Form 3160-3  
(February 2005)

OCD Artesia

FORM APPROVED  
OMB No 1004-0137  
Expires March 31, 2007UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

|  |  |  |                 |
|--|--|--|-----------------|
| 1a. Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER  |  | 5. Lease Serial No.<br>NM0560295 & NM0560290   |                 |
| 1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone      |  | 6. If Indian, Allottee or Tribe Name   |                 |
| 2. Name of Operator<br>Devon Energy Production Co., LP   |  | 7. If Unit or CA Agreement, Name and No<br>BFDU 14-08-0001-12397 NM 70798x             |                 |
| 3a. Address 333 W. Sheridan Avenue<br>OKC, OK 73102  |  | 8. Lease Name and Well No.<br>Burton Flat Deep Unit 55H <302209>                       |                 |
| 3b. Phone No. (include area code)<br>(405)-228-4248  |  | 9. API Well No.<br>30-05-40682   |                 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.)<br>At surface 3175' FNL & 50' FEL Lot 9, Sec 3, 21S-27E<br>At proposed prod. zone 2920' FNL & 330' FWL Lot 12, Sec 3, 21S-27E |  | 10. Field and Pool, or Exploratory<br>Burton Flat, Bone Spring, EAST<br>Avallon <3213> |                 |
| 14. Distance in miles and direction from nearest town or post office*<br>Approximately 4 miles North of Carlsbad, NM.  |  | 12. County or Parish<br>Eddy   | 13. State<br>NM |
| 15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any)<br>330'  | 16. No. of acres in lease<br>95: 40 ac/90: 360 ac            | 17. Spacing Unit dedicated to this well<br>N/2 S/2 of Sec 3-21S-27E or 160 acres       |                 |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft<br>See attached map  | 19. Proposed Depth<br>TVD: 6484' MD: 11227'<br>MAX TVD 6545' | 20. BLM/BIA Bond No on file<br>CO-1104 & NMB-000801                                    |                 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc)<br>3203.6' GL   | 22. Approximate date work will start*                        | 23. Estimated duration<br>45 days  |                 |

To be pad drilled with BFDU #51H

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form

- |  |  |
|--|--|
| 1. Well plat certified by a registered surveyor  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above) |
| 2. A Drilling Plan.  | 5. Operator certification  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM.            |

|   |  |                     |
|---|--|---------------------|
| 25. Signature<br><i>Patti Riechers</i>      | Name (Printed/Typed)<br>Patti Riechers   | Date<br>07/25/2012  |
| Title<br>Sr. Staff Operations Technician    |  |                     |
| Approved by (Signature)<br>Is/ Don Peterson | Name (Printed/Typed)<br>Is/ Don Peterson | Date<br>SEP 10 2012 |
| Title<br>Is/ FIELD MANAGER                  | Office<br>CARLSBAD FIELD OFFICE          |                     |

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

Capitan Controlled Water Basin

SEE ATTACHED FOR  
CONDITIONS OF APPROVALApproval Subject to General Requirements  
& Special Stipulations Attached

**Operators Representative:**

The Devon Energy Production Company, L.P. representatives responsible for ensuring compliance of the surface use plan are listed below

James Allbee - Operations Engineer Advisor  
Devon Energy Production Company, L.P.  
333 West Sheridan Ave.  
Oklahoma City, OK 73102-5010  
(405) 228-8698 (office)  
(405) 820-8682 (Cellular)

Don Mayberry - Superintendent  
Devon Energy Production Company, L.P.  
Post Office Box 250  
Artesia, NM 88211-0250  
(575) 748-3371 (office)  
(575) 746-4945 (home)

**Certification**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Devon Energy Production Company, L.P. am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

I hereby also certify that I, or Devon Energy Production Company, L.P. have made a good faith effort to provide the surface owner with a copy of the Surface Use Plan of Operations and any Conditions of Approval that are attached to the APD.

Executed this 13th day of August, 2012.

Printed Name: Patti Riechers

Signed Name: Patti Riechers

Position Title: Operations Technician

Address: 333 West Sheridan Ave., OKC, OK 73102

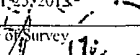
Telephone: (405)-228-4248

Field Representative (if not above signatory):

Address (if different from above):

Telephone (if different from above):

Form C-102  
Revised October 15, 2009  
Submit one copy to appropriate  
District Office  
☐ AMENDED REPORT

MAY 25, 2018  
Date of Survey \_\_\_\_\_  
  
\_\_\_\_\_  
Signature and Seal of Professional Surveyor  
Certificate Number: 176999 RARAVILLO, PLS 12797  
SURVEY NO. 1051

**DRILLING PROGRAM**  
Devon Energy Production Company, LP  
**Burton Flat Deep Unit #55H**

Surface Location: 3175' FNL & 50' FEL, Lot 9, Sec 3 T21S R27E, Eddy, NM  
Bottom Hole Location: 2920' FNL & 330' FWL, Lot 12, Sec 3 T21S R27E, Eddy, NM

**1. Geologic Name of Surface Formation**

a. Quaternary

**2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:**

|                                   |         |        |
|-----------------------------------|---------|--------|
| a. Fresh Water                    | 15'     |        |
| b. Rustler                        | surface |        |
| c. Salado                         | 269'    | Barren |
| d. Base of Salt                   | 429'    | Barren |
| e. Tansil                         | 505'    | Barren |
| f. Yates                          | 615'    | Barren |
| g. Seven Rivers                   | 750'    | Barren |
| h. Capitan                        | 865'    | Water  |
| i. Capitan Base                   | 2590'   | Barren |
| j. Delaware                       | 2761'   | Oil    |
| k. Bone Spring Lm                 | 5239'   | Oil    |
| l. 1 <sup>st</sup> Bone Spring Ss | 6447'   | Oil    |

Total Depth 6,484'

**3. Casing Program: All casing is new and API approved.**

| <u>Hole Size</u> | <u>Hole Interval</u> | <u>OD Csg</u> | <u>Casing Interval</u> | <u>Weight</u> | <u>Collar</u> | <u>Grade</u> |
|------------------|----------------------|---------------|------------------------|---------------|---------------|--------------|
| 26"              | 0' - 200'            | 20"           | 0' - 200'              | 94#           | BT&C          | J/K-55       |
| 17 1/2"          | 200' - 850'          | 13 3/8"       | 0' - 850'              | 48#           | ST&C          | H-40         |
| 12 1/4"          | 850' - 2,750'        | 9 5/8"        | 0' - 2,750'            | 40#           | LT&C          | J-55         |
| 8 3/4"           | 2,750' - 5,800'      | 5 1/2"        | 0' - 5,800'            | 17#           | LT&C          | HCP-110      |
| 8 3/4"           | 5,800' - 11,227'     | 5 1/2"        | 5,800' - 11,227'       | 17#           | BT&C          | HCP-110      |

**Design Parameter Factors:**

| <u>Casing Size</u> | <u>Collapse Design</u> | <u>Burst Design</u> | <u>Tension Design</u> |
|--------------------|------------------------|---------------------|-----------------------|
|                    | <u>Factor</u>          | <u>Factor</u>       | <u>Factor</u>         |
| 20"                | 5.55                   | 22.5                | 7.46                  |
| 13 3/8"            | 1.97                   | 4.44                | 8.94                  |
| 9 5/8"             | 2.00                   | 3.07                | 4.73                  |
| 5 1/2"             | 2.45                   | 3.50                | 2.33                  |
| 5 1/2"             | 2.75                   | 3.92                | 7.06                  |

**4. Cement Program: (all cement volumes based on at least 25% excess)**

- a. 20" Surface **Lead** w/ 510 Cl C cmt + 2% bwoc Calcium Chloride + 0.125#/sx CF + 56.3% FW. 14.8 ppg. **Yield** 1.35 cf/sx. **TOC @** surface.
- b. 13 3/8" 1<sup>st</sup> Intermediate **Lead** w/ 415 sx Class C + 2% bwow Calcium Chloride + 0.125#/sx CF + 4% bwoc Bentonite + 81.4% FW, 13.5 ppg. **Yield** 1.75 cf/sx. **Tail** w/ 335 sx Class C + 2% bwow Calcium Chloride + 0.125#/sx CF + 56.3% FW, 14.8 ppg. **Yield** 1.35 cf/sx. **TOC @** surface.
- c. 9 5/8" 2<sup>nd</sup> Intermediate **Lead** w/ 700 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack CF + 3 lbs/sack LCM-1 + 1% bwoc Sodium Metasilicate + 89.7% FW. 12.6 ppg. **Yield** 1.73 cf/sx. **Tail** w/ 300 sx (60:40) Poz (Fly Ash):Cl C Cmt + 5% bwow Sodium Chloride + 0.125 lbs/sack CF + 0.4% bwoc Sodium Metasilicate + 4% bwoc (MPA-5, to enhance compressive, tensile, flexural strength development and reduce permeability) + 65.5% FW. 13.8 ppg. **Yield** 1.38 cf/sx. **TOC @** surface.
- d. 5 1/2" Production **1<sup>st</sup> Lead** w/ 615 sx 50:50 POZ (Fly Ash) Class H + 0.5% bwoc FL-52 + 0.15% bwoc (ASA-301, to reduce free water and settling in cmt slurries) + 10% bwoc Bentonite + 0.3% bwoc (R-21, temperature retarder) + 130.5% FW, 11.8 ppg. **Yield** 2.30 cf/sx. **2<sup>nd</sup> lead** w/415 sacks (35:65) Poz (Fly Ash):Cl H Cement + 3% bwow Sodium Chloride + 0.125 lbs/sack CF + 0.7% bwoc FL-52 + 6% bwoc Bentonite + 105.4% FW. 12.5 ppg. **Yield** 2.00 cf/sx. **Tail** w/ 1430 sacks (50:50) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 0.5% bwoc FL-52 + 0.5% bwoc Sodium Metasilicate + 57.3% FW, 14.2 ppg. **Yield** 1.28 cf/sx. **TOC @** 750'.

