ATS-11-920

OCD-ARTESIA

Form 3160-3
(February 2005)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007 EA1243

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.
USA NM 98173

6. If Indian, Allotee 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 ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
Beryl 33 Federal 1H [38884]

2. Name of Operator
Devon Energy Production Co., LP 6137

9 API Well No.
30-015-39790

3a Address **20 North Broadway**
OKC, OK 73102

3b. Phone No. *(include area code)*
(405)-552-7802

10. Field and Pool, or Exploratory
Parkway; Bone Spring [49622]

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **SWSW 50' FSL & 400' FWL Lot M**
At proposed prod. zone **NWNW 330' FNL & 400' FWL Lot D** NON-STANDARD LOCATION

11. Sec., T R M or Blk and Survey or Area
Sec 33 T19S-R29E

14. Distance in miles and direction from nearest town or post office*
Approximately 14 miles northeast of Carlsbad, NM.

12 County or Parish
Eddy

13. State
NM

15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig unit line, if any) **50'**

16 No of acres in lease
200

17 Spacing Unit dedicated to this well
160

18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft **see plat**

19 Proposed Depth
MTVD ~~7895'~~ 7970' 12638' MD

20 BLM/BIA Bond No. on file
PHTD: 8155' **CO-1104**

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3302.6' GL

22 Approximate date work will start*
09/01/2011

23. Estimated duration
45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form.

1 Well plat certified by a registered surveyor
2 A Drilling Plan.
3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office)
4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5 Operator certification
6 Such other site specific information and/or plans as may be required by the BLM.

25. Signature
Name *(Printed/Typed)* **Stephanie A. Ysasaga**
Date **08/15/2011**

Title **Sr. Staff Engineering Technician**

Approved by *(Signature)* James A. Amos
Name *(Printed/Typed)*
Date **DEC 14 2011**

Title FIELD MANAGER
Office CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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 make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

*(Instructions on page 2)

Capitan Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Operators Representative:

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

Steven Jones
Operations Engineer Advisor

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

(405) 552-7994 (office)
(405) 596-8041 (cell)

Don Mayberry
Superintendent

Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, NM 88211-0250

(505) 748-0164 (office)
(505) 748-5235 (cell)

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Devon Energy Production Company, L.P. am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

I hereby also certify that I, or Devon Energy Production Company, L.P. have made a good faith effort to provide the surface owner with a copy of the Surface Use Plan of Operations and any Conditions of Approval that are attached to the APD.

Executed this _15th_ day of _August_ , 2011.
Printed Name: Stephanie A. Ysasaga
Signed Name: _____ .
Position Title: Sr. Staff Engineering Technician
Address: 20 North Broadway, OKC OK 73102
Telephone: (405)-552-7802
Field Representative (if not above signatory): Don Mayberry (see above)
Address (if different from above):
Telephone (if different from above):
E-mail (optional):

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No
NMNM98173

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
BERYL 33 FEDERAL 1H

2. Name of Operator
DEVON ENERGY PRODUCTION CO LP
Contact: MELANIE A CRAWFORD
EMail: MELANIE.CRAWFORD@DVN.COM

9. API Well No.

3a. Address
20 NORTH BROADWAY SUITE 1500
OKLAHOMA CITY, OK 73102

3b. Phone No. (include area code)
Ph: 405-552-4524

10. Field and Pool, or Exploratory
HACKBERRY

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 33 T19S R29E SWSW Lot M 50FSL 400FWL

11. County or Parish, and State
EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Devon Energy Production Co, LP respectfully request to change the proration unit from 160 to a W/2 320 proration unit (attached is the C102).

Thank you

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #121170 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION CO LP, sent to the Carlsbad
Committed to AFMSS for processing by KURT SIMMONS on 10/26/2011 (12KMS0174SE)

Name *(Printed/Typed)* MELANIE A CRAWFORD — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 10/24/2011

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By James A. Amos for — Title FIELD MANAGER — Date 12-14-11

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Office CARLSBAD FIELD OFFICE

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 make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 15, 2009
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-39790	49622	Parkway; Bone Spring

Property Code	Property Name	Well Number
38984	BERYL "33" FEDERAL	1H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3302.6

Surface Location

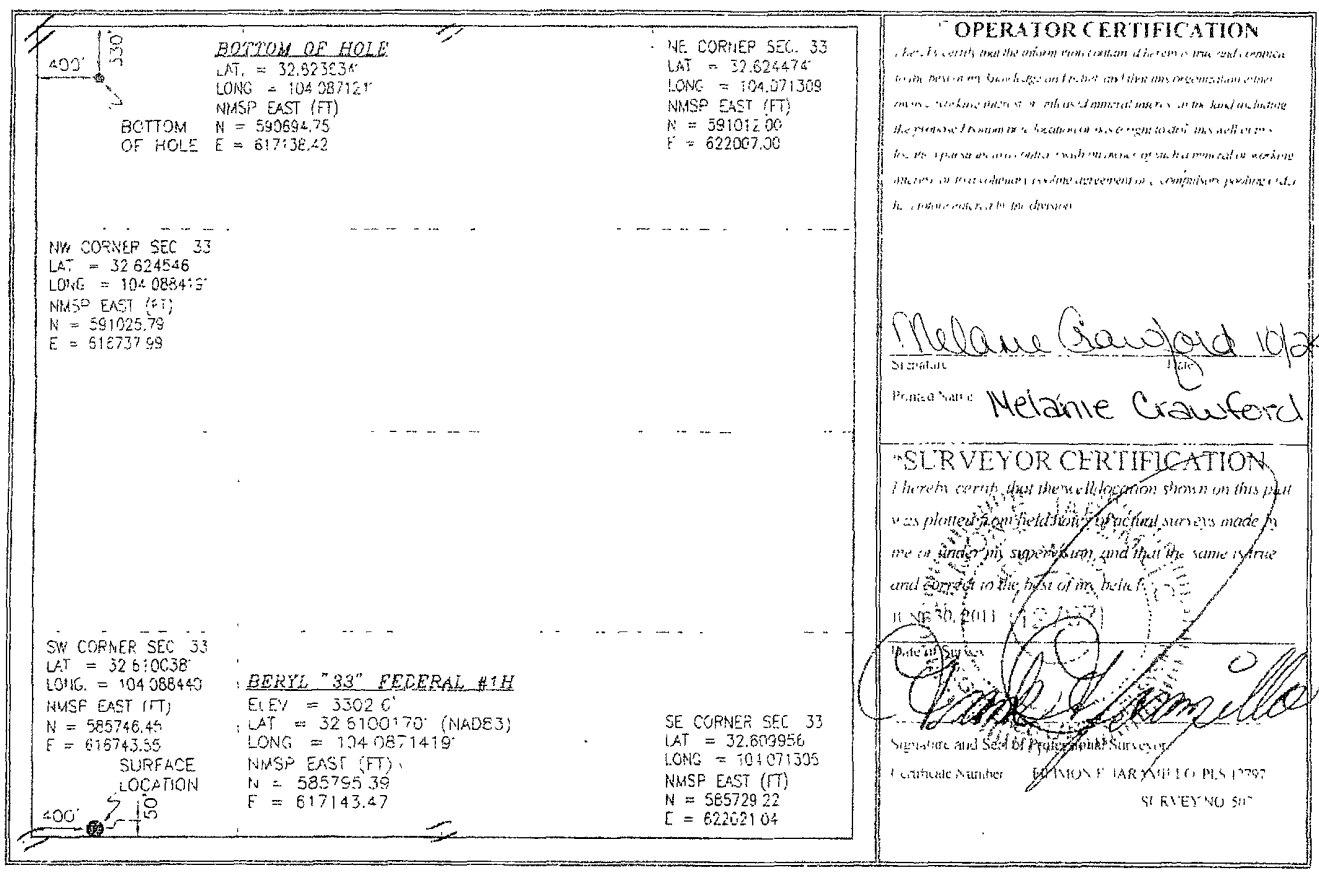
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	33	19 S	29 E		50	SOUTH	400	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	33	19 S	29 E		330	NORTH	400	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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 location or has a right to drill this well at this location 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.

