

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II  
811 South First, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, New Mexico 87504-2088

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SEP - 9 2005  
OCD-ARTESIA

Form C-102  
Revised March 17, 1999

Submittal to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

|               |                                   |                      |
|---------------|-----------------------------------|----------------------|
| API Number    | Pool Code                         | Pool Name            |
|               |                                   | Happy Valley; Morrow |
| Property Code | Property Name                     | Well Number          |
|               | WESTSIDE 4 STATE COM              | 1                    |
| OGRID No.     | Operator Name                     | Elevation            |
| 6137          | DEVON ENERGY PRODUCTION CO., L.P. | 3267'                |

Surface Location

|               |         |          |       |         |               |                  |               |                |        |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
| M             | 4       | 22 S     | 26 E  |         | 1000          | SOUTH            | 660'          | WEST           | EDDY   |

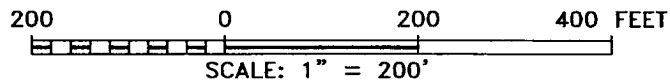
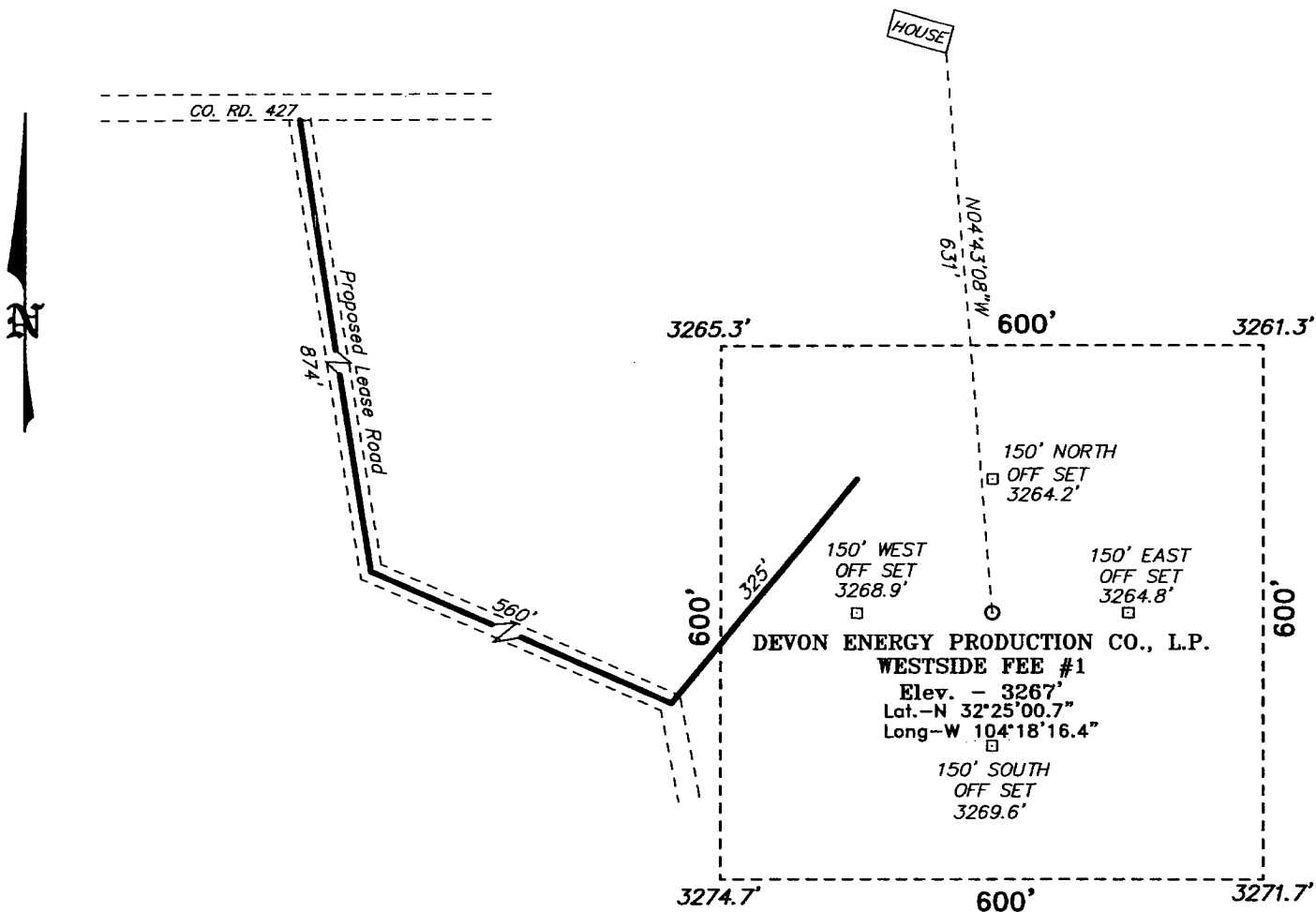
Bottom Hole Location If Different From Surface

|                 |                 |                    |           |         |               |                  |               |                |        |
|-----------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot No.   | Section         | Township           | Range     | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|                 |                 |                    |           |         |               |                  |               |                |        |
| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |         |               |                  |               |                |        |
| 320             |                 |                    |           |         |               |                  |               |                |        |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

|  |   |
|--|---|
|  | <p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature </p> <p>Printed Name Stephanie A. Ysasaga</p> <p>Title Senior Engineering Tech</p> <p>Date 09/07/05</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>JULY 28, 2005</p> <p>Date Surveyed</p> <p>Signature &amp; Seal of Professional Surveyor </p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYOR</p> |
|--|---|

