Devon's Natural Gas STAR Experience

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Outline

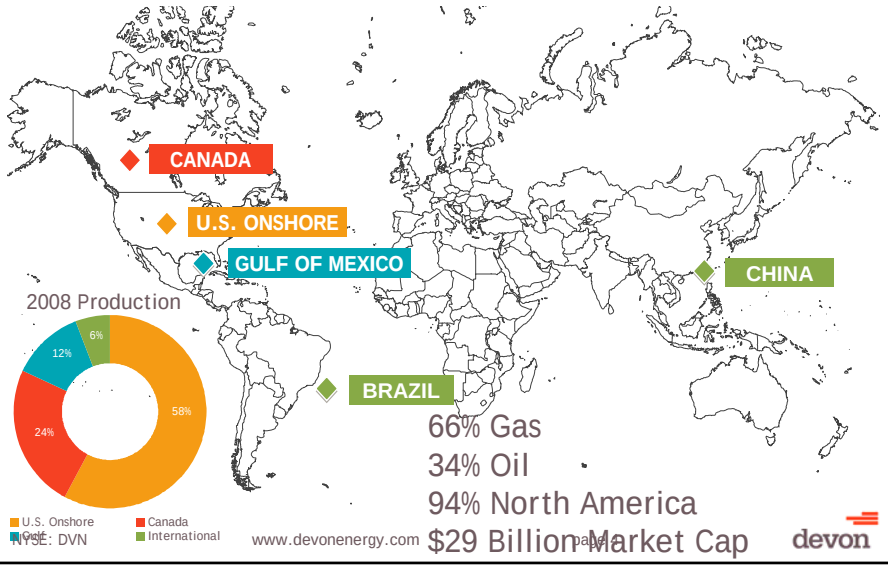
Devon Energy Corporation

Devon's Natural Gas STAR Experience

- Getting started
- Keeping up the momentum
- Specific reductions
- Fort Worth Basin success story
- San Juan Basin success story

Devon Energy Corporation

Devon's Worldwide Operations

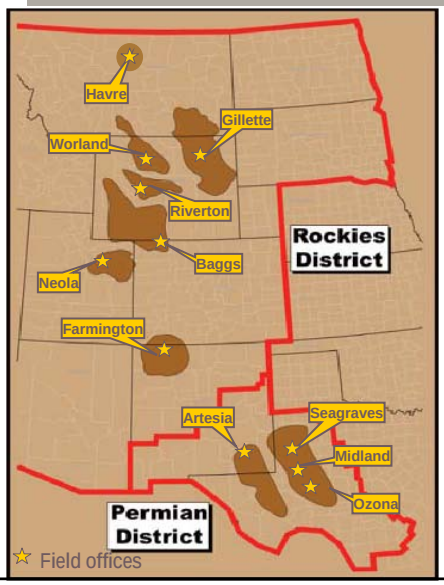


66% Gas
34% Oil
94% North America
$29 Billion Market Cap

NYSE: DVN

www.devonenergy.com

Devon's Western Division



Natural Gas STAR Participating Field Offices
(Western Division)

Riverton, WY
Worland, WY
Baggs, WY
Farmington, NM
Artesia, NM
Midland, TX

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Exploration and Production in the San Juan Basin

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Devon's San Juan Presence

Proved reserves:	≈ 370 BCF (gross)
Daily Production:	≈ 125 MMCF
Net acreage:	≈ 52 sections
Number of counties with Devon leases:	2 (San Juan & Rio Arriba)
Drilling activity:	24 wells in 2008 and 0 wells in 2009
# of Employees:	37

Devon's Natural Gas STAR Experience

EPA Welcomes Devon as a Partner

Devon Energy becomes an official partner in the EPA Natural Gas STAR Program on July 21, 2003

Focus

Primary focus for a successful program:

- Encouragement and support from upper management
- Select the right implementation manager
- Roll the program out to operations
- Educate the field on the goals of the program
- Recognize successes
- Research historical reductions
- Locate documentation for reductions
- Develop a tracking system

Program Participation - 2004

- Devon actively participated in a video shoot in the Bridgeport area showing Devon's involvement in the STAR Program (produced by a public TV station)
  - 6-minute version for airing during environmentally related segments
  - 12-minute version to be used by the STAR Program to promote the Program to other companies
- Participated in an interview for the "STAR Profile" section of the Program's fall edition of the STAR quarterly newsletter.

