OPERATOR'S COPY

UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPROVED OMB No. 1004-0136 Expires November 30, 2000

BUREAU OF LAND MANAGEMENT

Lease Serial No. NMNM112253

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いてしい		FUR	FER	78411 I	10	DUILL		UFF14	

6. If Indian, Allottee or Tribe Name

,		'
1a. Type of Work: ☑ DRILL ☐ REENTER		7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Oth 2. Name of Operator Contact: DEVON ENERGY PRODUCTION CO L P	ner Single Zone Multiple Zone LINDA GUTHRIE E-Mail: LINDA.GUTHRIE@DVN.COM	8. Lease Name and Well No. CUESTA ABAJO 26 FEDERAL 1 9. API Well No. 30 015 ~ 33966
3a. Address 20 NORTH BROADWAY SUITE 1500 OKLAHOMA CITY, OK 73102	3b. Phone No. (include area code) Ph: 405.228.8209	10. Field and Pool, or Exploratory HAPPY VALLEY- MORROW Undes.
Location of Well (Report location clearly and in accorded At surface SENE 1500FNL 660FEL At proposed prod. zone SENE 1500FNL 660FEL	FEB 2,2 2005	Sec 26 T22S R25E Mer NMP SME: BLM
14. Distance in miles and direction from nearest town or post	office*	12. County or Parish 13. State EDDY NM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Acres in Lease 280.00	17. Spacing Unit dedicated to this well 320.00
 Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 	19. Proposed Depth 11550 MD	20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KB, RT, GL, etc. 3531 GL	22. Approximate date work will start 02/01/2005	23. Estimated duration 45 DAYS
	24. Attachments CARLSBA	AD CONTROLLED WATER BASIN
 The following, completed in accordance with the requirements of Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest Syst SUPO shall be filed with the appropriate Forest Service Off 	4. Bond to cover the operation Item 20 above). 5. Operator certification	this form: ons unless covered by an existing bond on file (see formation and/or plans as may be required by the
25. Signature (Electronic Submission)	Name (Printed/Typed) LINDA GUTHRIE Ph: 405.228.8209	Date 12/03/2004
REGULATORY SPECIALIST		
Appropried by (Signature) Liketon	Name (Printed/Typed) MARIA E. Ketson	Date 2-18-05
FIELD MANAGER	Office CARLSBAD FIELI	
Application approval does not warrant or certify the applicant hoperations thereon. Conditions of approval, if any, are attached.		AL FOR 1 YEAR
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212,	make it a crime for any person knowingly and willfully to	o make to any department or agency of the United

Additional Operator Remarks (see next page)

Electronic Submission #51520 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION CO L P, sent to the Carlsbad
Committed to AFMSS for processing by LINDA ASKWIG on 12/06/2004 (05LA0140AE)

GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS **ATTACHED**

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

perator Remarks:

evon Energy Production Company, LP plans to drill to approximately 11,550' to test the Morrow for commercial quantities of gas. If the Morrow is deemed non-commercial, the wellbore will be plugged and abandoned as per federal regulations. Programs to adhere to onshore oil and gas regulations are outlined in the following exhibits and statements.

Approximately 3022' of new road will need to be constructed.

ench Dr., Hobbs, NN 88240 STRICT II 811 South First, Artesia, NM 88210

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102 Revised March 17, 1999

Submit to Appropriate District Office State Lease ~ 4 Copies Fee Lease ~ 3 Copies

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410 DISTRICT IV

2040 South Pacheco, Santa Pe. NM 87505

OIL CONSERVATION DIVISION

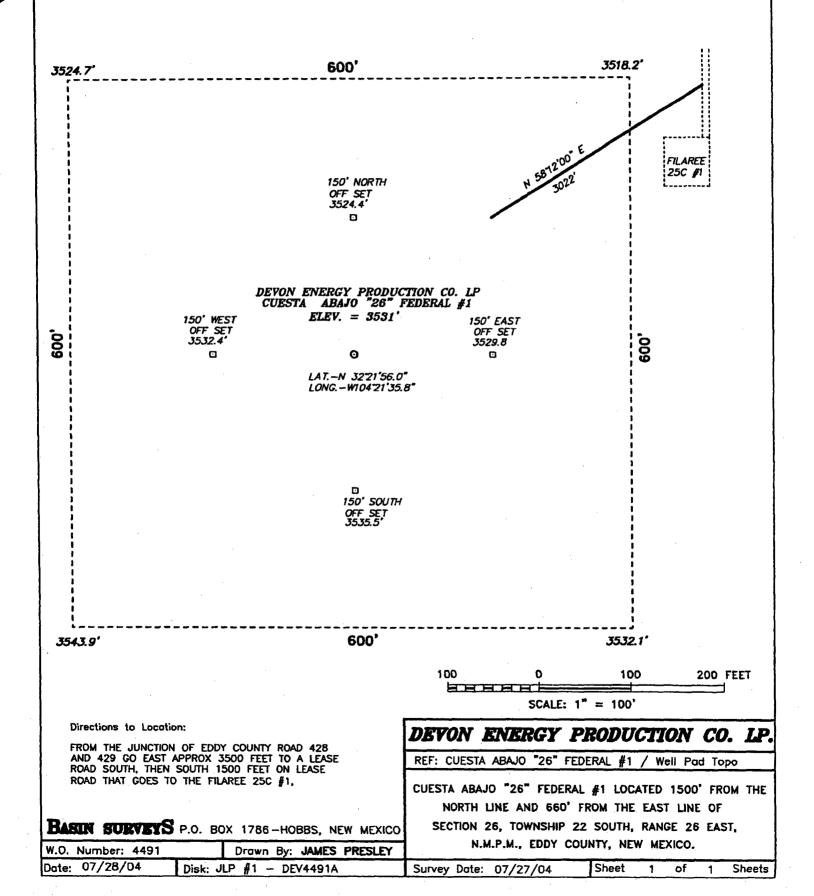
2040 South Pacheco Santa Fe, New Mexico 87504-2088

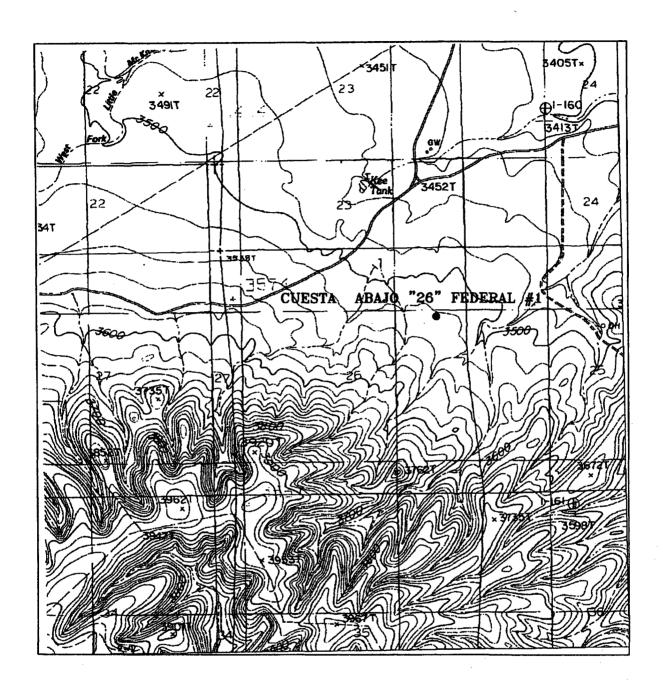
D AMENDED REPORT

•		7	WELL LO	CATION	AND AC	REAGE DEDICAT	TION PLAT		
API	Number		3	ool Code		·	Pool Name		
Property (Code	Property Name CUESTA ABAJO "26" FEDERAL							ımber
OGRID N	».	<u> </u>			Operator	Name		Eleva	ion
613	7		DEVO	N ENERG	SY PRODI	JCTION COMPAN	NY LP	353	1'
					Surface	Location			
UL or lot No.	Section	Township	Range	Lot ldn	Feet from	the North/South lin	e Feet from the	East/West line	County
н	26	22 S	25 E		1500	NORTH	660	EAST	EDDY
			Bottom	Hole Loc	cation If I	Different From S	urface		
UL or lot No.	Section	Township	Range	Lot Idn	Feet from	the North/South lin	e Feet from the	East/West line	County
Dedicated Acres Joint or Infill Consolidation Code Order No.									
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION									
OPERATOR CERTIFICATION									

·	OR A NON-SIAN	DARD UNIT HAS BEEN	APPROVED BI III	B DIVISION
			3524.7' 3518.2'	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature
		Lat.: N32*21'58.0" Long.: W104721'35.8";	3543.9' 3534.1'	Linda Guthrie Printed Name Regulatory Specialist Title 12/03/04 Date SURVEYOR CERTIFICATION
				I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief. July 27, 2004 Date Surveyed
				Signature & Sealchf L. JONGT Professional Survey 7077 SWO No. 4461 Certifical To. Gary L. Jones 7977 JLP Basin Survey

ECTION 26, TOWNSHIP 22 SOUTH, RANGE 25 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.