SECTION 4, TOWNSHIP 22 SOUTH, RANGE 26 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF CO. RD. 427 AND CO. RD. 427A, GO WEST ON CO. RD. 427 FOR ±200' TO LEASE ROAD SOUTH; THENCE SOUTH ON LEASE ROAD FOR 0.3 MILE TO PROPOSED LEASE ROAD.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 5575 Drawn By: K. GOAD

Date: 08-01-2005 Disk: KJG CD#4 - 5575A.DWG

**DEVON ENERGY PROD. CO., L.P.**

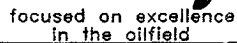
REF: WESTSIDE FEE No. 1 / Well Pad Topo

THE WESTSIDE FEE No. 1 LOCATED 1000' FROM  
THE SOUTH LINE AND 660' FROM THE WEST LINE OF  
SECTION 4, TOWNSHIP 22 SOUTH, RANGE 26 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 07-28-2005 Sheet 1 of 1 Sheets



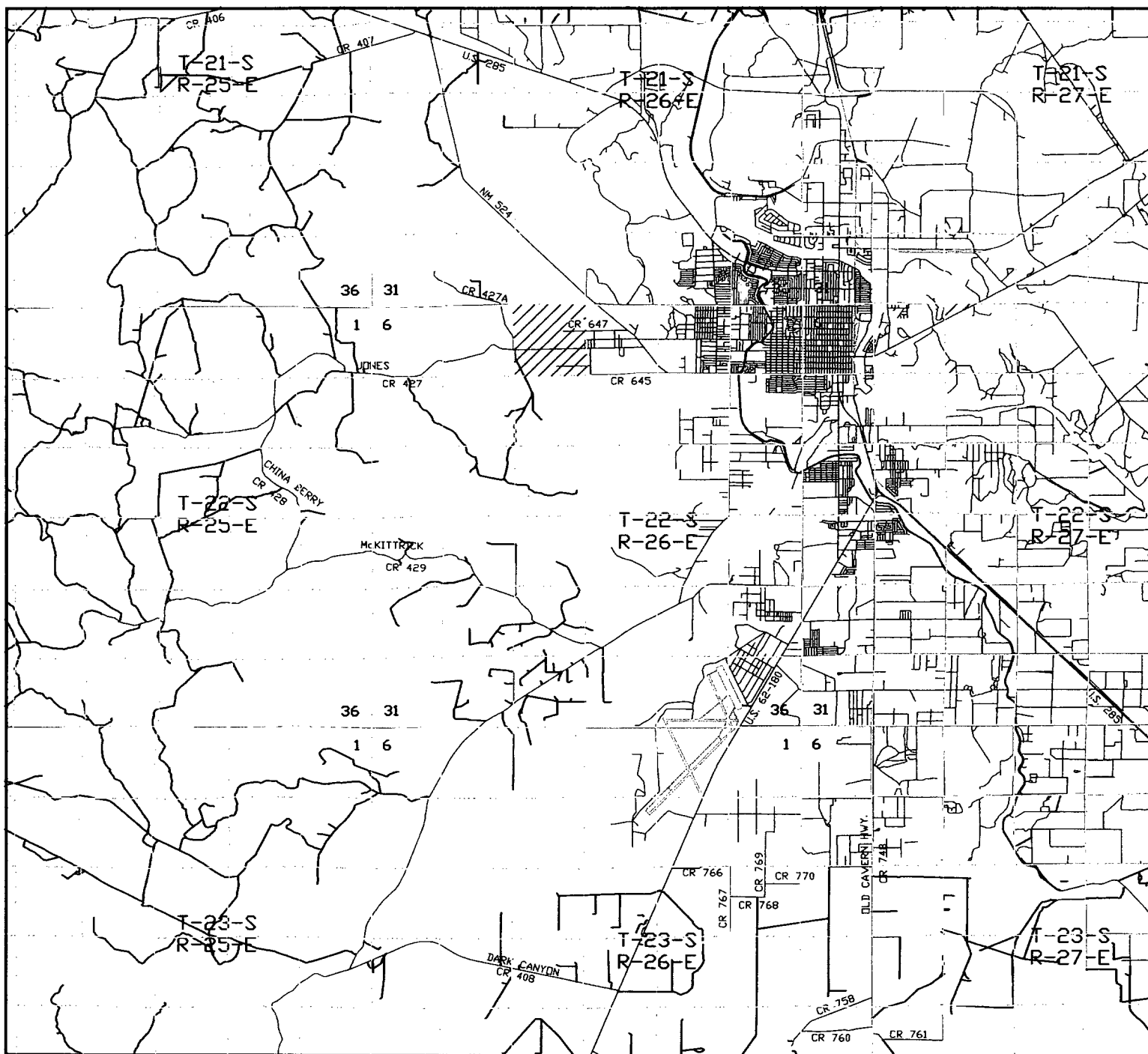
Located at 1000' FSL and 660' FWL  
Section 4, Township 22 South, Range 26 East,  
N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786  
1120 N. West County Rd.  
Hobbs, New Mexico 88241  
(505) 393-7316 - Office  
(505) 392-3074 - Fax  
basinsurveys.com

Date: 07-28-2005

DEVON ENERGY  
PROD. CO., L.P.



