

OCD-ARTESIA

Form 3160-3
(February 2005)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007 **EA 226**

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. USA NMNM 90534
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Devon Energy Production Co., LP		7. If Unit or CA Agreement, Name and No.
3a. Address 20 North Broadway OKC, OK 73102		8. Lease Name and Well No. Beetle Juice 19 Federal 1H
3b. Phone No. (include area code) (405)-552-7802		9. API Well No. 30-015-38484
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface NENE 400' FNL & 340' FEL Lot A At proposed prod. zone SESE 330' FSL & 330' FEL Lot P		10. Field and Pool, or Exploratory Hackberry; Bone Spring, NW
14. Distance in miles and direction from nearest town or post office* Approximately 13 miles south of Loco Hills, NM.		11. Sec., T. R. M. or Blk. and Survey or Area Sec 19-T19S-R31E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 340'	16. No. of acres in lease 632.68	12. County or Parish Eddy
17. Spacing Unit dedicated to this well 160	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1930'	19. Proposed Depth PH 9140 TVD 8340' MD 13195' 9347'	20. BLM/BIA Bond No. on file CO-1104
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3415.1' GL	22. Approximate date work will start* 12/15/2010	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:

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

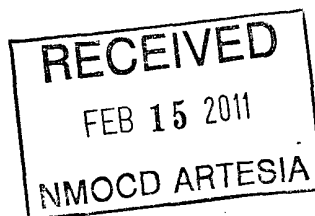
25. Signature 	Name (Printed/Typed) Stephanie A. Ysasaga	Date 11/01/2010
Title Sr. Staff Engineering Technician		
Approved by (Signature) 	Name (Printed/Typed) Don Peterson	Date FEB 9 2011
Title FIELD MANAGER		
Office CARLSBAD FIELD OFFICE		

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 AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

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DRILLING PROGRAM

Devon Energy Production Company, LP

Beetle Juice 19 Federal 1H

Surface Location: 400' FNL & 340' FEL, Unit A, Sec 19 T19S R31E, Eddy, NM

Bottom hole Location: 330' FSL & 330' FEL, Unit P, Sec 19 T19S R31E, 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	414'	Barren
b. Salado	495'	Barren
c. Tansil Dolomite	1934'	Barren
d. Yates	2074'	Oil
e. Seven Rivers	2214'	Oil
f. Queen	3209'	Oil
g. San Andres	4004'	Oil
h. Delaware	4759'	Oil
i. Bone Springs	6409'	Oil
j. 1 st Bone Spring Ss	7914'	Oil
k. 2 nd Bone Spring Lime	8060'	Oil
l. 2 nd Bone Spring Ss	8574'	Oil
m. 2 nd Bone Spring Middle Ss	8760'	Oil
n. 2 nd Bone Spring Middle Ss Base	8872'	Oil
o. 3 rd Bone Spring Lm	9064'	Oil
p. PTD Depth (Pilot Hole)	9139' 9140'	
q. Total Depth	TVD 8818' MD 13195'	
	8847'	

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 ~~475'~~^{400'} and circulating cement back to surface. The fresh water sands will be protected by setting 9 5/8" casing at ~~3100'~~^{3150'} and circulating cement to surface. The Delaware intervals will be isolated by setting 5 1/2" casing to total depth and circulating cement above the base of the 9 5/8" casing. All casing is new and API approved.

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

3. Casing Program:

See COA

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17 1/2"	0'- 475' ^{400'}	13 3/8"	0'- 475' ^{400'}	48#	STC	H-40
12 1/4"	400'-3100' ^{400'-3150'}	9 5/8"	0'- 3100' ^{3150'}	40#	LTC	J-55
8 3/4"	3150'-8200'	5 1/2"	0'-8200'	17#	LTC	P-110HC
8 3/4"	8200'-13195'	5 1/2"	8200-13195'	17#	BTC	P-110HC

An 8-3/4" pilot hole will be drilled to 9,140' MD, and plugged back to KOP. The cement plug details are included below in the "Cementing Program".

Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
13 3/8"	2.99	6.72	12.20
9 5/8" 40# J-55	1.23	2.15	2.74
5 1/2" 17# LTC	1.64	2.02	1.55
5 1/2" 17# BTC	1.84	2.27	5.22

4. Cement Program: (Note: All cement volumes are calculated with 25% excesses.)

- a. 13 3/8" Surface **Lead:** 250 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:** 750 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:** 1.96 cf/sk
- See COF* **Tail:** 300 sacks Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 52.7% Water, 14.8 ppg. **Yield:** 1.34 cf/sk. **TOC @ surface.**
- c. 5 1/2" Production **1st Stage**
- Lead:** 900 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:** 2.00 cf/sk
- Tail:** 1,400 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:** 1.28 cf/sk
- DV TOOL at ~4,500 ft**
- 2nd Stage**
- Lead:** 250 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: 150 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**

8-3/4" Pilot Hole Plug

650 sxs Class H, 18.0 ppg, 0.89 cf/sk
Top of Plug 8,370' (KOP)
Bottom of Plug 9,140' (Pilot Hole TD)

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:

BOP DESIGN: The BOP system used to drill the intermediate hole will consist of a 13-5/8" 3M Double 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 Double 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 each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. 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.

