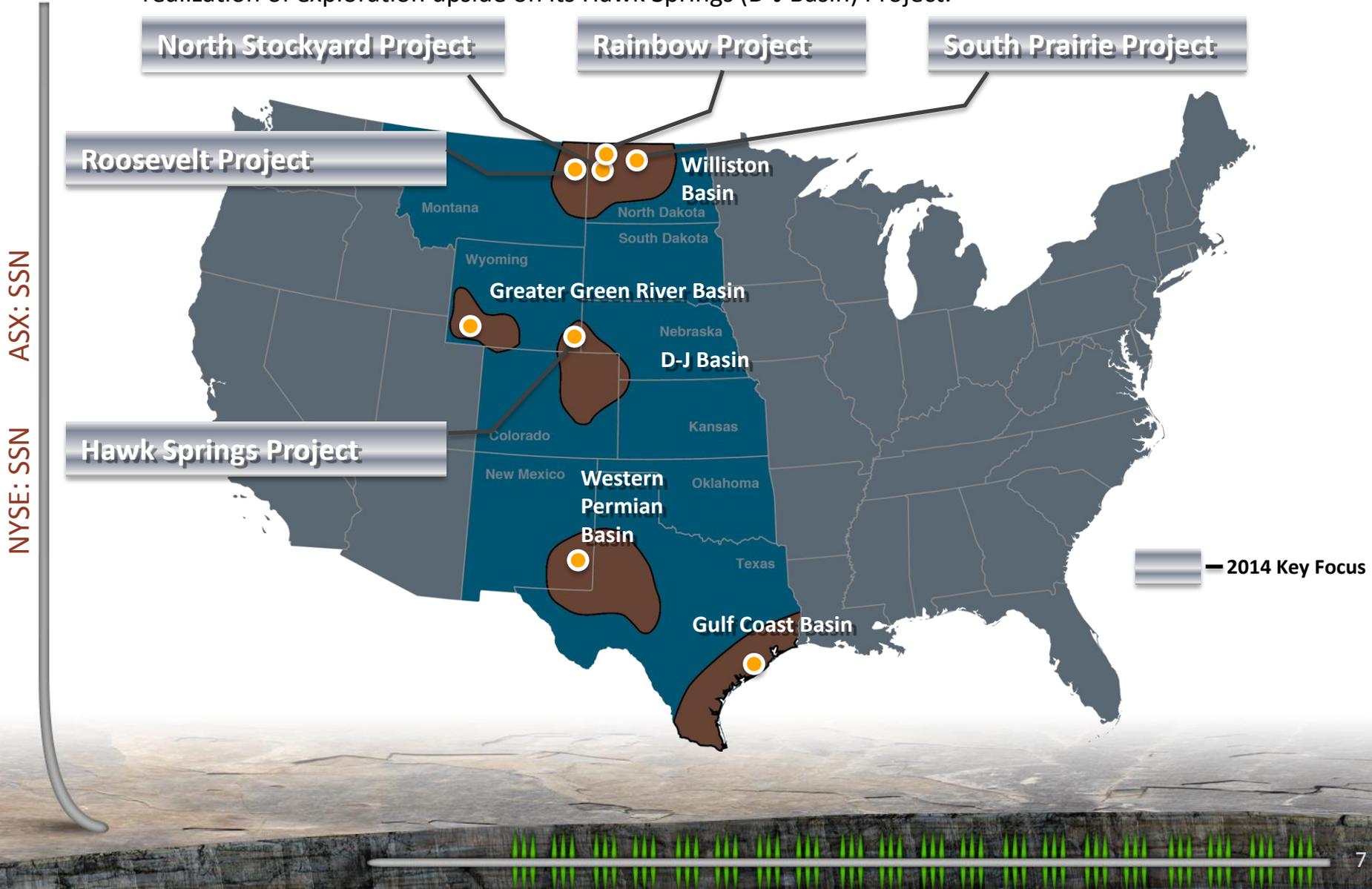
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# PROJECT LOCATIONS

2014 Strategy: Developing shale oil resources on the Company's Bakken (Williston Basin) acreage and realization of exploration upside on its Hawk Springs (D-J Basin) Project.



# 2015 INVESTMENT STRATEGY

- Produce existing inventory of North Stockyard and Rainbow wells.
- Drill the downdip Bluff prospect well, extremely attractive economics at \$50 per bbl.
- Complete the commercial arrangements for a new project area, that is feasible at \$50 per bbl.

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# BAKKEN INVENTORY

## ➤ North Stockyard

- 13 TF2 well locations dependent of Bootleg 8 performance.
- Ironbank 6 and 7 due for completion in around 45 days time.

## ➤ Rainbow

- Gladys was a modest well on free flow.
- 10,000 foot lateral with a mega frack.
- ESP installed has been very effective.
- Rates established at between 700 and 900 BOPD.
- Early in the cycle but looks to be a very encouraging rate.
- 15 well locations available.