**The above cement volumes could be revised pending the caliper measurement from the open hole logs.**

5. **Pressure Control Equipment**

The BOP system used to drill the 17-1/2" hole will consist of a 20" 2M Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 2M system prior to drilling out the casing shoe.

The BOP system used to drill the 12-1/4" and 8-3/4" holes will consist of a 13-5/8" 3M Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 3M system prior to drilling out the casing shoe.

The pipe rams will be operated and checked as per Onshore Order No 2. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

6. **Proposed Mud Circulation System**

| <u>Depth</u>              | <u>Mud Wt.</u> | <u>Visc</u> | <u>Fluid Loss</u> | <u>Type System</u> |
|---------------------------|----------------|-------------|-------------------|--------------------|
| 0' - 200' <i>see coll</i> | 8.4-9.0        | 30-34       | NC                | FW                 |
| 200' - 850'               | 9.8-10.0       | 28-32       | NC                | Brine              |
| 850' - 2,750'             | 8.4-9.0        | 28-30       | NC                | FW                 |
| 2750' - 11,227'           | 8.6-9.0        | 28-32       | NC-12             | FW                 |

The necessary mud products for weight addition and fluid loss control will be on location at all times.

7. **Auxiliary Well Control and Monitoring Equipment:**

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

8. **Logging, Coring, and Testing Program:**

- Drill stem tests will be based on geological sample shows.
- If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.
- The open hole electrical logging program will be:
  - Total Depth to Intermediate Casing and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper. Dual Laterolog-Micro Laterolog with SP
  - Total Depth to Surface Compensated Neutron with Gamma Ray
  - No coring program is planned

- iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

**9. Potential Hazards:**

- a. No abnormal pressures or temperatures are expected. There is no known presence of H<sub>2</sub>S in this area. If H<sub>2</sub>S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3000 psi and Estimated BHT 130°. No H<sub>2</sub>S is anticipated to be encountered.

**10. Anticipated Starting Date and Duration of Operations:**

- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

# Devon Energy Corporation

**HALLIBURTON** | Sperry Drilling

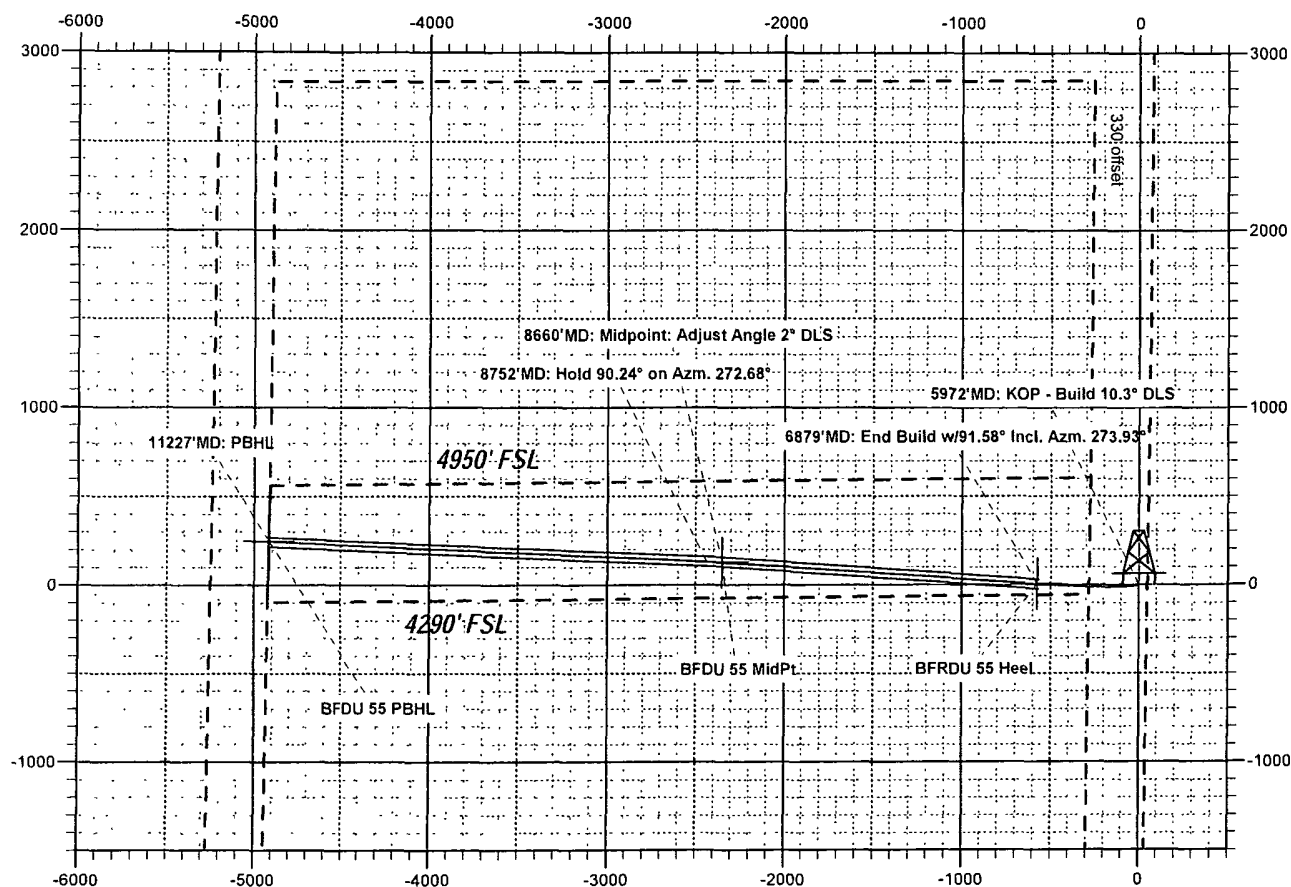
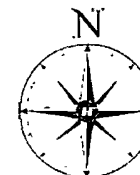
Project: Eddy County, NM (NAD 83)  
Site: Burton Flat Deep Unit  
Well: Burton Flat Deep Unit 55  
Wellbore: Wellbore #1  
Plan: Plan #1  
Rig: TBD

To convert a Magnetic Direction to a Grid Direction, Add 7.76°

Magnetic Model BGGM2011 Date: 13-Jun-12  
Azimuths to Grid North

## SURFACE LOCATION

US State Plane 1983  
New Mexico Eastern Zone  
Elevation GL 3203 6+ 25 @ 3228.60ft (TBD)  
Northing Easting Latitude Longitude  
550748 81 591992 36 32° 30' 50.260 N 104° 10' 8.404 W





# Devon Energy Corporation

HALLIBURTON | Sperry Drilling

Project: Eddy County, NM (NAD 83)  
 Site: Burton Flat Deep Unit  
 Well: Burton Flat Deep Unit 55  
 Wellbore: Wellbore #1  
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## SURFACE LOCATION

