R-III-POTASH

OPERATOR'S COPY

Form 3160-3 (April 2004)					FORM APPROVED OMB No. 1004-0137 Expires March 31, 2007			
UNITED STATES DEPARTMENT OF THE 1				5. Lease Serial No. NM-0418220-A				
BUREAU OF LAND MAN	AGEMENT				Pull - M.			
APPLICATION FOR PERMIT TO	DRILL OR R	EENTER		6. If Indian, Allotee or	Iribe Name			
la. Type of work: DRILL REENTI	ER			7 If Unit or CA Agreeme	nt, Name and No.			
Ib. Type of Well: Oil Well Gas Well Other	✓ Single	Zone Multip	le Zone	8. Lease Name and Well Todd 27D Federa	70271			
2. Name of Operator Devon Energy Production Company, L	P 6/3	77		9. API Well No.	- 35425			
3a. Address 20 North Broadway Oklahoma City, Oklahoma City 73102-8260	3b. Phone No. (inc. 405-228-8)			10. Field and Pool, or Expl Ingle Well; Delaw	oratory			
Location of Well (Report location clearly and in accordance with an At surface NWNW 330' FNL & 330' FWL	ny State requirements.)		11. Sec., T. R. M. or Blk.a	•			
At proposed prod. zone NWNW 330' FNL & 330' FWL		Sec 27 T23S R31	E					
14. Distance in miles and direction from nearest town or post office* Approximately 18 miles east of Loving, NM.				12. County or Parish Eddy County	13. State			
15. Distance from proposed*	16. No. of acres	in lease	17. Spacin	g Unit dedicated to this well				
location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	location to nearest property or lease line ft							
 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 	19. Proposed Depth 20. BLM/8 8500' MD			BIA Bond No. on file				
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3379' GL	1	date work will star 2/15/2007	rt*	23. Estimated duration 45 days				
	24. Attachm	ents						
The following, completed in accordance with the requirements of Onsho	re Oil and Gas Ord	er No.1, shall be a	ttached to th	is form:				
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office). 		Item 20 above). Operator certific	cation specific inf	ns unless covered by an exi	,			
25. Signature	Name (Pri	nted/Typed)		Da	te			
Title Regulatory Analyst	Jud	y A. Barnett			12/07/2006			
Approved by (Signature)	Name (Pr	inted/Typed)		Da	2/12/07			
Title STATE DIRECTOR	Office		NM S	TATE OFFICE	8			
Application approval does not warrant or certify that the applicant hole conduct operations thereon. Conditions of approval, if any, are attached.	ds legal or equitable	title to those righ		oject lease which would entit APPROVAL F				
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make : States any false, fictitious or fraudulent statements or representation	If earther	n pits are u	ised in	or a	gency of the United			
*(Instructions on page 2)	associatio	on with the OCD pit pe	drillin ermit n	ng of this == nust be truction				

obtained prior to pit construction.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

SEE ATTACHED FOR CONDITIONS OF APPROVAL DISTRICT I 1625 N. French Dr., Hobbs, NM 88240 DISTRICT II 1301 W. Grand Avenue, Artesia, NM 68210

1000 Rio Brazos Rd., Aztec, NM 87410

1220 S. St. Francis Dr., Santa Fe, NM 87505

DISTRICT III

DISTRICT IV

State of New Mexico Energy, Minerals and Natural Resources Department

Form C-102 Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

☐ AMENDED REPORT

WELL LOCATION AND ACDEACE DEDICATION DIAT

		ı	WELL LO	CATION	AND ACREA	GE DEDICATION	ON PLAT		
API Number Pool Code Pool Name									
50 · 01		5425 33745 Ingle Well; Delaware						mber	
Tropercy	Loue			TOI	DD "27D" FE			4	imbei
OGRID No	D.				Operator Nam			Elevat	
6137			DEVON	N ENER	Y PRODUCT	ON COMPANY	LP	3379	9'
					Surface Loca	ation			
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	27	23 S	31 E		330	NORTH	330	WEST	EDDY
•			Bottom	Hole Lo	cation If Diffe	rent From Sur	face		
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
40						İ			
Dedicated Acre	s Joint o	or Infill Co	nsolidation	Code Or	der No.				
NO ALLO	OWABLE V					JNTIL ALL INTER		EEN CONSOLIDA	ATED
F33/26"-3379/	,	UR A N		DARD UP	HAS BEEN	APPROVED BY	THE DIVISION		
	77]	•					OPERATO	OR CERTIFICAT	TION
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11330	J]	1		contained here the best of my	in is true and comp knowledge and beliej	lete to , and that
3374.0 3382.	5' 1			ļ			interest or unit	m either owns a worl eased mineral interes	in the
Lat - N32*16	3'54.4" J				ì		location pursua	the proposed bottom in int to a contract with a mineral or working	an
Long - W103	5°46'23.3″i	, 		1	1		or to a volunte	a moteral or working try pooling agreement ling order heretofore	or a
(NAD-83	<u>"</u>			<u> </u>	'_		the division.	,	
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				<u> </u>	<u> </u>		<u> </u>	ASIN SURVEYS	

#### **Additional Operator Remarks:**

Devon Energy Production Company, LP proposes to drill a Delaware well to 8,500' 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.