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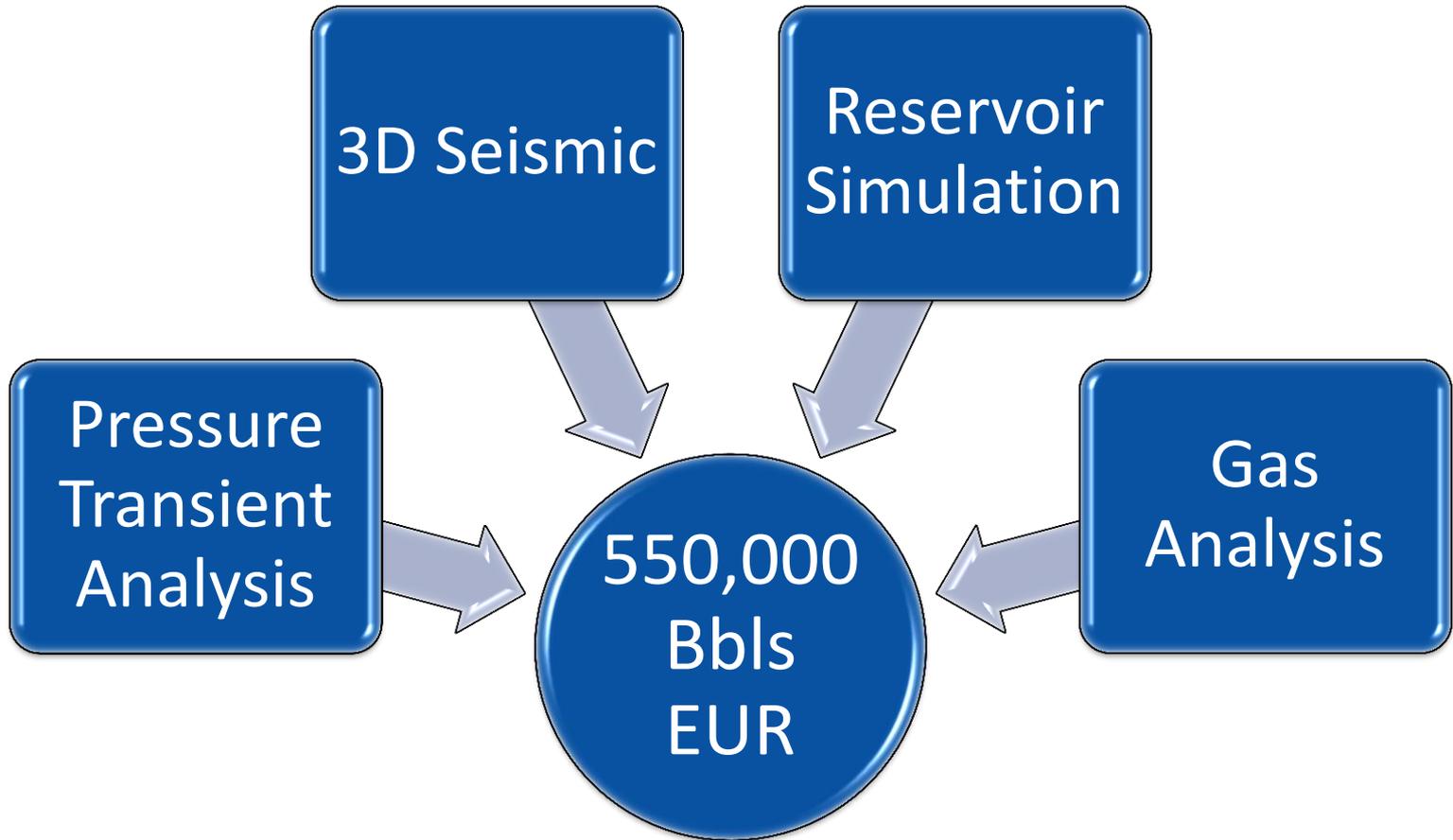
# BLUFF PROJECT'S UNEXPECTED RESULTS

- Flowed 8 MMCFPD of mostly nitrogen.
- Reservoir quality proven with an excellent 300 to 500 md of permeability and porosity of 18%.
- Efficacy of the trap has been proven.
- 3D data set validated with second well determining reservoir quality rock.

