OCD-HOBBS

Form 3160-3 (April 2004)			FORM AP OMB No. 1 Expires Mar		
UNITED STATES DEPARTMENT OF THE	5. Lease Serial No.				
BUREAU OF LAND MAN APPLICATION FOR PERMIT TO			6. If Indian, Allotee or	r Tribe Name	
la. Type of work: DRILL REENT	ER		7 If Unit or CA Agreen	nent, Name and No.	
Ib. Type of Well: Gas Well Other	✓ Single Zone M	Iultiple Zone	8. Lease Name and We Rattlesnake Fed		
2. Name of Operator Devon Energy Production Company, L		375	9. API Well No.	-37629	
3a. Address 20 North Broadway Oklahoma City, Oklahoma City 73102-8260	3b. Phone No. (include area code 405-552-8198	le)	10. Field and Pool, or Ex Wildcat; Delaw	ploratory	
4. Location of Well (Report location clearly and in accordance with an	ty State requirements.*)	· <u>-</u>	11. Sec., T. R. M. or Blk.	and Survey or Area	
	Unit P		Sec 13 T26S R34	E	
<ol> <li>Distance in miles and direction from nearest town or post office* Approximately 20 miles west of Jal, NM</li> </ol>			12. County or Parish Lea County	13. State	
<ol> <li>Distance from proposed*</li> <li>location to nearest</li> <li>property or lease line, ft.</li> <li>(Also to nearest drig, unit line, if any)</li> </ol>	16. No. of acres in lease 1920	17. Spaci 40 ac	ng Unit dedicated to this well		
<ul> <li>18. Distance from proposed location*</li> <li>to nearest well, drilling, completed, applied for, on this lease, ft.</li> </ul>	19. Proposed Depth 9500 MD		/BIA Bond No. on file	مند قولتان الموليان	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3238' GL	22. Approximate date work wil 01/10/2006	ll start*	23. Estimated duration 30 days		
	24. Attachments				
<ol> <li>The following, completed in accordance with the requirements of Onshor</li> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	4. Bond to cov ltem 20 abo Lands, the 5. Operator cer	ver the operation ve). rtification site specific inf	his form: ons unless covered by an ex formation and/or plans as m		
25. Signature	Name (Printed/Typed) Norvella Adams	6	Da	ate 11/30/2005	
Title Sr. Staff Eng. Tech					
Approved by (Signature)	Name (Printed/Typed) /s/ T	`ony J. ]	Herrell	ate JAN 0 5 200	
FIELD MANAGER	Office CARL	SBAD	FIELD OFF	FICE	
Application approval does not warrant or certify that the applicant hold obscuct operations thereon. Conditions of approval, if any, are attached.			bject lease which would entite DVAL FOR		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cr States any false, fictitious or fraudulent statements or representations as t	ime for any person knowingly a	nd willfully to r			

\*(Instructions on page 2)

**)** -

# APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

 $\cdots =$ 

C-06-06

EA 238

#### **Additional Operator Remarks:**

4

Devon Energy Production Company, LP proposes to drill to approximately 9,500' to test the Delaware for commercial quantities of oil. If deemed non-commercial, the wellbore will be plugged and abandoned as per Federal regulations. Programs to adhere to onshore oil and gas regulations are outlined in the following exhibits and attachments.

Approximately 1133' of new access road will need to be constructed.

### **DRILLING PROGRAM**

### Devon Energy Production Company, LP **RATTLESNAKE FEDERAL UNIT #6** Unit Letter P, 660 FSL & 660 FEL, Section 13-26S-34E Lea County, New Mexico

### 1. Geologic Name of Surface Formation

Alluvium

.

### 2. Estimated Tops of Important Geologic Markers

Rustler	940'
Top Salt	1,300'
Base Salt	5,050'
Delaware	5,320'
TD	9,500'

### 3. Estimated Depths of Anticipated Fresh Water, Oil or Gas

The estimated depths at which water, oil and gas will be encountered are as follows.

Water:None expected in areaOilBone Spring @ 6,000'Gas:Wolfcamp @ 12,640'

# 4. Casing Program

٠

١

<b>INTERVALS</b>	LENGTH	CASING
<u>Surface</u> 0 – 1000'	1000'	13 3/8" 48# H-40 ST&C
<u>Intermediate</u> 0 – 5350'	Seq 2 - 4000'	8 5/8" 32# J-55 LT&C
0 5550	Seq 1 - 1350'	8 5/8" 32# HCK-55 LT&C
<u>Production</u> 0 – 9500'	9500'	5 1/2" 17# N-80 LT&C

### Cementing Program

HOLE SIZE	<u>DEPTH</u>	CEMENT	TOC	WOC <u>HRS</u>
<u>Surface</u> 17 ½"	1000'	Lead: 633 sx 35:65 Class C + 2% CaCl + 0.25#/sx Cello Flake + 6% Bentonite. Tail: 300 sxs Cl "C" + 2% CaCl + 0.25#/sx Cello Flake.	Surf. 🗸	12
Intermediate 12 ¼"	5350'	Lead: 1798 sx 35:65 POZ Class C+ 5% salt +0.25#/sx Cello Flake + 6% Bentonite Tail: 300 sx 60:40 POZ Class C + 5% salt + 0.25#/sx Cello Flake + 4% MPA-1 + 0.3% Sodium Metasilicate	Surf. 🗸	12
Production 7 7/8"	9500'	Lead: 230 sx 35:65 Poz Class C + 3% NaCl + 0.1% R-3 + 0.25#/sx Cello Flake + 3 #/sx LCM-1 + 0.3% FL-52 + 6% Bentonite Tail: 775 sx 60:40 Poz Class H + 1% NaCl + 0.75% BA-10 + 0.25#/sx Cello Flake + 2#.sx Kol Seal + 4% MPA-1 + 0.75% EC- 1 + 0.2% R-3	4850 J	24

The cement volumes for the 5 1/2" casing will be revised pending the caliper measurement from the open hole logs.

### 5. Minimum Specifications for Pressure Control

٤

The blowout preventor equipment (BOP) shown in Exhibit # 1 will consist of a (5M system) double ram type (5000 psi WP) preventor and a bag-type (Hydril) preventor (3000 psi WP). Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 ½" drill pipe rams on bottom. Both BOP's will be installed on the 13 3/8" surface casing and utilized continuously until total depth is reached. All BOP's and associated equipment will be tested to 1200 psi with the rig pump before drilling out the 13 3/8" casing shoe (70% of 48#, H-40 casing). Prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2. Anticipated BHP 4800 psi and 160° BHT.

Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a kelly cock, floor safety valve, choke lines and choke manifold having 5000 psi WP rating.

### 6. <u>Types and Characteristics of the Proposed Mud System</u>

The well will be drilled to total depth with fresh water and brine mud systems. Depths of systems are as follows.

<u>Depth</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Water Loss</u>
		<u>(ppg)</u>	<u>(1/sec)</u>	<u>(cc)</u>
0' - 1000'	Fresh Water	8.4-9.4	32-34	No control
1000' – 5350'	Brine	10.0 – 10.1	29	No control
5350' – TD'	Fresh Water/ Cut Brine	8.4-10.0	28	No control

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. A kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.

### 8. Logging, Testing and Coring Program

- A. Drill stem tests may be run on potential pay interval.
- B. The open hole electrical logging program will be as follows.
  - 1) DLL/MSFL/GR from total depth to base of intermediate casing.
  - 2) CNL/LDT/GR from total depth to base of intermediate casing with CNL/GR to surface.
- C. No coring program is planned.
- D. Additional testing may be initiated subsequent to setting the 5 1/2" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

### 9. Abnormal Pressures, Temperatures and Potential Hazards

No abnormal pressures or temperatures are foreseen. The anticipated bottom hole temperature at total depth is 160 degrees and maximum bottom hole pressure is 4800 psi. No Hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation intervals have been encountered in adjacent wells.

