			AND MANAGEMENT	ARTESIA, NM 98210-28	S.LEASE D	Designation and se M <del>013878 -</del> / 0 <i>3</i>	$\begin{array}{c} \text{CRIAL NO,} \\ \rho \supset \rho \end{array}$
			RMIT TO DRILL OR DI	EEPEN		N, ALLOTTEE OR TR	
Carlsbad N	Office DRIL		DEEPEN		N/A		
Carlsbad Hat	. <u>M.</u>					REEMENT NAME	
OIL WELL	GAS WELL	Other	ZONE				
NAME OF OPERA						R LEASE NAME, WEL	
<b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>						ELL "8" FEDERA	L #1
ADDRESS AND T					9.API WEL	2170	<b>`</b>
LOCHERONIOR			TE 1500, OKC, OK 73102 (4		30-015	ND POOL, OR WILDO	
			accordance with any State require ion 8-T20S-R29E, Eddy Cnty, N			-	
11000 100		L, Unit D, Sect	•		11.SEC.,T.,	Flat, East (Morr R.,M.,OR BLOCK AND	OW) SURVEY OR AREA
At top proposed pro	d. zone (same)				Unit D		
				61617 18 19202	Section 8, T20S, R29E		
DISTANCE IN MILES A			OR POST OFFICE*	NAN PEN	12. COUNTY OR PARISH 13. STATE		
Approximately 15 n	niles east of Carl	lsbad, New Mexico	o, on US Hwy 62	34 5 16 17 18 19 20 3 20 3 20 3 20 3 20 3 20 3 20 3 20	Eddy (	County	NM
DISTANCE FROM PROI LOCATION TO NEARE			16.NO. OF ACRES IN LEASE	D= 200		17.NO. OF ACRE	
PROPERTY OR LEASE	LINE, FT.	660'	320.00	OCD AEVED	)	TO THIS WE	LL
(Also to nearest drlg. unit   DISTANCE FROM PROI	POSED LOCATION		19.PROPOSED DEPTH			320.00 20.ROTARY OR	CARLE TOOLS
TO NEAREST WELL, D OR APPLIED FOR, ON	ORILLING, COMPLI THIS LEASE, FT.	ETED,	11,700'	SIA N/			CABLE TOOLS
ELEVATIONS (Show wh		c.)			22 45	Rotary PROX. DATE WORK	WILL STADTA
GL 3279'				125.51 - 1800 BL	· ·		WILL START?
					36	ptember, 2000	
· · · · · · · · · · · · · · · · · · ·		·	PROPOSED CASING AND C	EMENTING PROGRAM			
SIZE OF HOLE	GRADE,	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH		QUANTITY	Y OF CEMENT
17 1/2"	H-40	13 3/8"	48.0	1,300'			est TOC @ surface
1. 1.	J-55	8 5/8"	32.0	3,500'	-		est TOC @ surface
12 1/4"	0-33						

Surface Use and Operating Plan Exhibits #1 = Blowout Prevention Equipment Exhibit #2 = Location and Elevation Plat Exhibits #3 = Road Map and Topo Map Exhibit #4 = Wells Within 1 Mile Radius Exhibits #5 = Production Facilities Plat Exhibit #6 = Rotary Rig Layout Exhibit #7 = Casing Design H<sub>2</sub>S Operating Plan Archeological clearance report

The undersigned accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land or: portions thereof, as described below Lease #: NM-NM013878 Legal Description: N/2 Section 8-T20S-R29E

Bond Coverage: Nationwide BLM Bond #: CO-1104

Notify OCD at SPUD & TIME to witness, cementing the  $13^3/8$  °  $8^5/8$  casing.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any. 24.

	n.		N.	1	
SIGNED	and	ace R.,	fla.	ham	TITLE

Candace R. Graham Engineering Technician

DATE August 25, 2000

\*(This space for Federal or State office use)

PERMIT NO.\_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

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.

TITLE

**CONDITIONS OF APPROVAL, IF ANY:** 

APPROVED BY	/S/LARHY	D.	BAAY
-------------	----------	----	------

## Assistant Field Manager, Lands And Minerals

DATE \_\_\_\_\_

#### See Instructions On Reverse Side

and the second s

Title 18 U.S.C. Section 1001, makes 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

#### **DRILLING PROGRAM**

Attached to Form 3160-3 Devon Energy Production Company, L.P. RUSSELL "8" FEDERAL #1 760' FNL & 660' FWL, Section D-8-T20S-R29E Eddy County, New Mexico

#### 1. <u>Geologic Name of Surface Formation</u>

Permian

## 2. Estimated Tops of Important Geologic Markers

Delaware	3,160'
Bone Spring	5,630'
3rd Bone Spring Sand	8,660'
Wolfcamp	9,080'
Cisco-Canyon	9,865'
Strawn	10,202'
Atoka	10,588'
Morrow	10,852'
Lower Morrow	11,426'
TD	±11,700'

## 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: Random fresh water from surface to approximately 350'

Oil: Delaware, Bone Spring

Gas: Wolfcamp, Cisco-Canyon, Strawn, Atoka, Morrow

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 8 5/8" casing at 3,500' and circulating cement back to surface. The oil and gas intervals will be isolated by setting 5 1/2" casing at TD and bringing cement top to approximately 6,500'.