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# BLUFF PROJECT EVIDENCE STRINGS



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# BLUFF 1-11X ATTRIBUTES

- Oil fields often have gas caps.
- Because of the lower density, gas always sits at the crest of a trap.
- Bluff deliberately drilled at the crest.
- Critical question to be determined is whether technical data supports the presence of a down dip oil leg.
- Evidence strings:
  - Gas analysis
  - Pressure transient analysis
  - Reservoir simulation
  - 3D seismic attributes

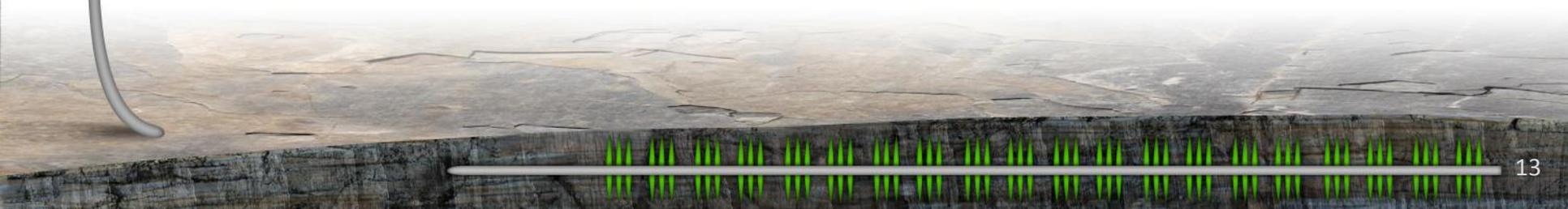
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# BLUFF GAS ANALYSIS RESULTS

- 97% N<sub>2</sub>, 3% Methane and heavier gases.
- Hydrocarbons indicates an organic source.
- N<sub>2</sub> isotopes suggest thermogenic origin.
- Noble gas isotopes yet to be determined.

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# BLUFF 1-11X

- Pressure transient analysis (PTA) completed after a 40-hour flow test and 240 hour shut in to monitor the pressure response.
- PTA, an accepted and rigorous industry standard numerical technique, “sees” changes in permeability and/or fluid type, as the reservoir pressure responds to the preceding flow of reservoir gas.
- PTA was augmented with a numerical 3D simulator that used the 3D seismic prospect outline.

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# BLUFF PTA

- Task is to take the observed pressure data (triangles in the following slide) and match that response to determine a set of reservoir and reservoir fluids properties.
- Derived outcomes:
  - Permeability 300 md.
  - Fluid boundary location ~600 feet from well bore.

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# BLUFF PTA

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Bluff 1-11 Flow Test  
Goshen Co. WY  
Samson Oil & Gas  
11/20/14-12/2/14

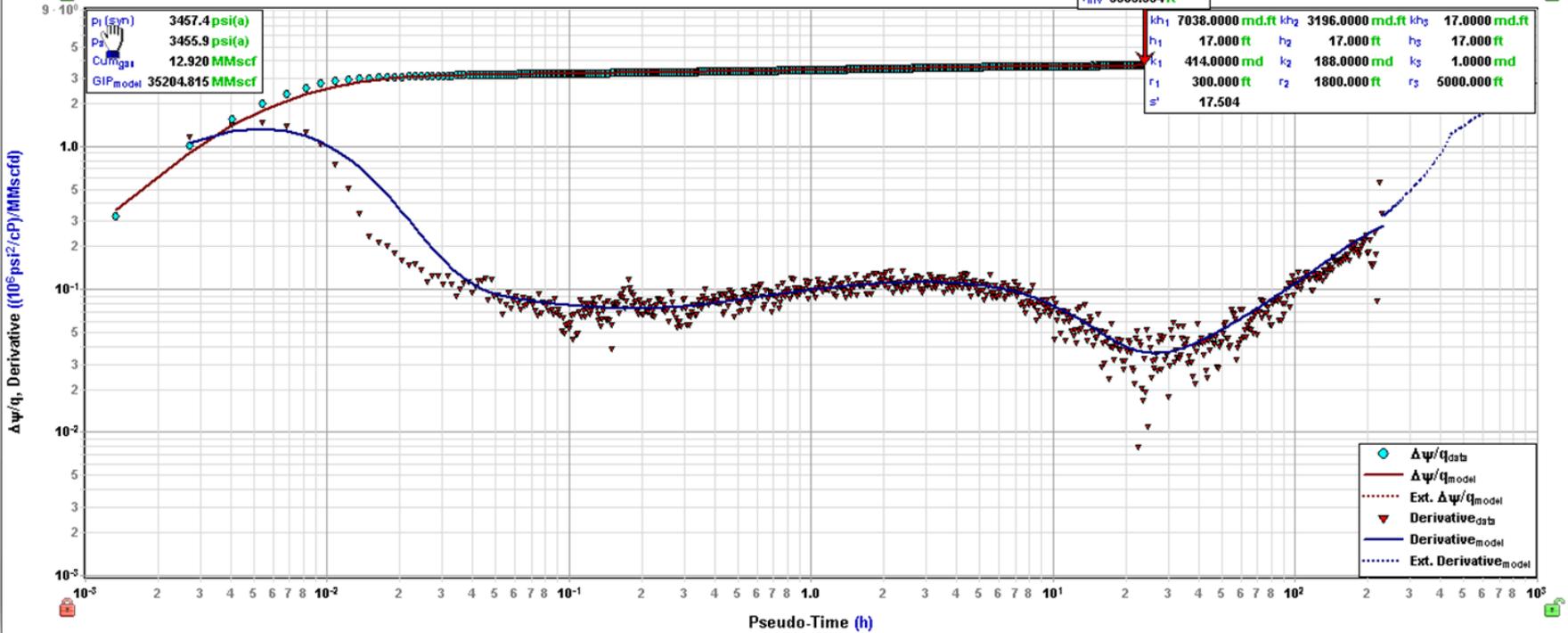
Radial Composite

$\Delta t$  24.05 h  
p 3447.4 psi(a)  
 $r_{inv}$  3383.994 ft

Upper Gauge

$P_i$  (Syn) 3457.4 psi(a)  
 $P_o$  3455.9 psi(a)  
 $Cu_{mgas}$  12.920 MMscf  
 $GIP_{model}$  35204.815 MMscf

