Form 3:60-3 (December 1990)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

SUBMIT IN (See other instruct reverse side)

Form approved.

CIST

			er Landa	3.LEASE D	ESIGNATION AND SERIAL	L NO.
Al	PPLICATION FOR PI	ERMIT TO DRILL	OR DEEPEN ISION	NM-NM(	0404441 N, allottee or tribe n	VALUE .
la TYPE OF WORK:	DRILL 🛛	DEEPEN	11 5	N/A	N, ALLOTTEE OR TRIBE	NAME
L TVDE OF WELL.			etic a, N 2834		REEMENT NAME	
b. TYPE OF WELL:	GAS Other	SINGLE	MULTIPLE (	N/A	9 97	₹41
2 NAME OF OPERA		ZONE	ZONE	8.FARM OF	LEASE NAME, WELL NO	5. <del></del>
2 Minute of or English	DEVON ENERGY CO	RPORATION (NEVAD	A) 6137	Barclay '	'11M" Federal #13	
3. ADDRESS AND T	EL EDUONE NO			9.API WEL	つつつつつ	
	20 N. BROADWAY, SI	ЛТЕ 1500, ОКС, ОК 7	3102 (405) 235036112/2	30-015-	・	
4. LOCATION OF WE	LL (Report location clearly and	l in accordance with anv Sta	ate regutements)*	_	(Delaware)	
At surface 660'	FSL & 660' FWL, Unit M,	Section 11-1238-R31E, Ed	ldy Cary, NM	fl.SEC.,T.,I	R,M.,OR BLOCK AND SUF	EVEY OR AREA
At top proposed proc	l zone (SAME)	elawane, South	Idy City, NM 1002	Unit M Section	I 11-T23S-R31E	
14.DISTANCE IN MILES AN	D DIRECTION FROM NEAREST TOV	VN OR POST OFFICE*	RECEIVED		Y OR PARISH	13. STATE
35 miles WNW of Ja	l, New Mexico		RECEIVED TO OCD - ARTESIA OF OCCUPANTE TO OC	Eddy		New Mexico
15.DISTANCE FROM PROP		16.NO. OF ACRES IN L	EAST OL	1	17.NO. OF ACRES AS	SIGNED
LOCATION TO NEARES PROPERTY OR LEASE		1440	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )		TO THIS WELL	
(Also to nearest drig unit li 18.DISTANCE FROM PROP	ne if any)	19 PDOPOSED DEPTU	29Z9Z4Z		40	
TO NEAREST WELL, DI	RILLING, COMPLETED,	8800'	<del></del>		20 ROTARY OR CAB	LE TOOLS*
OR APPLIED FOR, ON 1 21.ELEVATIONS (Show when		8800		1 44	Rotary	Com. D
GL 3431'	ure Dr. KI, GR, HC)			22. AP	PROX. DATE WORK WIL	L START*
GL 3431				31	rd quarter, ]	L998
23.	<del></del>	PROPOSED CASINO	AND CEMENTING PROGRAM			
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FO			QUANTITY OF	CEMENT
17 1/2"	13 3/8" H-40	48#	850'		500 sx 35/65 Poz + 2	00 sx Class "C"
11"	8 5/8" J-55	32#	4350'		1600 sx 35/65 Poz +	
7 7/8"	5 1/2" J-55	15.5# & 17#	8800°		1st Stage 525 sx Silic	
Exhibits #1 = Blowd Exhibit #2 = Locatic Exhibits #3 = Road I Exhibit #4 = Wells V Exhibits #5 = Produc Exhibit #6 = Rotary Exhibit #7 = Casing H <sub>2</sub> S Operating Plan, N ABOVE SPACE DI	Within 1 Mile Radius ction Facilities Plat Rig Layout Design , Archaeological Survey ESCRIBE PROPOSED PROG	RAM: If proposal is to dee	The undersigned accepts all applica and restrictions concerning operati portions thereof, as described below Lease #: NM-NM0404441 Legal Description: Section 11-T23 Bond Coverage: Nationwide BLM Bond #: CO-1104 epen, give data on present productive zo cations and measured and true vertical	ons conductors S-R31E	cted on the leased la	nd or
SIGNED	andaro R. Ar	.1.	Candace R. Graham			
		TITLE	Engineering Technician DA	TE Jui	ne 12, 1998	
(This space for Fed	eral or State office use)					
PERMIT NO.			APPROVAL DATE _			
	not warrant or certify that the app		title to those rights in the subject lease which	would entitle	the applicant to conduct	operations
APPROVED BY	A. Luhitley	TITLE _	ACTIONATE DIRECTORPPRO  JOINS ON Reverse Side GENER  ACTION AND ACTION ACTION AND ACTION	)VAL¤8t	JUI JUBJECTJO	N 0 4 200
Fitle 18 U.S.C. Section fraudulent statements or	1001, makes it a crime for any prepresentations as to any matter	See Instructiverson knowingly and willfular within its jurisdiction	ons On Reverse Side GENER	RAL REG	QUIR <b>EMENTS</b> ULATIONS AT	AND YEA

#### **DRILLING PROGRAM**

Attached to Form 3160-3
Devon Energy Corporation (Nevada)
BARCLAY "11M" FEDERAL #13
660' FSL & 660' FWL
Section 11-T23S-R31E, Unit M
Eddy County, New Mexico

#### 1. Geologic Name of Surface Formation

Permian

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

Rustler	800'
Top of Salt	1100'
Base of Salt	3900'
Bell Canyon	4400'
Cherry Canyon	5600'
Brushy Canyon	7000'
Bone Spring Lime	8300'
Total Depth	8800'

#### 3. Estimated Depths of Possible Fresh Water-, Oil-, or Gas-Bearing Formations

Upper Permian Sands	above 800'	fresh water
Delaware (Bell Canyon)	4400'	oil
Delaware (Cherry Canyon)	6000'	oil
Delaware (Brushy Canyon)	8000'	oil