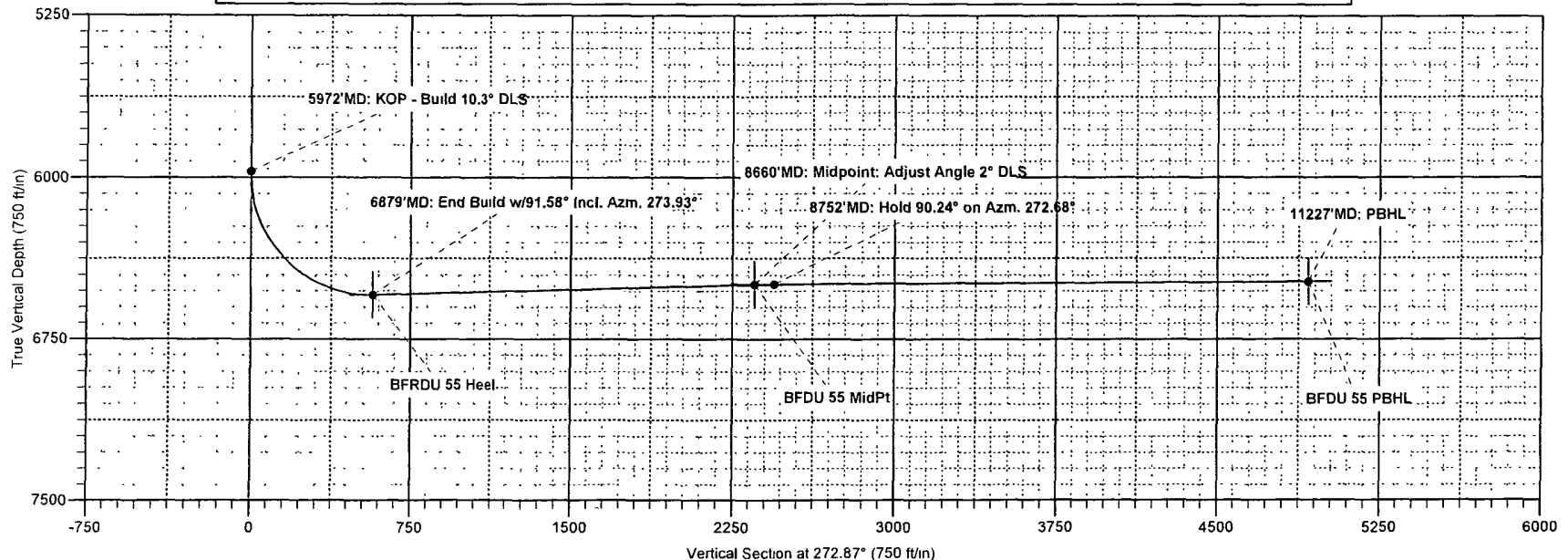
US State Plane 1983  
 New Mexico Eastern Zone  
 Elevation GL 3203.6+ 25 @ 3228 60ft (TBD)  
 Northing Easting Latitude Longitude  
 550748 81 591992.36 32° 30' 50 260 N 104° 10' 8.404 W

## WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name          | TVD     | +N/-S  | +E/-W    | Northing  | Easting   | Shape |
|---------------|---------|--------|----------|-----------|-----------|-------|
| BFDU 55 PBHL  | 6484.00 | 246.31 | -4913.19 | 550995.12 | 587079.17 | Point |
| BFDU 55 MidPt | 6496.00 | 125.42 | -2348.88 | 550874.23 | 589643.48 | Point |
| BFRDU 55 Heel | 6545.00 | 3.32   | -573.00  | 550752.13 | 591419.36 | Point |

## SECTION DETAILS

| MD       | Inc   | Azi    | TVD     | +N/-S  | +E/-W    | DLeg  | TFace   | VSec    | Annotation                                    |
|----------|-------|--------|---------|--------|----------|-------|---------|---------|---|
| 0.00     | 0.00  | 0.00   | 0.00    | 0.00   | 0.00     | 0.00  | 0.00    | 0.00    |   |
| 5972.24  | 0.00  | 0.00   | 5972.24 | 0.00   | 0.00     | 0.00  | 0.00    | 0.00    | 5972'MD KOP - Build 10.3° DLS                 |
| 6015.96  | 4.50  | 220.09 | 6015.92 | -1.31  | -1.11    | 10.30 | 220.09  | 1.04    | Turn / Build                                  |
| 6879.12  | 91.58 | 273.93 | 6545.00 | 3.32   | -573.00  | 10.30 | 53.83   | 572.45  | 6879'MD. End Build w/91.58° Incl Azm. 273.93° |
| 8659.87  | 91.58 | 273.93 | 6496.00 | 125.42 | -2348.88 | 0.00  | 0.00    | 2352.21 | 8660'MD Midpoint Adjust Angle 2° DLS          |
| 8751.45  | 90.24 | 272.68 | 6494.54 | 130.70 | -2440.29 | 2.00  | -136.68 | 2443.78 | 8752'MD Hold 90.24° on Azm. 272.68°           |
| 11227.07 | 90.24 | 272.68 | 6484.00 | 246.31 | -4913.19 | 0.00  | 0.00    | 4919.36 | 11227'MD. PBHL                                |



Date 16 01, June 18 2012

# **Devon Energy Corporation**

Eddy County, NM (NAD 83)

Burton Flat Deep Unit

Burton Flat Deep Unit 55

**Wellbore #1**

**Plan: Plan #1**

## **Sperry Drilling Services Proposal Report**

**18 June, 2012**

Well Coordinates 550,748.81 N, 591,992.36 E (32° 30' 50.26" N, 104° 10' 08.40" W)  
Ground Level: 3,203.60 ft

|                          |   |
|--------------------------|---|
| Local Coordinate Origin: | Centered on Well Burton Flat Deep Unit 55 |
| Viewing Datum:           | GL 3203.6+ 25 @ 3228.60ft (TBD)           |
| TVDs to System:          | N   |
| North Reference          | Grd                                       |
| Unit System:             | API - US Survey Feet                      |

Version: 2003.16 Build: 431

**HALLIBURTON**

## Plan Report for Burton Flat Deep Unit 55 - Plan #1

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | Toolface Azimuth (°) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|----------------------|
| 0.00                | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 100.00              | 0.00            | 0.00        | 100.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 200.00              | 0.00            | 0.00        | 200.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 300.00              | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 400.00              | 0.00            | 0.00        | 400.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 500.00              | 0.00            | 0.00        | 500.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 600.00              | 0.00            | 0.00        | 600.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 700.00              | 0.00            | 0.00        | 700.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 800.00              | 0.00            | 0.00        | 800.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 900.00              | 0.00            | 0.00        | 900.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 1,000.00            | 0.00            | 0.00        | 1,000.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 1,100.00            | 0.00            | 0.00        | 1,100.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 1,200.00            | 0.00            | 0.00        | 1,200.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 1,300.00            | 0.00            | 0.00        | 1,300.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 1,400.00            | 0.00            | 0.00        | 1,400.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 1,500.00            | 0.00            | 0.00        | 1,500.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 1,600.00            | 0.00            | 0.00        | 1,600.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 1,700.00            | 0.00            | 0.00        | 1,700.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 1,800.00            | 0.00            | 0.00        | 1,800.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 1,900.00            | 0.00            | 0.00        | 1,900.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 2,000.00            | 0.00            | 0.00        | 2,000.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 2,100.00            | 0.00            | 0.00        | 2,100.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 2,200.00            | 0.00            | 0.00        | 2,200.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 2,300.00            | 0.00            | 0.00        | 2,300.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 2,400.00            | 0.00            | 0.00        | 2,400.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 2,500.00            | 0.00            | 0.00        | 2,500.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 2,600.00            | 0.00            | 0.00        | 2,600.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 2,700.00            | 0.00            | 0.00        | 2,700.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 2,800.00            | 0.00            | 0.00        | 2,800.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 2,900.00            | 0.00            | 0.00        | 2,900.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 3,000.00            | 0.00            | 0.00        | 3,000.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 3,100.00            | 0.00            | 0.00        | 3,100.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 3,200.00            | 0.00            | 0.00        | 3,200.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 3,300.00            | 0.00            | 0.00        | 3,300.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 3,400.00            | 0.00            | 0.00        | 3,400.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 3,500.00            | 0.00            | 0.00        | 3,500.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 3,600.00            | 0.00            | 0.00        | 3,600.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 3,700.00            | 0.00            | 0.00        | 3,700.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 3,800.00            | 0.00            | 0.00        | 3,800.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 3,900.00            | 0.00            | 0.00        | 3,900.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 4,000.00            | 0.00            | 0.00        | 4,000.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 4,100.00            | 0.00            | 0.00        | 4,100.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 4,200.00            | 0.00            | 0.00        | 4,200.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 4,300.00            | 0.00            | 0.00        | 4,300.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 4,400.00            | 0.00            | 0.00        | 4,400.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 4,500.00            | 0.00            | 0.00        | 4,500.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 4,600.00            | 0.00            | 0.00        | 4,600.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 4,700.00            | 0.00            | 0.00        | 4,700.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 4,800.00            | 0.00            | 0.00        | 4,800.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 4,900.00            | 0.00            | 0.00        | 4,900.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 5,000.00            | 0.00            | 0.00        | 5,000.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 5,100.00            | 0.00            | 0.00        | 5,100.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 5,200.00            | 0.00            | 0.00        | 5,200.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 5,300.00            | 0.00            | 0.00        | 5,300.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 5,400.00            | 0.00            | 0.00        | 5,400.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 5,500.00            | 0.00            | 0.00        | 5,500.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 5,600.00            | 0.00            | 0.00        | 5,600.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 5,700.00            | 0.00            | 0.00        | 5,700.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 5,800.00            | 0.00            | 0.00        | 5,800.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0.00                 |

