

1625 N. French Dr.

Hobbs, NM 88240

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000APPLICATION FOR PERMIT TO DRILL OR REENTER *610.*

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM19142
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator DEVON ENERGY PRODUCTION CO LP Contact: LINDA GUTHRIE E-Mail: linda.guthrie@dmv.com <i>6137</i>		7. If Unit or CA Agreement, Name and No.
3a. Address 20 NORTH BROADWAY, SUITE 1500 OKLAHOMA CITY, OK 73102		8. Lease Name and Well No. RIO BLANCO 3 FEDERAL 1 <i>34137</i>
3b. Phone No. (include area code) Ph: 405.228.8209 Fx: 405.552.1319		9. API Well No. <i>30-025-36780</i>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWSW 1980FSL 660FWL At proposed prod. zone		10. <i>Bell Lake, Devonian, NE (GAS)</i> <i>92328</i>
14. Distance in miles and direction from nearest town or post office* APPROX 20 MILES WEST OF JAL, NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec 3 T23S R34E Mer NMP SME: BLM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		12. County or Parish LEA
16. No. of Acres in Lease 560.12		13. State NM
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.		17. Spacing Unit dedicated to this well 320.00
19. Proposed Depth 15000 MD		20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KB, RT, GL, etc.) 3387 GL		23. Estimated duration 90 DAYS
22. Approximate date work will start 07/01/2004		

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:

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

25. Signature (Electronic Submission)	Name (Printed/Typed) LINDA GUTHRIE	Date 05/20/2004
Title OPERATIONS ASSOCIATE		
Approved by (Signature) <i>/s/ Joe G. Lara</i>	Name (Printed/Typed) <i>/s/ Joe G. Lara</i>	Date <i>16 JUL 2004</i>
Title ACTING FIELD MANAGER		
Office 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

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHEDElectronic Submission #28752 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION CO LP, sent to the Hobbs
Committed to AFMSS for processing by ARMANDO LOPEZ on 05/24/2004 (04AL0069AE)DECLARED WATER BASIN
CEMENT BEHIND THE *13 3/8"*
CASING MUST BE *CIRCULATED**KZ*
CAPITAN REEF
CEMENT BEHIND THE *9 5/8"*
CASING MUST BE *TIED BACK 200' INTO 13 3/8"*

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

Additional Operator Remarks:

Devon Energy proposes to drill to approximately 15,000' to test the Morrow/Devonian 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.

Approximately 1804' of new lease road will need to be constructed.

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 30-025-36780	Pool Code 97328	Pool Name Bell Lake, Devonian NE (Gas)
Property Code 34137	Property Name RIO BLANCO "3" FEDERAL	Well Number 1
GRID No. 6137	Operator Name DEVON ENERGY PRODUCTION COMPANY LP	Elevation 3387'

Surface Location

UL or lot No. L	Section 3	Township 23-S	Range 34-E	Lot Idn	Feet from the 1980'	North/South line SOUTH	Feet from the 660'	East/West line WEST	County LEA
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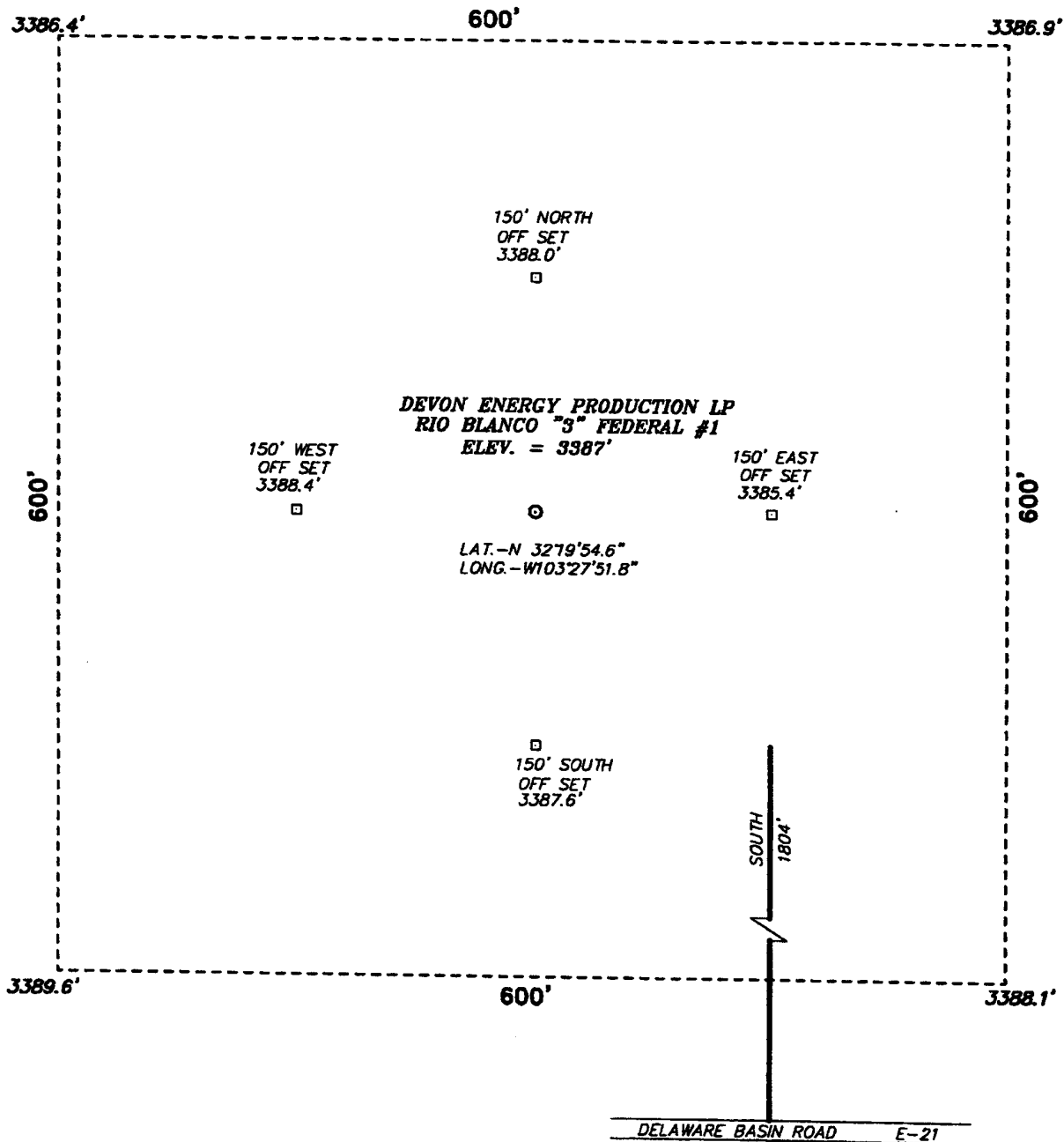
Bottom Hole Location If Different From Surface