**Directions To Location:** From the junction of State Hwy 128 and County Rd. 779 (Red Road), go north on County Rd. for approximately 2.2 miles turn west (NW) on lease road and go 1.9 miles to lease road; proceed south 0.7 miles to XX rds; turn west and proceed 0.2 miles thence turn south on lease road 0.2 miles to Devon 22M Federal #13 location; from the southwest corner of pad follow pipeline row south 0.15 miles to location.

#### Access Road:

Approximately 1,066' of access road will be required. Archeological survey's will be requested for the pad and access road.

#### H2S:

No H2S is anticipated to be encountered.

#### LPC Timing Stipulation Areas:

The location of this well does not fall in the LPC Timing Stipulation Area per BLM-CFO 2006 LPC Timing Stipulation Areas map.

# UNITED STATES DEPARTMENT OF THE INTERIOR Bureau of Land Management

# Bureau of Land Management Roswell Field Office 2909 West Second Street

### Roswell, New Mexico 88201-1287

Statement Accepting Responsibility for Operations

Operator Name: Street or Box: City, State: Zip Code:	Devon Energy Production Company, LP 20 North Broadway Oklahoma City, Oklahoma 73102-8260
	cable terms, conditions, stipulations and restrictions concerning operations ortion thereof, as described below
Lease No.:	NM-0418220-A
Legal Description of Land.	720 acres -T23S-R31E Unit D (NW/4 NW/4) 330' FNL & 330' FWL
Formation(s):	Ingle Well; Delaware
Bond Coverage:	Nationwide
BLM Bond File No.:	CO-1104
Authorized Signature:	Judy A. Barnett
Title:	Regulatory Analyst

12/19/06

Date:

Form 3160-5 (August 1999)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU-OF LAND MANAGEMENT SUNDRY NOTICES AND REPORTS ON WELLS

FORM APROVED
OMB NO. 1004-0135
EXPIRES: NOVEMBER 30, 2000

5. Lease Serial No.

Do not use this form		NM0418220-A 6. It Indian, Allottee or Tribe Name				
abandoned well. Us	abandoned well. Use Form 3160-3 (APD) for such proposals					
SL	JBMIT IN TRIPLICATE					
				<ol><li>Unit or CA Agree</li></ol>	ment Name and No.	
1a. Type of Well 🔽 Oil Well 🔲 Ga	s Well Other					
		· · · · · · · · · · · · · · · · · · ·		8 Well Name and N	lo.	
2. Name of Operator					27D Federal #4	
DEVON ENERGY PRODUCT	TION COMPANY, LP			9. API Well No.		
3. Address and Telephone No.						
20 North Broadway, Oklaho	ma City, OK 73102	405-228-8699		10. Field and Pool,	or Exploratory	
4. Location of Well (Report location clear			***************************************	·	Delaware	
Essential of their (nopel to seation of ear	y and in about admos which ou	, a		12. County or Paris		
330' FNL & 330' FWL, Sec 27 T23	S D31E			Eddy County, NA	, l	
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TYPE OS SUBMISSION	APPROPRIATE BOX(s) TO IN		OF ACTION	OR OTHER DATA		
THE GO CODIMISCION						
☐ Notice of Intent	Acidize	Deepen		n (Start/Resume)	Water Shut-Off	
✓ Subsequent Report	Alter Casing	Fracture Treat  New Construction	Reclamati		☐ Well Integrity	
1 <u> </u>	Casing Repair Change Plans	Plug and Abandon	Recomple	ily Abandon	✓ Other Change APD	
Final Abandonment Notice	Water Dis	•	1			
13. Describe Proposed or Completed Operations (C	Convert to Injection learly state all perlinent details, and give	Plug Back pertinent dates, including estimated		<u>,                                      </u>	eximate duration thereof. If the proposal	
deepen directionally or recomplete horizontally, give su	ubsurface location and measured and tr	e vertical depths of all pertinent mar	kers and zones. A	Attach the Bond under whic	h the work will be performed or provide	
the Bond No. on file with BLM/BIA. Required subsequenterval, a Form 3160-4 shall be filed once testing has	ent reports snall be filed within 30 days t been completed. Final Abandonment N	ollowing completion of the involved o otices shall be filed only after all requ	perations. If the d irement, including	pperation results in a multip i reclamation, have been co	le completion or recompletion in a new impleted, and the operator has	
determined that the site is ready for final inspection)						
Dovon Energy plans to hvild the seese	e read on you the Dies of Do.	atamus and a sure and sure as become	D 141	b - D114 4 40 000	T Mr. will build	
Devon Energy plans to build the access approximately 4,800' of new road. The						
	trownine will tonow the propi	osed access road to the pa	ittery to be co	onstructed at the 10	odd 27-11 location.	
Please See Attached Diagram.						
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14. I hereby certify that the foregoing is tr	ue and correct					
	Name	Judy A. Barne	eft			
Signed June 5	aust Title	Regulatory Anal		Date	1/22/2007	
(This space for Federal or State Office us	<u> </u>					
(This space for Federal of State Office Us	70	STATE DIRECTO	uD.	,	10.	
Approved by Mula 8	Well Title	ware an area and a contraction of the	11%	Date 2/12	107	
Conditions of approval, if any:	<u> </u>		· · · · · · · · · · · · · · · · · · ·	<del></del>	1	
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#### **DRILLING PROGRAM**