CUESTA ABAJO "26" FEDERAL #1
Located at 1500' FNL and 660' FEL
Section 26, Township 22 South, Range 25 East,
N.M.P.M., Eddy County, New Mexico.

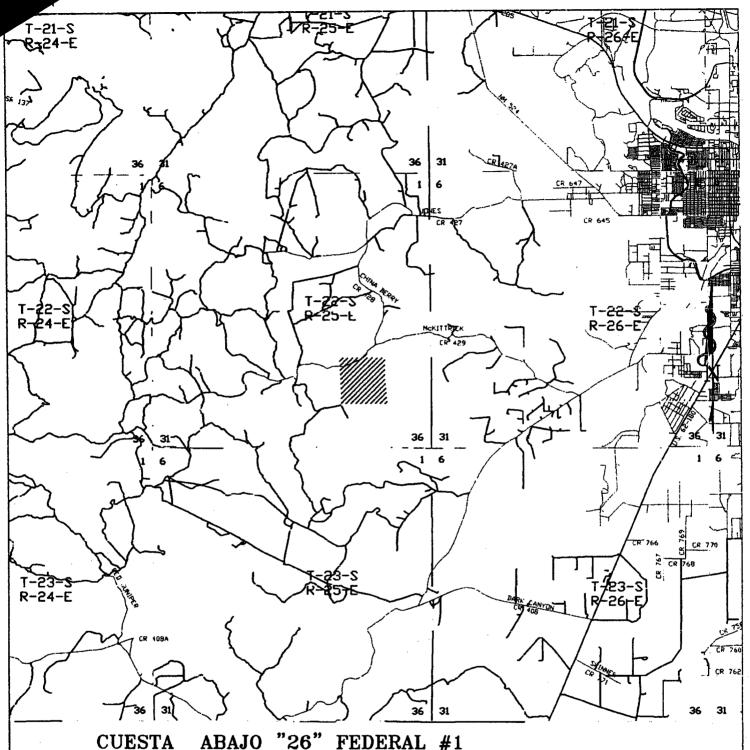


focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

W.O. Number:	4491AA - JLP #1
Survey Date:	07/27/04
Scale: 1" = 20	000,
Date: 07/28/	04

DEVON ENERGY PRODUCTION COMPANY LP.



CUESTA ABAJO "26" FEDERAL #1
Located at 1500' FNL and 660' FEL
Section 26, Township 22 South, Range 25 East,
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DEVON ENERGY PRODUCTION COMPANY LP.

DRILLING PROGRAM

Devon Energy Production Company, L.P. CUESTA ABAJO "26" FEDERAL #1 1500' FNL & 660' FEL, Unit H, Section 26-T22S-R25E Eddy County, New Mexico

1. Geologic Name of Surface Formation

Quaternary deposits

2. Estimated Tops of Important Geologic Markers

Delaware	2,230'
Bone Spring	5,640'
Wolfcamp	8,225'
Base Strawn	9,990'
Atoka	10,035'
Morrow	10,450'
Lower Morrow	11,040'
Barnett Shale	11,195'
TD	±11,550°

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

The estimated depths at which water, oil and gas will be encountered are as follows.

Water:

Random fresh water from surface to approximately 350'

Oil:

oil: Bone Spring

Gas:

Strawn, Atoka, Morrow

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at 500' and circulating cement back to 2250' surface. The intermediate intervals will be protected by setting 9 5/8" casing at 2,500' and circulating cement to surface. The production intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement to surface.

Casing Program

Hole Size	Interval \SS C	Casing OD	Weight, ppf	<u>Grade</u>	<u>Type</u>
WITNESS 17 1/2"	0-500'	13 3/8"	48	H-40	ST&C
12 1/4"	0-500° 0-2,500°2255	9 5/8"	36	J-55	LT&C
8 3/4"	0-11,350'±	5 1/2"	17	HCP-110	LT&C

Cementing Program

13 3/8" Surface Casing Cement to surface - with approximately 452 sx Class C

9 5/8" Intermediate Casing Cement to surface - with approximately 577 sx 35:65 Pozmix + 250 sx Class C

5 1/2" Production Casing Cement to surface - with approximately 925 sx Super C + 1500 sx Class H

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

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

Exhibit 1- Prior to intermediate, the blowout preventor equipment will consist of a 2M system utilizing a 2000 psi WP pipe ram and/or a 2000 psi (Hydril) preventor. After Td'ing intermediate, a Blow-out Preventer (5,000/10,000 PSI working pressure) consisting of double ram type preventer with bag type preventor will be used. Units will be hydraulically operated. A choke manifold and a closing unit will be used. Blind rams on top and pipe rams on bottom will correspond with size of drill pipe in use. BOP will be tested as well as choke manifold. BOP will be worked at least once each day while drilling and blind ram will be worked on trips when no drill pipe is in the hole. Full opening stabbing valve and upper Kelly cock will be utilized. The 2M BOP & associated wellhead equipment will be tested to 1215# with the rig pump. After setting the 9 5/8" casing, a 5000# casing head & 5000# BOP will be installed & tested with an independent tester in accordance with Onshore Order No. 2

6. Types and Characteristics of the Proposed Circulating Mud System

The well will be drilled to total depth with fresh water/brine/starch mud systems. Depths of systems are as follows: 1959

<u>Depth</u>	<u>Type</u>	Weight (ppg)	Viscosity (1/sec)	Water Loss (cc)
0' - 500'225	ò Fresh water/paper	8.5-9.0	32-50	No control
500' - 2500'	Fresh wtr/Brine	9.7-10.0	28-32	No control
2500' – 8500'	Cut Brine/paper/ lime/gel	9.0-10.0	28-32	No control
8500' – TD	Brine/Cut brine/Dris-pac/	9.0-10.0	34-50	6 or less

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 9 5/8" casing shoe until the 5 1/2" casing is cemented.

8. Logging, Testing and Coring Program

- A. No cores or drill stem tests are planned at this time.
- B. The open hole electrical logging program is proposed as follows:

Schlumberger Platform Express Azimuthal Laterlog/MCFL/NGT and Three Detector Litho-Density Compensated Neutron/NGT logs from TD to base of surface casing.

A formation pressure testing tool and a formation imaging tool may be run.

C. Additional testing may 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.

CUESTA ABAJO 26 FEDERAL#1 DRILLING PLAN PAGE 3

9. Abnormal Pressures, Temperatures and Potential Hazards

No abnormal pressures or temperatures are foreseen. The anticipated bottom hole temperature at total depth is 170 degrees and maximum bottom hole pressure is 4500 psig. Hydrogen sulfide gas may be encountered in this area and a Contingency Plan will be available at the location. Lost circulation intervals have been encountered in adjacent wells.

10. Anticipated Starting Date and Duration of Operations

A cultural resources examination will be submitted to the BLM in Carlsbad.

Road and location preparation will not be undertaken until approval has been received from the BLM. If approved, this well will be drilled as part of a development project. The anticipated spud date for the project is February, 2005. The drilling operation should require approximately 40-45 days. If the well is deemed productive, completion operations will require, at minimum, an additional 30 days of testing to ascertain whether permanent production facilities will be constructed.

11. Other Facets of Operations

After running casing a cement bond/gamma ray/collar log will be run.

The Morrow pay will be perforated and stimulated. The well will be swab tested and potentialed as a gas well.

SURFACE USE AND OPERATING PLAN

Devon Energy Production Company, L.P. CUESTA ABAJO "26" FEDERAL #1 1500' FNL & 660' FEL, Unit H, Section 26-T22S-R25E Eddy County, New Mexico

1. Existing Roads

The well site and elevation plat for the Cuesta Abajo 26 Federal #1 are reflected on Exhibit #2. This well was staked by Basin Surveys in Hobbs, New Mexico.

- A. All roads into the location are depicted in Exhibit #3. Access to this location will require the construction of approximately 3,022' of new road from existing lease road. All new construction will conform to the specifications outlined in Item #2 below.
- B. Directions to location: From the junction of Eddy County Road 428 and 429, go east approximately 3500 feet to a lease road south. Then south 1500 feet on lease road that goes to the Filaree 25C #1, then southwest on proposed lease road to location.