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 850' and circulating cement back to surface. The Potash and Salt intervals will be protected by setting 8 5/8" casing at 4350' and circulating cement to surface. The Delaware 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. <u>Casing Program</u>

Hole Size	<u>Interval</u>	Casing OD	<u>Weight</u>	<u>Grade</u>	<u>Type</u>
30"	0-40'	20"		Conductor	0.30" wall
17 1/2"	0-850'	13 3/8"	48#	H-40	ST&C, new R-3
11"	0-4350'	8 5/8"	32#	J-55	ST&C, new R-3
7 7/8"	0'-TD (8800'±)	5 1/2"	15.5# & 17#	J-55	LT&C, new R-3

#### Cementing Program

20" Conductor Casing	Cement with Ready-mix to surface.
13 3/8" Surface Casing	Cement to surface using 500 sx Poz (35% Poz, 65% Class C, 6% gel) with 2% $CaCl_2$ and 1/4 $lb/sx$ Cellophane flakes + 200 sx Class C with 2% $CaCl_2$ and 1/4 $lb/sx$ Cellophane flakes.
8 5/8" Intermediate Casing	Cement to surface using 1600 sx Poz (35% Poz, 65% Class C, 6% gel, 15% salt) with 1/4 lb/sx Cellophane flakes + 200 sx Class C with 2% CaCl <sub>2</sub> , 1/4 lb/sx Cellophane flakes
5 1/2" Production Casing with DV tool at ±5500'	Cement 1st stage with 525 sx Silica Lite (Class H) with 3% salt, 0.6% FL additive, 1/4 lb/sx Cellophane flakes Cement 2nd stage with 225 sx Poz (35% Poz, 65% Class H, 6% gel) with 1/4 lb/sx Cellophane flakes + 400 sks Class H with 4% gel, 5% salt, and 1/4 lb/sx Cellophane flakes.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach  $450'\pm$  above the 85/8" casing seat at 4350'.

#### 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 (2000 psi WP) preventer and a bag-type (Hydril) preventer (2000 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 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

before drilling out the 13 3/8" casing shoe (70% of 48# H-40 casing). Prior to drilling out the 8 5/8" casing shoe, the BOP's and Hydril will be function 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 3000 psi WP rating.

#### 6. Types and Characteristics of the Proposed Mud System

The well will be drilled to total depth using brine, cut brine and polymer mud systems. Depths of systems are as follows.

<u>Depth</u>	<u>Type</u>	Weight (ppg)	Viscosity (1/sec)	Water Loss (cc/30 mins)
0-850'	Fresh water	8.8	34-36	No control
850-4350'	Brine water	10.0	28	No control
4350'-TD	Fresh water polyme	r 8.8	32-36	10-20

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 the 13 3/8" casing shoe until the 5 1/2" casing is cemented.

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

- A. Drill stem tests will be based on geological sample shows.
- B. The open hole wireline logging program will be as follows.

TD to intermediate casing: Induction / Gamma Ray / Neutron / Density Log.

TD to surface: Neutron with Gamma Ray.

- C. Rotary sidewall cores are 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 drill stem tests.

#### 9. Abnormal Pressures, Temperatures and Potential Hazards

No abnormal pressures or temperatures are foreseen. The anticipated bottom hole temperature at total depth is approximately 130 degrees and maximum bottom hole pressure is approximately 2900 psig. No hydrogen sulfide gas has been reported or is known to exist at these depths in this area. No major lost circulation intervals have been encountered in adjacent wells.

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

A Cultural Resources Examination will be completed by Don Clifton Archaeological Consultant and submitted to the BLM. Road and location preparation will not be undertaken until approval has been received from the BLM. If approved, the anticipated spud date for the well will be third quarter in 1998. The drilling operation should require approximately 21 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 Corporation (Nevada) BARCLAY "11M" FEDERAL #13 660' FSL & 660' FWL Section 11-T23S-R31E, Unit M Eddy County, New Mexico

#### 1. Existing Roads

- A. The well site and elevation plat for the proposed BARCLAY "11M" FEDERAL #13 are reflected on Exhibit #2. This well was staked by Topographic Land Surveyors of Midland, Texas.
- B. All roads into the location are depicted in Exhibit #3. New construction from the County road will be used to access the location. New construction will conform to the specifications outlined in item 2 below.
- C. Directions to location: Travel west-northwest from Jal, NM approximately 35 miles on State Highway #128 to County Road #798, just into Eddy County from Lea County. Turn north (right) on County Road #798 and travel approximately 4.2 miles. Then, turn west (left) onto existing lease road. Go approximately 0.875 mile to the proposed location of BARCLAY "11M" FEDERAL #13.

#### 2. Proposed Access Road

Access to this location will require the construction of approximately 2500' of new access road from the County road. All new construction will adhere to the following specifications:

- A. The maximum width of the road will be fifteen (15) feet.
- B. It will be crowned and made of six (6) inches of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
- C. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location.
- D. The average grade will be approximately 1%.

#### BARCLAY "11M FEDERAL #13 Surface Use and Operating Plan Page 2

- E. No cattle guards, grates or fence cuts will be required.
- F. 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 BARCLAY "11M" FEDERAL #13.

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

- A. In the event the well is found productive, a tank battery will be built on the Barclay "110" Federal #15 location.
  - 1. Exhibit #5 shows the battery facility to be utilized by the BARCLAY "11M" FEDERAL #13. This facility may be upgraded to include one or two additional 500 barrel tanks.
  - 2. The tank battery, all connections and all lines will adhere to API standards.
  - 3. The well will be operated by means of an electric prime mover. Power poles will be set along the access road right-of-way.
- 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 BARCLAY "11M" FEDERAL #13 will be drilled using a combination of brine and fresh water mud systems (outlined in Drilling Program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing and proposed roads shown in Exhibit #3. Additionally, produced salt water from lease gathering tanks may be utilized. No water well will be drilled on the location.

