Form 3160-3
(August 1999)

EC

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM97910

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

8. Lease Name and Well No.
ARENA ROJA FEDERAL 1 <34832>

2. Name of Operator
DEVON ENERGY PRODUCTION CO LP
Contact: NORVELLA ADAMS
E-Mail: Norvella.adams@dvn.com
<6137>

9. API Well No.
30-025-37257

3a. Address
20 NORTH BROADWAY, SUITE 1500
OKLAHOMA CITY, OK 73102

3b. Phone No. (include area code)
Ph: 405-552-8198

10. Field and Pool, or Exploratory
MORROW
WILDCAT

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NWSE 1980FSL 1980FEL

At proposed prod. zone NWSE 1980FSL 1980FEL Unit J

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 27 T26S R35E Mer NMP
SME: BLM

14. Distance in miles and direction from nearest town or post office*
APPROX 20 MILES WEST OF JAL, NM

12. County or Parish
LEA

13. State
NM

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
2200.00

17. Spacing Unit dedicated to this well
320.00

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth
16600 MD
16600 TVD

20. BLM/BIA Bond No. on file

21. Elevations (Show whether DF, KB, RT, GL, etc.
3065 GL

22. Approximate date work will start
05/01/2005

23. Estimated duration
70

CARLSBAD CONTROLLED WATER BASIN

24. Attachments

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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name (Printed/Typed)	Date
(Electronic Submission)	NORVELLA ADAMS Ph: 405-552-8198	03/24/2005

Title
AUTHORIZED REPRESENTATIVE

Approved by (Signature)	Name (Printed/Typed)	Date
/s/ Joe G. Lara	/s/ Joe G. Lara	MAY 18 2005
Title	**Office**	
ACTING FIELD MANAGER	CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify 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.

Additional Operator Remarks (see next page)

KZ

Electronic Submission #55455 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION CO LP, sent to the Carlsbad
Committed to AFMSS for processing by ARMANDO LOPEZ on 03/29/2005 (05AL0062AE)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

DECLARED WATER BASIN
CEMENT BEHIND THE 13 3/8
CASING MUST BE CIRCULATED

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

WITNESS

Additional Operator Remarks:

Devon Energy proposes to drill to approximately 16,600' to test the Morrow for commercial quantities of gas. 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.

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

DISTRICT II
811 South First, Artesia, NM 88210

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

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

Form C-102
Revised March 17, 1999

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-37257	✓	Wildcat Morrow

Property Code	Property Name	Well Number
34832	ARENA ROJA FEDERAL	1

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY LP	3065'

Surface Location

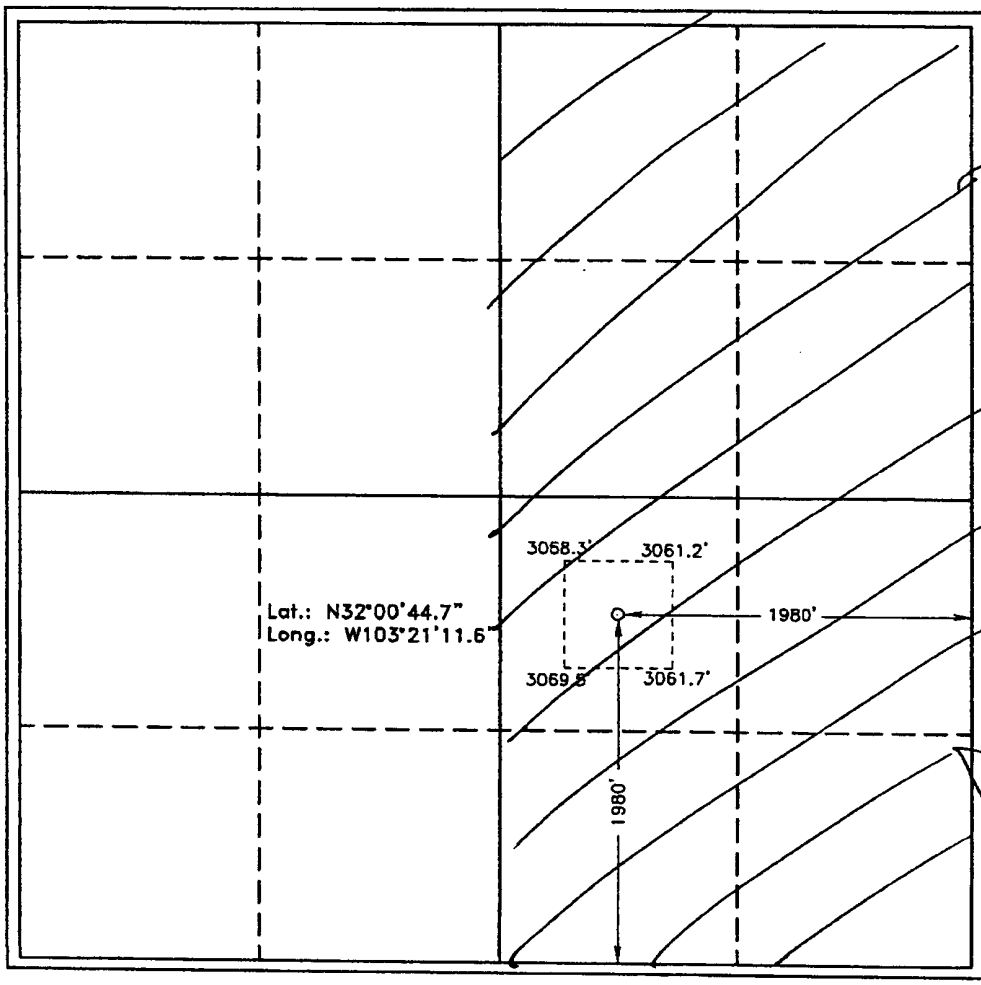
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	27	26 S	35 E		1980'	SOUTH	1980'	EAST	LEA

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	Joint or Infill	Consolidation Code	Order No.
320			

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



OPERATOR CERTIFICATION

I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Norvella Adams
Printed Name

Sr. Staff Eng. Tech
Title

March 22 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 supervison, and that the same is true and correct to the best of my belief.