6. Proposed Mud Circulation System

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' - 475' ^{460'}	8.4-9.0	30-34	NC	Fresh Water
400' 475' - 3100' ^{3150'}	9.8-10.0	28-32	NC	Brine
3950' 3100' - 13195'	8.6-9.0	28-32	NC-12	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 CCA*

- 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 1/2" 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 145°. 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.

11. Depending on rig availability, Devon may set the surface casing using an Ashton Oilfield Services rig.

- See CCA*
- a. The rig plat is attached (if applicable). This rig will be used only to set the surface casing and will leave the location once the surface casing has been run and cemented. Another rig will drill the remainder of the wellbore. The reasons for using the smaller rig to set surface are: rig availability and economics.
 - b. The BLM will be contacted 24 hours prior to commencing drilling operations. The surface casing will be run and cemented back to surface as per the approved APD. The well will be secured with a cap welded onto the surface casing. Another rig will be on location to drill the remainder of the wellbore within 60 days after the Ashton rig has left the location.



Devon Energy, Inc.

Eddy County

Beetle Juice "19" Federal

#1H

OH

Plan: Plan #1

Pathfinder X & Y Planning Report

18 November, 2010



A Schlumberger Company



Pathfinder
Pathfinder X & Y Planning Report



Company: Devon Energy, Inc.
Project: Eddy County
Site: Beetle Juice "19" Federal
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 3435.10ft (20' KB Correction McVay #10)
MD Reference: WELL @ 3435.10ft (20' KB Correction McVay #10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

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

Site		Beetle Juice "19" Federal			
Site Position:		Northing:		601,204.450 ft	
From:	Map	Easting:		674,357.480 ft	
Position Uncertainty:		Slot Radius:		"	
0.00 ft				Latitude: 32° 39' 7.251 N	
				Longitude: 103° 54' 4.087 W	
				Grid Convergence: 0.23 °	

Well		#1H				
Well Position	+N/-S	0.00 ft	Northing:	601,204.450 ft	Latitude:	32° 39' 7.251 N
	+E/-W	0.00 ft	Easting:	674,357.480 ft	Longitude:	103° 54' 4.087 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	3,415.10 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/12/10	7.83	60.56	48,931

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	179.46

Survey Tool Program		Date	11/18/10		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	13,194.61	Plan #1 (OH)	Pathfinder	Pathfinder MWD	



Pathfinder
Pathfinder X & Y Planning Report



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Well #1H
WELL @ 3435.10ft (20' KB Correction McVay #10
WELL @ 3435.10ft (20' KB Correction McVay #10
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Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0.00	0.00	0.00	-3,435.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
100.00	0.00	0.00	100.00	-3,335.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
200.00	0.00	0.00	200.00	-3,235.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
300.00	0.00	0.00	300.00	-3,135.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
400.00	0.00	0.00	400.00	-3,035.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
500.00	0.00	0.00	500.00	-2,935.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
600.00	0.00	0.00	600.00	-2,835.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
700.00	0.00	0.00	700.00	-2,735.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
800.00	0.00	0.00	800.00	-2,635.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
900.00	0.00	0.00	900.00	-2,535.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
1,000.00	0.00	0.00	1,000.00	-2,435.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
1,100.00	0.00	0.00	1,100.00	-2,335.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
1,200.00	0.00	0.00	1,200.00	-2,235.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
1,300.00	0.00	0.00	1,300.00	-2,135.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
1,400.00	0.00	0.00	1,400.00	-2,035.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
1,500.00	0.00	0.00	1,500.00	-1,935.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
1,600.00	0.00	0.00	1,600.00	-1,835.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
1,700.00	0.00	0.00	1,700.00	-1,735.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
1,800.00	0.00	0.00	1,800.00	-1,635.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
1,900.00	0.00	0.00	1,900.00	-1,535.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
2,000.00	0.00	0.00	2,000.00	-1,435.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
2,100.00	0.00	0.00	2,100.00	-1,335.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
2,200.00	0.00	0.00	2,200.00	-1,235.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
2,300.00	0.00	0.00	2,300.00	-1,135.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
2,400.00	0.00	0.00	2,400.00	-1,035.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
2,500.00	0.00	0.00	2,500.00	-935.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
2,600.00	0.00	0.00	2,600.00	-835.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48