## Plan Report for Burton Flat Deep Unit 55 - Plan #1

| Measured Depth (ft)   | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | Toolface Azimuth (°) |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|----------------------|
| 5,900.00  | 0 00            | 0 00        | 5,900.00            | 0.00       | 0.00       | 0 00                  | 0 00                  | 0 00                 | 0.00                | 0.00                 |
| 5,972.24  | 0 00            | 0.00        | 5,972.24            | 0 00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                | 0 00                 |
| <b>5972'MD: KOP - Build 10.3° DLS</b>                                 |                 |             |                     |            |            |                       |                       |                      |                     |                      |
| 6,000.00  | 2.86            | 220 09      | 5,999.99            | -0.53      | -0.45      | 0 42                  | 10 30                 | 10 30                | 0 00                | 220.09               |
| 6,015.96  | 4.50            | 220.09      | 6,015.92            | -1.31      | -1.11      | 1.04                  | 10.30                 | 10 30                | 0.00                | 0.00                 |
| <b>Turn / Build</b>   |                 |             |                     |            |            |                       |                       |                      |                     |                      |
| 6,100.00  | 11.88           | 256 26      | 6,099.08            | -5 90      | -11.65     | 11.34                 | 10 30                 | 8.78                 | 43 04               | 53 83                |
| 6,200.00  | 21 91           | 264 75      | 6,194.66            | -10.07     | -40.31     | 39 75                 | 10 30                 | 10 03                | 8.49                | 17.93                |
| 6,300.00  | 32 11           | 268.02      | 6,283.64            | -12.70     | -85.57     | 84 83                 | 10.30                 | 10 20                | 3.28                | 9.78                 |
| 6,400.00  | 42.35           | 269 84      | 6,363.16            | -13 72     | -145.97    | 145 10                | 10.30                 | 10 24                | 1 81                | 6.85                 |
| 6,500.00  | 52.61           | 271.05      | 6,430.65            | -13 08     | -219.58    | 218 65                | 10.30                 | 10 26                | 1 21                | 5 40                 |
| 6,600.00  | 62 89           | 271 97      | 6,483.95            | -10.82     | -304 00    | 303.08                | 10 30                 | 10 27                | 0.92                | 4 58                 |
| 6,700.00  | 73 16           | 272.73      | 6,521.32            | -7 00      | -396.53    | 395.69                | 10 30                 | 10.28                | 0 76                | 4.08                 |
| 6,800.00  | 83 44           | 273 41      | 6,541.56            | -1 74      | -494 18    | 493 48                | 10.30                 | 10 28                | 0.68                | 3 80                 |
| 6,879.12  | 91 58           | 273 93      | 6,545.00            | 3.32       | -573 00    | 572.45                | 10.30                 | 10 28                | 0 66                | 3 66                 |
| <b>6879'MD: End Build w/91.58° Incl. Azm. 273.93° - BFRDU 55 Heel</b> |                 |             |                     |            |            |                       |                       |                      |                     |                      |
| 6,900.00  | 91.58           | 273 93      | 6,544.43            | 4.75       | -593.82    | 593.31                | 0 00                  | 0 00                 | 0 00                | 0.00                 |
| 7,000.00  | 91.58           | 273 93      | 6,541.67            | 11 61      | -693.55    | 693.26                | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 7,100.00  | 91.58           | 273.93      | 6,538.92            | 18.46      | -793 28    | 793 20                | 0 00                  | 0 00                 | 0 00                | 0.00                 |
| 7,200.00  | 91.58           | 273 93      | 6,536.17            | 25 32      | -893.00    | 893.15                | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 7,300.00  | 91.58           | 273.93      | 6,533.42            | 32 18      | -992 73    | 993 09                | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 7,400.00  | 91.58           | 273.93      | 6,530.67            | 39.03      | -1,092.46  | 1,093 04              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 7,500.00  | 91 58           | 273.93      | 6,527.92            | 45 89      | -1,192.18  | 1,192 98              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 7,600.00  | 91 58           | 273.93      | 6,525.16            | 52 75      | -1,291.91  | 1,292 93              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 7,700.00  | 91.58           | 273 93      | 6,522.41            | 59.60      | -1,391.64  | 1,392.87              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 7,800.00  | 91 58           | 273 93      | 6,519.66            | 66.46      | -1,491.36  | 1,492.82              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 7,900.00  | 91 58           | 273.93      | 6,516.91            | 73 32      | -1,591.09  | 1,592.76              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 8,000.00  | 91 58           | 273.93      | 6,514.16            | 80.18      | -1,690.82  | 1,692.71              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 8,100.00  | 91 58           | 273 93      | 6,511.41            | 87 03      | -1,790.54  | 1,792 65              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 8,200.00  | 91 58           | 273 93      | 6,508.65            | 93 89      | -1,890.27  | 1,892.60              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 8,300.00  | 91 58           | 273.93      | 6,505.90            | 100 75     | -1,990.00  | 1,992.54              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 8,400.00  | 91.58           | 273 93      | 6,503.15            | 107 60     | -2,089.72  | 2,092 49              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 8,500.00  | 91 58           | 273 93      | 6,500.40            | 114 46     | -2,189.45  | 2,192 43              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 8,600.00  | 91 58           | 273.93      | 6,497.65            | 121.32     | -2,289.18  | 2,292 38              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 8,659.87  | 91 58           | 273.93      | 6,496.00            | 125 42     | -2,348.88  | 2,352 21              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| <b>8660'MD: Midpoint: Adjust Angle 2° DLS - BFDU 55 MidPt</b>         |                 |             |                     |            |            |                       |                       |                      |                     |                      |
| 8,700.00  | 90 99           | 273.38      | 6,495.10            | 127.98     | -2,388.92  | 2,392.33              | 2 00                  | -1.46                | -1 37               | -136.68              |
| 8,751.45  | 90 24           | 272.68      | 6,494.54            | 130 70     | -2,440.29  | 2,443.78              | 2 00                  | -1 46                | -1 37               | -136 69              |
| <b>8752'MD: Hold 90.24° on Azm. 272.68°</b>                           |                 |             |                     |            |            |                       |                       |                      |                     |                      |
| 8,800.00  | 90 24           | 272 68      | 6,494.34            | 132.97     | -2,488.79  | 2,492 33              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 8,900.00  | 90 24           | 272 68      | 6,493.91            | 137 64     | -2,588.68  | 2,592 33              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 9,000.00  | 90 24           | 272 68      | 6,493.49            | 142.31     | -2,688.57  | 2,692 32              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 9,100.00  | 90.24           | 272 68      | 6,493.06            | 146 98     | -2,788.46  | 2,792 32              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 9,200.00  | 90.24           | 272 68      | 6,492.63            | 151 65     | -2,888.35  | 2,892 32              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 9,300.00  | 90.24           | 272.68      | 6,492.21            | 156.32     | -2,988.24  | 2,992 32              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 9,400.00  | 90 24           | 272 68      | 6,491.78            | 160 99     | -3,088.13  | 3,092 32              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 9,500.00  | 90 24           | 272 68      | 6,491.36            | 165 66     | -3,188.02  | 3,192.32              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 9,600.00  | 90 24           | 272.68      | 6,490.93            | 170.33     | -3,287.91  | 3,292 31              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 9,700.00  | 90.24           | 272 68      | 6,490.50            | 175 00     | -3,387.80  | 3,392.31              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 9,800.00  | 90 24           | 272 68      | 6,490.08            | 179 67     | -3,487.69  | 3,492 31              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 9,900.00  | 90 24           | 272.68      | 6,489.65            | 184 34     | -3,587.58  | 3,592 31              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 10,000.00   | 90.24           | 272 68      | 6,489.23            | 189.01     | -3,687.47  | 3,692 31              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 10,100.00   | 90 24           | 272.68      | 6,488.80            | 193 68     | -3,787.36  | 3,792 31              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 10,200.00   | 90 24           | 272 68      | 6,488.37            | 198 35     | -3,887.25  | 3,892 31              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 10,300.00   | 90 24           | 272 68      | 6,487.95            | 203 02     | -3,987.14  | 3,992 30              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 10,400.00   | 90 24           | 272 68      | 6,487.52            | 207.69     | -4,087.03  | 4,092 30              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 10,500.00   | 90 24           | 272 68      | 6,487.10            | 212 36     | -4,186.92  | 4,192 30              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 10,600.00   | 90 24           | 272.68      | 6,486.67            | 217 03     | -4,286.81  | 4,292 30              | 0 00                  | 0 00                 | 0 00                | 0 00                 |
| 10,700.00   | 90.24           | 272.68      | 6,486.25            | 221 70     | -4,386.70  | 4,392 30              | 0 00                  | 0 00                 | 0 00                | 0 00                 |