#### RUSSELL "8" FEDERAL #1 DRILLING PLAN PAGE 2

#### 4. <u>Casing Program</u>

<u>Hole Size</u>	<u>Interval</u>	Casing OD	Weight, ppf	Grade	Type
17 1/2"	0–1,300'	13 3/8"	48	H-40	ST&C
12 1/4"	03,500'	8 5/8"	32	J-55	ST&C
7 7/8"	0–11,700'±	5 1/2"	15.5 & 17	J-55 / L-80	Buttress / LT&C

#### Cementing Program

13 3/8" Surface Casing:	Cement to surface with 700 sx Pozmix (35% Poz, 65% Class C) with 6% Bentonite, 2% CaCl <sub>2</sub> , 1/4 lb/sx Cello Flakes + 300 sx Class C with 2% CaCl <sub>2</sub> , 1/4 lb/sx Cello Flakes.
8 5/8" Intermediate Casing:	Cement to surface – with 300 sx Pozmix (35% Poz, 65% Class C) with 6% Bentonite, 5% NaCl <sub>2</sub> , 1/4 lb/sx Cello Flakes, 10 lbs/sx Kol Seal + 1300 sx Pozmix (35% Poz, 65% Class C) with 6% Bentonite, 5% NaCl <sub>2</sub> , 1/4 lb/sx Cello Flakes + 200 sx Class C with 1% CaCl <sub>2</sub> .
5 1/2" Production Casing:	Cement to 6500' – with 700 sx Pozmix (15% Poz, 61% Class C, 11% BA-90) with 0.5% FL-25, 0.2% CD-32, 5 lb/sx Gilsonite, 1/4 lbs/sx Cello Flakes.

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

#### 5. <u>Minimum Specifications for Pressure Control</u>

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a (3M system) double ram type (3000 psi WP) preventer and a bag-type (Hydril) preventer (3000 psi WP). Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and 4 1/2" drill pipe rams on bottom. Both BOP's will be installed on the 8 5/8" surface casing and utilized continuously until total depth is reached. As per BLM Drilling Operations Order #2, prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydril will be function tested.

## RUSSELL "8" FEDERAL #1 DRILLING PLAN PAGE 3

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 3000 psi WP rating.

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

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

<u>Depth</u>	Type	Weight (ppg)	Viscosity (1/sec)	Water Loss (cc)
0'-1300'	Fresh Water	8.4	34 - 36	No control
1300' – 3500'	Cut Brine	8.8	28 - 30	No control
3500' - 9000'	Cut Brine	8.8	28 - 30	No control
9000' – TD	Starch	9.6	28 - 38	4 - 8

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.
- C. Hydrogen Sulfide detection equipment (Compliance Package) will be in operation from drilling out 13 3/8" casing shoe until TD.

#### 8. Logging, Testing and Coring Program

- A. Drillstem tests may be run on potential pay interval.
- B. The open hole electrical logging program will be as follows.
  - a) DLL/MSFL/GR from 11,700' to D.S.C.
  - b) CNL/LDT/GR from 11,700' to D.S.C. with CNL/GR to surface

- C. No coring program is planned.
- D. 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 drillstem tests.

## 9. <u>Abnormal Pressures, Temperatures and Potential Hazards</u>

No abnormal pressures or temperatures are foreseen. The anticipated bottom hole temperature at total depth is 175 degrees and maximum bottom hole pressure is 4000 psig. Hydrogen sulfide gas is associated with the Delaware formation in this area. A hydrogen sulfide operations plan will be implemented prior to drilling out from under the intermediate casing string (see attached "Hydrogen Sulfide Operations Plan"). No major loss circulation intervals have been encountered in adjacent wells.

#### 10. <u>Anticipated Starting Date and Duration of Operations</u>

The Carlsbad, New Mexico, BLM office has performed the onsite inspection for the proposed pad site of this location.