### 10. Anticipated Starting Date and Duration of Operations

Road and location preparation will not be undertaken until approval has been received from the BLM. If approved, this well will be drilled as part of a development project. The anticipated spud date for the project is in January 10, 2006. The drilling operation should require approximately 30 days. If the well is deemed productive, completion operations will require, at minimum, an additional 30 days of testing to ascertain whether permanent production facilities will be constructed.

### SURFACE USE AND OPERATING PLAN

Devon Energy Production Company, LP **RATTLESNAKE FEDERAL UNIT #6** Unit Letter P, 660 FSL & 660 FEL, Section 13-26S-34E Lea County, New Mexico

### 1. Existing Roads

- A. The well site and elevation plat for the proposed well are reflected on the attached exhibit. This well was staked by Basin Surveys in Hobbs, NM.
- B. All roads into the location are depicted in the attached exhibit. New construction from the existing lease road will be used to access the location. New construction will conform to the specifications outlined in Item #2 below.
- C. Directions to location: From the Junction of Whitworth Street and 3<sup>rd</sup> Street in Jal, N.M., Go southwest on 3<sup>rd</sup> for 7.0 miles to Beckham Ranch Road; then west for 5.2 miles to a "T", go right at "T" for 3.7 miles to "Y"; then take right fork and go 1.1 mile to proposed lease road at "T".

### 2. Proposed Access Road

The attached exhibit shows the existing lease road. Access to this location will require the construction of about 1133' of proposed access road. All new construction will adhere to the following.

- A. The maximum width of the road will be 15'. It will be crowned and made of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
- B. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location. The average grade will be approximately 1%.
- C. No cattle guards, grates or fence cuts will be required. No turnouts are planned.

### 3. Location of Existing and/or Proposed Facilities

- A. In the event the well is found productive, a tank battery would be constructed and the necessary production equipment will be installed at the well site.
  - 1) If necessary, the well will be operated by means of an electric prime mover. Electric power poles will be set along side of the access road.
  - 2) The tank battery, all connections and all lines will adhere to API standards.
- B. If the well is productive, rehabilitation plans are as follows.
  - 1) The reserve pit will be closed pursuant to OCD rules and guidelines and reclaimed as per BLM specifications.
  - 2) The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

#### 4. Location and Type of Water Supply

The proposed well will be drilled using a combination of brine and fresh water mud systems (outlined in Drilling Program). The water will be obtained from commercial sources and will be transported over the existing and proposed roads. No water well will be drilled on the location.

### 5. <u>Source of Construction Materials</u>

All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit. All roads will be constructed of 6" rolled and compacted caliche.

### 6. Methods of Handling Waste Disposal

- A. Drill cuttings will be disposed into the reserve pit.
- B. Drilling fluids will be contained in steel mud tanks. The reserve pit will contain excess drilling fluid or fluid from the well during drilling, cementing and completion operations. The reserve pit will be an earthen pit roughly 200' x 240' x 8', or smaller, in size.
- C. The reserve pit will be fenced on three sides throughout drilling operations and will be totally isolated upon removal of the rotary rig. The pit will be lined using a 12 mil woven synthetic liner to minimize loss of drilling fluids.
- D. Water produced from the well during completion operations will be disposed into a steel tank or reserve pit, if volumes prove excessive. After placing the well on production through the production facilities, all water will be collected in tanks. Produced oil will be separated into steel stock tanks until sold.
- E. A portable chemical toilet will be available on the location for human waste during the drilling operations.
- F. Garbage, trash and waste paper produced during drilling operations will be collected in a contained trailer and disposed at an approved landfill. All waste material will be contained to prevent scattering by the wind. All water, fluids, salt or other chemicals will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be generated by this operation.
- G. All waste material will be removed within 30 days after the well is either completed or abandoned. The reserve pit will be completely fenced until it is reclaimed as per BLM specifications. Only the portion of the drilling pad used by the production equipment (pumping unit and tank battery) will remain in use. If the well is deemed non-commercial only a dry hole marker will remain.

### 7. Ancillary Facilities

No permanent campsite or other facilities will be constructed as a result of this well.

### 8. Well Site Layout

- A. The drilling pad is shown on Exhibit #5 The pad, pits and general location of the rig equipment are displayed. Top soil will be stored adjacent to the pad until reclamation efforts are undertaken. Only modest cuts will be necessary to build the pad which will be covered with 6" of compacted caliche.
- B. No permanent living facilities are planned, but temporary trailers for the tool pusher, drilling foreman and mud logger may be on location throughout drilling operations.
- C. The reserve pit will be lined using a 12 mil woven synthetic liner.

### 9. Plans for Restoration of Surface

- A. After concluding the drilling and/or completion operations, if the well is found non-commercial, the pad and road will be reclaimed as directed by the BLM. The reserve pit area will be reclaimed pursuant to OCD rules and BLM specifications. The original top soil will be returned to the pad and contoured, as close as possible, to the original topography.
- B. The location and road will be rehabilitated as recommended by the BLM.
- C. The reserve pit will be fenced on three sides throughout drilling operations. After the rotary rig is removed, the reserve pit will be fenced on the fourth side to preclude endangering wildlife. The fencing will be in place until the pit is reclaimed.

D. If the well is deemed commercially productive, the reserve pit will be restored as described in 9 (A). Caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drilling pad not necessary to operate the well. These unused areas of the drilling pad will be contoured, as closely as possible, to match the original topography.

### 10. Surface Ownership

The well site is owned by the Bureau of Land Management.

The surface location will be restored as directed by the BLM.

#### 11. Other Information

- A. The project area is located in a relatively flat area. The top soil at the wellsite is sandy. Vegetation in the area is moderately sparse, with prairie grasses, some mesquite bushes, and shinnery oak. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
- B. There is no permanent water in the immediate area.
- C. Land use is for oil and gas production, grazing and hunting.
- D. A Cultural Resources Examination will be completed by Southern New Mexico Archaeological Services, Inc. and forwarded to the BLM office in Carlsbad, New Mexico.

#### 12. Lessee's and Operator's Representative

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

Bill Greenlees	Don Mayberry
Operations Engineering Advisor	Superintendent
Devon Energy Production Company, L.P.	Devon Energy Production Company, L.P.
20 North Broadway	Post Office Box 250
Oklahoma City, OK 73102-8260	Artesia, NM 88211-0250
(405) 552-8194 (office)	(505) 748-3371 (office)
(405) 203-7778 (cell)	(505) 746-4945 (home)

#### **Certification**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Devon Energy Production Company, L.P. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Signed:

Norvella Adams Sr. Staff Engineering Technician

Date: November 29, 2005

### Attachment to Exhibit #1 NOTES REGARDING BLOWOUT PREVENTERS Devon Energy Production Company, LP **RATTLESNAKE FEDERAL UNIT #6** Unit Letter P, 660 FSL & 660 FEL, Section 13-26S-34E Lea County, New Mexico

- 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 5000 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.

### UNITED STATES DEPARTMENT OF THE INTERIOR Bureau of Land Management Roswell Field Office 2909 West Second Street Roswell, New Mexico 88201-1287

### Statement Accepting Responsibility for Operations

Operator Name: Street or Box: City, State: Zip Code: Devon Energy Production Company, LP 20 North Broadway Oklahoma City, Oklahoma 73102-8260

The undersigned accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land or portion thereof, as described below.

