

## OCD-HOBBS

Form 3160-3  
(April 2004)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007


5. Lease Serial No. <b>NMLC-070544-B</b>	
6. If Indian, Allottee or Tribe Name	
7. If Unit or CA Agreement, Name and No.	
8. Lease Name and Well No. <b>30-025-38032</b> <b>Bell Lake Unit 23</b>	
9. API Well No. <b>30-025-38032</b>	
10. Field and Pool or Exploratory <b>W. Lake</b> <b>Delaware</b>	
11. Sec., T. R. M. or Blk. and Survey or Area <b>Sec 31, T22S R34E</b>	
12. County or Parish <b>Lea County</b>	13. State <b>NM</b>
14. Distance in miles and direction from nearest town or post office* <b>Approximately 20 miles west of Jal, NM</b>	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease <b>314.45</b>
17. Spacing Unit dedicated to this well <b>40 acres</b>	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
19. Proposed Depth <b>8600' MD</b>	20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3442' GL</b>	22. Approximate date work will start* <b>06/01/2006</b>
23. Estimated duration. <b>32 days</b>	

## 24. Attachments

**Capitan Controlled Water Basin**

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

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

25. Signature 	Name (Printed/Typed) <b>Norvella Adams</b>	Date <b>03/07/2006</b>
Title <b>Sr. Staff Eng. Tech</b>		

Approved by (Signature) <b>/s/ Tony J. Herrell</b>	Name (Printed/Typed) <b>/s/ Tony J. Herrell</b>	Date <b>JUL 26 2006</b>
Title <b>FIELD MANAGER</b>		
Office <b>CARLSBAD FIELD OFFICE</b>		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.**APPROVAL FOR 1 YEAR**

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

\*(Instructions on page 2)

Witness Surface Casing

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED**

**Additional Operator Remarks:**

Devon Energy Production Company, LP proposes to drill to approximately 8,600' 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 1369' of new access road will need to be constructed.

## OCD-HOBBS

Form 3160-5  
(August 1999)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
SUNDRY NOTICES AND REPORTS ON WELLSFORM APPROVED  
OMB NO. 1004-0135  
EXPIRES: NOVEMBER 30, 2000Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals

SUBMIT IN TRIPLICATE

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other \_\_\_\_\_2. Name of Operator  
**DEVON ENERGY PRODUCTION COMPANY, LP**3. Address and Telephone No.  
**20 North Broadway, Ste 1500, Oklahoma City, OK 73102 405-552-8198**4. Location of Well (Report location clearly and in accordance with Federal requirements)\*  
**1980' FSL & 660' FEL 1 Sec 31 T22S R34E**

5. Lease Serial No.

**NMLC-070544-B**

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

8. Well Name and No.

**Bell Lake Unit 23**

9. API Well No.

10. Field and Pool, or Exploratory

**Delaware**

12. County or Parish 13. State

**Lea****NM**

## CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work and approximate duration thereof. If the proposal deepens directionally or recompletes horizontally, give subsurface location and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirement, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection)

Devon Energy Production Co., LP respectfully requests approval to move the access road 50' north to meet requirements specified by BLM due to potential H2S exposure. No additional archeological survey is required in this area, per Barry Hunt of the BLM.

14. I hereby certify that the foregoing is true and correct

Signed

Name

**Norvella Adams**

Title

**Sr. Staff Eng. Tech**

Date

**24-Jul-06**

(This space for Federal or State Office use)

Approved by

**/s/ Tony J. Herrell**

Title

**FIELD MANAGER**

Date

**JUL 26 2006**

Conditions of approval, if any:

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

\*See Instruction on Reverse Side



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

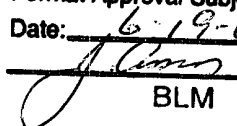
# Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan

For

**Bell Lake Unit # 23**

Sec-31, T-22S R-34E  
1980' FSL & 660' FEL,

**Lea County NM**

Accepted for Record Purposes.  
Format Approval Subject to Onsite Inspection  
Date: 6-19-06  
  