2. Proposed Access Road

Exhibit #3 shows the proposed lease road. Access to this location will be from an existing location. All new construction will adhere to the following.

- A. The maximum width of the road will be 15'.
- B. It will be crowned and made of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
- 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 less than 5%.
- E. No cattle guards, grates or fence cuts will be required.
- F. No turnouts are planned.

3. Location of Existing and/or Proposed Facilities

- A. In the event the well is found productive, a tank battery would be constructed and the necessary production equipment will be installed at the well site.
- B. The tank battery, all connections and all lines will adhere to API standards.
- C. The well may be operated by means of an electric prime mover. Electric power poles will be set along side of the access road.
- D. If the well is productive, rehabilitation plans are as follows.
 - 1. The reserve pit will be closed pursuant to New Mexico OCD rules and guidelines.
 - 2. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as closely as possible to the original state.

4. Location and Type of Water Supply

The Cuesta Abajo 26 Federal #1 will be drilled using a combination of brine and fresh water mud systems (outlined in Drilling Program). The water will be obtained from commercial sources and will be transported over the existing and proposed roads. No water well will be drilled on the location.

5. Methods of Handling Water Disposal

- 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 150' x 150' x 8', 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 12 mil synthetic woven liner pursuant to NM OCD rules and guidelines.
- 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. The reserve pit will be closed pursuant to New Mexico OCD rules and guidelines 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.

6. Ancillary Facilities

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

7. 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.

8. Plans for Restoration of Surface

- A. After concluding the drilling and/or completion operations, if the well is found non-commercial, the road will be reclaimed as directed by the BLM. The reserve pit will be closed and the original top soil, if any, will be returned to the pad and contoured, as close as possible, to the original topography.
- B. The pit lining and remaining contents will be buried pursuant to NM OCD rules and guidelines.
- C. 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.
- D. If the well is deemed commercially productive, the reserve pit will be restored and unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

9. 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.

10. Other Information

- A. The project is located on an area of rolling limestone hills used for ranching and raising cattle. Drainage is to the east toward the Pecos River via Little McKittrick Draw. Regionally the slopes average 1-3% and the calcareous land area consists of aridisols ranging from loamy sand to clay.
 Vegetation consists of mesquite, creosote, algerita, acacia, cholla, snakeweed, yucca cactus, and various grasses.
- B. There is no permanent water in the immediate area.
- C. Upon completion, a cultural resources examination will forwarded to the BLM office in Carlsbad, New Mexico, by Southern New Mexico Archeological Resources, Inc., in Bent.

11. Lessee's and Operator's Representative

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

Wyatt Abbitt
Operations Engineering Advisor
Devon Energy Production Company, L.P.
20 North Broadway, Suite 1500
Oklahoma City, Oklahoma 73102-8260
(405) 552-8137 (office)
(405) 245-3471 (cell)

Don Mayberry
Superintendent
Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, New Mexico 88211-0250
(505) 748-3371 (office)
(505) 746-4945 (home)

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Devon Energy Production Company, L.P. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Signed:

Linda Guthrie

Regulatory Specialist

Date: Dec

December 3, 2004

UNITED STATES DEPARTMENT OF THE INTERIOR

Bureau of Land Management Roswell Field Office 2909 West Second Street Roswell, New Mexico 88201-1287

Statement Accepting Responsibility for Operations

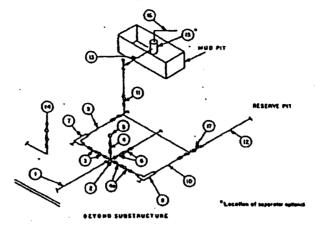
Operator Name: Street or Box: City, State: Zip Code:	Devon Energy Production Company, LP 20 North Broadway, Suite 1500 Oklahoma City, Oklahoma 73102-8260					
	icable terms, conditions, stipulations and restrictions on the leased land or portion thereof, as described					
Lease No.:	NMNM112253					
Legal Description of Land:	240 acres 26-22S-R25E					
Formation(s):	Morrow					
Bond Coverage:	Nationwide					
BLM Bond File No.:	CO-1104					
Authorized Signature:	Linda Guthrie					
Title:	Regulatory Specialist					

12/03/04

Date:

Attachment to Exhibit #1 NOTES REGARDING BLOWOUT PREVENTERS Devon Energy Production Company, L.P. CUESTA ABAJO "26" FEDERAL #1 1500' FNL & 660' FEL, Unit H, Section 26-T22S-R25E 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 5000 psi working pressure.
- 4. All fittings will be flanged.
- 5. A full bore safety valve tested to a minimum 5000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
- 6. All choke lines will be anchored to prevent movement.
- 7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
- 8. Will maintain a kelly cock attached to the kelly.
- 9. Hand wheels and wrenches will be properly installed and tested for safe operation.
- 10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
- 11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.



	міници пеоцпементз									
	2,000 MWP				\$,000 MWP			10,000 MWP		
No.		10.	HOMINAL	PATING	I.O.	NOMBAL	RATING	ID.	NOMMAL	RATING
	Line from drilling speal		7	3,000		3.	5,000		3-	10,000
7	Cross 3"x3"x3"x2"			3,000			5,000			
<u> </u>	Cues 3,13,13,13,									10,000
3	Valves(1) Gete [] Plug [](2)	3-1/8"		3,000	3-1/8°		\$,000	3-1/8"		000,01
•	Valve Gate () Plug ()(2)	1-13/16"		3,000	1-13/16"		\$,000	1-13/16*		19,000
44	Vaivas(1)	2-1/16"		3.000	2-1/1C*		9000,2	3-1/6"		10,000
5	Pressure Gauge			3,000			5,000			10,000
•	Valves Cate C Plug D(2)	3-1/6"		3,000	3-1/8"		\$,000	3-118.		10,000
7	Adjustable Choke(3)	7		3.000	2"		\$.000	2"		10.000
	Adjustable Choke	1.		3,000	- 1-	1	5,000	5.		10,000
	Une	I	3"	3,000		3.	\$,000		3"	10,000
10	Line		5~	3,000		2"	5,000		3.	10,000
11	Valves Gais []	3-1/8"		1,000	2:1/0.		5,000	3-146.		10,000
12	Lines	T	3.	1,000		3-	1,000		7"	2,000
12	Lines		3.	1,000		3"	1,000		3-	2,000
14	Remote meding compound standpips pressure gauge			3,000			\$,000	1		10,000
15	Gas Separator		2.42.			S.e2,	1	1	2,12	1
16			4"	1,000		4"	1,000		4"	2,000
17	Valves Plug D(Z)	3-148*		2,000	3-1/8"		\$,000	3-1/E*		10,900

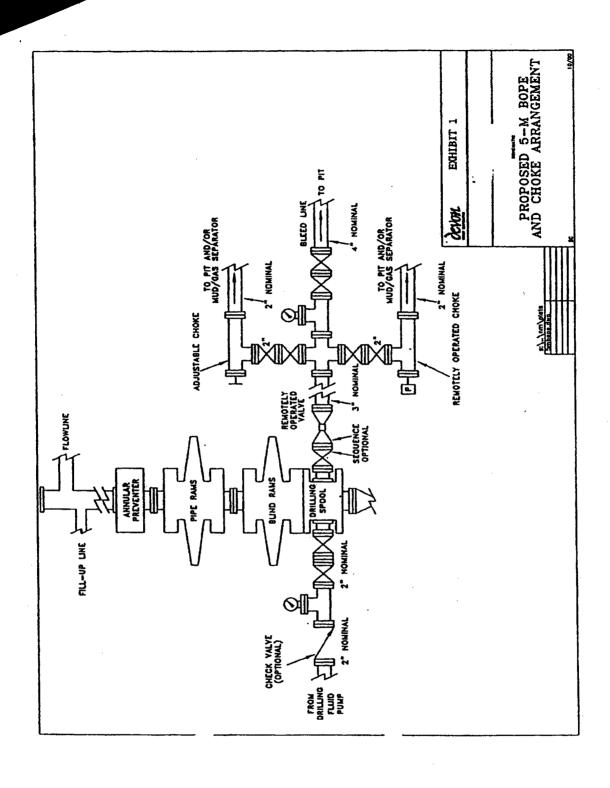
- (1) Only one required in Class 31L
- (2) Gate valves only shall be used for Class 1044.
- (3) Remote operated hydroulic choke required on 5,000 psi and 10,000 psi for drilling.

