

N.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-113395
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 Company, LP 6137		7. If Unit or CA Agreement, Name and No.
3a. Address 20 North Broadway Oklahoma City, Oklahoma City 73102-8260		8. Lease Name and Well No. 35215 Willow Draw 24 Federal 1
3b. Phone No. (include area code) 405-552-7802		9. API Well No. 30-015-34115
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1310' FSL & 800' FWL At proposed prod. zone 1310' FSL & 800' FWL		10. Field and Pool, or Exploratory Bubbling Springs; Monnew, West
14. Distance in miles and direction from nearest town or post office* Approximately 20 miles from post office in Carlsbad, NM		11. Sec., T. R. M. or Blk. and Survey or Area Sec 24, T20S R25E 72960
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 480'	17. Spacing Unit dedicated to this well 320'
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 10,450'	20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3483' GL	22. Approximate date work will start* 09/15/2005	23. Estimated duration 45 days

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. | 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) Stephanie A. Ysasaga	Date 09/08/2005
Title Senior Engineering Technician		
Approved by (Signature) /s/ Joe G. Lara	Name (Printed/Typed) /s/ Joe G. Lara	Date NOV - 4 2005
Title ACTING FIELD MANAGER		
Office CARLSBAD FIELD OFFICE		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR 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)

29.5

CARLSBAD CONTROLLED WATER BASIN

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

Witness Surface &
Intermediate Casing

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	Pool Code 7296c	Pool Name Bubbling Springs, Morrow, West
Property Code	Property Name WILLOW DRAW "24" FEDERAL	Well Number 1
OGRID No. 6137	Operator Name DEVON ENERGY PRODUCTION CO., L.P.	Elevation 3483'

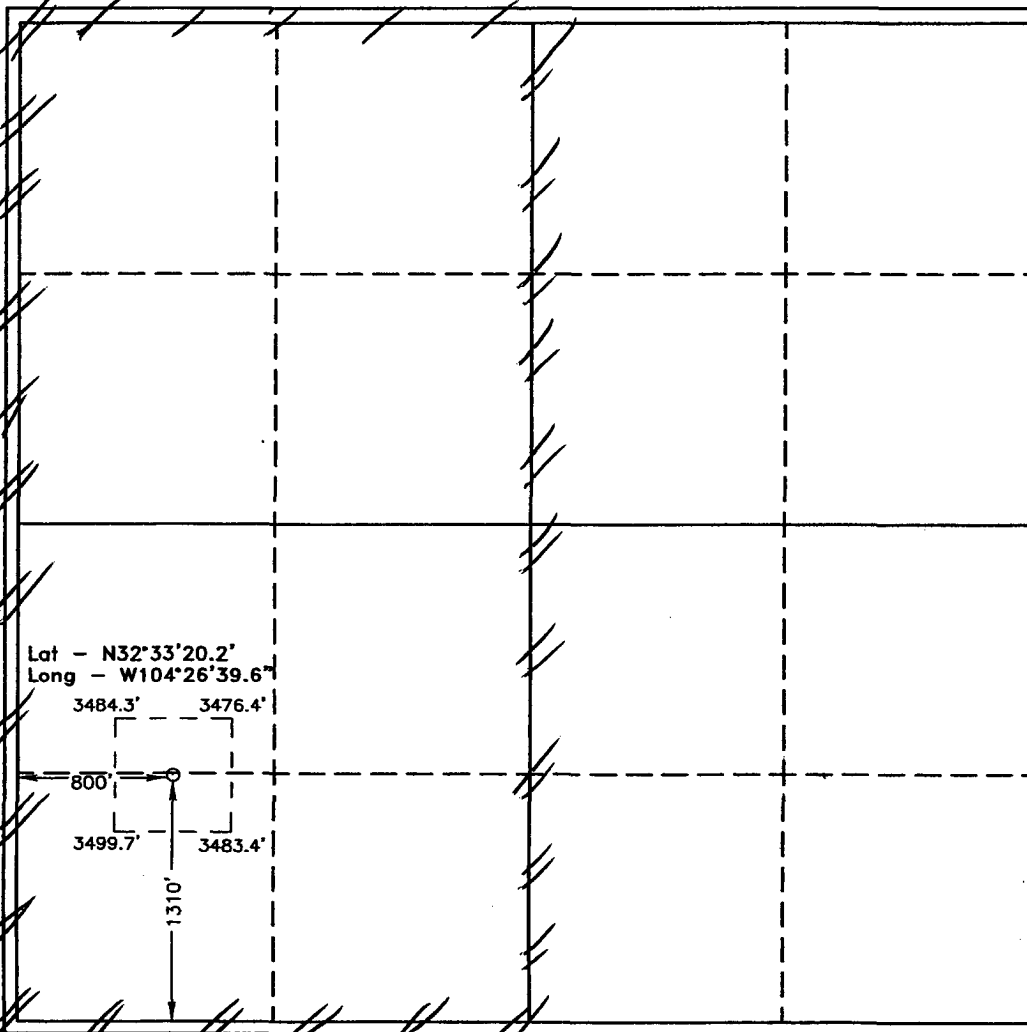
Surface Location

UL or lot No. M	Section 24	Township 20 S	Range 25 E	Lot Idn	Feet from the 1310	North/South line SOUTH	Feet from the 800	East/West line WEST	County EDDY
--------------------	---------------	------------------	---------------	---------	-----------------------	---------------------------	----------------------	------------------------	----------------

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 that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Stephanie A. Ysasaga

Printed Name

Senior Engineering Technician

Title

09/26/05

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.

