Devon Energy Overview: The Company, Exploration, and Technology*

Herb Martin¹

Search and Discovery Article #70124 (2012) Posted October 8, 2012**

Abstract

Devon Energy is a pioneer company in the "unconventional" plays, and today it is focused on exploring and developing a number of these plays across North America. This informal presentation consists of three parts (1) a focus on Devon the company, with some insight into the corporate structure, corporate values and philosophy, and our current activity and capital budget; (2) a high-level view of some of the plays in which Devon is involved; (3) some insight into some of our approaches to technology and innovation.

In the first part, the current structure of Devon (subsequent to the divestiture of international and GOM properties) is examined and discussed, including the philosophy behind those decisions. Further to that, Devon's current exploration philosophy and activity is considered.

The middle part of presentation is an overview of some of Devon's current activity. That includes Devon's ideas on play entry, balance of spending, and risk management.

Lastly, introduction is provided to Devon's current approach to innovation and technology, particularly in the geosciences. The structure of Devon's Strategic Geosciences group and its function is discussed, and then highlighted with a few examples of that team's work.

^{*}Adapted from presentation at Tulsa Geological Society dinner meeting, September 4, 2012

^{**}AAPG©2012 Serial rights given by author. For all other rights contact author directly.

¹VP Strategic Geoscience, E&P Strategic Services group, Devon Energy, Oklahoma City, OK (<u>herb.martin@dvn.com</u>)



Devon Energy Overview:

The Company, Exploration, and Technology

Herb Martin, Vice President - Strategic Geoscience

Tulsa Geological Society September 4, 2012



Investor Notices

Safe Harbor

Information provided in this presentation includes "forward-looking statements" as defined by the Securities and Exchange Commission. Forward-looking statements are identified as "forecasts, projections, estimates, plans, expectations, targets, etc." and are subject to a variety of risk factors. For representative risk factors that could cause Devon's actual results to differ materially from the forward-looking statements contained herein, see Form 8-K filed February 15, 2012.

Cautionary Note to Investors

The United States Securities and Exchange Commission permits oil and gas companies, in their filings with the SEC, to disclose only proved, probable and possible reserves that meet the SEC's definitions for such terms, and price and cost sensitivities for such reserves, and prohibits disclosure of resources that do not constitute such reserves. This presentation may contain certain terms, such as resource potential and exploration target size. These estimates are by their nature more speculative than estimates of proved, probable and possible reserves and accordingly are subject to substantially greater risk of being actually realized. The SEC guidelines strictly prohibit us from including these estimates in filings with the SEC. Investors are urged to consider closely the disclosure in our Form 10-K for the fiscal year ended December 31, 2011, available from us at Devon Energy Corporation, Attn. Investor Relations, 20 North Broadway, Oklahoma City, OK 73102. You can also obtain this form from the SEC by calling 1-800-SEC-0330 or from the SEC's website at www.sec.gov.

devon

Devon History

- Founded as a private company in 1971
- Became a public company in 1988
- Currently listed on the New York Stock Exchange under the ticker symbol DVN
- Has grown from 185 employees in 1981 to more than 5,000 employees today
- Established a portfolio to provide stable production and a solid platform for future growth

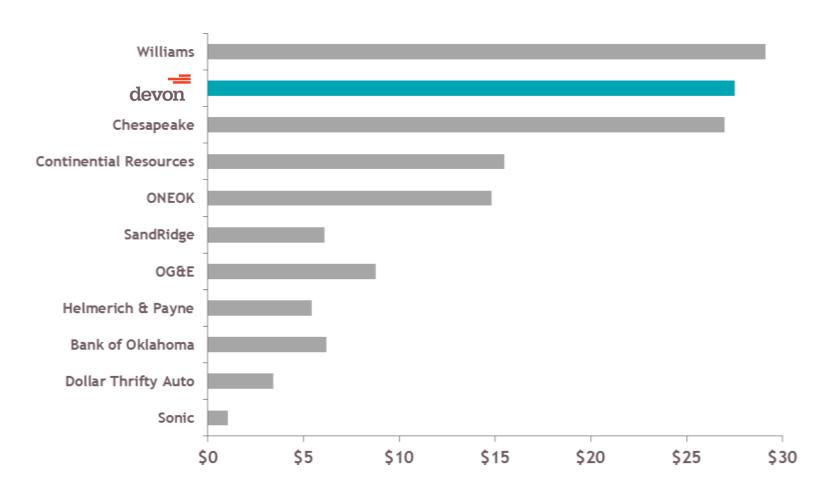




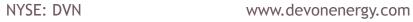
Top Oklahoma companies

Enterprise value

US\$, Billions



Note: Enterprise value - August 2012.





Devon today

Proved reserves: ≈3.0 billion BOE (42% liquids)

Q2 2012 production: ≈679 MBOED

(37% liquids)

Sales revenue mix: 57% oil

18% NGLs

25% natural gas

(Q2 2012)