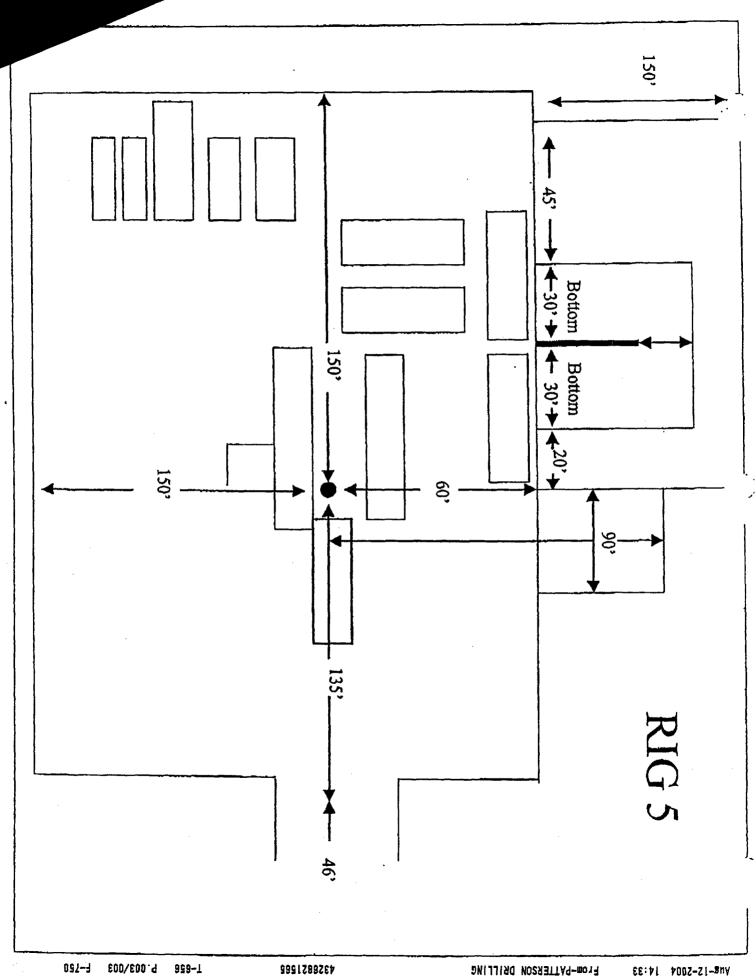
EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

- 1. All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
 2. All flanges shall be API 68 or 68X and ring paskets shall be API RX or 8X, Use only EX for 10 MWP,
 3. All flants shall be securely enchared.
 4. Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be evaliable.
 5. Choke manifold pressure and standpipe pressure gauges shall be evaluable at the choke manifold to assist in regulating chokes. As an alternate with eutomatic chokes, a choke manifold pressure gauge shall be located on the rig floor in confinence with the standarding excession passes.
- Choses. As an extensis with exemplant choses, a chose mention pressure gauge asset as an areing more in confunction with the standplipe pressure gauge.

 6. Line from drilling spoul to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bands or 90° bands using bull plugged less.

 7. Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.





999-I

4328821588

From-PATTERSON DRILLING

VHE-12-2004 14:33

Cuesta Abajo 26 Federal # 1

Operator:

Devon Energy

String type:

Surface

Location:

New Mexico

Desig: Collaps	n paramete se	ers:			Minimum design factors: Collapse:			Environment: H2S considered? No			
Mud weight: 9.000 ppg Design is based on evacuated pipe.			Design fac	Design factor 1.125			Surface temperature: 75 °F Bottom hole temperature: 82 °F Temperature gradient: 1.40 °F/100ft Minimum section length: 500 ft				
				Burst:			Minimum Dr	rift:	2.250 in		
				Design fac	ctor	1.00	Cement top	:	0 ft		
<u>Burst</u>											
Max	anticipated	surface							•		
•	ressure:		440 psi								
	rnal gradient	: 0	.120 psi/ft	<u>Tension:</u>			Non-direction	nal string.			
Calc	ulated BHP		500 psi	8 Round S		1.80 (J)					
				8 Round L	.TC:	1.80 (J)					
Ann	ular backup:		8.34 ppg	Buttress: 1.60 (J)							
				Premium: 1.50 (J)							
				Body yield	Body yield: 1.60 (B)			uent strings			
							Next setting depth: 2,700 ft				
				Tension is based on air weight.			Next mud weight: 10.200 p				
				Neutral point: 434 ft			Next set	1,431 psi			
								mud wt:	19.250 ppg		
							Fracture	•	500 ft		
							Injection	pressure	500 psi		
Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.		
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Cost		
4	(ft)	(in)	(ibs/ft)	Orace	1 1111311	(ft)	(ft)	(in)			
1	500	13.375	48.00	H-40	ST&C	500	500	12.59	(\$)		
1	300	13.373	46.00	11-40	Siac	500	500	12.59	6201		
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension		
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strenath	Design		
•	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor		
1	234	"74Ó	3.17	440	1762	4.01	24	322	13.42 J		

Prepared Don Culpepper by: Devon Energy

Phone: 405.552.7944

Date: August 9,2004 Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 500 ft, a mud weight of 9 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.

In addition, burst strength is biaxially adjusted for tension.

Cuesta Abajo 26 Federal # 1

Operator:

Devon Energy Intermediate

String type: Location:

New Mexico

Design	parameters:
Collapse	<u> </u>

10.100 ppg Mud weight: Design is based on evacuated pipe.

Minimum design factors:

Collapse: Design factor

Design factor

1.125

1.00

Environment:

H2S considered? No Surface temperature: 75 °F Bottom hole temperature: 110 °F Temperature gradient:

1.40 °F/100ft 500 ft

Minimum section length: Minimum Drift: Cement top:

8.750 in Surface

Burst

Max anticipated surface

2,200 psi pressure: 0.120 psi/ft Internal gradient: Calculated BHP 2,500 psi

Annular backup:

8.34 ppg

Tension:

Burst:

8 Round STC: 1.80 (J) 1.80 (J) 1.60 (J) 8 Round LTC: **Buttress:** 1.50 (J) Premium: 1.60 (B) Body yield:

Tension is based on air weight. Neutral point: 2,126 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 11,350 ft Next mud weight: 10.800 ppg Next setting BHP: 6,368 psi Fracture mud wt: 19.250 ppg Fracture depth: 2,500 ft Injection pressure 2,500 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2500	9.625	36.00	J-55	LT&C	2500	2500	8.796	20443
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
1	1312	2020	1.54	2200	3734	1.70	90	453	5.03 J

Prepared

Don Culpepper by: Devon Energy

Phone: 405.552.7944

Date: August 9,2004 Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 2500 ft, a mud weight of 10.1 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.

In addition, burst strength is biaxially adjusted for tension.

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

Cuesta Abajo 26 Federal # 1

Operator:

Devon Energy

String type:

Production

New Mexico

Design	parameters:
	parameter.

Minimum design factors:

Environment:

Collapse

10.800 ppg Design is based on evacuated pipe.

H2S considered?

No

Mud weight:

1.125

1.00

Surface temperature: Bottom hole temperature: 234 °F

75 °F

Temperature gradient: Minimum section length: 1.40 °F/100ft 500 ft

Burst:

Collapse:

Design factor

Design factor

Cement top:

5,040 ft

Burst

Max anticipated surface

pressure: Internal gradient: Calculated BHP

Annular backup:

5,006 psi 0.120 psi/ft 6,368 psi

8.34 ppg

8 Round STC:

8 Round LTC: **Buttress:**

Premium: Body yield:

Tension:

1.60 (J) 1.50 (J) 1.60 (B)

1.80 (J)

1.80 (J)

Tension is based on air weight.

Non-directional string.

Neutral point: 9,491 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	11350	5.5	17.00	HCP-110	LT&C	11350	11350	4.767	74760
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
1	6368	8580	1.35	5006	11858	2.37	192.9	445	2.31 J

Prepared

Don Culpepper by: Devon Energy

Phone: 405.552.7944

Date: August 9,2004 Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 11350 ft, a mud weight of 10.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

In addition, burst strength is biaxially adjusted for tension.

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

Cuesta Abajo 26 Federal # 1

Operator:

Devon Energy

String type:

Production: Frac

Location:

New Mexico

Design parameters:

Minimum design factors: Collapse:

Environment:

Collapse

9.800 ppg Mud weight:

Design factor

H2S considered?

No

Design is based on evacuated pipe.