JULY 22, 2005

Date Surveyed
Signature & Seal of
Professional Surveyor

1977

No. 5628

Certificate No. 7977

BASIN SURVEYS

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

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, L.P. Telephone: (405)-552-7802 e-mail address: Stephanie.Ysasaga@dvn.com
Address: P.O. Box 250 Artesia, NM 88211
Facility or well name: Willow Draw 24 Federal #1 API #: _____ U/L or Qtr/Qtr M Sec 24 T 20S R 25E
County: Eddy Latitude _____ Longitude _____ 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 _____ bbl	Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. <div style="text-align: right;">RECEIVED SEP 12 2005 ODD-ARTESIA</div>						
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water)	<table border="1"><tr><td>Less than 50 feet</td><td>(20 points)</td></tr><tr><td>50 feet or more, but less than 100 feet</td><td>(10 points)</td></tr><tr><td>100 feet or more</td><td>(0 points)</td></tr></table>	Less than 50 feet	(20 points)	50 feet or more, but less than 100 feet	(10 points)	100 feet or more	(0 points)
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.)	<table border="1"><tr><td>Yes</td><td>(20 points)</td></tr><tr><td>No</td><td>(0 points)</td></tr></table>	Yes	(20 points)	No	(0 points)		
Yes	(20 points)						
No	(0 points)						
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	<table border="1"><tr><td>Less than 200 feet</td><td>(20 points)</td></tr><tr><td>200 feet or more, but less than 1000 feet</td><td>(10 points)</td></tr><tr><td>1000 feet or more</td><td>(0 points)</td></tr></table>	Less than 200 feet	(20 points)	200 feet or more, but less than 1000 feet	(10 points)	1000 feet or more	(0 points)
Less than 200 feet	(20 points)						
200 feet or more, but less than 1000 feet	(10 points)						
1000 feet or more	(0 points)						
Ranking Score (Total Points)							

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 you 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: 08/29/05

Printed Name/Title Stephanie A. Ysasaga/Senior 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:

Field Supervisor

Printed Name/Title _____

Signature _____

SEP 14 2005

Additional Operator Remarks:

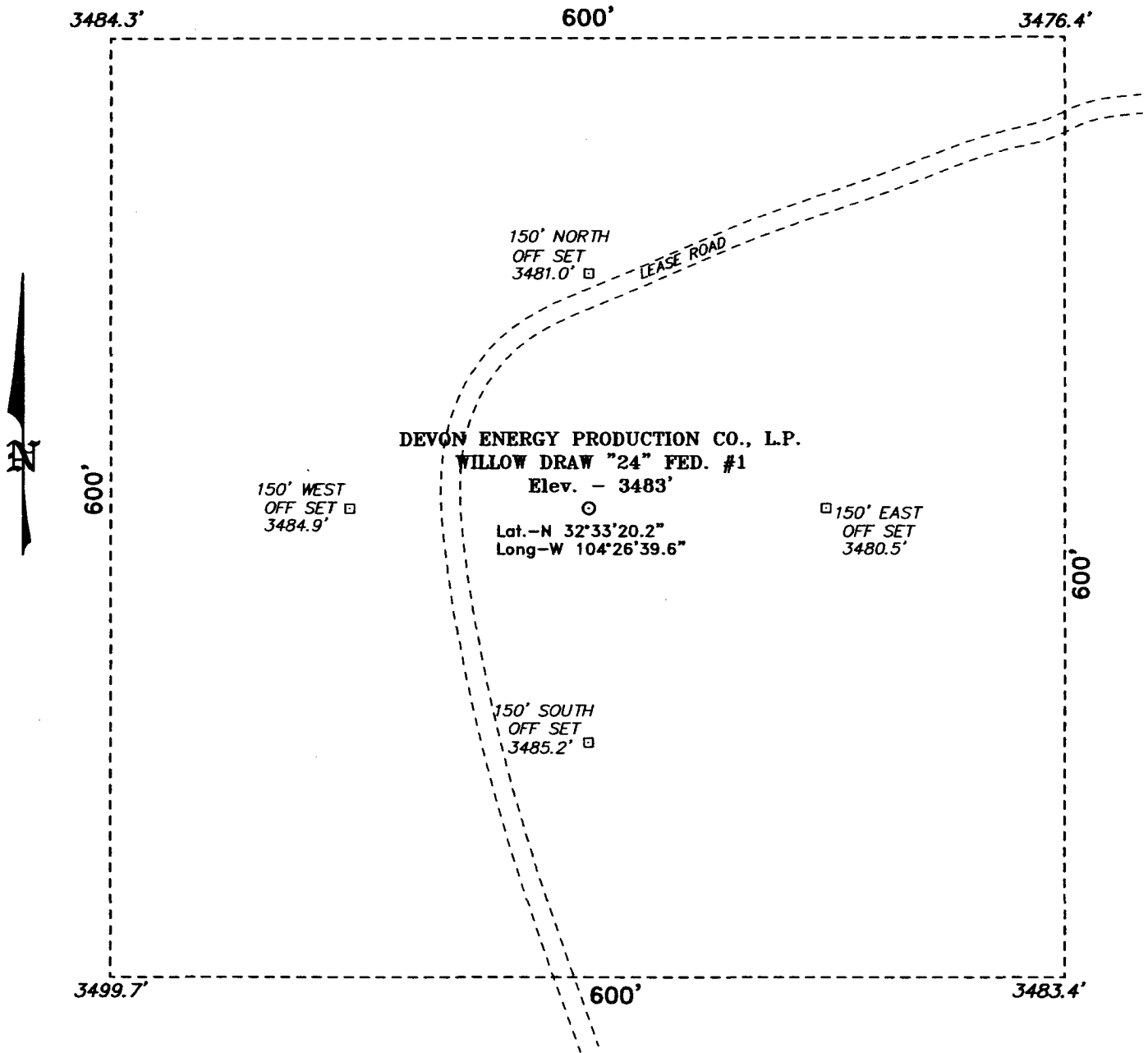
Devon Energy Production Company, LP proposes to drill a Happy Valley; Morrow well to 10,450' for commercial quantities of oil and gas. If the well is deemed noncommercial, the wellbore will be plugged and abandoned per Federal regulations. Devon Energy Production Co., LP plans to drill the well per the attached Drilling and Surface Use Plan. South 20 miles to Carlsbad Post Office.