## WESTSIDE FEE #1

Located at 1000' FSL and 660' FWL  
Section 4, Township 22 South, Range 26 East,  
N.M.P.M., Eddy County, New Mexico.

**basin**  
**surveys**

focused on excellence  
in the oilfield

P.O. Box 1786  
1120 N. West County Rd.  
Hobbs, New Mexico 88241  
(505) 393-7316 - Office  
(505) 392-3074 - Fax  
basinsurveys.com

W.O. Number: 5575AA - KJG #1

Survey Date: 08-01-2005

Scale: 1" = 2 MILES

Date: 07-28-2005

**DEVON ENERGY**  
**PROD. CO., L.P.**

Run File C:\STAR\DATA\12.29.04\3.14.05\DEV RIFLEMAN5#4.RUN

Method C:\star\method\_extended\_gas\_scott.mth

Operator Vickie Sullivan

Analysis Date 8/30/2005

Station Rifleman 5 #4

Company Devon Energy

Effective Date

Pulled Data 8/29/05

Received Date 8/29/05

Composite/Spot

| <u>Component</u>  | <u>Mole %</u> | <u>BTU</u> | <u>GPM</u> |
|-------------------|---------------|------------|------------|
| Methylcyclohexane | 0.0107        | 0.56       | 0.0043     |
| Toluene           | 0.0097        | 0.43       | 0.0032     |
| n-Octane          | 0.0065        | 0.41       | 0.0033     |
| Ethylbenzene      | 0.0132        | 0.69       | 0.0051     |
| m&p xylene        | 0.0049        | 0.00       | 0.0000     |
| o-Xylene          | 0.0014        | 0.07       | 0.0005     |
| n-Nonane          | 0.0155        | 1.09       | 0.0087     |
| n-Decane          | 0.0000        | 0.00       | 0.0000     |
| Totals            | 100.0000      | 1,053.06   | 1.5192     |

Relative Density from Composition 0.5870

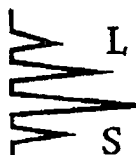
BTUs @ 14.65 Saturated 1,037

BTUs @ 14.65 Dry 1,055

Compressibility 0.99781

Nearly gas analysis for  
the Westside 4 State Com #1.

8/30/2005

**Laboratory Services Inc.**

2609 West Marland

Hobbs, New Mexico 88240

(505)397-3713

|                |   |                |              |
|----------------|---|----------------|--------------|
| Run File       | C:\STAR\DATA\12.29.04\3.14.05\DEV RIFLEMAN5#4.RUN |                |              |
| Method         | C:\star\method_extended_gas_scott.mth             |                |              |
| Operator       | Vickie Sullivan                                   | Analysis Date  | 8/30/2005    |
| Station        | Rifleman 5 #4                                     | Company        | Devon Energy |
| Effective Date |   | Pulled Data    | 8/29/05      |
| Received Date  | 8/29/05   | Composite/Spot |              |

| <u>Component</u>   | <u>Mole %</u> | <u>BTU</u> | <u>GPM</u> |
|--------------------|---------------|------------|------------|
| H2S                |               |            |            |
| Nitrogen           | 0.4300        | 0.00       | 0.0000     |
| Methane            | 92.6880       | 938.32     | 0.0000     |
| CO2                | 1.3762        | 0.00       | 0.0000     |
| Ethane             | 4.0971        | 72.67      | 1.0958     |
| Propane            | 0.9132        | 23.03      | 0.2516     |
| i-Butane           | 0.1250        | 4.07       | 0.0409     |
| n-Butane           | 0.1478        | 4.83       | 0.0466     |
| i-Pentane          | 0.0487        | 1.95       | 0.0178     |
| n-Pentane          | 0.0301        | 1.21       | 0.0109     |
| Cyclopentane       | 0.0074        | 0.28       | 0.0022     |
| 2-Methylpentane    | 0.0099        | 0.47       | 0.0041     |
| 3-Methylpentane    | 0.0080        | 0.38       | 0.0033     |
| n-Hexane           | 0.0149        | 0.71       | 0.0061     |
| Methylcyclopentane | 0.0058        | 0.26       | 0.0021     |
| Benzene            | 0.0116        | 0.44       | 0.0033     |
| Cyclohexane        | 0.0154        | 0.69       | 0.0052     |
| n-Heptane          | 0.0089        | 0.49       | 0.0041     |

8/30/2005

ARTESIA, N.M.