Lease No.:

NMNM100568

Legal Description of Land:

40 acres 13-26S-34E SE/SE

Wildcat (Delaware)

Formation(s):

Bond Coverage:

BLM Bond File No.:

CO1104

Nationwide

Authorized Signature:

Norvella Adams

### Sr. Staff Engineering Technician

November 29, 2005

Title:

Date:

UNITED STATES DEPARTMENT OF THE INTERIOR Bureau of Land Management Roswell Field Office 2909 West Second Street Roswell, New Mexico 88201-1287					
Statement Accept	ing Responsibility for Operations				
Operator Name: Street or Box: City, State: Zip Code:	Devon Energy Production Company, LP 20 North Broadway Oklahoma City, Oklahoma 73102-8260				
	e terms, conditions, stipulations and restrictions the leased land or portion thereof, as described				
Lease No.:	NMNM100568				
Legal Description of Land:	40 acres 13-26S-34E				
Formation(s):	Wildcat (Delaware)				
Bond Coverage:	Nationwide				
BLM Bond File No.:	C01104				
Authorized Signature:	Norvella Adams				
Title:	Sr. Staff Engineering Technician				
Date:	November 29, 2005				

•

-

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

API Number

\_

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102 Revised March 17, 1999

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

Pool Name

### OIL CONSERVATION DIVISION

2040 South Pacheco

Santa Fe, New Mexico 87504-2088

□ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

Pool Code

Property Read     Fromery Nead     Fromery Nead       OCCUP No.       OCCUP NO. <th< th=""><th>30-025</th><th>5-3/6</th><th>&gt;27</th><th colspan="5">Wildcat; Morrow</th><th></th><th></th></th<>	30-025	5-3/6	>27	Wildcat; Morrow						
OCED No.         Operator Name         Elevation           0137         DEVON ENERGY PRODUCTION CO., L.P.         3238'           Surface Location         Surface Location         Torraship         Bage         Let May Section         Elevation           9         13         26 S         34 E         660         SOUTH         660         EAST         LEA           Bottom Hole Location If Different From Surface           U. or let No.         Section         Torraship         Bage         Let May Section         Feet from the East/Work line         East/Work line         County           Dedicated Acres         Joint or Infill         Cosmolidation Code         Order No.         Over No.         County           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         OPERATOR CERTIFICATION         Printed Mass         Sr. Staff Eng Tech.           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         DIVISION           Determine the use and complete to the first of the use and complete to the first of the use and complete to the staff of the base of complete to the staff of the base of complete to the test of the te			Property Name							umber
6137     DEVON ENERGY PRODUCTION CO., L.P.     3238'       Surface Location       VL or let No.     Section     Tevraship     Rage     Let Ma     Peet from the     North/South line     Tevet from the     East/Teret line     County       Bottom Hole Location If Different From Surface       UL or let No.     Section     Tevraship     Rage     Let Ma     Feet from the     North/South line     Feet from the     East/Teret line     County       Dedicated Acres     Joint or lafin     Cennelidation Code     Order No.     Order No.       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     OPERATOR CERTIFICATION       Image: Section To THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION       OPERATOR CERTIFICATION       Image: Section To THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION       Image: Section To THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD       OPERATOR CERTIFICATION       Image: Section To THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD       Image: Section To THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD       Image					RATTLE				6	
DEVON         DEVONCTION         CU., LP.         3238           Surface Location         Surface Location         Surface Location         East/Test lise         County           P         13         26 S         34 E         Feet from the Noth/South line         Feet from the East/Test lise         County           Bottom Hole Location If Different From Surface         U. or lot No.         Section         Township         Range         Let Ma         Feet from the North/South line         Feet from the East/Test line         County           Dedicated Acres         Joint or Infill         Consolidation Code         Order No.         Order No.         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         OPERATOR CERTIFICATION 1 Acams           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         OPERATOR CERTIFICATION 1 Acams           NOTYO'LI'A Adams         The December 1, 2005         Str. Staff Eng. Tech.           Date         Interfield man big meriments         Str. Staff Eng. Tech.           UL of - N32702'16.4'         Interfield man big meriments         Str. Staff Eng. Tech.           It of - 0000 - W10272'92.1'         Interfield man big meriments         Str. Staff Eng. Tech.           It of - 00		0.		~~~		-		_		
UL or lot No.       Section       Township       Range       Lot Ma       Peet from the 660       SOUTH       Geo       East/Test line       County LEA         U. or lot No.       Section       Township       Range       Let Ma       Peet from the 660       SOUTH       Geo       East/Test line       County LEA         U. or lot No.       Section       Township       Range       Let Idn       Peet from the North/South line       Peet from the East/Test line       County LEA         Dedicated Acree       Joint or Infill       Consultation Code       Order No.       Order No.       Order No.       County Hass BEEN APPROVED BY THE DIVISION         NO ALLOWABLE       WILL EE ASSIGNED TO THIS COMPLETION UNTIT ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION       OPERATOR CERTIFICATION 1 / Array carring the fac advances to the bast of my basiste of the bast of th			<u> </u>	DEV	ON ENE	RGY PRODU	CTION CO., L.	Ρ.	323	8
P       13       26 S       34 E       660       SOUTH       660       EAST       LEA         Bottom Hole Location If Different From Surface         Ut or let No.         Dedicated Acree       Joint or Infill       Consclidation Code       Order No.         40       Joint or Infill       Consclidation Code       Order No.         OPERTOR CERTIFICATION         OPERTOR CERTIFICATION         OPERTOR CERTIFICATION         OPERTOR CERTIFICATION         OPERTOR CERTIFICATION         Interval         Interval         OPERTOR CERTIFICATION         Interval         OPERTOR CERTIFICATION         Interval         Interval         OPERTOR CERTIFICATION         Interval         Interval						Surface Lo	ation			
Bottom Hole Location If Different From Surface         Ut or lot No.       Section       Township       Bange       Lot Idn       Feet from the       North/South line       Feet from the       East/West line       County         Dedicated Acree       Joint or Infill       Councidation Code       Order No.       Order No.       OPERATOR CERTIFICATION         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       OPERATOR CERTIFICATION         Image: State of the st	UL or lot No.	Section	Township	Range	Lot Idn	East/West line	County			
UL or lot No.       Section       Township       Range       Lot idn       Peet from the       North/South line       Peet from the       Rant/Weet line       County         Dedicated Acres       Joint or Infill       Consolidation Code       Order No.       Order No.         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       OPERATOR CERTIFICATION / Arrenge certify the the information         Image:	Р	13	26 S	34 E		660	SOUTH	660	EAST	LEA
Jedicated Acres       Jetist or Infill       Consolidation Code       Order No.         40       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       OPERATOR CERTIFICATION         1       A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION       OPERATOR CERTIFICATION         1       Areeby certify the the information contained to the information dominant and complete to the information ontained to the information         Signature       Signature         Signature       Str. Staff Eng. Tech., Title         December 1, 2005       Date         SURVEYOR CERTIFICATION       I Areeby certify that the well location shown in the printed form the inter of my should be and the inter of my should be and the inter of my shown in the printed form the inter of my shown in the printed form the inter of my shown inter of my shown inter of a staff in the well location shown in the printed form field meets of run under my and the inter of a staff in the well location shown in the printed form field meets of run under my and the inter of a staff in the well location shown in the printed form field meets of run under my and the inter of a staff in the well location shown in the printed form field meets of run under my and the inter of a staff in the well location shown in the printed form field meets of run under my and the inter of a staff in the well location shown in the printed form field meets of run under my and the inter of a staff in the well location shown in the printed form field meets of run under my and the inter of a staff in the well location shown in the printed form field meets of run under my				Bottom	Hole Loc	cation If Diff	erent From Sur	face		
40 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 OPERATOR CERTIFICATION / Arrby crity the be information // Arrby crity the be information // Admis // Consolidation // Cons	UL or lot No.	Section	Township	Range	Lot ldn	East/West line	County			
40 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 OPERATOR CERTIFICATION / Arrby crity the be information // Arrby crity the be information // Admis // Consolidation // Cons										
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 OPERATOR CERTIFICATION / hereby certify the the information contained here of the one complete to the best of my knowledge and held. Signature Norvella Adams Friated Name Sr. Staff Eng. Tech. The December 1; 2005 Bate SURVEYOR CERTIFICATION / hereby certify that the well location shown on this plat was plated from field notes of pates SURVEYOR CERTIFICATION / hereby certify that the well location shown on this plat was plated from field notes of signature for the test of my blater SURVEYOR CERTIFICATION / hereby certify that the well location shown on this plat was plated from field notes of signature for the test of my blater Survey of the the set of my blater Signature for the test of my blater Signature for test of test of my blater Signature for test of test of my	Dedicated Acre	s Joint o	r Infill Co	nsolidation	Code Or	der No.				4
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION  OPERATOR CERTIFICATION  I hereby certify the the information condument herein is true and complete to the best of my brouding end belief  Signature Norvella Adams Printed Name Sr. Staff Eng. Tech, Title December 1, 2005 Date  SURVEYOR CERTIFICATION I hereby certify that the usel location shown on this plat was platted from field notes of additud streng and that the same is true and correct to the best of my beside.  NOVEMBER 23, 2005 Date Surveyout Supervise getSeen Office Supervise getSeen Office Supervise getSeen Office Supervise getSeen Office Supervise Supervise getSeen Office Supervise	40									