March 15, 2005
Date Surveyed

Signature & Seal of Professional Surveyor

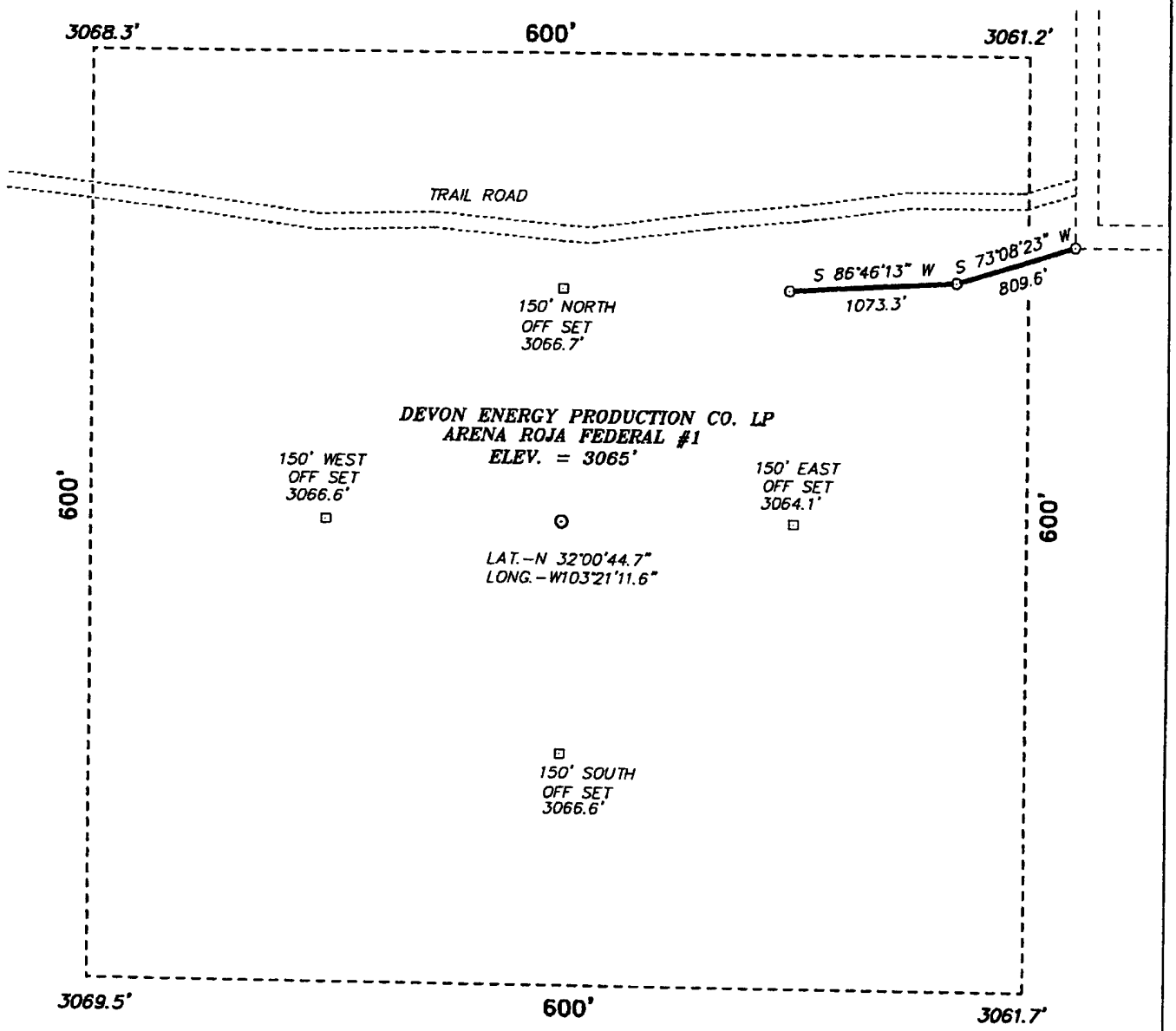
GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR
BASIN SURVEYS

W.O. No. 5228

Certificate No. Gary L. Jones 7977

JLP

SECTION 27, TOWNSHIP 26 SOUTH, RANGE 35 EAST, N.M.P.M.,
LEA COUNTY, **NEW MEXICO.**



SCALE: 1" = 100'

Directions to Location:

FROM THE END OF STATE HWY. 205 & CO. RD. J-3 (FRYING PAN RD), GO SOUTH ON J-3 FOR 4.2 MILES TO JCT. OF FRYING PAN ROAD AND BECKAM ROAD. THEN GO NORTHWEST 5.1 MILES, 2.9 MILES PAST RANCH HOUSE, TO PROPOSED LEASE ROAD.