## Plan Report for Burton Flat Deep Unit 55 - Plan #1

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | Toolface Azimuth (°) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|----------------------|
| 10,800.00           | 90.24           | 272.68      | 6,485.82            | 226.37     | -4,486.59  | 4,492.30              | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 10,900.00           | 90.24           | 272.68      | 6,485.39            | 231.04     | -4,586.48  | 4,592.30              | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 11,000.00           | 90.24           | 272.68      | 6,484.97            | 235.71     | -4,686.37  | 4,692.29              | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 11,100.00           | 90.24           | 272.68      | 6,484.54            | 240.38     | -4,786.26  | 4,792.29              | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 11,200.00           | 90.24           | 272.68      | 6,484.12            | 245.05     | -4,886.15  | 4,892.29              | 0.00                  | 0.00                 | 0.00                | 0.00                 |
| 11,227.07           | 90.24           | 272.68      | 6,484.00            | 246.31     | -4,913.19  | 4,919.36              | 0.00                  | 0.00                 | 0.00                | 0.00                 |

11227'MD: PBHL - BFDU 55 PBHL

### Plan Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates +N/-S (ft) | +E/-W (ft) | Comment                                      |
|---------------------|---------------------|------------------------------|------------|--|
| 5,972.24            | 5,972.24            | 0.00                         | 0.00       | 5972'MD: KOP - Build 10.3° DLS               |
| 6,015.96            | 6,015.92            | -1.31                        | -1.11      | Turn / Build                                 |
| 6,879.12            | 6,545.00            | 3.32                         | -573.00    | 6879'MD: End Build w/91.58° Incl Azm 273.93° |
| 8,659.87            | 6,496.00            | 125.42                       | -2,348.88  | 8660'MD: Midpoint Adjust Angle 2° DLS        |
| 8,751.45            | 6,494.54            | 130.70                       | -2,440.29  | 8752'MD: Hold 90.24° on Azm 272.68°          |
| 11,227.07           | 6,484.00            | 246.31                       | -4,913.19  | 11227'MD: PBHL                               |

### Vertical Section Information

| Angle Type | Target               | Azimuth (°) | Origin Type | Origin +N/-S (ft) | +E/-W (ft) | Start TVD (ft) |
|------------|----------------------|-------------|-------------|-------------------|------------|----------------|
| User       | No Target (Freehand) | 272.87      | Slot        | 0.00              | 0.00       | 0.00           |

### Survey tool program

| From (ft) | To (ft)   | Survey/Plan | Survey Tool |
|-----------|-----------|-------------|-------------|
| 0.00      | 11,227.07 | Plan #1     | MWD         |

### Targets associated with this wellbore

| Target Name   | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Shape |
|---------------|----------|------------|------------|-------|
| BFDU 55 MidPt | 6,496.00 | 125.42     | -2,348.88  | Point |
| BFRDU 55 Heel | 6,545.00 | 3.32       | -573.00    | Point |
| BFDU 55 PBHL  | 6,484.00 | 246.31     | -4,913.19  | Point |

## North Reference Sheet for Burton Flat Deep Unit - Burton Flat Deep Unit 55 - Wellbore #1

All data is in US Feet unless otherwise stated Directions and Coordinates are relative to Grid North Reference

Vertical Depths are relative to GL 3203 6+ 25 @ 3228 60ft (TBD) Northing and Easting are relative to Burton Flat Deep Unit 55

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -104.33°, Longitude Origin 0° 0' 0 000 E°, Latitude Origin 0° 0' 0 000 N°

False Easting 541,337.50ft, False Northing 0.00ft, Scale Reduction: 0.99991203

Grid Coordinates of Well 550,748 81 ft N, 591,992 36 ft E

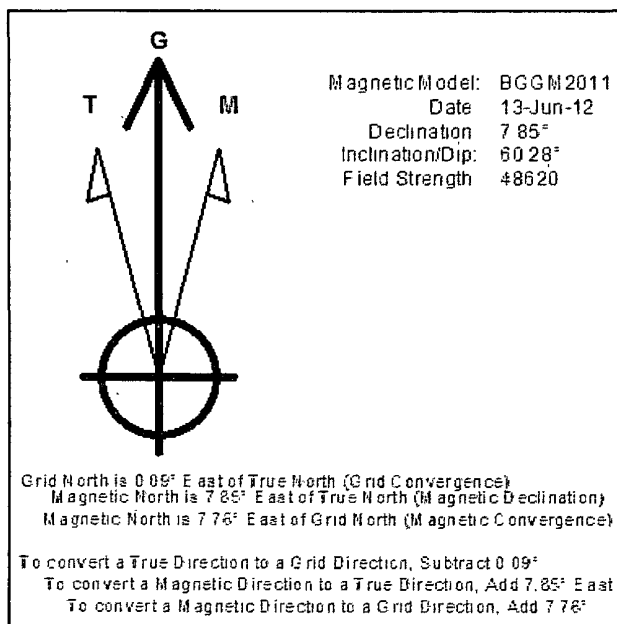
Geographical Coordinates of Well 32° 30' 50.26" N, 104° 10' 08.40" W

Grid Convergence at Surface is 0 09°

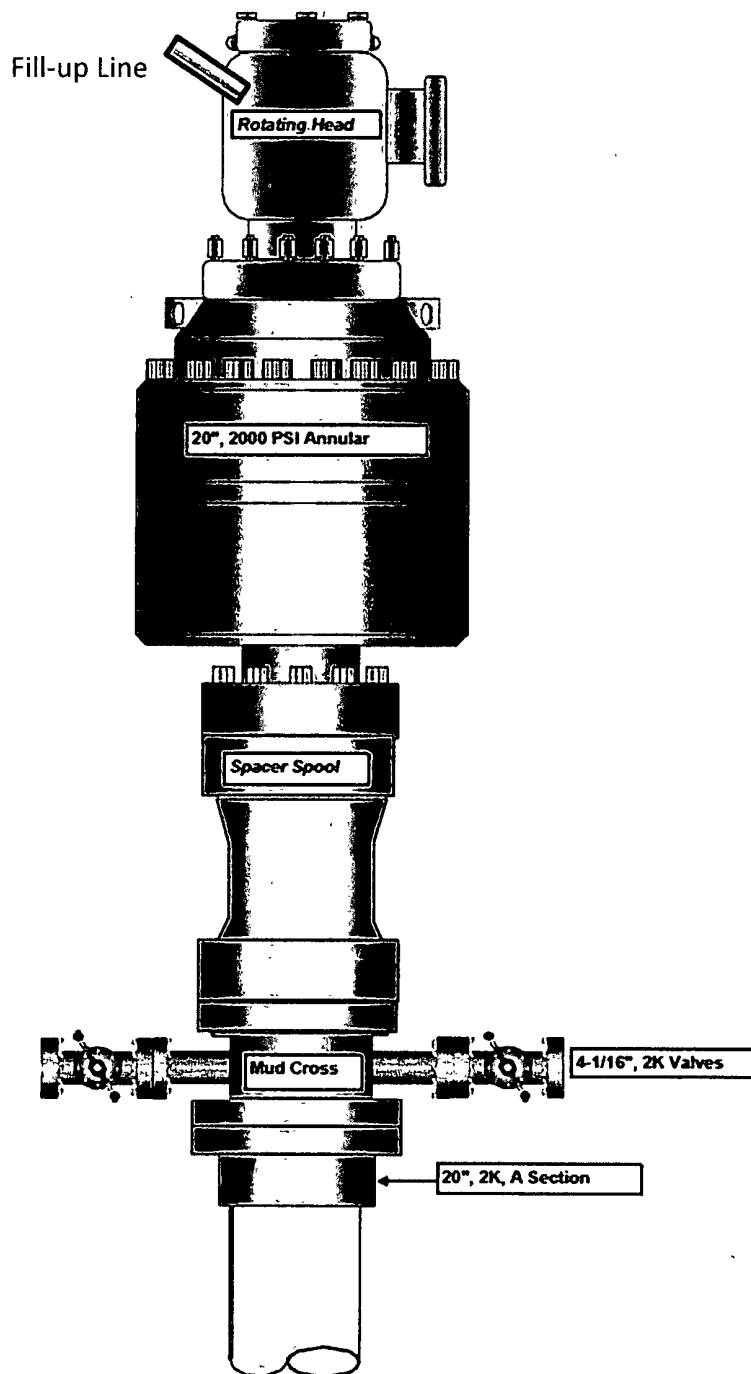
Based upon Minimum Curvature type calculations, at a Measured Depth of 11,227 07ft

the Bottom Hole Displacement is 4,919.36ft in the Direction of 272 87° (Grid)