#### 6. Source of Construction Materials

All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. 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 to drill from 850' to 4350'.
- 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 campsite or other facilities will be constructed as a result of this well.

#### 9. Well Site Layout

- 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 non-commercial, 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 again 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. Other Information

- A. The area surrounding the well site is grassland. The top soil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, sagebrush, yucca and miscellaneous weeds.
- B. There is no permanent or live water in the general proximity of the location.
- C. A Cultural Resources Examination will be completed by Don Clifton Archaeological Consultant, and a copy forwarded to the BLM office in Carlsbad, New Mexico.

#### BARCLAY "11M FEDERAL #13 Surface Use and Operating Plan Page 6

#### 13. <u>Lessee's and Operator's Representative</u>

The Devon Energy Corporation (Nevada) representatives responsible for ensuring compliance of the surface use plan are:

Walter Frank Daryl Lowder District Engineer Superintendent

DEVON ENERGY CORPORATION
20 North Broadway, Suite 1500
Oklahoma City, OK 73102-8260
DEVON ENERGY CORPORATION
P. O. Box 250
Artesia, NM 88211-0250

 (405) 552-4595 (office)
 (505) 748-3371 (office)

 (405) 364-3504 (horne)
 (505) 677-2103 (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 Corporation (Nevada) and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

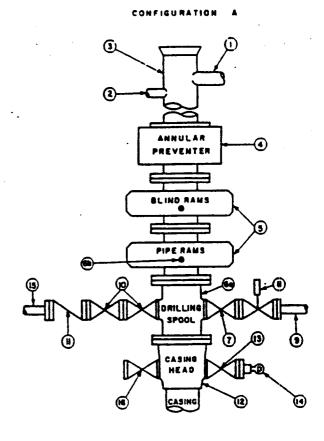
Signed: Walter M. Frank
District Engineer

#### 3,000 psi Working Pressure

#### 3 MWP

#### STACK REQUIREMENTS

No.	item		Min. 1.D.	Min. Nominal
1	Flowline			
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			
<b>6</b> b	2" min. kill line and 3" mi outlets in ram. (Alternate			
7	Valve	Gale 🗆 Plug 🗆	3-1/8"	
8	Gale valve—power opera	ted	3-1/8"	
9	Line to choke manifold			3.
10	Valves	Gate C Plug C	2-1/16*	
11	Check valve		2-1/16"	
12	Casing head			
13	Valve	Gate □ Plug □	1-13/16*	
14	Pressure gauge with nee	die valve		
15	Kill line to rig mud pump			2"



OPTION	AL
16 Flanged valve	1-13/16"

#### CONTRACTOR'S OPTION TO FURNISH:

- All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 3,000 psi, minimum.
- Automatic accumulator (80 gallon, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
- 3.BOP controls, to be located near drillers position.
- 4. Kelly equipped with Kelly cock.
- 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.
- 8. Type RX ring gaskets in place of Type R.

#### MEC TO FURNISH:

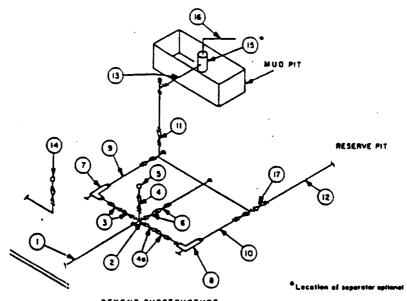
- 1.Bradenhead or casinghead and side valves.
- 2. Wear bushing, if required.

#### **GENERAL NOTES:**

- 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 beans. Replaceable parts for edjustable 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 sultably 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.
- Casinghead connections shall not be used except in case of emergency.
- 11.Do not use kill line for routine fill-up operations.

#### 3 MWP - 5 MWP - 10 MWP



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			MINI	MUM REQL	IREMENTS	3				
			10,000 MWP							
No		1.0.	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)	3-1/6"		3,000	3-1/8*		5,000	3-1/8*		10,000
4	Valve Gate □ Plug □(2)	1-13/16*		3,000	1-13/16"		5,000	1-13/16"		10,000
42	Valves(1)	2-1/16"		3,000	2-1/16"		5,000	3-1/8"		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valves Gate □ Plug □(Z)	3-1/8*		3,000	3-1/8"		5,000	3-1/6"		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	1	2-	5,000		3-	10,000
11	Valves Gate □ Plug □(2)	3-1/8*		3,000	3-1/8"		5,000	3-1/8*		10,000
12	Lines		3.	1,000		3.	1,000	1	3′	2,000
13	Lines		3.	1,000		3.	1,000		3-	2,000
14	Remote reading compound standpipe pressure gauge			3.000			5,000			10,000
15	Gas Separator		2'x5'			2'x5'			2'x5'	
16	Line		4*	1,000		4"	1,000		4"	2,000
17	Valves Gate □ Plug □(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000

- (1) Only one required in Class 3M.
- (2) Gale 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 58 or 68X and ring gaskets shall be API RX or 8X. Use only 8X 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.
- 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 chake manifold should be as straight as possible. Lines downstream from chakes 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.

## Exhibit #1A NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Corporation (Nevada)
BARCLAY "11M" FEDERAL #13
660' FSL & 660' FWL
Section 11-T23S-R31E, Unit M
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.