A cultural resources examination has been completed by Southern New Mexico Archaeological Services, Inc. and submitted to the BLM in August, 2000, as report number SNMAS-00NM-370. 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 September, 2000. The drilling operation should require approximately 45 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

Attachment to Form 3160-3 Devon Energy Production Company, L.P. RUSSELL "8" FEDERAL #1 760' FNL & 660' FWL, Section D-8-T20S-R29E Eddy County, New Mexico

#### 1. <u>Existing Roads</u>

- A. The well site and elevation plat for the proposed RUSSELL "8" FEDERAL #1 are reflected on Exhibit #2. This well was staked by Topographic Land Surveyors in Midland, TX.
- 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 U.S. Highway 62-180 and County Road 238, east of Carlsbad, NM, go north 2.0 miles on County Road 238, thence west 2.9 miles, thence north 0.8 mile on lease road, thence westererly 0.2 m ile, thence northwesterly 0.8 mile, thence east 0.1 mile, thence northwesterly 0.9 mile, thence west 0.5 mile to existing pad of well #5 which is approx 2850' north of RUSSELL "8" FEDERAL #1 proposed location.

#### 2. Proposed Access Road

Exhibit #3 shows the existing lease road. Access to this location will require the construction of about 400' of new road from the existing lease 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. <u>Location of Existing Wells</u>

Exhibit #4 shows all existing wells within a one-mile radius of the proposed RUSSELL "8" FEDERAL #1.

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

A. In the event the well is found productive, a tank battery would be constructed.

- 1. Exhibit #5 shows the battery facility to be utilized by the RUSSELL "8" FEDERAL #1.
- 2. The tank battery, all connections and all lines will adhere to API standards.
- 3. The well may be operated by means of an electric prime mover. Electric power poles will be set along side of the access road if necessary.
- B. If the well is productive, rehabilitation plans are as follows.
  - 1. The reserve pit will be back-filled after the contents of the pit are dry (within 120 days after completion, weather permitting).
  - 2. Caliche from unused portions of the drill pad will be removed. 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.

#### 5. <u>Location and Type of Water Supply</u>

The RUSSELL "8" FEDERAL #1 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. Additionally, produced salt water from lease gathering tanks may be utilized. No water well will be drilled on the location.

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

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

#### 7. <u>Methods of Handling Water Disposal</u>

- 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 125' x 125' x 6', 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 5-7 mil plastic 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 dried. At the point the reserve pit is found sufficiently dry, it will be backfilled 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.

#### 8. Ancillary Facilities

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

#### 9. <u>Well Site Layout</u>

- A. The drill pad is shown on Exhibit #6. Approximate dimensions of 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 plastic sheeting of 5-7 mil thickness.

#### 10. Plans for Restoration of Surface

- A. After concluding the drilling and/or completion operations, if the well is found noncommercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The reserve pit area will be broken out and leveled after drying to a condition where these efforts are feasible. The original top soil will be returned to the pad and contoured, as close as possible, to the original topography.
- B. The pit lining will be buried or hauled away in order to return the location and road to their pristine nature. All pits will be filled and location leveled, weather permitting, within 120 days after abandonment.
- 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.

E. If the well is deemed commercially productive, the reserve pit will be restored as described in 10 (A) within 120 days subsequent to the completion date. 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 drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

#### 11. Surface Ownership

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

Road routes have been approved and the surface location will be restored as directed by the BLM.

#### 12. <u>Other Information</u>

various grasses.

A. The proposed location rests on loose sands, is relatively flat and slightly sloped to the south, with low dunes.
Regionally the rock land area is limestone rock, very shallow, stony and rocky, loamy soils over limestone; low rolling hills and ridges with draws, washes and gullies interposed.
The vegetation is mesquite, creosote, yucca, cholla, Mormon tea bush, snakeweed and

B. There is permanent water in the immediate area.

C. A Cultural Resources Examination has been completed by Southern New Mexico Archaeological Services, Inc., report number SNMAS-00NM-370, 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.

Walter Frank	Don Mayberry
District Engineer	Superintendent
Devon Energy Production Company, L.P.	Devon Energy Production Company, L.P.
20 North Broadway, Suite 1500	Post Office Box 250
Oklahoma City, OK 73102-8260	Artesia, NM 88211-0250
(405) 552-4595 (office)	(505) 748-3371 (office)
(405) 364-3504 (home)	(505) 746-4945 (home)

#### Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite 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.

Candace R. Graham Date: August 25, 2000 Signed:

Candace R. Graham Engineering Tech.