$kh_1$	7038.0000 md.ft	$kh_2$	3196.0000 md.ft	$kh_3$	17.0000 md.ft
$h_1$	17.000 ft	$h_2$	17.000 ft	$h_3$	17.000 ft
$k_1$	414.0000 md	$k_2$	188.0000 md	$k_3$	1.0000 md
$r_1$	300.000 ft	$r_2$	1800.000 ft	$r_3$	5000.000 ft
$s'$	17.504				



# BLUFF 3D SIMULATOR

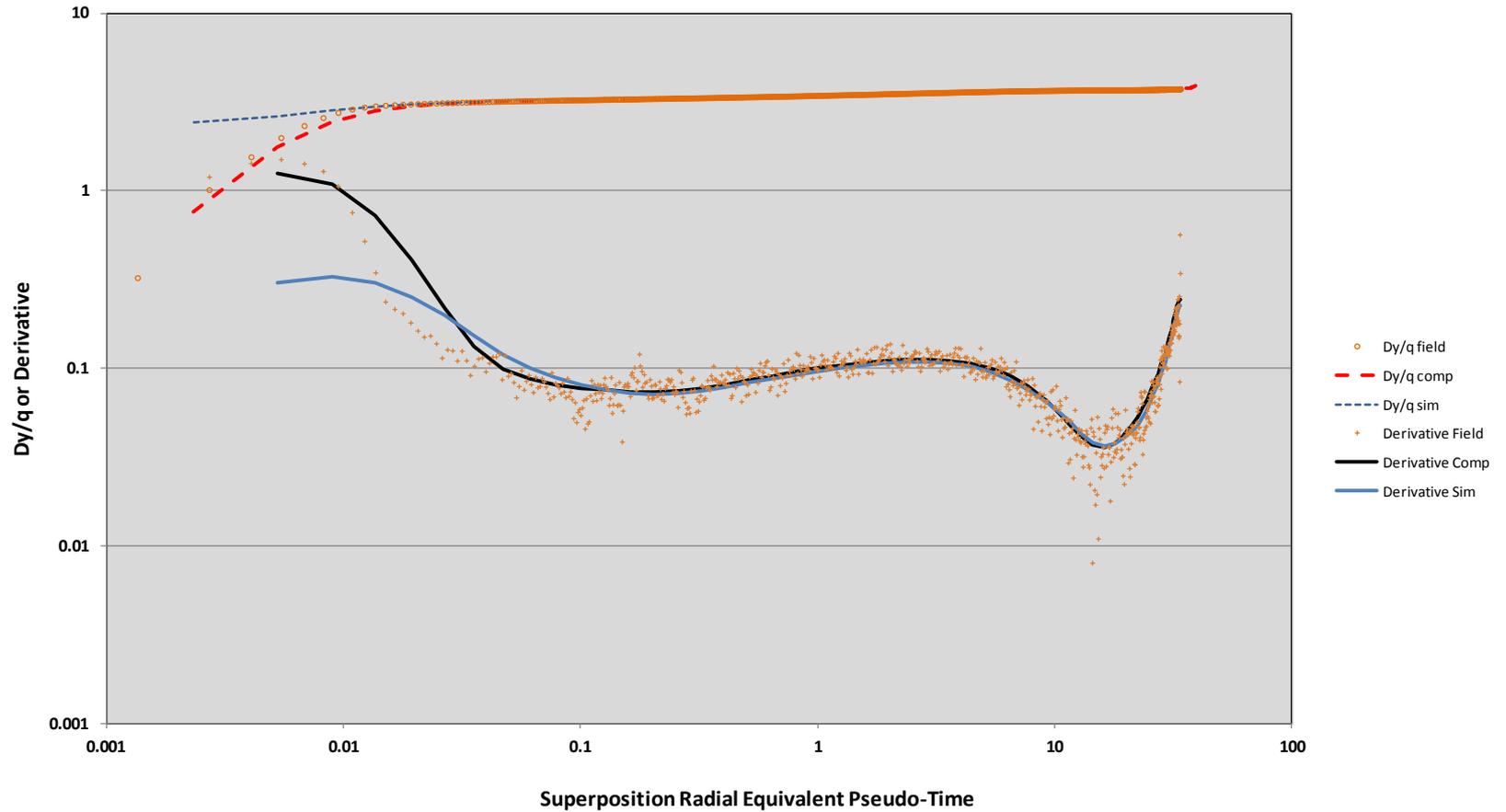
- Task is to build a numerical simulator that consists in this case of 300,000 cells with 3 feet sided dimension, and follows the 3D seismic determined outlines.
- Each cell is given a discrete set of rock and fluid properties.
- The simulator flows and shuts in the well as it did in the flow test and the pressure response observed.
- The cell properties are changed as an iterative process to achieve a response match between the actual observed data and the simulated data.