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION  OPERATOR CERTIFICATION  I hereby certify the the information condument herein is true and complete to the best of my brouding end belief  Signature Norvella Adams Printed Name Sr. Staff Eng. Tech, Title December 1, 2005 Date  SURVEYOR CERTIFICATION I hereby certify that the usel location shown on this plat was platted from field notes of additud streng and that the same is true and correct to the best of my beside.  NOVEMBER 23, 2005 Date Surveyout Supervise getSeen Office Supervise getSeen Office Supervise getSeen Office Supervise getSeen Office Supervise Supervise getSeen Office Supervise	NO ALLO	WABLE W	TILL BE AS	SSIGNED '	TO THIS	COMPLETION	UNTIL ALL INTER	ESTS HAVE BE	EN CONSOLID	ATED
I hereby certify the the information contained herein is true and complete to the best of my knowledge and being Signature Norvella Adams Printed Name Sr. Staff Eng. Tech. Tile December 1: 2005 Date SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual survey made by me or under my supervision and that the arms is true and correct to the best of my being. NOVEMBER 23, 2005 Date Survey 3245.8' - 3231.1' Survey of the survey of the surve			ORAN	ION-STAN	IDARD UN	IT HAS BEEN	APPROVED BY	THE DIVISION		
I hereby certify the the information contained herein is true and complete to the best of my knowledge and being Signature Norvella Adams Printed Name Sr. Staff Eng. Tech. Tile December 1: 2005 Date SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual survey made by me or under my supervision and that the arms is true and correct to the best of my being. NOVEMBER 23, 2005 Date Survey 3245.8' - 3231.1' Survey of the survey of the surve					1	r				
Signature Norvella Adams Frinted Name Sr. Staff Eng. Tech, Tile December 1, 2005 Date SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of run was plotted from field notes of run adder my bridge Survey made by me or under my supervison and that the ame is true and correct to the best of my being. NOVEMBER 23, 2005 Date Signature Signature Signature NOVEMBER 23, 2005 Date Signature S						1		OPERATO	OR CERTIFICAT	TION
best of my knowledge and bild Signature Signature Signature Sr. Staff Eng. Tech. True December 1, 2005 Date SURVEYOR CERTIFICATION / Arrey critity that the well location shown on this pict was picited from field notes of actual sorrey most by me or under my supervision and that the swell location shown on this pict was picited from field notes of actual sorrey most by me or under my supervision and that the swell location shown on this pict was picited from field notes of actual sorrey most by me or under my supervision and that the swell for the swell or under my supervision and that the swell for the swell or under my supervision and that me swell for the swell or under my supervision and that seems to free and or the swell for the swell or under my supervision and that seems to free and or under my supervision and that for the set of my belief. NOVEMBER 23, 2005 Date Surreget Signature of the set of my belief. To the set of my belief. Nove Staff Sec. To the set of my belief. The sec. Survey was and the set of my belief. The sec. The sec.		1				1		11		
Norvella Adams Printed Name Sr. Staff Eng. Tech. Title December 1, 2005 Date SURVEYOR CERTIFICATION / hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison and that the same is true and correct to the best of my beligt. NOVEMBER 23, 2005 Date Surveys Signature packed of the same is for a difference of the best of t						1		11	•	
Norvella Adams Printed Name Sr. Staff Eng. Tech. Title December 1, 2005 Date SURVEYOR CERTIFICATION / hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison and that the same is true and correct to the best of my beligt. NOVEMBER 23, 2005 Date Surveys Signature packed of the same is for a difference of the best of t		1				1		$H \land \circ$	(X XO	,
Norvella Adams Printed Name Sr. Staff Eng. Tech. Title December 1, 2005 Date SURVEYOR CERTIFICATION / hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervisen and that the same is true and correct to the best of my beligt. NOVEMBER 23, 2005 Date Surveys 3245.B' = - 3231.1' 3245.B' = - 3231.1' Signature for Selar Only of Signature for Selar Only of Toposolar Surveys made for the selar of the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the for the best of my beligt. Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 NOVEMBER 23, 2005 NOVEMBER 23, 2005 NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 Date Surveys made for the best of my beligt. NOVEMBER 23, 2005 NOVEMBER 23, 2005 NOVEMBER 23, 2005 NOVEMBER 23, 2005 NOVEMBER 23, 2005 NOVEMBER 24, 2005 NOVEMBER 25, 2005					ļ			11)//////	V V X	$  \rightarrow  $
Norvella Adams Printed Name Sr. Staff Eng. Tech. Title December 1, 2005 Date SURVEYOR CERTIFICATION / hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison and that the same is true and correct to the best of my beligt. NOVEMBER 23, 2005 Date Surveys Signature packed of the same is for a difference of the best of t								1 Cr Cr	June	
Printed Name         Sr. Staff Eng. Tech,         Tile         December 1, 2005         Date         SURVEYOR CERTIFICATION         I hereby certify that the well location shown on this plat was plotted from field notes of supervison and that the same is true and correct to the best of my beligt.         Lot - N32'02'16.4'         Long - W103'25'02.1"         Signate of Sector of the best of my beligt.         3245.8' - 3231.1'         Jack         Jack         Certuristy No. 5995         Certuristy No. 5995         Certuristy No. Correct To this plate	F	+			+	+			a Adams	
Title       December 1, 2005       Date       SURVEYOR CERTIFICATION       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.       Lot - N32'02'16.4' Long - W103'25'02.1"       3245.8' - 3231.1'       3245.8' - 3231.1'       3245.8' - 3233.5'       Certures the Gar, thores 7977						I.				
December 1, 2005       Date       SURVEYOR CERTIFICATION       I hereby certify that the well location shown on this plat was plotted from field notes of actual survays made by me or water my supervison and that the same is true and correct to the best of my beilar.       Lot - N32'02'16.4' Long - W103'25'02.1"       Signature (x) Schild Survays)       3245.8' 3231.1'       3245.8' 3231.1'       Signature (x) Schild Survays)       Jaza6.9'					}			Sr Sta	ff Eng. Tec	h,
Date       Date       SURVEYOR CERTIFICATION       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 supervisor, and that the same is true and correct to the best of my beiler.       Lot - N32'02'16.4' Long - W103'25'02.1"       Signature for Selen JON'CO Portersional Mathematication 1       3245.8' 3231.1'       3245.8'								Title		
SURVEYOR CERTIFICATION 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 supervison and that the same is true and correct to the best of my belief. NOVEMBER 23, 2005 Date Survey Signature (RSchild Jowes 1007 - 3233.5' 3245.8' - 3233.5' Certified and the same is true and correct to the best of my belief. NOVEMBER 23, 2005 Date Survey Signature (RSchild Jowes 100 No. 5995 Certified and the same is true and correct to the best of my belief. NOVEMBER 23, 2005 Date Survey Signature (RSchild Jowes 100 No. 5995 Certified and the same is true and correct to the best of my belief. Signature (RSchild Jowes 100 No. 5995 Certified and the same is true and correct to the best of my belief. Signature (RSchild Jowes 100 No. 5995 Certified and the same is true and correct to the best of my belief. Signature (RSchild Jowes 100 No. 5995 Certified and the same is true and correct to the best of my belief. Signature (RSchild Jowes 100 No. 5995 Certified and the same is true and 100 No. 5995 100 No. 5995									r 1; 2005	
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or my belief. I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or my belief. NOVEMBER 23, 2005 Date Surveys Jate Survey								Date		
n this plat was plotted from field notes of actual surveys made by me or under my supervison and that the same is true and correct to the best of my belief. NOVEMBER 23, 2005 Date Survey signature for Sell 'Orves Professional Survey actual surveys made by me or under my supervison and that the same is true and correct to the best of my belief. November 23, 2005 Date Surveys Signature for Sell 'Orves Professional Surveys actual surveys Signature for Sell 'Orves Professional Surveys Certaines No Gary, works 7977								SURVEYO	R CERTIFICAT	ION
actual surveys made by me or under my supervison and that the same is true and correct to the best of my belief. NOVEMBER 23, 2005 Date Survey signature and survey supervison and that the same is true and correct to the best of my belief. November 23, 2005 Date Survey signature and survey supervison and that the same is true and correct to the best of my belief. Signature and survey supervison and that the same is true and correct to the best of my belief. Signature and survey supervison and that the same is true and correct to the best of my belief. Signature and survey supervison and that the same is true and correct to the best of my belief. Signature and supervison supervison and that the same is true and correct to the best of my belief. Signature and supervison supervison and that the same is true and correct to the best of my belief. Signature and supervison supervison and that the same is true and correct to the best of my belief. Signature and supervison supervison and that the same is true and correct to the best of my belief. Signature and supervison supervison and that the same is true and correct to the best of my belief. Signature and supervison supervison and that the same is true and correct to the best of my belief. Signature and supervison supervison and that the same is true and correct to the best of my belief.				· · · · · ·				I bomber and	that the surfly les of	
$  Lat - N32'02'16.4'   Long - W103'25'02.1"   Supervison and that the same is true and correct to the best of my belief.   NOVEMBER 23, 2005   Date Surrect Signature \kappa Set of M vertices of \kappa Set of \kappa se$		 				1				
$\begin{bmatrix} Lat - N32^{\circ}02^{\circ}16.4'\\ Long - W103^{\circ}25^{\circ}02.1''\\ 3245.8'\frac{3231.1'}{3236.9'} = -\frac{3231.1'}{32236.9'} \begin{bmatrix} correct to the best of my belief.\\ NOVEMBER 23, 2005\\ Date SurveyedSignatore ARSeal JOW/csProfessional SurveyedSignatore ARSeal JOW/c$		l I				1				
$\begin{bmatrix} Lat - N32^{\circ}02^{\circ}16.4' \\ Long - W103^{\circ}25^{\circ}02.1'' \\ 3245.8' \frac{3231.1'}{3236.9'} = -\frac{3231.1'}{3236.9'} \begin{bmatrix} Date Surveys H JOWes \\ Signature ARSehl JOWes \\ Dofessional Surveys H JOWes \\ Dofessional Surveys \\ Dofe$		1				1				1
$\begin{bmatrix} Lat - N32^{\circ}02^{\circ}16.4' \\ Long - W103^{\circ}25^{\circ}02.1'' \\ 3245.8' \frac{3231.1'}{3236.9'} = -\frac{3231.1'}{3236.9'} \begin{bmatrix} Date Surveys H JOWes \\ Signature ARSehl JOWes \\ Dofessional Surveys H JOWes \\ Dofessional Surveys \\ Dofe$		1				1			10ED 27 200	ь
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1	i				,  L		Date Survey		
$\begin{array}{c} 3245.8' \frac{3231.1'}{1} \\ 3236.9' \frac{3}{3233.5'} \\ \end{array}$	<u> </u>	+	·		L			A Signature AR		
$ \begin{array}{c} 3243.6 = -3231.6 \\ 3236.9' = -3233.5' \\ \end{array} $		i				, X	<i>,</i> , , , , , , , , , , , , , , , , , , ,	H-Profession	Surface VI	
3236.9'		i				ĺ	$\frac{3245.8'}{2} \frac{3231.1'}{2}$		PRA !!	
3236.9'		İ				1		Hall Shake	Var I) UM	$\sim$
S230.9 S233.3 PROFESSIONAL UNIT		Ì				İ			2. No 5993	
S230.9 S233.3 PROFESSIONAL UNIT	1	Í				Ť		Certificate N	2. Gory L. Sonas	7977
BASIN SUBJEYS	1	I				X	2230.9 3233.5 	PRO	FESSIONALLAN	
	L				ļ	<u> </u>	<u>/ / 7 -</u>		SIN SHEVEYS	}