#### 3,000 psi Working Pressure

#### 3 MWP

#### STACK REQUIREMENTS

No.	liem		Min. I.D.	Min. Nominal	
1	Flowline	<u> </u>			
2	Fill up line			2-	
3	Drilling nipple				
4	Annular preventer				
5	Two single or one dual hy operated rams				
6a	Drilling spool with 2" min. 3" min choke line outlets				
6b	2" min. kill line and 3" mi outlets in ram. (Alternate t				
7	Valve	Gale 🗆 Plug 🗇	3-1/8"		
8	Gate valve-power opera	ted	3-1/8"		
9	Line to choke manifold			3"	
10	Vaives	Gate 🗆 Piug 🖸	2-1/16*		
11	Check valve		2-1/16"		
12	Casing head				
13	Valve	Gate 🖸 Piug 🗆	1-13/16*		
14	Pressure gauge with nee	die valve			
15	Kill line to rig mud pump			2"	

#### CONFIGURATION



		OPTIONAL
16	Flanged valve	1-13/16"
		· · · · · · · · · · · · · · · · · · ·

#### CONTRACTOR'S OPTION TO FURNISH:

- 1.All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 3,000 psi, minimum.
- 2.Automatic accumulator (80 gallon, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against Juli rated working pressure.
- 3.BOP controls, to be located near drillers position.
- 4.Kelly equipped with Kelly cock.
- 5.Inside blowout prevventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
- 6.Kelly saver-sub equipped with rubber casing protector at all times.
- 7.Plug type blowout preventer tester.
- 8.Extra set pipe rams to fit drill pipe in use on location at all times.
- 9. Type RX ring gaskets in place of Type R.

#### **MEC TO FURNISH:**

- 1.Bradenhead or casinghead and side valves.
- 2.Wear bushing, if required.

#### **GENERAL NOTES:**

- 1.Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
- 2.All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through chore. Valves must be full opening and suitable for high pressure mud service.
- Controls to be of standard design and each marked, showing opening and closing position.
- 4. Chokes will be positioned so as not to hamper or delay changing of choke besns. Replaceable parts for adjustable choke, other bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
- 5.All valves to be equipped with handwheels or handles ready for immediate use.
- 6.Choke lines must be suitably anchored.

- Handwheels and extensions to be connected and ready for use.
- Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
- All seamless steel control piping (3000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
- 10.Casinghead connections shall not be used except in case of emergency.
- 11.Do not use kill line for routine fill-up operations.

# EXHIBIT# 1

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

3 MWP - 5 MWP - 10 MWP



			MINI	NUM REQU	IREMENTS	5				<u> </u>
			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 C Plug C(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 C Plug C(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"	1	5,000	2*	1	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	Gate C Valves Plug C(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	Vaives Gate () Plug ()(2)	3-1/8"		3,000	3-1/8*		5,000	3-1/8"	<u> </u>	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 buil plugged tees.
- 7. Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.

Attachment to Exhibit #1 NOTES REGARDING BLOWOUT PREVENTERS Devon Energy Production Company, L.P. RUSSELL "8" FEDERAL #1 760' FNL & 660' FWL, Section D-8-T20S-R29E Eddy 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 3000 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.

DISTRICT I P. O. Box 1980 Hobbs, NM 88241-1980

DISTRICT II P. O. Drawer DD Artesia, NM 88211-0719

<u>DISTRICT III</u> 1000 Rio Brazos Rd. Aztec, NM 87410

DISTRICT IV P. O. Box 2088 Santa Fe, NM 87507-2088 WELL LOCATION AND ACREAGE DEDICATION PLAT

				BURTON	FLAT, EAST	1140000011		
					LTWI' DWOT	(MORROW)		
4 Property Code 5	Property No		SELL	'8' FEDER	RAL		• Well Number	•
<sup>7</sup> OGRID No. •	Operator Na						* Elevation	
6137		DEVON ENERO	SY PRE	DUCTION	COMPANY, L	.,P,	3279	•
		" SUI	RFACE	LOCATION				
	Township 0 SOUTH	Range 29 EAST, N.M.P.M.	Lot Ida	Feet from the 760'	North/South line NORTH	Feet from the 660'	East/West line WEST	County EDDY
	"BOTTO	M HOLE LOCAT	ION IF	DIFFEREN	NT FROM SU	JRFACE	•	
UL or lot no. Section 7	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres 13 Joint	or Infill	<sup>14</sup> Consolidation Code	15 Order	No.				
320								
NO ALLOV Conso	WABLE WE OLIDATED	CLL BE ASSIGNED TO OR A NON-STANDA	O THIS RD UNI	COMPLETION T HAS BEEN	UNTIL ALL IN	TERESTS HA	VE BEEN	
760'						OPERATOR / hereby certi- contained here to the best of Signature Printed Name Candace R. Title Engineerir Date August 25, SURVEYOF / hereby ce location sho plotted from surveys mod my supervi- same is true best of my Date of Survey JUL Signature and Professional Su Certificate No.	R CERTIFICA ily that the infe in is true and my knowledge a co. R. Arc Graham og Tech. 2000 R CERTIFICA ertify that the win on this pl field notes of field notes of field notes of field notes of field notes of field notes of field so the belief. Y 10, 2000	TION actual under actual under actual under actual under actual under actual under actual under actual under actual under actual

