ATS-07-280

Form 3160-3 > (April 2004)			FORM APPRO OMB No. 1004	-0137
UNITED STATES	· ·	_	Expires March 3	1, 2007
DEPARTMENT OF THE I BUREAU OF LAND MAN			 Lease Serial No. NMNM-98192 	
APPLICATION FOR PERMIT TO			6. If Indian, Allotee or Tr	ibe Name
la. Type of work: DRILL REENTE	ER		7 If Unit or CA Agreement	, Name and No.
		-	8. Lease Name and Well N	~ < 226
Ib. Type of Well: Oil Well Gas Well Other	Single Zone Multip	ole Zone	Tomcat 9 Federal	
2. Name of Operator Devon Energy Production Company, L	р ().	22	9. API Well No.	21.0
	3b. Phone No. (include area code)	311	30-025-38 10. Field and Pool, or Explor	
Oklahoma City, Oklahoma City 73102-8260	405-552-8198	2		Inonata
4. Location of Well (Report location clearly and in accordance with an	ry State requirements.*)	1	1. Sec., T. R. M. or Blk. and	Survey or Area
At surface 660 FSL & 660 FWL			Sec 9, T23S R32E	
At proposed prod. zone 660 FSL & 660 FWL	Knit M		12. County or Parish	13. State
14. Distance in miles and direction from nearest town or post office* Approximately 35 miles WNW from Jal, NM			Lea County	IS. State NM
15. Distance from proposed*	16. No. of acres in lease	17. Spacing	Unit dedicated to this well	
location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	640 acres	40 acre	8	
18. Distance from proposed location*	19. Proposed Depth		A Bond No. on file	
to nearest well, drilling, completed, applied for, on this lease, ft.	8800'	CO-110)4	
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will star	 rt*	23. Estimated duration	
3650' GL	03/01/2007		30 days	
	24. Attachments	24.25	2027282930	
The following, completed in accordance with the requirements of Onshor	re Oil and Gas Order No.1, shall be at	ttacher to this	form: 🛧 🥱	\
1. Well plat certified by a registered surveyor.	4. Bond to cover the Item 20 above).		unless covered by an exist	ng bond on file (s
 A Drilling Plan. A Surface Use Plan (if the location is on National Forest System) 	Lands, the 5. Operator certifid	aRn	Received 4	
			MORL TY	
SUPO shall be filed with the appropriate Forest Service Office).	 Such other site authorized offic 	SDEGILIC INFORM	nation and or plans as magin	be required by the
SUPO shall be filed with the appropriate Forest Service Office). 25. Signature	6. Such other site sauthorized offic Name (Printed/Typed)		OCD Sor plans as mage	be required by the
SUPO shall be filed with the appropriate Forest Service Office).	authorized offic		OCD Sor plans as mage	bé required by the
SUPO shall be filed with the appropriate Forest Service Office).	authorized offic Name (Printed/Typed)		nan or any or plans as magy	/
SUPO shall be filed with the appropriate Forest Service Office). 25. Signature Title Sr. Staff Eng. Tech Approved by (Signature)	authorized offic Name (Printed/Typed)		OCD Sor plans as mage	/
SUPO shall be filed with the appropriate Forest Service Office). 25. Signature Title Sr. Staff Eng. Tech Approved by (Signature)	authorized offic Name (Printed/Typed) Norvella Adams Name (Printed/Typed)		Date	/
SUPO shall be filed with the appropriate Forest Service Office). 25. Signature Title Sr. Staff Eng. Tech Approved by (Signature) Title Include FIELD MANAGER	authorized offic Name (Printed/Typed) Norvella Adams Name (Printed/Typed) Office		D FIELD OF	2/26 FICE
SUPO shall be filed with the appropriate Forest Service Office).	authorized offic Name (Printed/Typed) Norvella Adams Name (Printed/Typed) Office		D FIELD OF	2/26 FICE
SUPO shall be filed with the appropriate Forest Service Office). 25. Signature Title Sr. Staff Eng. Tech Approved by (Signature) Title INC FIELD MANAGER Application approval does not warrant or certify that the applicant hold conduct operations thereon. Conditions of approval, if any, are attached. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212. make it a cr	authorized offic Name (Printed/Typed) Norvella Adams Name (Printed/Typed) Office CARI Is legal or equitable title to those right time for any person knowingly and we	LSBAL	Date DFIELD OF CT ELSTING Date DFIELD OF Ct lease which would entitle CT lease which would entitle	2/26/2007 FICE
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GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