AUG 08 2005

Wildcat Measurement Service  
P.O. Box 1836  
Artesia, New Mexico 88211-1836  
TollFree #888-421-9453  
Office #505-746-3481  
"Quality and Service is our First Concern"

PDS 06/25/00

Run No. 250728-35  
Date Run 07/28/2005  
Date Sampled 07/27/2005

Analysis for: DEVON ENERGY PRODUCTION COMPANY

GPANGL L60

Well Name: RIFLEMAN "5" FEDERAL #4

Field:

Sta. Number: 885-12-057

Purpose: SPOT-EPM

Sampling Temp: 82.2 DEG F

Volume/day: 1.8 MMCF/DAY

Pressure on Cylinder: 518.4 PSIG

Producer: DEVON ENERGY PRODUCTION

County: EDDY

State: NM

Sampled By: JACK PITTMAN

Atmos Temp: DEG F

Formation:

Line Pressure: 531.6 PSIA

## GAS COMPONENT ANALYSIS

Pressure Base: 14.7300

|                |     | Mol %    | GPM    |
|----------------|-----|----------|--------|
| Carbon Dioxide | CO2 | 1.9215   |        |
| Nitrogen       | N2  | 0.5124   |        |
| Methane        | C1  | 92.1455  |        |
| Ethane         | C2  | 4.0539   | 1.0836 |
| Propane        | C3  | 0.8552   | 0.2355 |
| Iso-Butane     | IC4 | 0.1361   | 0.0445 |
| Nor-Butane     | NC4 | 0.1278   | 0.0403 |
| Iso-Pentane    | IC5 | 0.0496   | 0.0182 |
| Nor-Pentane    | NC5 | 0.0345   | 0.0125 |
| Hexanes Plus   | C6+ | 0.1635   | 0.0713 |
| TOTAL          |     | 100.0000 | 1.5058 |

Real BTU Dry: 1049.11  
Real BTU Wet: 1030.85  
Real Calc. Specific Gravity: 0.6134  
Field Specific Gravity: 0.0000

Standard Pressure: 14.6960

BTU Dry: 1044.28

BTU Wet: 1026.11

Z Factor: 0.9977

N Value: 1.3008

Avg Mol Weight: 17.7347

Avg CuFt/Gal: 57.9357

26 Lb Product: 0.1630

Methane+ GPM: 17.1241

Ethane+ GPM: 1.5058

Propane+ GPM: 0.4223

Butane+ GPM: 0.1868

Pentane+ GPM: 0.1020

REMARKS:  
SAMPLE TAKEN FOR EPM

Approved by: DON NORMAN

Thu Jul 28 20:40:45 2005



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SEP 29 2005

DOB-ARTESIA

Devon Energy Production Company  
Regulatory Affairs  
20 North Broadway - Suite 600  
Oklahoma City, Oklahoma 73102-8260  
Phone: (405)-552-7802  
Fax (405)-552-4553  
[Stephanie.Ysasaga@dvn.com](mailto:Stephanie.Ysasaga@dvn.com)

September 28<sup>th</sup>, 2005

Bryan Arrant  
Oil Conservation Division  
1301 W. Grand Avenue  
Artesia, New Mexico 88210

**Re: APD - Westside 4 State Com 1**  
**Additional Requirements: H2S Plan**

Dear Mr. Arrant:

Enclosed you will find a copy of the H2S plan per your request. Please review and let me know if there are any additions that need to be made.

Also, let me know if we have fulfilled the additional requirements necessary to have the Westside 4 State Com 1 approved.

Should we need to provide additional information, please call me at (405)-552-7802.

Very truly yours,

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

Stephanie A. Ysasaga  
Senior Engineering Technician ☺



## Recommended Drilling Fluids Program

Devon Energy Corporation \* Westside "4" State # 1 \* Sec-4, T-22-S, R-26-E, Eddy,

| INTERVAL: 0 - 500              |                         | 26" hole | 2 days                           | 20" csg   |       |
|--------------------------------|-------------------------|----------|----------------------------------|-----------|-------|
| Product                        | Function                |          | Treatment                        | Unit Size | Usage |
| Bentonite                      | Viscosifier             |          | 12-14 ppb                        | 100 #     | 80    |
| Cedar Fiber/Fiber Plug         | LCM, sealant            |          | 3-10 ppb in pills                | 40 #      | 40    |
| Ground Paper                   | Seepage and sweeps      |          | 1-3 sacks per 100 feet           | 40 #      | 60    |
| Lime                           | pH additive, flocculant |          | 1 sack per 15 sacks of bentonite | 50 #      | 10    |
| Maxi-Seal/Fiber Seal/Chem Seal | LCM, sealant            |          | 3-10 ppb in pills                | 40 #      | 40    |
| MF-55/VisPlus(non-ionic)       | Hole sweep              |          | 2-3 gal sweeps                   | 5 gal.    | 5     |
| Plastic                        | Storage aid             |          | Cover mud                        | 1 roll    | 1     |

Interval

| INTERVAL: 500 - 2,225          |                    | 12.25" hole | 6 days                 | 9.625" csg |       |
|--------------------------------|--------------------|-------------|------------------------|------------|-------|
| Product                        | Function           |             | Treatment              | Unit Size  | Usage |
| Bentonite                      | Hole sweep         |             | 12-14 ppb in sweeps    | 100 #      | 90    |
| Cedar Fiber/Fiber Plug         | LCM, sealant       |             | 3-10 ppb in pills      | 40 #       | 50    |
| Ground Paper                   | Seepage and sweeps |             | 1-3 sacks per 200 feet | 40 #       | 70    |
| Lime                           | pH additive        |             | .5-.75 ppb             | 50 #       | 70    |
| Maxi-Seal/Fiber Seal/Chem Seal | LCM, sealant       |             | 3-10 ppb in pills      | 40 #       | 50    |
| MF-55/VisPlus(non-ionic)       | Hole sweep         |             | 2-3 gal sweeps         | 5 gal.     | 4     |