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2,700.00	0.00	0.00	2,700.00	-735.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
2,800.00	0.00	0.00	2,800.00	-635.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
2,900.00	0.00	0.00	2,900.00	-535.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
3,000.00	0.00	0.00	3,000.00	-435.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
3,100.00	0.00	0.00	3,100.00	-335.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
3,200.00	0.00	0.00	3,200.00	-235.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
3,300.00	0.00	0.00	3,300.00	-135.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
3,400.00	0.00	0.00	3,400.00	-35.10	0.00	0.00	0.00	0.00	601,204.45	674,357.48
3,500.00	0.00	0.00	3,500.00	64.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
3,600.00	0.00	0.00	3,600.00	164.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
3,700.00	0.00	0.00	3,700.00	264.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
3,800.00	0.00	0.00	3,800.00	364.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
3,900.00	0.00	0.00	3,900.00	464.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
4,000.00	0.00	0.00	4,000.00	564.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
4,100.00	0.00	0.00	4,100.00	664.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
4,200.00	0.00	0.00	4,200.00	764.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
4,300.00	0.00	0.00	4,300.00	864.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
4,400.00	0.00	0.00	4,400.00	964.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
4,500.00	0.00	0.00	4,500.00	1,064.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
4,600.00	0.00	0.00	4,600.00	1,164.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
4,700.00	0.00	0.00	4,700.00	1,264.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
4,800.00	0.00	0.00	4,800.00	1,364.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
4,900.00	0.00	0.00	4,900.00	1,464.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
5,000.00	0.00	0.00	5,000.00	1,564.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
5,100.00	0.00	0.00	5,100.00	1,664.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
5,200.00	0.00	0.00	5,200.00	1,764.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
5,300.00	0.00	0.00	5,300.00	1,864.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48



Pathfinder
Pathfinder X & Y Planning Report



Company: Devon Energy, Inc.
Project: Eddy County
Site: Beetle Juice "19" Federal
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 3435.10ft (20' KB Correction McVay #10
MD Reference: WELL @ 3435.10ft (20' KB Correction McVay #10
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
5,400.00	0.00	0.00	5,400.00	1,964.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
5,500.00	0.00	0.00	5,500.00	2,064.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
5,600.00	0.00	0.00	5,600.00	2,164.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
5,700.00	0.00	0.00	5,700.00	2,264.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
5,800.00	0.00	0.00	5,800.00	2,364.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
5,900.00	0.00	0.00	5,900.00	2,464.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
6,000.00	0.00	0.00	6,000.00	2,564.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
6,100.00	0.00	0.00	6,100.00	2,664.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
6,200.00	0.00	0.00	6,200.00	2,764.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
6,300.00	0.00	0.00	6,300.00	2,864.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
6,400.00	0.00	0.00	6,400.00	2,964.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
6,500.00	0.00	0.00	6,500.00	3,064.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
6,600.00	0.00	0.00	6,600.00	3,164.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
6,700.00	0.00	0.00	6,700.00	3,264.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
6,800.00	0.00	0.00	6,800.00	3,364.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
6,900.00	0.00	0.00	6,900.00	3,464.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
7,000.00	0.00	0.00	7,000.00	3,564.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
7,100.00	0.00	0.00	7,100.00	3,664.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
7,200.00	0.00	0.00	7,200.00	3,764.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
7,300.00	0.00	0.00	7,300.00	3,864.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
7,400.00	0.00	0.00	7,400.00	3,964.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
7,500.00	0.00	0.00	7,500.00	4,064.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
7,600.00	0.00	0.00	7,600.00	4,164.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
7,700.00	0.00	0.00	7,700.00	4,264.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
7,800.00	0.00	0.00	7,800.00	4,364.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
7,900.00	0.00	0.00	7,900.00	4,464.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
8,000.00	0.00	0.00	8,000.00	4,564.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48