Melanie Crawford 10/24/11
Signature Date

Printed Name Melanie Crawford

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 supervision, and that the same is true and correct to the best of my belief.

JUNE 30, 2011
Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number EDMUND F. JARAMILLO PLS 12797

SURVEY NO. 5[illegible]

District I
1625 N. French Dr., Hobbs, NM 88240
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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-39790	49622	Parkway; Bone Spring
4 Property Code	**5 Property Name**	**6 Well Number**
38984	BERYL "33" FEDERAL	1H
7 OGRID No.	**8 Operator Name**	**9 Elevation**
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3302.6

10 Surface Location

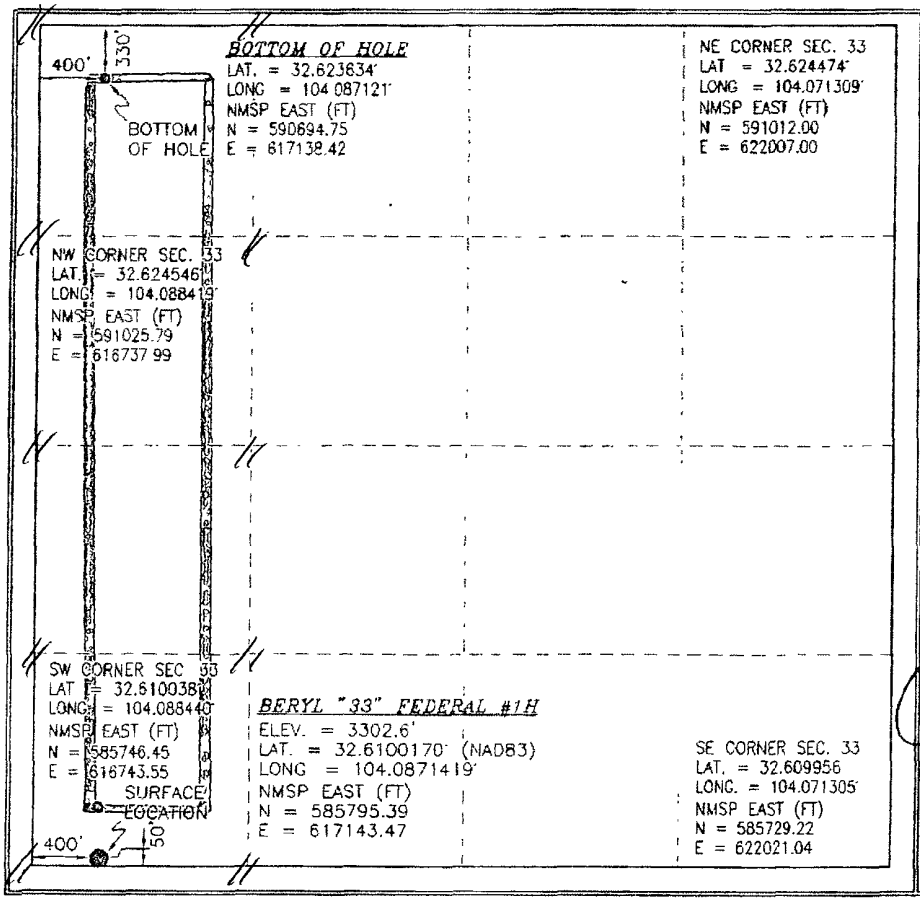
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	33	19 S	29 E		50	SOUTH	400	WEST	EDDY

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	33	19 S	29 E		330	NORTH	400	WEST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
160			

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.



17 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 location or has a right to drill this well at this location 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.

Signature — Date: 06/15/2011

Printed Name: STEPHANIE A. YSASAGA

18 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 supervision, and that the same is true and correct to the best of my belief.

JUNE 30, 2011

Date of Survey

EDMON F. JARAMILLO — NEW MEXICO — 12797 — REGISTERED LAND SURVEYOR

Signature and Seal of Professional Surveyor

Certificate Number: EDMON F. JARAMILLO, PLS 12797

SURVEY NO 507

PENETRATION POINT: 330' FNL & 400' FWL

PRODUCING AREA **PROJECT AREA**

DRILLING PROGRAM

Devon Energy Production Company, LP
Beryl 33 Federal 1H
Surface Location: 50' FSL & 400' FWL, Unit M, Sec 33 T19S R29E, Eddy, NM
Bottom hole Location: 330' FNL & 400' FWL, Unit D, Sec 33 T19S R29E, Eddy, NM

1. Geologic Name of Surface Formation

a. Permian

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

a.	Rustler	Surface'	Water @ ~60'
b.	Salado	440'	Barren
c.	Tansil Dolomite	1090'	Barren
d.	Yates	1235'	Oil
e.	Seven Rivers	1535'	Oil
f.	Queen	2025'	Barren
g.	San Andres	2890'	Oil
h.	Delaware	3390'	Oil
i.	Cut off Dolomite	5390'	Oil
j.	Bone Springs Lm	5415'	Oil
k.	1st Bone Spring Ss	6915'	Oil
l.	2nd Bone Spring Lime	7045'	Oil
m.	2nd Bone Spring Ss	7650'	Oil
n.	2nd Bone Spring Lower Ss	7935'	Oil
o.	2nd Bone Spring Lower Ss Base	8000'	Oil
p.	3rd Bone Springs Lm	8030'	Oil
q.	PTD (Pilot Hole)	8155'	
r.	Total Depth	MTVD 7895' MD 12638'	

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 ~~300~~ 360' and circulating cement back to surface. The fresh water sands will be protected by setting 9 5/8" casing at 3300' and circulating cement to surface. The Delaware intervals will be isolated by setting 5 ½" casing to total depth and circulating cement above the base of the 9 5/8" casing. All casing is new and API approved.

3. Casing Program:

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17 1/2"	0'-~~300~~' 360	13 3/8"	0'-300'	48#	STC	H-40
12 ¼"	~~300~~'-3300' ✓	9 5/8"	0'-3300'	40#	LTC	J-55
8 ¾"	3300'–7300	5 ½"	0'-7300'	17#	LTC	HCP-110
8 ¾"	7300'- 12638'	5 ½"	7300-12638'	17#	BTC	HCP-110

NOTE: THIS WELL WILL BE DRILLED WITH A PILOT HOLE (PH)

An 8-3/4" pilot hole will be drilled to 8,155 ft and plugged back to KOP with 350 sxs, Class H, 15.6 ppg, 1.18 cf/sk cement.

Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13 3/8"	1.8	4.0	7.3
9 5/8" 40# J-55 LTC	1.2	1.8	3.0
5 1/2" 17# HCP-110 LTC	1.6	2.0	1.6
5 ½" 17# HCP-110 BTC	1.6	1.9	5.2

4. **Cement Program: (Cement volumes are based on at least 25% excess)**

a. 13 3/8" Surface

Lead: 500 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 81.4% Fresh Water, 13.5 ppg. **Yield:** 1.75 cf/sk

Tail: 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water, 14.8 ppg. **Yield:** 1.35 cf/sk.. **TOC @ surface.**

b. 9 5/8" Intermediate

Lead: 1000 sacks (35:65) Poz (Fly Ash): Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water, 12.5 ppg. **Yield**: 2.04 cf/sk

Tail: 300 sacks (60:40) Poz (Fly Ash): Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 64.7% Water, 13.8 ppg. **Yield**: 1.37 cf/sk. **TOC @ surface.**

c. 5 ½" Production

1st Stage

Lead: 500 sacks (35:65) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 2% bwoc Bentonite + 0.6% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 102.5% Fresh Water, 12.5 ppg. **Yield**: 2.01 cf/sk

Tail: 1500 sacks (50:50) Poz (Fly Ash):Class H Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 58.3% Fresh Water, 14.2 ppg. **Yield**: 1.37 cf/sk

DV TOOL at ~5,000 ft

2nd Stage

Lead: 500 sacks Class C Cement + 1% bwow Calcium Chloride + 0.125 lbs/sack Cello Flake + 157.8% Fresh Water, 11.4 ppg. **Yield**:

2.89 cf/sk

Tail: 100 sacks (60:40) Poz (Fly Ash): Class C Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 63.2% Fresh Water, 13.8 ppg. **Yield**: 1.37cf/sk. **TOC @ 2,600 ft**

TOC for All Strings:

Surface:	0'
Intermediate:	0'
Production:	2,600'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. Actual cement volumes will be adjusted bases on fluid caliper and caliper log data.