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# BLUFF 3D SIMULATOR

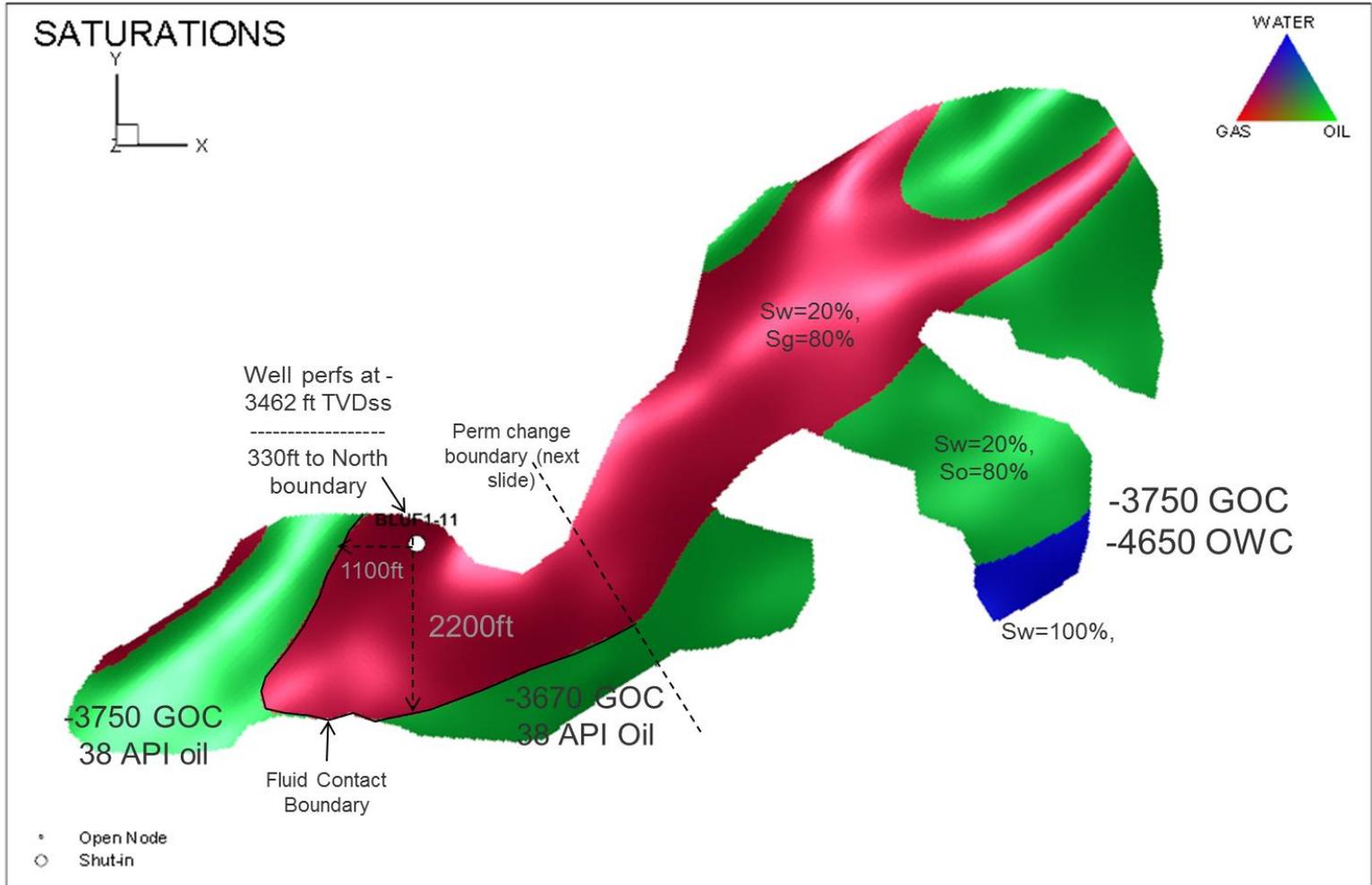
Type Curve Comparison (Field, Analytical Composite Model, Numerical Simulation)



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# BLUFF 3D SIMULATOR

## Simulation Model Saturations



# BLUFF 3D SEISMIC

- 3D seismic data reprocessed with the fluid knowledge of the two wells drilled in the project area.
- SOA2 was water saturated, Bluff 1 was N2 saturated.
- As anticipated these fluids can be distinguished in the 3D data set.
- At the Bluff prospect a discrete gas filled region is indicated at the crest of the structure.
- A cross plot of the ratio of two different derived velocities ( $V_p$  and  $V_s$ ) against density shows a discrete difference in the crestal area compared to the balance of the prospect.