Pathfinder
Pathfinder X & Y Planning Report



Company: Devon Energy, Inc.
Project: Eddy County
Site: Beetle Juice "19" Federal
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 3435.10ft (20' KB Correction McVay #10
MD Reference: WELL @ 3435.10ft (20' KB Correction McVay #10
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,100.00	0.00	0.00	8,100.00	4,664.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
8,200.00	0.00	0.00	8,200.00	4,764.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
8,300.00	0.00	0.00	8,300.00	4,864.90	0.00	0.00	0.00	0.00	601,204.45	674,357.48
8,369.50	0.00	0.00	8,369.50	4,934.40	0.00	0.00	0.00	0.00	601,204.45	674,357.48
8,375.00	0.66	179.46	8,375.00	4,939.90	-0.03	0.00	0.03	12.00	601,204.42	674,357.48
8,400.00	3.66	179.46	8,399.98	4,964.88	-0.97	0.01	0.97	12.00	601,203.48	674,357.49
8,425.00	6.66	179.46	8,424.88	4,989.78	-3.22	0.03	3.22	12.00	601,201.23	674,357.51
8,450.00	9.66	179.46	8,449.62	5,014.52	-6.77	0.06	6.77	12.00	601,197.68	674,357.54
8,475.00	12.66	179.46	8,474.14	5,039.04	-11.61	0.11	11.61	12.00	601,192.84	674,357.59
8,500.00	15.66	179.46	8,498.38	5,063.28	-17.72	0.17	17.72	12.00	601,186.73	674,357.65
8,525.00	18.66	179.46	8,522.27	5,087.17	-25.09	0.24	25.10	12.00	601,179.36	674,357.72
8,550.00	21.66	179.46	8,545.73	5,110.63	-33.71	0.32	33.71	12.00	601,170.74	674,357.80
8,575.00	24.66	179.46	8,568.72	5,133.62	-43.54	0.41	43.54	12.00	601,160.91	674,357.89
8,600.00	27.66	179.46	8,591.15	5,156.05	-54.56	0.51	54.56	12.00	601,149.89	674,357.99
8,625.00	30.66	179.46	8,612.98	5,177.88	-66.74	0.63	66.74	12.00	601,137.71	674,358.11
8,650.00	33.66	179.46	8,634.14	5,199.04	-80.04	0.75	80.04	12.00	601,124.41	674,358.23
8,675.00	36.66	179.46	8,654.58	5,219.48	-94.43	0.89	94.44	12.00	601,110.02	674,358.37
8,700.00	39.66	179.46	8,674.24	5,239.14	-109.87	1.04	109.88	12.00	601,094.58	674,358.52
8,725.00	42.66	179.46	8,693.06	5,257.96	-126.32	1.19	126.33	12.00	601,078.13	674,358.67
8,750.00	45.65	179.46	8,710.99	5,275.89	-143.74	1.35	143.74	12.00	601,060.71	674,358.83
8,775.00	48.65	179.46	8,727.99	5,292.89	-162.06	1.53	162.07	12.00	601,042.39	674,359.01
8,800.00	51.65	179.46	8,744.01	5,308.91	-181.25	1.71	181.26	12.00	601,023.20	674,359.19
8,825.00	54.65	179.46	8,759.00	5,323.90	-201.26	1.90	201.27	12.00	601,003.19	674,359.38
8,850.00	57.65	179.46	8,772.92	5,337.82	-222.02	2.09	222.03	12.00	600,982.43	674,359.57
8,875.00	60.65	179.46	8,785.74	5,350.64	-243.48	2.29	243.49	12.00	600,960.97	674,359.77
8,900.00	63.65	179.46	8,797.42	5,362.32	-265.58	2.50	265.59	12.00	600,938.87	674,359.98
8,925.00	66.65	179.46	8,807.92	5,372.82	-288.26	2.72	288.27	12.00	600,916.19	674,360.20



Pathfinder
Pathfinder X & Y Planning Report



Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County	TVD Reference:	WELL @ 3435.10ft (20' KB Correction McVay #1C
Site:	Beetle Juice "19" Federal	MD Reference:	WELL @ 3435.10ft (20' KB Correction McVay #1C
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,950.00	69.65	179.46	8,817.22	5,382.12	-311.46	2.94	311.48	12.00	600,892.99	674,360.42
8,975.00	72.65	179.46	8,825.30	5,390.20	-335.12	3.16	335.13	12.00	600,869.33	674,360.64
9,000.00	75.65	179.46	8,832.12	5,397.02	-359.16	3.39	359.18	12.00	600,845.29	674,360.87
9,025.00	78.65	179.46	8,837.68	5,402.58	-383.53	3.61	383.55	12.00	600,820.92	674,361.09
9,050.00	81.65	179.46	8,841.96	5,406.86	-408.16	3.85	408.18	12.00	600,796.29	674,361.33
9,075.00	84.65	179.46	8,844.94	5,409.84	-432.98	4.08	433.00	12.00	600,771.47	674,361.56
9,100.00	87.65	179.46	8,846.62	5,411.52	-457.92	4.32	457.94	12.00	600,746.53	674,361.80
9,123.92	90.52	179.46	8,847.00	5,411.90	-481.83	4.54	481.85	12.00	600,722.62	674,362.02
9,200.00	90.52	179.46	8,846.31	5,411.21	-557.91	5.26	557.93	0.00	600,646.54	674,362.74
9,300.00	90.52	179.46	8,845.40	5,410.30	-657.90	6.20	657.93	0.00	600,546.55	674,363.68
9,400.00	90.52	179.46	8,844.49	5,409.39	-757.89	7.14	757.92	0.00	600,446.56	674,364.62
9,500.00	90.52	179.46	8,843.59	5,408.49	-857.88	8.09	857.92	0.00	600,346.57	674,365.57
9,600.00	90.52	179.46	8,842.68	5,407.58	-957.87	9.03	957.91	0.00	600,246.58	674,366.51
9,700.00	90.52	179.46	8,841.77	5,406.67	-1,057.86	9.97	1,057.91	0.00	600,146.59	674,367.45
9,800.00	90.52	179.46	8,840.86	5,405.76	-1,157.85	10.91	1,157.91	0.00	600,046.60	674,368.39
9,900.00	90.52	179.46	8,839.96	5,404.86	-1,257.85	11.86	1,257.90	0.00	599,946.60	674,369.34
10,000.00	90.52	179.46	8,839.05	5,403.95	-1,357.84	12.80	1,357.90	0.00	599,846.61	674,370.28
10,100.00	90.52	179.46	8,838.14	5,403.04	-1,457.83	13.74	1,457.89	0.00	599,746.62	674,371.22
10,200.00	90.52	179.46	8,837.23	5,402.13	-1,557.82	14.68	1,557.89	0.00	599,646.63	674,372.16
10,300.00	90.52	179.46	8,836.33	5,401.23	-1,657.81	15.62	1,657.89	0.00	599,546.64	674,373.10
10,400.00	90.52	179.46	8,835.42	5,400.32	-1,757.80	16.57	1,757.88	0.00	599,446.65	674,374.05
10,500.00	90.52	179.46	8,834.51	5,399.41	-1,857.79	17.51	1,857.88	0.00	599,346.66	674,374.99
10,600.00	90.52	179.46	8,833.60	5,398.50	-1,957.79	18.45	1,957.87	0.00	599,246.66	674,375.93
10,700.00	90.52	179.46	8,832.70	5,397.60	-2,057.78	19.39	2,057.87	0.00	599,146.67	674,376.87
10,800.00	90.52	179.46	8,831.79	5,396.69	-2,157.77	20.34	2,157.86	0.00	599,046.68	674,377.82
10,900.00	90.52	179.46	8,830.88	5,395.78	-2,257.76	21.28	2,257.86	0.00	598,946.69	674,378.76
11,000.00	90.52	179.46	8,829.97	5,394.87	-2,357.75	22.22	2,357.86	0.00	598,846.70	674,379.70