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

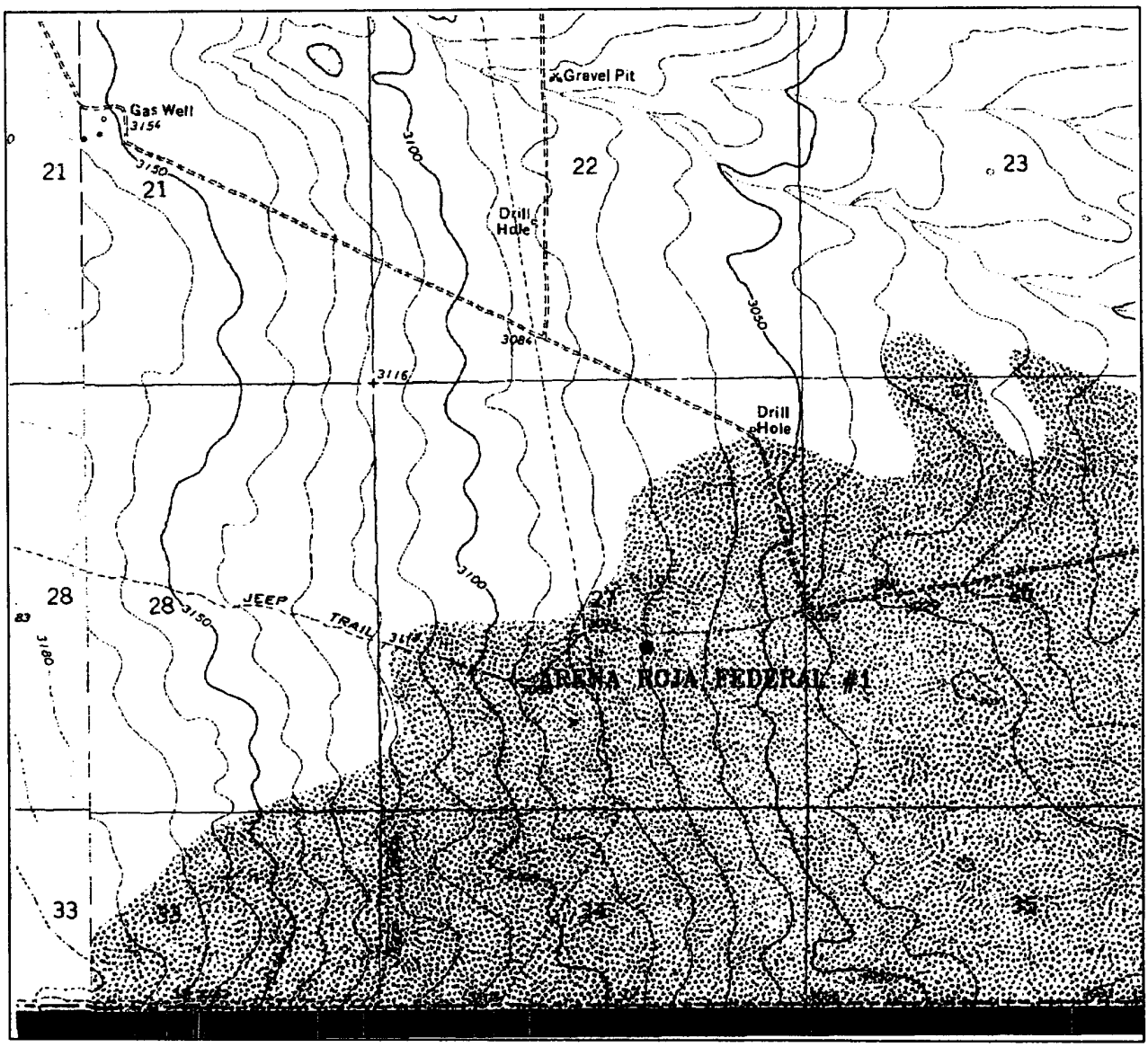
W.O. Number: 5228	Drawn By: JAMES PRESLEY
Date: 03/16/05	Disk: JLP #1 - DEV5228A

DEVON ENERGY PRODUCTION CO. LP.

REF: ARENA ROJO FEDERAL #1 / Well Pad Topo

ARENA ROJO FEDERAL #1 LOCATED 1980' FROM THE SOUTH LINE AND 1980' FROM THE EAST LINE OF SECTION 27, TOWNSHIP 26 SOUTH, RANGE 35 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 03/15/05	Sheet 1 of 1 Sheets