EPA STAR Video

Program Participation - 2004

- Developed a monthly STAR newsletter to be distributed to managers to assure communications regarding the status of the Program.
- Newsletter contains:
  - A STAR (Partner Reduction Opportunity (PRO) Fact Sheet
  - Link to lessons learned on the EPA STAR website
  - Graph reflecting Devon's emission reductions annually
  - Status table providing a breakdown by Division, Area, Activity

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Natural Gas STAR Partner Newsletter

March 2005

Welcome

This is the March 2005 installment of a monthly newsletter highlighting Devon's activities in the Environmental Protection Agency (EPA) Natural Gas STAR Program. These monthly installments summarize Devon's methane emission efforts and a specific partner reported emission reduction opportunity that might be of benefit at certain Devon operations.

In this Issue:
- Welcome
- Division Status Table
- Annual Reduction Graph
- PRO Fact of the Month

Check out Devon's EPA video on the K drive at: K:/Universal/ Permanent/EHS Dept. Presentations/ Natural Gas STAR

STAR Reductions Through 2005

Methane Reduction Activity	Methane Reductions
Central Division	3,015,124
Southern Division	3,087,134
South Texas	1,204,526
Carthage	1,441,468
Groesbeck	441,110
Western Division	2,068,677
Rockies	864,360
Permian	1,204,317
Gulf Division	-
Midstream	-
Total Reductions	8,170,935

PRO Fact Sheet of the Month

"Portable Desiccant Dehydrators"

This month, the highlighted PRO (Partner Reported Opportunities) Fact Sheet document is related to "Portable Desiccant Dehydrators". The attached PRO Fact Sheet feature provides more details about the technology and associated benefits of desiccant dehydration units. Additional information on desiccant dehy's may be found in the EPA Lessons Learned report located at http://www.epa.gov/gasstar/pdf/lessons/ll_dessde.pdf

If you have an idea or recognize an opportunity for a process change or pressure setting to improve efficiencies or reduce venting, please discuss these ideas with your EHS specialist or call Steve O'Connell at (405) 552-4672.

Program Participation - 2004

- Co-authored a SPE paper on the optimization of separator pressure to reduce methane emissions.
- Paper was presented at the annual SPE conference held in Galveston, Texas.
- Authored with the intent of creating a PRO Fact Sheet for the STAR Program

Program Participation – 2005

- Sponsored and co-sponsored EPA Natural Gas STAR Technology Workshops Oklahoma City and Casper
- Participated in a leak detection survey at the Bridgeport Plant (USEPA Natural Gas STAR DI&M Grant)
- Highlighted the STAR program as a pollution prevention initiative at an Environmental Federation of Oklahoma Pollution Prevention Workshop
- Developed a database to track future methane reduction activities
- Database to be given to EPA for other Partners use upon completion

Awards

- 2004 Natural Gas STAR Rookie of the Year
- 2005 Natural Gas STAR Production Partner of the Year
- 2005 Natural Gas STAR Implementation Manager of the Year (Steve O'Connell of Devon)
- 2008 Natural Gas STAR Continuing Excellence Award

STAR Program (Best Management Practices (BMP's)

BMP 1: Replace High-Bleed Pneumatic Controls

- ~4.78 Bcf of methane emission reductions through 2009

STAR Program BMP's

BMP 2: Install Flash Tank Separators on Glycol Dehydrators

- ~101.07 Mmcf of methane emission reductions through 2009

STAR Program BMP's

BMP 3: Partner Reported Opportunities (PRO's)

- Reduced Emission Completions (REC's) – 35.47 Bcf
- Absolute Open Flow (AOF) Testing – 1,025.13 Mmcf

Summary of Devon's Emission Reductions

- Overall Reductions – 50.76 Bcf (through 2009)
  - Low Bleed Pneumatics 4.78 Bcf (~9%)
  - Reduced Emission Completions 35.47 Bcf (~70%)
  - AOF Testing 1,025.13 Mmcf (~2%)
  - VRU's 3.19 Bcf (~6%)
  - Dehy Controls 95.49 Mmcf
  - Plunger Lift Systems 3.41 Bcf (~7%)
  - Flared Volumes 1.33 Bcf (~3%)
  - Other 1.46 Bcf (~3%)
- Overall savings of approximately $152,280,000 since 1990 (assuming an average of $3/mcf gas price)

Fort Worth Basin Success Story

- Implementation Manager discussed STAR opportunities with the Production Supervisor in the FWB
- Reviewed opportunities to reduce venting during cleanup procedures after fracs
  - Evaluated portable flare systems
  - Supervisor discussed it further with superintendents and foreman
- Completions Superintendent decided there was a better option available