Pathfinder
Pathfinder X & Y Planning Report



Company: Devon Energy, Inc.
Project: Eddy County
Site: Beetle Juice "19" Federal
Well: #1H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 3435.10ft (20' KB Correction McVay #10
MD Reference: WELL @ 3435.10ft (20' KB Correction McVay #10
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
11,100.00	90.52	179.46	8,829.07	5,393.97	-2,457.74	23.16	2,457.85	0.00	598,746.71	674,380.64
11,200.00	90.52	179.46	8,828.16	5,393.06	-2,557.73	24.11	2,557.85	0.00	598,646.72	674,381.59
11,300.00	90.52	179.46	8,827.25	5,392.15	-2,657.73	25.05	2,657.84	0.00	598,546.72	674,382.53
11,400.00	90.52	179.46	8,826.34	5,391.24	-2,757.72	25.99	2,757.84	0.00	598,446.73	674,383.47
11,500.00	90.52	179.46	8,825.44	5,390.34	-2,857.71	26.93	2,857.84	0.00	598,346.74	674,384.41
11,600.00	90.52	179.46	8,824.53	5,389.43	-2,957.70	27.88	2,957.83	0.00	598,246.75	674,385.36
11,700.00	90.52	179.46	8,823.62	5,388.52	-3,057.69	28.82	3,057.83	0.00	598,146.76	674,386.30
11,800.00	90.52	179.46	8,822.71	5,387.61	-3,157.68	29.76	3,157.82	0.00	598,046.77	674,387.24
11,900.00	90.52	179.46	8,821.81	5,386.71	-3,257.67	30.70	3,257.82	0.00	597,946.78	674,388.18
12,000.00	90.52	179.46	8,820.90	5,385.80	-3,357.67	31.65	3,357.82	0.00	597,846.78	674,389.13
12,100.00	90.52	179.46	8,819.99	5,384.89	-3,457.66	32.59	3,457.81	0.00	597,746.79	674,390.07
12,200.00	90.52	179.46	8,819.08	5,383.98	-3,557.65	33.53	3,557.81	0.00	597,646.80	674,391.01
12,300.00	90.52	179.46	8,818.18	5,383.08	-3,657.64	34.47	3,657.80	0.00	597,546.81	674,391.95
12,400.00	90.52	179.46	8,817.27	5,382.17	-3,757.63	35.42	3,757.80	0.00	597,446.82	674,392.90
12,500.00	90.52	179.46	8,816.36	5,381.26	-3,857.62	36.36	3,857.79	0.00	597,346.83	674,393.84
12,600.00	90.52	179.46	8,815.45	5,380.35	-3,957.61	37.30	3,957.79	0.00	597,246.84	674,394.78
12,700.00	90.52	179.46	8,814.54	5,379.44	-4,057.61	38.24	4,057.79	0.00	597,146.84	674,395.72
12,800.00	90.52	179.46	8,813.64	5,378.54	-4,157.60	39.19	4,157.78	0.00	597,046.85	674,396.67
12,900.00	90.52	179.46	8,812.73	5,377.63	-4,257.59	40.13	4,257.78	0.00	596,946.86	674,397.61
13,000.00	90.52	179.46	8,811.82	5,376.72	-4,357.58	41.07	4,357.77	0.00	596,846.87	674,398.55
13,100.00	90.52	179.46	8,810.91	5,375.81	-4,457.57	42.01	4,457.77	0.00	596,746.88	674,399.49
13,194.61	90.52	179.46	8,810.06	5,374.96	-4,552.17	42.90	4,552.37	0.00	596,652.28	674,400.38