EXHIBIT # State of New Mexico Energy, Minerals, and Natural Resources Department

OIL CONSERVATION DIVISION

P. 0. Box 2088 Santa Fe, New Mexico 87504-2088 2 Form C-102 Revised 02-10-94 instructions on back

Submit to the Appropriate District Office State Lease — 4 copies Fee Lease — 3 copies

**AMENDED REPORT** 

VICINITY MAP



SECTION	8	TWP	20-5	_ RGE	29-E
SURVEY	NEW	MEXICO P	RINCIPAL I	MERIDIAN	
COUNTY	<u> </u>	EDDY	STA	TE <u>NM</u>	
DESCRIPTION _		760	) FNL & 6	6C'FWL	

OPERATOR <u>DEVON ENERGY PRODUCTION COMPANY, LP.</u> LEASE <u>RUSSELL</u> "8" FEDERAL #1

DISTANCE & DIRECTION \_\_FROM THE JCT OF U.S. 62-180 AND CO. RO. 238, EAST OF CARLBAD, GO NORTH 2.0 MILES ON COUNTY ROAD 238, THENCE WEST 2.9 MILES, THENCE NORTH 0.8 MILE ON LEASE ROAD, THENCE WEST-ERLY 0.2 MILE, THENCE NORTHWESTERLY 0.8 MILE, THENCE EAST 0.1 MILE, THENCE NORTHWESTERLY 0.9 MILE, THENCE WEST 0.5 MILE TO EXISTING PAD OF WELL #5 WHICH IS ±2850' NORTH OF LOCATION.



This location has been very carefully staked on the ground according to the best official survey records, maps, and other data available to us. Review this plat and notify us immediately of any

Review this plat and notify us immediately of any possible discrepancy.

# TOPOGRAPHIC LAND SURVEYORS

Surveying & Mapping for the Oil & Gas Industry

1307 N. HOBART PAMPA, TX. 79065 (800) 558-6382 6709 N. CLASSEN BLVD. OKLAHOMA CITY, OK. 73116 (800) 654-3219

2903 N. BIG SPRING MIDLAND, TX. 79705 (800) 767-1653

# LOCA N & ELEVATION VERIFICATION P EXHIBIT # 2



# TOPOGRAPHIC LAND SURVEYORS

Surveying & Mapping for the Oil & Gas Industry

1307 N. HOBART PAMPA, TX. 79065 (800) 658-6382

6709 N. CLASSEN BLVD. OKLAHOMA CITY, OK. 73116 (800) 654-3219 2903 N. BIG SPRING MIDLAND, TX. 79705 (800) 767-1653



7/00









# EXHIBIT# 7

Well na Operat	tor: Dev		Production		ssell 8 Fe , L.P.	d. #1			
String									
Locatio	on: Sec.	8, 1205, 1	R29E, Eddy (	County, NM	j				· ··· · · · · · · · · · · · · · · · ·
Desigi Collapi	n paramete	ers:		Minimum design factors: Collapse:			Environment: H2S considered? No		
Mud weight: 8.400 ppg Design is based on evacuated pipe.			Design factor 1.125 Surface temperat Bottom hole temp Temperature grad			perature: temperature e gradient:	ure: 90 °F erature: 100 °F		
Burst				Burst: Design factor 1.00			5		
Max anticipated surface pressure: 743 psi Internal gradient: 0.000 psi/ft Calculated BHP 743 psi			<u>Tension:</u> 8 Round STC: 1.80 (J) 8 Round LTC: 1.80 (J)			Non-directional string.			
Annular backup: 8.40 ppg		8.40 ppg	Buttress:         1.60 (J)           Premium:         1.50 (J)           Body yield:         1.60 (B)		1.60 (J) 1.50 (J)	Re subseq	3,000 ft		
			Tension is based on air weight. Neutral point: 1,140 ft		Next mu Next set Fracture Fracture	tting depth: ad weight: tting BHP: e mud wt: e depth: n pressure	8.600 ppg 1,340 psi 11.000 ppg 1,301 ft 743 psi		
Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (Ibs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	1300	13.375	48.00	H-40	ST&C	1300	1300	12.59	16122
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

- -~ ·

Prepared W.M. Frank by: Devon Energy Phone: (405) 552-4595 FAX: (405) 552-7813

1730

2.33

62.4

Date: August 8,2000 Oklahoma City, Oklahoma

322

5.16 J

Remarks:

1

567

740

1.30

743

Collapse is based on a vertical depth of 1300 ft, a mud weight of 8.4 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.