5. **Pressure Control Equipment:**

The BOP system used to drill the intermediate hole will consist of a 13-5/8" 3M Triple Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 3M system prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a 13-5/8" 3M Triple Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 3M system prior to drilling out the intermediate casing shoe.

The pipe rams will be operated and checked as per Onshore Order No 2. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

6. **Proposed Mud Circulation System**

See COA

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – ~~300'~~	8.4-9.0	28-34	NC	Fresh Water
~~300'~~– 3300'	9.8-10.0	28-34	NC	Brine
3300'–12638'	8.4-9.0	28-34	NC	Fresh Water

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 will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

8. **Logging, Coring, and Testing Program:** * See COA

a. Drill stem tests will be based on geological sample shows.
b. If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.
c. The open hole electrical logging program will be:
    i. Total Depth to Intermediate Casing — Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
    ii. Total Depth to Surface — Compensated Neutron with Gamma Ray
    iii. No coring program is planned
    iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

9. **Potential Hazards:**

a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6 No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 3600 psi and Estimated BHT 130°. No H2S is anticipated to be encountered.

10. **Anticipated Starting Date and Duration of Operations:**

a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 32 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

devon

Devon Energy, Inc.

Eddy County
Beryl 33 Fed
#1H
OH

Plan: Design #1

Pathfinder X&Y Report

22 July, 2011

PATHFINDER®
A Schlumberger Company

Company:	Devon Energy, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Site:	Beryl 33 Fed	**MD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM 5000.1 Single User Db

Project Eddy County

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Beryl 33 Fed

Site Position:		**Northing:**	585,795.390 usft	**Latitude:**	32° 36' 36.582 N
From:	Map	**Easting:**	617,143.470 usft	**Longitude:**	104° 5' 13.720 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.13 °

Well #1H

Well Position	**+N/-S**	0.00 usft	**Northing:**	585,795.390 usft	**Latitude:**	32° 36' 36.582 N
	+E/-W	0.00 usft	**Easting:**	617,143.470 usft	**Longitude:**	104° 5' 13.720 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,302.60 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	7/22/2011	7.83	60.48	48,819

Design Design #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.94

Survey Tool Program **Date** 7/22/2011

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	12,638.43	Design #1 (OH)	Pathfinder	Pathfinder MWD

Company:	Devon Energy, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Site:	Beryl 33 Fed	**MD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	-3,328.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
100.00	0.00	0.00	100.00	-3,228.60	0 00	0.00	0.00	0.00	585,795.39	617,143.47
200.00	0.00	0.00	200.00	-3,128.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
300.00	0.00	0.00	300.00	-3,028.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
400.00	0.00	0.00	400.00	-2,928.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
500.00	0.00	0.00	500.00	-2,828.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
600.00	0.00	0.00	600.00	-2,728.60	0.00	0.00	0 00	0.00	585,795 39	617,143 47
700.00	0.00	0.00	700.00	-2,628.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
800.00	0.00	0.00	800.00	-2,528.60	0 00	0.00	0.00	0.00	585,795.39	617,143.47
900.00	0.00	0.00	900.00	-2,428.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
1,000.00	0.00	0.00	1,000.00	-2,328.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
1,100.00	0.00	0.00	1,100.00	-2,228.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
1,200.00	0.00	0.00	1,200.00	-2,128.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
1,300.00	0.00	0.00	1,300.00	-2,028.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
1,400.00	0.00	0.00	1,400.00	-1,928.60	0.00	0.00	0 00	0.00	585,795.39	617,143.47
1,500.00	0.00	0.00	1,500.00	-1,828.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
1,600.00	0.00	0.00	1,600 00	-1,728.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
1,700.00	0.00	0.00	1,700.00	-1,628.60	0.00	0.00	0.00	0 00	585,795.39	617,143.47
1,800.00	0.00	0.00	1,800.00	-1,528.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
1,900.00	0.00	0 00	1,900 00	-1,428.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
2,000.00	0.00	0.00	2,000.00	-1,328.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
2,100.00	0.00	0.00	2,100.00	-1,228.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
2,200 00	0.00	0.00	2,200.00	-1,128.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
2,300.00	0.00	0.00	2,300.00	-1,028.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
2,400.00	0.00	0 00	2,400.00	-928 60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
2,500.00	0.00	0.00	2,500.00	-828.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
2,600.00	0.00	0.00	2,600.00	-728.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47

Company:	Devon Energy, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Site:	Beryl 33 Fed	**MD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,700.00	0.00	0.00	2,700.00	-628.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
2,800.00	0.00	0.00	2,800.00	-528.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
2,900.00	0.00	0.00	2,900.00	-428.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
3,000.00	0.00	0.00	3,000.00	-328.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
3,100.00	0.00	0.00	3,100.00	-228.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
3,200.00	0.00	0.00	3,200.00	-128.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
3,300.00	0.00	0.00	3,300.00	-28.60	0.00	0.00	0.00	0.00	585,795.39	617,143.47
3,400.00	0.00	0.00	3,400.00	71.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
3,500.00	0.00	0.00	3,500.00	171.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
3,600.00	0.00	0.00	3,600.00	271.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
3,700.00	0.00	0.00	3,700.00	371.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
3,800.00	0.00	0.00	3,800.00	471.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
3,900.00	0.00	0.00	3,900.00	571.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
4,000.00	0.00	0.00	4,000.00	671.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
4,100.00	0.00	0.00	4,100.00	771.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
4,200.00	0.00	0.00	4,200.00	871.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
4,300.00	0.00	0.00	4,300.00	971.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
4,400.00	0.00	0.00	4,400.00	1,071.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
4,500.00	0.00	0.00	4,500.00	1,171.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
4,600.00	0.00	0.00	4,600.00	1,271.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
4,700.00	0.00	0.00	4,700.00	1,371.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
4,800.00	0.00	0.00	4,800.00	1,471.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
4,900.00	0.00	0.00	4,900.00	1,571.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
5,000.00	0.00	0.00	5,000.00	1,671.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
5,100.00	0.00	0.00	5,100.00	1,771.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
5,200.00	0.00	0.00	5,200.00	1,871.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
5,300.00	0.00	0.00	5,300.00	1,971.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47