Pathfinder
Pathfinder X & Y Planning Report



Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County	TVD Reference:	WELL @ 3435.10ft (20' KB Correction McVay #10
Site:	Beetle Juice "19" Federal	MD Reference:	WELL @ 3435.10ft (20' KB Correction McVay #10
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
PBHL(BJ#1H)	0.00	0.00	8,810.00	-4,552.17	42.78	596,652.280	674,400.260	32° 38' 22.205 N	103° 54' 3.804 W
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County
Site: Beetle Juice "19" Federal
Well: #1H
Wellbore: OH
Plan: Plan #1 (#1H/OH)

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



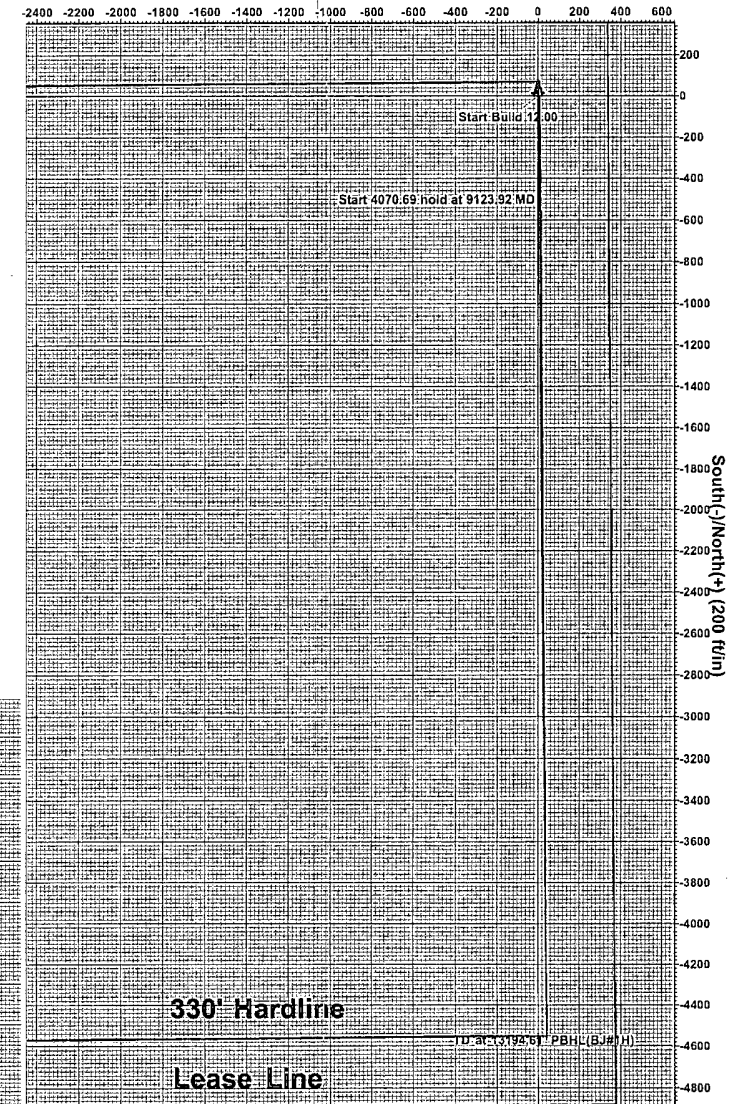
Azimuths to Grid North
True North: -0.23°
Magnetic North: 7.60°

Magnetic Field
Strength: 48930.7snT
Dip Angle: 60.56°
Date: 11/12/2010
Model: IGRF200510



A Schlumberger Company

West(-)/East(+) (200 ft/in)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8369.50	0.00	0.00	8369.50	0.00	0.00	0.00	0.00	0.00	
3	9123.92	90.52	179.46	8847.00	-481.83	4.54	12.00	179.46	481.85	
4	13194.61	90.52	179.46	8810.06	-4552.17	42.90	0.00	0.00	4552.37	PBHL(BJ#1H)