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Form 3160-5					
(August 1999) DEPAR BUREA	EXPIRES	AB NO. 1004-0135 S: NOVEMBER 30, 2000			
	ICES AND REPORTS ON WEI			5. Lease Serial N	
abandoned well. U	m for proposals to drill or to re-e ie Form 3160-3 (AFD) for such (proposals		6. IT Incian, Allotte	NMNM-88192 V He or Tribe Name
S	UBMIT IN TRIPLICATE			7. Unit or CA Agr	sement Name and No.
1a. Type of Well 🔽 Oil Well 🔲 G	as Well 🔲 Other			8 Well Name and	No
2. Name of Operator					omcat 9 Federal 3 🦯
DEVON ENERGY PRODUC	TION COMPANY, LP			9. API Well No.	
	00, Oklahoma City, OK 73102		8	10. Field and Poo	o), or Exploratory
4. Location of Well (Report location cle	arly and in accordance with Fede Sec 9 TZ3S 32E	eral requirements)"		12. County or Par	Delaware
560 FSL & 660 FWL M	395 9 1233 34E			Lea	NM
	APPROPRIATE BOX(S) TO IN	DICATE NATURE OF NO	TICE, REPOR	and the second se	
TYPE OS SUBMISSION		IY!	PE OF ACTIO	N	
Notice of Intent	Acidize	Deepen Fracture Treat	Productio	on (Start/Resume) Non	Water Shut-Off
Subsequent Report	Alter Casing	New Construction			Other Name Change
Final Abandonment Notice	Change Plans	Plug and Abandon		nly Abandon	1111112
13. Describe Proposed or Completed Operations (drectionally or recomplete horizontally, pive subsurfa	Convert to Injection	Plug Back	Water Di	encount work and appro-	admate duration thereof. If the proposal deepan
Devon Energy Production Company, wall in this series.	LP respectfully requests appr	oval to change the name	of the above	well to the	his is the first
Signed	Name	Norvelle Adı Sr. Şişifi Eng.		Date	28-Feb-07
(This space for Federal or State Office Approved by Conditions of approval, if any:	Thue	FIELD MANA		Date	2/26/2003
THE TO C. D.C. GECENT TOOT, IN BREAM & CONTO TO BR	Person nitowalgy and wantity to these any	Pasparonets or agained or sis Orice	- June any 1986,	INCOUNTS OF TRACEOPERA BUS	איז איזאין איזעער אין איז
	*Se	e Instruction on Reverse	\$ido		

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02/26/2007	09:00	FAX
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Form 3160-5 (August 1999)	DEPART BUREAU	UNITED STATES MENT OF THE IN OF LAND MANAG CES AND REPOR	GEMENT	OCD-HORI	e.)		FORM APROVED OMB NO. 1004-0135 RES: NOVEMBER 30, 2000
	Do not use this form	for proposals to di	rill or to re-enter				NMNM-98192
ئ سور ا	abandoned well. Use SUE	BMIT IN TRIPLICA)8815 		6. If Indian, Alic	ottee or Tribe Name
a. Type of Well [······································		7. Unit or CA A	Agreement Name and No.
а. туре от тивн Ц	☑ Oil Welt Gas	Well Other	•	······································		8 Well Name a	and No,
Name of Operator DEVON B	ENERGY PRODUCTI	ON COMPANY, LI	P			9. API Well No	Tomcat Federal 9 #1
Address and Teler	•						
	x 250, Artesia, NM Report location clearly	and in accordanc	e with Federal re	505-748-0173 auirements)*	· · · · · · · · · · · · · · · · · · ·	10. Field and F	Pool, or Exploratory Delaware
•				· ,			Parish 13. State
660' FSL & 660' F						Lea County	
TYPE OS SU	JBM SSION	FRUFRIATE BO	A(5) TO INDICA	TE NATURE OF NOT TYPE	OF ACTION		
Notice of Inter			 	Deepen	Producti	on (Start/Resume	
Subsequent Re	eport	Alter Casing		Fracture Treat New Construction	Reclama		Well Integrity Other Drilling
Final Abandon		Change Pla	ns 🔲	Plug and Abandon Plug Back	Tempora	rily Abandon	Operations
Detedbe Ownered an	Completed (Coomtilety (Cle				Water D	11	d approximate duration thereof. If the pro
	uction Co. L.P. reque	ests permission to	o blade road an	d location and set 40	' of conduct	or by midnlght 2	2/28/07.
	uction Co. L.P. reque	ests permission to	o blade road an		324 25 26	27282930	
4. Thereby centry the	at the foregoing is true	e and correct	Name Title	Vivian Rodrigu Tech II	1222 2526 Rec Ho 00	27282930 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	2/28/2007
evon Energy Produ	at the foregoing is true www.www. al or State Office use) Is/ Don Poto I. If uny:	e and correct	Name Title	Vivian Rodrigu Tech II LD MANAGI	22222 Rec Ho 00 ER	272829303 Cived Cived Cived Date Date Date	2/28/2007 FEB 2 6 2007
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DISTRICT I 1625 N. French Dr., Robbe, NM 85240 DISTRICT II