# RATTLESNAKE FEDERAL UNIT #6

660' FSL AND 660' FEL Section 13, Township 26 South, Range 34 East, N.M.P.M., Lea County, New Mexico.

	CTHFR MADRE
	SEAR ACAS
	focused on excellence
·	in the ciltield

P.O. Box 1786	n ev.
TIZU N. West Louniv RC. (	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Hobbs, New Mexico 88241	S
(505) 393-7316 - Office	Sc
(505) 392-3074 - Fox	
besinsurveys.com	∎ D∢

W.O. Number: 5993AA - KJG CD#4 Survey Date: 11-23-2005 Scale: 1" = 2000' Date: 11-29-2005





Well na	ame:			Rattle	snake Fe	d Unit 6	·····	· · · · · · · · · · · · · · · · · · ·	
Operat	tor: De	evon							
String	type: SL	Irface							
Locatio	on: Le	a Co, NM							
	n parame	ters:			n design fa	ctors:	Environm		
<u>Collapse</u> Mud weight: 9.500 ppg Design is based on evacuated pipe.		9.500 ppg ted pipe.	<u>Collapse</u> Design fa		1.125	H2S considered? No Surface temperature: 75 °F Bottom hole temperature: 84 °F		75 °F	
				Burst:			Temperatu	e gradient: ection length:	0.90 °F/100
				Design fa	ctor	1.00			
<u>Burst</u> Max	anticipate	d surfaco							
	ressure:		1,500 psi						
Inter	nal gradie	nt:	0.244 psi/ft	Tension:			Non-direction	onal string.	
Calc	ulated BH	P	1,744 psi	8 Round S		1.80 (J)		0	
Δnni	ular backu		8.34 ppg	8 Round L Buttress:	_TC:	1.80 (J)			
731110	alar backu	ρ.	0.54 ppg	Premium:		1.60 (J) 1.50 (J)			
				Body yield		1.60 (B)	Re subsea	uent strings:	
								tting depth:	5,350 ft
					s based on ai			id weight:	10.100 ppg
				Neutral po	Dint:	861 ft		tting BHP: e mud wt:	2,807 psi 19.250 ppg
							Fracture		5,350 ft
								pressure	5,350 psi
Run	Segmen	t	Nominal		End	True Vert	Measured	Drift	Est.
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Cost
	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(\$)
1	1000	13.375	48.00	H-40	ST&C	1000	1000	12.59	12401
Run	Collapse	e Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design
	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor
1	494	740	1.50	1500	1730	1.15	48	322	6.71 J

Prepared Wes Handley by: Devon Energy

Date: November 29,2005 Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 1000 ft, a mud weight of 9.5 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

. . .