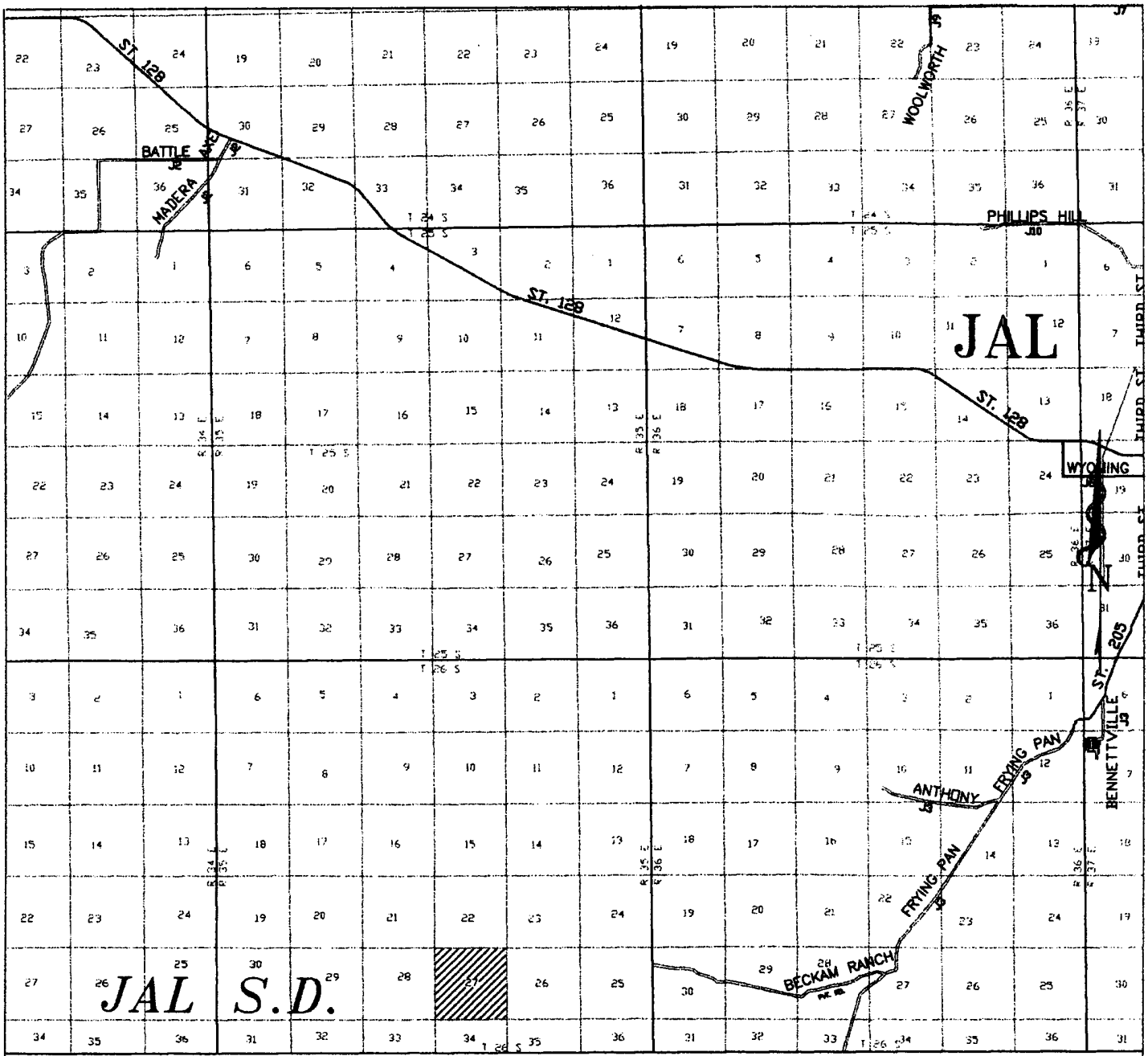
ARENA ROJA FEDERAL #1
Located at 1980' FSL and 1980' FEL
Section 27, Township 26 South, Range 35 East,
N.M.P.M., Lea County, New Mexico.

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:	5228AA - JLP #1
Survey Date:	03/15/05
Scale:	1" = 2000'
Date:	12/14/04

DEVON ENERGY PRODUCTION COMPANY LP.



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Survey Date:	03/15/05
Scale:	1" = 2000'
Date:	12/14/04

DEVON ENERGY PRODUCTION COMPANY LP.

DRILLING PROGRAM

Devon Energy Production Company, LP
ARENA ROJA FEDERAL #1
Unit Letter J, 1980 FSL & 1980 FEL, Section 27-26S-35E
Lea County, New Mexico

1. Geologic Name of Surface Formation

   Alluvium

2. Estimated Tops of Important Geologic Markers

Rustler	975'
Top Salt	1,400'
Base Salt	2,070'
Delaware	5,330'
Bone Spring	9,375'
Wolfcamp	12,500'
Strawn	14,575'
Atoka	15,310'
M Morrow	16,070'
TD	16,600'

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	Bone Spring @ 9,375'
Gas:	Wolfcamp @ 12,500'

4. Casing Program

INTERVALS	LENGTH	CASING
Surface		
0 – 1035'	1035'	13 3/8" 48# H-40 STC
Intermediate		
0 – 5350'	5350'	9 5/8" 40# N-80 LT&C
Production		
0 – 13,400'	13400'	7 5/8" 39# P110 FL-4S
Liner		
13,100' – 16,600'	3500'	5 ½" 23# HCP-110 STL

Cementing Program

HOLE SIZE	DEPTH	CEMENT	TOC	WOC HRS
Surface				
17 ½"	1035'	**Lead:** 466 sxs 35/65 POZ + 6% gel + 1/4#/sx celloflk) **Tail:** 300 sxs Cl "C" + 2% CaCl2	Surf.	12
Intermediate				
12 ¼"	5350'	**Lead:** 1167 sxs 50/50 POZ + 10% gel 5% salt +1/4#/sx celloflk **Tail:** 300 sx 60/40 POZ + 5% salt.	Surf.	12
Production				
8 3/4"	13,400'	**Lead:** 380 sx Class H **Tail:** 403 sx Class C	4850	24
Liner				
5 1/2"	13,100' – 16,600'	**Cmt w/330 sx Class H**		

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

5. Minimum Specifications for Pressure Control

Prior to intermediate, the blowout preventor equipment will consist of a 3M system. A 3000 WP double and a 3000 annular preventor. **The equipment will be tested to 1000 psi with the rig pump.** The 9 5/8" csg will have a 10M double and a 5M annular preventor. The 7 5/8" csg and the 5 1/2" will have a 10M double and single and a 10M annular preventor. Units will be hydraulically operated. See Exhibit #2 for Choke Manifold and Closing Unit. Blind rams on top, pipe rams on bottom to correspond with size of drill pipe in use. BOP will be tested as well as choke manifold. BOP will be worked at least once each day while drilling & blind ram will be worked on trips when no drill pipe is in hole. Full opening stabbing valve and upper Kelly cock will be utilized. Anticipated BHP 11700 psi and 210° 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 8000 psi WP rating.