1301 W. Grand Avenus, Artenia, NM 88210 DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 67410 DISTRICT IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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 ACREAGE DEDICATION PLAT 96916 Pool Name API Number Delaware Southwest Diamondta Property Code Well Number Property Name 3 TOMCAT 9 FEDERAL **Operator** Name Elevation OGRID No. 3650 DEVON ENERGY PRODUCTION COMPANY LP 6137 Surface Location Lot Idn Feet from the North/South line Feet from the East/West line County UL or lot No. Section Township Range 32 E 660 SOUTH 660 WEST LEA 9 23 S М Bottom Hole Location If Different From Surface Lot Idn Feet from the North/South line Feet from the East/West line County Range UL or lot No. Section Township Consolidation Code Order No. Dedicated Acres Joint or Infill 40 NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole leadion pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. **∡/25√**07 $\overline{\mathbf{T}}$ Signature Date Norvella Adams Printed Name SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief. 2007 Date S Signa Prof urv 3656.2 3644.0 Lat - N32*18'49.3" Long - W103*41'09.7" (NAD-83) 660' 682 7977 Certificate No. Gary L. Jones 3662.0 ъğ 3649.7 BASIN SURVEYS

Attachment to Exhibit #1 NOTES REGARDING BLOWOUT PREVENTERS Devon Energy Production Company, LP Tomcat 9 Federal #3 Surface Location: 660 FSL & 660 FWL, Unit M, Sec 9- T23S R32E, Lea, NM

Bottom hole Location: 660 FSL & 660 FWL, Unit M, Sec 9- T235 R32E, Lea, 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. If H2S is present in this area the following will apply.
- 2. 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.
- 3. 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.
- 4. 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
- 5. 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.
- 6. Well Control Equipment
 - a. See Exhibit "E" & "E-1"
- 7. 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.
- 8. 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.
- 9. 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.

Well name: Operator: **DEVON ENERGY** String type: Surface

.

TOMCAT 9FEDERAL 3

Collaps Mud	n parameter se weight: gn is based o	10	.000 ppg d pipe.	Minimum <u>Collapse:</u> Design fact	design fac or	t ors: 1.125	Environme H2S conside Surface tem Bottom hole Temperature Minimum se	ered? perature: temperature: e gradient:	No 75 °F 81 °F 0.90 °F/100ft 650 ft
<u>Burst</u>		·		<u>Burst:</u> Design fac	tor	1.00			
pr Inter Calc	anticipated s ressure: nal gradient: ulated BHP nackup mud s	0.	476 psi 268 psi/ft 650 psi		TC: based on air	•	Next set Next mu	u ent strings: ting depth: d weight:	4,620 ft 10.500 ppg
			:	Neutral poi	int:	555 ft	Fracture Fracture	ting BHP: mud wt: depth: pressure	2,520 psi 19.250 ppg 650 ft 650 psi
Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.
Seq	Length	Size (in)	Weight (Ibs/ft)	Grade	Finish	Depth (ft)	Depth (ft)	Diameter (in)	Cost (\$)
1	(ft) 650	13.375	48.00	H-40	ST&C	650	650	12.59	18320
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 WES HANDLEY by: Devon Energy Date: January 25,2007 Oklahoma City, Oklahoma

322

10.32 J

by: De Remarks:

338

740

2.19

1

Collapse is based on a vertical depth of 650 ft, a mud weight of 10 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.