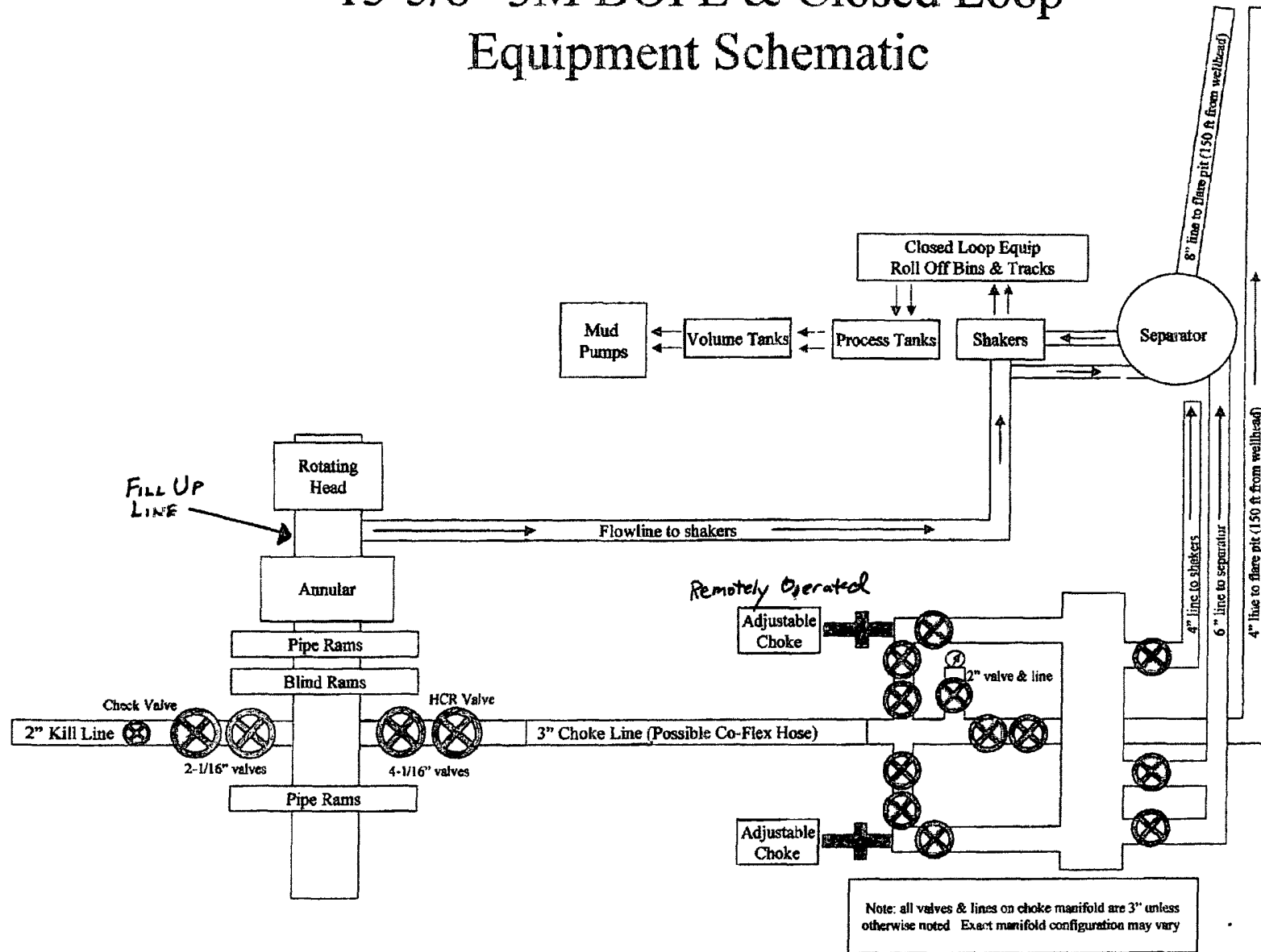
Magnetic Convergence at surface is -7 76° (13 June 2012, , BGGM2011)



20" 2K Annular



# 13-5/8" 3M BOPE & Closed Loop Equipment Schematic





## **NOTES REGARDING BLOWOUT PREVENTERS**

**Devon Energy Production Company, LP**

**Burton Flat Deep Unit #55H**

**Surface Location: 3175' FNL & 50' FEL, Unit 9, Sec 3 T21S R27E, Eddy, NM**

**Bottom Hole Location: 2920' FNL & 330' FWL, Unit 12, Sec 3 T21S R27E, Eddy, NM**

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 3000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 3000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.



# QUALITY DOCUMENT

PHOENIX RUBBER  
INDUSTRIAL LTD.

H-6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152  
Phone: (3662) 566-737 • Fax: (3662) 566-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 26  
Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.tauruserge.hu

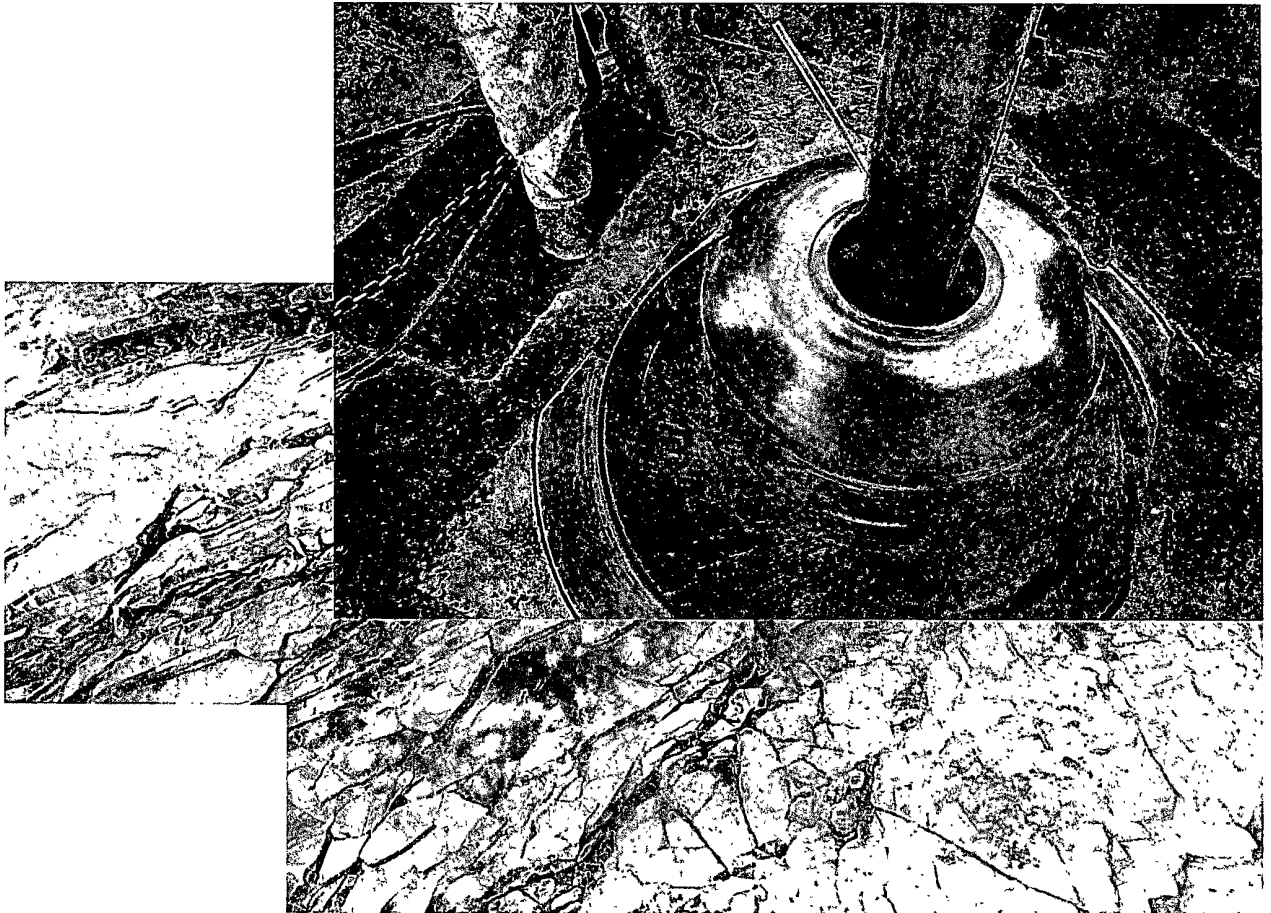
| QUALITY CONTROL<br>INSPECTION AND TEST CERTIFICATE  |             |                                      |  | CERT N° 890        |  |
|---|-------------|--------------------------------------|--|--------------------|--|
| PURCHASER: Phoenix Beattie Co.  |             |                                      |  | P.O. N° 1520FA-872 |  |
| PHOENIX ORDER N° 172232   |             | HOSE TYPE: 3" ID Choke and Kill Hose |  |                    |  |
| HOSE SERIAL N° 34403  |             | NOMINAL / ACTUAL LENGTH: 11,43 m     |  |                    |  |
| W.P 68,96 MPa 10000 psi   |             | T.P 103,4 MPa 15000 psi              |  | Duration: 60 min.  |  |
| Pressure test with water at ambient temperature   |             |                                      |  |                    |  |
| See attachment. (1 page)  |             |                                      |  |                    |  |
| ↑ 10 mm = 10 Min.<br>→ 10 mm = 16 MPa   |             |                                      |  |                    |  |
| COUPLINGS   |             |                                      |  |                    |  |
| Type  | Serial N°   |                                      | Quality  | Heat N°            |  |
| 3" coupling with<br>4 1/16" Flange end  | 1231/a 1228 |                                      | AISI 4130  | 80751              |  |
|   |             |                                      | AISI 4130  | 47438              |  |
|   |             |                                      |  |                    |  |
|   |             |                                      |  |                    |  |
| API Spec 16 C<br>Temperature rate: "B"  |             |                                      |  |                    |  |
| All metal parts are flawless  |             |                                      |  |                    |  |
| WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT. |             |                                      |  |                    |  |
| Date:<br><br>20. June. 2002.  | Inspector   |                                      | Quality Control<br>PHOENIX RUBBER<br>Industrial Ltd.<br>Hose Inspection and<br>Certification Dept. |                    |  |