## EXHIBIT #

Well n Opera String	tor: Dev	ron Energy	Productior		ssell 8 Fe /, L.P.	d. #1				
Locatio	on: Sec	. 8, T20S, I	R29E, Eddy	County, NM	1					
Desig: Collap:	n paramete se	ers:		Minimum design factors: Collapse:			Environment: H2S considered? No			
	l weight: ign is based		8.800 ppg ed pipe.	Design factor 1.125			Surface temperature: 90 °F Bottom hole temperature: 114 °F Temperature gradient: 0.80 °F/ Minimum section length: 1,000 ft			
<u>Burst</u>	anticipated	f		<u>Burst:</u> Design fa	ctor	1.00				
Max anticipated surface pressure: 1,714 psi Internal gradient: 0.000 psi/ft Calculated BHP 1,714 psi Annular backup: 8.80 ppg			8 Round LTC: 1.80 Buttress: 1.60		1.80 (J) 1.80 (J) 1.60 (J) 1.50 (J)	J) J)				
			Body yield: 1.60 (B)			Re subsequent strings:				
		·		Tension is Neutral po	s based on air weight. bint: 2,608 ft		Next setting depth: Next mud weight: Next setting BHP: Fracture mud wt: Fracture depth: Injection pressure		11,700 ft 9.600 ppg 5,835 psi 11.000 ppg 3,000 ft 1,714 psi	
Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (Ibs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)	
1	3000	8.625	32.00	J-55	LT&C	3000	3000	7.875	24176	
Run Seq 1	Collapse Load (psi) 1371	Collapse Strength (psi) 2530	Collapse Design Factor 1.84	Burst Load (psi) 1714	Burst Strength (psi) 3930	Burst Design Factor 2.29	Tension Load (kips) 96	Tension Strength (kips) 417	Tension Design Factor 4.34 J	

-

Prepared W.M. Frank by: Devon Energy

Phone: (405) 552-4595 FAX: (405) 552-7813

Date: August 8,2000 Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 3000 ft, a mud weight of 8.8 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.

7

#### EXHIBIT # 7

Well na Operat String I	ior: Devo	on Ener	gy Productior		sell 8 Fe , L.P.	d. #1				
Locatio	on: Sec.	8, T20S	, R29E, Eddy	County, NM						
Desigr Collaps	n paramete	rs:		Minimum design factors: Collapse:			Environment: H2S considered? No			
Mud weight: 6.600 ppg Design is based on evacuated pipe.			Design fac	tor	1.125	Surface temperature: 90 °F Bottom hole temperature: 184 °F Temperature gradient: 0.80 °F/10 Minimum section length: 1,000 ft				
Burst				<u>Burst:</u> Design fac	tor	1.00		Ū	,	
	anticipated s ressure:	surface	4,011 psi							
Internal gradient: 0.000 psi/ft			<u>Tension:</u>			Non-directional string.				
Calculated BHP 4,011 psi					1.80 (J)		·			
Δηηι	ular backup:		9.60 ppg	8 Round LTC: Buttress:		1.80 (J) 1.60 (J)				
<i>-</i>	Annular backup: 9.60 ppg			Premium:		1.50 (J)				
			Body yield:		1.60 (B)					
				Tension is Neutral po	based on ai int:	r weight. 10,581 ft				
				Estimated	cost:	57,993 (\$)				
Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.	
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Cost	
	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(\$)	
4	300	5.5	17.00	L-80	Buttress		300	4.767	2033	
3 2	3900 5800	5.5	17.00	L-80	LT&C	4200	4200	4.767	24710	
2	5800 1700	5.5 5.5	15.50 17.00	J-55 L-80	LT&C LT&C	10000 11700	10000	4.825	20480	
- 1	1700	5.5	17.00	L-00	LIQU	11700	11700	4.767	10770	

1	1700	0.0	17.00	L-00	LIGO	11700	11700	4.707	10770	
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	
4	103	4854	47.19	4011	7740	1.93	190.2	397	2.09 B	
3	1440	5532	3.84	3862	7740	2.00	185.1	338	1.83 J	
2	3429	3893	1.14	1917	4810	2.51	118.8	217	1.83 J	
1	4011	6290	1.57	4011		999.00	28.9	338	11.70 J	

Prepared W.M. Frank

by: Devon Energy

Phone: (405) 552-4595 FAX: (405) 552-7813

Date: August 8,2000 Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 11700 ft, a mud weight of 6.6 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.