Directions: From mile marker 50 on US Hwy 285, North for 0.1 mile to lease road; thence southwest for 1.5 mile and 1.0 mile west to location.

H2S:

No H2S is anticipated to be encountered.

**SECTION 24, TOWNSHIP 20 SOUTH, RANGE 25 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.**



Directions to Location:

FROM MILE MARKER 50 ON US HWY 285, NORTH
FOR 0.1 MILE TO LEASE ROAD; THENCE SOUTHWEST
FOR 1.5 MILE AND 1.0 MILE WEST TO LOCATION.

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

W.O. Number: 5628

Drawn By: K. GOAD

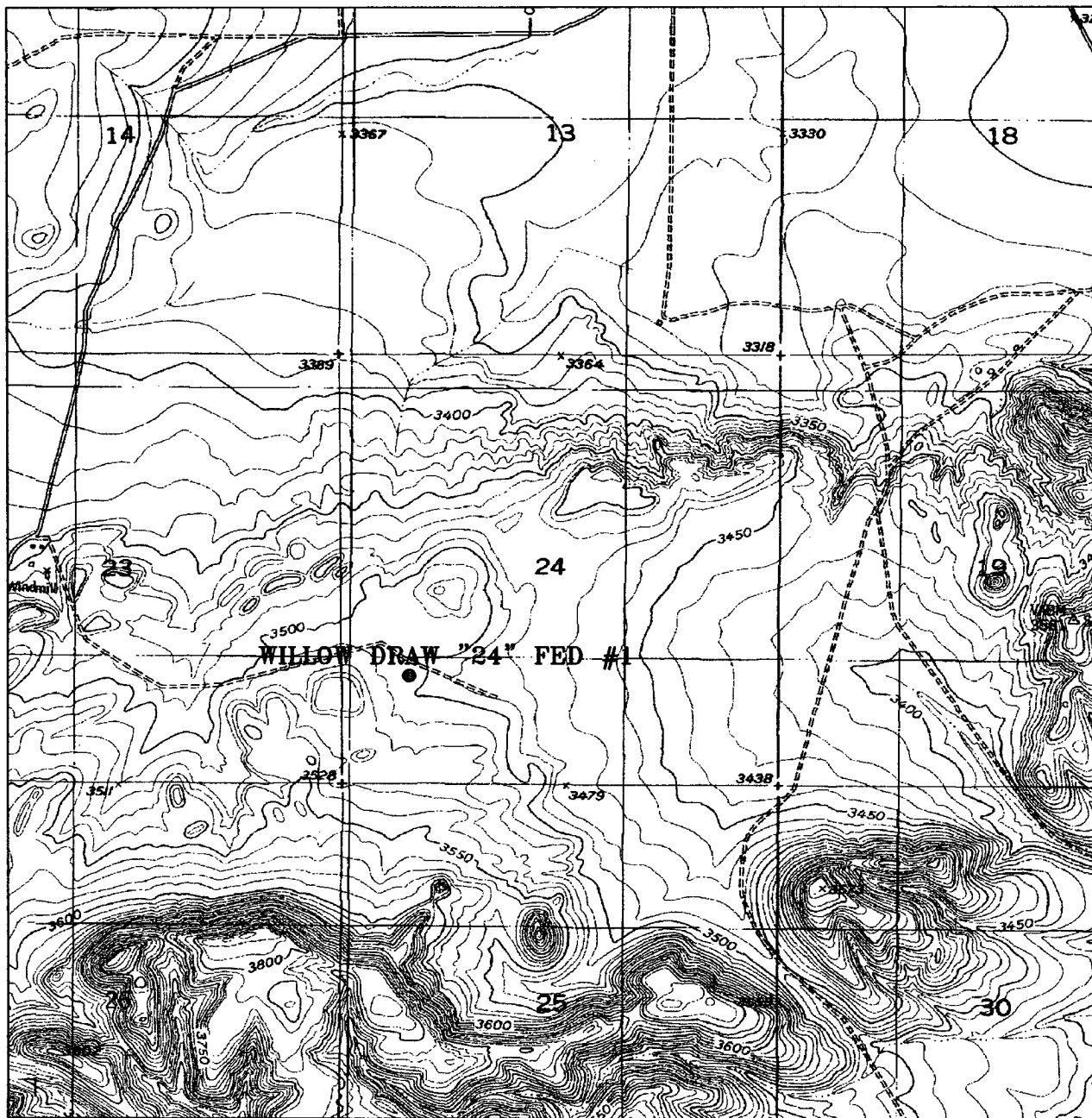
Date: 08-01-2005 Disk: KJG CD#4 - 5628A.DWG