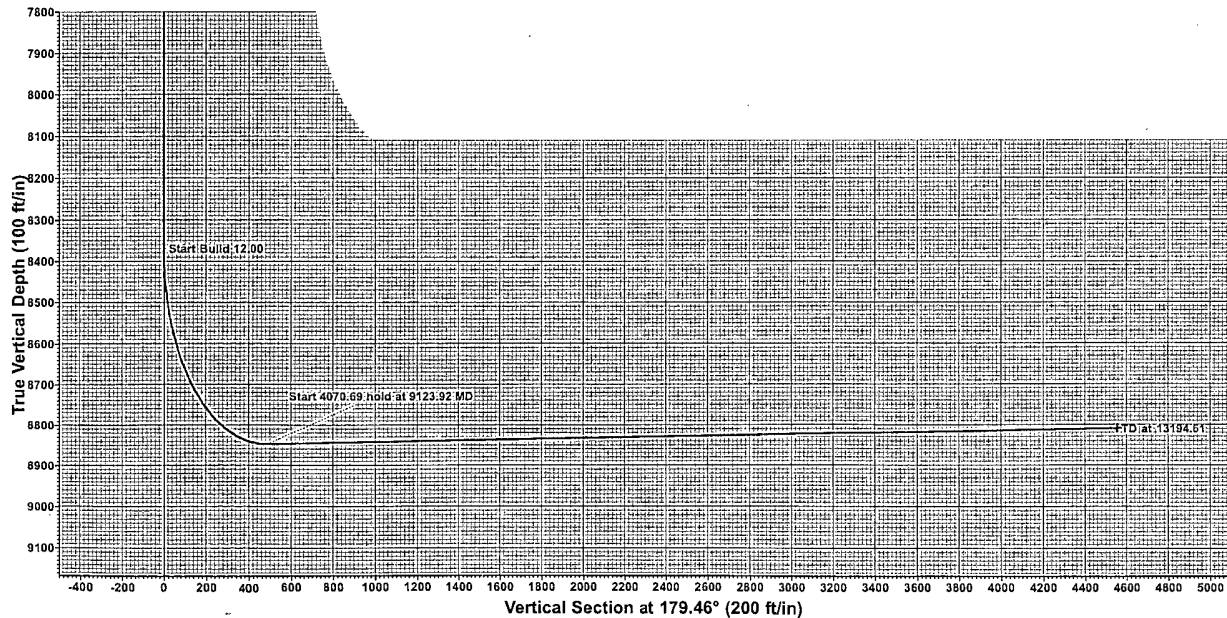
WELL DETAILS: #1H

Ground Elevation: 3415.10
RKB Elevation: WELL @ 3435.10ft (20' KB Correction McVay #10)
Rig Name: 20' KB Correction McVay #10

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	601204.450	674357.480	32° 39' 7.251 N	103° 54' 4.087 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(BJ#1H)	8810.00	-4552.17	42.78	596652.280	674400.260	Point



Plan: Plan #1 (#1H/OH)