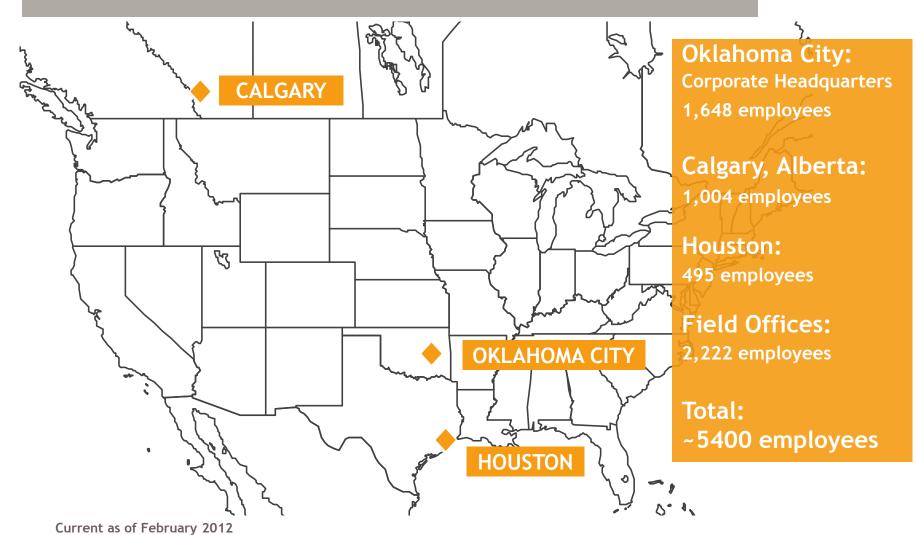
Significant midstream business

Enterprise value: ≈\$27.6 billion





Employment centers





NYSE: DVN

Devon's Strengths

Disciplined focus on per share results

Deep inventory of development opportunities

Strong, highly-visible oil growth

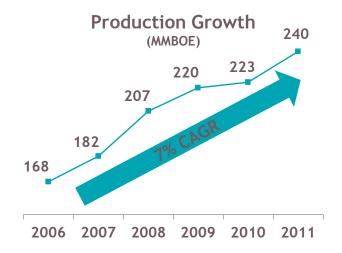
Significant positions in emerging oil plays

Superior financial strength and flexibility

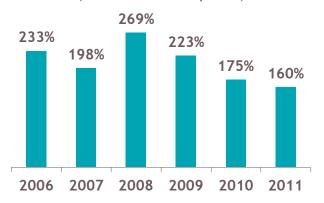


Track Record of Success

North American Onshore Historical Performance



Drill-Bit Reserve Replacement⁽¹⁾
(% of Production Replaced)



Note: Includes a non-GAAP measure (1) Excludes price revisions



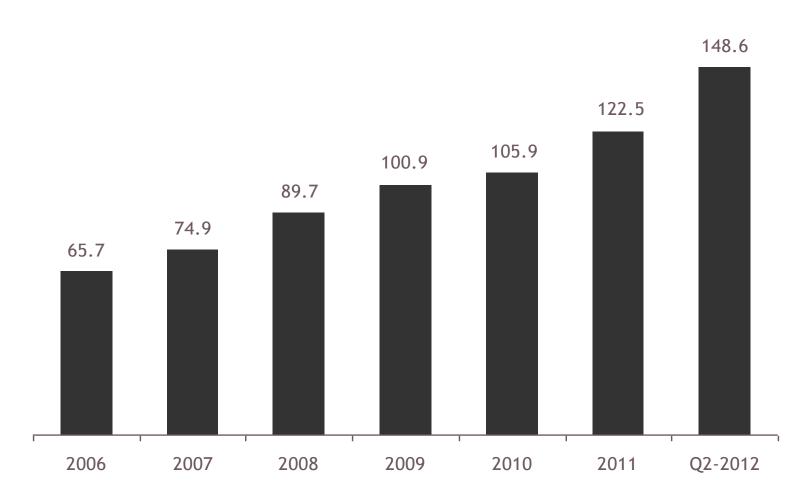






Significant Oil Production Growth North American Onshore

Production Data in MBOPD

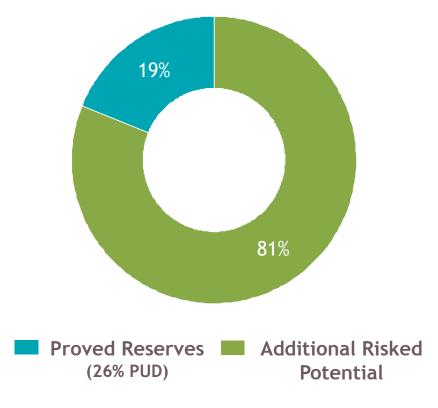




Devon's Risked Resource Base

High-Quality and Balanced

16.2 BBOE Risked Resource (31.8 BBOE Unrisked)



Note: Includes 12/31/11 proved reserves of 3.0 BBOE.

Risked Resource By Product (BBOE)		
Oil (29%)	4.7	
NGLs (19%)	3.1	
Gas (52%)	8.4	
Total	16.2	



Resource By Asset Strong Foundation for Growth

Data in BBOE

	Unrisked Resource	Proved Reserves	Additional + Risked = Potential	Total Risked Resources
Permian Basin	7.6	0.2	2.6	2.8
Barnett Shale	4.3	1.2	1.3	2.5
Cana Woodford Shale	2.8	0.3	1.6	1.9
Canadian Oil Sands	2.1	0.5	0.9	1.4
East Texas/Gulf Coast	0.9	0.2	0.6	0.8
Other U.S.	4.6	0.4	1.7	2.1
Other Canada	3.3	0.2	1.8	2.0
Horn River	1.4	-	1.1	1.1
Sinopec JV Assets (net)	4.8	-	1.6	1.6
Total	31.8	3.0	13.2	16.2



NYSE: DVN

Portfolio Management

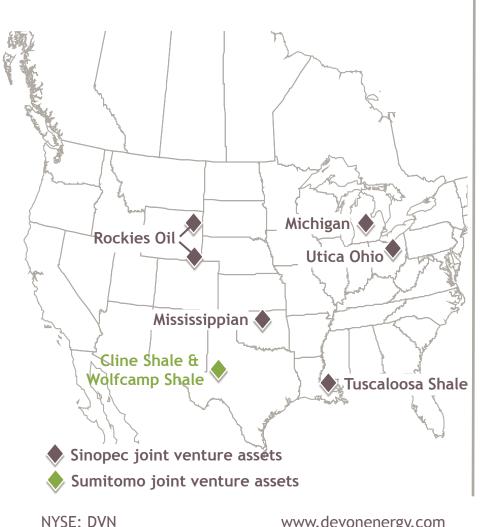
Goal: Optimize depth, diversity, and quality of drilling inventory

- Harvesting mature and lower return assets
 (Since 2002 divested ≈\$17 billion of assets)
- New leasehold capture
 (Since 2009 invested >\$4 billion into leasehold capture and exploration)
- Joint ventures / farm-ins
 (Recent ~\$4.0 billion JV transactions)