# United States Department of the Interior

BUREAU OF LAND MANAGMENT Colorado State Office 2850 Youngfield Street Lakewood, Colorado 80215-7076 CO-921A (MM) 3104 BLM Bond No.: CO-1104

## CERTIFIED MAIL

DECISION

OCT 26 1997

Principal:

Surety:

Devon Energy Corporation (Nevada) 1500 Mid America Tower 20 N. Broadway Oklahoma, OK 73102

Aetna Casualty & Surety

Hartford, CT 06156

Company (The) 151 Farmington Avenue Surety ID No.: 30S100753026 32

Bond Type: Nationwide

Bond Amount: \$150,000

Rider Type: Assumption

Date Executed: August 17, 1993

## Replacement Nationwide Oil and Gas Bond and Rider Accepted

On September 17, 1993, this office received the bond and rider described above. The rider extends coverage to assume any and all liabilities outstanding on a prior \$150,000 nationwide bond, Surety ID # 56-0130-1709-74, issued on behalf of the principal by the United State Fidelity & Guaranty Company (BLM Bond CO-1051). We have examined the replacement bond and rider, and have found them satisfactory. They are accepted effective September 17, 1993.

The bond constitutes coverage of all operations conducted by or on behalf of the principal on all federal leases except those in the National Petroleum Reserve in Alaska. Coverage also extends to any lease on which the principal is operator. Federal leases do not include indian leases. The rider conditions this bond to assume any and all outstanding liabilities on Bond # 56-0130-1709-74, BLM Bond CO-1051.

The bond will be maintained by this office. Termination of liability under the bond will be permitted only after this office is satisfied that either there is no outstanding obligation covered by the bond or satisfactory replacement bonding coverage has been furnished.

RECEIVE

OCT 29 1993

Janet M. Budzilek, Chief

Fluid Minerals Adjudication Section

LAND DEPARTMENT

# **DEVON ENERGY CORPORATION**

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

#### A. Hydrogen Sulfide Training

All rig crews and company personnel will receive training from a qualified instructor in the following areas prior to penetrating any hydrogen sulfide bearing formations during drilling operations:

- 1. The hazards and characteristics of hydrogen sulfide (H2S).
- 2. The proper use and maintenance of the H2S safety equipment and of personal protective equipment to be utilized at the location such as H2S detection monitors, alarms and warning systems, and breathing equipment. Briefing areas and evacuation procedures will also be discussed and established.
- 3. Proper rescue techniques and procedures will be discussed and established.

In addition to the above, supervisory personnel will be trained in the prevention of oil and gas well blowouts in accordance with Minerals Management Service Standards Subpart - 0 - 250 - 212.

Prior to penetrating any known H2S bearing formation, H2S training will be required at the rig sight for all rig crews and company personnel that have not previously received such training. This instruction will be provided by a qualified instructor with each individual being required to pass a 20 question test regarding H2S safety procedures. All contract personnel employed on an unscheduled basis will be required to have received appropriate H2S training.

This Hydrogen Sulfide Drilling And Operations Plan shall be available at the wellsite during drilling operations.

#### **B. H2S Safety Equipment And Systems**

All H2S safety equipment and systems will be installed, tested, and operational when drilling operations reach a depth approximately 500' above any known or probable H2S bearing formation. The safety systems to be utilized during drilling operations are as follows:

- 1. Well Control Equipment
  - (a) Double ram BOP with a properly sized closing unit and pipe rams to accommodate all pipe sizes in use.
  - (b) A choke manifold with a minimum of one remote choke.
- 2. H2S Detection And Monitoring Equipment
  - (a) Three (3) H2S detection monitors will be placed in service at the location. One monitor will be placed near the bell nipple on the rig floor; one will be placed at the rig substructure; and, one will be at the working mud pits or shale shaker. This monitoring system will have warning lights and audible alarms that will alert personnel when H2S levels reach 10 ppm.
  - (b) One (1) Sensidyne Pump with the appropriate detection tubes will also be available to perform spot checks for H2S concentrations in any remote or isolated areas.
- 3. Protective Equipment For Essential Personnel

Protective equipment will consist of the following:

- (a) Four (4) five minute escape packs located at strategic points around the rig.
- (b) Two (2) thirty minute rescue packs to be located at the designated briefing areas.
- 4. Visual Warning System

Visual warning system will consist of the following:

- (a) Two wind direction indicators.
- (b) One condition / warning sign which will be posted on the road providing direct access to the location. The sign will contain lettering of sufficient size to be readable at a reasonable distance from the immediate location. The sign will inform the public that a hydrogen sulfide gas environment could be encountered at the location.

#### 5. Mud Program

The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight and safe drilling practices (for example, keeping the hole filled during trips) will minimize hazards when drilling in H2S bearing formations.

6. Metallurgy

All drill strings, casings, tubing, wellhead, blowout preventers, drilling spools, kill lines, choke manifold and lines and valves shall be suitable for H2S service.

7. Communication

Cellular telephone communication will be available in company vehicles.