BLM

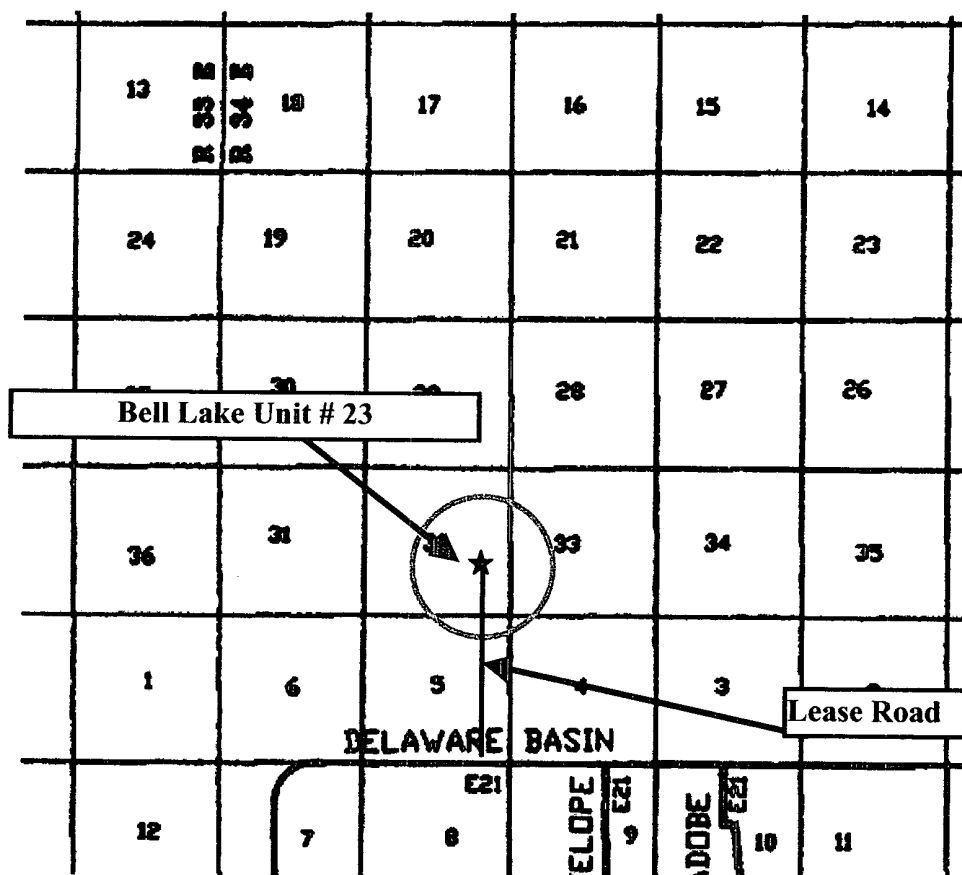
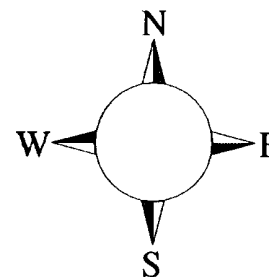
RECEIVED

MAY 31 AM 1:11

BUREAU OF LAND MGMT  
CAPITOL OFFICE

## Bell Lake Unit # 23

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



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

### Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated South on lease road to Delaware Basin Road. Crews should then move to block access to the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in the ROE.

## Emergency Procedures

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

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

## Ignition of Gas Source

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

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

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

## Contacting Authorities

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

## Devon Energy Corp. Company Call List

<u>Artesia (505)</u>	<u>Cellular</u>	<u>Office</u>	<u>Home</u>
Foreman – Roger Hernandez .	748-5238 .....	748-0169 .....	396-7169
Joe Johnston .....	513-0630 .....	748-0171 .....	627-6917
Mike Myers .....	(505) 513-0782....	(505) 748-0177 ...	(505) 395-3020
Engineer – Bill Greenlees .....	(405) 203-7778....	(405) 552-8194 ...	(405) 324-9994

## Agency Call List

### Eddy

### Hobbs

### County (505)

State Police.....	392-5588
City Police.....	397-9265
Sheriff's Office.....	393-2515
Ambulance.....	911
Fire Department .....	397-9308
LEPC (Local Emergency Planning Committee) .....	393-2870
NMOCD.....	393-6161
US Bureau of Land Management.....	393-3612

### **Carlsbad**

State Police .....	885-3137
City Police .....	885-2111
Sheriff's Office.....	887-7551
Ambulance.....	911
Fire Department.....	885-2111
LEPC (Local Emergency Planning Committee).....	887-3798
US Bureau of Land Management.....	887-6544
New Mexico Emergency Response Commission (Santa Fe) ...	(505)476-9600
24 HR .....	(505) 827-9126
National Emergency Response Center (Washington, DC)	(800) 424-8802

### **Emergency Services**

Boots & Coots IWC .....	1-800-256-9688 or (281) 931-8884
Cudd Pressure Control.....	(915) 699-0139 or (915) 563-3356
Halliburton .....	(505) 746-2757
B. J. Services.....	(505) 746-3569

### *Give*

### *GPS*

### *position:*

Flight For Life - Lubbock, TX .....	(806) 743-9911
Aerocare - Lubbock, TX .....	(806) 747-8923
Med Flight Air Amb - Albuquerque, NM .....	(505) 842-4433
Lifeguard Air Med Svc. Albuquerque, NM .....	(505) 272-3115

Prepared in conjunction with  
Wade Rohloff of;