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

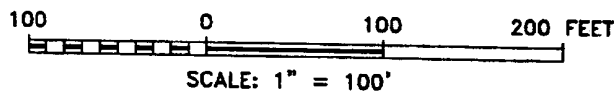
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	OPERATOR CERTIFICATION I hereby certify the information contained herein is true and complete to the best of my knowledge and belief. Signature Linda B Guthrie Printed Name Regulatory Specialist Title 03/23/04 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. FEBRUARY 24, 2004 Date Surveyed Signature & Seal of Professional Surveyor 7977 Professional Surveyor No. W.O. No. 4024 Certificate No. 8047 JLP BASIN SURVEYS

**SECTION 3, TOWNSHIP 23 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.**



FROM THE INTERSECTION OF STATE HWY. 128
AND LEA CO. RD. E-21 GO NORTH ON E-21
8.0 MILES, THEN 2.5 MILES EAST ON E-21
TO THE BEGINNING OF PROPOSED ROAD.



DEVON ENERGY PRODUCTION CO. LP.

REF: RIO BLANCO "3" FED. #1 / Well Pad Topo

RIO BLANCO "3" FEDERAL #1 LOCATED 1980' FROM THE
SOUTH LINE AND 660' FROM THE WEST LINE OF
SECTION 3, TOWNSHIP 23 SOUTH, RANGE 34 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

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

W.O. Number: 4024

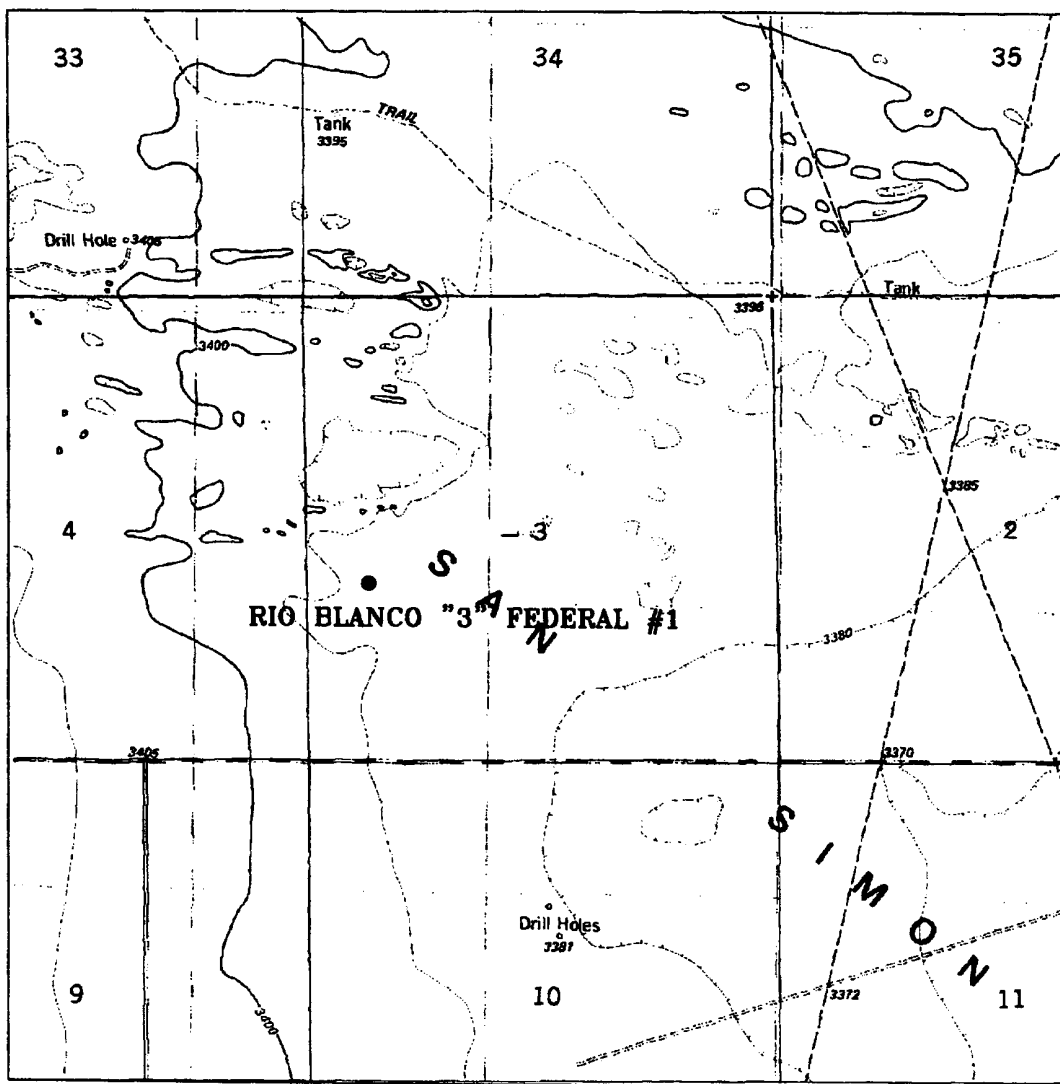
Drawn By: JAMES PRESLEY

Date: 02/26/04

Disk: JLP #1 - CON4024A

Survey Date: 02/24/04

Sheet 1 of 1 Sheets



RIO BLANCO "3" FEDERAL #1

Located at 1980' FSL and 660' FWL
 Section 3, Township 23 South, Range 34 East,
 N.M.P.M., Lea County, New Mexico.



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

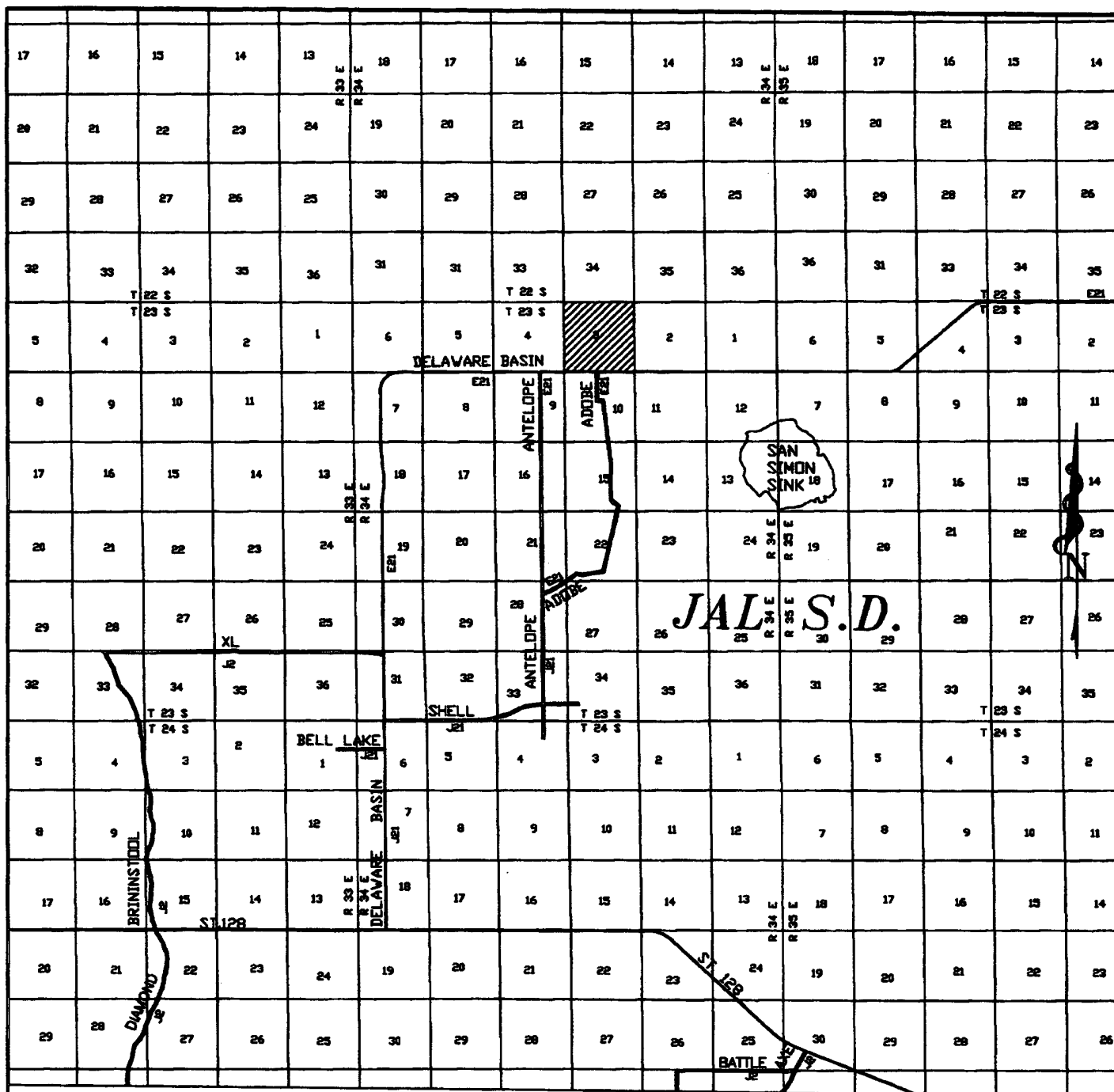
W.O. Number: 4024AA - JLP #1

Survey Date: 02/24/04

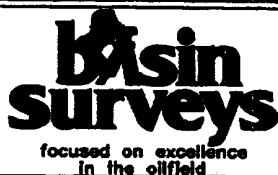
Scale: 1" = 2000'

Date: 02/26/04

**DEVON ENERGY
 PRDUCTION
 COMPANY LP.**



RIO BLANCO "3" FEDERAL #1
 Located at 1980' FSL and 660' FWL
 Section 3, Township 23 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

W.O. Number: 4024AA - JLP #1

Survey Date: 02/24/04

Scale: 1" = 2000'

Date: 02/26/04

DEVON ENERGY
 PRDUCTION
 COMPANY LP.

DRILLING PROGRAM

Devon Energy Production Company, LP
RIO BLANCO 3 FEDERAL #1
1980' FSL & 660' FWL, Section 3 T23S, R34E
Lea County, New Mexico

1. **Geologic Name of Surface Formation**

Alluvium

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

Rustler	2375'
Delaware	5125'
Bone Spring	8485'
Wolfcamp	11240'
Strawn	11750'
Atoka	12050'
Morrow	12850'
Devonian	14574'
Total Depth	15000'

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 @8485'
Gas	Upper Morrow @12850
	Devonian @14,574'

4. **Casing Program**

Hole Size	Interval	OD Csg	Weight	Collar	Grade
17 1/2"	0 – 2400'	13 3/8"	54.5 & 61#	ST&C	K55
12 1/4:"	0 –5150'	9 5/8"	40#	LT&C	N80
8 3/4"	0' –12,000'	7"	26#	LT&C	HCP-110
6 1/8"	11,700' – 14,570'	5"	18#	ST-L	HCL-80
4 1/8"	14,570 – 15,000	Open hole			

5. CASING CEMENTING & SETTING DEPTH:

13-3/8"	Surface	Run 13-3/8" 54.5# & 61# K55 ST&C casing. Cement with 1027 sx 35:65:6 Poz Class C followed by 300 sx Class C. Cement to surface.
9-5/8"	Intermediate	Run 9-5/8" 40# N80 LT&C casing. Cement Stage I w/ 417 sx 50:50 Poz:Class C followed by 250 sx 60:40 Poz Class C. Cement Stage II w/ 496 sx 50:50 Poz:Class C followed by 200 sx 60:40 Poz:Class C. Cement back to 13-3/8" casing.
7 5/8	Production Interm.	Run 7 ", 26# HCP 110, LT&C casing . Cement with 421 sx Class H. Cement 500' above the top hydrocarbon bearing interval.
5"	Production Liner	Run 5 ", 18# HCL-80 liner. Cement with 225 sx Class H. Cement to top of liner.

Note: Cement volumes may vary based on hole conditions and caliper information.

6. **PRESSURE CONTROL EQUIPMENT:** Exhibit 1 Prior to intermediate, the blowout preventor equipment will consist of a 2M system. A 2000 psi WP pipe ram and/or a 2000 psi (Hydril) preventor. After Tding intermediate, a Blow-out Preventer (5,000/10,000 PSI working pressure) consisting of double ram type preventer with bag type preventor will be used. Units will be hydraulically operated. 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 6300 PSI and 200° BHT.

7. PROPOSED MUD CIRCULATION SYSTEM:

DEPTH	MUD. WT.	MUD VISC.	FLUID LOSS	TYPE MUD
0' – 2400'	8.4 – 8.8	29-36	NC	Fresh water spud mud use paper for seepage.
2400' – 5000'	8.5 – 10	29-32	NC	Brine water, use ground paper for seepage control and lime for ph
5000' – 11,800'	8.4 – 9	29-34	N/C	Cut Brine use paper for seepage control
11,800' – 14,570'	9-12.5	34-38	10cc for drilling Morrow	Cut Brine. Mud up at 12,000'
14,570' - 15,000'	8.4	28-30	N/C	Fresh Water

Sufficient mud materials to maintain mud properties, meet lost circulation and weight increase requirement will be kept at well site at all times. In order to run casing and log well viscosity may have to be raised and water loss may have to be lowered.

8. 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.
- C. Hydrogen Sulfide detection equipment (Compliance Package) will be in operation when drilling out the 9 5/8" casing shoe until the well is TD'd.

9. 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) TD to intermediate casing; Induction/ Gamma Ray/ Neutron/ Density Log.
 - 2) TD to surface: Neutron with Gamma Ray.
- C. No coring program is planned.
- D. Additional testing may be initiated during drilling of the open hole section below 14,570'. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

11. Abnormal Pressures, Temperatures and Potential Hazards

Abnormally high pressured zones with a bottom hole pressure of approximately 7500 psi could possibly be encountered while drilling the Pennsylvanian interval. Sufficient barite will be on location to enable the weighting up to the estimated 11.5 ppg to control any high-pressure zone encountered. Along with the above mentioned primary control, a Blow Out Preventor System as outlined in Exhibit B will be utilized should the need arise to shut the well in prior to running and cementing the drilling liner. The estimated bottom hole temperature is 200°F. Hydrogen Sulfide has been reported at this depth in this area. No major lost circulation zones have been reported in the offsetting wells.

12. 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 July 01, 2004. 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
RIO BLANCO 3 FEDERAL #1
1980' FSL & 660' FWL, Section 3 T23S, R34E
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 junction of Co. Rd. E-21 and state Hwy 128, go north on Co. Rd. E-21 for approx. 8.0 miles; then east on E-21 for approx. 2.5 miles to the beginning of the proposed lease road.

2. Proposed Access Road

Exhibit #3 shows the existing lease road. Access to this location will require the construction of about 1804' 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.

RIO BLANCO 33 FEDERAL #2
SURFACE USE AND OPERATING PLAN
PAGE 2

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 to the original natural state.

4. Methods of Handling Water 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 150' x 8' 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 20 mil liner to minimize loss of drilling fluids and saturation of the ground with brine water used during drilling.
 - 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 has it is ready to be closed. It will be closed pursuant to OCD rules and guidelines and 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.
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RIO BLANCO 33 FEDERAL #2
SURFACE USE AND OPERATING PLAN
PAGE 3

5. 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.

10. Plans for Restoration of Surface

- A. After concluding the drilling and/or completion operations, if the well is found non-commercial, the road will be reclaimed as directed by the BLM.
- B. The pit will be closed pursuant to OCD rules and guidelines and reclaimed as per BLM specifications. The original top soil will be returned to the pad and contoured as closely as possible to the original topography.
- C. The location and road will be rehabilitated as recommended by the BLM.
- D. 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.

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.

RIO BLANCO 33 FEDERAL #2
SURFACE USE AND OPERATING PLAN
PAGE 4

12. Other Information

- A. The wellsite and access route are located in a relatively flat area.
- B. The top soil at the wellsite and access route is sandy.
- C. The vegetation cover at the wellsite is moderately sparse, with prairie grasses, some mesquite bushes, and shinnery oak.
- D. No wildlife was observed but it is likely that deer, rabbits, coyotes and rodents traverse the area.
- E. 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 Engineer Advisor

Don Mayberry
Superintendent

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

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

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

(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: _____

Bill Greenlees
Operations Engineer Advisor

Date: May 20, 2004

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
RIO BLANCO 3 FEDERAL #1
1980' FSL & 660' FWL, Section 3 T23S, R34E
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 5000 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. 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.: **NMNM19142 and NMNM19143**

Legal Description of Land: **320 acres 3-23S-R34E**

Formation(s): **Morrow, Devonian**

Bond Coverage: **Nationwide**

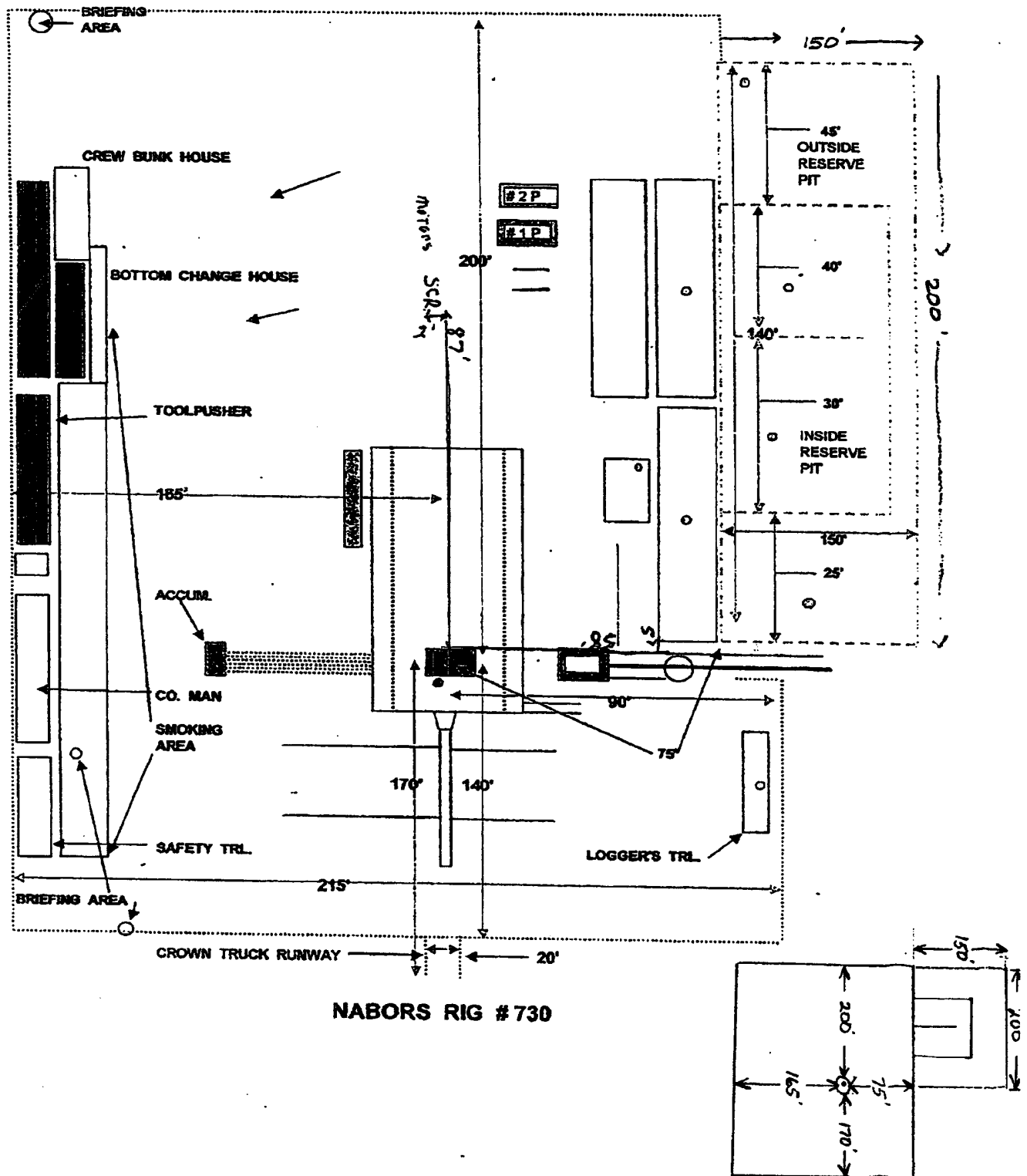
BLM Bond File No.: **CO-1104**

Authorized Signature:


Bill Greenlees

Title: **Operations Engineering Advisor**

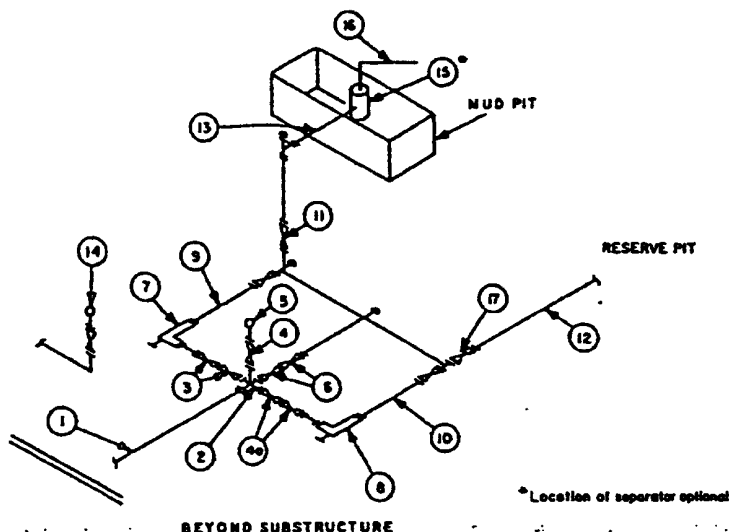
Date: **05/20/04**



NABORS RIG # 730

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

3 MWP - 5 MWP - 10 MWP



MINIMUM REQUIREMENTS										
No.		3,000 MWP			5,000 MWP			10,000 MWP		
		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 <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
4	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/> (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 <input type="checkbox"/> Plug <input type="checkbox"/> (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 <input type="checkbox"/> Plug <input type="checkbox"/> (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 <input type="checkbox"/> Plug <input type="checkbox"/> (2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000

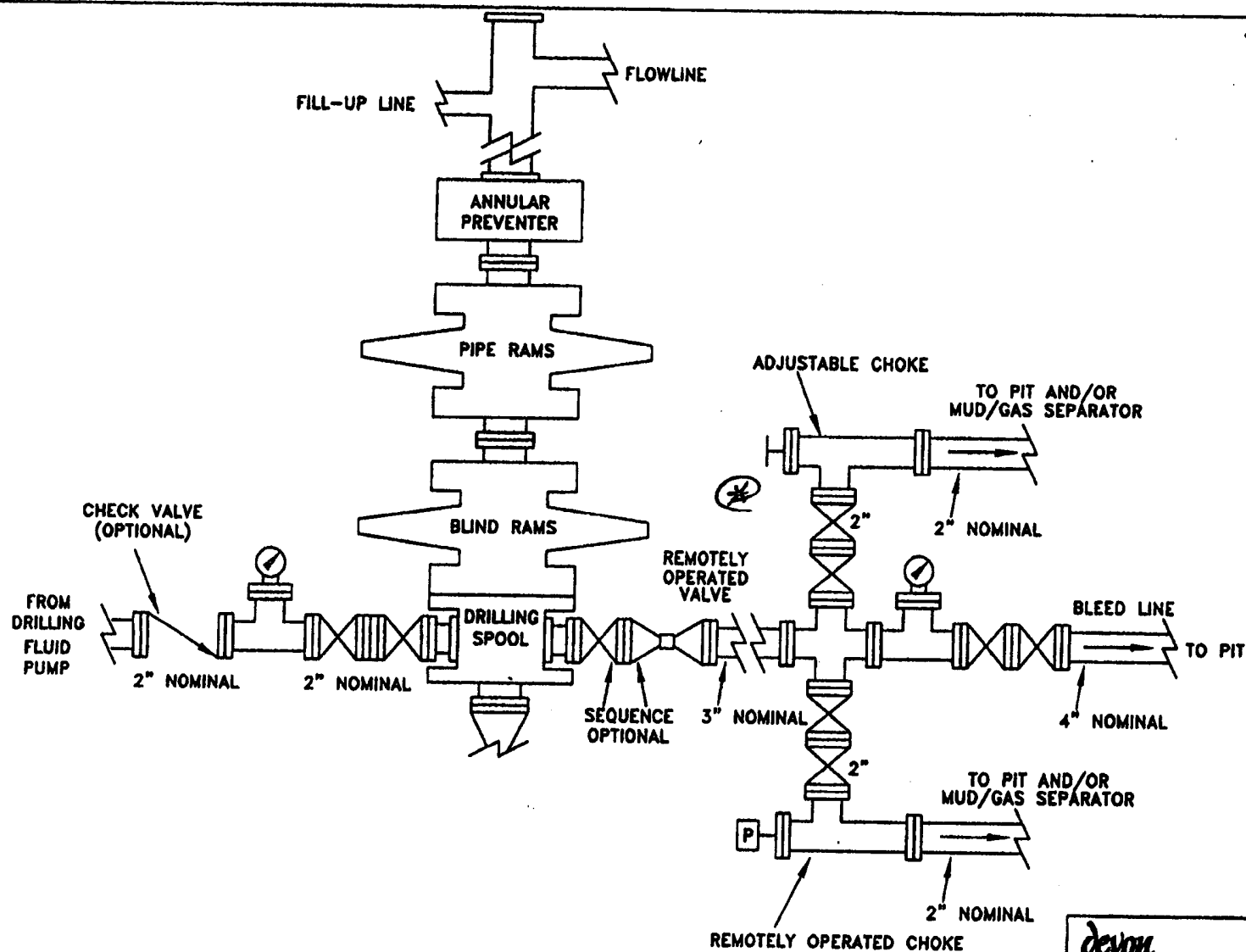
(1) Only one required in Class 3M.

(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

- All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- All lines shall be securely anchored.
- Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
- 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.
- 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.
- Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.