Growing the Resource Base

New Ventures Exploration



Sinopec Joint Venture



- \$2.5 billion transaction (\$900 million cash and \$1.6 billion drilling carry)
- Sinopec receives 33% of Devon's interest
- Net acreage in joint venture: 1.5 million
- Devon serves as operator

Sumitomo Joint Venture



- \$1.4 billion transaction (\$340 million cash and \$1.025 billion drilling carry)
- Sumitomo receives 30% of Devon's interest
- Net acreage in joint venture: 650,000
- Devon serves as operator



www.devonenergy.com



Exploration & Exploitation

Sept 4, 2012







Devon Today 2012 Exploration

Projected 2012 exploration spending

Land, G & G, Testing

\$1,600

Breakdown

• Mississippian leasehold & testing \$800

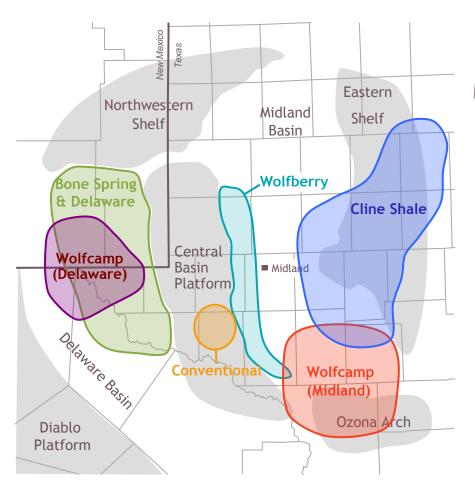
• Cline Shale leasehold & testing \$350

• Other \$450





Permian Basin Overview





Net acres: 1.5 million

Net unrisked resource: 7.6 BBOE

Net risked resource: 2.8 BBOE

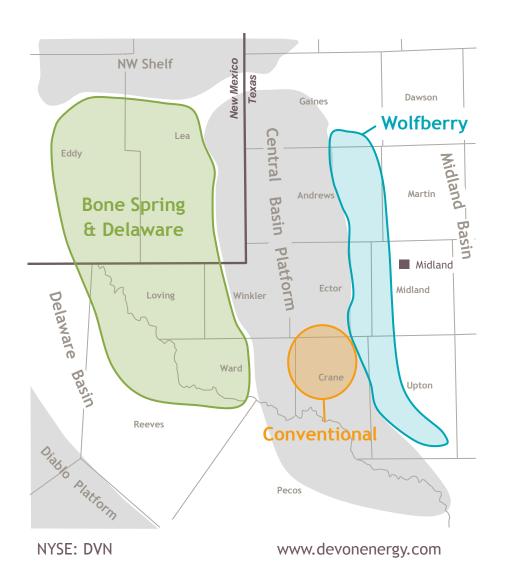
Risked locations: >8,000

- Significant exposure to oil & liquids plays
- 21 operated rigs (24 by year-end)
- Q4 2011 net production: 53 MBOED
- Oil and liquids content ≈75% of production



NYSE: DVN www.devonenergy.com

Permian Basin Oil Development Projects



Development Overview

- Low-risk, high-margin oil plays
- Multi-year drilling inventory
- 16 operated rigs

Bone Spring/Delaware

- 185,000 net acres (2012 plans: Drill ≈110 wells)
- High-impact wells (Best wells: IP's >1,000 BOED)

Wolfberry

- 160,000 net acres (2012 plans: Drill ≈100 wells)
- Upside: Downspacing and Wolfcamp horizontal exploitation

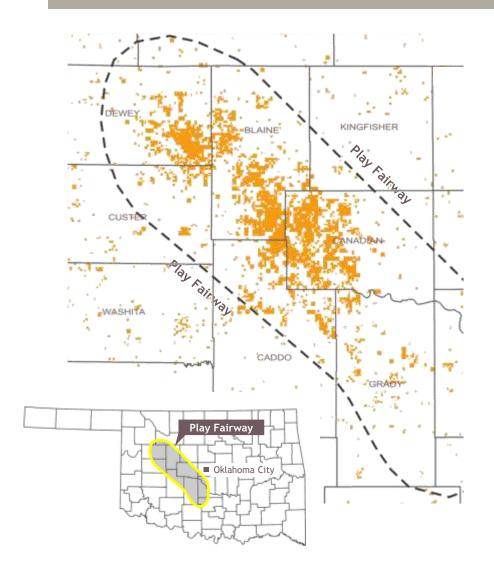
Other Conventional Activity

- Exploit Central Basin Platform targets
- Stacked oil pays (Tubb, Wichita-Albany, Strawn, Clear Fork & others)



Cana Woodford Shale

Overview

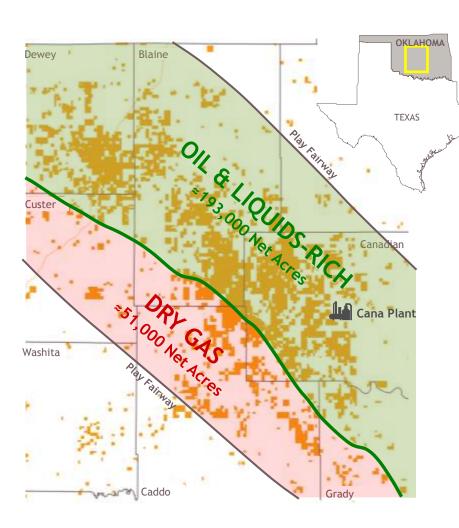


- Estimated play resource in-place: 50-220 BCFE per square mile
- Oil and liquids-rich gas play
- Low above ground risk
 (markets, topography, regulatory environment)
- Industry rigs running: 46
- Producing wells: ≈500



Cana Woodford Shale

Liquids-Rich Gas Development



Net risked resource: 11.4 TCFE

Risked locations: $\approx 5,400$

Net acreage: 244,000

Low average royalty burden: 21%

Q2 2012 net production: 280 MMCFED

2012e program: >40% of production is liquids

Expanding gas processing facility:

• 30 MBPD of NGL capacity

Significant undrilled liquids-rich inventory

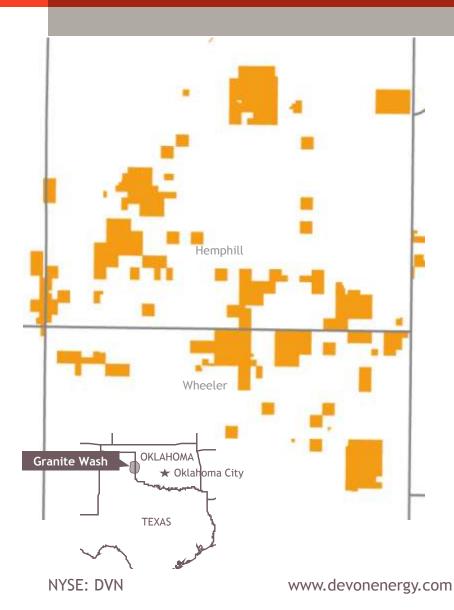
• ≈3,000 locations

2012 plans: Drill ≈200 wells



NYSE: DVN www.devonenergy.com

Granite Wash Oil & Liquids-Rich Development



Net risked resource: ≈200 MMBOE

Risked locations: ≈350 net wells

Net acreage: 63,600

Legacy land position held by production

Low average royalty burden: 19%

Q2 2012 net production: 19 MBOED

Liquids drive superior economics

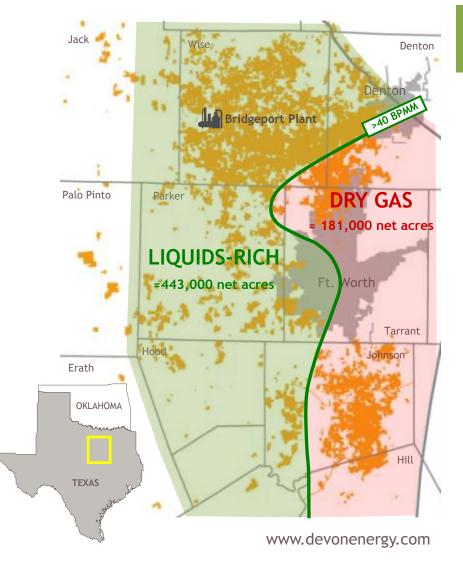
3 operated rigs running

2012 plans: Drill ≈65 wells



Barnett Shale

Liquids-Rich Gas Development



Net risked resource: 14.8 TCFE

Risked locations: ≈ 5,000

Net acreage: 624,000

Low average royalty burden: 18%

Q2 2012 net production: 1.32 BCFED

2012e program: >30% of production is liquids

Significant free cash flow

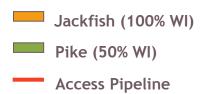
Liquids-rich drilling inventory: ≈2,500 locations

2012 plans: Drill ≈300 wells



Devon's Thermal Oil Position SAGD Development





NYSE: DVN



www.devonenergy.com

Field characteristics

- Low F&D
- Flat production profile
- Long reserve life >20 years

Jackfish

- Top-tier operating performance
- Q2 2012 net production: 33 MBOPD

Jackfish 2

- Q2 2012 net production: 18 MBOPD
- Reach peak facility capacity in 2013

Jackfish 3

• Construction ≈40% complete

Pike

- Up to five SAGD development phases
- First regulatory application filed in June



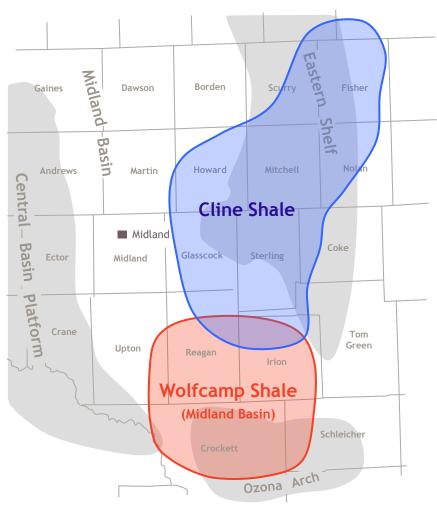
New Ventures/Exploration Process Unlocking Significant Potential

- Methodical exploration
- Initial assessment
 - Oil in-place
 - Permeability
 - Rock properties
 - Cost to develop
- Lease best plays
- Test commerciality
- Expand position

	Unrisked Resource (BBOE)
New ventures (Sinopec JV & Cline Shale)	8.4
Other U.S. exploration	5.8
Canada exploration	2.2
Development & exploitation assets	15.4
Total Unrisked Resource	31.8



Permian Basin Oil Exploration Projects



NYSE: DVN

Exploration Overview

- Potential, high-impact resource plays (Unrisked resource: >3 BBOE net to Devon)
- 2012 plans: Drill ≈40 wells
- 4 operated rigs

Cline Shale

- JV acreage: 556,000 net acres (Net to Devon: 389,000 acres)
- Stacked pay potential
- Encouraging initial wells results

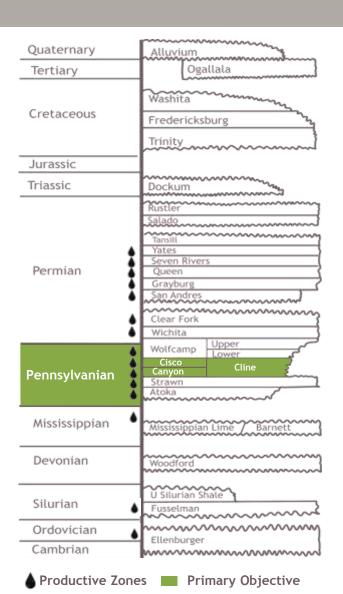
Midland-Wolfcamp Shale

- JV acreage: 94,000 net acres (Net to Devon: 66,000 acres)
- Well results continue to improve
- Testing longer laterals (Extending to >7,000')



www.devonenergy.com

Cline Shale Stratigraphic Section

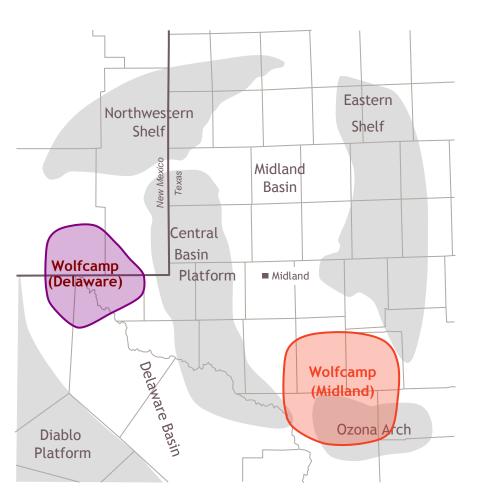


- Organic-rich shale
- Mixed silt and sand interbeds
- Gross thickness: 200' 550'
- Total organic content: 1 8%
- Frac barriers above and below