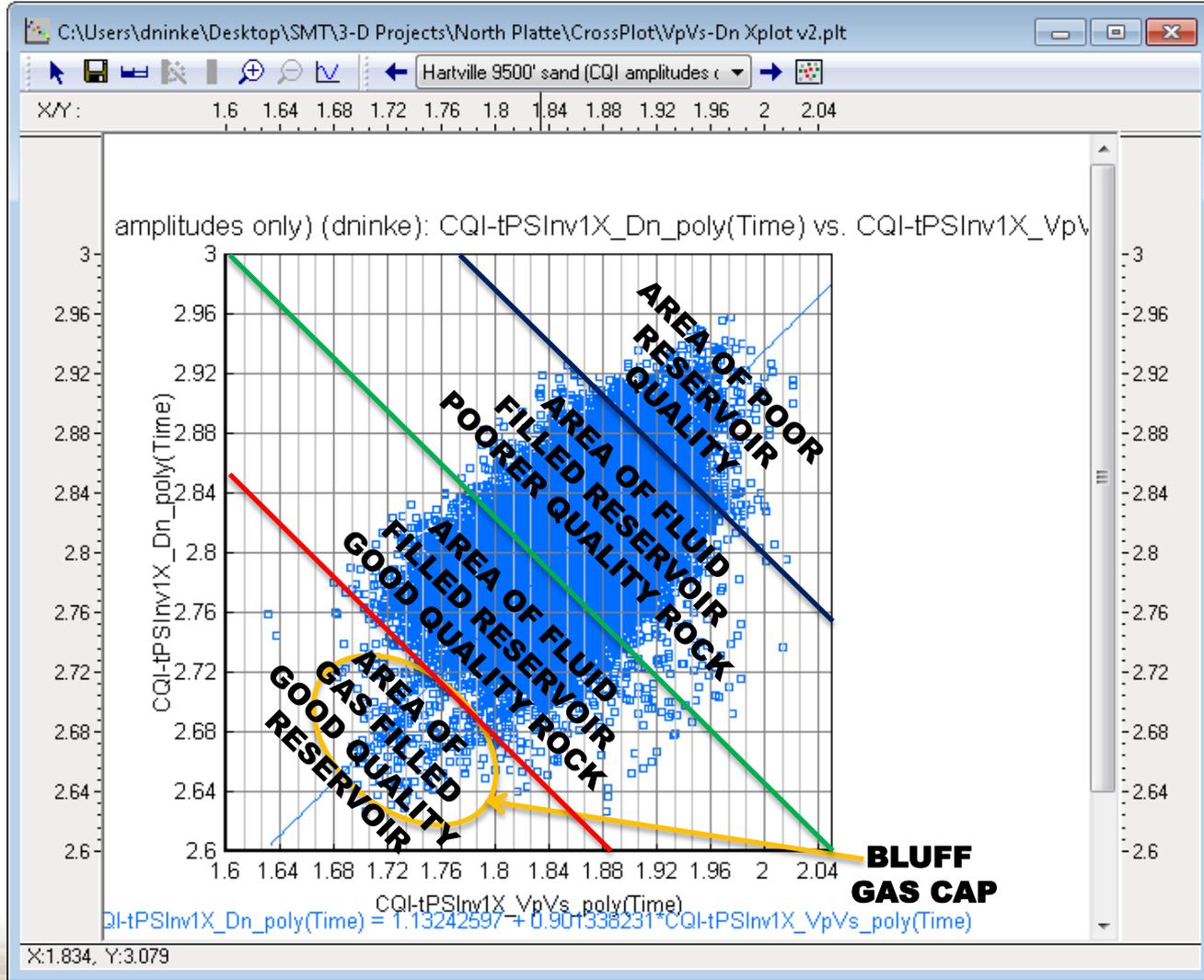
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# ATTRIBUTE CROSS PLOT