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

DISTRICT II  
811 South First, Artesia, NM 88210

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

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised March 17, 1999

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

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-38032</b>	Pool Code -	Pool Name <b>Wildcat</b> Delaware
Property Code <b>30856</b>	Property Name <b>BELL LAKE UNIT</b>	
GRID No. 6137	Operator Name <b>DEVON ENERGY PRODUCTION CO., L.P.</b>	
		Well Number <b>23</b>
		Elevation <b>3442'</b>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	31	22 S	34 E		1980	SOUTH	660	EAST	LEA

Bottom Hole Location If Different From Surface

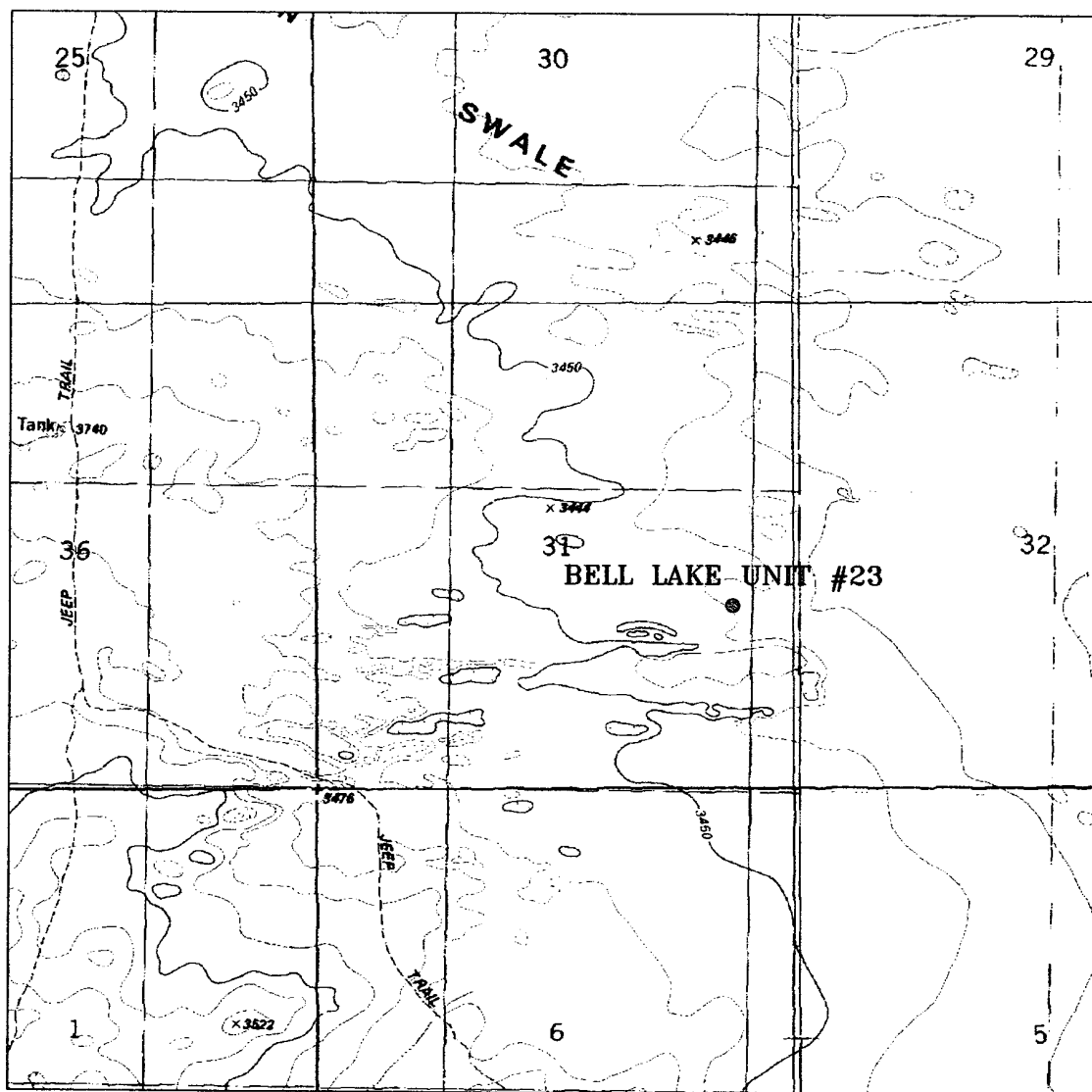
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40		Joint or Infill		Consolidation Code		Order No.			

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

				<b>OPERATOR CERTIFICATION</b>  <i>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</i>   Signature Norvella Adams Printed Name Sr. Staff Eng. Tech. Title February 27 2006 Date	
<b>SURVEYOR CERTIFICATION</b>  <i>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.</i>  DECEMBER 12, 2005 Date Surveyed  Signature & Seal of Professional Surveyor W.O. No: 6055 Certificate No. Cory L. Jones 7977 BASIN SURVEYS					







## BELL LAKE UNIT #23

Located at 1980' FSL AND 660' FEL  
Section 31, Township 22 South, Range 34 East,  
N.M.P.M., Lea County, New Mexico.