#### Devon Energy Production Company, LP Todd 27D Federal 4

Surface Location: 330' FNL & 330' FWL, Unit D, Sec 27 T23S R31E, Eddy, NM Bottom hole Location: 330' FNL & 330' FWL, Unit D, Sec 27 T23S R31E, Eddy, NM

#### 1. Geologic Name of Surface Formation

a. Permian

#### 2. Estimated tops of geological markers:

a.	Rustler	500'
b.	Top of Salt	830'
c.	Base of Salt	4070'
đ.	Bell Canyon	4330'
e.	Cherry Canyon	5250'
f.	Brushy Canyon	6700'
g.	Bone Spring Lime	8000'

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

Rustler	Water		500'
a. Bell	Canyon	Oil	4330'
b. Cher.	ry Canyon	Oil	5250'
c. Brus	hy Canyon	Oil	6700'

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. Fresh water sands will be protected by setting 8 5/8" casing at 4350' and circulating cement to surface. The Morrow intervals will be isolated by setting 5 ½" 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>	OD Csg	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
30"	0' -400'	20"	NA	NA	Conductor
17 1/2"	0'- 850'	13 3/8"	48#	ST&C	H-40
11"	0'- 4350'	8 5/8"	32#	ST&C	J-55
7 7/8 <b>"</b>	0 <b>' – 88<del>00</del></b> '	5 ½"	15.5# & 17#	LT&C	J-55
	8500'				

### 5. Cement Program:

a.	20	Conductor	Cement with ready mix to surface.
b.	13 3/8"	Surface	Cement to surface with 500 sx Poz (35% Poz, 65% Class C, 6% gel) w/2% CaCl2 + 1/4"#/sx celloflk + 200 sx Class C w/2% CaCl2 and 1/4#/sk celloflk.

c. 8 5/8" Intermediate Cement to surface with 2 gel. 15 % salt) w/ 1/4#/s

Cement to surface with 1600 sx Poz (35% Poz, 65% Class C, 6% gel, 15 % salt) w/ 1/4#/sx celloflk + 200 sx Class C w/2% CaCl2, 1/4#/sx celloflk.

d. 5 ½" Production Cement 1st stage w/ 525 sx Silica Lite (Class H) w/ 3% salt, 0.6% FL additive, ¼ #/sx celloflk w/ DV tool at ~ 5500°. Cement 2nd stage w/ 225 sx Poz (35% Poz, 65% Class H, 6% gel) w/ ¼ #/sx celloflk + 400 sx Class H w/ 4% gel, 5% salt, ¼ #/sx celloflk.

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 (5M system) double ram type (2000 psi WP) preventor and a bag-type (Hydril) preventor (2000 psi WP) and rotating head. Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 ½" 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 48#, H-40 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>	Mud Wt.	<u>Visc</u>	Fluid Loss	Type System
0' - 850'	8.8	34-36	NC	Fresh Water
850' - 4350'	10.0	28	NC	Brine Water
4350'- TD	8.8	32-36	10-20	Fresh Water
				Polymer

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 11 3/4" shoe until total depth is reached.