Interval

| INTERVAL: 2,225 - 8,250        |                    | 8.75" hole | 11 days                        | 7" csg    |       |
|--------------------------------|--------------------|------------|--------------------------------|-----------|-------|
| Product                        | Function           |            | Treatment                      | Unit Size | Usage |
| Bentonite                      | Hole sweep         |            | 12-14 ppb in sweeps            | 100 #     | 120   |
| Caustic Soda                   | pH additive        |            | .25 ppb below 8,000'           | 50 #      | 10    |
| Cedar Fiber/Fiber Plug         | LCM, sealant       |            | 3-10 ppb in pills              | 40 #      | 100   |
| Ground Paper                   | Seepage and sweeps |            | 1-3 sacks per 200 feet         | 40 #      | 60    |
| Lime                           | pH additive        |            | .5-.75 ppb                     | 50 #      | 80    |
| Maxi-Seal/Fiber Seal/Chem Seal | LCM, sealant       |            | 3-10 ppb in pills              | 40 #      | 100   |
| MF-55/VisPlus(non-ionic)       | Flocculant         |            | 1 qt in 50 gal water as needed | 5 gal.    | 3     |
| Mica                           | LCM, sealant       |            | 3-10 ppb in pills              | 50 #      | 80    |
| M-I-X II/Delta P               | LCM, sealant       |            | 3-10 ppb in pills              | 25 #      | 100   |

Interval

| INTERVAL: 8,250 - 11,300        |   | 6.125" hole | 16 days            | 4.5" csg  |       |
|---------------------------------|---|-------------|--------------------|-----------|-------|
| Product                         | Function                                |             | Treatment          | Unit Size | Usage |
| Biocide (STC)                   | Biocide                                 |             | 1 gal./100 bbls.   | 5 gal.    | 40    |
| Caustic Soda                    | pH additive                             |             | .25 ppb            | 50 #      | 30    |
| Drispac/Poly Pac/StaFlo/Aquapac | Filtrate control, secondary viscosifier |             | .5 ppb             | 50 #      | 20    |
| Maxi-Seal/Fiber Seal/Chem Seal  | LCM, sealant                            |             | 1-4 ppb in sweeps  | 40 #      | 30    |
| Mica                            | LCM, sealant                            |             | 3-10 ppb in sweeps | 50 #      | 30    |
| M-I-X II/Delta P                | LCM, sealant                            |             | 3-10 ppb in pills  | 25 #      | 30    |
| Silicone Defoamer               | Defoamer                                |             | As needed          | 5 gal.    | 10    |
| Soda Ash                        | Calcium remover                         |             | .5-.75 ppb         | 50 #      | 70    |
| White Starch                    | Filtrate control                        |             | 2-3 ppb            | 50 #      | 90    |
| XCD Polymer/Flozan              | Viscosifier, invasion control           |             | .25-5 ppb          | 25 #      | 30    |

Interval



Devon Energy Production Company  
Regulatory Affairs  
20 North Broadway – Suite 600  
Oklahoma City, Oklahoma 73102-8260  
Phone: (405)-552-7802  
Fax (405)-552-4553  
[Stephanie.Ysasaga@devon.com](mailto:Stephanie.Ysasaga@devon.com)

September 19<sup>th</sup>, 2005

Bryan Arrant  
Oil Conservation Division  
1301 W. Grand Avenue  
Artesia, New Mexico 88210

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SEP 20 2005

OCD-ARTESIA

**Re: APD - Westside 4 State Com 1  
Additional Requirements**

Dear Mr. Arrant:

Enclosed you will find a detailed copy of the mud program from our contractor, Nova Mud, Inc.; per the OCD's request. TOC for all strings is to circulate to surface. TOC for the 4 ½" liner is @ 7950'. The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. The functional tests will be documented on the daily drillers log.

I've spoken to the group that does our H2S plan, and have asked them to specifically include a detailed map of the immediate location depicting the well to the north and denoting the distance to the closest occupied dwelling from the proposed location. I will submit promptly upon receipt.

Should we need to provide additional information, please call me at (405)-552-7802.

Very truly yours,

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

Stephanie A. Ysasaga  
Senior Engineering Technician ☺

# **Recommended Drilling Fluids Program**

*For:*

**Devon Energy Corporation  
20 N. Broadway  
Oklahoma City, OK 73102-8260**

*The*

**Westside "4" State # 1**

*Located in:*

**Sec-4, T-22-S, R-26-E,  
Eddy Co., NM**

*Prepared especially for:*

**Mr. Gerald Brockman  
Drilling Supervisor**

***"The Nova Difference"***

**A Commitment to Service and Quality**

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OCD-ARTESIA

### Projected Mud Properties

| Depth     | Mud Wt. - ppg | Viscosity | Filtrate | pH  | Solids - % by vol. |
|-----------|---------------|-----------|----------|-----|--------------------|
| 0' - 500' | 8.6-9.4       | 32-34     | N/C      | 7-9 | 5-8                |

### Interval Notes for 0 - 500

Drill surface with Fresh Water spud mud. Maintain the viscosity as needed to clean the large diameter hole. Add small amounts of Lime to control the pH and to flocculate the Gel for added carrying capacity. Ground Paper additions may be used periodically to aid in hole cleaning and control seepage. Should severe losses occur we suggest dry drilling to total depth sweeping the hole regularly with viscous (40-50) Bentonite pills containing 3-10 ppb of various fibrous LCM's. Vis Plus sweeps should be made as needed on connections to aid in hole cleaning.