**basin**  
**surveys**

focused on excellence  
in the oilfield

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

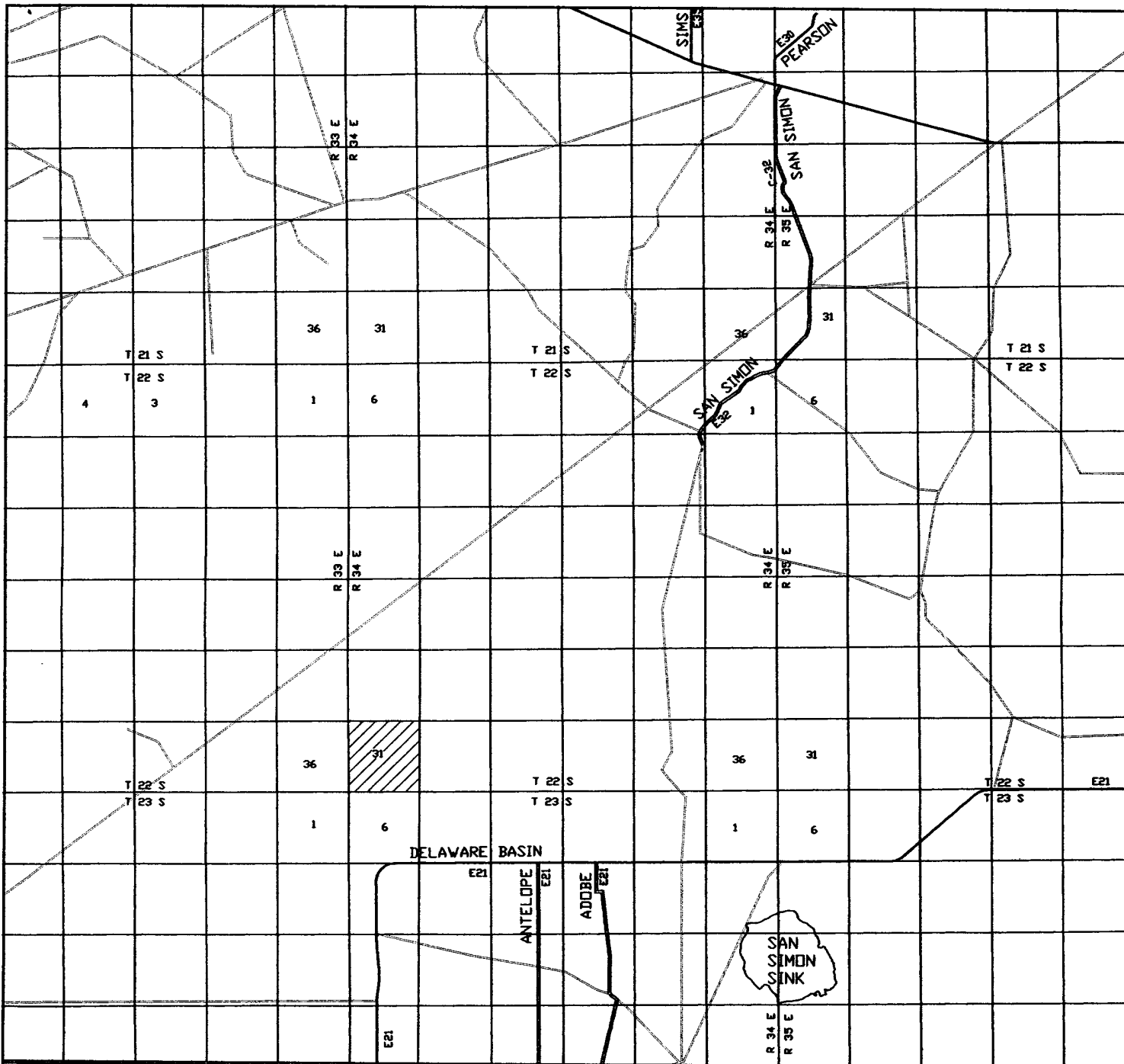
W.O. Number: 6055AA - KJG CD#4

Survey Date: 12-12-2005

Scale: 1" = 2000'

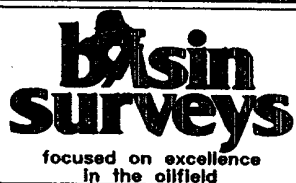
Date: 12-13-2005

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



# **BELL LAKE UNIT #23**

Located at 1980' FSL AND 660' FEL  
 Section 31, Township 22 South, Range 34 East,  
 N.M.P.M., Lea County, New Mexico.