Company:	Devon Energy, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Site:	Beryl 33 Fed	**MD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
5,400.00	0.00	0.00	5,400.00	2,071.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
5,500.00	0.00	0.00	5,500.00	2,171.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
5,600.00	0.00	0.00	5,600.00	2,271.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
5,700.00	0.00	0.00	5,700.00	2,371.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
5,800.00	0 00	0.00	5,800.00	2,471.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
5,900.00	0.00	0.00	5,900.00	2,571.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
6,000.00	0.00	0.00	6,000.00	2,671 40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
6,100.00	0.00	0.00	6,100.00	2,771.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
6,200.00	0.00	0.00	6,200.00	2,871.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
6,300.00	0.00	0.00	6,300.00	2,971.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
6,400.00	0.00	0.00	6,400.00	3,071.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
6,500.00	0.00	0.00	6,500.00	3,171.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
6,600.00	0.00	0.00	6,600.00	3,271.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
6,700.00	0.00	0.00	6,700.00	3,371.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
6,800.00	0.00	0.00	6,800.00	3,471.40	0.00	0.00	0.00	0.00	585,795.39	617,143 47
6,900.00	0.00	0.00	6,900.00	3,571.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
7,000.00	0.00	0.00	7,000 00	3,671.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
7,100.00	0.00	0.00	7,100.00	3,771.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
7,200.00	0.00	0.00	7,200.00	3,871.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
7,300.00	0.00	0.00	7,300 00	3,971.40	0 00	0.00	0.00	0.00	585,795.39	617,143.47
7,400.00	0.00	0.00	7,400.00	4,071.40	0.00	0.00	0.00	0.00	585,795.39	617,143.47
7,412.05	0.00	0.00	7,412.05	4,083.45	0.00	0.00	0.00	0.00	585,795.39	617,143.47
7,450.00	3.80	359.94	7,449.97	4,121.37	1.26	0.00	1.26	10.00	585,796.65	617,143.47
7,500.00	8.80	359.94	7,499.66	4,171.06	6.74	-0.01	6.74	10.00	585,802.13	617,143.46
7,550 00	13.80	359.94	7,548.67	4,220.07	16 53	-0.02	16.53	10.00	585,811.92	617,143.45
7,600.00	18.80	359.94	7,596.65	4,268.05	30.55	-0.03	30.55	10.00	585,825.94	617,143.44
7,650.00	23.80	359.94	7,643.22	4,314.62	48.70	-0.05	48.70	10.00	585,844.09	617,143.42

Company:	Devon Energy, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Site:	Beryl 33 Fed	**MD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
7,700.00	28.80	359.94	7,688.03	4,359.43	70.85	-0.07	70.85	10.00	585,866.24	617,143.40
7,750.00	33.80	359.94	7,730.74	4,402.14	96.81	-0.10	96.81	10.00	585,892.20	617,143.37
7,800.00	38.80	359.94	7,771.03	4,442.43	126.40	-0.13	126.40	10.00	585,921.79	617,143.34
7,850.00	43.80	359.94	7,808.58	4,479.98	159.38	-0.16	159.39	10.00	585,954.77	617,143.31
7,900.00	48.80	359.94	7,843.12	4,514.52	195.52	-0.20	195.52	10.00	585,990.91	617,143.27
7,950.00	53.80	359.94	7,874.37	4,545.77	234.53	-0.24	234.53	10.00	586,029.92	617,143.23
8,000.00	58.80	359.94	7,902.11	4,573.51	276.11	-0.28	276.11	10.00	586,071.50	617,143.19
8,050.00	63.80	359.94	7,926.12	4,597.52	319.95	-0.33	319.95	10.00	586,115.34	617,143.14
8,100.00	68.80	359.94	7,946.21	4,617.61	365.72	-0.38	365.72	10.00	586,161.11	617,143.09
8,150.00	73.80	359.94	7,962.24	4,633.64	413.06	-0.43	413.06	10.00	586,208.45	617,143.04
8,200.00	78.80	359.94	7,974.09	4,645.49	461.62	-0.48	461.62	10.00	586,257.01	617,142.99
8,250.00	83.80	359.94	7,981.65	4,653.05	511.03	-0.53	511.03	10.00	586,306.42	617,142.94
8,300.00	88.80	359.94	7,984.88	4,656.28	560.91	-0.58	560.91	10.00	586,356.30	617,142.89
8,314.04	90.20	359.94	7,985.00	4,656.40	574.95	-0.59	574.95	10.00	586,370.34	617,142.88
8,400.00	90.20	359.94	7,984.71	4,656.11	660.91	-0.68	660.91	0.00	586,456.30	617,142.79
8,500.00	90.20	359.94	7,984.36	4,655.76	760.91	-0.78	760.91	0.00	586,556.30	617,142.69
8,600.00	90.20	359.94	7,984.01	4,655.41	860.91	-0.89	860.91	0.00	586,656.30	617,142.58
8,700.00	90.20	359.94	7,983.67	4,655.07	960.90	-0.99	960.91	0.00	586,756.29	617,142.48
8,800.00	90.20	359.94	7,983.32	4,654.72	1,060.90	-1.09	1,060.90	0.00	586,856.29	617,142.38
8,900.00	90.20	359.94	7,982.97	4,654.37	1,160.90	-1.20	1,160.90	0.00	586,956.29	617,142.27
9,000.00	90.20	359.94	7,982.62	4,654.02	1,260.90	-1.30	1,260.90	0.00	587,056.29	617,142.17
9,100.00	90.20	359.94	7,982.28	4,653.68	1,360.90	-1.40	1,360.90	0.00	587,156.29	617,142.07
9,200.00	90.20	359.94	7,981.93	4,653.33	1,460.90	-1.51	1,460.90	0.00	587,256.29	617,141.96
9,300.00	90.20	359.94	7,981.58	4,652.98	1,560.90	-1.61	1,560.90	0.00	587,356.29	617,141.86
9,400.00	90.20	359.94	7,981.24	4,652.64	1,660.90	-1.71	1,660.90	0.00	587,456.29	617,141.76
9,500.00	90.20	359.94	7,980.89	4,652.29	1,760.90	-1.82	1,760.90	0.00	587,556.29	617,141.65
9,600.00	90.20	359.94	7,980.54	4,651.94	1,860.90	-1.92	1,860.90	0.00	587,656.29	617,141.55

Company:	Devon Energy, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Site:	Beryl 33 Fed	**MD Reference:**	KB=26' @ 3328.60usft (H&P 300)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
9,700.00	90.20	359.94	7,980.20	4,651.60	1,960.90	-2.02	1,960.90	0.00	587,756.29	617,141.45
9,800.00	90.20	359.94	7,979.85	4,651.25	2,060.90	-2.12	2,060.90	0.00	587,856.29	617,141.35
9,900.00	90.20	359.94	7,979.50	4,650.90	2,160.90	-2.23	2,160.90	0.00	587,956.29	617,141.24
10,000.00	90.20	359.94	7,979.15	4,650.55	2,260.90	-2.33	2,260.90	0.00	588,056.29	617,141.14
10,100.00	90.20	359.94	7,978.81	4,650.21	2,360.90	-2.43	2,360.90	0.00	588,156.29	617,141.04
10,200.00	90.20	359.94	7,978.46	4,649.86	2,460.90	-2.54	2,460.90	0.00	588,256.29	617,140.93
10,300.00	90.20	359.94	7,978.11	4,649.51	2,560.89	-2.64	2,560.90	0.00	588,356.28	617,140.83
10,400.00	90.20	359.94	7,977.77	4,649.17	2,660.89	-2.74	2,660.90	0.00	588,456.28	617,140.73
10,500.00	90.20	359.94	7,977.42	4,648.82	2,760.89	-2.85	2,760.89	0.00	588,556.28	617,140.62
10,600.00	90.20	359.94	7,977.07	4,648.47	2,860.89	-2.95	2,860.89	0.00	588,656.28	617,140.52
10,700.00	90.20	359.94	7,976.73	4,648.13	2,960.89	-3.05	2,960.89	0.00	588,756.28	617,140.42
10,800.00	90.20	359.94	7,976.38	4,647.78	3,060.89	-3.16	3,060.89	0.00	588,856.28	617,140.31
10,900.00	90.20	359.94	7,976.03	4,647.43	3,160.89	-3.26	3,160.89	0.00	588,956.28	617,140.21
11,000.00	90.20	359.94	7,975.68	4,647.08	3,260.89	-3.36	3,260.89	0.00	589,056.28	617,140.11
11,100.00	90.20	359.94	7,975.34	4,646.74	3,360.89	-3.46	3,360.89	0.00	589,156.28	617,140.01
11,200.00	90.20	359.94	7,974.99	4,646.39	3,460.89	-3.57	3,460.89	0.00	589,256.28	617,139.90
11,300.00	90.20	359.94	7,974.64	4,646.04	3,560.89	-3.67	3,560.89	0.00	589,356.28	617,139.80
11,400.00	90.20	359.94	7,974.30	4,645.70	3,660.89	-3.77	3,660.89	0.00	589,456.28	617,139.70
11,500.00	90.20	359.94	7,973.95	4,645.35	3,760.89	-3.88	3,760.89	0.00	589,556.28	617,139.59
11,600.00	90.20	359.94	7,973.60	4,645.00	3,860.89	-3.98	3,860.89	0.00	589,656.28	617,139.49
11,700.00	90.20	359.94	7,973.26	4,644.66	3,960.89	-4.08	3,960.89	0.00	589,756.28	617,139.39
11,800.00	90.20	359.94	7,972.91	4,644.31	4,060.88	-4.19	4,060.89	0.00	589,856.27	617,139.28
11,900.00	90.20	359.94	7,972.56	4,643.96	4,160.88	-4.29	4,160.89	0.00	589,956.27	617,139.18
12,000.00	90.20	359.94	7,972.22	4,643.62	4,260.88	-4.39	4,260.89	0.00	590,056.27	617,139.08
12,100.00	90.20	359.94	7,971.87	4,643.27	4,360.88	-4.49	4,360.89	0.00	590,156.27	617,138.98
12,200.00	90.20	359.94	7,971.52	4,642.92	4,460.88	-4.60	4,460.88	0.00	590,256.27	617,138.87
12,300.00	90.20	359.94	7,971.17	4,642.57	4,560.88	-4.70	4,560.88	0.00	590,356.27	617,138.77