devon

AREA NAME

COUNTY, STATE

SCHEMATIC

PROPOSED 5-M BOPE
AND CHOKE ARRANGEMENT

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5mbope.dwg

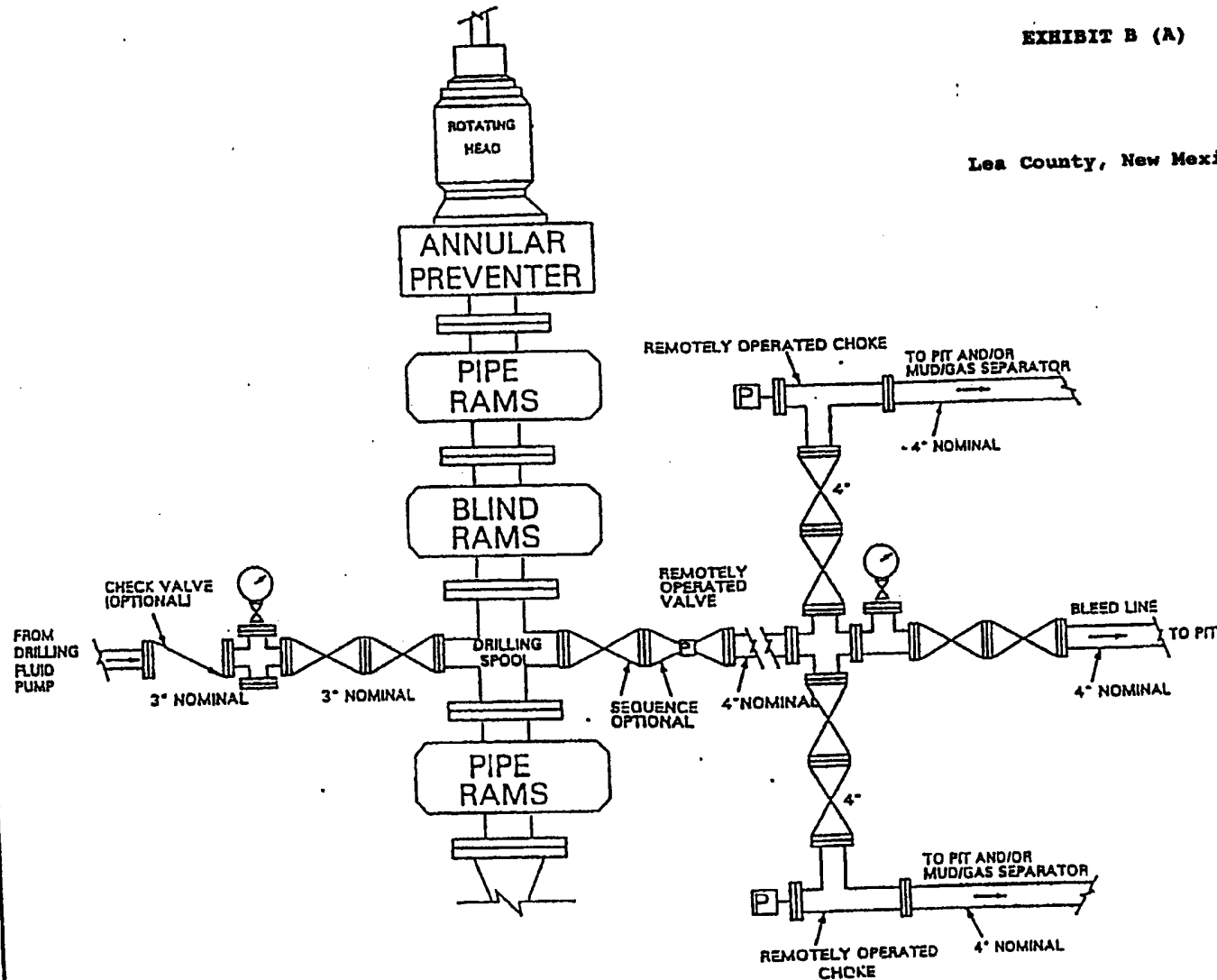
SC

10/00

PROPOSED 10-M BOPE AND CHOKE ARRANGEMENT

EXHIBIT B (A)

Lea County, New Mexico



Well name:	Rio Blanco 3 Fed 1
Operator:	Devon Energy
String type:	Surface
Location:	New Mexico

Design parameters:
Collapse

Mud weight: 9.800 ppg
Internal fluid density: 1.100 ppg

Burst

Max anticipated surface pressure: 1,500 psi
Internal gradient: 0.239 psi/ft
Calculated BHP: 2,073 psi

No backup mud specified.

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: 2,079 ft

Estimated cost: 33,731 (\$)

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 109 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft
Minimum Drift: 2.250 in

Non-directional string.

Re subsequent strings:

Next setting depth: 5,150 ft
Next mud weight: 10.200 ppg
Next setting BHP: 2,729 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,400 ft
Injection pressure: 2,400 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	1800	13.375	54.50	K-55	ST&C	1800	1800	12.49	24710
1	600	13.375	61.00	K-55	ST&C	2400	2400	12.39	9021

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	814	1117	1.37	1929	2730	1.41	134.7	547	4.06 J
1	1085	1540	1.42	2073	3090	1.49	36.6	633	17.30 J

Prepared by: Bill Dougherty
Devon Energy

Date: May 18, 2004
Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 2400 ft, a mud weight of 9.8 ppg. An internal gradient of .057 psi/ft was used for collapse from TD to 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:	Rio Blanco 3 Fed 1
Operator:	Devon Energy
String type:	Intermediate
Location:	New Mexico

Design parameters:

Collapse

Mud weight: 10.100 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: 147 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft
Minimum Drift: 8.750 in

Burst

Max anticipated surface pressure: 5,103 psi
Internal gradient: 0.009 psi/ft
Calculated BHP 5,150 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: 4,376 ft

Re subsequent strings:

Next setting depth: 11,950 ft
Next mud weight: 14.300 ppg
Next setting BHP: 8,877 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 5,150 ft
Injection pressure 5,150 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	5150	9.625	40.00	N-80	LT&C	5150	5150	8.75	65533
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	2702	3090	1.14	5150	5750	1.12	206	737	3.58 J

Prepared by: Bill Dougherty
by: Devon Energy

Date: May 18, 2004
Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 5150 ft, a mud weight of 10.1 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:	Rio Blanco 3 Fed 1
Operator:	Devon Energy
String type:	Intermediate: Prod'n
Location:	New Mexico

Design parameters:

Collapse

Mud weight: 10.200 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: 243 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft
Minimum Drift: 8.750 in

Burst

Max anticipated surface pressure: 4,997 psi
Internal gradient: 0.400 psi/ft
Calculated BHP 9,796 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: 10,154 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 14,570 ft
Next mud weight: 14.300 ppg
Next setting BHP: 10,823 psi
Fracture mud wt: 30.000 ppg
Fracture depth: 12,000 ft
Injection pressure 18,701 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	12000	7	26.00	HCP-110	LT&C	12000	12000	6.151	124740

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	6358	7800	1.23	9796	9950	1.02	312	693	2.22 J

Prepared by: Bill Dougherty
Devon Energy

Date: May 18,2004
Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 12000 ft, a mud weight of 10.2 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.

Burst strength is not adjusted for tension.

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

Well name:	Rio Blanco 3 Fed 1
Operator:	Devon Energy
String type:	Drilling Liner
Location:	New Mexico

Design parameters:
Collapse

Mud weight: 12.500 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: 279 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft
Minimum Drift: 4.125 in

Burst

Max anticipated surface pressure: 3,634 psi
Internal gradient: 0.400 psi/ft
Calculated BHP 9,461 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: 14,024 ft

Liner top: 11,700 ft
Non-directional string.