1730

650

2.66

31.2

Burst strength is not adjusted for tension.

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

Well name: Operator: **DEVC** String type: Intern

TOMCAT 9 FEDERAL 3

br: DEVON ENERGY

Design parameters: <u>Collapse</u> Mud weight: 10.200 ppg Design is based on evacuated pipe.		<u>Collapse:</u> Design facto	design fac or	t ors: 1.125	Environme H2S conside Surface tem Bottom hole Temperature Minimum se Minimum Dri	ered? perature: temperature: gradient: ction length:	No 75 °F 117 °F 0.90 °F/100ft 650 ft 7.875 in		
	anticipated s			<u>Burst:</u> Design fact	or	1.00	Minimum Dr		7.875 m
Inter Calc	ressure: nal gradient: ulated BHP packup mud s	(1,305 psi).330 psi/ft 2,828 psi	Tension: 8 Round ST 8 Round LT Buttress:		1.80 (J) 1.80 (J) 1.60 (J)	Non-directio	nal string.	
				Premium: Body yield:		1.50 (J) 1.60 (B)	Re subseau	ent strings:	
				Tension is based on air weight. Neutral point: 3,920 ft		Next mud weight: 9.20 Next setting BHP: 4,20 Fracture mud wt: 11.00		8,800 ft 9.200 ppg 4,206 psi 11.000 ppg 8,650 ft	
				Estimated of	cost: 8	86,466 (\$)	Injection	pressure	4,943 psi
Run Seq 2 1	Segment Length (ft) 4000 620	Size (in) 8.625 8.625	Nominal Weight (Ibs/ft) 32.00 32.00	Grade J-55 HCK-55	End Finish LT&C LT&C	True Vert Depth (ft) 4000 4620	Measured Depth (ft) 4000 4620	Drift Diameter (in) 7.875 7.875	Est. Cost (\$) 73260 13206
Run Seq 2	Collapse Load (psi) 2119	Collapse Strength (psi) 2502	Collapse Design Factor 1.18	Burst Load (psi) 2624	Burst Strength (psi) 3930	Burst Design Factor 1.50	Tension Load (kips) 147.8	Tension Strength (kips) 417	Tension Design Factor 2.82 J
1	2448	4130	1.69	2828	3930	1.39	19.8	503.2	25.36 B

Prepared WES HANDLEY by: Devon Energy Date: January 25,2007 Oklahoma City, Oklahoma

Dy: Remarks:

Collapse is based on a vertical depth of 4620 ft, a mud weight of 10.2 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name: Operator: DEVON E String type: Production		ТОМ	CAT 9 FEL	JEKAL 3
Design parameters: <u>Collapse</u> Mud weight: Internal fluid density:	10.000 ppg 0.450 ppg	Minimum desig <u>Collapse:</u> Design factor	n factors: 1.125	Environment: H2S considered? Surface temperature: Bottom hole temperature: Temperature gradient: Minimum section length:

Burst: Design factor

Tension:

Buttress:

Premium: Body yield:

8 Round STC:

8 Round LTC:

3,000 psi

4,571 psi

0.179 psi/ft

No 75 °F 154 °F 0.90 °F/100ft 650 ft

Non-directional string.

Tension is based on air weight. Neutral point: 7,548 ft

Estimated cost: 72,803 (\$)

True Vert Drift Run Segment Nominal End Measured Est. Length Weight Grade Finish Depth Diameter Seq Size Depth Cost (lbs/ft) (ft) (in) (ft) (ft) (in) (\$) 3 500 17.00 J-55 500 500 4403 5.5 LT&C 4.767 2 6000 5.5 15.50 J-55 LT&C 6500 6500 4.825 48150 1 2300 5.5 17.00 J-55 LT&C 8800 8800 4.767 20251 Collapse Collapse Collapse Burst Burst Burst Tension Tension Run Tension Load Strength Strength Seq Design Load Design Load Strength Design Factor (psi) Factor (kips) (kips) Factor (psi) (psi) (psi) 3 248 3723 15.01 3089 5320 1.72 140.6 247 1.76 J 132.1 2 3225 3829 1.19 4161 4810 1.16 217 1.64 J 1 4366 4910 1.12 4571 5320 1.16 39.1 247 6.32 J

WES HANDLEY Prepared Devon Energy by:

Date: January 25,2007 Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 8800 ft, a mud weight of 10 ppg An internal gradient of .023 psi/ft was used for collapse from TD to Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

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

Burst

Max anticipated surface pressure:

No backup mud specified.