Surface temperature: Bottom hole temperature: 234 °F

75 °F

Temperature gradient:

1.40 °F/100ft

Minimum section length:

500 ft

Burst:

Design factor

Cement top:

5.040 ft

Burst

Max anticipated surface

pressure: Internal gradient: Calculated BHP

Annular backup:

8,426 psi

0.120 psi/ft 9,788 psi

8.34 ppg

Tension: 8 Round STC:

1.80 (J)

1.125

1.00

1.80 (J)

Buttress: Premium:

8 Round LTC:

1.60 (J) 1.50 (J)

Body yield:

1.60 (B)

Tension is based on air weight. Neutral point: 9,663 ft Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	11350	5.5	17.00	HCP-110	LT&C	11350	11350	4.767	74760
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
1	5778	8580	1.48	8426	11873	1.41	192.9	`445	2.31 J

Prepared

Don Culpepper **Devon Energy**

Phone: 405.552.7944

Date: August 9,2004 Oklahoma City, Oklahoma

Remarks:

Collapse is based on a vertical depth of 11350 ft, a mud weight of 9.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

In addition, burst strength is biaxially adjusted for tension.

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

BLM Lease Number: NM-112253 Company Reference: Devon Energy

Well No. & Name: Cuesta Abajo 26 Fed. #1

STANDARD STIPULATIONS FOR PERMANENT RESOURCE ROADS CARLSBAD FIELD OFFICE

A copy of the grant and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder/grantee/permittee shall hereafter be identified as the holder in these stipulations. The Authorized Officer is the person who approves the Application for Permit to Drill (APD) and/or Right-of-Way (ROW).

GENERAL REQUIREMENTS

- A. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
- B. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.
- C. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et. seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et. seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
- D. If, during any phase of the construction, operation, maintenance, or termination of the road, any oil or other pollutant should be discharged, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil of other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all

mages to Federal lands resulting therefrom, the Authorized

Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

E. The holder shall minimize disturbance to existing fences and other improvements on public domain surface. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times.

The holder will make a documented good-faith effort to contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence.

F. The Holder shall ensure that the entire right-of-way, including the driving surface, ditching and drainage control structures, road verges and any construction sites or zones, will be kept free of the following plant species: Malta starthistle, African rue, Scotch thistle and salt cedar.

Holder agrees to comply with the following stipulations:

ROAD WIDTH AND GRADE

The road will have a driving surface of 14 feet (all roads shall have a minimum driving surface of 12 feet, unless local conditions dictate a different width). The maximum grade is 10 percent unless the box below is checked. Maximum width of surface disturbance from construction will be 30 feet.

/__/ Those segments of road where grade is in excess of 10% for more than 300 feet shall be designed by a professional engineer.

2. CROWNING AND DITCHING

Crowning with materials on site and ditching on one side of the road on the uphill side will be required. The road cross-section will conform to the cross section diagrams in Figure 1. If conditions dictate, ditching may be required for both sides of the road; if local conditions permit, a flat-bladed road may be considered (if these conditions exist, check the appropriate box below). The crown shall have a grade of approximately 2% (i.e., 1" crown on a 12' wide road).

/_	<u>x</u> /	Ditching	will be	required	on	both	sides	of th	e roa	dway	as	shown	on	the
	ā	ittached n	nap or	as staked	d in	the f	field.							

[/]_/ Flat-blading is authorized on segment(s) delineated on the attached map.

DRAINAGE

Drainage control shall be ensured over the entire road through the use of borrow ditches, outsloping, insloping, natural rolling topography, lead-off (turnout) ditches, culverts, and/or drainage dips.

A. All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval for lead-off ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope (in %):

SPACING INTERVAL FOR TURNOUT DITCHES

Percent slope	Spacing interval
0% - 4%	400' - 150'
4% - 6%	250' - 125'
6% - 8%	200' - 100'
8% - 10%	150' - 75'

A typical lead-off ditch has a minimum depth of 1 foot below and a berm 6 inches above natural ground level. The berm will be on the down-slope side of the lead-off ditch. The ditch end will tie into vegetation whenever possible.

For this road the spacing interval for lead-off ditches shall be at

- /_/ foot intervals.

 /_x/ _200 foot intervals.

 /_/ locations staked in the field as per spacing intervals above.

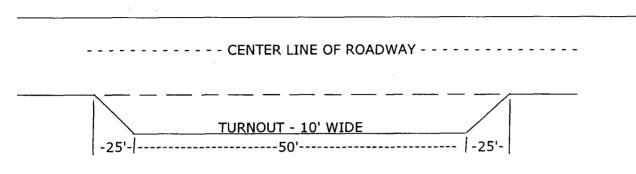
 /_/ locations delineated on the attached map.
- B. Culvert pipes shall be used for cross drains where drainage dips or low water crossings are not feasible. The minimum culvert diameter must be 18 inches. Any culvert pipe installed shall be of sufficient diameter to pass the anticipated flow of water. Culvert location and required diameter are shown on the attached map (Further details can be obtained from the Roswell District Office or the appropriate Resource Area Office).
- C. On road slopes exceeding 2%, drainage dips shall drain water into an adjacent lead-off ditch. Drainage dip location and spacing shall be determined by the formula:

Example: 4% slope: spacing interval = 400 + 100 = 200 feet

3

TURNOUTS

Unless otherwise approved by the Authorized Officer, vehicle turnouts will be required. Turnouts will be located at 2000-foot intervals, or the turnouts will be intervisible, whichever is less. Turnouts will conform to the following diagram:



STANDARD TURNOUT - PLAN VIEW

5. SURFACING

Surfacing of the road or those portions identified on the attached map may, at the direction of the Authorized Officer, be required, if necessary, to maintain traffic within the right-of-way with caliche, gravel, or other surfacing material which shall be approved by the Authorized Officer. When surfacing is required, surfacing materials will be compacted to a minimum thickness of six inches with caliche material. The width of surfacing shall be no less

than the driving surface. Prior to using any mineral materials from an existing or proposed Federal source, authorization must be obtained from the Authorized Officer.

A sales contract for the removal of mineral materials (caliche, sand, gravel, fill dirt, etc.) from an authorized pit, site, or on location must be obtained from the BLM prior to using any such mineral material from public lands. Contact the BLM solid minerals staff for the various options to purchase mineral material.

6. CATTLEGUARDS

Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads (exceeding H-20 loading), are anticipated (See BLM standard drawings for cattleguards). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

MAINTENANCE

The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, drainage installation, cattleguard maintenance, and surfacing.

8. PUBLIC ACCESS

Public access along this road will not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer.

9. CULTURAL RESOURCES

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the authorized officer after consulting with the holder.

10. SPECIAL STIPULATIONS: None.

SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

•	n 1500 F N L & 660		z. <u>26</u> , T. <u>2</u>		Ε.	
	n <u>1500 </u>	County		State New		
condition General	ecial stipulations check marked belowed upon compliance with such stip Requirements, a copy of which is a MINISTRATIVE APPEAL TO THE	ulations in additi vailable from a B	ion to the General F Bureau of Land Mai	Requirements. The agement office.	he permittee shoul EACH PERMIT	ld be familiar with the TEE HAS THE RIGHT
This pe	rmit is valid for a period of one year	from the date of	approval or until le	ease expiration of	r termination which	hever is shorter.
I.	SPECIAL ENVIRONMENT REC	UIREMENTS				
	sser Prairie Chicken (stips attached) a Simon Swale (stips attached)) Flood plain (sti (x) Other See atta		st and Visual Res	ources Stipulations
II.	ON LEASE - SURFACE REQUI	REMENTS PRIC	OR TO DRILLING			
	he BLM will monitor construction o 93-3612, at least 3 working days price			rlsbad Field Offi	ce at (505) 234-59	72 () Hobbs Office
	oads and the drill pad for this well med to be a producer.	oust be surfaced v	with <u>6</u> inches	of compacted c	aliche upon comple	etion of well and it is
resurfac	topsoil and vegetation encountered coing of the disturbed area after comp. Approximatelycubic yards	letion of the drill	ing operation. Top	soil on the subje	ect location is appro	
(x)O	ther. V-Door West (Cuttings pit to	the South).				
III.	WELL COMPLETION REQUIR	EMENTS				
	Communlitization Agreement covering the agreement must be prior to any s		edicated to the well	must be filed fo	r approval with the	BLM. The effective
to a slo surrour	urface Restoration: If the well is a pr pe of 3:1 or less. All areas of the pa ding terrain, and topsoil must be re- e following seed mixture, in pounds	d not necessary for distributed and re	or production must e-seeded with a dril	be re-contoured	to resemble the or	iginal contours of the
Sid	Seed Mixture 1 (Loamy Sites) e Oats Grama (<i>Bouteloua curtipendu</i> id Dropseed (<i>Sporobolus cryptandru</i>	la) 5.0	Sand Lovegrass	e 2 (Sandy Sites (Sporobolus crp (Eragostis trick ass (Setaria mag	ntandrus) 1.0 nodes) 1.0	
	C. Seed Mixture 3 (Shallow Sites) e oats Grama (Boute curtipendula)	1.0	Alkali Sacaton	ed Mixture 4 (C (Sporobollud air bush (Atriplex c	roides) 1.0	
() 0	THER SEE ATTACHED SEED M	IXTURE				
	g should be done either late in the fal vantage of available ground moisture		- November 15, be	fore freeze up, o	r early as possible	the following spring to
()0	ther.					