#### 9. Logging, Coring, and Testing Program:

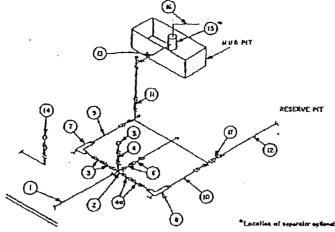
- a. Drill stem tests will be based on geological sample shows.
- b. The open hole electrical logging program will be:
  - i. Total Depth to Intermediate Casing Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron Z Density log with Gamma Ray and Caliper.
  - ii. Total Depth to Surface Compensated Neutron with Gamma Ray
  - iii. No coring program is planned
  - iv. Additional testing will be initiated subsequent to setting the 5 ½" 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 2900 psi and Estimated BHT 130°.

#### 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 21 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.



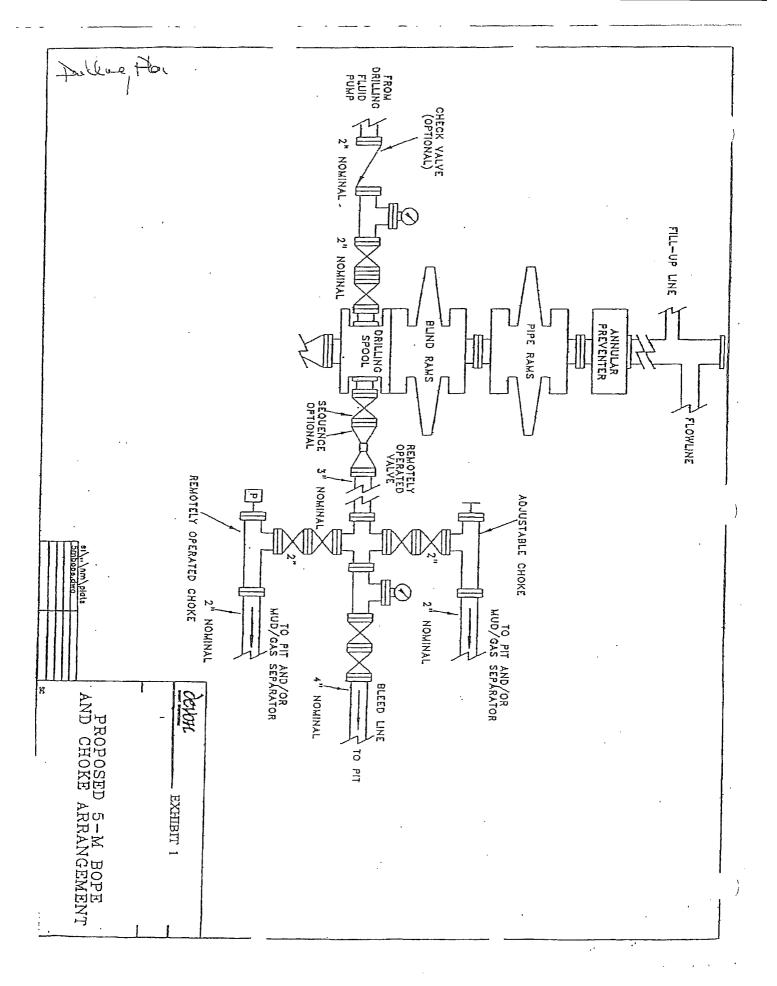
BETO	k n	SHET	TRUC	† 1 ( Ø 2

			MINI	HUM RED	UIREMENT	5				
	1	1	TWM COOLE	,		5,000 MWP		T	10,000 MW	P
No.		111.	HOMINAL	PATING	LD.	NOMINAL	RATING	LD.	HOMINAL	RATING
1	Line from drilling spool		2-	3,000		3.	5,000		3"	10,000
2	Cross 5" (3" 12"			3,000		L	5,000			1
	Cross 3"x3"x3"x3"				J					10,000
3	Valves(1) Gale [] Plug □[2]	3-1/8*		3,000	3-1/10"		\$,000	3-1/8"		10,000
4	Valve Gate [] Ptog [](2)	1-13H6"		31,000	1-13/16"		5,000	1-13/16*		10,000
48	Valves(I)	2-1716*		3,000	2-1/16"		5,000	3-1/8"		10,000
5	Pressure Gauge			3,000			5,000			200,01
6	Yalves Gats □ Plug □(Z)	3-1/6"		3,000	3-1/8"		5,000	3-1/8"		10,000
7	Adjustable Choke(3)	2"		2,000	Z*		5,000	2-		10,000
6	Adjustable Choke	1-		3,000	1.		5,000	5-		10,000
9	Line		3-	3,000		3-	5,000		3~	10,030
10	Lirte		2"	3,000		2-	5,000		3"	10,000
11	Valves Plug □(2)	3-1/6"		1,800	3-1/8"		5,000	3-1/8"		10,000
12	Lines "		3*	1,000		3"	1.000		3"	2,030
13	Lines		3.	1,000		3-	1,000		3"	2,000
14	Remote reading compound			3,000	-		5,000	•		10,000
15	Gas Separator		215"			2:5			225	
16	Line		4"	1,000		1"	1.000		4"	2,030
17	Valves Plug ()(Z)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000