C. Diagram of Drilling Location

Attached is a diagram representing a typical location layout as well as the location of H2S monitors, briefing areas and wind direction indicators.



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File: Q:\\NM\H2S-PLAN

4/97

# CULTURAL RESOURCE

# MANAGEMENT REPORT

Devon Energy Production Company, L.P. The Russell "8" Federal Number 1 Proposed Well Location and Access Road Section 8, T.20S., R. 29E Eddy County, New Mexico

> Written By: Doralene Sanders And Joe Ben Sanders Project Archaeologist Principal Investigator

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

Prepared By:

# SOUTHERN NEW MEXICO ARCHAEOLOGICAL SERVICES, Inc.

Post Office Box 1 Bent, New Mexico 88314-0001

> Date: August 10, 2000

Project # SNMAS-00NM-370 NMCRIS # 71413

<b>3. NMCRIS No</b> . 71413 <b>5. Project Date(s)</b> August 5, 7, 10, 2000 <b>6. Report Date</b> August 10, 2000
<b>5. Project Date(s)</b> August 5, 7, 10, 2000 <b>6. Report Date</b>
<b>5. Project Date(s)</b> August 5, 7, 10, 2000 <b>6. Report Date</b>
August 5, 7, 10, 2000 6. Report Date
August 5, 7, 10, 2000 6. Report Date
-
August 10, 2000
8. Permit No.
145-2920-99-D
<b>Consultant Report #</b>
SNMAS-00NM-370
11. FOR BLM USE
12. ACREAGE:
Total No. of acres
Surveyed 9.97
Per Surface
Ownership:
Federal <u>9.97</u>
State
Private

r 5

Page 2

g. Area: Block: Impact: 200' X 200' Surveyed: 400' X 400' Linear: 50' X 2732' Surveyed: 100' X 2732'

14. a. Records Search:

Location:	ARMS HPD.
	BLM Carlsbad

Date: August 4, 2000 Date: August 4, 2000

List by LA # All sites within .25 miles of the project: None

#### b. Description of Undertaking:

The proposed Russell "8" Federal Number 1 well location, is staked 760 ft FNL and 660 ft FWL in Section 8, T.20S., R.29E. The impact area for the proposed well location is an area 200 ft by 200 ft. The proposed access road is 2,732 ft long with an impact area of 50 ft by 2,732 ft. The proposed access road begins at an existing lease road and trends 2,032 ft southwest in Section 5, T.20S., R.29E, then trends 700 ft southwest in Section 8, T.20S., R.29E, then trends 700 ft southwest in Section 8, T.20S., R.29E, not proposed access road begins at an existing lease road and trends 2,032 ft southwest in Section 5, T.20S., R.29E, then trends 700 ft southwest in Section 8, T.20S., R.29E, ending on the northeast corner of the well location.

On August 5, 2000 archaeologist Joe Ben Sanders, attempted to perform an archaeological survey on the Russell "8" Federal Number 1 well location and access road. The well location could not be found, three hours were spent trying to locate the well location. On August 7, 2000 archaeologist Ray Medlock, attempted to located the well location and access road. The well location was found, after a 2 hour search, there was only a northeast corner stake on the well pad, and three stakes located on the access road. Mr. Joe Handley and Ms. Candi Graham of Devon Energy Production Company, L.P. were contacted and informed of the situation, on August 7, 2000. Topo Graphic Land Surveyors were also contacted, and the well was re-staked on August 8, 2000. Ray Medlock completed an archaeological survey on August 10, 2000.

c. Environmental Setting NRCS soil designation: vegetative community: etc.:

The project area is located in loose sands, is relatively flat and slightly sloped to the south, with low dunes. The vegetation in the area is mesquite, creosote, yucca, cholla, Mormon tea bush, snakeweed and various grasses. The elevation is 3,279 ft.

d. Field Methods: Transect Intervals: 8 zig zag transects across well pad, 50-ft zig zag intervals across the staked corridor.

Crew Size: 1 Time in Field: 7 hours Collections: NONE Page 3

#### 15. Cultural Resource Findings:

a. Identification and description: (Location shown on project map)

During the current survey, no cultural resources were encountered.

16. Management Summary (Recommendations):

During the survey, no cultural resources were encountered. Therefore, **archaeological clearance is recommended** for the Devon Energy Production Company, L.P. proposed Russell "8" Federal Number 1 well location and access road, with no stipulations.

I certify the information provided above is correct and accurate and meets all appreciable BLM standards.

Responsible Archaeologist: Signature

Joe Ben Sanders Principal Investigator Date: August 10, 2000

The above completes a negative report. If eligible of potentially eligible properties are involved, then the above will be the title page and abstract for a complete report