6. Types and Characteristics of the Proposed Mud System

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

Depth	Type	Weight (ppg)	Viscosity (1/sec)	Water Loss (cc)
0' – 1035'	Fresh Water	<9.0	35-40	No control
1035' – 5350'	Brine	9.9 - 10	28-30	No control
5350' – 13,400'	Fresh Water	8.3 – 9.0	36-38	15-20 cc
13,400' – TD	Cut Brine/Starch	10.0 – 16.5	36-45	8- 10

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 liner. 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. However, the Atoka, if present may be overpressured and could require up to 16.5 ppg mud to control. The anticipated bottom hole temperature at total depth is 210 degrees and maximum bottom hole pressure is 11700 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 May 1, 2005. The drilling operation should require approximately 70 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
ARENA ROJA FEDERAL #1
Unit Letter J, 1980 FSL & 1980 FEL, Section 27-26S-35E
Lea County, New Mexico

1. Existing Roads

A. The well site and elevation plat for the proposed well are reflected on Exhibit #2. This well was staked by Basin Surveys in Hobbs, NM.

B. All roads into the location are depicted in Exhibit #3. 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 end of State Hwy. 205 & Co. Rd. J-3 (Frying Pan Rd), go South on J-3 for 4.2 miles to JCT. of Frying Pan Road and Beckam Road. Then go Northwest 5.1 miles, 2.9 miles past Ranch House, to proposed lease road.

2. Proposed Access Road

Exhibit #3 shows the existing lease road. Access to this location will require the construction of about 1,883' 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.

5. 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.

6. Source of Construction Materials

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.

7. 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.

8. Ancillary Facilities

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

9. 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.

10. 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 10 (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.

11. Surface Ownership

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

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

12. 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.

13. 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
Operations Engineering Advisor

Devon Energy Production Company, L.P.
20 North Broadway, Suite 1500
Oklahoma City, OK 73102-8260

(405) 552-8194 (office)
(405) 203-7778 (cell)

Don Mayberry
Superintendent

Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, NM 88211-0250

(505) 748-3371 (office)
(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: _____ Date: March 22, 2005

Norvella Adams
Sr. Staff Engineering Technician

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
ARENA ROJA FEDERAL #1
Unit Letter J, 1980 FSL & 1980 FEL, Section 27-26S-35E
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 5000/10000 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:	**Devon Energy Production Company, LP**
Street or Box:	**20 North Broadway, Suite 1500**
City, State:	**Oklahoma City, Oklahoma**
Zip Code:	**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:	**320 acres 27-26S-35E**
Formation(s):	**Wildcat (Morrow)**
Bond Coverage:	**Nationwide**
BLM Bond File No.:	**CO1104**
Authorized Signature:	**Norvella Adams**
Title:	**Sr. Staff Engineering Technician**
Date:	March 22, 2005

Arena Roja #1 & 2

Well name:	
Operator:	**Devon Energy**
String type:	Surface
Location:	New Mexico

Design parameters:

Collapse

Mud weight: 9.200 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 911 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 1,035 psi
Annular backup: 8.34 ppg

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

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: 896 ft

Environment:

H2S considered?	No
Surface temperature:	75 °F
Bottom hole temperature:	89 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	1,000 ft
Minimum Drift:	2.250 in
Cement top:	Surface

Non-directional string.

Re subsequent strings:

Next setting depth:	5,350 ft
Next mud weight:	10.100 ppg
Next setting BHP:	2,807 psi
Fracture mud wt:	19.250 ppg
Fracture depth:	1,035 ft
Injection pressure	1,035 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	1035	13.375	48.00	H-40	ST&C	1035	1035	12.59	12835

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	495	740	1.50	911	1795	1.97	49.7	322	6.48 J

Prepared by: Don Culpepper
Devon Energy
Phone: 405.552.7944
FAX: 405.552.4621
Date: September 9,2004
Oklahoma City, Oklahoma

Remarks:
Collapse is based on a vertical depth of 1035 ft, a mud weight of 9.2 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.

In addition, burst strength is biaxially adjusted for tension.

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

Arena Roja #1 & 2

Well name:
Operator: **Devon Energy**
String type: Liner: Production

Location: New Mexico

Design parameters:

Collapse
Mud weight: 16.500 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 11,559 psi
Internal gradient: 0.116 psi/ft
Calculated BHP 13,371 psi

Annular backup: 8.34 ppg

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

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: 14,982 ft

Estimated cost: 26,746 ($)

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 293 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft
Minimum Drift: 4.500 in
Cement top: 13,109 ft

Liner top: 13,100 ft
Non-directional string.

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	1400	5.5	23.00	HCP-110	ST-L	14500	14500	4.545	14978
1	1100	5.5	23.00	HCP-110	ST-L	15600	15600	4.545	11768

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	12429	14401	1.16	7405	14942	2.02	57.5	563	9.79 J
1	13371	14540	1.09	6962	14639	2.10	25.3	563	22.25 J

Prepared by: Don Culpepper
Devon Energy
Phone: 405.552.7944
FAX: 405.552.4621
Date: September 10,2004
Oklahoma City, Oklahoma

Remarks:
For this liner string, the top is rounded to the nearest 100 ft.Collapse is based on a vertical depth of 15600 ft, a mud weight of 16.5 ppg The casi Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

In addition, burst strength is biaxially adjusted for tension.

Arena Roja #1 & 2

Well name:	
Operator:	**Devon Energy**
String type:	Liner: Production
Location:	New Mexico

Design parameters:

Collapse

Mud weight: 14.200 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 10,316 psi
Internal gradient: 0.116 psi/ft
Calculated BHP 12,245 psi

Annular backup: 8.34 ppg

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

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: 15,856 ft

Environment:

H2S considered?	No
Surface temperature:	75 °F
Bottom hole temperature:	307 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	1,000 ft
Minimum Drift:	4.500 in
Cement top:	13,107 ft
Liner top:	13,100 ft

Non-directional string.

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	3500	5.5	23.00	HCP-110	ST-L	16600	16600	4.545	37445

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	12245	14540	1.19	6163	15120	2.45	80.5	563	6.99 J

Prepared by: Don Culpepper
Devon Energy
Phone: 405.552.7944
FAX: 405.552.4621

Date: September 10,2004
Oklahoma City, Oklahoma

Remarks:
For this liner string, the top is rounded to the nearest 100 ft.Collapse is based on a vertical depth of 16600 ft, a mud weight of 14.2 ppg The casi Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

In addition, burst strength is biaxially adjusted for tension.