AT CONSTRUCTION STANDARDS

Mineral material extracted from within the boundary of the APD during construction of the well pad and reserve pits and be used for the construction of this well pad and its immediate access road only, as long as that portion of the access road it is use on remains on-lease. Removal of any additional material from this location for construction or improvement of other well pads and other access or lease roads must first be purchased from BLM.

<u>Reclamation</u>: Reclamation of this type of deep pit will consist of pushing the pit walls into the pit when sufficiently dry to support track equipment. The pit liner is NOT TO BE RUPTURED to facilitate drying; a ten month period after completion of the well is allowed for drying of the pit contents.

The pit area must be contoured to the natural terrain with all contaminated drilling mud buried with at least 3 feet of clean soil. The reclaimed area will then be seeded as specified in this permit.

OPTIONAL PIT CONSTRUCTION STANDARDS

The reserve pit may be constructed in predominantly fill material if:

- (1) Lined as specified above and
- (2) A temporary or emergency pit may be constructed immediately adjacent to the reserve pit as long as the pit remains within the APD boundary. Mineral material removed from this pit may be used for the construction of this well pad only and its immediate access road, as long as that portion of the access road the material is used on remains on-lease. Removal of any material from the APD boundary for use on other well locations or roads must first be purchased from BLM.

Reclamation of the reserve pit consists of bulldozing all reserve pit contents and contaminants into the borrow pit and covering with a minimum of 3 feet of clean soil material. The entire area must be recontoured, all trash removed, and reseeded as specified in this permit.

CULTURAL

Whether or not an archaeological survey has been completed and notwithstanding that operations are being conducted as approved, the lessee/operator/grantee shall notify the BLM immediately if previously unidentified cultural resources are observed during surface disturbing operations. From the time of the observation, the lessee/operator/grantee shall avoid operations that will result in disturbance to these cultural resources until directed to processed by BLM.

TRASH PIT STIPS

All trash, junk, and other waste material shall be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not permitted.

Conditions of Approval for

Cave/Karst and Visual Resources on Devon Energy Production Company LP Lease #'s NM 112253

Cuesta Abajo 26 Fed. #1 1500 FNL & 660 FEL, Section 26, T. 22S., R. 25 E.

Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

- 1. Any tank batteries will be bermed and be large enough to contain any spills that may occur. Tank batteries will be lined with a permanent 12 mil. or thicker plastic liner.
- 2. All above-ground structures will be less that 8 feet high and be painted a non-reflective (flat) Juniper Green.

Subsurface Mitigation

The following stipulations will be applied to protect cave/karst resources and ground water concerns.

- 1. Rotary drilling techniques in cave or karst areas will include the use of fresh water as a circulating medium in zones where caves or karst are expected (at a minimum of 3,000 feet). Below those zones, the operator may use whatever drilling fluid is approved in the drilling plan.
- 2. All casing will meet or exceed National Association of Corrosion Engineers specifications pertaining to the geology of the location and be run to American Petroleum Institute and BLM standards.
- 3. A cave protection casing will be required. The cave-protection casing string would be set at least 100 feet below the deepest known cave-bearing zone as determined by drilling. See attached diagram as an example.
- 4. All casing strings will be cemented to the surface.
- 5. Regardless of the type of drilling machinery used, if a bit drops of four feet or more and circulation losses greater than 75 percent occur simultaneously while drilling in any cave-bearing zone, drilling operations will immediately stop and the BLM will be notified by the Operator. In the event that such an incident occurs contact Jim Goodbar at 505 234-5929 or 505 236-1016 after hours and Jim Amos at (505) 234-5909 or 706-2775. The BLM will assess the consequences of the situation and work with Operator on corrective actions to resolve the problem. If corrective actions fail, the well will be plugged.

Any corrective actions proposed to resolve problems related to bit drops or lost circulation will require BLM concurrence prior to implementation. A decision on how to proceed will be reached within 24 hours of notification.

- 6. Any blasting will be a phased and time delayed.
- 7. Upon well abandonment the well bore will be cemented completely from the top of the cave bearing zone to the surface.

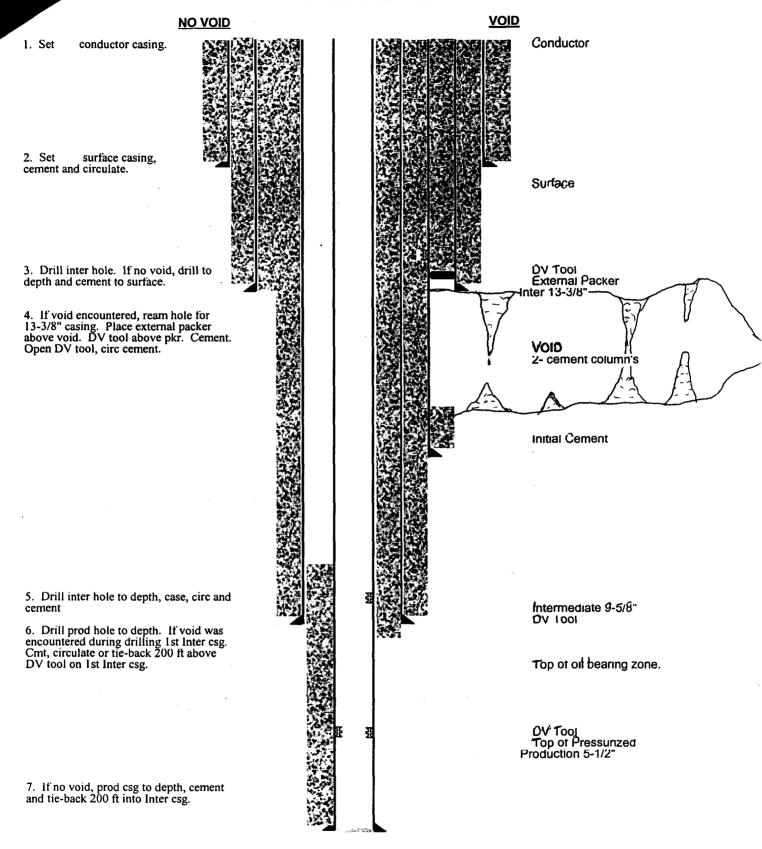
1. Annual pressure tests will be performed by the Operator on all casing annuli. If the test results indicated a casing failure, remedial actions approved by the BLM will be undertaken to correct the problem.

Record Keeping

- 1. The Operator will track customary drilling activities, including the rate of penetration, pump pressure, weight on bit, bit drops, percent of mud returns, and presence of absence of cuttings returning to the surface. As part of customary record keeping, each detectable void or sudden increase in the rate of penetration not attributable to a change in the formation type should be documented and evaluated as it is encountered.
- 2. The BLM may review data held by companies on wells drilled in cave or karst areas, to gain information about impacts to caves and karst. This information will be used to categorize lost-circulation zones on the basis of depth, relative volume, and severity, and to evaluate and compare the relative success or failure of different remedies attempted to combat lost-circulation problems while drilling and cementing casing in these zones. This information also will be used to update information about the occurrence of cave and karst features. Information concerning cave resources gathered during drilling will be submitted and be retained by the BLM in accordance with The Carlsbad Field Office Cave Management Plan and the regulations implementing the Federal Cave Resources Protection Act.

WELLBORE SCHEMATIC

"CAVE PROTECTION"



CONDITIONS OF APPROVAL - DRILLING

Operator's Name:

DEVON ENERGY PRODUCTION CO LP

Well Name & No.