VERIFIED TRUE COPY  
PHOENIX RUBBER O.C.





Commitment Runs Deep



Design Plan  
Operation and Maintenance Plan  
Closure Plan

SENM - Closed Loop Systems  
June 2010

## **I. Design Plan**

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

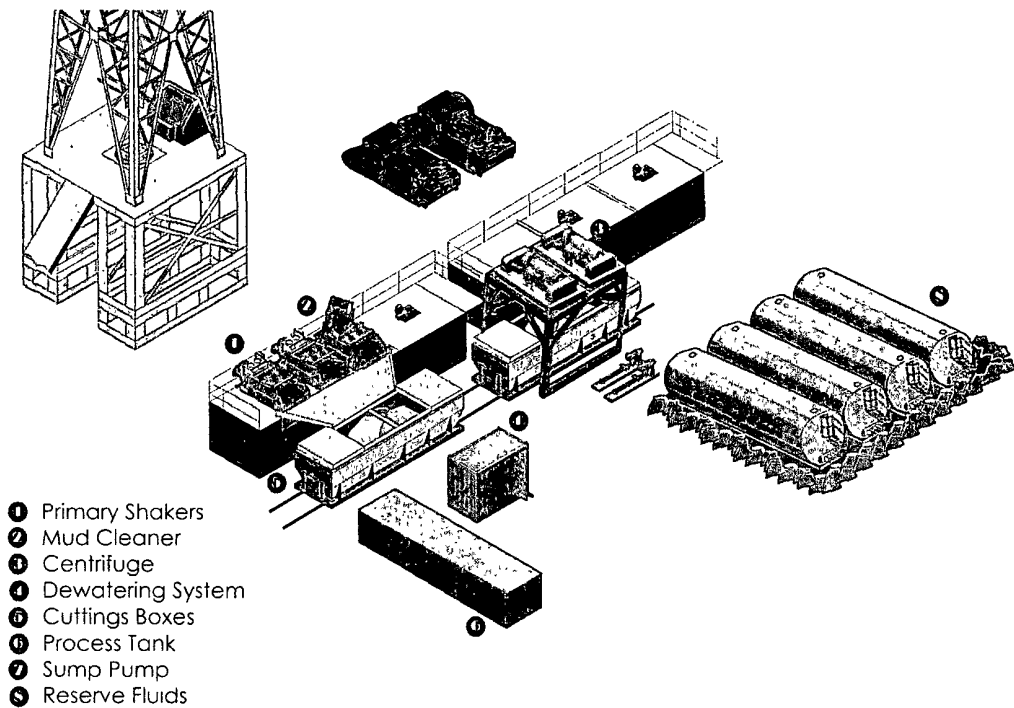
## **II. Operations and Maintenance Plan**

*Primary Shakers:* The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

**Mud Cleaner:** The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



## Closed Loop Schematic



**Centrifuges:** The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

**Dewatering System:** The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

*Cuttings Boxes:* Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

*Process Tank: (Optional)* The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

*Sump and Sump Pump:* The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

*Reserve Fluids (Tank Farm):* A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

### **III. Closure Plan**

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.





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

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

**For**

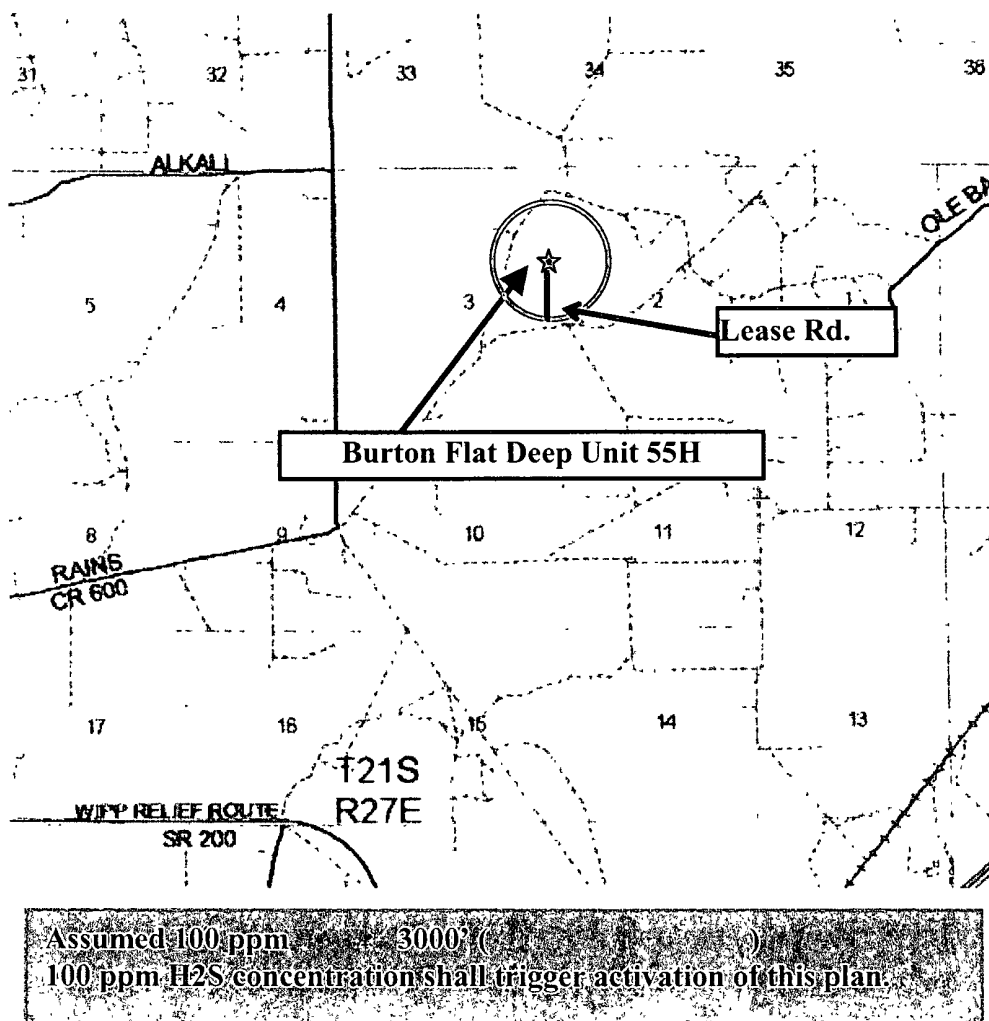
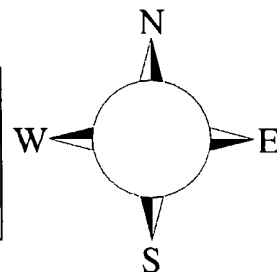
**Burton Flat Deep Unit 55H**

**Sec-3, T-21S R-27E  
3175' FNL & 50' FEL,  
LAT. = 32.5139611°N (NAD83)  
LONG = 104.1690011°W**

**Eddy County NM**

## Burton Flat Deep Unit 55H

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.



### Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road, South then Southwest or Northeast on primitive road. Crews should then block both directions of the road 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 no homes or buildings in or near the ROE.