Internal gradient:

Calculated BHP

1.00

1.80 (J)

1.80 (J)

1.60 (J) 1.50 (J)

1.60 (B)



.

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

EXHIBIT 1 DEVON ENERGY PRODUCTION COMPANY, L.P.

3 MWP - 5 MWP - 10 MWP (16 13) NUD PIT (\mathbf{n}) RESERVE PIT 12 (10) 2 Location of separator optional BEYOND SUBSTRUCTURE

			MINU	MUM REOL	IREMENT	S					
		3,000 MWP			[5,000 MWP			10,000 MWP		
No.		ID.	NOMINAL	RATING	1.D.	NOMINAL	RATING	1.D.	NOMINAL	BATING	
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	
Э	Valves(1) Gate D Plug D(2)	3-1/8-		3,000	3-1/8*		5,000	3-1/8*		10,000	
4	Gate G Valve Gate G Plug ()(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*	1	5,000	3-1/8*	· · · · ·	10,000	
5	Pressure Gauge			3,000			5,000			10,000	
6	Gate C Valves Plug (2)	3-1/8*		3.000	3-1/8*		5,000	3-1/8*		10,000	
7	Adjustable Choke(3)	2"		3,000	2*		5,000	2-		10,000	
8	Adjustable Choke	1-		3,000		1	5,000	2.		10,000	
9	Line		3-	3,000		3.	5,000		3-	10,000	
10	Line		2*	3,000		2-	5,000		3.	10,000	
11	Gate D Valves Plug D(2)	3-1/8*		3,000	3-1/8-		5,000	3-1/8*		10,000	
12	Lines		3.	1,000		3.	1,000		3.	2,000	
13	Lines		3.	1,000		3.	1,000	•	3.	2,000	
14	Remote reading compound standpipe pressure gauge			3,000			5,000	·		10,000	
15	Gas Separator		2'x5'			2'x5'			2'x5'		
16	Line		4*	1.000		4"	1,000		4'	2,000	
17	Valves Gate D Plug D(2)	3-1/8-		3,000	3-1/8"		5,000	3-1/8"		10,000	

(1) Only one required in Class 3M.

(2) Gate valves only shall be used for Class 10M.

(3) Remote operated hydrautic choke required on 5,000 psl 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 con-Junction with the standpipe pressure gauge.
- 6. Line from drilling spool to choke manifold should be as streight as possible. Lines downstream from chokes shall make turns by large bends or 90° bends using bull plugged tees.
- 7. Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.

MINIMUM BLOWOUT PREVENTER REQUIREMENTS

3,000 psi Working Pressure

3 MWP

EXHIBIT # 1

Eddy County, New Mwxico

CONFIGURATION

ANNULAR

PREVENTER

BLIND RAMS

PIPE RAMS

-0

DRILLING

CASING

HEAD

CASING

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(12)

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4

(3)

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(16

STACK REQUIREMENTS

· · · ·				
No.	ltem	Min. I.D.	Min. Nominal	
1	Flowline			1
2	Fill up line		1	2"
3	Drilling nipple			†
4	Annular preventer		1	<u> </u>
5	Two single or one dual h operated rams	ydraulically		
6a	Drilling spool with 2" min 3" min choke line outlets			
6Ъ	2" min. kill line and 3" m outlets in ram. (Alternate			
7	Valve	Gate D Plug D	3-1/8″	
8	Gate valve-power opera	ted	3-1/8"	
9	Line to choke manifold	•		3"
10	Valves	Gate 🗆 Plug 🗆	2-1/16"	
11	Check valve	······································	2-1/16"	
12	Casing head			
13	Valve	Gate 🗆 Piug 🗆	1-13/16"	
14	Pressure gauge with need	le valve		······
15	Kill line to rig mud pump m			2"

	OP'	TIONAL	ł
	· · · · · · · · · · · · · · · · · · ·		1
16	Flanged valve	1-13/16"	i.