1 – CUESTA ABAJO 26 FEDERAL

Location:

1500' FNL & 660' FEL - SEC 26 - T22S - R25E - EDDY COUNTY

Lease: NM-112253

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5909 or (505) 361-2822 (After hours) - 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: 13-3/8 inch 9-5/8 inch 5-1/2 inch
- C. BOP tests
- 2 Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
- 3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.
- 4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

II. CASING:

- 1. The <u>13-3/8</u> inch surface casing shall be set at <u>500 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>9-5/8</u> inch intermediate casing is <u>circulate cement to</u> the <u>surface</u>. Note: <u>9-5/8</u> intermediate casing will be set at 2250 feet using fresh water from <u>surface to 2250 feet</u>.
- 4. The minimum required fill of cement behind the 5-1/2 inch production casing is <u>cement shall extend</u> upward a minimum of 500 feet above the uppermost hydrocarbon bearing interval.

III. PRESSURE CONTROL:

- 1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13-3/8 inch 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>2000</u> psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the <u>9-5/8</u> inch casing shall be <u>5000</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 **2M BOP** to the reduced pressure of **1215** 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.
- BOPE must be tested prior to drilling into the **Wolfcamp** Formation by an independent service company.

IV. DRILLING MUD:

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

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

CITY OF CARLSBAD P. O. BOX 1569 CARLSBAD, NM 88221

OIL, GAS, PIPELINE APPLICATION FOR PERMIT/LICENSE

A separate application shall be required for each well, trunkline pipeline and each water or gas repressurizing or injection facility.

	····
Drill Well	@ Drill Well
I Ro-enter/Deepen Existing Well	☐ Re-enter/Deepen Existing-Well
☐ Water/Gas Repressurizing/injection Facility	☐ Water/Gas Repressurizing/injection Facility
D Construct/Operate Pipeline	Construct/Operate Pipeline
	☐ Crossing City Water Facilities
Applicant Numm: Devon Energy Production C	company, L.P. Filing Date: 11/10/04
If not Corporation, name of local Agent:	
If Corporation, Name of Registered Agent: Ken G	тау
Telephone number(s): 405-552-4633	
Applicant Address: 20 N. Broadway	Cily, Sinte, Zip Code: Oklahoma City, OK 73102
Cuesta Abajo 25 Fed Com #1 located 13	00' FNL & 660' FEL of Section 26-T22S-R2.E
servicing the Filaree 25C Fed Com #1 25-T22S-R25E. Name of lease (wher: Devon Energy Producti	
servicing the Filaree 25C Fed Com #1 25-T22S-R25E.	on Company, L.P.
Name of Icasa awar: Devon Energy Producti Accumbe description of location (with legal description of eusements to be used by pipeline, crossing, etc.): Se	on Company, L.P.
Servicing the Filaree 25C Fed Com #1 25-T228-R25E, Name of Icasa c.wnor: Devon Energy Producti Accumbe description of location (with legal description of eusements to be used by pipeline, crossing, etc.): Se C-102.	on Company, L.P.
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Servicing the Filaree 25C Fed Com #1 25-T228-R25E, Name of lease canon: Devon Energy Product1 Accumic description of location (with legal description of eusements to be used by pipeline, crossing, etc.): Sec C-102. Location with respect to property lines, right-of-way bout	on Company, L.P. If all acreage dedicated to well or legal description of the attached State of New Mexico form Industries, and surface contours: See attached Basin

Application continues on reverse side

Note: Attach all applications and forms submitted to or received from OCD, State Land Office, and/or BLM, as applicable.

RECEIVED

FEB 2 2 2005

Ground clovelion at woll side: 35211; See attached leasin Surveys plat Typus of decrice; it applicable: Releasy 14, edit is a syrepaid 1371, 571,000 lb. capacity Proposed depit of well or pipeline: 11,350! Detailed explanation of operating pressures of pipelines and facilities: N/A Location and queraling characteristics of compressor, compressor control or safety devices: N/A Typed or printed name of Eurogeney Controd with telephone number(s): Cert 1 Terrenor 10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	Property and the second of the	
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Typed or printed name of Emergency Contract with telephone number(s): Certifice 505-748-0171. Gett 505-748-7180 How you dited a current certified financial statement: Dives	Language and quartified clumps phartetion of companying a com-	Transport control or order du dans N/E
Signature of authorized agent: Date: 11/10/04	Totalion and marining interactions are of compressor, com	pressor control of surery devices: 11/12
Signature of authorized agent: Typed or Printed name of authorized agent: Typed or Printed name of authorized agent: This application shall be filed with the City Administrator and accompanied by a filing fee of \$500.00 in cash, company check, cashler's check or certified check made payable to the City of Carlsbad. CI Cash, Company check, Cashler's check, or Certified check accompanies application. License: Permit: Approval Date: City Administrator Permit: Approved Disapproved by Council Date: This Permit incorporates by reference and requires compliance with all applicable City Ordinances and regulations, and all applicable laws, rules, regulations and requirements of the Oil Conservation Commission, the Oil Conservation Division, the State Land Office and the Bureau of Land Management.	Typed or printed name of Emergency Contract with telepho	office 505-748-0171
Typed or Printed name of authorized agent: Ken Gray This application shall be filed with the City Administrator and accompanied by a filing fee of \$500.00 in cash, company check, cashier's check or certified check made payable to the City of Carlsbad. CI Cash, Company check, Cashier's check, or Certified check accompanies application. License: Date: ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ	Have you attacked a current certified financial statement:	Li Yes W No On file with regulatory
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City Administrator City Administrator City Administrator Permit: Approved Disapproved by Council Date: This Permit incorporates by reference and requires compliance with all applicable City Ordinances and regulations, and all applicable laws, rules, regulations and requirements of the Oil Conservation Commission, the Oil Conservation Division, the State Land Office and the Bureau of Land Management.		• •
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applicable City Ordinances and regulations, and all applicable laws, rules, regulations and requirements of the Oil Conservation Commission, the Oil Conservation Division, the State Land Office and the Bureau of Land Management.	the City of Carlsbad. CI Cash, Company check, Cashier's check, or License: La Preliminary Approval	Date: 2-2/-0 City Administrator Date:
City Administrator Date	the City of Carlsbad. CI Cash, Company check, Cashier's check, or License: La Preliminary Approval Li Final Approval	Date: 2-21-0 City Administrator Date: City Administrator
	License: Li Preliminary Approval License: Li Preliminary Approval Li Final Approval Permit: Approved Disapp This Permit incorporates by reference applicable City Ordinances and regulations and requirements of the Oicenservation Division, the State Lan	City Administrator Date: City Administrator Toved by Council Date: and requires compliance with all tions, and all applicable laws, rules, I Conservation Commission, the Oll

N. French Sr., Hobbs, MM 885er

DISTRICT II 311 South Pirst, Artesia, NM 88210

DISTRICT III 1000 Rio Statos Rd., Axiec, NM 87410

DISTRICT IV 2010 South Pachyos, Santa Fe. NH 8'505 State of New Mexico

Energy, Ringrale and Nuloral Resources Department

Form C-102 Revised March 17, 1999

Submit to Appropriate District Office

State Leave - 4 Copies Fee Leave - 3 Copies

OIL CONSERVATION DIVISION

2040 South Panheco

Santa Fe. New Mexico 87504-2088

I AKENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT API Number Pool Code Pool Name Property Code Property Name Hell Number CUESTA ABAJO "26" FEDERAL OGRID No. Operator Name Elevation DEVON ENERGY PRODUCTION COMPANY LP 3531' Surface Location UL or lot No. Section Toynehip Range tol ldn Pest from the North/South line Post from the Back/Feet Hoe H 26 22 S 25 E 1500 NORTH 660 EAST EDDY Bottom Hole Location If Different From Surface UL or lot No. Section Township Lot Ida Renze Feet from the North/South line Fret from the East/Yest line County Dedicated Acres Joint or lafill Consolidation Code Order No. NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION OPERATOR CERTIFICATION I hereby sertify the the informa ed herein is true and complete t 3524.7 3518,2 Signature at.: N32'21'56.0" Printed Name Long.: W104'21'35.8" 3543.9 ~3532.1° Title Date SURVEYOR CERTIFICATION I hereby sertify that the well loca on this plat was picted from field nates of setual surveys made by the or under my supervisor and that the same is true and correct to the best of my better. 2004 July 27, Date Surveyed Signature & SENTENT L JONE Certificati

ASTRICT I 1625 M. Franch Dr., Bobbs, NM 88240

State of New Mexico ergy. Minerals and Natural Resources Department

Pool Code

Form C-102 Revised Murch 17, 1999

DISTRICT II 311 South Pirst, Artesta, NM 88210

Submit to Appropriate District Office

Pool Name

DISTRICT III 1000 Rio Bruzon Rd., Artec, NM 87410 Sinte Lease - 4 Copies Pee Lease - 3 Copies

DISTRICT IV 2040 South Pacheco, Sents Fe. NM 67505

API Number

OIL CONSERVATION DIVISION

2040 South Pacheco Santa Fe, New Mexico 87504-2088

II AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

Property	Code	1		CULTO	Property Na			Well N	umber	
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PRELIMINARY APPROVAL ADDENDUM

Applicant

Devon Energy Production Company, L.P.