DEVON ENERGY PROD. CO., L.P.

REF: WILLOW DRAW "24" FED. No. 1 / Well Pad Topo

THE WILLOW DRAW "24" FED. No. 1 LOCATED 1310' FROM
THE SOUTH LINE AND 800' FROM THE WEST LINE OF
SECTION 24, TOWNSHIP 20 SOUTH, RANGE 25 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 07-22-2005 Sheet 1 of 1 Sheets



WILLOW DRAW "24" FEDERAL #1
 Located at 1310' FSL and 800' FWL
 Section 24, Township 20 South, Range 25 East,
 N.M.P.M., Eddy 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: 5628AA - KJG #1

Survey Date: 08-02-2005

Scale: 1" = 2000'

Date: 07-22-2005

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

DRILLING PROGRAM

Devon Energy Production Company, LP

Willow Draw 24 Federal 1

Surface Location: 1310' FSL & 800' FWL, Unit M, Sec 24 T20S R25E, Eddy, NM

Bottom hole Location: 1310' FSL & 800' FWL, Unit M, Sec 24 T20S R25E, Eddy, NM

1. Geologic Name of Surface Formation

- a. Seven Rivers

2. Estimated tops of geological markers:

a. Queen	500'
b. Grayburg	750'
c. San Andres	1000'
d. Bone Spring Lime	3850'
e. 3 rd Bone Spring Sand	7050'
f. Wolfcamp	7500'
g. Cisco	8175'
h. Canyon	8600'
i. Strawn	8900'
j. Atoka	9525'
k. Morrow	9840'
l. Morrow Clastics	10000'
m. Barnett Shale	10350'
n. Total Depth	10450'

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

a. Surface/Seven Rivers	150'	Fresh Water
b. Wolfcamp	7500'	Oil or Gas
c. Cisco	8175'	Oil or Gas
d. Atoka	9525'	Oil or Gas
e. Morrow	9840'	Oil or Gas

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 13 3/8" casing at 380' and circulating cement back to surface. Freshwater will be protected by setting 8 5/8" casing at 2380' and circulating cement to surface. The Morrow intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement above the base of the 8 5/8" casing.

4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>OD Csg</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>	
17 1/2"	0' -380'	13 3/8"	48#	ST&C	H-40	WITNESS
12 1/4"	380-2380'	8 5/8"	32#	LT&C	J-55	WITNESS
7 7/8"	2380-10500	5 1/2"	17#	LT&C	HCP110	

5. Cement Program:

- a. 13 3/8" Surface Cement to surface with 161sx Poz C, 2% CaCl; +200 sx "C", 2% CaCl.
- b. 8 5/8" Intermediate Cement to surface with 550 sxs 35:65:6 Poz C + 250 sx 60:40 Poz C (MPA1)
- c. 5 1/2" Production Cement 1st Stage with 741 sx Super C Modified, 2nd Stage with 410 sx 35:65:6 Poz C + 754 sx 60:40 PozC (MPA).

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach approximately 500' above the 8 5/8" casing shoe.

6. Pressure Control Equipment:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (3M system) double ram type (5000 psi WP) preventor and a bag-type (Hydril) preventor (5000 psi WP). Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. The drilling head 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 32#, J-55 casing)**. Prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2.

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

7. Proposed Mud Circulation System

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' - 380'	8.4-9.2	32-34	NC	Fresh Water
380' - 2380'	8.4	28	NC	Fresh Water
2380' - 9000'	8.4 - 9.3	28	NC	Fresh/Cut Brine
9000'-10500'	9.3-9.7	30-40	8-10	Cut Brine

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

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 will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.
- 9. Logging, Coring, and Testing Program:**
- a. Drill stem tests will be based on geological sample shows.
 - 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.
- 10. Potential Hazards:**
- a. No abnormal pressures or temperatures are expected. There is no known presence of H₂S in this area. If H₂S 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 3900 psi and Estimated BHT 155°.
- 11. Anticipated Starting Date and Duration of Operations:**
- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

SURFACE USE PLAN
Devon Energy Production Company, LP
Willow Draw 24 Federal 1

Surface Location: 1310' FSL & 800' FWL, Unit M, Sec 24 T20S R25E, Eddy, NM
Bottom hole Location: 1310' FSL & 800' FWL, Unit M, Sec 24 T20S R25E, Eddy, NM

1. Existing Roads:

- a. The well site and elevation plat for the proposed well are reflected on Exhibit 2. The well was staked by Basin Surveys.
- b. All roads into the location are depicted on Exhibit 3.
- c. Directions to Location: From mile marker 50 on US Hwy 285, North for 0.1 mile to lease road; thence southwest for 1.5 mile and 1.0 mile west to location. Approximately south 20 miles to Carlsbad Post Office.