Arena Roja #1 # 2

Well name:
Operator: **Devon Energy**
String type: Intermediate

Location: New Mexico

Design parameters:

Collapse
Mud weight: 10.100 ppg
Internal fluid density: 1.000 ppg

Burst
Max anticipated surface pressure: 4,708 psi
Internal gradient: 0.116 psi/ft
Calculated BHP 5,330 psi

Annular backup: 8.34 ppg

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

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: 4,546 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 150 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft
Minimum Drift: 8.750 in
Cement top: Surface

Non-directional string.

Re subsequent strings:
Next setting depth: 13,400 ft
Next mud weight: 9.000 ppg
Next setting BHP: 6,265 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 5,350 ft
Injection pressure 5,350 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	5350	9.625	40.00	N-80	LT&C	5350	5350	8.75	68078

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	2529	3090	1.22	4708	6235	1.32	214	737	3.44 J

Prepared by: Don Culpepper
Devon Energy
Phone: 405.552.7944
FAX: 405.552.4621
Date: September 9,2004
Oklahoma City, Oklahoma

Remarks:
Collapse is based on a vertical depth of 5350 ft, a mud weight of 10.1 ppg An internal gradient of .052 psi/ft was used for collapse from TD to 0
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

In addition, burst strength is biaxially adjusted for tension.

Arena Roja #142

Well name:	
Operator:	**Devon Energy**
String type:	Intermediate: Prod'n
Location:	New Mexico

Design parameters:

Collapse

Mud weight: 9.000 ppg
Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 11,559 psi
Internal gradient: 0.116 psi/ft
Calculated BHP 13,116 psi

Annular backup: 8.34 ppg

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

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: 11,602 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 263 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft
Minimum Drift: 6.500 in
Cement top: Surface

Non-directional string.

Re subsequent strings:
Next setting depth: 15,600 ft
Next mud weight: 16.500 ppg
Next setting BHP: 13,371 psi
Fracture mud wt: 30.000 ppg
Fracture depth: 13,400 ft
Injection pressure 20,883 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	13400	7.625	39.00	P-110	FL-4S	13400	13400	6.5	245421

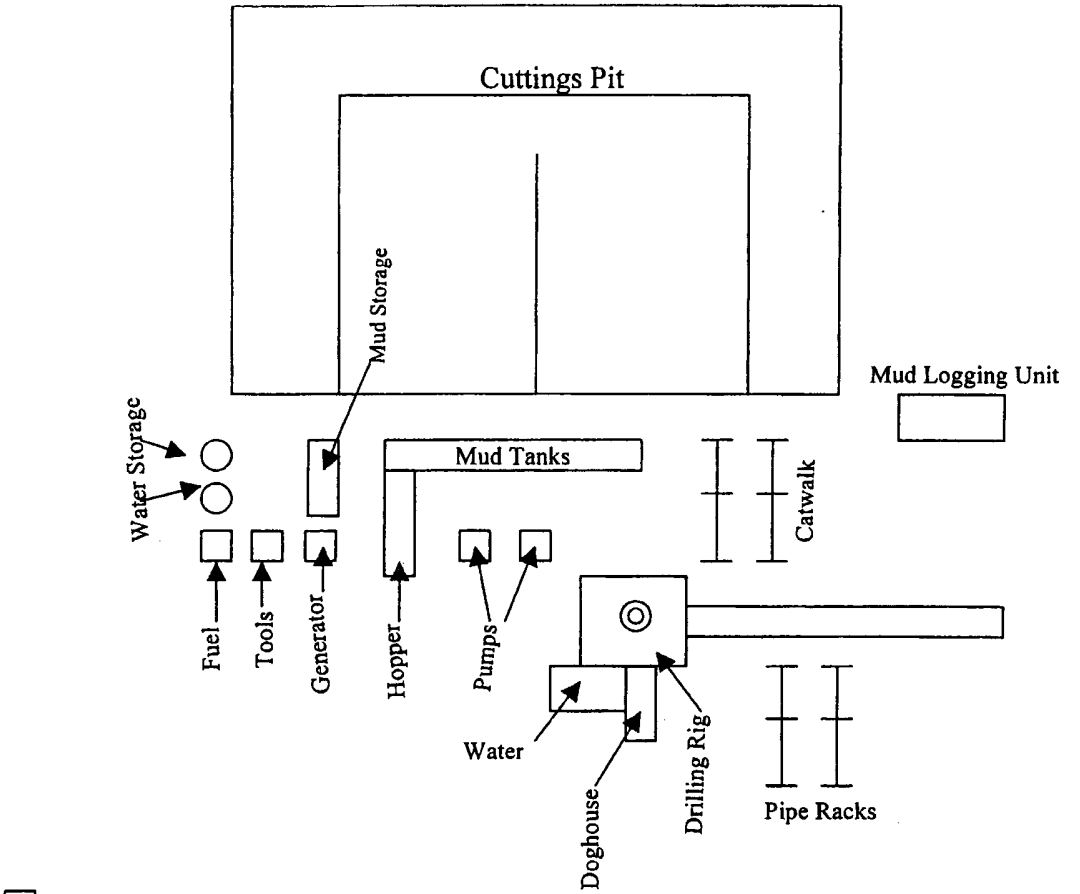
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	6265	11080	1.77	11559	14286	1.24	522.6	889	1.70 J

Prepared by: Don Culpepper
Devon Energy
Phone: 405.552.7944
FAX: 405.552.4621
Date: September 9,2004
Oklahoma City, Oklahoma

Remarks:
Collapse is based on a vertical depth of 13400 ft, a mud weight of 9 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.