Well Name

Cuesta Abajo 26 Fed Com #1

One condition of Preliminary Approval is that Devon Energy shall submit a revised detailed drilling program. That program shall include all required items, including, but not limited to the modifications described in the Review of Permit Application attached hereto. Those modifications include:

- 1. Surface casing must extent to the top of the freshwater-bearing strata. Devon's casing plan to set surface casing to 500 feet may need to be adjusted in the field, according to what is encountered during drilling.
- 2. Due to the possibility of cross contamination, John Simits of BLM recommends the intermediate casing string should be set to 2,250 feet. This is acceptable to the City.
- 3. Devon must state the expected bottom of the brine water-bearing strata. The third casing must extend a minimum of 100 feet below that bottom.
- 4. No brine shall be used in the drilling process for the surface and intermediate casing strings.
- 5. Devon must specify the use of a closed mud system in its drilling plan.
- 6. Devon has already submitted to the City's Inspector its:
 - Hydrogen sulfide contingency plan
 - OCD Pit Registration (form C-144)
 - Well abandonment and capping plans

February 15, 2005

Mr. Jon Tully
City Administrator
City Of Carlsbad
PO Box 1569
Carlsbad, New Mexico 88221

Re: Permit Application from Devon Energy, for Cuesta Abajo "26" FED COM #1 Well

Dear Mr. Tully:

We have completed our review of the above-referenced permit application. The permit application submitted was for drilling of an oil and gas well located within the "Significant Impact Zone" of the Sheep Draw Wellhead Protection Area. Therefore, permit issuance by the City of Carlsbad is required before oil and gas operations begin.

The review was based on the City of Carlsbad's requirements for oil and gas industry operations within the jurisdiction of the City. Observations and recommendations are based on correlations of regulatory authority prescribed by city ordinances, applicable federal and state regulations, and standard oilfield operating practices.

The review revealed that the permit application is complete. In general, the information provided met the requirements of Carlsbad City Ordinance 2000-13, Bureau of Land Management and generally accepted standard oilfield operation practices. A listing of the review process involved application's deficiencies and appropriate response is attached for your review. Our recommendation is that the City of Carlsbad issue a permit for this location.

If you have any questions or need anything further on this matter, do not hesitate to contact me at 505-268-2661.

Sincerely,

Dave Henard Project Geologist

DAH:pas

Enclosure

cc: Ms. Eileen Riordan, City Attorney, City of Carlsbad Project Central File 1520 — Category K

REVIEW OF PERMIT APPLICATION Petroleum Drilling Permit Application Review For the City of Carlsbad, New Mexico

Devon Energy Cuesta Abajo 26 Fed Com #1

RESPEC Inc., FEBRUARY 15, 2005

Permit approval is contingent on the following items:

- Permit application—includes plans for drilling, not for production. Permit approval will be for drilling only. Compliance with Ordinance No. 2000-13 Section 5(D) must be demonstrated before production facilities are constructed.
- Permit approval is contingent on BLM approval.
- Permit approval is contingent on applicant paying all required fees and bonding.
- Permit approval is contingent on correction of deficiencies noted below.
- Submittal of revised detailed drilling program.
- Drilling operations will be monitored by field inspection for compliance.

The following items in the drilling plan are deficient with respect to the City of Carlsbad Ordinance No. 2000-13, City of Carlsbad Wellhead and Water Facilities Protection

- Section 5. Wellhead Protection Areas
- Section 5(B)(3)(b)(1)(b) The surface casing must extend to the top of the freshwater-bearing strata.

DEVON RESPONSE:

The City of Carlsbad Water Department tells us that the top of freshwater in the Sheep Draw capture area is about 426 feet below surface. The depth to freshwater will vary with location and elevation. Devon's casing plan to set surface casing to 500 feet may need to be adjusted in the field, according to what is encountered during drilling.

Section 5(B)(3)(b)(1)(c) The second casing must extend a minimum of 100 feet below the bottom of the freshwater-bearing strata.

DEVON RESPONSE

Devon's drilling plan to set intermediate casing to 2,500 feet is not sufficient. The Wellhead Protection Areas are defined as extending to a depth of 2,500 feet below the surface of the ground (Ordinance No. 2000-13, Section 3, Definition P). The intermediate casing string should be set to 2,600 feet.

Bureau of Land Management contacted RESPEC on February 9, 2005 in response to sundry report submitted by Devon per intermediate string casing design. Mr. John Simits with BLM reported concerns as to intermediate casing string depth. Discussion detailed expected subsurface geology that will be encountered during drilling of the Devon Cuesta well. In the depth interval at 2250' below ground surface the base of the Capitan Limestone will be encountered exposing mid and basal Delaware Group-lithology. Brackish-waters and oil and gas production may be encountered in sandstones and permeable limestones while drilling through mid and basal Delaware Formations. RESPEC concurs with BLM findings and intermediate casing program for this well due to the potential for cross contamination of brackish waters and/or oil and gas to the fresh water bearing Capitan Formation during drilling.

Section 5(B)(3)(b)(1)(d) The third casing must extend a minimum of 100 feet below the bottom of the brine water-bearing strata immediately underlying the freshwater-bearing strata.

DEVON RESPONSE:

Devon's drilling plan to set production casing to 11,350 probably complies, but the expected bottom of the brine water-bearing strata needs to be stated.

Section 5(B)(3)(b)(1)(f) Fresh, high quality water shall be used in the drilling process.

DEVON RESPONSE:

Devon's drilling plan specifies a combination of freshwater and brine for the depth interval of 500 to 2,500 feet. No brine shall be used in the drilling process for the surface and intermediate casing strings.

Section 5(B)(3)(b)(1)(g) No open pits, ponds, etc. shall be permitted (i.e. only closed mud systems).

DEVON RESPONSE

No mud pits are permitted in the City of Carlsbad Wellhead Protection areas. Devon must specify the use of a closed mud system in their drilling plan.

Section 5(B)(3)(b)(1)(h) All liquids shall be contained in a sealed reservoir.

DEVON RESPONSE

This needs to be specified in the drilling program.

Section 5(B)(3)(b)(1)(i) H₂S (hydrogen sulfide).

DEVON RESPONSE

Devon's drilling program states that there will be H_2S detection equipment and a contingency plan on location. H_2S contingency plan must be submitted with the City of Carlsbad drilling application.

Section 5(B)(3)(c)(1)(ii) A copy of all OCD permitting documentation.

DEVON RESPONSE

Include OCD Pit Registration (Form C-144).

Section 5(B)(3)(c)(2) The City Administrator, or designee, shall review the permit application for approval or disapproval. <u>Permit applications not approved will be returned with an explanation as to the deficiencies found.</u>

.Application to be returned with deficiencies noted

Section 5(D)(3) <u>All abandoned wells must be capped</u> and comply with all local, state, and federal regulations.

DEVON RESPONSE

Include plans for abandoning and capping well in the event this is needed.

105 S. 4th Str. Artesia, NM 88210

Yates Petroleum Corporation

Fax

TO: Br	yan Arrant From: Tim Bussell (505) 748-42
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Phone:	Pagesi 2
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02/21/2005 15:57

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CALLAWAY SAFETY

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EMPRGENCY ASSISTANCE TELEPHONE LIST

Artesia P.D. Eddy County Sheriff's Department New Mexico State Police Artesia Fire Department New Mexico OCD (Tim Gum) New Mexico D.C.T. U.S. Dept. of Labor		(505)	746~5000	or 911			
		(505) 746-9888 0. (505) 748-9718 0 (505) 885-5050 0 (505) 748-1283 (505) 827-5100	748-9718 885-5050 748-1283	or 911 or 911			
					(505)	248-5302	
					IATES PETROLEUM CORPOR	ATION	
			Jim Krogman	Drilling Superintendent	(505)	748-4215	(office)
					365-8340		
			746-2674				
		(40-/	140 44	(1101:00)			
Tim Bussell	Assistant Drilling Sun.	(595)	748-4221	(office)			
	•		365-5695				
			746-2121				
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Artesia Municipal Airport		(505)	746-3206				
PLETC (Gloria Vaught)	Safety Chief	(505)	748-8056	(どってと)			
		(505)	315-1113	(cellular			
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