Company:	Devon Energy, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	KB=26 @ 3328.60usft (H&P 300)
Site:	Beryl 33 Fed	**MD Reference:**	KB=26 @ 3328.60usft (H&P 300)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #1	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
12,400.00	90.20	359.94	7,970.83	4,642.23	4,660.88	-4.80	4,660.88	0.00	590,456.27	617,138.67
12,500.00	90.20	359.94	7,970.48	4,641.88	4,760.88	-4.91	4,760.88	0.00	590,556.27	617,138.56
12,600.00	90.20	359.94	7,970.13	4,641.53	4,860.88	-5.01	4,860.88	0.00	590,656.27	617,138.46
12,638.48	90.20	359.94	7,970.00	4,641.40	4,899 36	-5.05	4,899.36	0.00	590,694.75	617,138.42
BHL (Beryl 1)										

Checked By: _____ Approved By: _____ Date: _____

devon

Project: Eddy County
Site: Beryl 33 Fed
Well: #1H
Wellbore: OH
Plan: Design #1 (#1H/OH)

PATHFINDER®
A Schlumberger Company

PROJECT DETAILS: Eddy County
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	7412.05	0.00	0.00	7412.05	0.00	0.00	0.00	0.00	0.00	
3	8314.04	90.20	359.94	7985.00	574.95	-0.59	10.00	359.94	574.95	
4	12638.48	90.20	359.94	7970.00	4899.36	-5.05	0.00	0.00	4899.36	BHL (Beryl 1)

WELL DETAILS #1H

Ground Elevation: 3302.60
RKB Elevation: KB=28' @ 3328.60usft (H&P 300)
Rig Name: H&P 300

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	585795.390	617143.470	32° 36' 36.582 N	104° 5' 13.720 W	

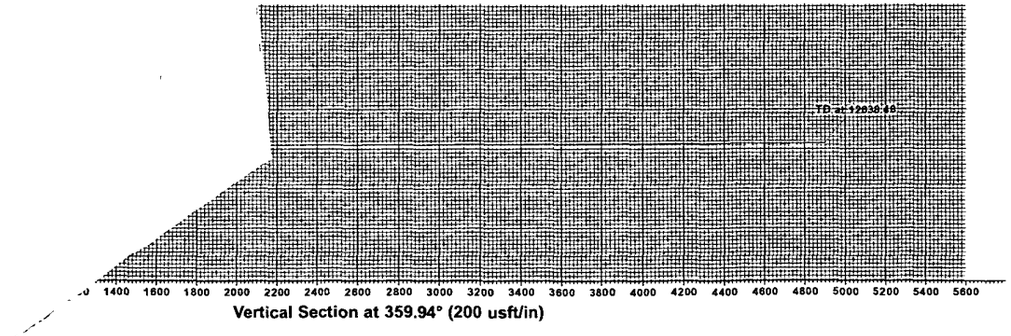
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

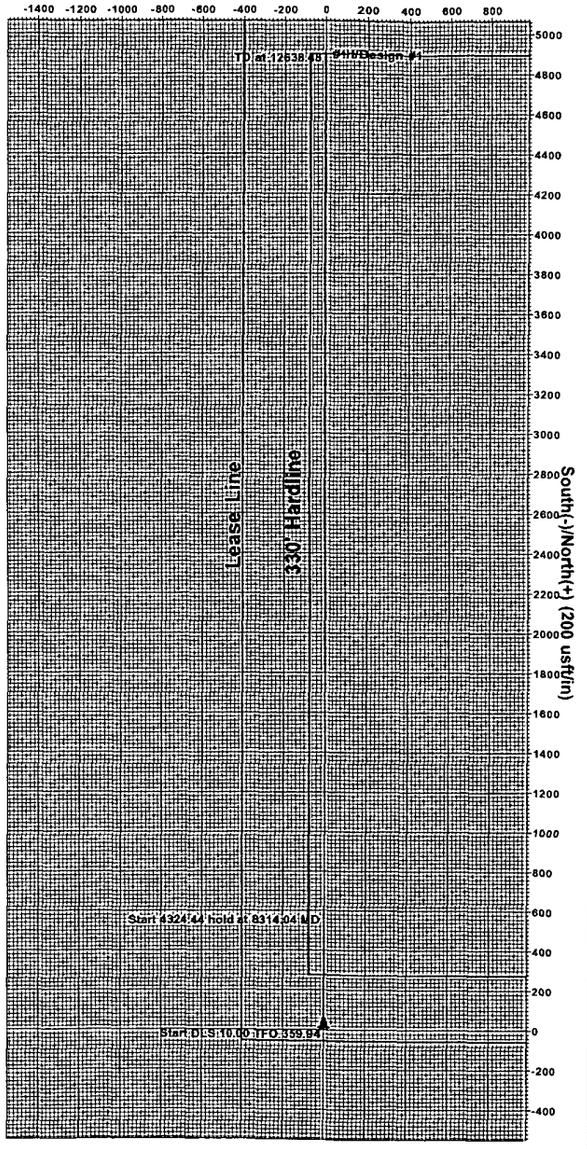
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
BHL (Beryl 1)	7970.00	4899.36	-5.05	590694.750	617138.420	Point

T G M

Azimuths to Grid North
True North: -0.13°
Magnetic North: 7.70°

Magnetic Field
Strength: 48819.3snT
Dip Angle: 60.48°
Date: 7/22/2011
Model: IGRF200510





Plan: Design #1 (#1H/OH)
Created By: Nate Bingham Date: 15:20, July 22 2011

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
Beryl 33 Federal 1H
Surface Location: 50' FSL & 400' FWL, Unit M, Sec 33 T19S R29E, Eddy, NM
Bottom hole Location: 330' FNL & 400' FWL, Unit D, Sec 33 T19S R29E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.

2. Wear ring will be properly installed in head.

3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 3000 psi working pressure.