**NOTE 1:** it is highly possible that loss of circulation will be encountered in this interval. We suggest that consideration be given to placing an air package on this project to maintain returns.

**NOTE 2:** it may be possible to use Red Stripe in this interval to introduce aphrons into the system for lower equivalent mud weights.

### Projected Mud Properties

| Depth         | Mud Wt. - ppg | Viscosity | Filtrate | pH       | Chlorides - ppm |
|---------------|---------------|-----------|----------|----------|-----------------|
| 500' - 2,225' | 8.4-8.5       | 28-29     | N/C      | 9.5-10.5 | 3-12K           |

### General Geological Data

| Tops/Bases      | Formation      | Lithology                       | Notes/Challenges                          |
|-----------------|----------------|---------------------------------|---|
| 500' - 599'     | Yates          |                                 |   |
| 500' - 825'     | Seven Rivers   | Limestone, w/dolomite stringers |   |
| 825' - 1,650'   | Capitan Reef   | Fractured Limestone             | Lost circulation, air drilling, sloughing |
| 1,650' - 2,225' | Goat Seep Reef | Limestone                       | Heavy seepage in porosity                 |

### Interval Notes for 500 - 2,225

Drill out from under the surface casing with Fresh Water. Circulate a controlled portion of the reserve. Adjust the pH to 10.0 with Lime additions. Use an air package to decrease the hydrostatic to around 7.0 ppg. Approximately 1400 cfm should be sufficient. Continue to sweep the hole periodically with Ground Paper to control seepage and enhance hole cleaning. Use Bentonite pills only as necessary to control torque and/or drag. Small amounts of MF-55 may be added to aid in fine solids removal. Should severe losses occur we suggest dry drilling to total depth sweeping the hole as necessary with viscous (40-50) Bentonite pills containing 3-10 ppb of fibrous LCM. Vis Plus pills should be used on connections to aid in hole cleaning and to slick up the hole.

**NOTE:** Loss of circulation is highly likely through this interval at approximately 1,500'. Should losses occur dry drilling should be attempted. Sweep the hole as needed to keep the well bore clean. Should fill, torque and drag become severe, we suggest opening the hole to 17 ½" and running 13 3/8" casing as deep as possible.

### Projected Mud Properties

| Depth           | Mud Wt. - ppg | Viscosity | Filtrate | pH       | Chlorides - ppm |
|-----------------|---------------|-----------|----------|----------|-----------------|
| 2,225' - 3,400' | 8.4-8.5       | 28        | N/C      | 9.5-10.5 | 3-12K           |
| 3,400' - 8,250' | 8.9-9.0       | 28        | N/C      | 9.5-10.5 | +40K            |

### General Geological Data

| Tops/Bases      | Formation            | Lithology       | Notes/Challenges          |
|-----------------|----------------------|-----------------|---------------------------|
| 2,190' - 2,385' | Delaware Lime        | Lamar group     |                           |
| 2,225' - 2,190' | Goat Seep Reef       | Limestone       |                           |
| 2,385' - 2,750' | Delaware Sand        |                 | Seepage                   |
| 2,750' - 3,150' | Cherry Canyon        | Sand            |                           |
| 3,150' - 4,615' | Brushy Canyon        |                 |                           |
| 4,615' - 5,840' | Bone Spring Lime     | Limestone       |                           |
| 5,840' - 6,085' | 1st Bone Spring Sand | Sand            | Seepage                   |
| 6,085' - 6,385' | 2nd Bone Spring Lime | Limestone       |                           |
| 6,385' - 6,710' | 2nd Bone Spring Sand | Sand            | Seepage, lost circ        |
| 6,710' - 7,915' | 3rd Bone Spring Lime | Limestone       |                           |
| 7,915' - 8,200' | 3rd Bone Spring Sand | Sand            | Seepage                   |
| 8,200' - 8,250' | Wolfcamp Lime        | Shaly limestone | Poss. gas kick, sloughing |

**Interval Notes for 2,225 - 8,250**

Drill out with Fresh Water circulating the outer reserve pit for solids control. Sweep hole periodically with Ground Paper sweeps to control seepage and to aid in hole cleaning. Continue to use Lime to control the pH down to 8,000' then switch to Caustic Soda to prevent scaling. MF-55 may be added periodically to flocculate fine solids and keep the fluid clean. Viscous (40-50) Bentonite pills may be used as needed to clean cuttings from the well bore and reduce torque and drag. Begin adjusting the weight and chlorides to 8.9-9.0 ppg and +40,000 ppm respectively below 3,500' to prepare for drilling the Wolfcamp and Cisco formations. Should any severe losses occur, add 3-20 ppb of various LCM's to viscous pills to regain returns. Sweep and spot viscous (50-60) Salt Gel pills at total depth to ensure a clean hole for logging and casing operations.