٠.

.

Well n				Rattle	snake Fe	d Unit 6	· · · · · · · · · · · · · · · · · · ·	-	
Opera		evon							
String	type: In	itermediate							
Locatio	on: L	ea Co, NM							۰ <u>۰۰۰</u> ,۰,۰
Desig	n param	eters:		Minimun	n design fa	ctors:	Environm	ent:	
Collap				<u>Collapse:</u>	-		H2S consid	ered?	No
Mud weight: 10.500 ppg Design is based on evacuated pipe.		Design fac	Design factor 1.125			Surface temperature: 75 °F Bottom hole temperature: 123 °F Temperature gradient: 0.90 °F/100ft			
				<u>Burst:</u> Design fac	tor	1.00	Minimum se	ection length:	1,000 ft
<u>Burst</u>				200.9.1100					
		ed surface							
	ressure:	nt.	1,874 psi	Tension					
	Internal gradient: 0.244 psi/ft Calculated BHP 3,181 psi		Tension: 8 Round STC: 1.80 (J)			Non-directional string.			
			o,.o. po.	8 Round L		1.80 (J)			
Ann	ular backı	ıp:	8.34 ppg	Buttress:		1.60 (J)			
				Premium:		1.50 (J)	Bo ouboom	nomt otvin	
				Body yield	•	1.60 (B)		u <mark>ent strings</mark> : tting depth:	9,500 ft
				Tension is based on air weight.				id weight:	8.500 ppg
				Neutral point: 4,516 ft			Next setting BHP: 4,195 p		
							Fracture	e mud wt:	19.250 ppg 5,350 ft
				Estimated	cost: 4	14,886 (\$)		i pressure	5,350 ft 5,350 psi
Run	Segme	nt	Nominal		End	True Vert	Measured	Drift	Est.
Seq	Lengt		Weight	Grade	Finish	Depth	Depth	Diameter	Cost
-	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(\$)
2	4000	8.625	32.00	J-55	LT&C	4000	4000	7.875	32234
1	1350	8.625	32.00	HCK-55	LT&C	5350	5350	7.875	12652
Run	Collaps		•	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load	Strength		Load	Strength	Design	Load	Strength	Design
2	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor
2 1	2182 2918	2465 4130	1.13 1.42	1874	3930	2.10	171.2	417	2.44 J
	2910	4130	1.42	1118	3930	3.51	43.2	503.2	11.65 B

Prepared Wes Handley by: Devon Energy

Date: November 29,2005 Oklahoma City, Oklahoma

Remarks:

.

Collapse is based on a vertical depth of 5350 ft, a mud weight of 10.5 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kernler method of biaxial correction for tension.

.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	
Operator:	Devon
String type:	Production

-1

### **Rattlesnake Fed Unit 6**

Location: Lea Co, NM

Design parameters: <u>Collapse</u>		Minimum design f Collapse:	factors:	Environment: H2S considered? No
Mud weight: Design is based on evacu	10.500 ppg uated pipe.	Design factor	1.125	Surface temperature: 75 °F Bottom hole temperature: 160 °F Temperature gradient: 0.90 °F/100ft Minimum section length: 1,000 ft
		Burst:		<b>..</b>
		Design factor	1.00	
Burst		200.9.110.000	1.00	
Max anticipated surface				
pressure:	2,861 psi			
Internal gradient:	0.244 psi/ft	Tension:		Non-directional string.
Calculated BHP	5,182 psi	8 Round STC:	1.80 (J)	i ton anoodonar olimig.
		8 Round LTC:	1.80 (J)	
Annular backup:	8.34 ppg	Buttress:	1.60 (J)	
		Premium:	1.50 (J)	
		Body yield:	1.60 (B)	
		Tension is based on	air weight.	
		Neutral point:	7,987 ft	

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (Ibs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	9500	5.5	17.00	N-80	LT&C	9500	9500	4.767	53546
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5182	6290	1.21	2861	7740	2.71	161.5	348	2.15 J

Prepared Wes Handley by: Devon Energy Date: November 29,2005 Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 9500 ft, a mud weight of 10.5 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.





#### MINIMUM CHOKE MANIFOLD 3,000, 5,000 and 10,000 PSI Working Pressure

3 MWP - 5 MWP - 10 MWP

Apache "25" Federal No. 5 EXHIBIT 1-A Eddy County, New Mexico



BEYOND SUBSTRUCTURE

			MINI	MUM REQU	JIREMENT:	S				
			3,000 MWP			5,000 MWP		1	10,000 MWF	>
No.		I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING
1	Line from drilling spool		3″	3,000		3″	5,000		3"	10,000
2	Cross 3"x3"x3"x2"			3,000			5,000			
•	Cross 3"x3"x3"x3"									10.000
3	Valves(1) Gate  Plug  (2)	3-1/8*		3,000	3-1/8"		5,000	3-1/8"		10,000
4	Valve Gate D Plug D(2)	1-13/16*		3,000	1-13/16*		5,000	1-13/16"		10,000
<b>4a</b>	Valves(1)	2-1/16*		3,000	2-1/16"		5,000	3-1/8"		10,000
5	Pressure Gauge			3,000	·		5,000			10,000
6	Valves Gate D Plug D(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
7	Adjustable Choke(3)	2"		3,000	2*	T	5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	27		10,000
9	Line		3*	3,000		3″	5,000		3"	10.000
10	Line		2"	3,000		2"	5,000		3"	10.000
11	Valves Gate □ Plug □(2)	3-1/8"		3,000	3-1/8″		5,000	3-1/8*		10,000
12	Lines		3"	1,000		3*	1,000		3"	2.000
13	Lines		3″	1,000		3*	1,000		3"	2,000
14	Remote reading compound standpipe pressure gauge			3,000			5,000	•		10,000
15	Gas Separator	-	2'x5'			2'x5'			2'x5'	
16	Line		4*	1,000		4"	1,000		4"	2.000
17	Gate □ Valves Plug □(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000

(1) Only one required in Class 3M.

(2) Gate valves only shall be used for Class 10M.

.

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

#### EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

- 1. All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- 2. All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- 3. All lines shall be securely anchored.
- 4. Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
- 5. Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating chokes. As an alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
- 6. Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90° bends using bull plugged tees.
- 7. Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.

### THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

Operator's Name: <u>Devon Energy Production Company</u> Well Name & #: <u>Rattlesnake Federal Unit #6</u> Location: <u>660</u>' FSL & <u>660</u>' FEL Sec.<u>13</u>, T.<u>26</u>S., R.<u>34</u>E. Lease: <u>NMNM-100568</u> County: <u>Lea</u> State: <u>New Mexico</u>

The Special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CRF 3165.3 AND 3165.4.