Created By: Nate Bingham Date: 11/08, November 18 2010

Checked: _____ Date: _____

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP

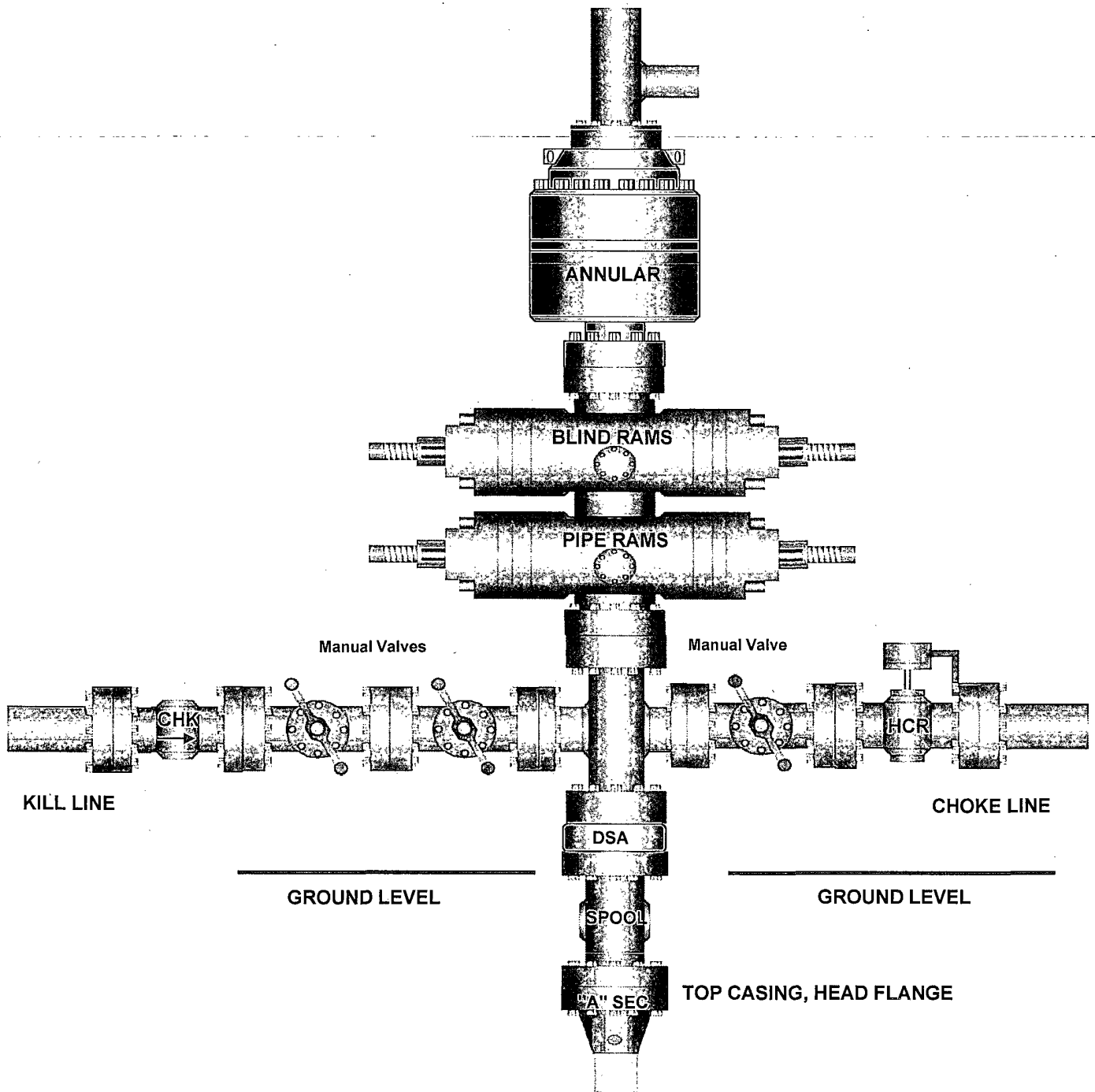
Beetle Juice 19 Federal 1H

Surface Location: 400' FNL & 340' FEL, Unit A, Sec 19 T19S R31E, Eddy, NM

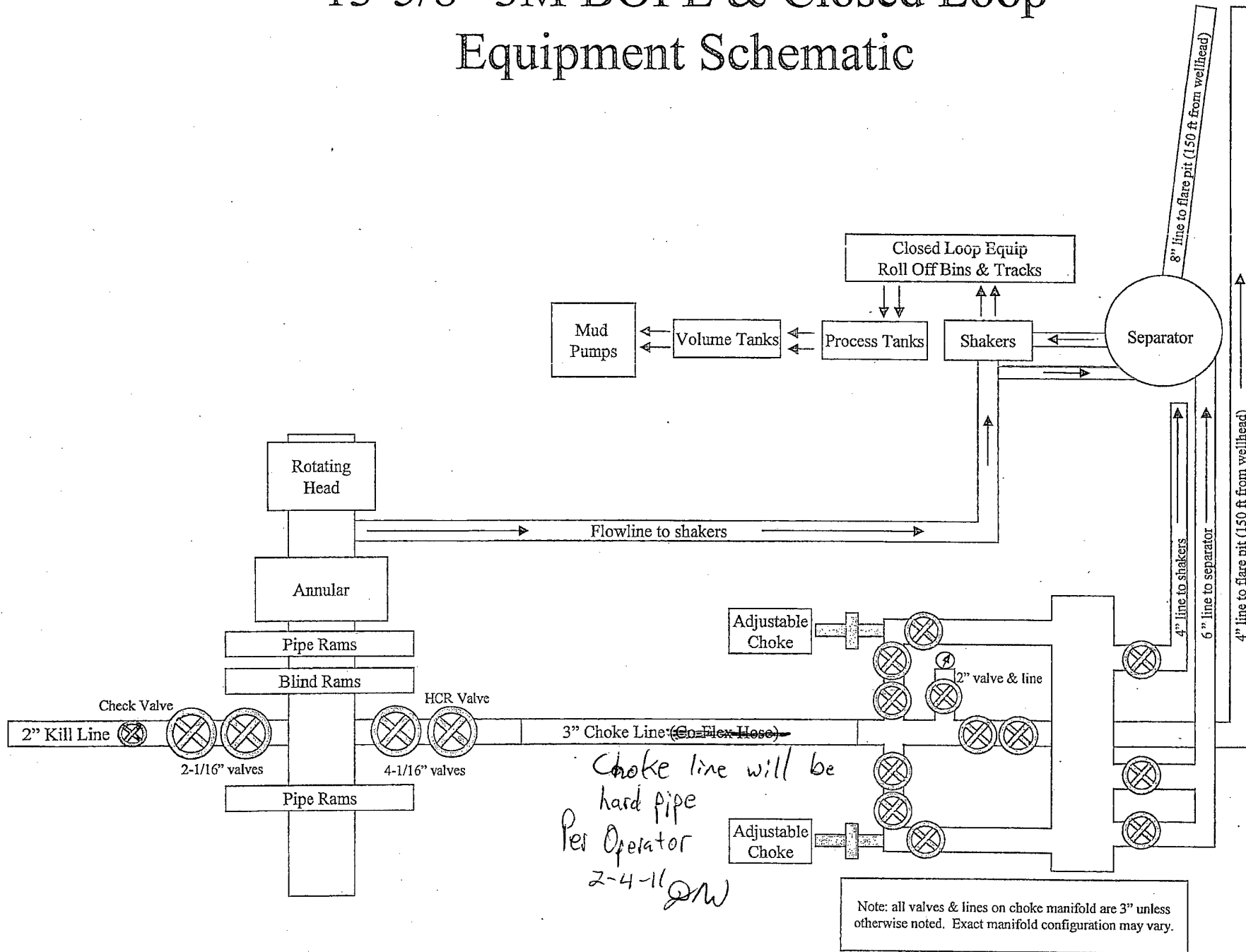
Bottom hole Location: 330' FSL & 330' FEL, Unit P, Sec 19 T19S R31E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 3000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 3000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

13-5/8" x 3,000 psi BOP Stack



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



Closed Loop Equipment Diagram