### Projected Mud Properties

| Depth             | Mud Wt. - ppg | Viscosity | Filtrate | pH       | Chlorides - ppm |
|-------------------|---------------|-----------|----------|----------|-----------------|
| 8,250' - 9,900'   | 10.0          | 31-34     | <12 cc   | 9.5-10.5 | +186K           |
| 9,900' - 10,700'  | 10.0-10.2     | 34-36     | <10 cc   | 9.5-10.5 | +186K           |
| 10,700' - 11,300' | 10.2-10.3     | 34-38     | <8cc     | 9.5-10.5 | +186K           |

### General Geological Data

| Tops/Bases        | Formation          | Lithology                 | Notes/Challenges |
|-------------------|--------------------|---------------------------|------------------|
| 8,250' - 9,700'   | Wolfcamp           |                           |                  |
| 9,700' - 9,780'   | Canyon Pay         |                           | Pay Zone         |
| 9,780' - 10,040'  | Strawn Lime        | Shaly limestone           |                  |
| 10,040' - 10,235' | Atoka              | Sandy shale, mostly shale | Poss. gas kick   |
| 10,235' - 10,725' | Atoka Pay          |                           | Pay Zone         |
| 10,725' - 10,950' | Morrow Clastics    | Shaly calcareous sand     | Water sensitive  |
| 10,950' - 11,055' | Middle Morrow Lime | Limestone                 |                  |
| 11,055' - 11,180' | Lower Morrow       | Shale                     |                  |
| 11,180' - 11,300' | Barnett            | Shale                     | TD               |



**Interval Notes for 8,250 - 11,300**

Return to the working pits with Brine weighing 10.0 ppg. Discontinue the use of MF-55. Adjust the pH to no more than 10.0 with Caustic Soda. Pre-treat the system with Soda Ash to lower the total hardness to below 600 ppm and add STC (biocide) to prevent bacteria growth. Add amounts of Drispac and White Starch to lower the filtrate to 12cc. Use XCD Polymer to adjust the viscosity as necessary. Small amounts of Silicone Defoamer may be needed while mixing mud to prevent the aeration of the pumps. Sweep the hole as only as necessary with viscous (40-45) XCD Polymer pills that may be left in the system should added viscosity be needed. Adjust the weight with Brine or sack salt to 10.0 ppg. Should weights above the 10.0 ppg range be needed use Barite additions. Use M-I-X II or Delta P for seepage control while using viscous (40-45) XCD Polymer pills containing 3-10 ppb of various LCM's for more severe losses.

**NOTE 1:** our estimate is based on mud weights not exceeding 10.2 ppg. we would estimate an additional 1.2 ppg would be needed to raise the weight to 11.4 ppg without additional losses.



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**Devon Energy Corporation  
20 North Broadway  
Oklahoma City, Oklahoma 73102-8260**

# **Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan**

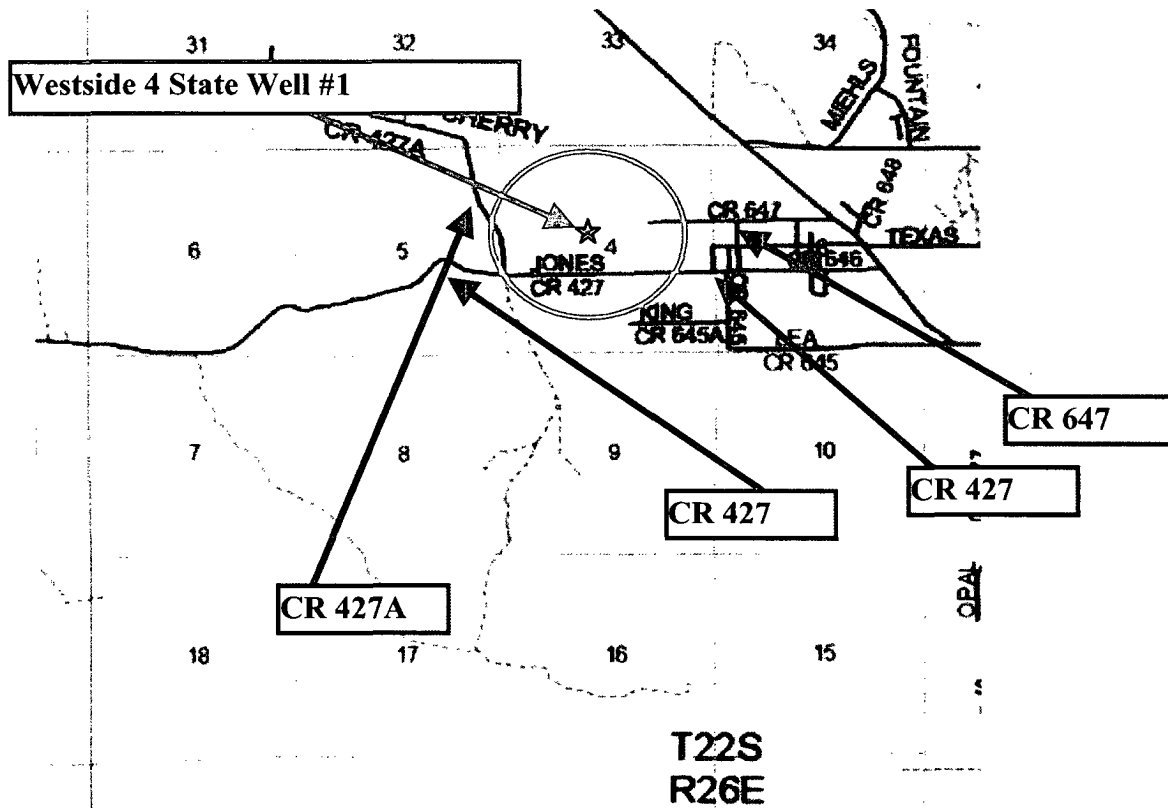
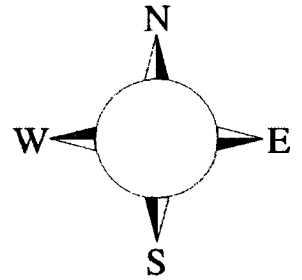
**For**