This permit is valid for a period of one year from the date of approval or until lease expiration or termination whichever is shorter.

I. SPECIAL ENVIRONMENT REQUIREMENTS

(X) Lesser Prairie Chicken (stips attached)	() Flood plain (stips attached)
() San Simon Swale (stips attached)	( ) Other

### II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

(X) The BLM will monitor construction of this drill site. Notify the (X) Carlsbad Field Office at (505) 234-5972 () Hobbs Office (505) 393-3612, at least 3 working days prior to commencing construction.

(X) Roads and the drill pad for this well must be surfaced with <u>6</u> inches of compacted caliche.

() All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately \_\_\_\_\_\_inches in depth. Approximately \_\_\_\_\_\_cubic yards of topsoil material will be stockpiled for reclamation.

(X) Other. V-door south

#### III. WELL COMPLETION REQUIREMENTS

() A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the BLM. The effective date of the agreement must be prior to any sales.

(X) Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrain, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at depth of ½ inch) with the following seed mixture, in pounds of Pure Live Seed (PLS), per acre. Seeding should be done either late in the fall (September 15 - November 15, before freeze up, or early as possible the following spring to take advantage of available ground moisture. See attached seed mixture.

<ul> <li>( ) A. Seed Mixture 1 (Loamy Sites)</li> <li>Side Oats Grama (Bouteloua curtipendula) 5.0</li> <li>Sand Dropseed (Sporobolus cryptandrus) 1.0</li> </ul>	(x) B. Seed Mixture 2 (Sandy Sites) Sand Dropseed (Sporobolus crptandrus) 1.0 Sand Lovegrass (Eragostis trichodes) 1.0 Plains Bristlegrass (Setaria magrostachya) 2.0		
<ul> <li>( ) C. Seed Mixture 3 (Shallow Sites)</li> <li>Side oats Grama (Boute curtipendula) 1.0</li> </ul>	<ul> <li>( ) D. Seed Mixture 4 (Gypsum Sites)</li> <li>Alkali Sacaton (Sporobollud airoides) 1.0</li> <li>Four-Wing Saltbush (Atriplex canescens) 5.0</li> </ul>		

#### (X) OTHER:

This approval does not include any installation of flow lines or pipelines. A Sundry Notice will need to be submitted and approved prior to any flow line or pipeline installation.

### **RESERVE PIT CONSTRUCTION STANDARDS**

The reserve pit shall be constructed entirely in cut material and lined with 6-mil plastic. Mineral material extracted from within the boundary of the APD during construction of the well pad and reserve pits and be used for the construction of this well pad and its immediate access road only, as long as that portion of the access road it is use on remains on-lease. Removal of any additional material from this location for construction or improvement of other well pads and other access or lease roads must first be purchased from BLM.

<u>Reclamation</u>: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.

The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

# OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

(1) Lined as specified above and

(2) A temporary or emergency pit may be constructed immediately adjacent to the reserve pit as long as the pit remains within the APD boundary. Mineral material removed from this pit may be used for the construction of this well pad only and its immediate access road, as long as that portion of the access road the material is used on remains on-lease. Removal of any material from the APD boundary for use on other well locations or roads must first be purchased from BLM.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be re-contoured, all trash removed, and reseeded as specified in this permit.

# CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to process by BLM.

# TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

¢

### BLM Serial #: NMNM-100568 Company Reference: Devon Energy Production Company, LP

### Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

Species	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	11bs/A

\*\*Four-winged Saltbush

Ś

5lbs/A

\* This can be used around well pads and other areas where caliche cannot be removed.

\*Pounds of pure live seed:

Pounds of seed  $\mathbf{x}$  percent purity  $\mathbf{x}$  percent germination = pounds pure live seed

#### PRAIRIE CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

On the lands described below:

Į

All of Section 13, T.26S., R.34E.

For the purpose of: Protecting Prairie Chickens:

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in Lesser Prairie Chicken Habitat during the period of March 15 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks know at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Bureau of Land Management Carlsbad Field Office SENM-S-22 December 1997 ø

j.

ម្មៀបប4

# **CONDITIONS OF APPROVAL - DRILLING**

Operator's Name: Devon Energy Production Company LP Well Name & No: Rattlesnake Federal Unit 06 Location: Surface: 660' FSL & 660' FEL, Sec. 13, T. 26 S., R. 34 E. Lease: NM 100568 Lea County, New Mexico

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13 % inch; 8 % inch; 5 % inch.

C. BOP Tests

2. A Hydrogen Sulfide (H2S) Drilling Plan is not required for this wellbore.

3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

#### II. CASING:

1. The <u>13 %</u> inch shall be set at <u>1000 Feet</u> with cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the <u>8%</u> inch Intermediate casing is to circulate to surface.

3. The <u>minimum required fill of cement</u> behind the <u>5 ½</u> inch Production casing is to <u>place TOC at least 500 feet above</u> any potential hydrocarbon bearing formations.

### III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the \_\_inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be <u>3 M</u> psi. A variance to test

4

V

i

j.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the test.

-The test shall be done by an independent service company

-The results of the test shall be reported to the appropriate BLM office.

-Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures.

-Use of drilling mud for testing is not permitted since it can mask small leaks. -Testing must be done in safe workman-like manner. Hard line connections shall be required.

-Both low pressure and high pressure testing of BOPE is required.

G Gourley 1/04/06

### BLM Serial Number: NMNM-100568 Company Reference: Devon Energy Production Company Well No. & Name: Rattlesnake Federal Unit #6

### STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS CARLSBAD FIELD OFFICE

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

The holder/grantee/permittee shall hereafter be identified as the holder in these stipulations. The Authorized Officer is the person who approves the Application for Permit to Drill (APD) and/or Right-of-Way (ROW).

#### GENERAL REQUIREMENTS

A. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

B. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, *et. seq.*) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

C. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seq.*) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

D. If, during any phase of the construction, operation, maintenance, or termination of the road, any oil or other pollutant should be discharged, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil of other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all

damages to Federal lands resulting there from the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

E. The holder shall minimize disturbance to existing fences and other improvements on public domain surface. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times.

The holder will make a documented good-faith effort to contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence.

F. The Holder shall ensure that the entire right-of-way, including the driving surface, ditching and drainage control structures, road verges and any construction sites or zones, will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle and salt cedar. The Holder agrees to comply with the following stipulations:

1. ROAD WIDTH AND GRADE

The road will have a driving surface of 14 feet (all roads shall have a minimum driving surface of 12 feet, unless local conditions dictate a different width). The maximum grade is 10 percent unless the box below is checked. Maximum width of surface disturbance from construction will be 30 feet.

/\_\_/ Those segments of road where grade is in excess of 10% for more than 300 feet shall be designed by a professional engineer.

#### 2. CROWNING AND DITCHING

Crowning with materials on site and ditching on one side of the road on the uphill side will be required. The road cross-section will conform to the cross section diagrams in Figure 1. If conditions dictate, ditching may be required for both sides of the road; if local conditions permit, a flat-bladed road may be considered (if these conditions exist, check the appropriate box below). The crown shall have a grade of approximately 2% (i.e., 1" crown on a 12' wide road).

 $\overline{V}$  Ditching will be required on both sides of the roadway as shown on the attached map or as staked in the field.

/ / Flat-blading is authorized on segment(s) delineated on the attached map.

3. DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches, out-sloping, in-sloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

A. All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval for lead-off ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope (in %):

SPACING INTERVAL FOR TURNOUT DITCHES

Percent slope	Spacing interval
0% - 4%	400' - 150'
4% - 6%	250' - 125'
6% - 8%	200' - 100'
8% - 10%	150' - 75'

A typical lead-off ditch has a minimum depth of 1 foot below and a berm 6 inches above natural ground level. The berm will be on the down-slope side of the lead-off ditch. The ditch end will tie into vegetation whenever possible.

For this road the spacing interval for lead-off ditches shall be at

/\_x\_/ 400 foot intervals.

4:

/\_\_\_/ \_\_\_\_\_ foot intervals.

/ / locations staked in the field as per spacing intervals above.

/ / locations delineated on the attached map.

B. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed shall be of sufficient diameter to pass the anticipated flow of water. Culvert location and required diameter are shown on the attached map (Further details can be obtained from the Roswell District Office or the appropriate Resource Area Office).

C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent leadoff ditch. Drainage dip location and spacing shall be determined by the formula:

spacing interval =  $\frac{400'}{\text{road slope in \%}}$  + 100'

Example: 4% slope: spacing interval =  $\frac{400}{4}$  + 100 = 200 feet

4. TURNOUTS

Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less. Turnouts will conform to the following diagram:



### STANDARD TURNOUT - PLAN VIEW

### 5. SURFACING

¢

Surfacing of the road or those portions identified on the attached map may, at the direction of the Authorized Officer, be required, if necessary, to maintain traffic within the right-ofway with caliche, gravel, or other surfacing material which shall be approved by the Authorized Officer. When surfacing is required, surfacing materials will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing shall be no less than the driving surface. Prior to using any mineral materials from an existing or proposed Federal source, authorization must be obtained from the Authorized Officer.

A sales contract for the removal of mineral materials (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to using any such mineral material from public lands. Contact the BLM solid minerals staff for the various options to purchase mineral material.

### 6. CATTLEGUARDS

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads (exceeding H-20 loading), are anticipated (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

### 7. MAINTENANCE

÷

The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, drainage installation, cattleguard maintenance, and surfacing.

#### 8. PUBLIC ACCESS

Public access along this road will not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer.

### 9. CULTURAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

### 10. SPECIAL STIPULATIONS:

"See reclamation stipulations attached.

· See Lesser Praise chicken Stip. attached

### BLM Serial #: NMNM-100568 Company Reference: Devon Energy Production Company, LP

# Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

Plains Bristlegrass Sand Bluestem Little Bluestem Big Bluestem Plains Coreopsis	5lbs/A 5lbs/A 3lbs/A 6lbs/A 2lbs/A
Sand Dropseed	11bs/A

\*\*Four-winged Saltbush

5lbs/A

\* This can be used around well pads and other areas where caliche cannot be removed.

\*Pounds of pure live seed:

Pounds of seed  $\mathbf{x}$  percent purity  $\mathbf{x}$  percent germination = pounds pure live seed

### PRAIRIE CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

On the lands described below:

Ÿ,

All of Section 13, T.26S., R.34E.

For the purpose of: Protecting Prairie Chickens:

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in Lesser Prairie Chicken Habitat during the period of March 15 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks know at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Bureau of Land Management Carlsbad Field Office SENM-S-22 December 1997

### BLM Serial Number: NMNM-100568 Company Reference: Devon Energy Production Company Well No. & Name: Rattlesnake Federal Unit #6

# STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, <u>et seq</u>. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, <u>et seq</u>.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Powerlines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Powerlines," Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "raptor safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- · Filling holes from removing the poles
- See attached reclamation plans.

· see the Lesser Prairie Chicken Stip

### BLM Serial #: NMNM-100568 Company Reference: Devon Energy Production Company, LP

### Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

\*\*Four-winged Saltbush

5lbs/A

\* This can be used around well pads and other areas where caliche cannot be removed.

\*Pounds of pure live seed:

Pounds of seed  $\mathbf{x}$  percent purity  $\mathbf{x}$  percent germination = pounds pure live seed

#### PRAIRIE CHICKENS

No surface use is allowed during the following time periods; unless otherwise specified, this stipulation does not apply to operation and maintenance of production facilities.

On the lands described below:

All of Section 13, T.26S., R.34E.

For the purpose of: Protecting Prairie Chickens:

Drilling for oil and gas, and 3-D geophysical exploration operations will not be allowed in Lesser Prairie Chicken Habitat during the period of March 15 through June 15, each year. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 a.m. and 9:00 a.m. The 3:00 a.m. and 9:00 a.m. restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during the period. Additionally, no new drilling will be allowed within up to 200 meters of leks know at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Bureau of Land Management Carlsbad Field Office SENM-S-22 December 1997

1625 N French Dr. Hopps, NM 88240	tate of New Mexico inerals and Natural Resources	Form C-144 June 1, 2004		
1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road Aztec, NM 87410 Oil	Conservation Division 0 South St. Francis Dr.	For drilling and production facilities, submit to appropriate NMOCD District Office. For downstream facilities, submit to Santa Fe		
	anta Fe, NM 87505	office		
	ade Tank Registration or (	Closure		
Is pit or below-grade ta	hk covered by a "general plan"? Yes or below-grade tank 🛛 Closure of a pit or b			
Operator: _Devon Energy Production Company, L.P Telephon				
Address:PO Box 250, Artesia NM 88211 Facility or well name:Rattlesnake Federal Unit 6API #:	5-3762 U/L or Otr/Otr P Sec 13	T 26S B 34E		
County: Lea Latitude				
Surface Owner: Federal 🛛 State 🗌 Private 🔲 Indian 🗌				
Pit	Below-grade tank			
Type: Drilling 🖾 Production 🗌 Disposal 🗍	Volume:bbl Type of fluid:			
Workover Emergency	Construction material:			
Lined 🖾 Unlined 🔲	Double-walled, with leak detection? Yes	If not, explain why not.		
Liner type: Synthetic 🛛 Thickness _12_mil Clay 🗖				
Pit Volume bbl				
	Less than 50 feet	(20 points)		
Depth to ground water (vertical distance from bottom of pit to seasonal	50 feet or more, but less than 100 feet	(10 points)		
high water elevation of ground water.)	100 feet or more	( 0 points)		
	Yes	(20 points)		
Wellhead protection area: (Less than 200 feet from a private domestic	No	(20  points)		
water source, or less than 1000 feet from all other water sources.)				
Distance to surface water: (horizontal distance to all wetlands, playas,	Less than 200 feet	(20 points)		
irrigation canals, ditches, and perennial and ephemeral watercourses.)	200 feet or more, but less than 1000 feet	(10 points)		
	1000 feet or more	( 0 points)		
	Ranking Score (Total Points)	Ø		
If this is a pit closure: (1) Attach a diagram of the facility showing the pi	's relationship to other equipment and tanks.	(2) Indicate disposal location: (check the onsite box if		
your are burying in place) onsite [] offsite [] If offsite, name of facility				
remediation start date and end date. (4) Groundwater encountered: No	Yes I If yes, show depth below ground sur	rfaceft_and attach sample results.		
remediation start date and end date. (4) Groundwater encountered: No 🗌 Yes 🗌 If yes, show depth below ground surface				
Additional Comments:				
		E DE GIN		
		2 Pro Hours		
		2711016819°		
I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines , a general permit , or an (attached) alternative OCD-approved plan .				
Date: _12/21/05				
Printed Name/Title Norvella Adams / Sr. Staff Engineering Technician _ Signature				
Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.				
Approval:				
Approval: Printed Name/Title				
CHRIS WILLING SUPERVISOR OLIT				