Re subsequent strings:

Next setting depth: 14,570 ft
Next mud weight: 8.600 ppg
Next setting BHP: 6,509 psi
Fracture mud wt: 30.000 ppg
Fracture depth: 14,570 ft
Injection pressure 22,706 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	2870	5	18.00	HCL-80	FL-4S	14570	14570	4.151	27163
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	9461	11880	1.26	9461	10140	1.07	51.7	331	6.41 J

Prepared Bill Dougherty
by: Devon Energy

Date: May 18, 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 14570 ft, a mud weight of 12.5 ppg. The 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.



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

Hydrogen Sulfide (H₂S) Contingency Plan

For

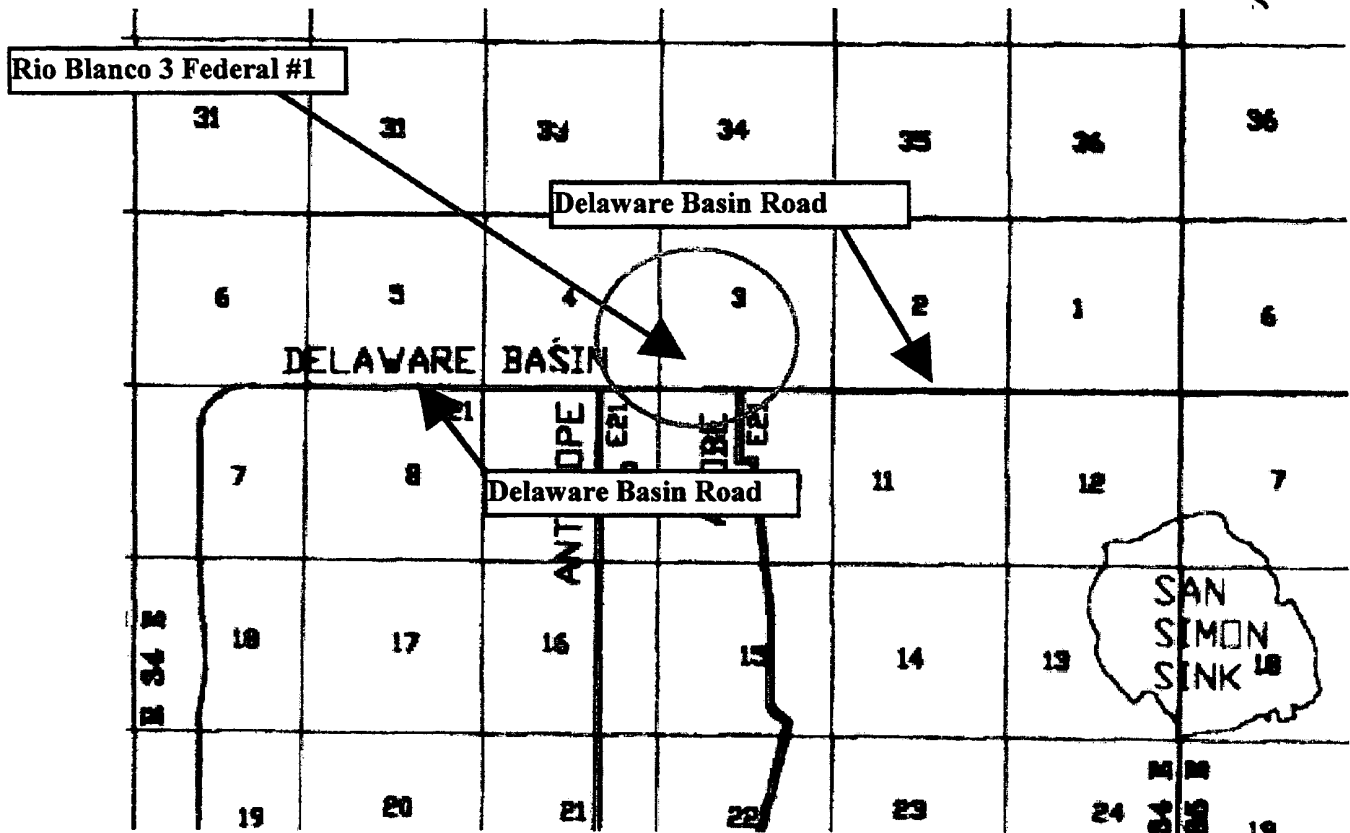
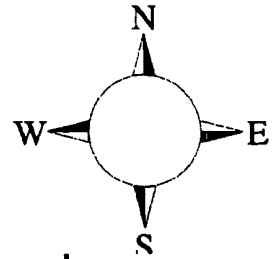
Rio Blanco 3 Federal #1

**1980' FSL & 660' FWL,
Sec-3, T-23S R-34E**

Lea County NM

Rio Blanco 3 Federal # 1

This is an open drilling site. H₂S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H₂S, including warning signs, wind indicators and H₂S monitor.



Assumed 100 ppm ROE = 500' (Radius of Exposure)
 100 ppm H₂S concentration shall trigger activation of the alarm

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. Drivers in both directions of Delaware Basin road and Adobe road must be flagged and stopped so as to prevent traversing into a hazardous area. There are no homes or other buildings in or near the ROE.

Emergency Procedures

In the case of a release of gas containing H₂S, 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 H₂S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H₂S 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 (SO₂). 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 H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H₂S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO₂	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 – 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
David Purdy	(432)631-2969.....	(432)495-7279	(432)683-0735
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.....	748-1283

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

Other

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
Flight For Life -4000 24th St, Lubbock, TX	(806) 743-9911
Aerocare -Rr 3 Box 49f, Lubbock, TX	(806) 747-8923
Med Flight Air Amb 2301 Yale Blvd SE #D3, Albuq, NM	(505) 842-4433
S B Air Med Svc 2505 Clark Carr Loop SE, Albuq, NM	(505) 842-4949

Prepared in conjunction with
Wade Rohloff of;