FWB Reduced Emission Completions (RECs)

- Previous procedure upon completion of the frac job
- Flow well back to frac tanks until clean up is completed
- Snub tubing in the hole while venting gas back to reduce the pressure on the well
- Run required tests to atmosphere to calculate the absolute open flow potential

FWB RECs

- Current procedure upon completion of the frac job
- Install temporary flowline and meter run on location during completion process
- Flow well back to frac tanks until gas is encountered

FWB RECs

- Turn well down line and *sell gas* while cleaning up the well
- Snub tubing in the hole while *selling gas* back to reduce the pressure on the well
- Run required tests *through sales* to calculate the absolute open flow potential

Benefits of FWB RECs

- Reduces the volume of methane emissions
- Allows wells to be cleaned up longer with better results
- Additional gas sales (net revenue of ~$50,000 per well)
- Safer work environment

Sand Buster- Green Completion Method

Created by Robert Jordan, Production Foreman

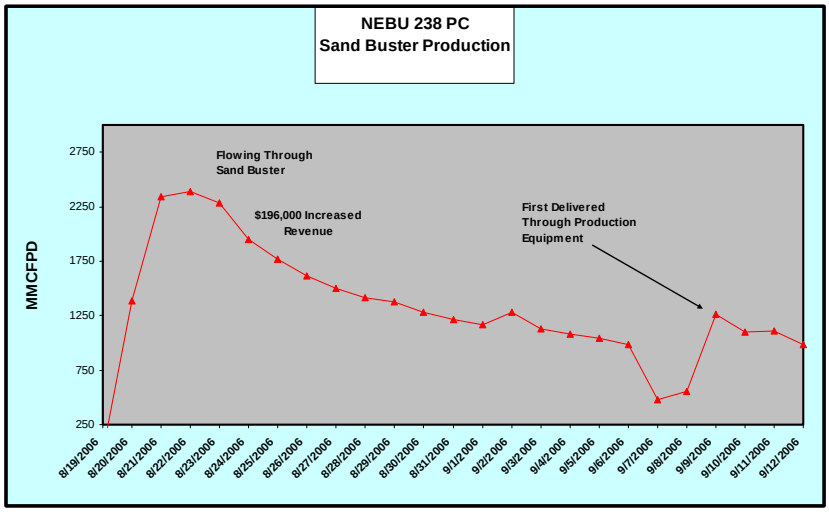
- Envisioned a cost effective way to capture loss revenue and reduce what is emitted into the atmosphere
- A system that protects the employee from potential injury

San Juan Best Practice

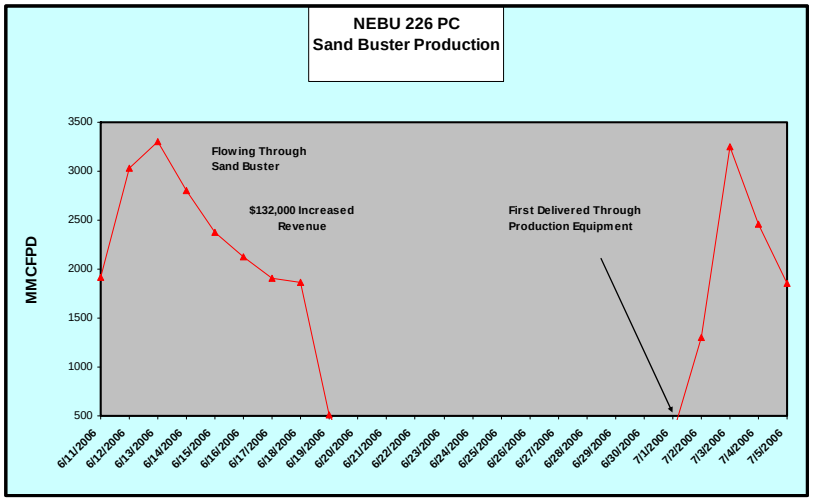
Before Sand Buster

Sand Buster

Results



Results



Sand Buster- Benefits

Reduced the amount of gas being sent to the atmosphere…

which leads to:

Less emissions into the atmosphere

Sand Buster has been constructed in other companies and have seen similar results

Success Breeds Success

- Measuring and reporting results in competition
  - Everyone benefits!
- Due to the success of the FWB RECs other areas also use the technology
  - Washakie Basin of Wyoming and the San Juan Basin in New Mexico

Thank You.

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