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

W.O. Number: 6055AA - KJG CD#4

Survey Date: 12-12-2005

Scale: 1" = 2000'

Date: 12-13-2005

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

## **DRILLING PROGRAM**

Devon Energy Production Company, LP  
**BELL LAKE UNIT 23**  
1980' FSL & 660' FEL, Section 31 T22S, R34E  
Lea County, New Mexico

### **1. Geologic Name of Surface Formation**

- a. Permian

### **2. Estimated Tops of Important Geologic Markers**

- a. Rustler 1825'
- b. Delaware 5240'
- c. Bone Spring 8475'

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting the 13 3/8" casing at 1850' and circulating cement back to surface.

### **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 area
Oil	Delaware and Bone Spring
Gas	Upper Morrow

### **4. Casing Program**

Hole Size	Interval	OD Csg	Weight	Collar	Grade
26"	0 – 830'	20"	94#	BTC	J55
17 1/2"	0-1850'	13 3/8"	54.5#	ST&C	J55
12 1/4"	0-5235'	9 5/8"	40#	LT&C	J55 & N80
8 3/4"	0-8600'	5 1/2"	17#	LT&C	N80

### **5. Cement & Setting Depth:**

20"	Conductor	Cement Lead - 1100 sx (35:65) Poz Class C, 1/4 #/sx Celloflake, 6% Bentonite, 2% CaCl <sub>2</sub> ; tail with 400 sx Class C, 1/4 #/sx Celloflake, TOC - surface.
13 3/8"	Surface	Cement Lead - 866 sx (35:65) Poz Class C, 5% NaCl, 1/4 #/sx Celloflake, 6% Bentonite; Tail with 300 sx Class C, 1/4 #/sx Celloflake. TOC – surface.
9 5/8"	Intermediate	Cement Stage 1: Lead – 440 sx (50:50) Poz Class C, 5% NaCl, 0.5% ASA-301, 1/4 #/sx Celloflake, 10% Bentonite, 0.006 gps FP-13L, tail

5 ½"

Production

with 250 sx (60:40) Poz Class C, 5% NaCl, ¼ #/sx Celloflake, 4% MPA-1, 0.3% Sodium Metasilicate, DV Tool at 3100'. Stage 2: Lead - 513 sx (50:50) Poz Class C, 0.5% ASA-301, 5% NaCl, ¼ #/sx Celloflake, 10% Bentonite, 0.006 gps FP-13L, tail with 200s (60:40) Poz Class C, 5% NaCl, ¼ #/sx Celloflake, 0.3% Sodium Metasilicate. TOC – surface.

Cement Stage 1: 985 sx (60:40) Poz Class C, 1% NaCl, 0.5% BA-10, ¼ #/sx Celloflake, 2pps Kol Seal, 4% MPA-1, 0.2% R-3, DV Tool at 6000'. Stage 2: 375 sx (60:40) Poz Class C, 0.5% BA-10, 5% NaCl, ¼ #/sx Celloflake, 4% MPA-1, 2pps Kol Seal. TOC to be 500' inside of the 9 5/8" casing.

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

##### 5. **Pressure Control Equipment:**

The blowout preventor equipment (BOP) shown in Exhibit # B (A) 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 54.5, J-55 casing).** Prior to drilling out the 9 5/8" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2.

Pipe rams will be operated and check 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. **Proposed Mud Circulation System:**

DEPTH	MUD WT.	VISC	FLUID LOSS	TYPE MUD
0' – 830'	8.5 – 9.4	35-45	NC	Fresh
830' – 1850'	8.5-9	30-40	NC	Fresh
1850-5235'	10	29-35	NC	Brine
5235-8600'	8.4-9.1	29-35	NC to 15	Fresh / Polymer

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

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

- A kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in operations after drilling out the 13 3/8" casing shoe until the 9 5/8" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

**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:
  - i. Total Depth to Intermediate Casing      Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
  - ii. Total Depth to Surface      Compensated Neutron with Gamma Ray
  - iii. No coring program is planned
  - iv. Additional testing will 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. Potential Hazards**

No abnormal pressures or temperatures are expected. There is no known presence of H<sub>2</sub>S in this area. If H<sub>2</sub>S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No.

6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3750 psi and Estimated BHT 130°.

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

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

Well name:  
Operator: N/A  
String type: Conductor

## Bell Lake 23

### Design parameters:

#### Collapse

Mud weight: 9.500 ppg  
Design is based on evacuated pipe.

### Minimum design factors:

#### Collapse:

Design factor 1.125

#### Burst:

Design factor 1.00

### Environment:

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 87 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,000 ft

#### Burst

Max anticipated surface  
pressure: 310 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 410 psi

No backup mud specified.

#### Tension:

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Non-directional string.

Tension is based on air weight.