CONTRACTOR'S OPTION TO FURNISH:

- 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 full 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 choke. 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 adjustable choke, other bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
- All valves to be equipped with handwheels or handles ready for immediate use.
- 6. Choke lines must be suitably anchored.

- 7.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.
- 9.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.

Well Name & No.	Tomcat Federal 9 #3
Operator's Name:	Devon Energy Prod Co. LP
Location:	660'FSL, 660'FWL, SEC9, T23S, R32E, Lea County, NM
Lease:	NM-98192

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; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 20 inch, 13.375 inch, 8.625 inch, 5.5 inch

C. BOP tests

2. A Hydrogen Sulfide (H2S) Drilling Plan should be activated prior to drilling into the <u>Delaware</u> Formation. A copy of the plan shall be posted at the drilling site.

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 <u>13.375</u> inch surface casing shall be set <u>@ APPROXIMATELY 650 FEET</u>, 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.

2. The minimum required fill of cement behind the <u>8 5/8</u> inch salt protection casing is <u>CIRCULATE</u> <u>CEMENT TO THE SURFACE.</u>

3. The minimum required fill of cement behind the 5-1/2 inch production casing is <u>cement shall</u> <u>CIRCULATE TO at least 500 feet inside of the 8.625 inch casing</u>.

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 <u>13.375</u> 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) is 2000 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 and BOPE</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.

IV. Mud:

1. Fresh water based mud will be used to the top of the Rustler Anhydrite, with low water loss materials and viscosity pill sweeps.

V. Hazards:

1. Possible lost circulation in the Delaware and Bone Springs. Possible flows in the Salado, Castile, Delaware and Bone Springs.

Engineers can be reached at 505-706-2779 for any variances that might be necessary.

F Wright 2/8/07

1301 W. Grand Avenue, Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505	State of New Mexico gy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505	For C-144 June 1, 2004 For drilling and production facilities, submit to appropriate NMOCD District Office. For downstream facilities, submit to Santa Fe office		
Pit or Below-Grade Tank Registration or Closure Is pit or below-grade tank covered by a "general plan"? Yes 🛛 No 🗌				
Type of action: Registration of a pit or below-grade tank I Closure of a pit or below-grade tank I Operator: _Devon Energy Production Company, LP Telephone: _405-552-8198e-mail address: _norvella.adams@dvn.com Address: _PO Box 250 Artesia NM 88211 Facility or well name:Tomcat 9 Federal *** API #: API #: AD = 0.25 - 3.834 ^ U/L or Qtr/Qtr _M Sec _9 T23S R32E County: _Lea Latitude _N32'18' 49.3" Longitude _W103'41'09.7" NAD: 1927 [] 1983 [] Surface Owner: Federal State [] Private [] Indian []				
Pit Type: Drilling ⊠ Production □ Disposal □ Workover □ Emergency □ Lined ⊠ Unlined □ Liner type: Synthetic ⊠ Thickness _12_mil Pit Volumebbl	Below-grade tank Volume:bbl Type of fluid: Construction material: Double-walled, with leak detection? Ye	es □ If nor, explain why@@ Sqq0H=2		
Depth to ground water (vertical distance from bottom of pit to seas high water elevation of ground water.)	onal Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) (10 points) (20 p		
Wellhead protection area: (Less than 200 feet from a private dome water source, or less than 1000 feet from all other water sources.)	stic Yes No	(20 points) (0 points)		
Distance to surface water: (horizontal distance to all wetlands, pla irrigation canals, ditches, and perennial and ephemeral watercourse	200 feet or more, but less than 1000 feet	t (20 points) t (10 points) (0 points) 0 Points		
If this is a pit closure: (1) Attach a diagram of the facility showing your are burying in place) onsite in offsite in If offsite, name of fremediation start date and end date. (4) Groundwater encountered: (5) Attach soil sample results and a diagram of sample locations and	acility (3) Attach No 🗌 Yes 🔲 If yes, show depth below ground s	a general description of remedial action taken including		
Additional Comments:				
I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines , a general permit , or an (attached) alternative OCD-approved plan .				

Printed Name/Title Norvella Adams / Sr. Staff Engineering Technician_

Signature

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: Printed Name/Title _	CHRIS WILLIAMS/DIST. SULU Signature	Chino Usilian	

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