- (1) Only one required in Class 31.
- (2) Gate valves only shall be used for Class 10M.
- (1) 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, llanged or Cameron clamp of comparable rating.
- 2. All flanges shall be API 68 or 68X 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 spoot 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. Oischarge lines from chokes, choke bypass and from top of gas separator should yent as far as practical from the well.



# Attachment to Exhibit #1 NOTES REGARDING BLOWOUT PREVENTERS

#### Devon Energy Production Company, LP

#### Todd 27D Federal 4

Surface Location: 330' FNL & 330' FWL, Unit D, Sec 27 T23S R31E, Eddy, NM Bottom hole Location: 330' FNL & 330' FWL, Unit D, Sec 27 T23S R31E, 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 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.

#### 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

#### CONDITIONS OF APPROVAL - DRILLING

Well Name & No.

4-Todd 27D Federal

Operator's Name:

**Devon Energy Production Company, LP** 

Location:

0330FNL, 0330FWL, Section 27, T-23-S, R-31-E

Lease:

NM-0418220-A

#### 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. Spudding
- B. Cementing casing: 13-3/8 inch 8-5/8 inch 5-1/2 inch
- C. BOP tests
- 2. Although Hydrogen Sulfide is not reported in Section 27, it is always a potential hazard.
- 3 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.
- 4. 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.
- 5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.
- 6. 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.
- 7. Gamma-Ray/Neutron logs shall be run from the base of the Salado Formation to the surface; cable speed not to exceed 30 feet per minute.

#### II. CASING:

1. The 13-3/8 inch surface casing shall be set a minimum of 25 feet into the Rustler Anhydrite approximately 850 feet and above the salt, below usable water 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.

Possible lost circulation in the Delaware and Bone Spring formations.

Possible water flows in Salado, Castile, Delaware, and Bone Spring formations.

- 2. The minimum required fill of cement behind the <u>8-5/8</u> inch salt protection casing is <u>circulate cement</u> to the surface. Set between 4250' and 4370' in basal anhydrite or Lamar Limestone.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is cement shall extend a minimum of 500 feet into the 8-5/8 inch casing per NMOCD Order No. R-12513. In addition, steps 3-5 of this order must also be met. First stage to circulate.

4. Whenever a casing string is cemented in the R-111-P Potash Area, cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

#### **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 casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling the surface and intermediate casing shall be <u>2M</u> psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the 8-5/8 inch casing shall be <u>2M</u> psi.
- 3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
- A variance to test the <u>BOP</u>, <u>BOPE</u>, <u>and 13-3/8 inch surface casing</u> to the reduced pressure of <u>1200</u> psi with the rig pumps is approved.
- 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.

Engineer on call phone: 505-706-2779

WWI 011707



3160 (52200)

## United States Department of the Interior



BUREAU OF LAND MANAGEMENT New Mexico State Office 1474 Rodeo Rd. P.O. Box 27115 Santa Fe, New Mexico 87502-0115 www.nm.blm.gov

February 12, 2007

CERTIFIED--RETURN RECEIPT REQUESTED 7005 3110 0000 1062 3887

Devon Energy Production Company, LP 20 North Broadway Oklahoma City, OK 73102-8260

Re: NM-0418220-A Todd 27D Federal #4 330'/N. & 330'/W., sec. 27, T. 23 S., R. 31 E. Eddy County, New Mexico

#### Gentlemen:

I have approved your application at the well location requested. A copy of the approved application with stipulations is enclosed. The drill island will include the preexisting Todd and Pure Gold Drillislands, and the area between them that is currently classified as measured potash ore. The island includes all of Section 22, and portions of Sections 11-17, 20-24, and 26-28; T23S; R31E. The drill island's northern, eastern, and southern boundaries are defined by the measured ore boundaries. It extends to the western edge of the Pure Gold Drill-island. Please contact our Carlsbad Field Office at (505) 234-5972, should you have any questions, or if we can be of any additional help.

Sincerely,

Linda S.C. Rundell State Director

1 Enclosure