2. Access Road

- a. There is an existing two track road located off Hwy 284.
- b. Devon will be upgrading the existing road.
- c. 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.
- d. 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%.
- e. No cattle guards, grates or fence cuts will be required. No turnouts are planned.

3. Proposed Facilities

- a. In the event the well is found productive, the Willow Draw 24 Federal 1 tank battery would be utilized and the necessary production equipment will be installed at the well site.
- b. 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.
- c. All flow lines will adhere to API standards.
- d. If the well is productive, rehabilitation plans are as follows:
 - i. The reserve pit will be back-filled after the contents of the pit are dry (within 120 days after completion, weather permitting).
 - ii. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

4. Methods of Handling Waste Material:

- a. Drill cuttings will be disposed of in the reserve pits.
- b. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary landfill.
- c. The supplier, including broken sacks, will pick up salts remaining after completion of well.
- d. Wastewater from living quarters will be drained into hole with a minimum of 10'. These holes will be covered during drilling and will be back filled when the well is completed. A Porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.

- e. Remaining drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for further drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approved disposal site. Later pits will be broken out to speed dry. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in a storage tank and sold.

5. Well Site Layout

- a. Exhibit D Shows the proposed well site layout.
- b. This exhibit indicated proposed location of reserve and dump pits and living facilities.
- c. Mud pits in the active circulating system will be steel pits & the reserve pit is proposed to be unlined unless subsurface conditions encountered during pit construction indicate that lining is needed for lateral containment of fluids.
- d. If needed, the reserve pit is to be lined with polyethylene. The pit liner will be 6 mils thick. Pit liner will extend a minimum 2'00" over the reserve pits dikes where the liner will be anchored down.
- e. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

6. Other Information:

- a. The area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, some mesquite bushes and shinnery oak. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
- b. The surface is owned by the US Government and is administered by the Bureau of Land Management. The surface is of limited use except for the grazing of livestock and the production of oil and gas.
- c. A Cultural Resources Examination will be completed by Southern New Mexico Archaeological Services, Inc. and forwarded to the BLM office in Carlsbad, New Mexico.
- d. There are no dwellings within 2 miles of location.

Operators Representative:

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

Wyatt Abbitt
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) 228-4301 (office)
(405) 834-9207 (Cellular)

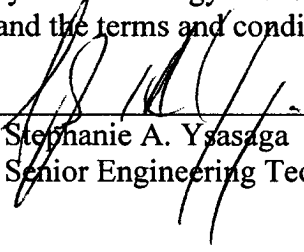
(505) 748-3371 (office)
(505) 746-4945 (home)