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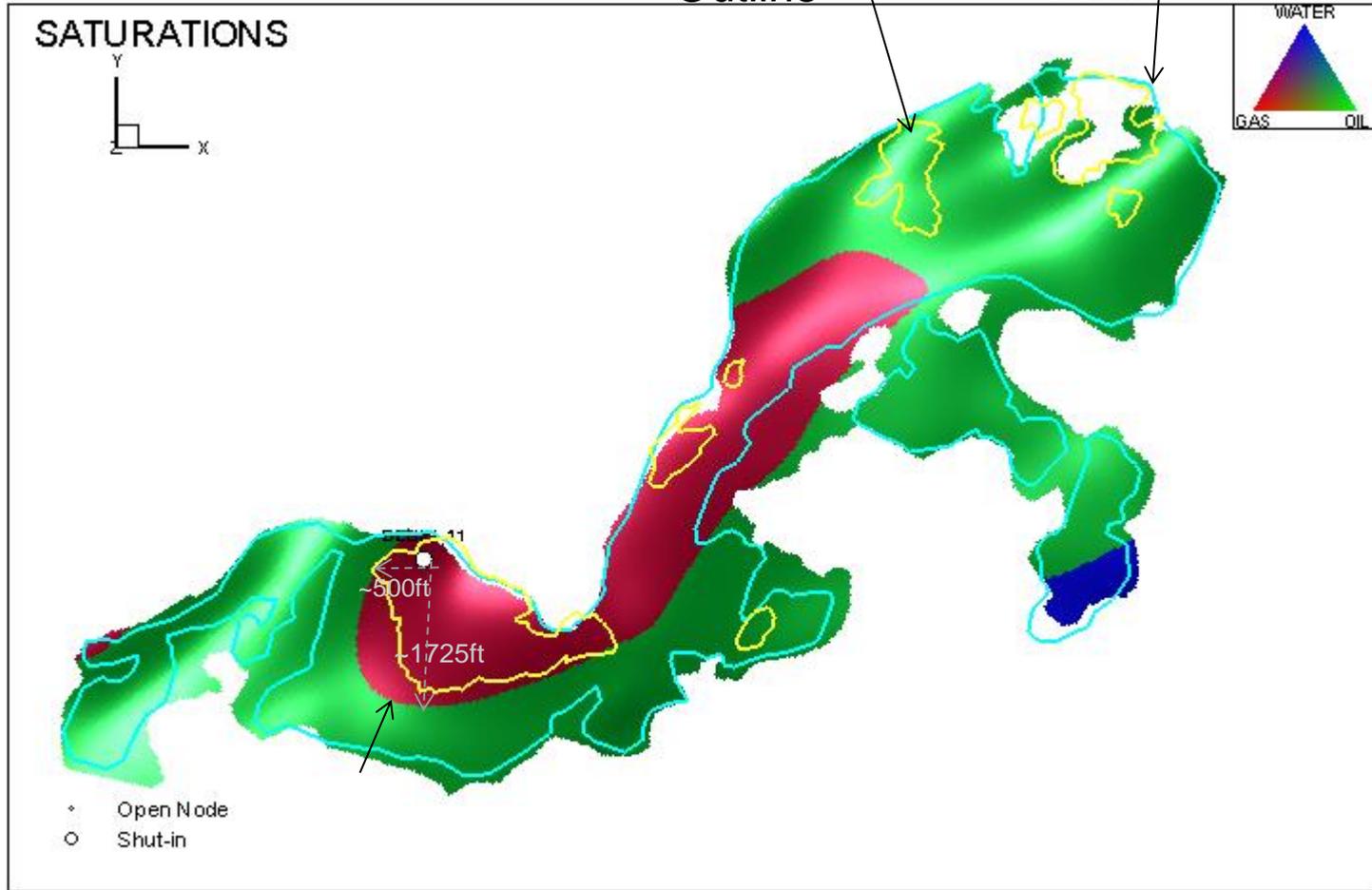


# 3D ATTRIBUTES AND SIMULATOR

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Vp/Vs Inversion  
Outline

Density Inversion  
Outline



BASE\_JRGDBG\_V3A\_PHI

24 Jan 2015

# BLUFF CONCLUSIONS

- PTA suggests a fluid boundary ~600 feet from the well bore.
- 3D simulator confirms this conclusion.
- 3D seismic attributes are collaborative.
- Downtip oil leg is then a possibility.
- Rock quality is excellent and therefore delivers a substantial theoretical flow rate.

# BLUFF CONCLUSIONS

Using a \$50 per bbl oil price  $NPV_{10}$  is \$8.3 million.

- 3D simulator used to develop a type curve for wells in the oil leg.
- EUR is 550,000 bbls.
- IP rate of 500 BOPD.
- Wells are conventional vertical wells.
- Well cost around \$3 million.
- The Bluff prospect on a 40 acre spacing has 20 locations.
- The Hawk Springs project has 18 additional prospects

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# 2014 RESERVES

	PDP		PDNP		PUD		PROVED	
	MBOE	NPV <sub>10</sub> \$ million	MBOE	NPV <sub>10</sub> \$ million	MBOE	NPV <sub>10</sub> \$ million	MBOE	NPV <sub>10</sub> \$ million
<b>Mar '14</b>	685	\$25.78	139	\$4.48	631	\$8.92	1,455	\$39.19
<b>June '14</b>	1,032	\$33.27	170	\$6.48	552	\$9.95	1,753	\$49.70
<b>Dec '14</b>	825	\$15.76	737	\$19.85	213	\$3.83	1,774	\$39.44

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NYMEX pricing

# LIQUIDITY

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	US\$'000
Cash	\$3.881
September quarter product sales	\$3.000
Additional debt	\$3.500
Proceeds from hedging	\$0.600
JIB receivable	\$0.815
<b>TOTAL<sup>^</sup></b>	<b>\$11.796</b>