In addition, burst strength is biaxially adjusted for tension.

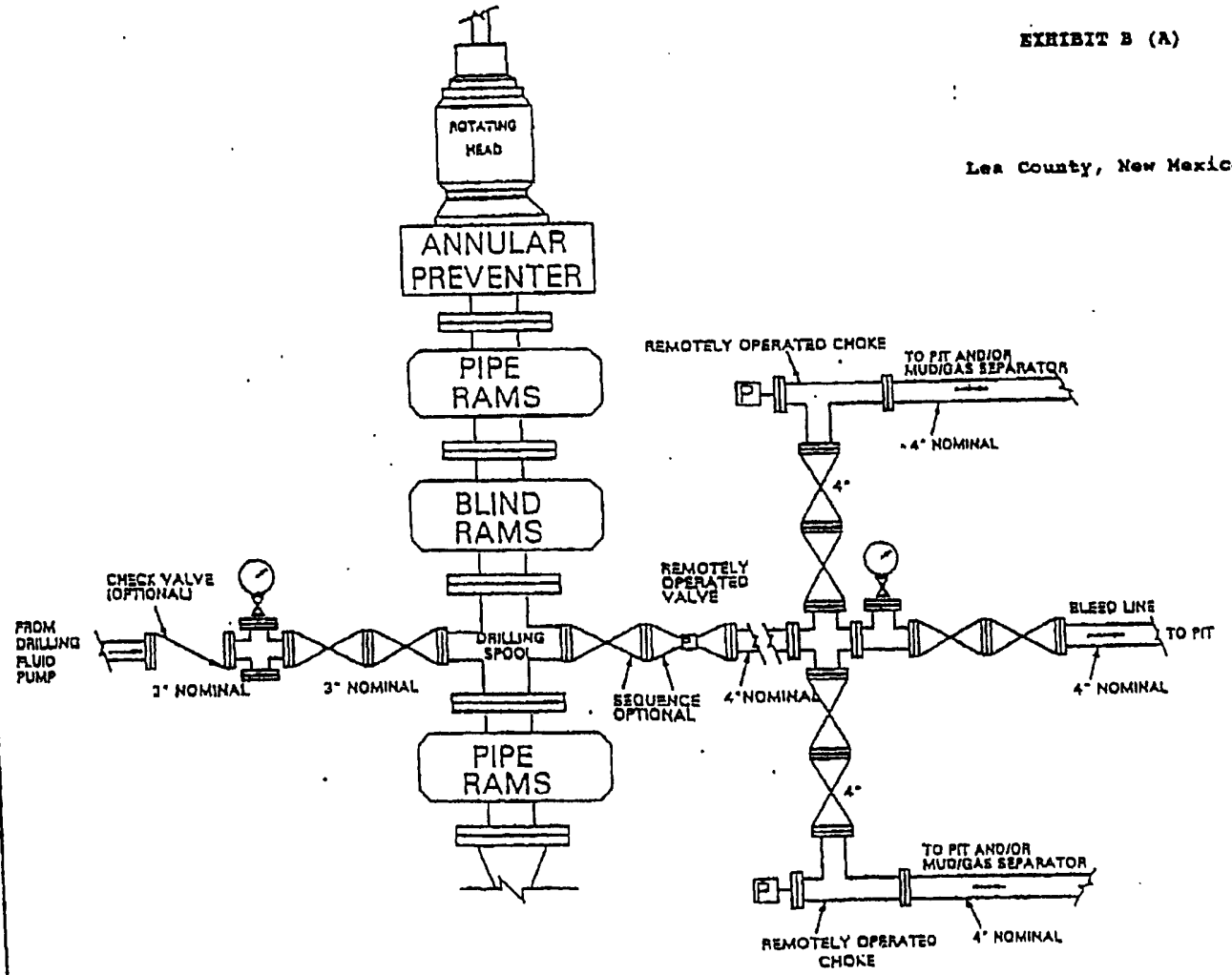
Engineering responsibility for use of this design will be that of the purchaser.


Cuttings Pit
Mud Storage
Mud Logging Unit
Water Storage
Mud Tanks
Catwalk
Fuel
Tools
Generator
Hopper
Pumps
Water
Doghouse
Drilling Rig
Pipe Racks
Garbage Trailer
Toilet
Parking Area
Trailer
Trailer
N
Devon Energy Production Company, LP
Drilling Pad
Exhibit #

PROPOSED 10-M BOPE AND CHOKE ARRANGEMENT

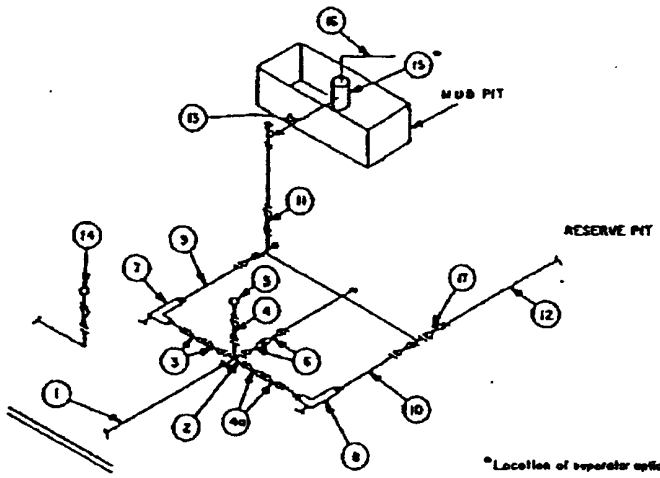
EXHIBIT B (A)