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: _____

Date: September 10, 2005


Stephanie A. Ysasaga
Senior Engineering Technician

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP

Willow Draw 24 Federal 1

Surface Location: 1310' FSL & 800' FWL, Unit M, Sec 24 T20S R25E, Eddy, NM

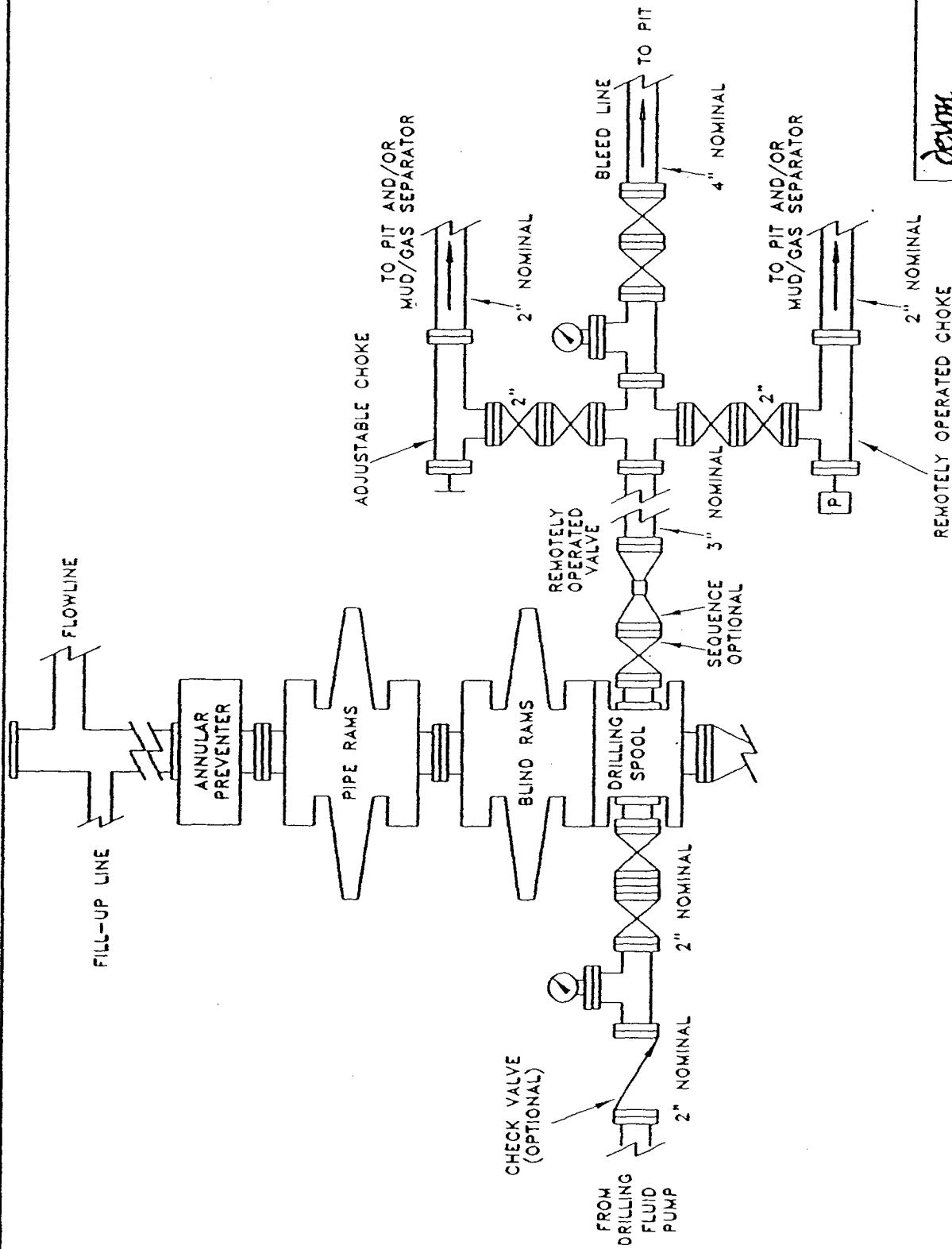
Bottom hole Location: 1310' FSL & 800' FWL, Unit M, Sec 24 T20S R25E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 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. 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.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:
 - a. Characteristics of H₂S
 - b. Physical effects and hazards
 - c. Proper use of safety equipment and life support systems.
 - d. Principle and operation of H₂S detectors, warning system and briefing areas
 - e. Evacuation procedures, routes and first aid.
 - f. Proper use of 30-minute pressure demand air pack.
2. H₂S Detection and Alarm System
 - a. H₂S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
3. Windsock and/or wind streamers
 - a. Windsock at mud pit area should be high enough to be visible
 - b. Windsock at briefing area should be high enough to be visible
 - c. There should be a windsock at entrance to location
4. Condition Flags and Signs
 - a. Warning Sign on access road to location
 - b. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H₂S present in dangerous concentration. Only emergency personnel admitted to location.
5. Well Control Equipment
 - a. See Exhibit "E" & "E-1"
6. Communication
 - a. While working under masks chalkboards will be used for communication.
 - b. Hand signals will be used where chalk board is inappropriate
 - c. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
7. Drill stem Testing
 - a. Exhausts will be watered
 - b. Flare line will be equipped with an electric igniter or a propane pilot light in case gas reaches the surface.
 - c. If the location is near to a dwelling a closed DST will be performed.
8. Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.

If H₂S is encountered, mud system will be altered if necessary to maintain control or formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.



devon

EXHIBIT 1

PROPOSED 5-M BOPE AND CHOKE ARRANGEMENT

s:\...nm\plots
5mbope.dwg

SC

10/00

Patterson-UTI Drilling Company

Rig #74
7,000' - 14,000'
DRAWWORKS

Brewster N-75, 1000 HP
 Brake: Parmac 342 Hydromatic
 1 1/4" Drilling Line – Crown-o-matic

ENGINES

Two 3412 Caterpillar engines w/Torque
 Converter, 450 HP each

DERRICK

Pyramid 137' 571,000# rated capacity

SUBSTRUCTURE

Pyramid 20' high 500,000# rated capacity
 KB – 21', Rotary Clearance – 16' 2"

MUD PUMPS

Pump #1: Gardner Denver Triplex PZ-8, 750 HP
 w/Cat 3508
 Pump #2: Gardner Denver Triplex PZ-8, 750 HP
 w/Cat 3508

DRILL STRING

6-8" Drill Collars (6 5/8 Reg)
 6-7" Drill Collars (5" H-90)
 24-6 1/4" Drill Collars (4 1/2 XH)
 5800'-4 1/2 DP 16.60 # "E"
 7000'-4 1/2 DP 20 # "G"

BLOWOUT PREVENTERS

3000# - 5000# working pressure as required

MUD SYSTEM

Two steel pits plus slug pit, 800 bbl volume, three
 electric stirrers, two 5" x 6" mixing pumps
 powered by two electric motors, dual tandem
 shale shaker, two cone desander

MUD HOUSE

8 x 30 Storage

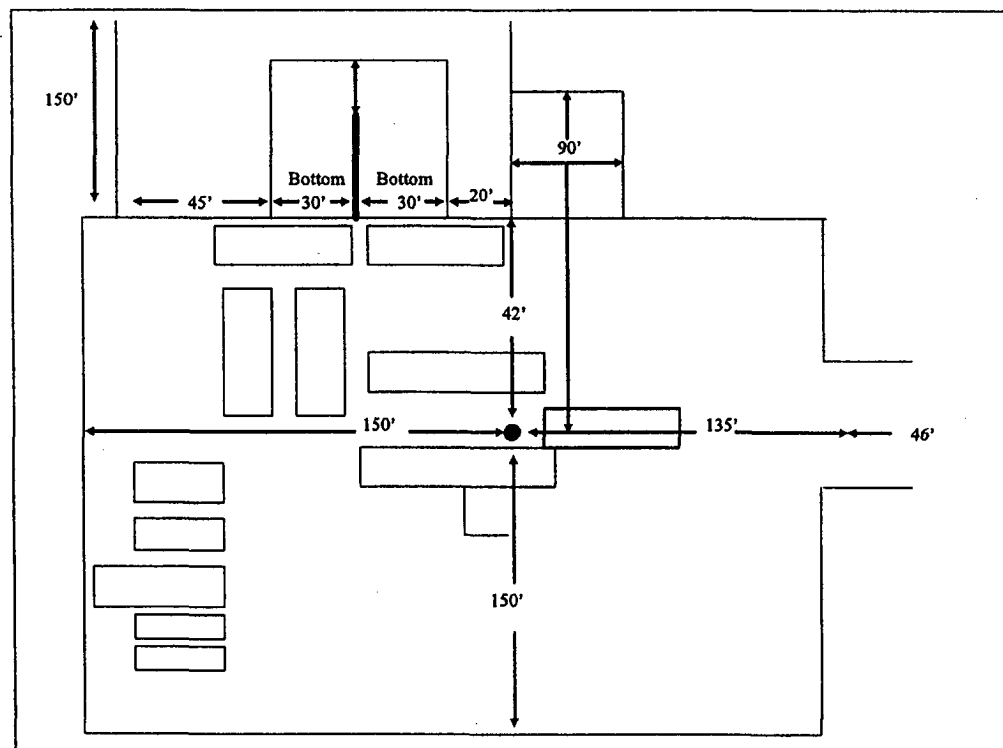
COMMUNICATIONS

24 hour direct cellular telephone

OTHER EQUIPMENT

Blocks. Brewster 250 Ton
 Hook. Unitized
 Swivel. Gardner Denver 400 Ton
 Rotary Table. 27 1/2 Oil Well
 Shale Shaker. Dual Tandem
 Electrical Power. Two 320-kw generators
 Fresh Water Storage. Two 500 bbl tanks
 Housing.
 Kelly. 5 1/4 Hex, 46' Long

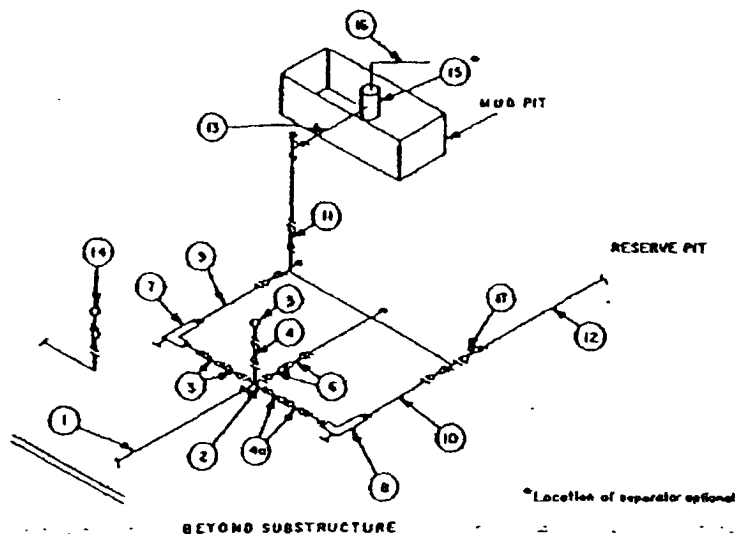
"Hole Requirements will dictate actual Reserve Pit size (TOOLPUSHER SHOULD BE CONSULTED)"