Facility	
Rate	3.25% + LIBOR
Term	3 years
Base	\$19 million
Drawn *	\$15.5 million

<sup>^</sup> As at December 31<sup>st</sup> 2014

\* Currently drawn to \$15.5 million

# LIQUIDITY

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## Favorable Facility Terms

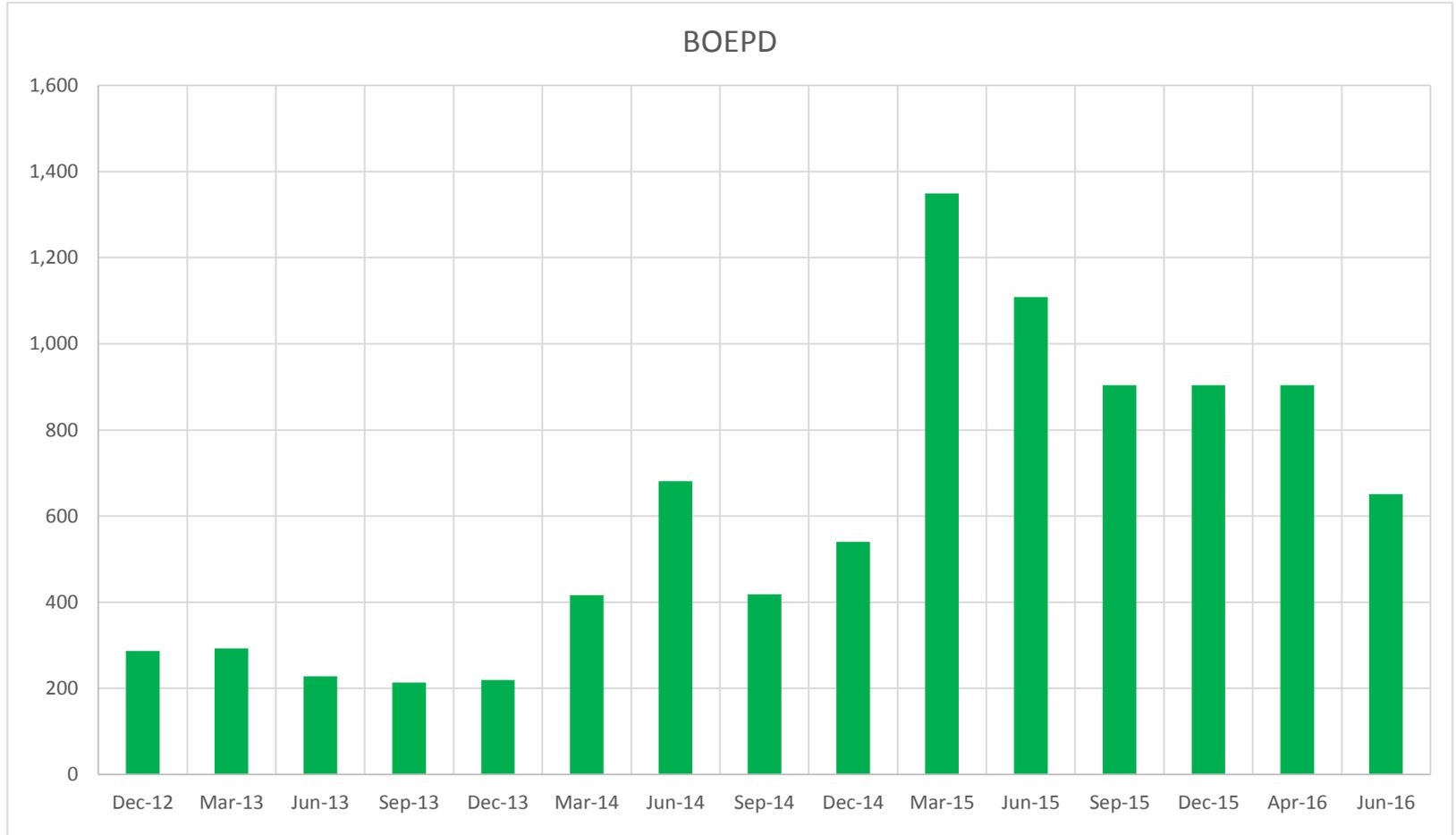
Rate: 3.25% + LIBOR

Term: 3 Years

Base: \$19 million

Drawn: \$17.5 million

# PRODUCTION ESTIMATE



Forward production estimate uses a type curve with a 700 BOPD IP

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# SUMMARY

- Primary infill development completed in North Stockyard.
- Bakken drilling curtailed until oil price is stabilized and recovered .
- Focus is on two projects that respond well to a \$50 per bbl price point.
- Conventional acreage in the DJ attractive because of lower development cost, key risk elements known, oil leg looks probable.
- Samson well down the track of acquiring a very attractive conventional play.