**Assumed 100 ppm ROE = 3000'**

**100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.**

## Emergency Procedures

In the event 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.
- Evacuate any public places encompassed by the 100 ppm ROE.
- 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 occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - Detection of H<sub>2</sub>S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency 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)

## **Hydrogen Sulfide Drilling Operation Plan**

### **I. HYDROGEN SULFIDE (H<sub>2</sub>S) TRAINING**

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H<sub>2</sub>S metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

## **II. HYDROGEN SULFIDE TRAINING**

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H<sub>2</sub>S.

### **1. Well Control Equipment**

- A. Flare line
- B. Choke manifold
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

### **2. Protective equipment for essential personnel:**

- A. 30-minute SCBA units located in the doghouse and at briefing areas, as indicated on well site diagram. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

### **3. H<sub>2</sub>S detection and monitoring equipment:**

- A. Portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H<sub>2</sub>S levels of 20 PPM are reached. These units are usually capable of detecting SO<sub>2</sub>, which is a byproduct of burning H<sub>2</sub>S.

### **4. Visual warning systems:**

- A. Wind direction indicators as shown on well site diagram
- B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate..

### **5. Mud program:**

- A. The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. Proper mud weight, safe drilling practices and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.

**6. Metallurgy:**

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H<sub>2</sub>S trim.
- B. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

**7. Communication:**

- A. Radio communications in company vehicles including cellular telephones and 2-way radio
- B. Land line (telephone) communications at Office

**8. Well testing:**

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H<sub>2</sub>S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

## Devon Energy Corp. Company Call List

| <u>Artesia (575)</u>            | <u>Cellular</u>    | <u>Office</u>      | <u>Home</u>    |
|---------------------------------|--------------------|--------------------|----------------|
| Foreman – Robert Bell .....     | 748-7448 .....     | 748-0178 .....     | 746-2991       |
| Asst. Foreman –Tommy Polly..... | 748-5290 .....     | 748-0165 .....     | 748-2846       |
| Don Mayberry .....              | 748-5235 .....     | 748-0164 .....     | 746-4945       |
| Montral Walker .....            | 390-5182 .....     | 748-0193 .....     | 936-414-6246   |
| Engineer – Marcos Ortiz.....    | (405) 317-0666.... | (405) 552-8152.... | (405) 381-4350 |

## Agency Call List

| <u>Lea</u>    | <u>Hobbs</u>                                   |
|---------------|--|
| <u>County</u> | State Police .....                             |
| <u>(575)</u>  | City Police .....                              |
|               | Sheriff's Office .....                         |
|               | Ambulance.....                                 |
|               | Fire Department.....                           |
|               | LEPC (Local Emergency Planning Committee)..... |
|               | NMOCD .....                                    |
|               | US Bureau of Land Management .....             |

| <u>Eddy</u>   | <u>Carlsbad</u>   |
|---------------|---|
| <u>County</u> | State Police .....                                      |
| <u>(575)</u>  | City Police .....                                       |
|               | Sheriff's Office .....                                  |
|               | Ambulance.....  |
|               | Fire Department.....                                    |
|               | LEPC (Local Emergency Planning Committee).....          |
|               | US Bureau of Land Management .....                      |
|               | New Mexico Emergency Response Commission (Santa Fe) ... |
|               | 24 HR .....   |
|               | National Emergency Response Center (Washington, DC) ..  |

### **Emergency Services**

|                  |  |
|------------------|--|
|                  | Boots & Coots IWC .....                      |
|                  | Cudd Pressure Control.....                   |
|                  | Halliburton .....                            |
|                  | B. J. Services.....                          |
| <i>Give</i>      | Flight For Life - Lubbock, TX .....          |
| <i>GPS</i>       | Aerocare - Lubbock, TX .....                 |
| <i>position:</i> | Med Flight Air Amb - Albuquerque, NM .....   |
|                  | Lifeguard Air Med Svc. Albuquerque, NM ..... |

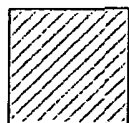
Prepared in conjunction with  
Wade Rohloff





## Proposed Interim Site Reclamation

Devon Energy Production Co.  
BFDU 55H  
3175' FNL & 50' FEL  
Sec. 3-T21S-R27E  
Eddy County, NM

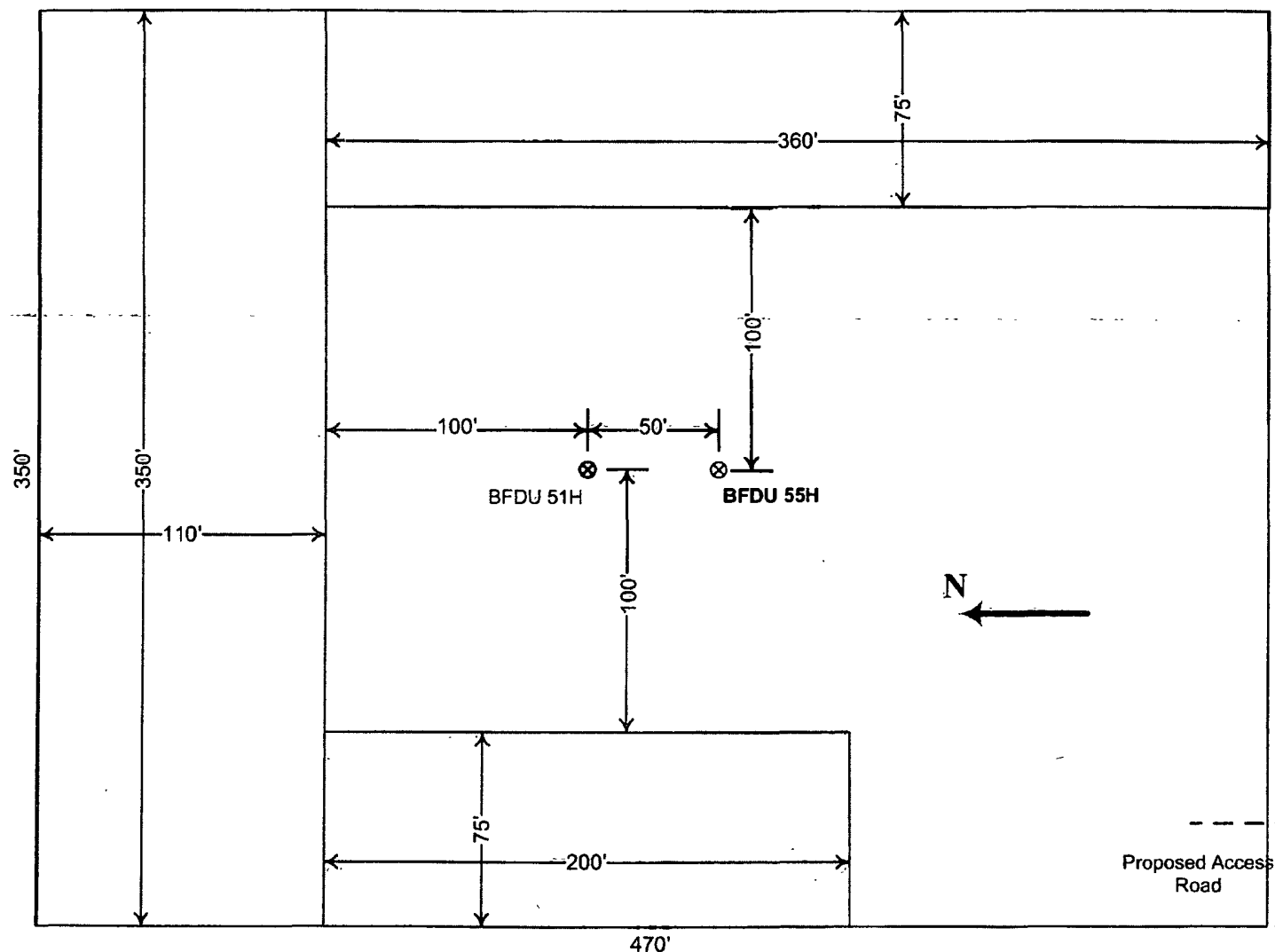


Proposed  
Reclamation  
Area



Scale: 1in = 60ft.

### Proposed Production Facility at the BFDU 52H/56H well pad in Sec. 3-T21S-R27E





## PECOS DISTRICT CONDITIONS OF APPROVAL

|                       |                                    |
|-----------------------|------------------------------------|
| OPERATOR'S NAME:      | Devon Energy Production Company LP |
| LEASE NO.:            | NM-0560295                         |
| WELL NAME & NO.:      | Burton Flat Deep Unit #55H         |
| SURFACE HOLE FOOTAGE: | 3175' FNL & 0050' FEL              |
| BOTTOM HOLE FOOTAGE:  | 2920' FNL & 0330' FWL              |
| LOCATION:             | Section 3, T. 21 S., R 27 E., NMPM |
| COUNTY:               | Eddy County, New Mexico            |

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

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- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
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  - Commercial well determination
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  - Topsoil
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  - Roads
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- ☒ **Drilling**
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