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

3 MWP - 5 MWP - 10 MWP

Exhibit E



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

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

Hydrogen Sulfide (H₂S) Contingency Plan

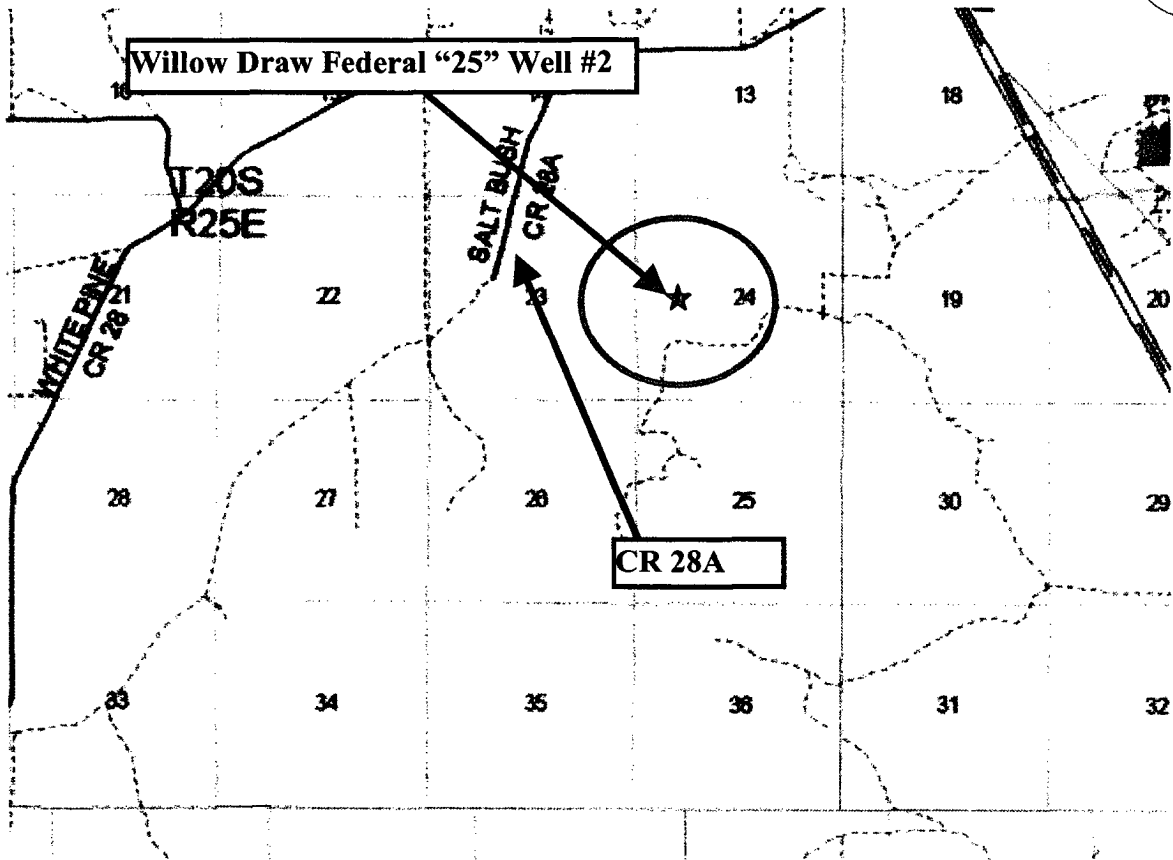
For

Willow Draw Federal "24" Well #1

**1310' FSL & 800' FWL,
Sec-24, T-20S R-25E**

Eddy County NM

Willow Draw Federal "25" Well # 2
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 **ROH** = 3000" (1500" x 2) = 6000" (1500' x 4)
 100 ppm HBS concentration shall trigger activation of this plant.

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated West NorthWest on lease road to Salt Bush – CR 28A. Crews should then block entrance 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 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	H ₂ S	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

<u>Artesia (505)</u>	<u>Cellular</u>	<u>Office</u>	<u>Home</u>
Foreman – BJ Cathey	390-5893	748-0176	887-6026
Asst. Frmn – 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 – Wyatt Abbitt	(405) 245-3471 ...	(405) 552-8137 ...	(405) 340-3879

Agency Call List

<u>Eddy</u>	<u>Artesia</u>	
<u>County</u>	State Police	746-2703
<u>(505)</u>	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
	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
<i>Give</i>	Flight For Life - Lubbock, TX	(806) 743-9911
<i>GPS</i>	Aerocare - Lubbock, TX	(806) 747-8923
<i>position:</i>	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;



CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Devon Energy Production Company, L.P.
Well Name & No. Willow Draw 24 Federal #1
Location: 1310' FSL, 800' FWL, Section 24, T. 20 S., R. 25 E., Eddy County, New Mexico
Lease: NM-113395

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:
 - A. Well spud
 - B. Cementing casing: 13-3/8 inch 8-5/8 inch 5-1/2 inch
 - C. BOP tests
2. 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.
3. 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.
4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.
5. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

II. CASING:

1. The 13-3/8 inch surface casing shall be set at approximately 380 feet and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is to be circulated to the surface.
3. The minimum required fill of cement behind the 5-1/2 inch production casing is to reach at least 500 feet above the top of the uppermost hydrocarbon productive interval.

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 surface casing shoe and shall be tested as follows. 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 3000 psi.
3. A variance to test the BOP's to 1200 psi with the rig pumps before drilling out the 13-3/8 inch surface casing shoe is granted.

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

- The tests 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 a safe workman-like manner. Hard line connections shall be required.

IV. DRILLING MUD:

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- Recording pit level indicator to indicate volume gains and losses.
- Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- Flow-sensor on the flow-line to warn of abnormal mud returns from the well.

acs

9 21 2005