4. All fittings will be flanged.

5. A full bore safety valve tested to a minimum 3000 psi WP with proper thread connections will be available on the rotary rig floor at all times.

6. All choke lines will be anchored to prevent movement.

7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.

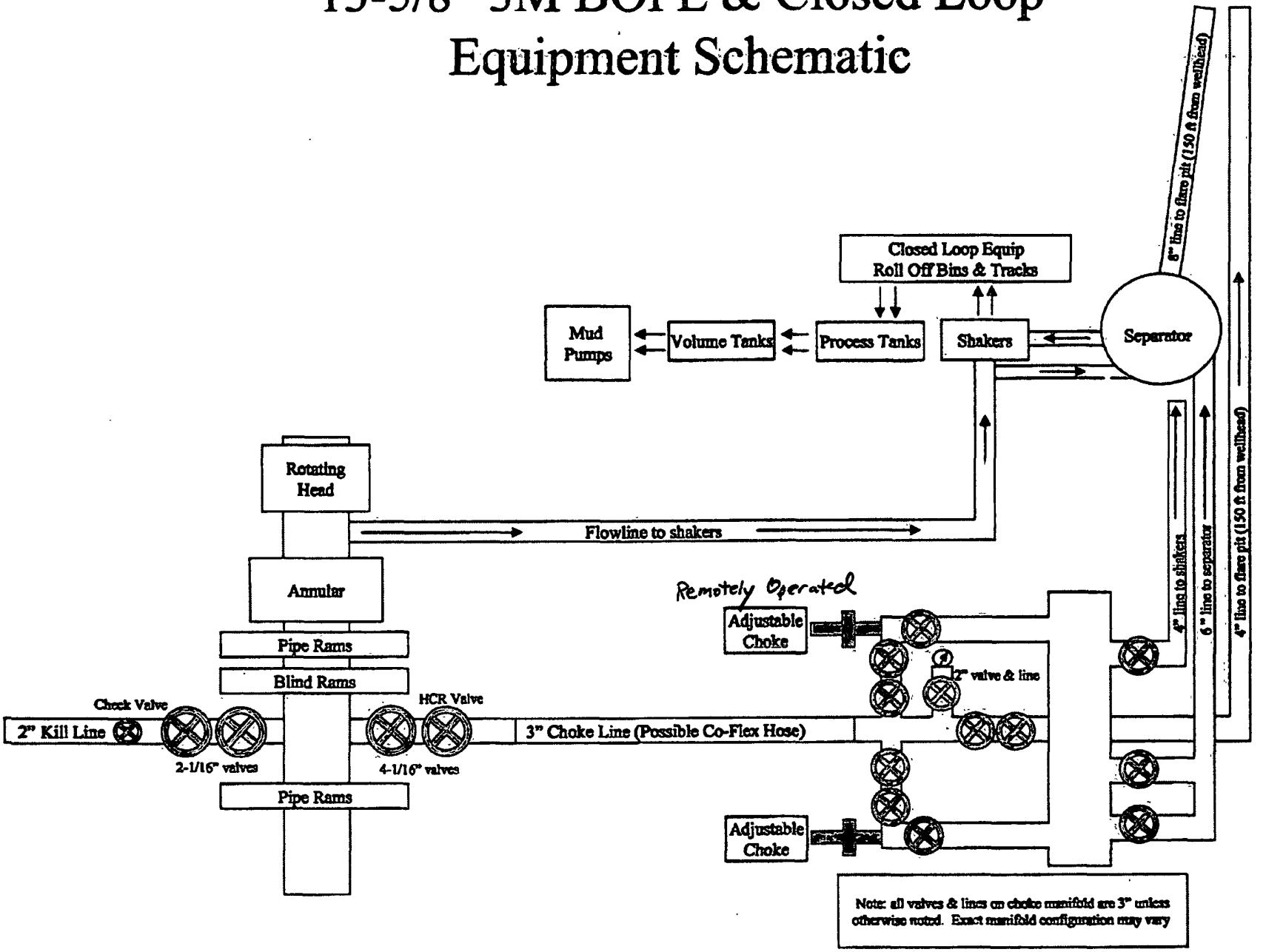
8. Will maintain a kelly cock attached to the kelly.

9. Hand wheels and wrenches will be properly installed and tested for safe operation.

10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.

11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

13-5/8" 3M BOPE & Closed Loop Equipment Schematic



Hydrostatic Test Certificate

Continental CONTITECH

Certificate Number: 4520	**PBC No:** 10321	**Customer Name & Address**
Customer Purchase Order No:	RIG 300	HELMERICH & PAYNE INT'L DRILLING CO 1437 SOUTH BOULDER TULSA, OK 74119
Project:		

Test Centre Address	Accepted by ContiTech Beattie Inspection		Accepted by Client Inspection
ContiTech Beattie Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Signed: Date:	Josh Sims 10/27/10	

We certify that the goods detailed hereon have been inspected by our Quality Management System, and to the best of our knowledge are found to conform to relevant industrial standards within the requirements of the purchase order as issued to ContiTech Beattie Corporation.

These goods were made in the United States of America.

Item	Part No.	Description	Qnty	Serial Number	As-Built Length (m)	Work Press.	Test Press.	Test Time (minutes)
1		3" ID 10K Choke & Kill Hose x 35ft OAL End A: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange End B: 4 1/16" 10Kpsi API Spec 6A Type 6BX Flange Working Pressure: 10,000psi Test Pressure: 15,000psi Serial#: 49106	1	49106		10 kpsi	15 kpsi	60

15
20
10
360 deg = 96 min
Ref # 4486
SN 134403
Recertification
LTB TK
ContiTech-Beattie Corp.
Certified True Copy
10-5-10
40
45
60
65