Wolfcamp Shale

Emerging Opportunity





Net acres: 92,000 (Midland)

240,000 (Delaware)

Unrisked resource: 1.3 BBOE

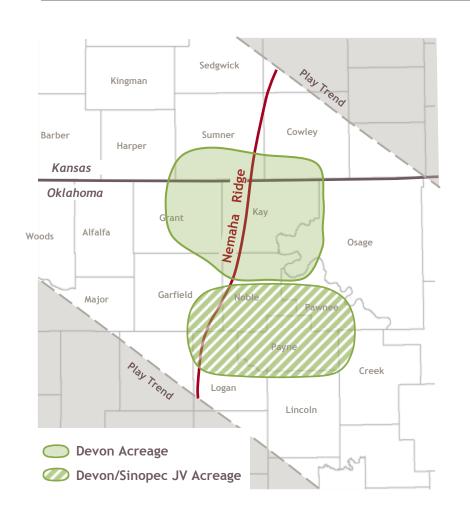
2012 capital: ≈\$225 million

2012 plans: Drill 35 wells

- Focus on Wolfcamp Midland (light oil, resource play)
- Multiple producing zones in Wolfcamp
- Drilling depth: 5,000' 8,500' (Midland)
 8,000' 10,500' (Delaware)
- Midland Basin results improving
- Testing long laterals (Extending to >7,000')



Mississippian Light-Oil Exploration



Net acreage: 545,000

(400,000 net acres outside of Sinopec JV)

High-margin, exploration play

Early results in-line with expectations

Risked resource potential: >800 MMBOE

Stacked pay potential (Woodford)

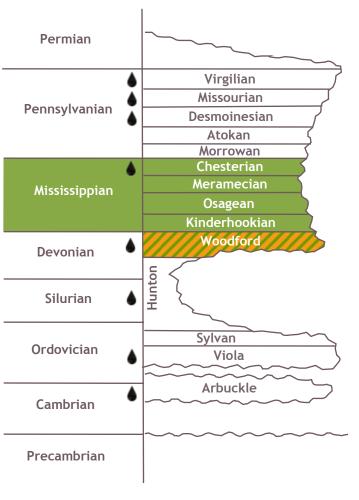
7 operated rigs

2012 plans: Drill >50 wells



NYSE: DVN www.devonenergy.com

Mississippian Stratigraphic Section



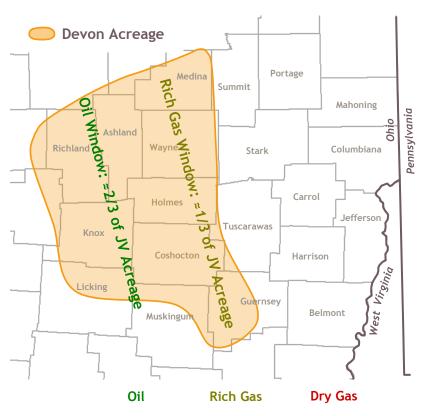
- Multiple prolific lithologies
 - > High porosity chert
 - Siliceous limestone with medium porosity
 - Fractured limestone with lower porosity
- Significant open fractures
- Woodford TOC up to 10% is a great source rock







Ohio Utica Overview



Approximate Thermal Maturity Windows



	DVN (net)	JV (gross)
Net acres:	157,000	235,000
Unrisked res.	640 MMBOE	950 MMBOE
2012 capital:	\$26 MM	\$100 MM
2011/12 plans:	Drill ≈15 wells	

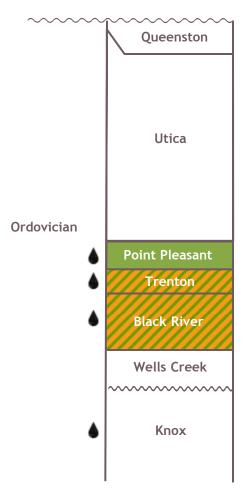
Attractive Attributes

- Positive industry results to date
- Conventional oil and gas area
- Abundant well control
- Favorable subsurface (TOC, porosity, perm)



NYSE: DVN www.devonenergy.com

Ohio Utica Stratigraphic Section



- Hybrid unconventional resource
- Lithology consists of laminated limestonemudstone
- In-situ fractures
- Frac barriers above and below (no wet zones)
- Prolific source rock and reservoir
- Potential upside from fractured Trenton/Black River





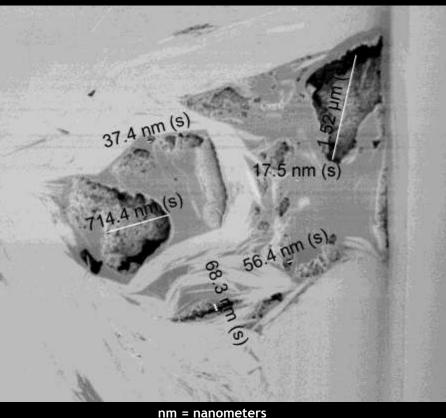






Ohio Utica Permeability Analysis

Fixed Ion Beam Scanned Electron Microscope (FIBSEM Analysis)



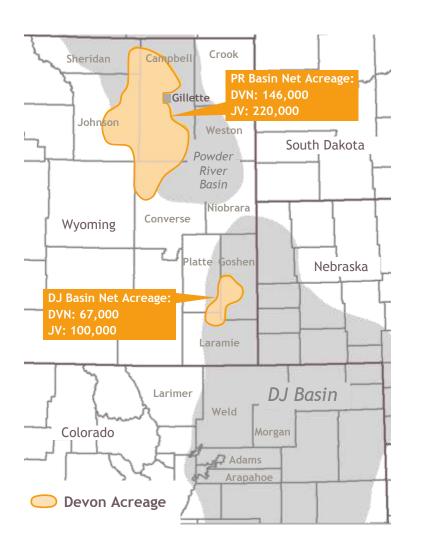
(Oil molecules range from 0.5 - 3.0 nm)

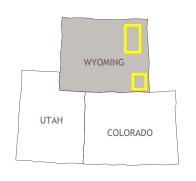
- FIBSEM analysis enables imaging of connected pores
- Significant size pores present
- Indicates potential to move liquids
- Top-tier permeability:

	Permeability (microdarcy, µD
DVN Harstine Well	Up to 30
Barnett Shale:	0.2 to 0.3
Marcellus:	0.7 to 1.3
Eagleford:	0.7 to 1.5
Bakken:	6.7 to 13.3



Rockies Oil Overview





	DVN (net)	JV (gross)
Net acres:	213,000	320,000
Unrisked res.	890 MMBOE	1,330 MMBOE
2012 capital:	\$40 MM	\$152 MM
2011/12 plans:	Drill ≈35 wells	

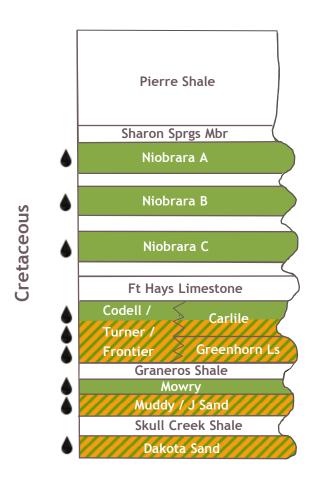
Attractive Attributes - Powder River Basin

- Stacked oil targets Niobrara, Turner, Frontier, Greenhorn Mowry & Muddy
- Economic results in multiple intervals
- Significant operational expertise in basin

Attractive Attributes - DJ Basin

- Stacked oil targets Niobrara, Codell, Greenhorn & J Sand
- Favorable thermal maturity for oil generation
- Thick Codell sand with oil shows in core and logs

Rockies Oil Stratigraphic Section



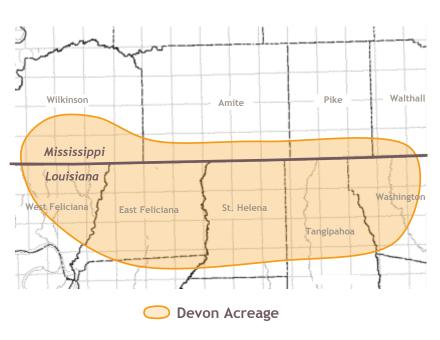
Powder River Basin

- Primary targets: Niobrara and Mowry
- High total organic content in Mowry and Niobrara
- Secondary targets: Turner, Muddy, Dakota and Frontier
- Deeper Paleozoic prospective

DJ Basin

- Primary targets: Niobrara and Codell
- Niobrara and Mowry source of significant Lower Cretaceous production
- Multiple Niobrara chalk benches; B main target across play
- Viable secondary objectives: Greenhorn and J Sand

Tuscaloosa Overview





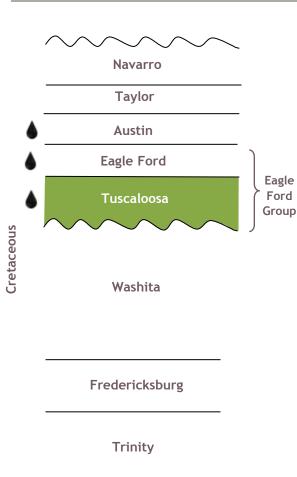
	DVN (net)	JV (gross)
Net acres:	190,000	285,000
Unrisked res.	1,150 MMBOE	1,730 MMBOE
2012 capital:	\$44 MM	\$167 MM
2011/12 plans:	Drill ≈10 wells	

Attractive Attributes

- Proven capacity to flow oil; existing production
- Highly overpressured reservoir
- Low-cost acreage
- Well-established regulatory environment
- Existing infrastructure



Tuscaloosa Stratigraphic Section

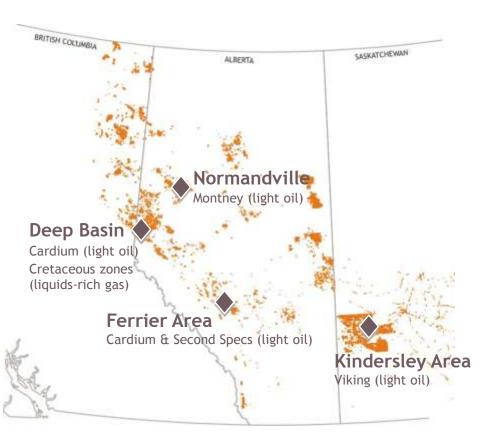


- Highly laminated lithology
- Brittle intervals of sand, siltstone and limestone
- Significant fracture system
- Several historical oil pay zones throughout the stratigraphic section





Canada Exploration Oil & Liquids Opportunities



- Net prospective acres: >4 million
- Net unrisked resource: 2.2 BBOE
- 2012 plans: Drill 90 wells
- Testing >10 new play types including:
 - Viking (Shallow targets; good economics)
 - > Cardium (Ferrier area IP's up to 940 BOED)
 - Second Specs (Early stages of evaluation)
 - Montney (Light-oil exploration prospect)
 - Cretaceous zones (Exploiting multistacked pay)



NYSE: DVN www.devonenergy.com

Other U.S. Exploration Oil & Liquids Opportunities

- Net prospective acres: 1.3 million
- Net unrisked resource: 5.8 BBOE
- Focus on oil opportunities
- Targeting tight carbonates/clastics and shale
- Currently evaluating 16 different exploration concepts across our existing asset base
 - > 2012 Plans: Drill ≈15 wells





E&P Strategic Services at Devon Strategic Geosciences Group

• Sept 4, 2012

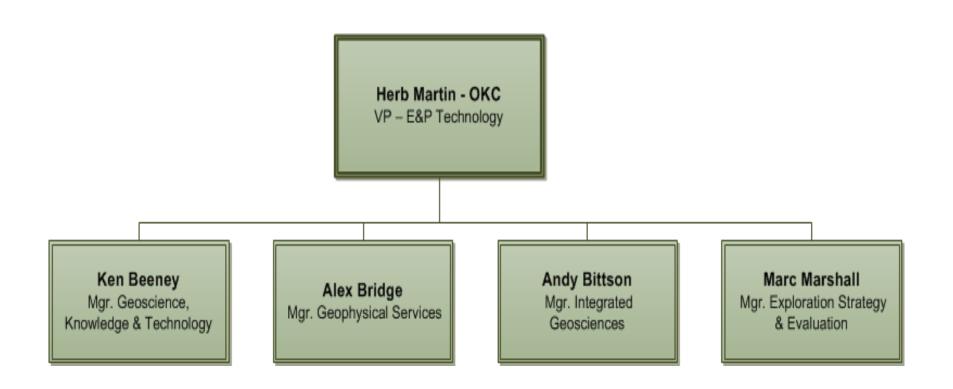








E&P Strategic Services 2012 E&P Technology (May 2012)





Competencies and Roles

Exploration Strategy & Evaluation (ESE)

- Technical/Peer review
- Play Evaluation & Ranking
- Development/Support for Evaluation process/tool
- Technology Pipeline

Integrated Geoscience (SSIG)

- Reservoir Modelers
- Geophysical modelers
- Sedimentologists/petrographers
- Structure/Fracture Expertise
- Geochemistry

Geophysical Services (GS)

- Acquisition
- Processing
- Microseismic
- Data management
 - Contracts and Permitting
- Geodetics

Knowledge Management / Technology

- Collaborate w/ Engineering Technology
- Consortia prioritized
- Data Management
- Training
- Petrophysics



Exploration Strategy and Evaluation



Exploration Strategy Evaluation Team (ESE): Roles and Responsibilities

ESE Team is responsible for unconventional play characterization and comparative play analysis across the company.

Analysis is used for play ranking and as an aid for executive decision-making

Facilitate consistent technical and peer reviews (UCRisk)

Promote best practices and technical exchanges through reviews

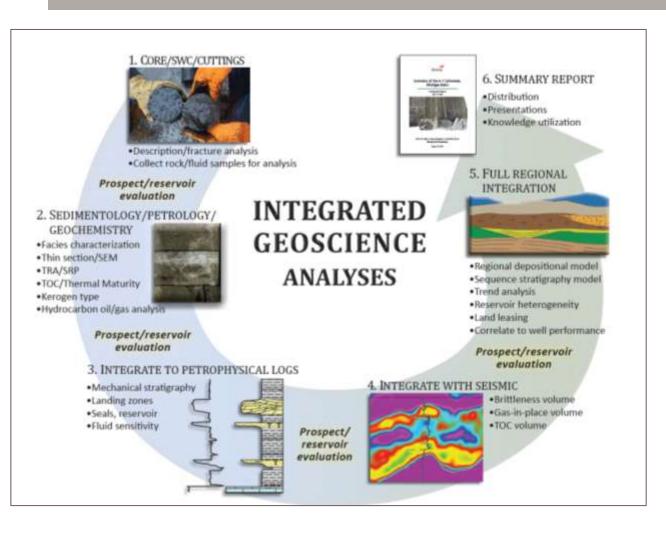
Maintain an up-to-date exploration play inventory



Integrated Geoscience June 2012



Integrated Workflow and Knowledge Experts



Technology Experts

- Core Description
 Stratigraphy /Sedimentology
- Structure and Fractures
- Seismic ReservoirCharacterization
- Reservoir / Basin Modeling
- Petrography
- Geochemistry

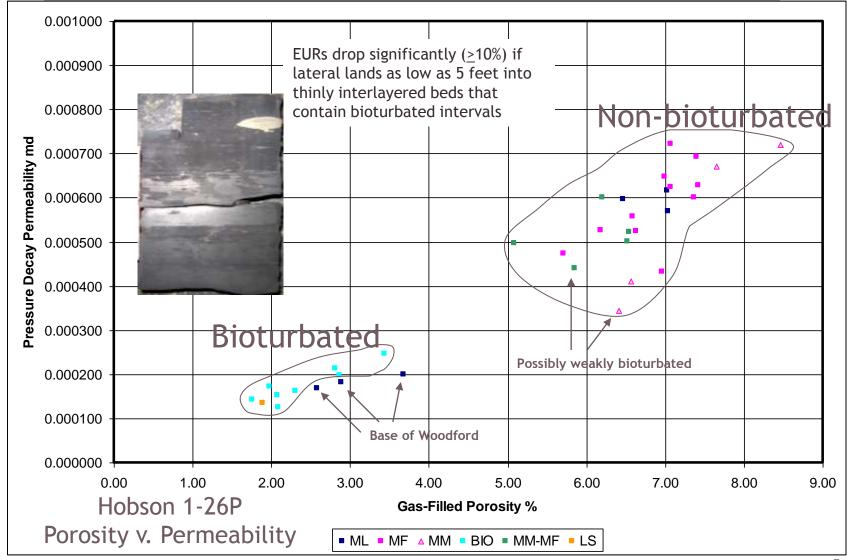


www.devonenergy.com

NYSE: DVN

Cana Woodford Example

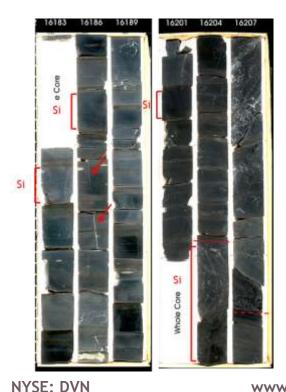
Facies Control on Production



NYSE: DVN

Cana Woodford Example Natural Fracture Production Conduits

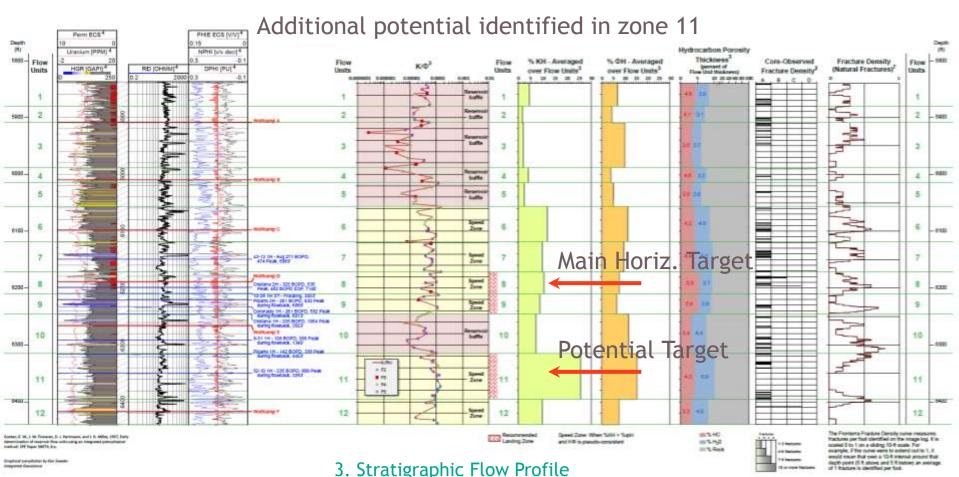
- Bed-confined natural fractures likely conduits for liquids production
- Increase oil storage
- Large enough to move oil through
- Vertical paths of weakness for fracing





Permian Basin Wolfcamp Example Type Well Stratigraphic Flow Profile

Most wells landed in zone 8-9



www.devonenergy.com

NYSE: DVN



Geophysical Services



Geophysical Services (GS)

What We Do

- Acquisition
- Processing
- Microseismic
- Data management
- Contracts and Permitting
- Geodetics



Seismic Acquisition Highlights

2012 Seismic Acquisition Projects

3D Summary

• 4 Completed 366 mi²

• 4 Active 790 mi²

• 5 Planning 941 mi²

• 4 Hold 275 mi²

Total 17 2,371 mi²

New Seismic Methods / Evaluations

- Regional Seismicity Monitoring
- Seismic Source Optimization Michigan, Ohio, West Texas
- Frac Monitor with passive surface seismic Mississippian & Cana
- High-Resolution 3D Depth Imaging
- Microseismic Evaluations



Knowledge and Technology



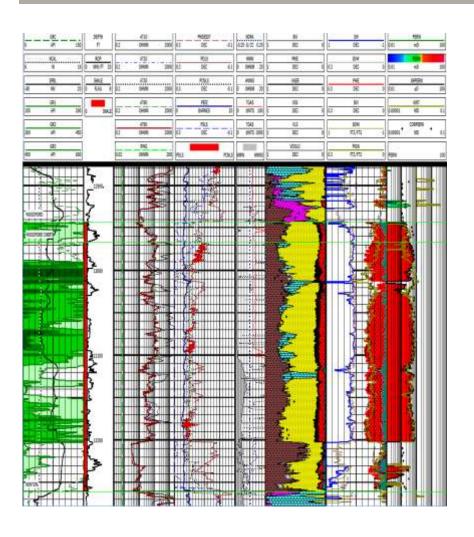
Geoscience - Knowledge & Technology

- Collaborate w/ Engineering Technology
 - Knowledge management (Communities of Practice)
- Consortia management
- Data Management
- Training
 - In-house
 - Nautilus
 - Industry
- Petrophysics



Knowledge & Technology

Petrophysics Example



- Core to Log integration
- Productivity
 - Pay zones and cutoffs
 - Permeability
- Volumetrics
 - Thickness, Net to Gross
 - Effective porosity and fluid saturations
 - Reserves in-Place
- Reservoir Description
 - Lithology
 - Sweet Spot identification
- Additional Categories
 - Seismic integration
 - Mechanical properties
 - Reservoir modeling integration
 - Pretty log plots



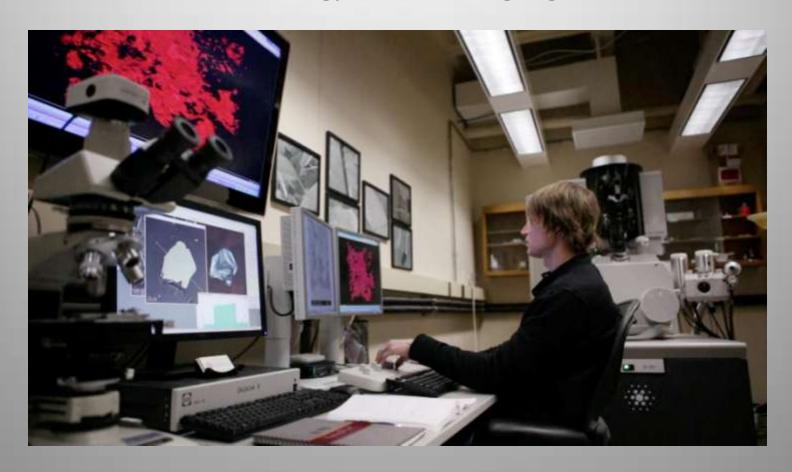
NYSE: DVN www.devonenergy.com

Strategic Geoscience Putting It All Together

- Why "Strategic"?
- Integration Essential
 - Across Geoscience Disciplines
 - Across E & P
- Answer Important Questions Early
 - Data Gathering
 - Which data to gather
 - Technology
 - Experience (what do we need to know?)



The Devon Energy Nano Imaging Center



Devon E&P in Unconventionals

- Focused Strategy
- Leverages Experience and Expertise
- Takes Advantage of Unique Time in our Industry

Questions?



Thank you.