Lea County, New Mexico



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

3 MWP - 5 MWP - 10 MWP



MINIMUM REQUIREMENTS										
		3,000 MWP			5,000 MWP			10,000 MWP		
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 ☐ Plug ☐(2)	1-13/16"		3,000	1-13/16"		5,000	1-13/16"		10,000
4a	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 ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
7	Adjustable Choke(3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		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	Valves Gate ☐ 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.

devon

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

Hydrogen Sulfide (H_2S) Contingency Plan

For

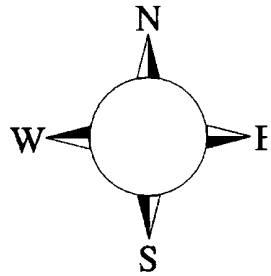
Arena Roja Federal # 1

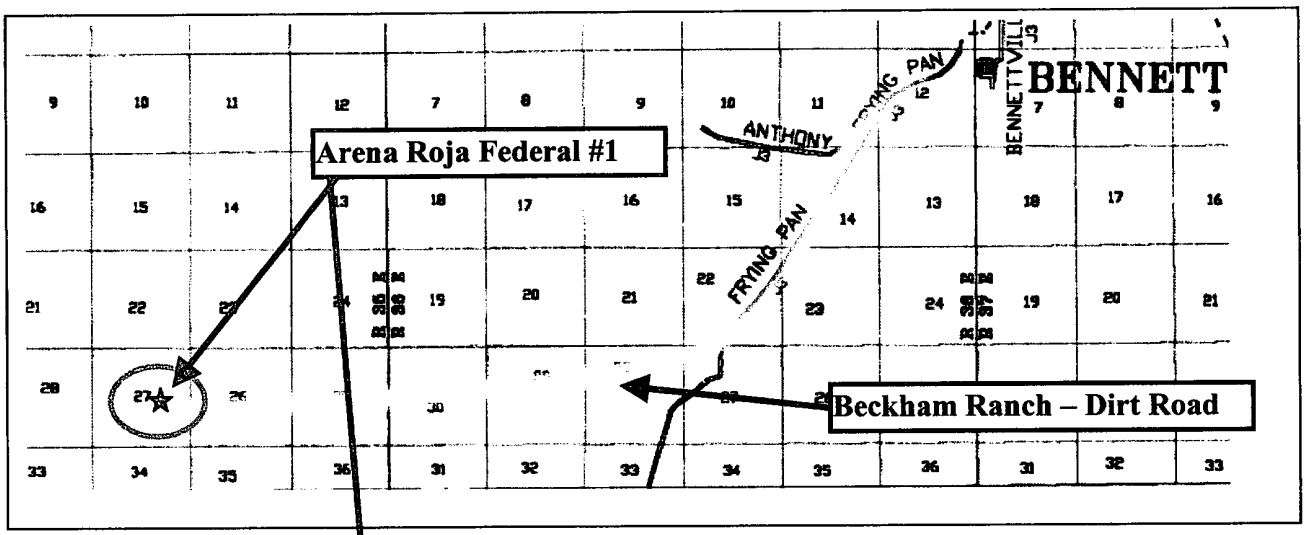
1980'FSL & 1980' FWL,
Sec-27, T-26S R-35E

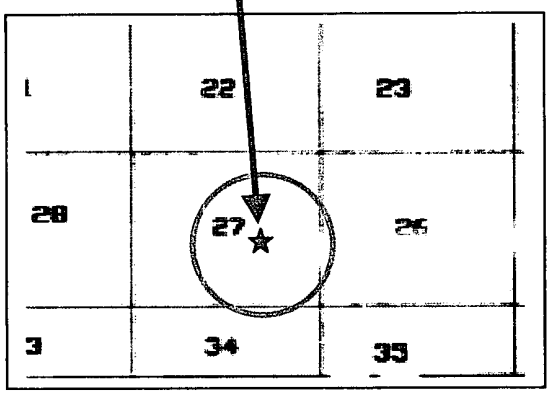
Lea County NM

Arena Roja Federal # 1

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.







Assumed 100 ppm ROE = 3000' (Radius of Exposure)
100 ppm H_2S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated East on Beckham Ranch road to Frying pan. Crews should then block entrance to the location from 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 or near the ROE.

Emergency Procedures

In the case of a release of gas containing H_2S, 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_2S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H_2S 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_2). 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_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentr-ation
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	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

Artesia (505)	Cellular	Office	Home
Foreman – BJ Cathey	390-5893	748-0176	887-6026
Asst. Foreman – Bobby Jones	748-7447	748-0176	746-3194
Cecil Thurmond	748-7180	748-0171	887-1479
Mike Myers	(505) 513-0782	(505) 748-0187	(505) 395-3020
Engineer – Tom Pepper	(405) 203-2242	(405) 552-4513	(405) 728-8641

Agency Call List

Eddy County (505)

Artesia

State Police	746-2703
City Police	746-2703
Sheriff's Office	746-9888
Ambulance	911
Fire Department	746-2701
LEPC (Local Emergency Planning Committee)	746-2122
NMOCD	748-128

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;

Compliance Services
PO Box 2731 Hobbs NM 88240 505) 631-1568

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

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

Form C-144
June 1, 2004

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: Arena Roja Fed #1 API #: 30-025-37257 U/L or Qtr/Qtr _____ Sec 27 T 26S R 35E
County: Lea Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐
Surface Owner: Federal ☑ State ☐ Private ☐ Indian ☐

Pit Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☒ Unlined ☐ Liner type: Synthetic ☒ Thickness 12 mil Clay ☐ Pit Volume _____ bbl	**Below-grade tank** Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes ☐ If not, explain why not.	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (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 No	(20 points) (0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points)
	Ranking Score (Total Points)	0

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: 5/23/05
Printed Name/Title Norvella Adams / Sr. Staff Eng. Tech 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 MAY 23 2005