Neutral point: 713 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	830	20	94.00	JH55	Buttress	830	830	18.999	21490
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	410	520	1.27	410	1530	3.74	78	1041	13.34 J

Devon Energy

Date: February 27, 2006  
Oklahoma City, Oklahoma

#### Remarks:

Collapse is based on a vertical depth of 830 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.

Well name:  
Operator: **N/A**  
String type: Surface

## Bell Lake 23

### Design parameters:

#### Collapse

Mud weight: 10.000 ppg  
Design is based on evacuated pipe.

### Minimum design factors:

#### Collapse:

Design factor 1.125

#### Burst:

Design factor 1.00

### Environment:

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 101 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 830 ft  
Minimum Drift: 2.250 in

#### Burst

Max anticipated surface pressure: 1,955 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,177 psi

No backup mud specified.

#### Tension:

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Tension is based on air weight.  
Neutral point: 1,576 ft

Non-directional string.

### Re subsequent strings:

Next setting depth: 5,235 ft  
Next mud weight: 9.500 ppg  
Next setting BHP: 2,584 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 5,235 ft  
Injection pressure 5,235 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	1850	13.375	54.50	J-55	ST&C	1850	1850	12.49	22955
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	961	1130	1.18	2177	2730	1.25	100.8	514	5.10 J

Devon Energy

Date: February 27, 2006  
Oklahoma City, Oklahoma

#### Remarks:

Collapse is based on a vertical depth of 1850 ft, a mud weight of 10 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.



Well name:  
Operator: N/A  
String type: Intermediate

## Bell Lake 23

### Design parameters:

#### Collapse

Mud weight: 10.000 ppg  
Design is based on evacuated pipe.

### Minimum design factors:

#### Collapse:

Design factor 1.125

#### Burst:

Design factor 1.00

### Environment:

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 148 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 830 ft  
Minimum Drift: 8.750 in

#### Burst

Max anticipated surface pressure: 3,436 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 4,064 psi

No backup mud specified.

#### Tension:

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Tension is based on air weight.  
Neutral point: 4,456 ft

Estimated cost: 52,015 (\$)

Non-directional string.

### Re subsequent strings:

Next setting depth: 8,600 ft  
Next mud weight: 10.000 ppg  
Next setting BHP: 4,468 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 5,235 ft  
Injection pressure 5,235 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	4000	9.625	40.00	J-55	LT&C	4000	4000	8.75	36300
1	1235	9.625	40.00	N-80	LT&C	5235	5235	8.75	15715

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
2	2078	2510	1.21	3916	3950	1.01	209.4	520	2.48 J
1	2719	3090	1.14	4064	5750	1.41	49.4	737	14.92 J

Devon Energy

Date: February 27, 2006  
Oklahoma City, Oklahoma

#### Remarks:

Collapse is based on a vertical depth of 5235 ft, a mud weight of 10 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.

Well name:  
Operator: N/A  
String type: Production

## Bell Lake 23

### Design parameters:

#### Collapse

Mud weight: 10.000 ppg  
Design is based on evacuated pipe.

### Minimum design factors:

#### Collapse:

Design factor 1.125

#### Burst:

Design factor 1.00

### Environment:

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 195 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 830 ft

#### Burst

Max anticipated surface pressure: 3,435 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 4,467 psi

No backup mud specified.

#### Tension:

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Non-directional string.

Tension is based on air weight.  
Neutral point: 7,296 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8600	5.5	17.00	N-80	LT&C	8600	8600	4.767	48472
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	4467	6290	1.41	4467	7740	1.73	146.2	348	2.38 J

Devon Energy

Date: February 27, 2006  
Oklahoma City, Oklahoma

#### Remarks:

Collapse is based on a vertical depth of 8600 ft, a mud weight of 10 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.