**Westside 4 State Well #1  
1000' FSL & 660' FWL,  
Sec-4, T-22S R-26E**

**Eddy County NM**

## Westside 4 State Well # 1

This is an open drilling site. H<sub>2</sub>S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H<sub>2</sub>S, including warning signs, wind indicators and H<sub>2</sub>S monitor.



Assumed 100 ppm ROE = 3000' (Radius of Exposure)  
 100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan

### Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated East on county road 647. Crews should then block roads CR647, CR427 (both directions) and CR 427A so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE There are several homes within the ROE. Steps must be taken to evacuate person(s) present at these homes should the hazardous H<sub>2</sub>S gas be released in sufficient quantities and/or concentrations.

## Emergency Procedures

In the case of a release of gas containing H<sub>2</sub>S, the first responder(s) must isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

All responders must have training in the detection of H<sub>2</sub>S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H<sub>2</sub>S monitors and air packs in order to control the release. Use the “buddy system” to ensure no injuries during the response.

## Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

## Characteristics of H<sub>2</sub>S and SO<sub>2</sub>

| Common Name      | Chemical Formula | Specific Gravity | Threshold Limit | Hazardous Limit | Lethal Concentration |
|------------------|------------------|------------------|-----------------|-----------------|----------------------|
| Hydrogen Sulfide | H <sub>2</sub> S | 1.189<br>Air = 1 | 10 ppm          | 100 ppm/hr      | 600 ppm              |
| Sulfur Dioxide   | SO <sub>2</sub>  | 2.21<br>Air = 1  | 2 ppm           | N/A             | 1000 ppm             |

## Contacting Authorities

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico’s ‘Hazardous Materials Emergency Response Plan’ (HMER)

## Devon Energy Corp. Company Call List

| <u>Artesia (505)</u>           | <u>Cellular</u>    | <u>Office</u>      | <u>Home</u>    |
|--------------------------------|--------------------|--------------------|----------------|
| Foreman – BJ Cathey.....       | 390-5893 .....     | 748-0176.....      | 887-6026       |
| Asst. Frmn – Bobby Jones ..... | 748-7447 .....     | 748-0176.....      | 746-3194       |
| Cecil Thurmond .....           | 748-7180 .....     | 748-0171.....      | 887-1479       |
| Mike Myers .....               | (505) 513-0782 ... | (505) 748-0187 ... | (505) 395-3020 |
| Engineer – Wyatt Abbitt.....   | (405) 245-3471 ... | (405) 552-8137 ... | (405) 340-3879 |

## Agency Call List

|                      |   |                                  |
|----------------------|---|----------------------------------|
| <b><u>Eddy</u></b>   | <b>Artesia</b>  |                                  |
| <b><u>County</u></b> | State Police .....                                      | 746-2703                         |
| <b><u>(505)</u></b>  | City Police .....                                       | 746-2703                         |
|                      | Sheriff's Office.....                                   | 746-9888                         |
|                      | Ambulance.....  | 911                              |
|                      | Fire Department.....                                    | 746-2701                         |
|                      | LEPC (Local Emergency Planning Committee) .....         | 746-2122                         |
|                      | NMOCD .....   | 748-1283                         |
|                      | <b>Carlsbad</b>   |                                  |
|                      | State Police .....                                      | 885-3137                         |
|                      | City Police .....                                       | 885-2111                         |
|                      | Sheriff's Office.....                                   | 887-7551                         |
|                      | Ambulance.....  | 911                              |
|                      | Fire Department.....                                    | 885-2111                         |
|                      | LEPC (Local Emergency Planning Committee).....          | 887-3798                         |
|                      | US Bureau of Land Management.....                       | 887-6544                         |
|                      | New Mexico Emergency Response Commission (Santa Fe) ... | (505)476-9600                    |
|                      | 24 HR .....   | (505) 827-9126                   |
|                      | National Emergency Response Center (Washington, DC)     | (800) 424-8802                   |
|                      | <b>Emergency Services</b>                               |                                  |
|                      | Boots & Coots IWC .....                                 | 1-800-256-9688 or (281) 931-8884 |
|                      | Cudd Pressure Control.....                              | (915) 699-0139 or (915) 563-3356 |
|                      | Halliburton .....                                       | (505) 746-2757                   |
|                      | B. J. Services.....                                     | (505) 746-3569                   |
| <i>Give</i>          | Flight For Life - Lubbock, TX .....                     | (806) 743-9911                   |
| <i>GPS</i>           | Aerocare - Lubbock, TX .....                            | (806) 747-8923                   |
| <i>position:</i>     | Med Flight Air Amb - Albuquerque, NM .....              | (505) 842-4433                   |
|                      | Lifeguard Air Med Svc. Albuquerque, NM .....            | (505) 272-3115                   |

Prepared in conjunction with  
Wade Rohloff of;