**EXHIBIT** #

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

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

Form C-102 Revised 02-10-94

Instructions on back

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

DISTRICT II
P. O. Drawer DD
Artesia, NM 88211-0719
DISTRICT III
1000 Rio Brazos Rd.
Aztec, NM 87410

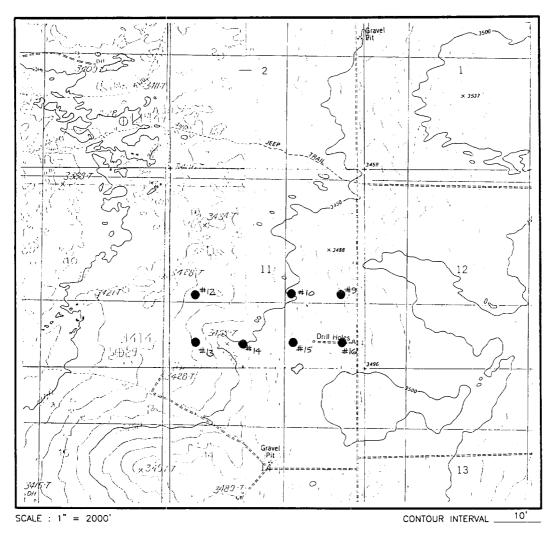
# OIL CONSERVATION DIVISION P. 0. Box 2088 Santa Fe, New Mexico 87504-2088

AMENDED REPORT

DISTRICT IV P. O. Box 2088

Santa Fe, NM 87507-2088 WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number			<sup>2</sup> Pool C	ode		3 Poc	l Nar	ne						
i				3374	5			Ir	ng1	e Wells	(Del	laware)		
4 Property Cod	le	Property N	ame								· · · · · ·		• Well Numbe	r
						BARC	LAY	11	M	FEDERAL			13	
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	137	•		1	<b>DEVIN</b>	ENER	GY	COR	PN	RATION	(NE	VADA)	343	· '
												····		
					" SUF	RFACE	LO	CATI	ON					
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M	11	23 SOUTH	31 EA	ST, N	.M.P.M.			660'		SOUTH		660'	WEST	EDDY
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12 Dedicated A	cres 13 Jo	oint or Infill	14 Conso	lidation	Code	15 Order	No.	•		<u> </u>		<u> </u>		·
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1.1 \_\_ TWP <u>23-S</u> RGE \_\_

NEW MEXICO PRINCIPAL MERIDIAN SURVEY .

EDDY COUNTY\_ \_ STATE \_\_\_

OPERATOR DEVON ENERGY CORPORATION (NEVADA)

U.S.G.S. TOPOGRAPHIC MAP

LOS MEDANOS & BOOTLEG RIDGE

NAME	LOCATION	ELEVATION	LAT.	LONG.
BARCLAY 11 I #9	1980' FSL & 660' FEL	3470'	N 32'19'01.2"	W 103'44'30.0"
BARCLAY 11 J #10	1980' FSL & 1980' FEL	3452'	N 32'19'01.3"	W 103'44'45.4"
BARCLAY 11 L #12	1980' FSL & 660' FWL	3423'	N 32'19'01.4"	W 103'45'16.2"
BARCLAY 11 M #13	660' FSL & 660' FWL	3431'	N 32°18'48.3"	W 103'45'16.2"
BARCLAY 11 N #14	660' FSL & 1980' FWL	3453	N 32*18'48.3"	W 103'45'00.8"
BARCLAY 11 0 #15	660' FSL & 1980' FEL	3474'	N 32118'48.2"	W 103'44'45.4"
BARCLAY 11 P #16	660' FSL & 660' FEL	3485'	N 32'18'48.2"	W 103'44'30.1"

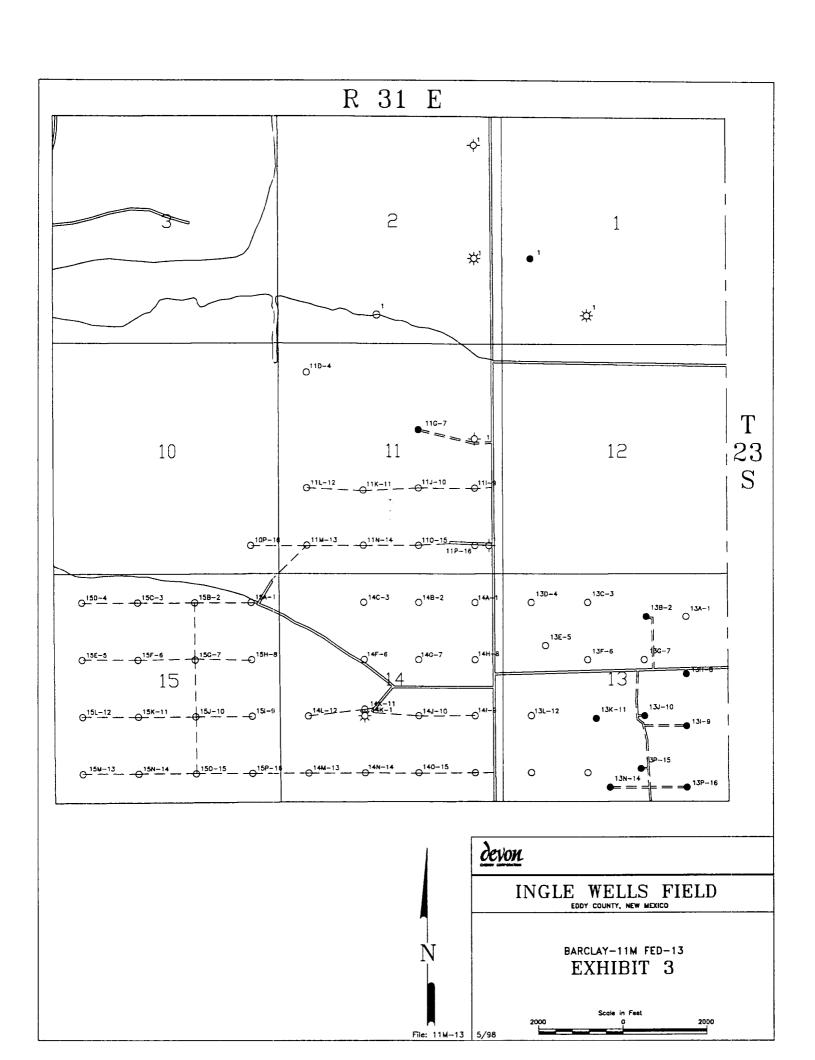
These locations have been very corefully staked on the ground according to the best official survey records, maps, and other data available to us.