Nov 10 05 02:10p  
Aug 23 04 08:10a

505 7485211

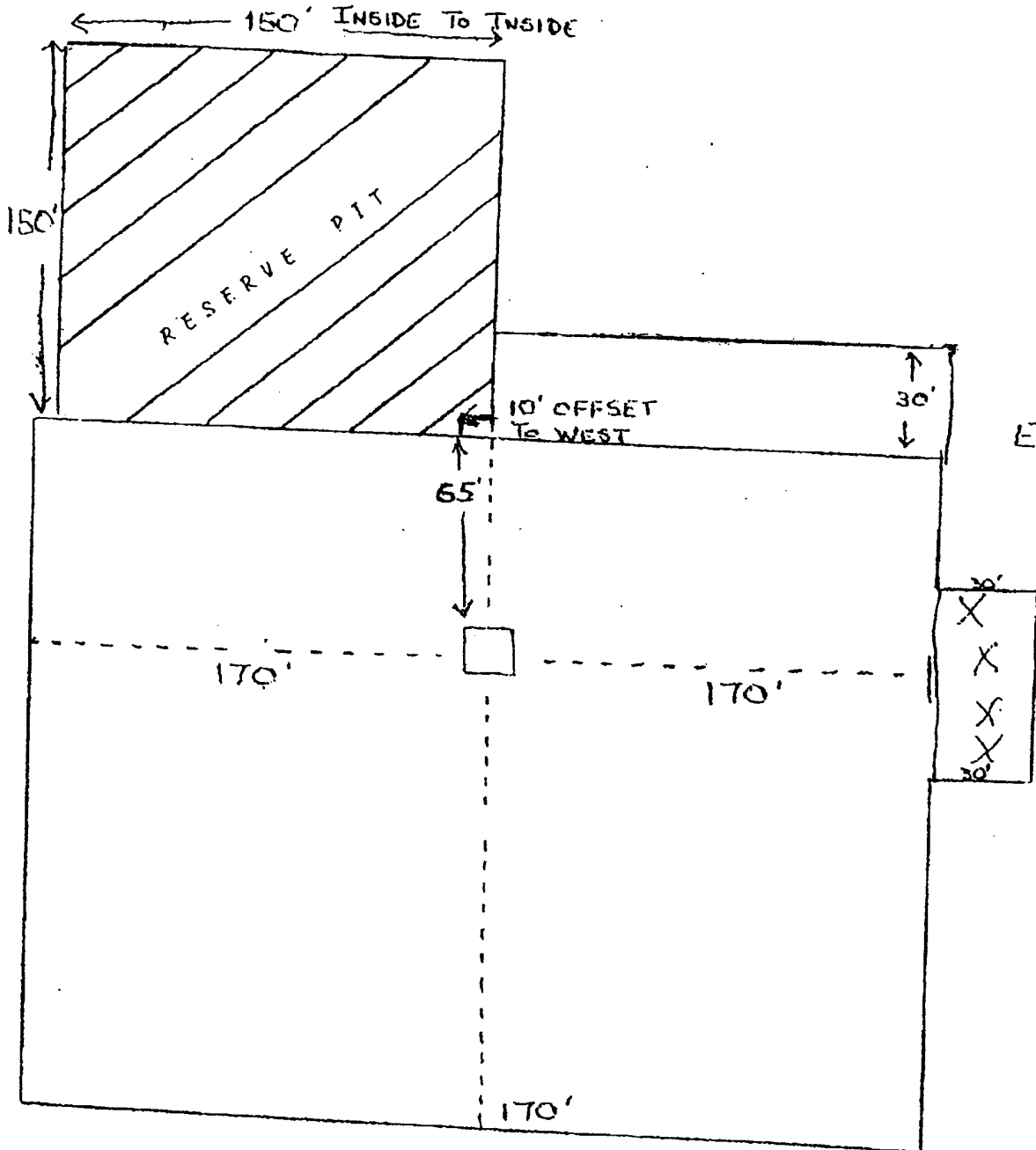
p.1  
p.2



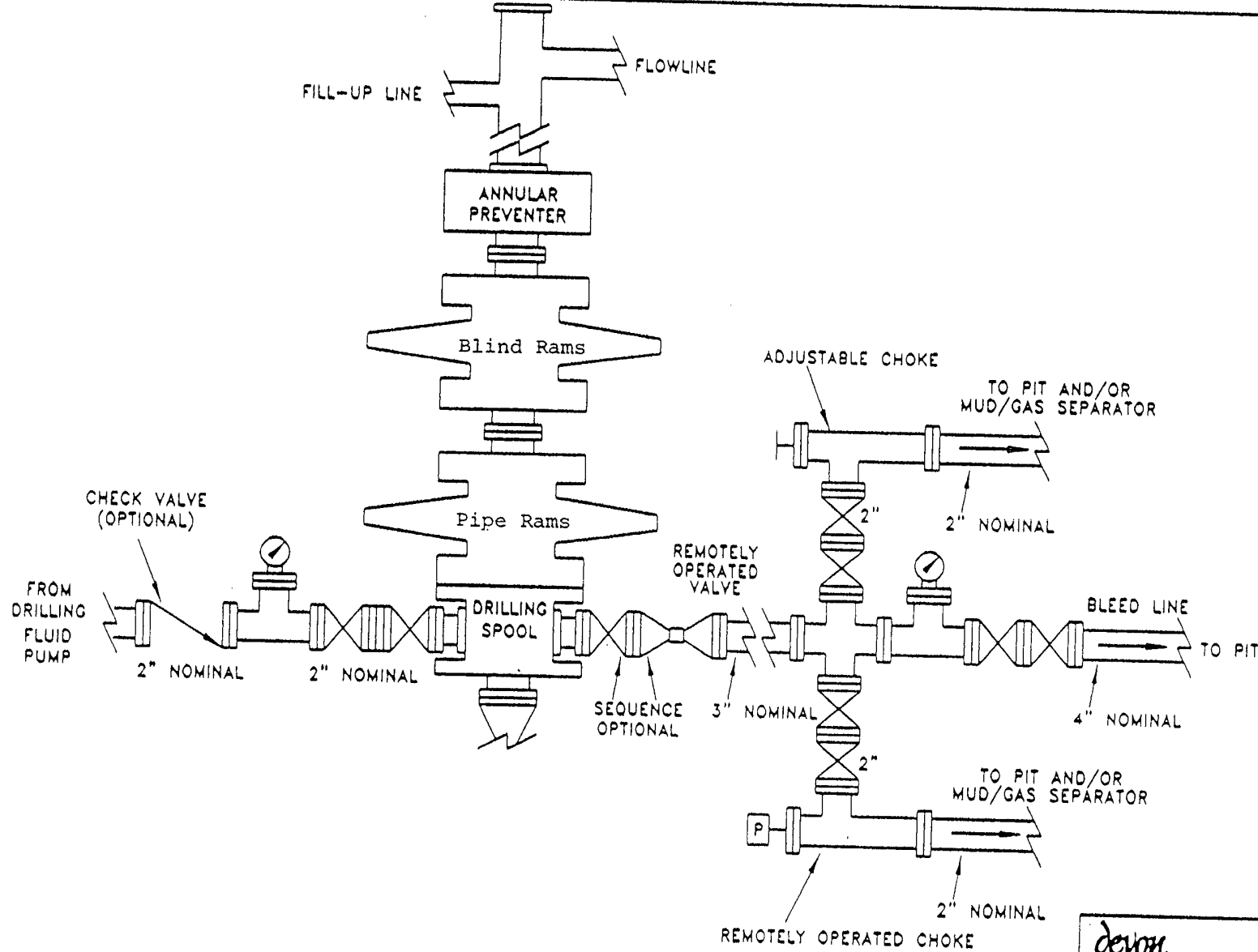
McVAY DRILLING COMPANY  
Post Office Box 924  
Hobbs, New Mexico 88241  
(505) 397-3311  
(505) 393-3744

N

McVAY 17



S



AREA NAME COUNTY, STATE	
PROPOSED 5-M BOPE AND CHOKE ARRANGEMENT	
s:\nm\plate 5mbopa.dwg	SC

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Devon Energy Production Company

Well Name & No: Bell lake Unit No. 23

Location: Surface: 1980' ~~FWL~~ & 660' ~~FWL~~, Sec. 31, T. ~~32~~ S., R. 34 E.

Lease: NMLC 070544-B

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: 20 inch; 13 3/8 inch; 9 5/8 inch, 5 1/2 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 20 inch shall be set at 1400 Feet with cement circulated to the surface or use Lea County Conditions of Approval (attached) to a depth of 1371 ft. 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 13 3/8 inch 1<sup>st</sup> Intermediate casing is to circulate to surface.

3. The minimum required fill of cement behind the 9 5/8 inch 2<sup>nd</sup> Intermediate casing is to circulate to surface.

4. The minimum required fill to cement behind the 5 1/2 inch Production casing is to Tie Back to the 9 5/8 inch shoe by at least 200 feet.

### 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 13 3/8 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 2 M psi for surface hole drilling conditions down to a depth of 5235 ft. A variance to test the BOPE installed on the 13 3/4" with the rig pumps to 1211 psig for 30 minutes is approved. The 3M BOPE system shall be tested as a 3M BOPE as per Onshore Order # 02 prior to drilling below the 9 3/4" inch shoe.

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 3/24/06 RFO

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-144  
June 1, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: Devon Energy Production Company, LP Telephone: 405-552-8198 e-mail address: norvella.adams@dvn.com  
Address: PO Box 250 Artesia NM 88211  
Facility or well name: Bell Lake Unit 23 API #: 30-025-38032 U/L or Qtr/Qtr I Sec 31 T 22S R 34E  
County: Lea Latitude N32°20' 46.8" Longitude W103°30' 10.3" NAD: 1927 ☐ 1983 ☐  
Surface Owner: Federal ☒ State ☐ Private ☐ Indian ☐

Pit	Below-grade tank	
Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Pit Volume <u>      </u> bbl	Volume: <u>      </u> bbl Type of fluid: <u>                                </u> Construction material: <u>                                </u> Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. <u>  </u>	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet	(20 points)
	50 feet or more, but less than 100 feet	(10 points)
	100 feet or more	( 0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes	(20 points)
	No	( 0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet	(20 points)
	200 feet or more, but less than 1000 feet	(10 points)
	1000 feet or more	( 0 points)
<b>Ranking Score (Total Points)</b>		<b>0 Points</b>

**If this is a pit closure:** (1) Attach a diagram of the facility showing the pit'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   . (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface                          ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

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: 3/21/06

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:

Printed Name/Title PETROLEUM ENGINEER

Signature 

Date: AUG 02 2006