devon

Devon Energy Corporation
20 North Broadway
Oklahoma City, Oklahoma 73102-8260

Hydrogen Sulfide (H_2S) Contingency Plan

For

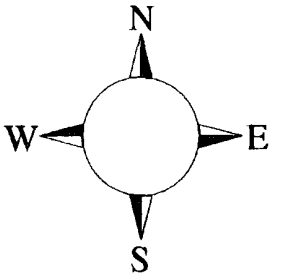
Beryl 33 Federal 1H

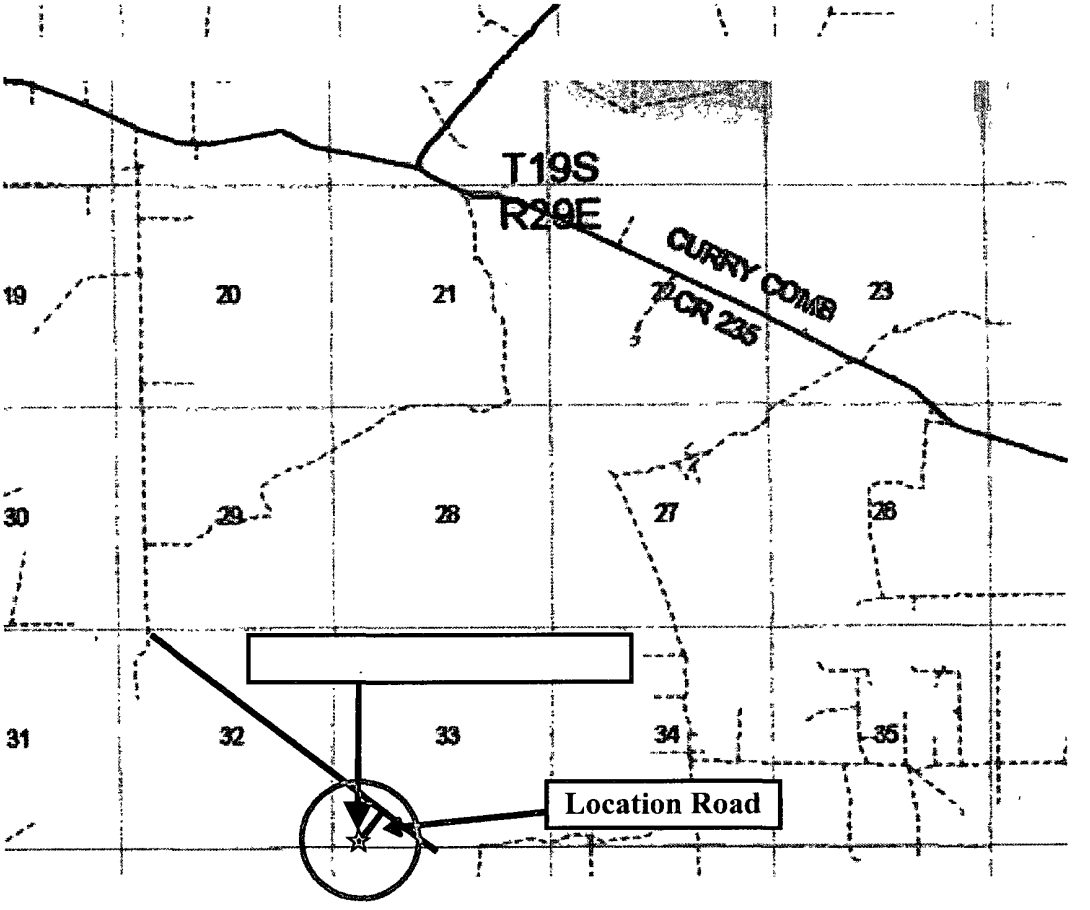
Sec-33, T-19S R-29E
50'FSL & 400' FWL,
LAT. = 32.3520903'N (NAD83)
LONG = 104.0871419'W

Eddy County NM

BERYL "33" Federal 1H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.





Assumed 100 ppm ROE = 3000' (Radius of Exposure)
100 ppm H2S concentration
shall be used for working on this plan

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated Northeasteast then Southwest on caliche road. Crews should then block entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. Evacuation should continue if necessary both directions of lease access road. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H_2S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H_2S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Devon Energy Corp. Company Call List

Artesia (575)	Cellular	Office	Home
Foreman – Robert Bell	748-7448	748-0178	746-2991
Asst. Foreman –Tommy Polly	748-5290	748-0165	748-2846
Don Mayberry	748-5235	748-0164	746-4945
Montral Walker	390-5182	748-0193	936-414-6246
Engineer – Steven Jones	(405) 596-8041	(405) 552-7994	

Agency Call List

Lea County (575)

Hobbs

State Police	392-5588
City Police	397-9265
Sheriff's Office	393-2515
Ambulance	911
Fire Department	397-9308
LEPC (Local Emergency Planning Committee)	393-2870
NMOCD	393-6161
US Bureau of Land Management	393-3612

Eddy County (575)

Carlsbad

State Police	885-3137
City Police	885-2111
Sheriff's Office	887-7551
Ambulance	911
Fire Department	885-2111
LEPC (Local Emergency Planning Committee)	887-3798
US Bureau of Land Management	887-6544
New Mexico Emergency Response Commission (Santa Fe)	(505)476-9600
24 HR	(505) 827-9126
National Emergency Response Center (Washington, DC)	(800) 424-8802

Emergency Services

Boots & Coots IWC	1-800-256-9688 or (281) 931-8884
Cudd Pressure Control	(915) 699-0139 or (915) 563-3356
Halliburton	(575) 746-2757
B. J. Services	(575) 746-3569

Give GPS position:

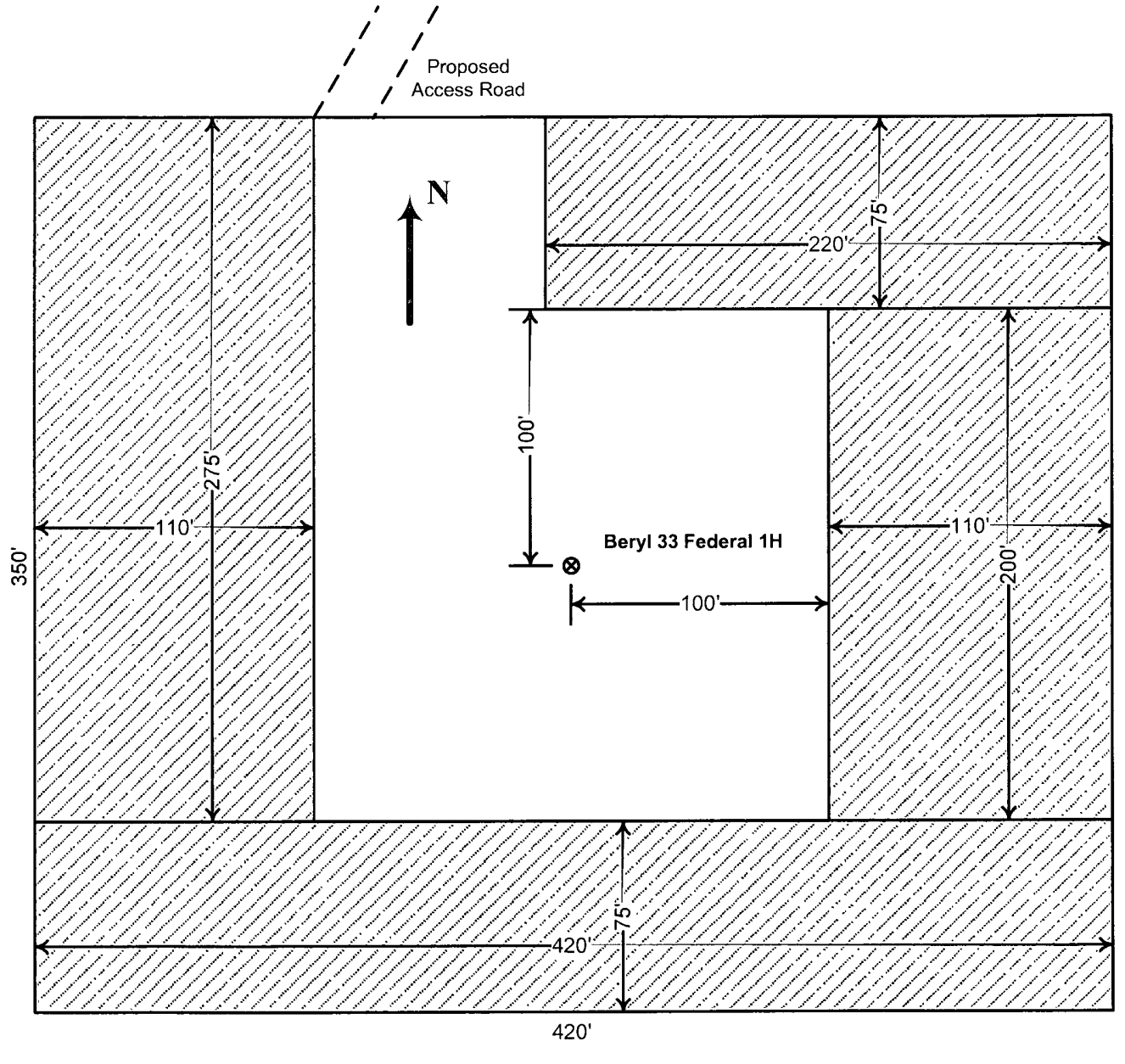
Flight For Life - Lubbock, TX	(806) 743-9911
Aerocare - Lubbock, TX	(806) 747-8923
Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
Lifeguard Air Med Svc. Albuquerque, NM	(575) 272-3115

Prepared in conjunction with
Wade Rohloff

devon

Proposed Interim Site Reclamation

Devon Energy Production Co.
Beryl 33 Federal 1H
50' FSL & 400' FWL
Sec. 33-T19S-R29E
Eddy County, NM



Proposed Reclamation Area

Scale: 1in = 60ft.