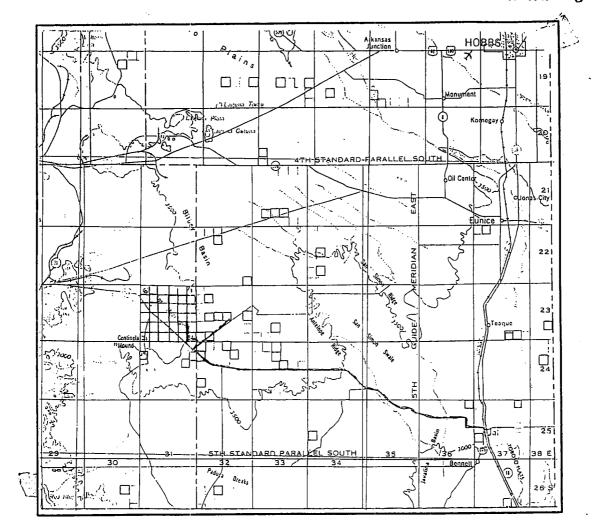
Review this plat and notify us immediately of any

possible discrepancy.

#### TOPOGRAPHIC LAND SURVEYORS

Surveying & Mapping for the Oil & Gas Industry





SECTION 10.	11, 13,	14, 15,	22, & 23	TWP.	<u>23-S</u>	RGE <u>31-E</u>
SURVEY	NEW	MEXICO	PRINCIPAL	MEF	NAIDI	
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OPERATOR -	DEVON	ENERGY	CORPORATION	
LEASE			BARCLAY	

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This location has been very carefully staked on the ground according to the best official survey records, maps, and other data available to us.

maps, and other data available to us.

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

#### TOPOGRAPHIC LAND SURVEYORS

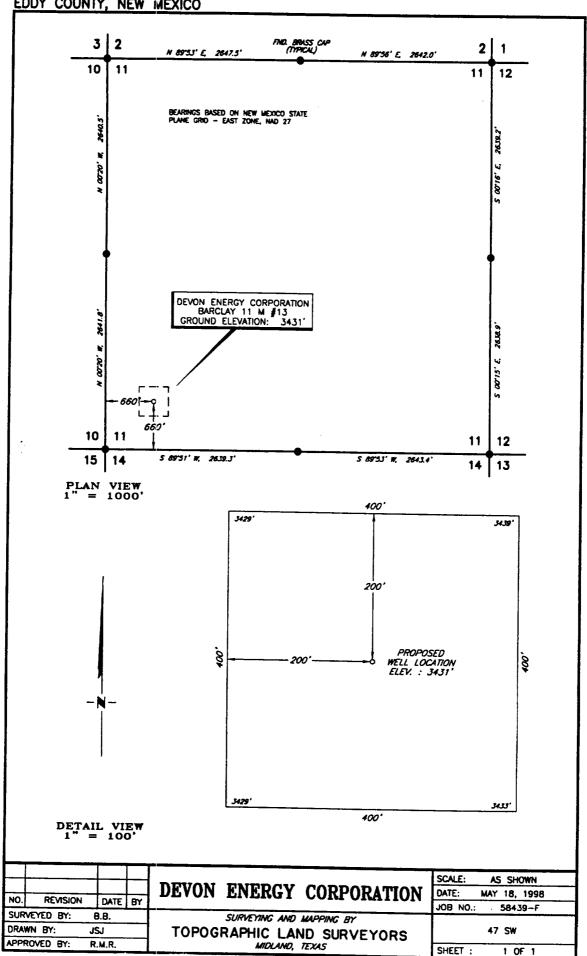
Surveying & Mapping for the Oil & Gas Industry

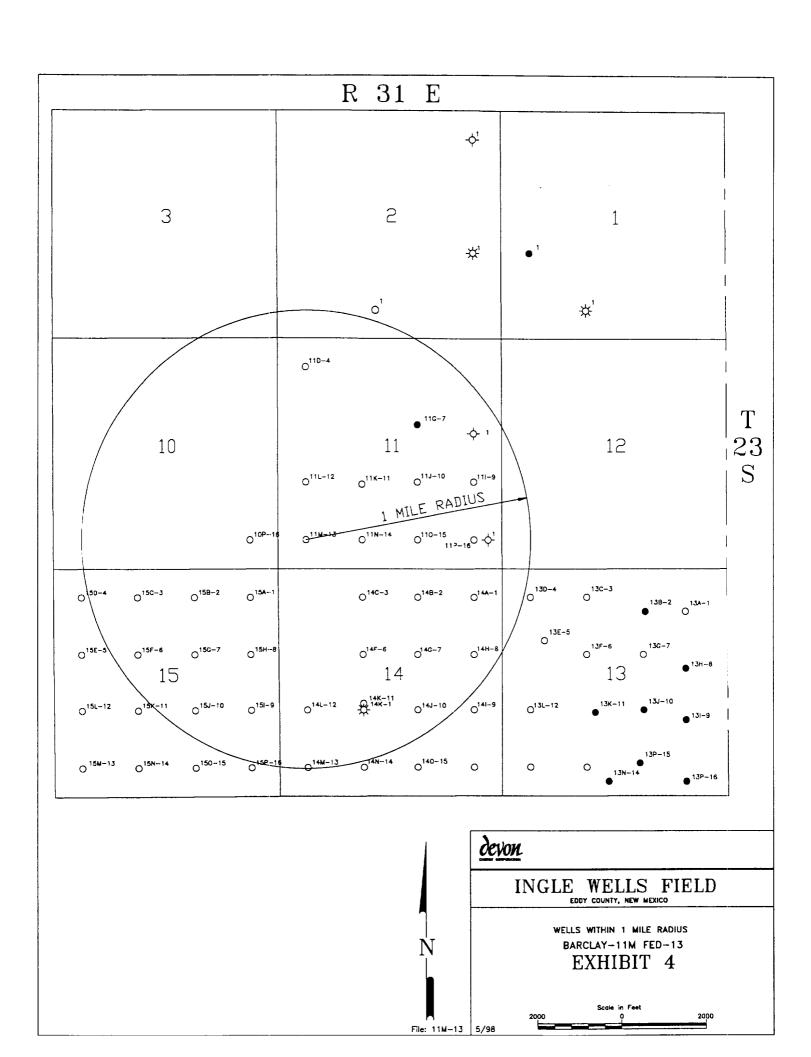
APPROVED BY:

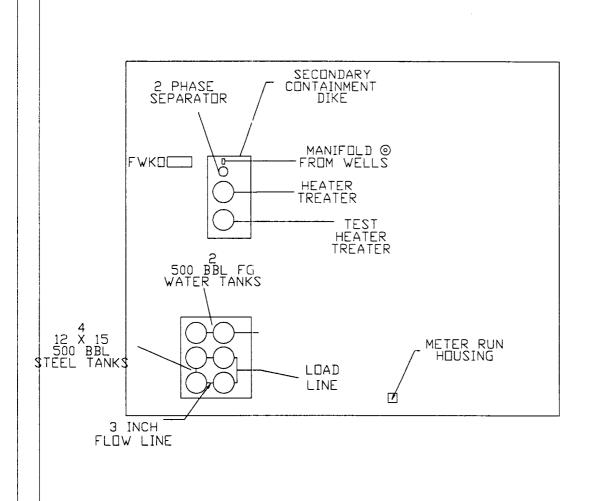
R.M.R.

SHEET :

1 OF 1

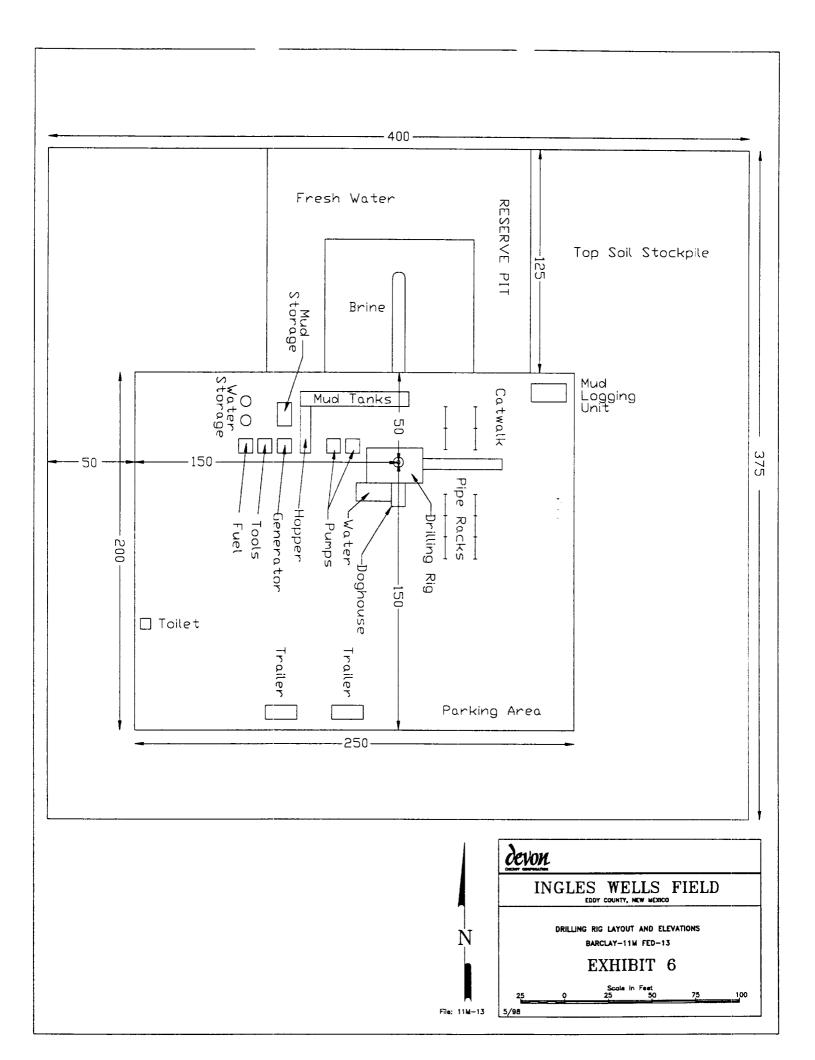








# PRODUCTION FACILITIES LAYOUT AT BARCLAY-110 FED-15 FOR BARCLAY-11M FED-13 EXHIBIT 5 Scale in Feet 75 100 5/98



#### DEVON ENERGY

Operator: DEVON ENERGY COR	P   Well Name: BARCLAY FEDERAL AREA
Project ID:	Location: T235-R31E

Design Parameters:	Design Factors:				
Must weight ( 9.00 ppg) : 0.468 psi/ft	Collapse	:	1.12	5	
Shut in surface pressure : 765 psi	Burst	:	1.00		
Internal gradient (burst) : 0.100 pai/ft	8 Round	:	1.80		(4)
Annular gradient (burst) : 0.000 psi/ft	. Buttress		1.60		
Tensile load is determined using air weight	Body Yield		1.50		
Service rating is "Sweet"	Overmuli				

	Length (feet)	Size (in.)	Weight (lb/ft)	Grad	e Joi	at	Depth (feet)	Drift (in.)	Cost .
1	850	13-3/8	48.00	H-4(	O ST&C	2	850	12.559	
	Load (psi)	Collapse Strgth (psi)	S.F.	Burst Load (psi)	Min Int Strgth (psi)	Yield S.F.			S.F.
1	397	740	1.864	850	1730	2.04	40.8	0 322	7.89 J

Prepared by : CHUCK HORSMAN, Oklahoma City, OK

Date :

Remarks

06-04-1993

Minimum segment length for the 850 foot well is 800 feet.

Surface string:

Next string will set at 4,400 ft. with 10.00 ppg mud (pore pressure of 2,286 pmi.) The frac gradient of 1.000 at the casing sent results in an injection pressure of 850 pmi. Effective BMP (for burst) is 850 pmi.

NOTE: The design fectors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kember curve. Engineering responsibility for use of this design will be that of the purchaser. Losts for this design are based on a 1990 pricing model. (Version 1.06)

#### DEVON ENERGY

Operator: DEVON ENERGY CORP	Well Name: BARCLAY FEDERAL AREA
Project ID:	Location: T23S-R31E

Design Parameters:	<u>Design Factors:</u>				
Mud weight (9.80 ppg) : 0.509 psi/ft	Col Lapse	-	1.125	5	
Shot in surface pressure : 3487 psi	Surst	:	1.00		
Internal gradient (burst) : 0.100 psi/ft	8 Round	:	1.80	6.1	1)
Annular gradient (burst) : 0.000 pai/ft	. Buttress		9.89		
Tensile load is determined using air weight	Body Yield		1.50		-
Service reting is "Sweet"	Oversui l				

	Length (feet)	Size (in.)	Weight (lb/ft)		Joint	_	Depth (feet)	Drift (in.)	Cost .
1	4,400	8-5/8"	32.00	J-55	ST&C		4,400	7.875	
	Load (psi)	Collapse Strgth (psi)		Load S	in Int y tryth (psi)	ield S.F.	Load (kips)	Tension Strgth (kips)	S.F.
1	2240	2530	1.129	3527	3930	1.11	140.80	372	2.64 J

Prepared by : CHUCK HORSMAN, Oklahoma City, OK

Date:

06-04-1993

Remarks

Minimum segment length for the 4,400 foot well is 800 feet.

Surface/Intermediate string:

Next string will set at 8,400 ft. with 9.00 ppg mud (pore pressure of 3,927 psi.) The fruc gradient of 1.000 at the casing seat results in an injection pressure of 4,400 psi. Effective BMP (for burst) is 3,527 psi.

NOTE: The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Mestcott, Dunlop and Kenter curve. Engineering responsibility for use of this design will be that of the purchaser. Costs for this design are based on a 1990 pricing model. (Version 1.0G)

#### DEVON ENERGY

Operator: DEVON ENERGY CORP | Well Name: BARCLAY FEDERAL AREA
Project ID: | Location: T23S-R31E

Design Factors: <u>Design Parameters:</u> Ned weight ( 9.00 ppg) : 0.468 psi/ft Callapse : 1.125 Shut in garince pressure : 3216 psi Burne : 1.00 Internal gradient (hurst) : 0.100 psi/ft \* Round : 1.80 (J) Assmilar gradient (burnt) : 0.000 psi/ft Buttrees : 9.89 (J) Tensile load is determined using air weight Body Tield : 1.50 **(B)** Service rating is "Sweet" Overpull 0 lbs.

\*\*\* MARKING \*\*\* Design factor for joint strength exceeded in design!

	Length (feet)	Size (in.)	Weight (lb/ft		e <b>J</b> oii		Depth (feet)	Drift (in.)	Cost
1 2 3	1,200 6,200 1,350	5-1/2* 5-1/2* 5-1/2*	17.00 15.50 17.00	J-5: J-5: J-5:	LTE	-	1,200 7,400 8,750	4.767 4.825 4.767	
	Load (psi)	Collapse Stryth (psi)	S.F.	Burst Load (psi)	Min Int Strgth (psi)	Yield S.F.	Load (kips)	Tension Strgth (kips)	S.F.
1 2 3	561 3460 4091	3897 3927 <b>4</b> 910	6.947 1.135 1.200	3336 3956 4091	5320 4810 5320	1.59 1.22 1.30	139.45 119.05 22.95	217	1.77 J 1.82 J 10.76 J

Prepared by : TOM PEPFER, Oklahoma City, OK

Date : 07-10-1995

Remarks

Minimum segment length for the 8,750 foot well is 500 feet.

The mad gradient and bottom hole pressures (for burst) are 0.468 psi/ft and

4,091 pmi, respectively.

NOTE: The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel ::ecomemds using minimum design factors of 1.125 - Chilapse (with everyward casing), 1.0 - Burst, 1.8 - 8 Round Tansion, 1.6 - Buttrees Tansion, and 1.5 - Body Tield. Chilapse strangth under axial tension was calculated based on the Mestcott, Dunlop and Esmier curve. Engineering responsibility for use of this design will be that of the purchaser. Casts for this design are based on a 1990 pricing model. (Version 1.05)

### **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.

Hydrogen Sulfide Drilling Operations Plan

#### 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

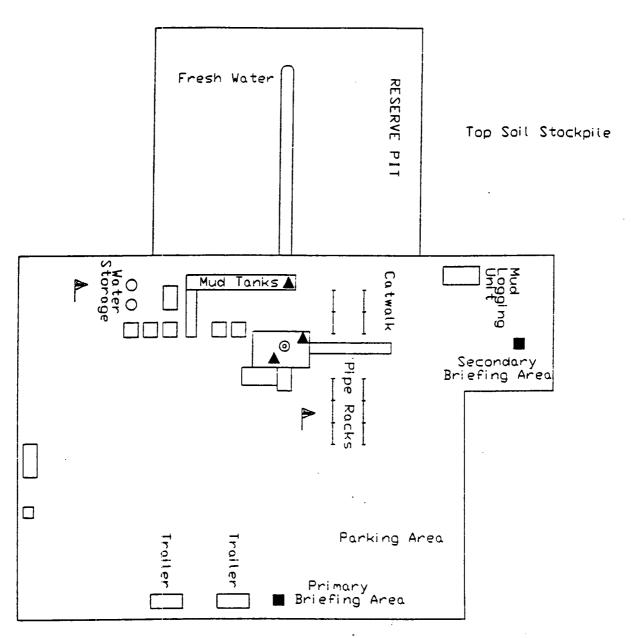
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spools, kill lines, choke manifold and lines and valves shall be suitable for H2S service.

#### 7. Communication

Cellular telephone communication will be available in company vehicles.

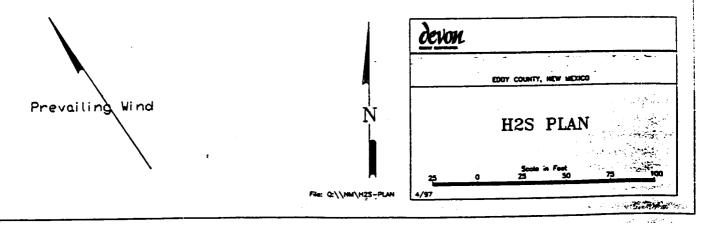
#### C. Diagram of Drilling Location

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



## H2S MONITORS WITH ALARMS AT THE BELL NIPPLE, SUBSTRUCTURE, AND SHALE SHAKER WIND DIRECTION INDICATORS

SAFE BRIEFING AREAS WITH CAUTION SIGNS AND PROTECTIVE BREATHING EQUIPMENT



**DEVON ENERGY CORPORATION** 

1500 Mid-America Tower 20 North Broadway Okiahoma City, Okiahoma 73102-8260

405/235-3611 TWX 910-831-327"

May 5, 1989

State of New Mexico Oil & Gas Conservation Commission State Capitol Building Santa Fe, NM 87504

Re:

Blanket Plugging Bond State of New Mexico No. 56-0130-11003-87

#### Gentlemen:

Devon Energy Corporation formerly Devon Corporation has changed its name to Devon Energy Corporation (Nevada). In this regard, enclosed is a Rider for the referenced bond to include both company names. Please amend your records.

Very truly yours,

Charlene Newkirk

Lease Records Supervisor

encls

CC: Carolyn Wilson

McEldowney McWilliams

#### RIDER

To be attached to and become	e a part of Bond No. 56-0130-11003-87-1
issued by the United States Fide:	lity and Guaranty Company, on
behalf of Devon Energy Cor	
as Principal, and in favor of	State of New Mexico
as Obligee, in the penalty of	Fifty thousand and no/100
Dollars (\$ 50,000.00)	for Blanket plugging bond
It is hereby understood and	agreed that effective on the
February 10, 1989	the Principal in this

bond shall be Devon Energy Corporation (Nevada)

However, the liability of the Surety in the apprepare to the Oblinee for any and all defaults of the Principal, whether occuring before or after or partly before and partly after this rider become effective, shall in no event exceed the penalty stated in the bond.

Signed, Sealed, and Dated this 3rd day of March 1989.

ATTEST:		Devon Energy Corporation (Nevada)
ast-deen	DVITED STATES FI	By: Vice President  DELITY A'TO GUARANTY COMPANY
	Ву:	
······································	Marcia C. Brejda	Attorney-in-fact

## TITLE PAGE/ABSTRACT/NEGATIVE SITE REPORT

#### ROSWELL DISTRICT

1. BLM Report No.	2. (ACCEPTED) (REJECTED)	3.NMCRIS No. 60928
4. Title of Report (Project Title An Archaeological Survey of New Mexico	) 20 Proposed Well Locations, Eddy County	5. Project Date(s) , 05/18/98 - 05/22/9 6. Report Date 05/23/98
7. Consultant Name & Address: Direct Charge: Don Clifton Name: Don Clifton, Archaeolo Address: P. O. Box 30, Pep, N. Authors Name: Don Clifton Field personel names: Don Clift Phone (505) 675-2360	gical Consultant M. 88126	8. Permit No. 83-2920-96-K 9. Consultant Report No. 248
10. Sponsor Name and Address: Indiv. Responsible: Wally France Name: Devon Energy Corpora Address: 20 N Broadway, Suite Phone (405) 552-4595	nk	11. For BLM's Use
2. ACREAGE:  Total No. acres surveyed: 74 ac  SURFACE  DWNERSHIP: Federal: 74 acre		Private:
3. Location: (Maps attached if ra. State New Mexico b. County Eddy c. BLM District: Roswell d. Nearest City or town: e. Area: T23S R 31E Sec. 10 f. Well Pad Footages: Codd 10P#16=660'fsl/660'fel, Starclay 11I#9=1980'fsl/660'fel, Starclay 11J#10=1980'fsl/660'fel, Starclay 11J#10=1980'fsl/660'fel, Starclay 11M#13= 660'fsl/660'fstarclay 11M#13= 660'fsl/1980'fstarclay 110#15= 660'fsl/1980'fstarclay 11P#16= 660'fsl/660'fel, Starclay 11P#16= 660'fsl/	Gec. 10 Todd 15C#3=660'fnl/1980', Sec. 11 Todd 15F#6=1980'fnl/660'fnl/1980'fnl/660'fnl/1980'fnl/660'fnl/980'fnl/660'fnl/980'fnl/660'fnl/980'fnl/660'fnl/980'fnl/980'fnl/660'fnl/980'fnl	0'fwl, Sec. 15 80'fel, Sec. 15 9'fel, Sec. 15 fel, Sec. 15 80'fel, Sec. 15 80'fwl, Sec. 15 80'fwl, Sec. 15

Date: M List by L (Those s LA71831	BLM and ARMS  [ay 18, 1998]  A# all sites within .25 miles of the project:  sites within 500' are to be shown on project map)
c. Environ comunity; present. Veg d. Field M Transect i Crew Size	ntervals: 15m :: Two eld: Two days
15. Cultural R	esource Findings: None
	ent Summary (Recommendations): roperties were discovered during the archaeological survey.
certify that that that that	e information provided above are correct and accurate and meets all appreciable BLM
Responsible A	rchaeologist: Signature