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy prod Co
LEASE NO.:	NM98173
WELL NAME & NO.:	Beryl 33 Federal 1H
SURFACE HOLE FOOTAGE:	50' FSL & 400' FWL
BOTTOM HOLE FOOTAGE	330' FNL & 400' FWL
LOCATION:	Section 33, T.19 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator 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 shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

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

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Tank Battery Liners and Berms:
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

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

Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

ROAD FENCING:

The entire length of newly constructed access road will be fenced on both sides in such a way that vehicle travel off of the road is not possible. The fence will be constructed of vertically placed t-posts only so not to interfere with livestock and wildlife travel. All currently disturbed areas outside of the approved width of the road (20 feet during construction, 14 foot driving surface) will be reclaimed.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-6235 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 5 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and **does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty (20) feet.**

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

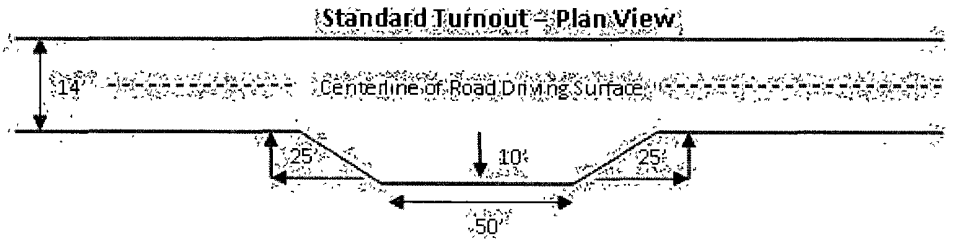
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

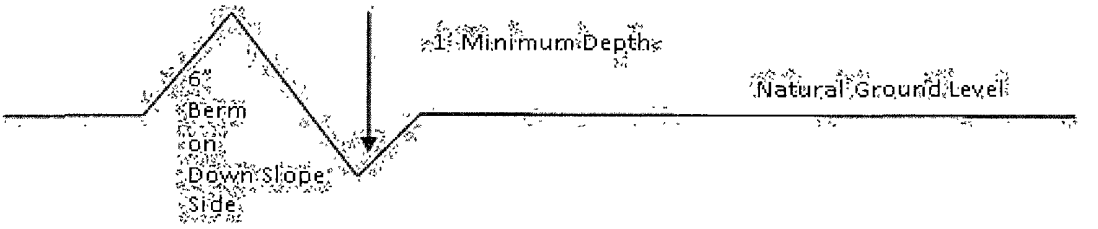
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

Fence Requirement

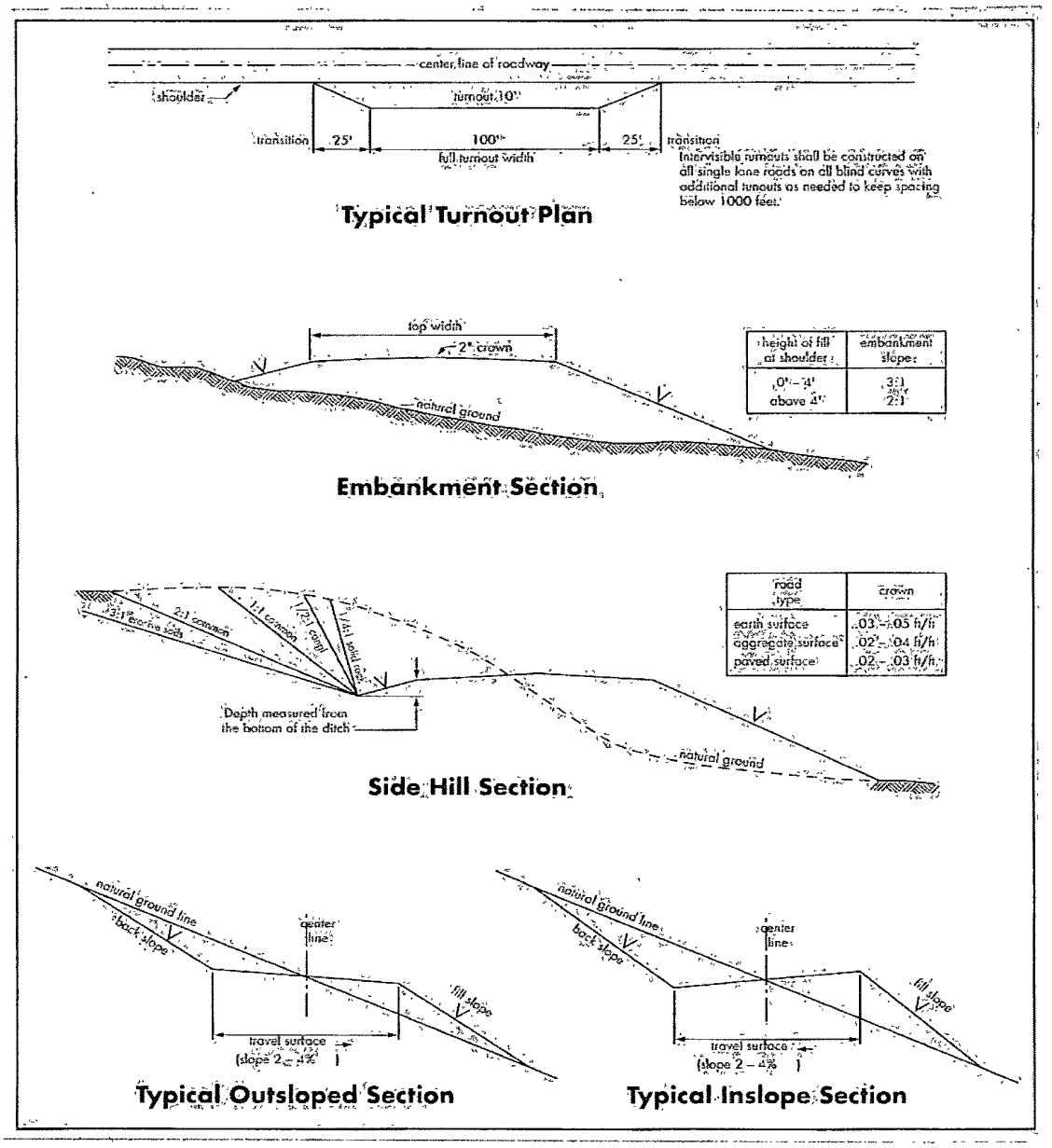
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Hydrogen Sulfide has been reported as a hazard, but no measurements have been recorded. It is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide. If Hydrogen Sulfide is encountered, please report measurements and formations to the BLM.**

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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. Also if present the Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

High cave/karst.
Possible lost circulation in the Grayburg, San Andres, Delaware, Bone Springs and Capitan Reef formations.
Possible brine and water flows in the Salado Group, Artesia Group and the Capitan Reef if present.

1. The **13-3/8** inch surface casing shall be set at approximately **360** feet (in a competent bed and if salt is encountered, set casing at least 25 feet above the salt) and cemented to the surface. **Freshwater mud to be used to setting depth.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to high cave/karst or Capitan Reef.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

Pilot hole plugging approved as proposed.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

☒ Cement should tie-back at least **700 feet** (as per APD) into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. **Variance approved to use flex line with Serial #49106 from BOP to choke manifold. Check condition of 3" flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. Anchor requirements to be onsite for review. If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

    a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips or where the float does not hold, the minimum wait time before cut-off is eight hours after bumping the plug or when the cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. BOP/BOPE testing can begin after the above conditions are satisfied.

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

    c. The results of the test shall be reported to the appropriate BLM office.

    d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

    e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 1, for Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed