

ATS-14-655

Carlsbad Field Office OCD Artesia

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

5. Lease Serial No.
NMLC 061862

6. If Indian, Allottee or Tribe Name

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator Devon Energy Production Company, L.P.

3a. Address 333 W. Sheridan
Oklahoma City, OK 73102

3b. Phone No. (include area code)
405.552.6559

4. Location of Well (Report location clearly and in accordance with any State requirements.)
At surface 330 FNL & 1150 FEL, Unit A PP: 330 FNL & 1150 FEL
At proposed prod. zone 330 FSL & 330 FEL, Unit P

14. Distance in miles and direction from nearest town or post office*
20 Miles SE of Malga, NM

7. If Unit or CA Agreement, Name and No.
Cotton Draw Unit C-02-0398

8. Lease Name and Well No.
Cotton Draw 14 Fed 4H

9. API Well No.

10. Field and Pool or Exploratory
Cotton Draw; Bone Spring (13367)

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 14, T25S, R31E

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) See attached map

16. No. of acres in lease
NMCL 061862=1720 ac

17. Spacing Unit dedicated to this well
160 ac

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map

19. Proposed Depth
10,398' TVD, 14,847' MD

20. BLM/BIA Bond No. on file
CO-1104; NBM-000801

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3415.3 GL

22. Approximate date work will start*
11/15/2014

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)
Ryan DeLong

Date
03/24/2014

Title

Regulatory Coordinator

Approved by (Signature)

Name (Printed/Typed)

IS/ STEPHEN J. CAFFEY

Date
7-9-14

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.

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.

(Continued on page 2)

*(Instructions on page 2)

CARLSBAD CONTROLLED WATER BARRI

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 14 2014

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

RECEIVED

Approval Subject to General Requirements
& Special Stipulations Attached

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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 August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015-42505		2 Pool Code 13367		3 Pool Name Paduca	
4 Property Code 313486		5 Property Name COTTON DRAW 14 FEDERAL		6 Well Number 4H	
7 OGRID No. 6137		8 Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.		9 Elevation 3415.3	

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
A	14	25 S	31 E		330	NORTH	1150	EAST	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
P	14	25 S	31 E		330	SOUTH	330	EAST	EDDY

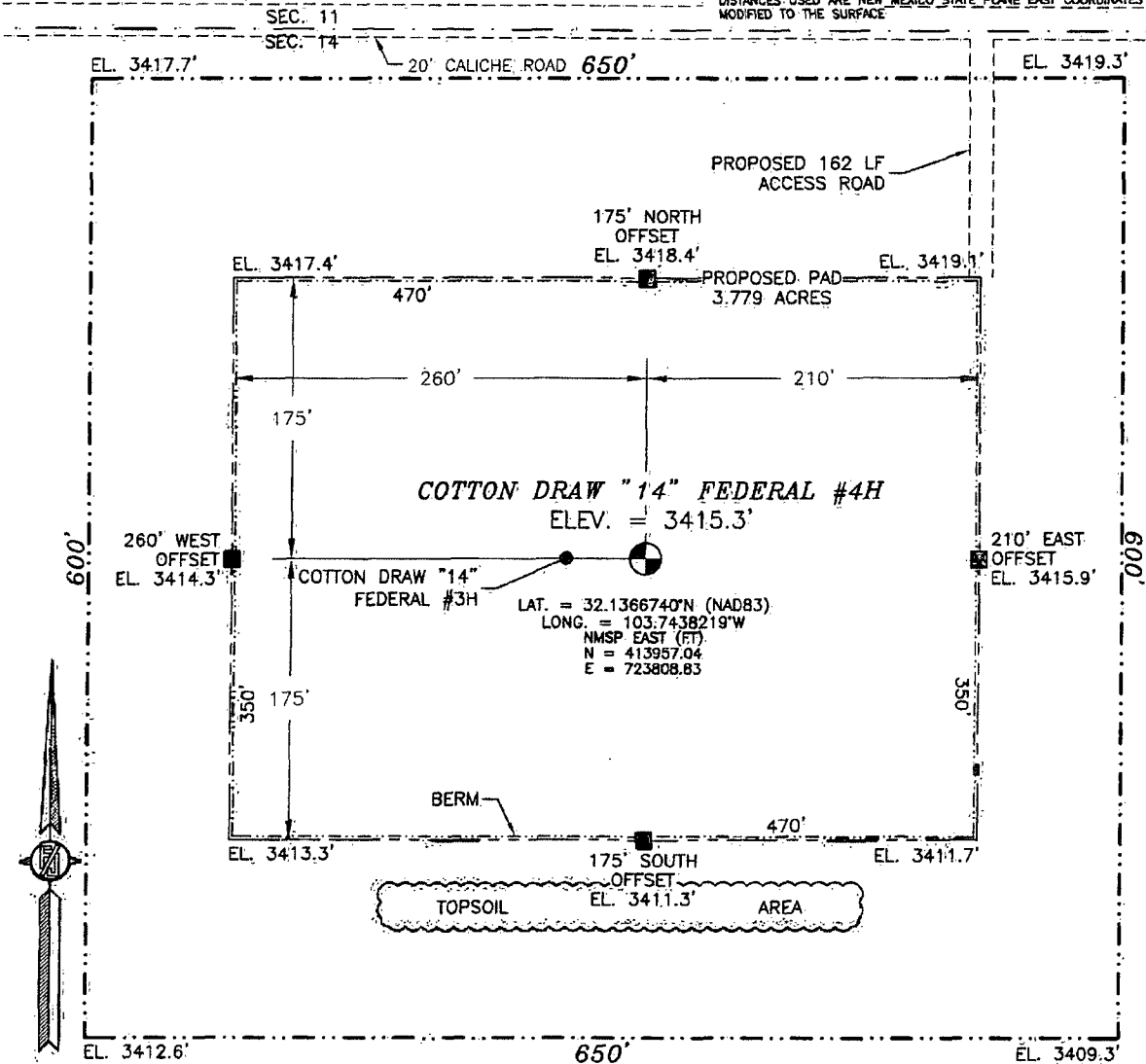
12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
160 ac			

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.
PP: 330FNL & 1150FEL 14-25S-31E

S89°44'55"E 2646.89 FT NW CORNER SEC. 14 LAT. = 32.1376926°N LONG. = 103.7572043°W NMSP EAST (FT) N = 414305.21 E = 719864.53 W Q CORNER SEC. 14 LAT. = 32.1304013°N LONG. = 103.7572709°W NMSP EAST (FT) N = 411652.84 E = 719658.11 NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. SW CORNER SEC. 14 LAT. = 32.1231182°N LONG. = 103.7573246°W NMSP EAST (FT) N = 409003.08 E = 719655.63		S89°44'55"E 2646.89 FT NE CORNER SEC. 14 LAT. = 32.1375499°N LONG. = 103.7401065°W NMSP EAST (FT) N = 414281.99 E = 724957.10 SURFACE LOCATION COTTON DRAW "14" FEDERAL #4H ELEV. = 3415.3' LAT. = 32.1366740°N (NAD83) LONG. = 103.7438219°W NMSP EAST (FT) N = 413957.04 E = 723808.83 E Q CORNER SEC. 14 LAT. = 32.1302841°N LONG. = 103.7401147°W NMSP EAST (FT) N = 411638.81 E = 724969.15 BOTTOM OF HOLE LAT. = 32.1239473°N LONG. = 103.7411942°W NMSP EAST (FT) N = 409331.75 E = 724647.65 SE CORNER SEC. 14 LAT. = 32.1230397°N LONG. = 103.7401304°W NMSP EAST (FT) N = 409003.37 E = 724978.78 S Q CORNER SEC. 14 LAT. = 32.1230451°N LONG. = 103.7486843°W NMSP EAST (FT) N = 408980.89 E = 722330.65		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 undivided 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 into. Signature: <i>[Signature]</i> Date: 3/24/14 Ryan DeLong - Regulatory Coordinator Printed Name ryan.delong@dvn.com E-mail Address 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. Date of Survey: JULY 25, 2013 Signature of Professional Surveyor: <i>[Signature]</i> Certificate Number: 12797 SURVEY NO. 2022	
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SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE.



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM: STATE HIGHWAY 128 AND CR 1 (ORLA HIGHWAY) GO SOUTH ON CR 1 6.5 MILES, TURN RIGHT ON CALICHE ROAD (MONSANTO ROAD) AND GO WEST 2.2 MILES; TURN RIGHT AND GO NORTH 0.75 MILES; BEND LEFT AND GO WEST 2.0 MILES; TURN RIGHT AND GO NORTH 0.25 MILES, TURN LEFT AND GO WEST 1200' AND LOCATION IS ON THE LEFT (SOUTH) 330'.

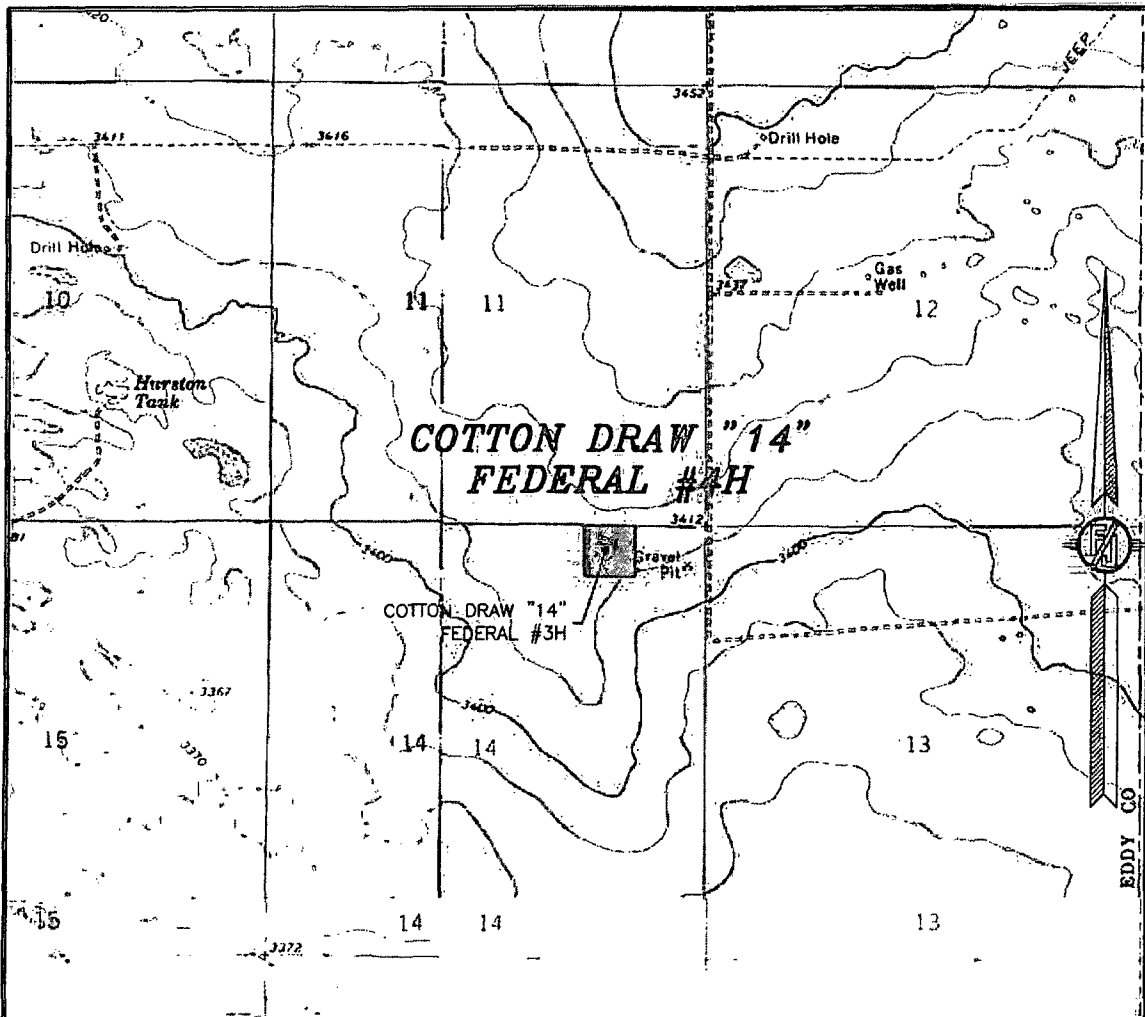
DEVON ENERGY PRODUCTION COMPANY, L.P.
COTTON DRAW "14" FEDERAL #4H
LOCATED 330 FT. FROM THE NORTH LINE
AND 1150 FT. FROM THE EAST LINE OF
SECTION 14, TOWNSHIP 25 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JULY 25, 2013

SURVEY NO. 2022

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
BIG SINKS

NOT TO SCALE

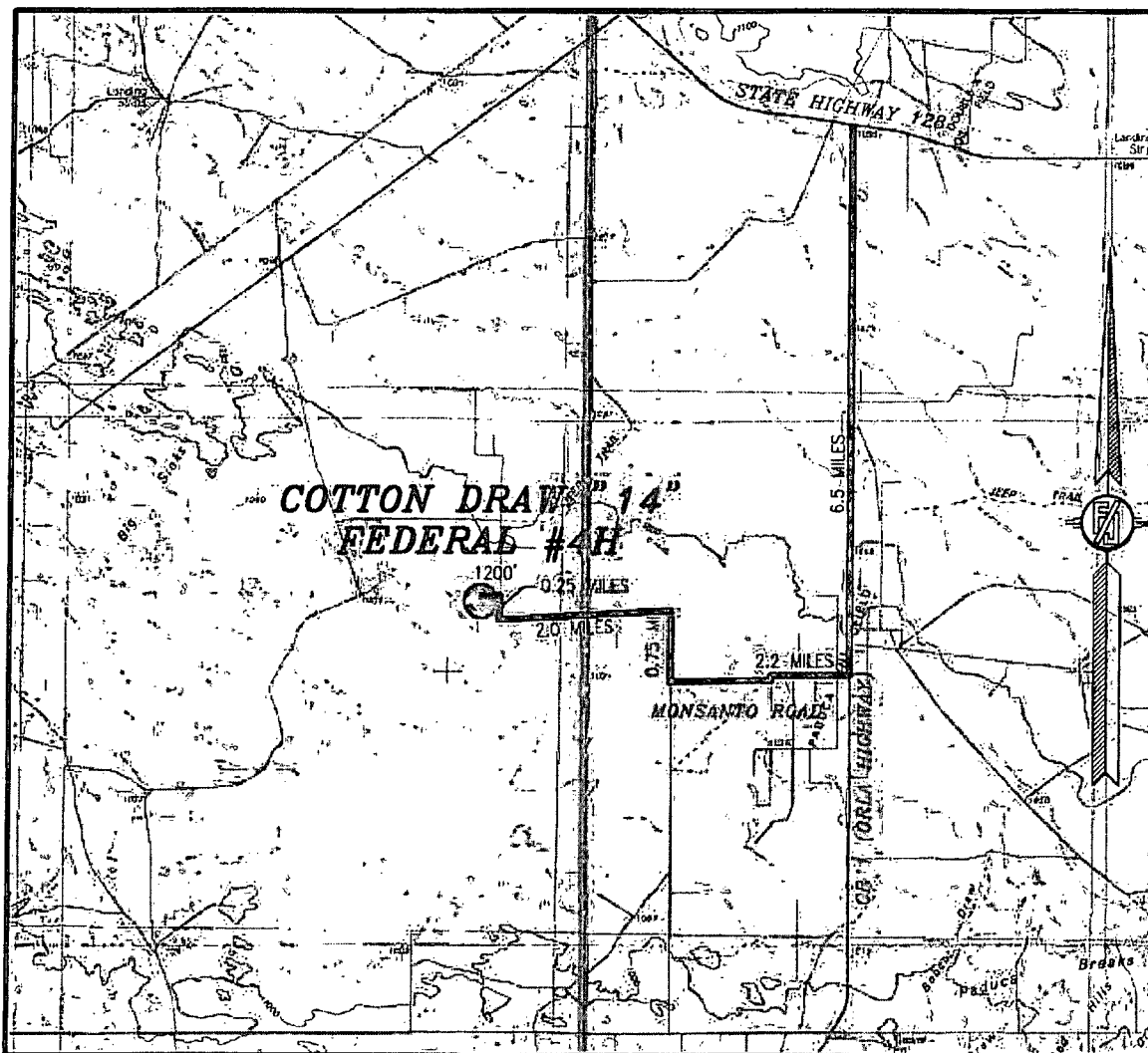
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SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

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EDDY COUNTY, STATE OF NEW MEXICO

JULY 25, 2013

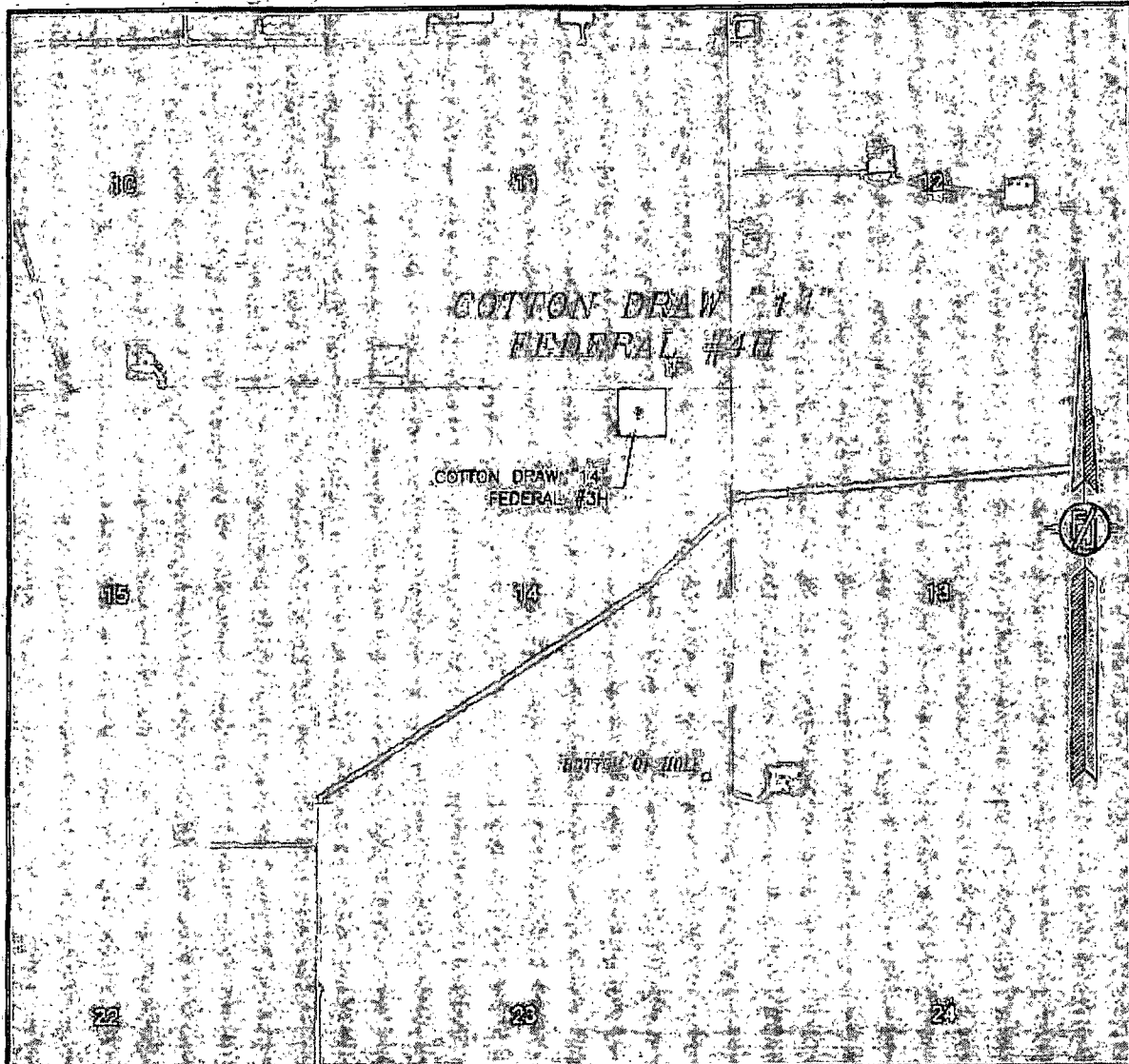
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AND GO WEST 2.2 MILES, TURN RIGHT AND GO NORTH 0.75 MILES,
BEND LEFT AND GO WEST 2.0 MILES, TURN RIGHT AND GO NORTH
0.25 MILES, TURN LEFT AND GO WEST 1200' AND LOCATION IS ON
THE LEFT (SOUTH) 330'.

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SURVEY NO. 2022

SECTION 14, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



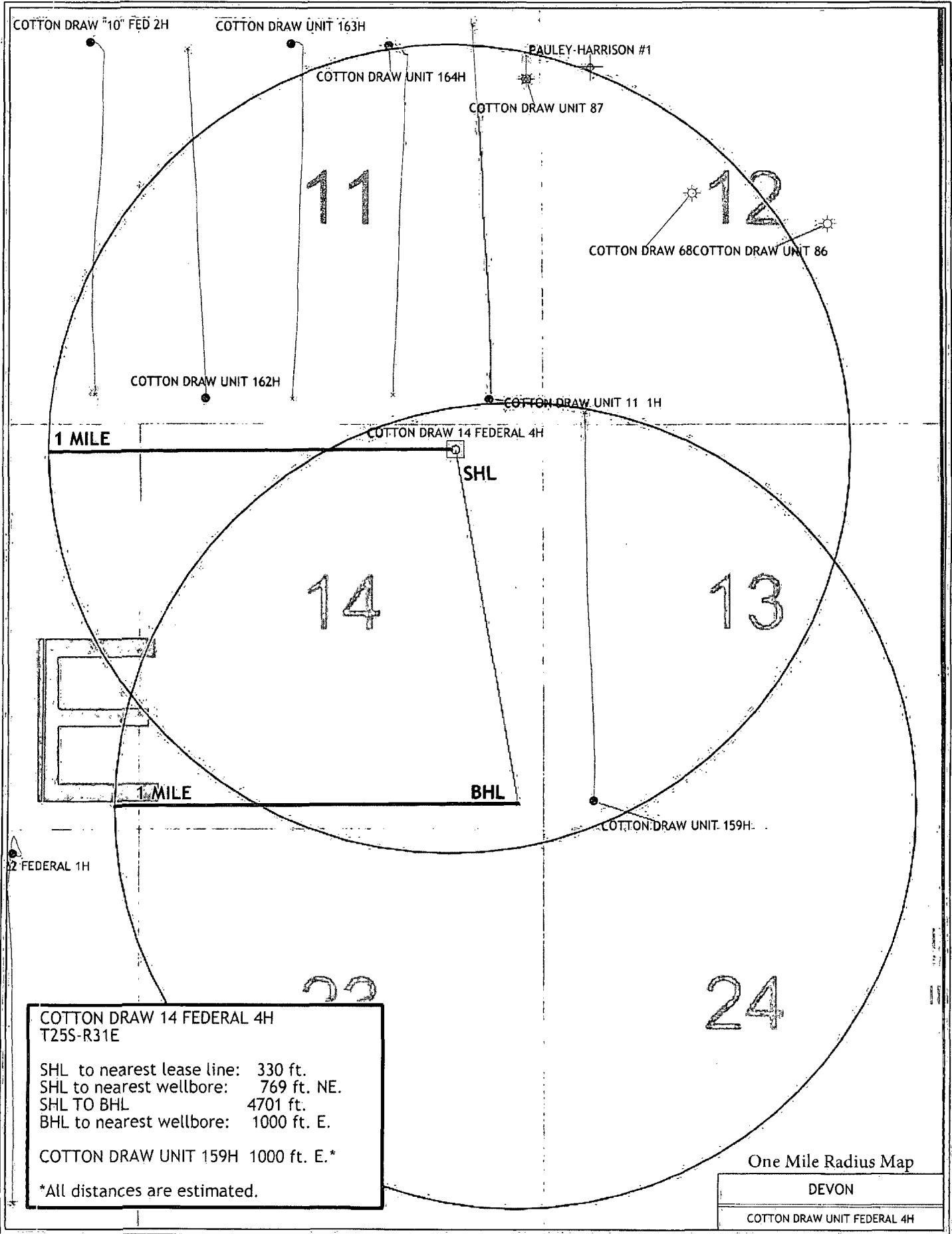
NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
APRIL 2013

DEVON ENERGY PRODUCTION COMPANY, L.P.
COTTON DRAW "14" FEDERAL #4H
LOCATED 330 FT. FROM THE NORTH LINE
AND 1150 FT. FROM THE EAST LINE OF
SECTION 14, TOWNSHIP 25 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JULY 25, 2013

SURVEY NO. 2022

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO



DRILLING PROGRAM

Devon Energy Production Company, L.P.
Cotton Draw 14 Fed 3H

1. **Geologic Name of Surface Formation:** Quaternary

2. **Estimated Tops of Geological Markers & Depths of Anticipated FW, Oil, or Gas:**

a. Fresh Water	350'	
b. Rustler	676'	Barren
c. Top Salt	975'	Barren
d. Base Salt/LWR Castille	4163'	Barren
e. Delaware	4386'	Oil/Gas
f. Bone Spring Lime	8410'	Oil/Gas
g. 1 st Bone Spring Sand	9318'	Oil/Gas
h. 2 nd Bone Spring Sand	9960'	Oil/Gas
Total Depth	10,398' TVD	14816' MD

3. Pressure Control Equipment:

A 3M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the surface casing shoe. The BOP system used to drill the intermediate hole will be tested per BLM Onshore Oil and Gas Order 2.

A 3M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the intermediate casing shoe. The BOP system used to drill the production hole will be tested per BLM Onshore Oil and Gas Order 2.

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.

See
COA

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.

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.

4. Casing Program:

See
COA

Hole Size	Hole Interval, ⁷⁵⁰	Casing OD	Casing Interval ⁷⁵⁰	Weight (lb/ft)	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
17-1/2"	0 - 775 ⁷⁵⁰	13-3/8"	0 - 775 ⁷⁵⁰	48	STC	H-40	2.12	4.77	14.54
12-1/4"	775 - 4300'	9-5/8"	0 - 4300'	40	BTC	J-55	1.13	1.73	3.02
8-3/4"	4300-14847'	5-1/2"	0-14847'	17	BTC	P-110	1.54	2.19	3.09

Casing Notes:

- All casing is new and API approved

Maximum Lateral TVD: 10,398'

5. Proposed mud Circulations System:

See
COA

Depth ⁷⁵⁰	Mud Weight	Viscosity	Fluid Loss	Type System
0 - 775 ⁷⁵⁰	8.4-9.0	30-34	N/C	FW
775 - 4300'	10-10.2	28-32	N/C	Brine
4300-14847'	8.6-9.0	28-32	N/C	FW

The necessary mud products for weight addition and fluid loss control will be on location at all times. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume. If abnormal pressures are encountered, electronic/mechanical mud monitoring equipment will be installed.

6. Cementing Table:

String	Number of sx	Weight lbs/gal	Water Volume g/sx	Yield cf/sx	Stage; Lead/Tail	Slurry Description
13-3/8" Surface	840	14.8	6.32	1.33	Tail	Class C Cement + 63.5% Fresh Water
9-5/8" Intermediate	910	12.9	9.81	1.85	Lead	(65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 70.9 % Fresh Water
	430	14.8	6.32	1.33	Tail	Class C Cement + 63.5% Fresh Water
5-1/2" Production Casing 2-Stage	610	12.5	10.86	1.96	Lead	(65:35) Class H Cement: Poz (Fly Ash) + 6% BWOC Bentonite + 0.25% BWOC HR-601 + 0.125 lbs/sack Poly-E-Flake + 74.1 % Fresh Water
	1380	14.5	5.38	1.22	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.25% bwoc CFR-3 + 0.1% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water
	DV Tool @ 5500ft					
	550	11.0	15.23	2.71	Lead	Tuned Light Blend + 0.125 lb/sk Pol-E-Flake + 76.3% Fresh Water
	160	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water

TOC for all Strings:

13-3/8" Surface 0ft

9-5/8" Intermediate 0ft

5-1/2" Production 2-Stage
Stage #1 = 5500ft
Stage #2 = 3800ft

Notes:

- Cement volumes Surface 100%, Intermediate 75% and Production based on at least 25% excess
- Actual cement volumes will be adjusted based on fluid caliper and caliper log data
- If lost circulation is encountered while drilling the production hole section, a DV tool will be installed a minimum of 50' below the intermediate casing shoe. If the DV tool has to be moved, the cement volumes will be adjusted proportionately. Both single and double stage proposals are listed in the cement table. The cement will tie back 500' into the 9-5/8" casing shoe.

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. No logs are planned
 - d. No coring program is planned
 - e. Additional Testing will be initiated subsequent to setting the production casing. Specific intervals will be targeted based on log evaluation, geological sample shows, and drill stem tests.

7. Potential Hazards:

- a. No abnormal pressures or temperatures are expected. There is no known presence of H₂S in this area, and none is anticipated to be encountered. 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 being used to drill this well. Estimated BHP: 4679 psi, and estimated BHT: 164 degrees.
- b. Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached.

8. 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 Energy

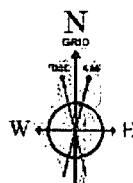
Location: Eddy County, NM
Field: (Cotton) Sec 10, T25S, R31E
Facility: Cotton Draw 14 Fed Com (3.4)

Slot: No.4H SHL
Well: No.4H
Wellbore: No.4H PWB

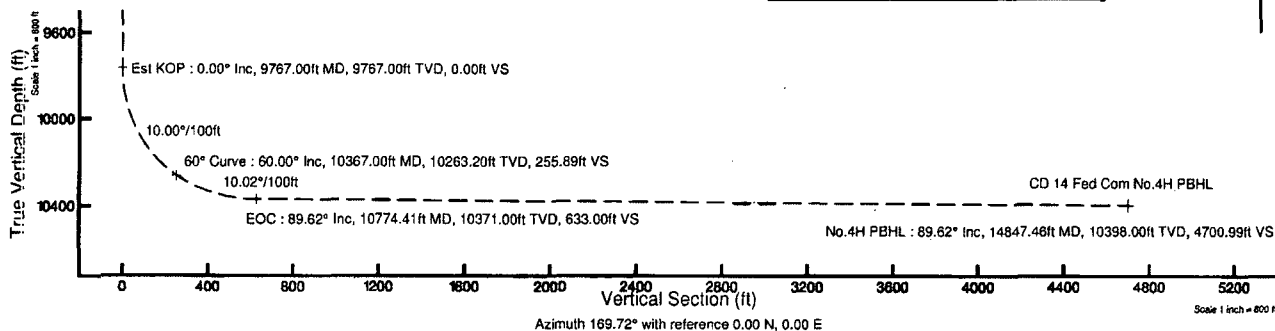
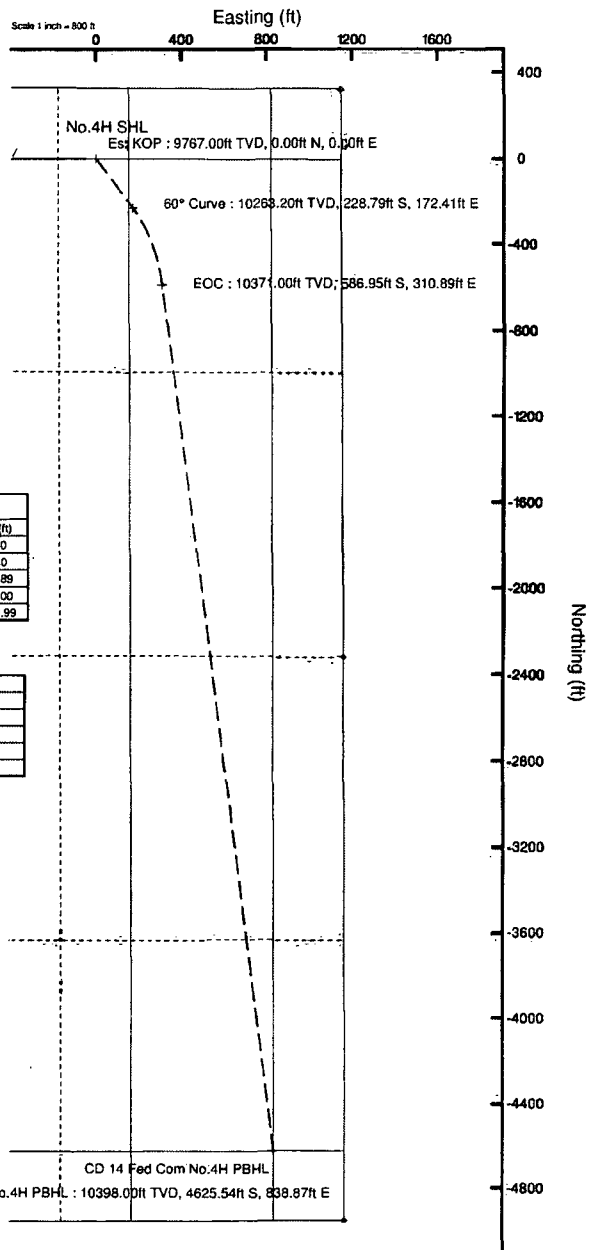


Well Profile Data								
Design Comment	MD (ft)	Inc. (")	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	25.00	0.000	143.000	25.00	0.00	0.00	0.00	0.00
Est KOP	9767.00	0.000	143.000	9767.00	0.00	0.00	0.00	0.00
60° Curve	10367.00	60.000	143.000	10263.20	-228.79	172.41	10.00	255.89
EOC	10774.41	89.620	172.552	10371.00	-566.95	310.89	10.02	633.00
No.4H PBHL	14847.46	89.620	172.552	10398.00	-4625.54	838.87	0.00	4700.99

Plot reference wellpath is Rev-A.0	
True vertical depths are referenced to Rig on No.4H SHL (KB)	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.4H SHL (KB)	North Reference: Grid north
Fig on No.4H SHL (KB) to Mean Sea Level: 3440.3 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No.4H SHL): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gentry on 3/4/2014



BGGM (1945.0 to 2015.0) Dip: 59.99° Field: 48251.9 nT
Magnetic North is 7.44 degrees East of True North (at 3/3/2014)
Grid North is 0.31 degrees East of True North
To correct azimuth from True to Grid subtract 0.31 degrees
To correct azimuth from Magnetic to Grid add 7.13 degrees



Rev-A.0



Planned Wellpath Report

Rev-A.0
Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.4H PWB
Facility	Cotton-Draw 14 Fed Com (3,4)		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 4.0.1
North Reference	Grid	User	Gentbry
Scale	0.999947	Report Generated	3/4/2014 at 8:30:04 AM
Convergence at slot	0.31° East	Database/Source file	MidlandDB/No.4H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.22	50.05	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W
Facility Reference Pt			723758.78	413957.26	32°08'12.031"N	103°44'38.341"W
Field Reference Pt			718969.84	419273.98	32°09'04.900"N	103°45'33.707"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No.4H SHL (KB) to Facility Vertical Datum	3440.30ft
Horizontal Reference Pt	Slot	Rig on No.4H SHL (KB) to Mean Sea Level	3440.30ft
Vertical Reference Pt	Rig on No.4H SHL (KB)	Rig on No.4H SHL (KB) to Mud Line at Slot (No.4H SHL)	3440.30ft
MD Reference Pt	Rig on No.4H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	169.72°



Planned Wellpath Report

Rev-A.0
Page 2 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.4H PWB
Facility	Cotton Draw 14 Fed Com (3,4)		

WELLPATH DATA (161 stations) † = interpolated/extrapolated station

MD (ft)	Inclination [°]	Azimuth [°]	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	143.000	0.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
25.00	0.000	143.000	25.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	Tic On
125.00†	0.000	143.000	125.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
225.00†	0.000	143.000	225.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
325.00†	0.000	143.000	325.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
425.00†	0.000	143.000	425.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
525.00†	0.000	143.000	525.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
625.00†	0.000	143.000	625.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
676.00†	0.000	143.000	676.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	Rustler
725.00†	0.000	143.000	725.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
825.00†	0.000	143.000	825.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
925.00†	0.000	143.000	925.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
975.00†	0.000	143.000	975.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	Top Salt
1025.00†	0.000	143.000	1025.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
1125.00†	0.000	143.000	1125.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
1225.00†	0.000	143.000	1225.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
1325.00†	0.000	143.000	1325.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
1425.00†	0.000	143.000	1425.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
1525.00†	0.000	143.000	1525.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
1625.00†	0.000	143.000	1625.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
1725.00†	0.000	143.000	1725.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
1825.00†	0.000	143.000	1825.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
1925.00†	0.000	143.000	1925.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
2025.00†	0.000	143.000	2025.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
2125.00†	0.000	143.000	2125.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
2225.00†	0.000	143.000	2225.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
2325.00†	0.000	143.000	2325.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
2425.00†	0.000	143.000	2425.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
2525.00†	0.000	143.000	2525.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
2625.00†	0.000	143.000	2625.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
2725.00†	0.000	143.000	2725.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
2825.00†	0.000	143.000	2825.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
2925.00†	0.000	143.000	2925.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
3025.00†	0.000	143.000	3025.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
3125.00†	0.000	143.000	3125.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
3225.00†	0.000	143.000	3225.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
3325.00†	0.000	143.000	3325.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
3425.00†	0.000	143.000	3425.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
3525.00†	0.000	143.000	3525.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
3625.00†	0.000	143.000	3625.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
3725.00†	0.000	143.000	3725.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
3825.00†	0.000	143.000	3825.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
3925.00†	0.000	143.000	3925.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
4025.00†	0.000	143.000	4025.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
4125.00†	0.000	143.000	4125.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.4H PWB
Facility	Cotton Draw 14 Fed Com (3,4)		

WELLPATH DATA (161 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4163.00†	0.000	143.000	4163.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	Base Salt
4225.00†	0.000	143.000	4225.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
4325.00†	0.000	143.000	4325.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
4386.00†	0.000	143.000	4386.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	Delaware
4425.00†	0.000	143.000	4425.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
4525.00†	0.000	143.000	4525.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
4625.00†	0.000	143.000	4625.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
4725.00†	0.000	143.000	4725.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
4825.00†	0.000	143.000	4825.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
4925.00†	0.000	143.000	4925.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
5025.00†	0.000	143.000	5025.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
5125.00†	0.000	143.000	5125.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
5225.00†	0.000	143.000	5225.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
5325.00†	0.000	143.000	5325.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
5425.00†	0.000	143.000	5425.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
5525.00†	0.000	143.000	5525.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
5625.00†	0.000	143.000	5625.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
5725.00†	0.000	143.000	5725.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
5825.00†	0.000	143.000	5825.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
5925.00†	0.000	143.000	5925.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
6025.00†	0.000	143.000	6025.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
6125.00†	0.000	143.000	6125.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
6225.00†	0.000	143.000	6225.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
6325.00†	0.000	143.000	6325.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
6425.00†	0.000	143.000	6425.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
6525.00†	0.000	143.000	6525.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
6625.00†	0.000	143.000	6625.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
6725.00†	0.000	143.000	6725.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
6825.00†	0.000	143.000	6825.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
6925.00†	0.000	143.000	6925.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
7025.00†	0.000	143.000	7025.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
7125.00†	0.000	143.000	7125.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
7225.00†	0.000	143.000	7225.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
7325.00†	0.000	143.000	7325.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
7425.00†	0.000	143.000	7425.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
7525.00†	0.000	143.000	7525.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
7625.00†	0.000	143.000	7625.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
7725.00†	0.000	143.000	7725.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
7825.00†	0.000	143.000	7825.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
7925.00†	0.000	143.000	7925.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
8025.00†	0.000	143.000	8025.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
8125.00†	0.000	143.000	8125.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
8225.00†	0.000	143.000	8225.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
8325.00†	0.000	143.000	8325.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
8410.00†	0.000	143.000	8410.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	Bone Spring Lmne



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REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	(Cotton) Sec 10, T2SS, R31E	Wellbore	No.4H PWB
Facility	Cotton Draw 14 Fed Com (3,4)		

WELLPATH DATA (161 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8425.00†	0.000	143.000	8425.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
8525.00†	0.000	143.000	8525.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
8625.00†	0.000	143.000	8625.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
8725.00†	0.000	143.000	8725.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
8825.00†	0.000	143.000	8825.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
8925.00†	0.000	143.000	8925.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
9025.00†	0.000	143.000	9025.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
9125.00†	0.000	143.000	9125.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
9225.00†	0.000	143.000	9225.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
9318.00†	0.000	143.000	9318.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	1st Bone Spring Sand
9325.00†	0.000	143.000	9325.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
9425.00†	0.000	143.000	9425.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
9525.00†	0.000	143.000	9525.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
9625.00†	0.000	143.000	9625.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
9725.00†	0.000	143.000	9725.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	
9767.00	0.000	143.000	9767.00	0.00	0.00	0.00	723808.83	413957.04	32°08'12.026"N	103°44'37.759"W	0.00	Est KOP
9825.00†	5.800	143.000	9824.90	2.62	-2.34	1.77	723810.60	413954.70	32°08'12.003"N	103°44'37.738"W	10.00	
9925.00†	15.800	143.000	9923.01	19.34	-17.29	13.03	723821.86	413939.75	32°08'11.854"N	103°44'37.608"W	10.00	
9962.79†	19.579	143.000	9959.00	29.59	-26.46	19.94	723828.77	413930.58	32°08'11.763"N	103°44'37.529"W	10.00	2nd Bone Spring Sand
10025.00†	25.800	143.000	10016.37	51.01	-45.61	34.37	723843.20	413911.43	32°08'11.573"N	103°44'37.362"W	10.00	
10125.00†	35.800	143.000	10102.16	96.69	-86.45	65.15	723873.97	413870.59	32°08'11.167"N	103°44'37.007"W	10.00	
10225.00†	45.800	143.000	10177.76	154.98	-138.57	104.42	723913.25	413818.48	32°08'10.649"N	103°44'36.553"W	10.00	
10325.00†	55.800	143.000	10240.88	224.11	-200.38	151.00	723959.82	413756.67	32°08'10.035"N	103°44'36.015"W	10.00	
10367.00	60.000	143.000	10263.20	255.89	-228.79	172.41	723981.23	413728.26	32°08'09.753"N	103°44'35.768"W	10.00	60° Curve
10425.00†	63.906	147.880	10290.48	302.53	-270.94	201.39	724010.21	413686.11	32°08'09.384"N	103°44'35.434"W	10.02	
10525.00†	70.980	155.575	10328.86	390.27	-352.22	244.93	724053.74	413604.84	32°08'08.528"N	103°44'34.933"W	10.02	
10625.00†	78.345	162.628	10355.32	484.95	-442.23	279.18	724088.00	413514.84	32°08'07.635"N	103°44'34.540"W	10.02	
10725.00†	85.874	169.311	10369.06	583.66	-538.21	303.11	724111.93	413418.86	32°08'06.684"N	103°44'34.268"W	10.02	
10774.41	89.620	172.552	10371.00	633.00	-586.95	310.89	724119.70	413370.12	32°08'06.201"N	103°44'34.181"W	10.02	EOC
10825.00†	89.620	172.552	10371.34	683.53	-637.11	317.45	724126.26	413319.96	32°08'05.705"N	103°44'34.108"W	0.00	
10925.00†	89.620	172.552	10372.00	783.41	-736.27	330.41	724139.22	413220.81	32°08'04.723"N	103°44'33.963"W	0.00	
11025.00†	89.620	172.552	10372.66	883.29	-835.42	343.37	724152.18	413121.66	32°08'03.741"N	103°44'33.819"W	0.00	
11125.00†	89.620	172.552	10373.33	983.16	-934.57	356.34	724165.15	413022.52	32°08'02.759"N	103°44'33.674"W	0.00	
11225.00†	89.620	172.552	10373.99	1083.04	-1033.73	369.30	724178.11	412923.37	32°08'01.777"N	103°44'33.530"W	0.00	
11325.00†	89.620	172.552	10374.65	1182.91	-1132.88	382.26	724191.07	412824.22	32°08'00.795"N	103°44'33.386"W	0.00	
11425.00†	89.620	172.552	10375.31	1282.79	-1232.04	395.22	724204.03	412725.07	32°07'59.814"N	103°44'33.241"W	0.00	
11525.00†	89.620	172.552	10375.98	1382.66	-1331.19	408.19	724216.99	412625.92	32°07'58.832"N	103°44'33.097"W	0.00	
11625.00†	89.620	172.552	10376.64	1482.54	-1430.35	421.15	724229.96	412526.77	32°07'57.850"N	103°44'32.952"W	0.00	
11725.00†	89.620	172.552	10377.30	1582.42	-1529.50	434.11	724242.92	412427.62	32°07'56.868"N	103°44'32.808"W	0.00	
11825.00†	89.620	172.552	10377.97	1682.29	-1628.65	447.07	724255.88	412328.48	32°07'55.886"N	103°44'32.663"W	0.00	
11925.00†	89.620	172.552	10378.63	1782.17	-1727.81	460.04	724268.84	412229.33	32°07'54.904"N	103°44'32.519"W	0.00	
12025.00†	89.620	172.552	10379.29	1882.04	-1826.96	473.00	724281.80	412130.18	32°07'53.923"N	103°44'32.375"W	0.00	
12125.00†	89.620	172.552	10379.95	1981.92	-1926.12	485.96	724294.76	412031.03	32°07'52.941"N	103°44'32.230"W	0.00	
12225.00†	89.620	172.552	10380.62	2081.79	-2025.27	498.92	724307.73	411931.88	32°07'51.959"N	103°44'32.086"W	0.00	
12325.00†	89.620	172.552	10381.28	2181.67	-2124.42	511.89	724320.69	411832.73	32°07'50.977"N	103°44'31.941"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	(Cotton) Sec 10, T2S5, R31E	Wellbore	No.4H PWB
Facility	Cotton Draw 14 Fed Com (3,4)		

WELLPATH DATA (161 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12425.00†	89.620	172.552	10381.94	2281.55	-2223.58	524.85	724333.65	411733.58	32°07'49.995"N	103°44'31.797"W	0.00	
12525.00†	89.620	172.552	10382.61	2381.42	-2322.73	537.81	724346.61	411634.44	32°07'49.013"N	103°44'31.653"W	0.00	
12625.00†	89.620	172.552	10383.27	2481.30	-2421.89	550.77	724359.57	411535.29	32°07'48.031"N	103°44'31.508"W	0.00	
12725.00†	89.620	172.552	10383.93	2581.17	-2521.04	563.74	724372.54	411436.14	32°07'47.050"N	103°44'31.364"W	0.00	
12825.00†	89.620	172.552	10384.59	2681.05	-2620.99	576.70	724385.50	411336.99	32°07'46.068"N	103°44'31.219"W	0.00	
12925.00†	89.620	172.552	10385.26	2780.92	-2719.35	589.66	724398.46	411237.84	32°07'45.086"N	103°44'31.075"W	0.00	
13025.00†	89.620	172.552	10385.92	2880.80	-2818.50	602.63	724411.42	411138.69	32°07'44.104"N	103°44'30.931"W	0.00	
13125.00†	89.620	172.552	10386.58	2980.68	-2917.66	615.59	724424.38	411039.54	32°07'43.122"N	103°44'30.786"W	0.00	
13225.00†	89.620	172.552	10387.25	3080.55	-3016.81	628.55	724437.35	410940.39	32°07'42.140"N	103°44'30.642"W	0.00	
13325.00†	89.620	172.552	10387.91	3180.43	-3115.96	641.51	724450.31	410841.25	32°07'41.159"N	103°44'30.497"W	0.00	
13425.00†	89.620	172.552	10388.57	3280.30	-3215.12	654.48	724463.27	410742.10	32°07'40.177"N	103°44'30.353"W	0.00	
13525.00†	89.620	172.552	10389.23	3380.18	-3314.27	667.44	724476.23	410642.95	32°07'39.195"N	103°44'30.209"W	0.00	
13625.00†	89.620	172.552	10389.90	3480.06	-3413.43	680.40	724489.19	410543.80	32°07'38.213"N	103°44'30.064"W	0.00	
13725.00†	89.620	172.552	10390.56	3579.93	-3512.58	693.36	724502.16	410444.65	32°07'37.231"N	103°44'29.920"W	0.00	
13825.00†	89.620	172.552	10391.22	3679.81	-3611.73	706.33	724515.12	410345.50	32°07'36.249"N	103°44'29.775"W	0.00	
13925.00†	89.620	172.552	10391.89	3779.68	-3710.89	719.29	724528.08	410246.35	32°07'35.267"N	103°44'29.631"W	0.00	
14025.00†	89.620	172.552	10392.55	3879.56	-3810.04	732.25	724541.04	410147.21	32°07'34.286"N	103°44'29.487"W	0.00	
14125.00†	89.620	172.552	10393.21	3979.43	-3909.20	745.22	724554.01	410048.06	32°07'33.304"N	103°44'29.342"W	0.00	
14225.00†	89.620	172.552	10393.87	4079.31	-4008.35	758.18	724566.97	409948.91	32°07'32.322"N	103°44'29.198"W	0.00	
14325.00†	89.620	172.552	10394.54	4179.19	-4107.51	771.14	724579.93	409849.76	32°07'31.340"N	103°44'29.053"W	0.00	
14425.00†	89.620	172.552	10395.20	4279.06	-4206.66	784.10	724592.89	409750.61	32°07'30.358"N	103°44'28.909"W	0.00	
14525.00†	89.620	172.552	10395.86	4378.94	-4305.81	797.07	724605.85	409651.46	32°07'29.376"N	103°44'28.765"W	0.00	
14625.00†	89.620	172.552	10396.53	4478.81	-4404.97	810.03	724618.82	409552.31	32°07'28.394"N	103°44'28.620"W	0.00	
14725.00†	89.620	172.552	10397.19	4578.69	-4504.12	822.99	724631.78	409453.17	32°07'27.413"N	103°44'28.476"W	0.00	
14825.00†	89.620	172.552	10397.85	4678.56	-4603.28	835.95	724644.74	409354.02	32°07'26.431"N	103°44'28.331"W	0.00	
14847.46	89.620	172.552	10398.00	4700.99	-4625.54	838.87	724647.65	409331.75	32°07'26.210"N	103°44'28.299"W	0.00	No.4H PBHL



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	No.4H SHL
Area	Eddy County, NM	Well	No.4H
Field	(Cotton) Sec 10, T25S, R31E	Wellbore	No.4H PWB
Facility	Cotton Draw 14 Fed Com (3,4)		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) CD 14 Fed Com No.4H PBHL	14847.46	10398.00	-4625.54	838.87	724647.65	409331.75	32°07'26.210"N	103°44'28.299"W	point

SURVEY PROGRAM - Ref Wellbore: No.4H PWB Ref Wellpath: Rev-A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	14847.46	NaviTrak (Standard)		No.4H PWB

PLANNED WELLPATH REPORT (CSV version)

Prepared by Baker Hughes

Software System: WellArchitect® 4.0.1

REFERENCE WELLPATH IDENTIFICATION

Operator Devon Energy
Area Eddy County, NM
Field (Cotton) Sec 10, T25S, R31E
Facility Cotton Draw 14 Fed Com (3,4)
Slot No.4H SHL
Well No.4H
Wellbore No.4H PWB
Wellpath Rev-A.0
Sidetrack (none)

REPORT SETUP INFORMATION

Projection : NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet

North Refe Grid

Scale 0.999947

Convergence 0.31° East

Software S WellArchitect® 4.0.1

User Gentbry

Report Gen 3/4/2014 at 8:30:04 AM

DataBase/£ MidlandsDB/ev1011.xml

WELLPATH	Local North [ft]	Local East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Locatic	-0.22	50.05	723808.8	413957.3	32°08'12.0"	103°44'37.759"W
Facility Ref			723758.8	413957.3	32°08'12.0"	103°44'38.341"W
Field Refer			718969.8	419274	32°09'04.9"	103°45'33.707"W

WELLPATH DATUM

Calculation Minimum curvature

Horizontal Slot

Vertical Ref: Rig on No.4H SHL (KB)

MD Refere: Rig on No.4H SHL (KB)

Field Vertic Mean Sea Level

Rig on No.4 3440.30ft

Rig on No.4 3440.30ft

Rig on No.4 3440.30ft

Section Ori N 0.00, E 0.00 ft

Section Azi 169.72°

WELL PATH DATA † = interpolated/extrapolated station

	MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
†	0	0	143	0	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
	25	0	143	25	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	Tie On
†	125	0	143	125	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	225	0	143	225	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	325	0	143	325	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	425	0	143	425	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	525	0	143	525	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	625	0	143	625	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	676	0	143	676	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	Rustler
†	725	0	143	725	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	825	0	143	825	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	925	0	143	925	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	975	0	143	975	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	Top Salt
†	1025	0	143	1025	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	1125	0	143	1125	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	1225	0	143	1225	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	1325	0	143	1325	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	1425	0	143	1425	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	1525	0	143	1525	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	1625	0	143	1625	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	1725	0	143	1725	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	1825	0	143	1825	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	1925	0	143	1925	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	2025	0	143	2025	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	2125	0	143	2125	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	2225	0	143	2225	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	2325	0	143	2325	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	2425	0	143	2425	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	2525	0	143	2525	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	2625	0	143	2625	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	2725	0	143	2725	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	2825	0	143	2825	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	2925	0	143	2925	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	3025	0	143	3025	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	3125	0	143	3125	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	3225	0	143	3225	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	3325	0	143	3325	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	3425	0	143	3425	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	
†	3525	0	143	3525	0	0	0	723808.8	413957	32°08'12.0"	103°44'37."	0	

†	3625	0	143	3625	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	3725	0	143	3725	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	3825	0	143	3825	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	3925	0	143	3925	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	4025	0	143	4025	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	4125	0	143	4125	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	4163	0	143	4163	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	Base Salt
†	4225	0	143	4225	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	4325	0	143	4325	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	4386	0	143	4386	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	Delaware
†	4425	0	143	4425	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	4525	0	143	4525	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	4625	0	143	4625	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	4725	0	143	4725	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	4825	0	143	4825	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	4925	0	143	4925	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	5025	0	143	5025	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	5125	0	143	5125	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	5225	0	143	5225	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	5325	0	143	5325	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	5425	0	143	5425	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	5525	0	143	5525	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	5625	0	143	5625	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	5725	0	143	5725	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	5825	0	143	5825	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	5925	0	143	5925	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	6025	0	143	6025	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	6125	0	143	6125	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	6225	0	143	6225	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	6325	0	143	6325	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	6425	0	143	6425	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	6525	0	143	6525	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	6625	0	143	6625	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	6725	0	143	6725	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	6825	0	143	6825	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	6925	0	143	6925	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	7025	0	143	7025	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	7125	0	143	7125	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	7225	0	143	7225	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	7325	0	143	7325	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	7425	0	143	7425	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	7525	0	143	7525	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	
†	7625	0	143	7625	0	0	0	723808.8	413957 32°08'12.0: 103°44'37.7	0	

†	7725	0	143	7725	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	7825	0	143	7825	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	7925	0	143	7925	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	8025	0	143	8025	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	8125	0	143	8125	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	8225	0	143	8225	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	8325	0	143	8325	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	8410	0	143	8410	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0 Bone Spring Lime
†	8425	0	143	8425	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	8525	0	143	8525	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	8625	0	143	8625	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	8725	0	143	8725	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	8825	0	143	8825	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	8925	0	143	8925	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	9025	0	143	9025	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	9125	0	143	9125	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	9225	0	143	9225	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	9318	0	143	9318	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0 1st Bone Spring Sand
†	9325	0	143	9325	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	9425	0	143	9425	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	9525	0	143	9525	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	9625	0	143	9625	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
†	9725	0	143	9725	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0
	9767	0	143	9767	0	0	0	723808.8	413957	32°08'12.0" 103°44'37.0"	0 Est KOP
†	9825	5.8	143	9824.9	2.62	-2.34	1.77	723810.6	413954.7	32°08'12.0" 103°44'37.0"	10
†	9925	15.8	143	9923.01	19.34	-17.29	13.03	723821.9	413939.8	32°08'11.8" 103°44'37.0"	10
†	9962.79	19.579	143	9959	29.59	-26.46	19.94	723828.8	413930.6	32°08'11.7" 103°44'37.0"	10 2nd Bone Spring Sand
†	10025	25.8	143	10016.37	51.01	-45.61	34.37	723843.2	413911.4	32°08'11.5" 103°44'37.0"	10
†	10125	35.8	143	10102.16	96.69	-86.45	65.15	723874	413870.6	32°08'11.1" 103°44'37.0"	10
†	10225	45.8	143	10177.76	154.98	-138.57	104.42	723913.3	413818.5	32°08'10.6" 103°44'36.0"	10
†	10325	55.8	143	10240.88	224.11	-200.38	151	723959.8	413756.7	32°08'10.0" 103°44'36.0"	10
	10367	60	143	10263.2	255.89	-228.79	172.41	723981.2	413728.3	32°08'09.7" 103°44'35.0"	10 60° Curve
†	10425	63.906	147.88	10290.48	302.53	-270.94	201.39	724010.2	413686.1	32°08'09.3" 103°44'35.0"	10.02
†	10525	70.98	155.575	10328.86	390.27	-352.22	244.93	724053.7	413604.8	32°08'08.5" 103°44'34.0"	10.02
†	10625	78.345	162.628	10355.32	484.95	-442.23	279.18	724088	413514.8	32°08'07.6" 103°44'34.0"	10.02
†	10725	85.874	169.311	10369.06	583.66	-538.21	303.11	724111.9	413418.9	32°08'06.6" 103°44'34.0"	10.02
	10774.41	89.62	172.552	10371	633	-586.95	310.89	724119.7	413370.1	32°08'06.2" 103°44'34.0"	10.02 EOC
†	10825	89.62	172.552	10371.34	683.53	-637.11	317.45	724126.3	413320	32°08'05.7" 103°44'34.0"	0
†	10925	89.62	172.552	10372	783.41	-736.27	330.41	724139.2	413220.8	32°08'04.7" 103°44'33.0"	0
†	11025	89.62	172.552	10372.66	883.29	-835.42	343.37	724152.2	413121.7	32°08'03.7" 103°44'33.0"	0
†	11125	89.62	172.552	10373.33	983.16	-934.57	356.34	724165.2	413022.5	32°08'02.7" 103°44'33.0"	0
†	11225	89.62	172.552	10373.99	1083.04	-1033.73	369.3	724178.1	412923.4	32°08'01.7" 103°44'33.0"	0
†	11325	89.62	172.552	10374.65	1182.91	-1132.88	382.26	724191.1	412824.2	32°08'00.7" 103°44'33.0"	0

†	11425	89.62	172.552	10375.31	1282.79	-1232.04	395.22	724204	412725.1	32°07'59.8"	103°44'33.1"	0
†	11525	89.62	172.552	10375.98	1382.66	-1331.19	408.19	724217	412625.9	32°07'58.8"	103°44'33.1"	0
†	11625	89.62	172.552	10376.64	1482.54	-1430.35	421.15	724230	412526.8	32°07'57.8"	103°44'32.1"	0
†	11725	89.62	172.552	10377.3	1582.42	-1529.5	434.11	724242.9	412427.6	32°07'56.8"	103°44'32.1"	0
†	11825	89.62	172.552	10377.97	1682.29	-1628.65	447.07	724255.9	412328.5	32°07'55.8"	103°44'32.1"	0
†	11925	89.62	172.552	10378.63	1782.17	-1727.81	460.04	724268.8	412229.3	32°07'54.9"	103°44'32.1"	0
†	12025	89.62	172.552	10379.29	1882.04	-1826.96	473	724281.8	412130.2	32°07'53.9"	103°44'32.1"	0
†	12125	89.62	172.552	10379.95	1981.92	-1926.12	485.96	724294.8	412031	32°07'52.9"	103°44'32.1"	0
†	12225	89.62	172.552	10380.62	2081.79	-2025.27	498.92	724307.7	411931.9	32°07'51.9"	103°44'32.1"	0
†	12325	89.62	172.552	10381.28	2181.67	-2124.42	511.89	724320.7	411832.7	32°07'50.9"	103°44'31.1"	0
†	12425	89.62	172.552	10381.94	2281.55	-2223.58	524.85	724333.7	411733.6	32°07'49.9"	103°44'31.1"	0
†	12525	89.62	172.552	10382.61	2381.42	-2322.73	537.81	724346.6	411634.4	32°07'49.0"	103°44'31.1"	0
†	12625	89.62	172.552	10383.27	2481.3	-2421.89	550.77	724359.6	411535.3	32°07'48.0"	103°44'31.1"	0
†	12725	89.62	172.552	10383.93	2581.17	-2521.04	563.74	724372.5	411436.1	32°07'47.0"	103°44'31.1"	0
†	12825	89.62	172.552	10384.59	2681.05	-2620.19	576.7	724385.5	411337	32°07'46.0"	103°44'31.1"	0
†	12925	89.62	172.552	10385.26	2780.92	-2719.35	589.66	724398.5	411237.8	32°07'45.0"	103°44'31.1"	0
†	13025	89.62	172.552	10385.92	2880.8	-2818.5	602.63	724411.4	411138.7	32°07'44.1"	103°44'30.1"	0
†	13125	89.62	172.552	10386.58	2980.68	-2917.66	615.59	724424.4	411039.5	32°07'43.1"	103°44'30.1"	0
†	13225	89.62	172.552	10387.25	3080.55	-3016.81	628.55	724437.4	410940.4	32°07'42.1"	103°44'30.1"	0
†	13325	89.62	172.552	10387.91	3180.43	-3115.96	641.51	724450.3	410841.3	32°07'41.1"	103°44'30.1"	0
†	13425	89.62	172.552	10388.57	3280.3	-3215.12	654.48	724463.3	410742.1	32°07'40.1"	103°44'30.1"	0
†	13525	89.62	172.552	10389.23	3380.18	-3314.27	667.44	724476.2	410643	32°07'39.1"	103°44'30.1"	0
†	13625	89.62	172.552	10389.9	3480.06	-3413.43	680.4	724489.2	410543.8	32°07'38.2"	103°44'30.1"	0
†	13725	89.62	172.552	10390.56	3579.93	-3512.58	693.36	724502.2	410444.7	32°07'37.2"	103°44'29.1"	0
†	13825	89.62	172.552	10391.22	3679.81	-3611.73	706.33	724515.1	410345.5	32°07'36.2"	103°44'29.1"	0
†	13925	89.62	172.552	10391.89	3779.68	-3710.89	719.29	724528.1	410246.4	32°07'35.2"	103°44'29.1"	0
†	14025	89.62	172.552	10392.55	3879.56	-3810.04	732.25	724541	410147.2	32°07'34.2"	103°44'29.1"	0
†	14125	89.62	172.552	10393.21	3979.43	-3909.2	745.22	724554	410048.1	32°07'33.3"	103°44'29.1"	0
†	14225	89.62	172.552	10393.87	4079.31	-4008.35	758.18	724567	409948.9	32°07'32.3"	103°44'29.1"	0
†	14325	89.62	172.552	10394.54	4179.19	-4107.51	771.14	724579.9	409849.8	32°07'31.3"	103°44'29.1"	0
†	14425	89.62	172.552	10395.2	4279.06	-4206.66	784.1	724592.9	409750.6	32°07'30.3"	103°44'28.1"	0
†	14525	89.62	172.552	10395.86	4378.94	-4305.81	797.07	724605.9	409651.5	32°07'29.3"	103°44'28.1"	0
†	14625	89.62	172.552	10396.53	4478.81	-4404.97	810.03	724618.8	409552.3	32°07'28.3"	103°44'28.1"	0
†	14725	89.62	172.552	10397.19	4578.69	-4504.12	822.99	724631.8	409453.2	32°07'27.4"	103°44'28.1"	0
†	14825	89.62	172.552	10397.85	4678.56	-4603.28	835.95	724644.7	409354	32°07'26.4"	103°44'28.1"	0
	14847.46	89.62	172.552	10398	4700.99	-4625.54	838.87	724647.7	409331.8	32°07'26.2"	103°44'28.1"	0 No.4H PBF

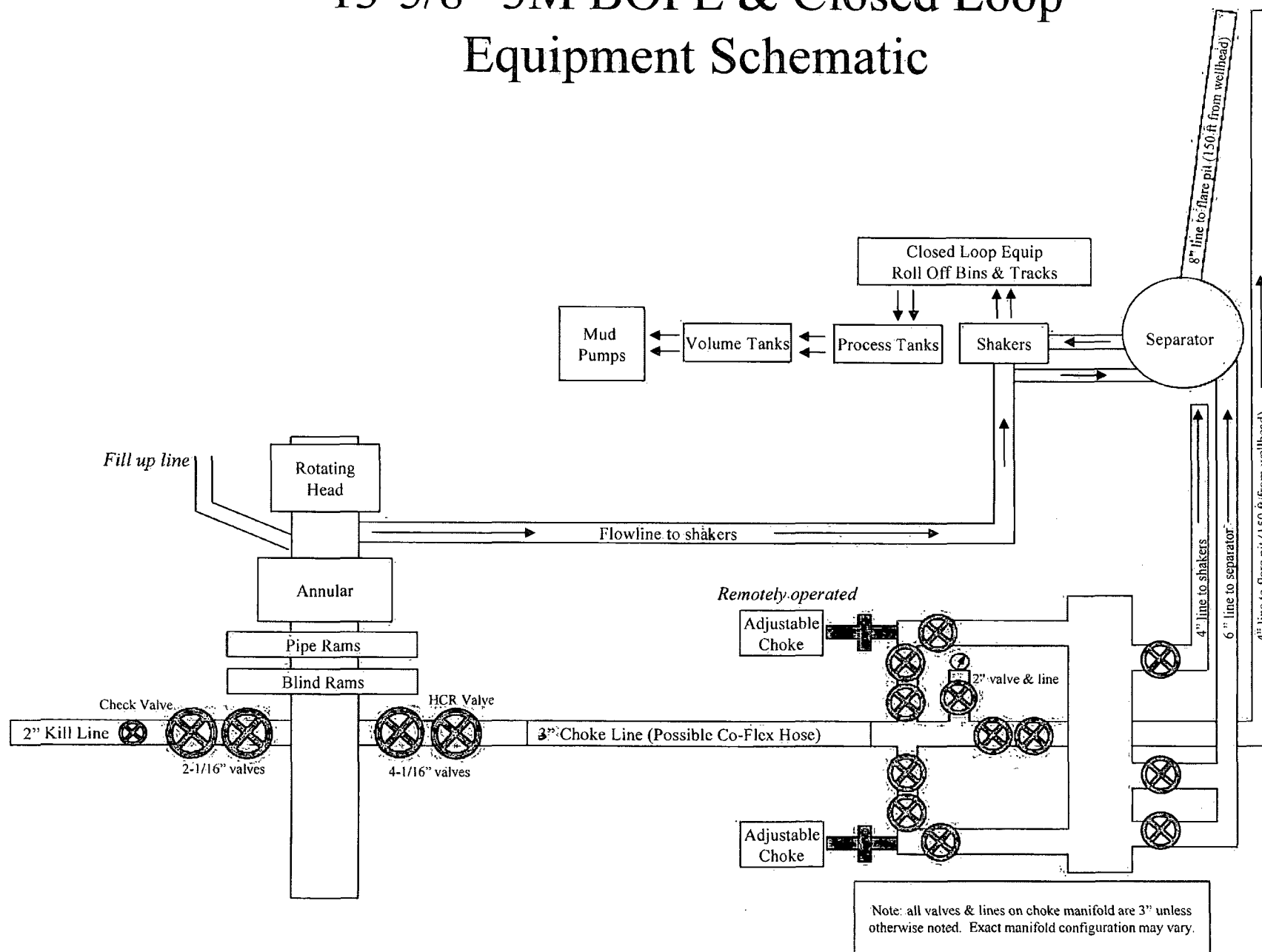
T A R G E T S

Name	MD	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Shape	Comment
	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]				
(1) CD 14 F	14847.46	10398	-4625.54	838.87	724647.7	409331.8	32°07'26.2"	103°44'28.1"	point	

SURVEY PROGRAM Ref Wellbore: No.4H PWB Ref Wellpath: Rev-A.0

Start MD [ft]	End MD [ft]	Pos Unc	Mi Log Name/ Wellbore
25	14847.46	NaviTrak (Standard)	No.4H PWB

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



NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Production Company, L.P.
Cotton Draw 14 Fed 4H

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 filings will be in operable condition to withstand a minimum of 3000 psi working pressure.
4. All fittings will be flanged.
5. A fill bore safety valve tested to a minimum of 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.

RIG 212



QUALITY DOCUMENT

PHOENIX RUBBER

INDUSTRIAL LTD.

5728 Szeged, Budapesti út 10, Hungary • H-6701 Szeged, P. O. Box 152
 Phone: (3662) 566-737 • Fax: (3662) 568-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44, Hungary • H-1440 Budapest, P. O. Box 26
 Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.taurusemerga.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 552	
PURCHASER: Phoenix Beattie Co.				P.O. N°: 1519FA-871	
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 34128		NOMINAL / ACTUAL LENGTH: 11,43 m			
W.P. 68,96 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature See attachment. (1 page)					
↑ 10 mm = 10 Min. → 10 mm = 25 MPa					
COUPLINGS					
Type	Serial N°		Quality	Heat N°	
3" coupling with 4 1/16" Flange end	720 719		AISI 4130	C7626	
			AISI 4130	47357	
API Spec 16 C Temperature rate: "B"					
All metal parts are flawless.					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
Date: 29. April. 2002.		Inspector		Quality Control PHOENIX RUBBER Industrial Ltd. <i>[Signature]</i> Hose Inspection and WE CERTIFY TRUE COPY PHOENIX RUBBER C.C.	

40920-0-00015 NB0006

40920-0-00015 NB0006

[illegible]

SENEX RUBBER
Industrial Ltd.
Hose Inspection and
Certification Dept.

VERIFIED TRUE CO.
PHOENIX RUBBER CO.



Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly. It is good practice to use lifting & safety equipment but not mandatory.

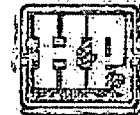
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

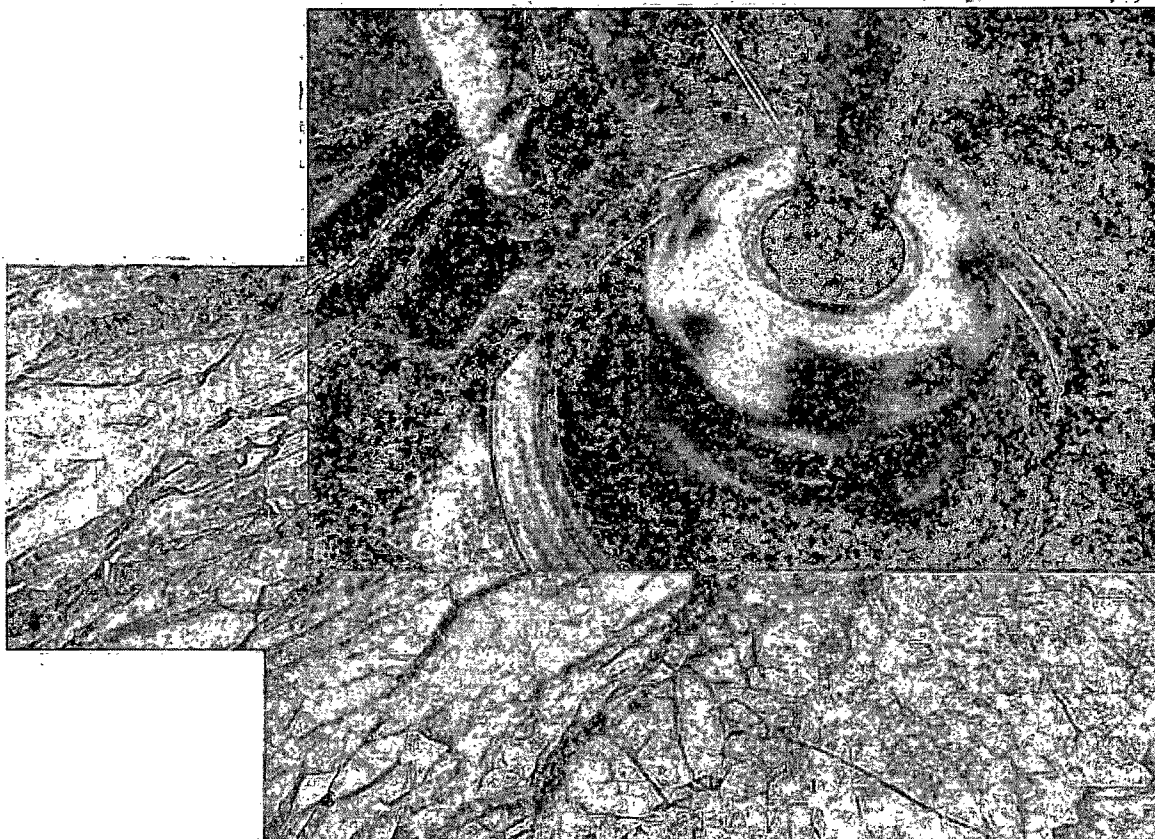
Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittonmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com





Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
June 2010

I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

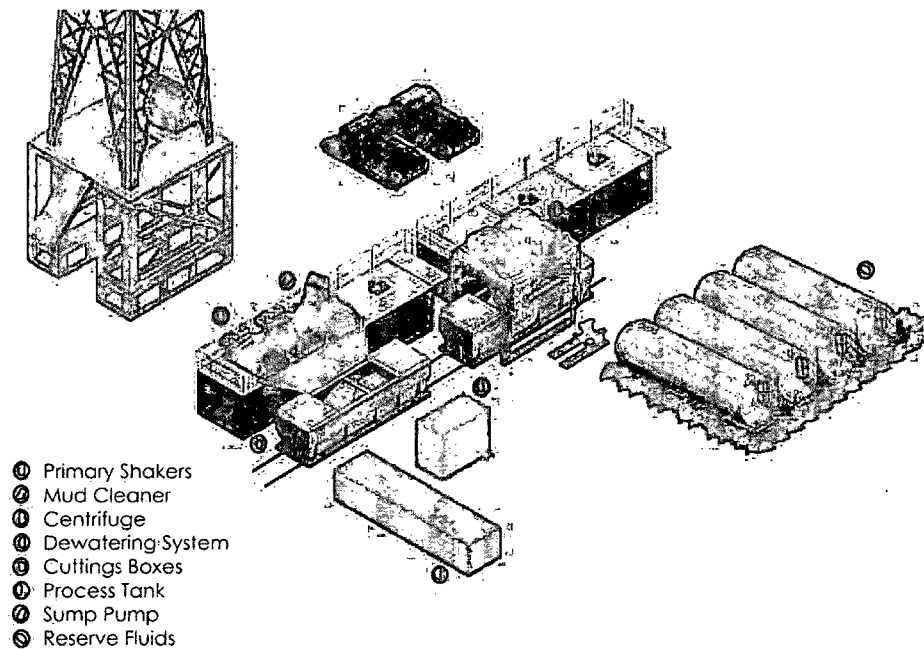
II. Operations and Maintenance Plan

Primary Shakers: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.

devon

Closed Loop Schematic



MI SWACO

Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

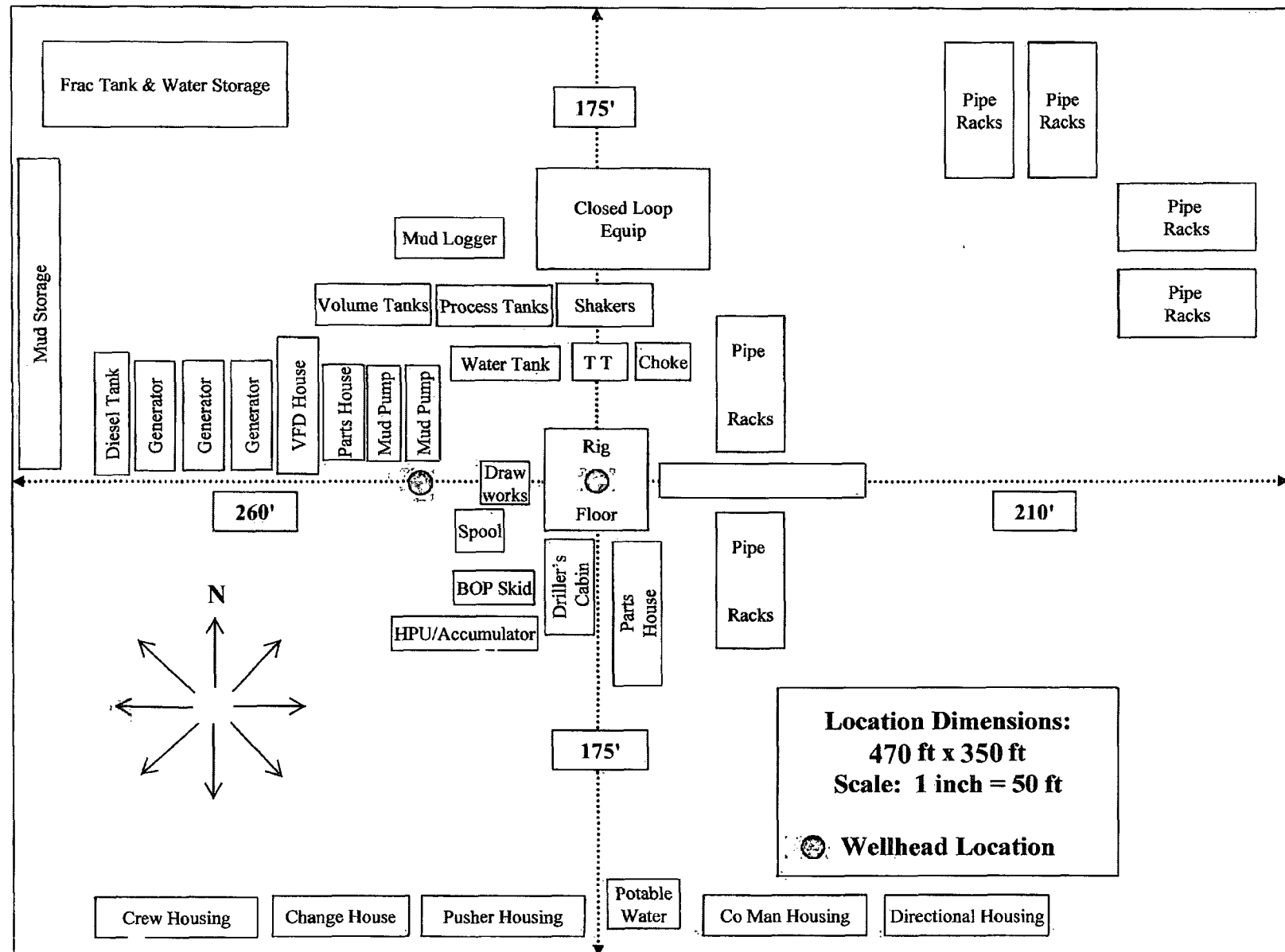
A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

H&P Flex Rig Location Layout

2 Well Pad





**Devon Energy Center
333 West Sheridan Avenue
Oklahoma City, Oklahoma 73102-5015**

Hydrogen Sulfide (H₂S) Contingency Plan

For

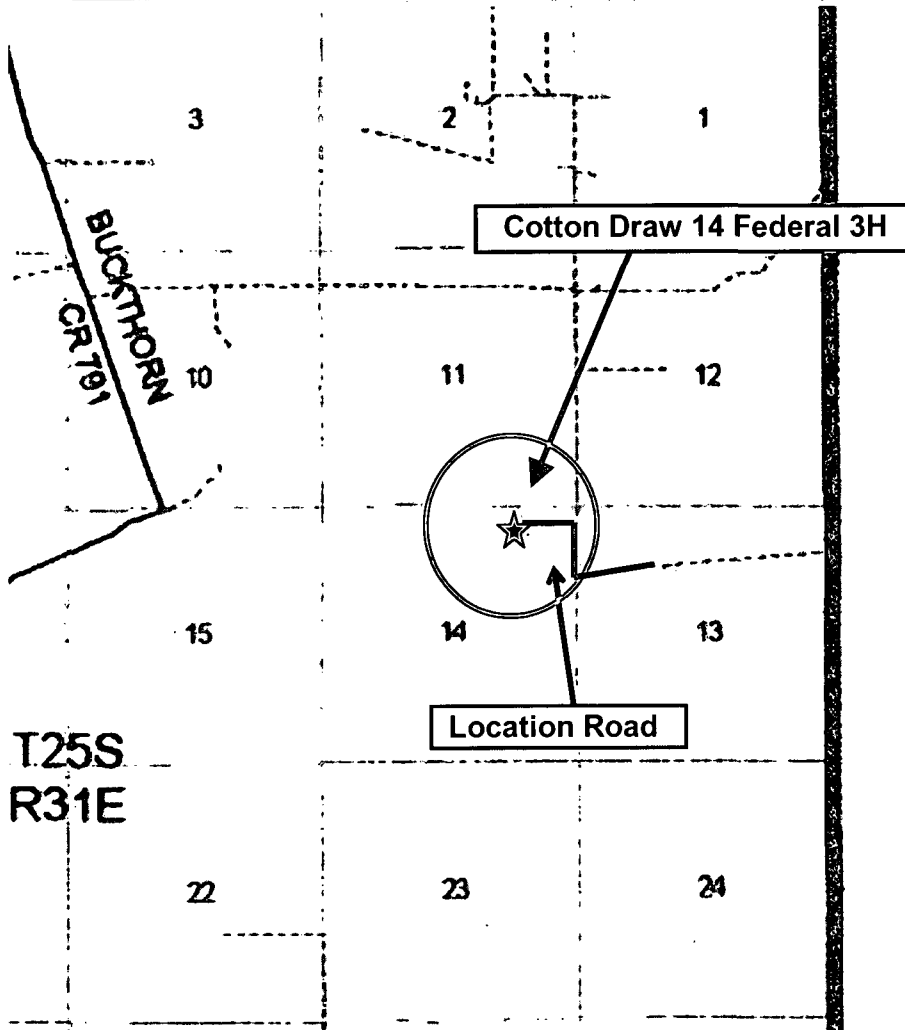
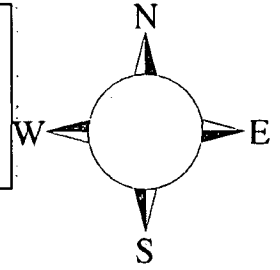
Cotton Draw 14 Federal 3H

**Sec-14, T-25S R-31E
330' FNL & 1200' FEL,
LAT. = 32.1366753°N (NAD83)
LONG = 103.7439836°W**

Eddy County NM

Cotton Draw 14 Federal 3H

This is an open drilling site. H₂S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H₂S, including warning signs, wind indicators and H₂S monitor.



T25S
R31E

Assumed 100 ppm 3000' (1000' x 1000' x 1000')
100 ppm H₂S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road, West then Northwest on lease 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. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'

100 ppm H₂S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H₂S, 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 H₂S 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 H₂S, 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 (SO₂). 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 H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	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)

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H₂S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H₂S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H₂S metal components. If high tensile tubular are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H₂S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan.

II. HYDROGEN SULFIDE TRAINING

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H₂S.

1. Well Control Equipment

- A. Flare line
- B. Choke manifold - Remotely Operated Choke
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment may include if applicable: annular preventer and rotating head.
- E. Mud/Gas Separator

2. Protective equipment for essential personnel:

- A. 30-minute SCBA units located in the doghouse and at briefing areas, as indicated on well site diagram. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

3. H₂S detection and monitoring equipment:

- A. Portable H₂S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S levels of 20 PPM are reached. These units are usually capable of detecting SO₂, which is a byproduct of burning H₂S.

4. Visual warning systems:

- A. Wind direction indicators as shown on well site diagram
- B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

5. Mud program:

- A. The mud program has been designed to minimize the volume of H₂S circulated to surface. Proper mud weight, safe drilling practices and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.

6. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H₂S trim.
- B. All elastomers used for packing and seals shall be H₂S trim.

7. Communication:

- A. Radio communications in company vehicles including cellular telephones and 2-way radio
- B. Land line (telephone) communications at Office

8. Well testing:

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H₂S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

Devon Energy Corp. Company Call List

<u>Artesia (575)</u>	<u>Cellular</u>	<u>Office</u>	<u>Home</u>
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 – Marcos Ortiz.....	(405) 317-0666.....	(405) 552-8152.....	(405) 381-4350

Agency Call List

<u>Lea County (575)</u>	<u>Hobbs</u>
	Lea County Communication Authority.....
	State Police
	City Police
	Sheriff's Office.....
	Ambulance.....
	Fire Department.....
	LEPC (Local Emergency Planning Committee).....
	NMOCD.....
	US Bureau of Land Management.....

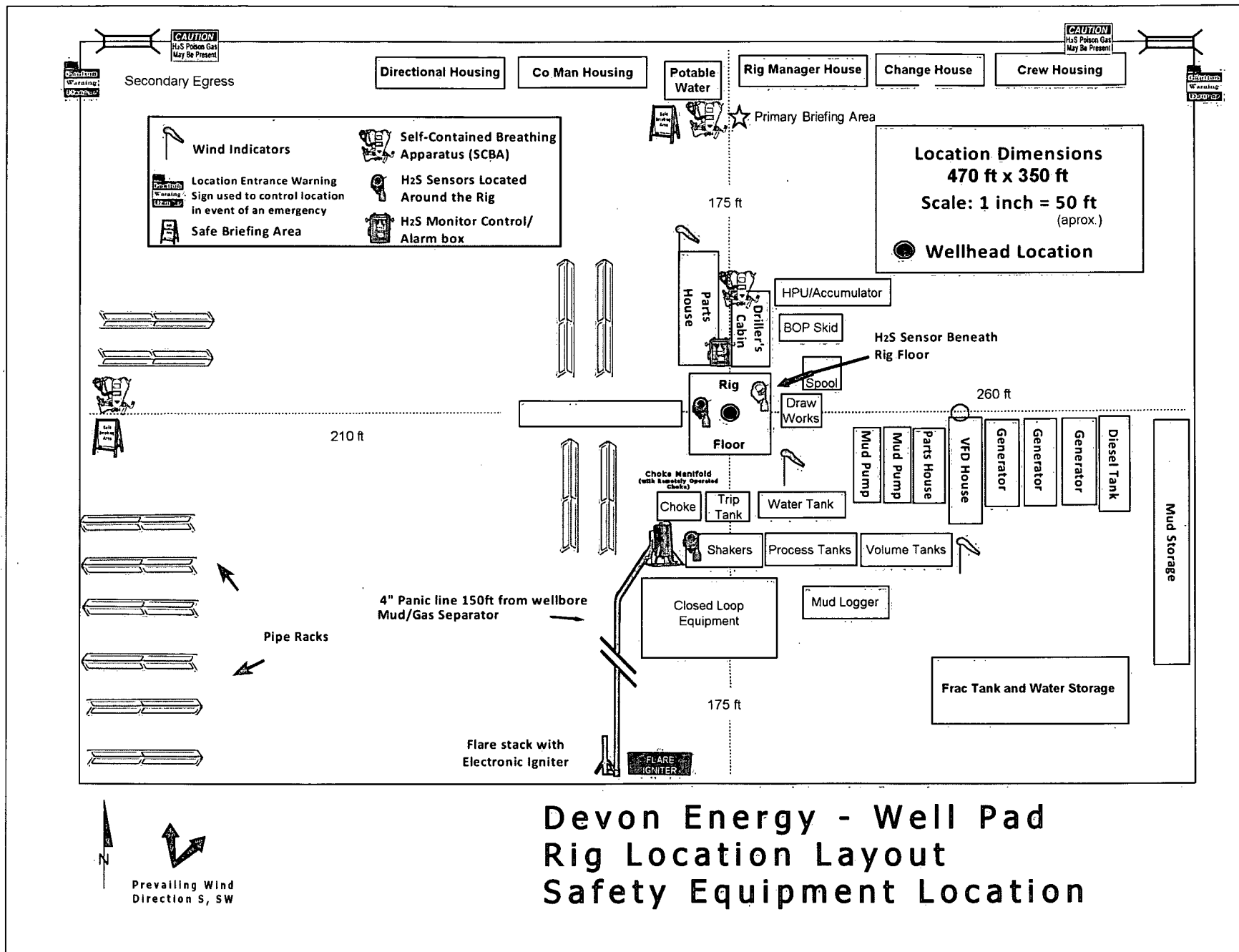
<u>Eddy County (575)</u>	<u>Carlsbad</u>
	State Police
	City Police
	Sheriff's Office
	Ambulance
	Fire Department.....
	LEPC (Local Emergency Planning Committee).....
	US Bureau of Land Management.....
	NM Emergency Response Commission (Santa Fe)
	24 HR
	National Emergency Response Center (Washington, DC)

Emergency Services

	Boots & Coots IWC
	Cudd Pressure Control.....
	Halliburton
	B. J. Services.....
<i>Give</i>	Native Air – Emergency Helicopter – Hobbs.....
<i>GPS</i>	Flight For Life - Lubbock, TX
<i>position:</i>	Aerocare - Lubbock, TX
	Med Flight Air Amb - Albuquerque, NM
	Lifeguard Air Med Svc. Albuquerque, NM

Prepared in conjunction with
Dave Small





devon

Proposed Interim Site Reclamation

Devon Energy Production Co.
Cotton Draw 14 Fed 4H
330' FNL & 1150' FEL
Sec. 14-T25S-R31E
Eddy County, NM

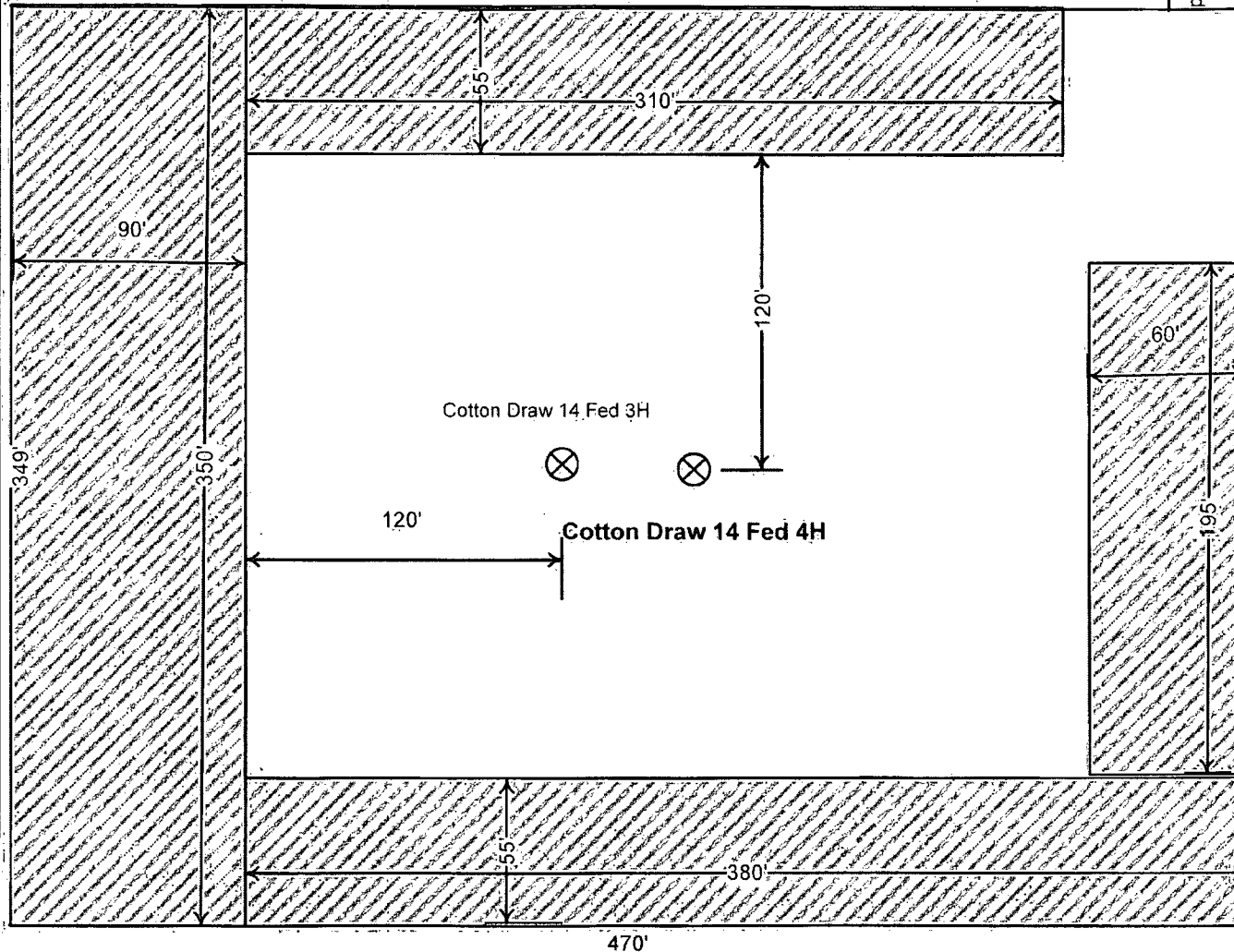


Proposed
Reclamation
Area



Scale: 1in = 60ft.

Proposed
Access Road



Topsoil Area

Cotton Draw 14 Fed 3H & 4H Proposed Flowline Route

Cotton Draw 14 Fed Com 1H & 2H
Proposed Battery

25S-
31E

EDDY
COUNTY

NEW
MEXICO

Cotton Draw 14 Fed 3H, 4H
Approximate Length: 4,710 ft



0 400 800 1,600 Feet

Flowline will follow within road ROW, but 10' off existing roads.
The 4" surface poly flowline will be operated at
a pressure of 125 psi or less. The line will carry a mixture of
oil, water and gas.

This map is for illustrative purposes only and is
neither a legally recorded map nor a survey
and is not intended to be used as one. Devon
makes no warranty, representation, or
guarantee of any kind regarding this map.

Legend

Mapping_Line

— Flow Line

SURFACE USE PLAN

Devon Energy Production Company, L.P.
Cotton Draw 14 Fed 4H

1. Existing Roads:

- a. The well site and elevation plat for the proposed well are reflected on the "Site Map". The well was staked by Madron Surveying, Inc.
- b. All roads into the location are depicted on the "Vicinity Map". The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattle guards, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.
- c. Directions to Location: From state hwy 128 and CR 1 (Orla Highway) go south on CR 1 6.5 miles, turn right on caliche road (Monsanto road) and go west 2.2 miles, turn right and go north 0.75 miles, bend left and go west 2.0 miles, turn right and go north 0.25 miles, turn left and go west 1200' and location is on the left (south) 330'.

2. New or Reconstructed Access Roads:

- a. The "Site Map" shows new constructed access road, which will be approximately 162 LF from the existing Lease road.
- b. The maximum driving width of the access road will be 14 feet. The maximum width of surface disturbance when constructing the access road will not exceed 25 feet. The road will be crowned and ditched with 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 3 feet wide with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.
- c. No cattle guards, grates or fence cuts will be required. No turnouts are planned.

3. Location of Existing Wells:

The attached "One Mile Radius Map" shows all existing and proposed wells within a one-mile radius of the proposed location.

4. Location of Existing and/or Proposed Production Facilities:

- a. In the event the well is found productive, the proposed Cotton Draw 14 Fed Com 1H & 2H tank battery would be utilized and shared, and the necessary production equipment will be installed at the well site. This facility is located in Sec 14-T25S-R31E. See attached "Proposed Flowline Route" map.
- b. If necessary, the well will be operated by means of an electric prime mover. If electric power poles are needed, a plat and a sundry notice will be filed with your office.
- c. All flow lines will adhere to API standards.
- d. If the well is productive, rehabilitation plans are as follows:
 - i. A closed loop system will be utilized.
 - ii. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

5. Location and Types of Water Supply:

This location will be drilled using a combination of water mud systems (outlined in the Drilling Program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing and proposed roads described and depicted on the "Vicinity Map". On occasion, water will be obtained from a pre-existing water well, running a pump directly to the drill rig. In cases where a poly pipeline is used to transport water for drilling purposes, proper authorizations will be secured. If a poly pipeline is used, the size, distance, and map showing route will be provided to the BLM via sundry notice.

6. Construction Materials:

Obtaining caliche: One primary way of obtaining caliche to build locations and roads will be by "turning over" the location. This means caliche will be obtained from the actual well site. Actual amounts will vary for each pad. The procedure below has been approved by BLM personnel:

- a. The top 6 inches of topsoil is pushed off and stockpiled along the side of the location.
- b. Subsoil is removed and stockpiled within the surveyed well pad.
- c. When caliche is found, material will be stock piled within the pad site to build the location and road.
- d. Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road.
- e. Once well is drilled, the stock piled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced.
- f. Neither caliche, nor subsoil will be stock piled outside of the well pad. Topsoil will be stockpiled along the edge of the pad as depicted in the Well Site Layout or survey plat.

In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired prior to obtaining any mineral material from BLM pits or land.

7. Methods of Handling Waste Material:

- a. Drill cuttings will be safely contained in a closed loop system and disposed of properly at a NMOCD approved disposal site.
- b. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary landfill.
- c. The supplier will pick up salts remaining after completion of well, including broken sacks.
- d. A Porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- e. Remaining drilling fluids will be sent to a closed loop system. Water produced during completion will be put into a closed loop system. Oil and condensate produced will be put into a storage tank and sold.
- f. Disposal of fluids to be transported by the following companies:
 - i. American Production Service Inc, Odessa TX
 - ii. Gandy Corporation, Lovington NM
 - iii. I & W Inc, Loco Hill NM
 - iv. Jims Water Service of Co Inc, Denver CO

8. Ancillary Facilities: No campsite or other facilities will be constructed as a result of this well.

9. Well Site Layout

- a. The Rig Location Layout attachment shows the proposed well site layout and pad dimensions.
- b. The Rig Location Layout attachment proposes location of sump pits and living facilities.
- c. Mud pits in the active circulating system will be steel pits.
- d. A closed loop system will be utilized.
- e. If a pit or closed loop system is utilized, Devon will provide a copy of the Design Plan to the BLM.

10. Plans for Surface Reclamation:

- a. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original top soil will again be returned to the pad and contoured, as close as possible, to the original topography.
- b. The location and road will be rehabilitated as recommended by the BLM.
- c. If the well is deemed commercially productive, caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

- d. All disturbed areas not needed for active support of production operations will undergo interim reclamation. The portions of the cleared well site not needed for operational and safety purposes will be recontoured to a final or intermediate contour that blends with the surrounding topography as much as possible. Topsoil will be respread over areas not needed for all-weather operations.

11. Surface Ownership

- a. The surface is owned by the US Government and is administered by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas.
- b. The proposed road routes and the surface location will be restored as directed by the BLM.

12. Other Information:

- a. The area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, sage bush, yucca and miscellaneous weeds. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
- b. There is no permanent or live water in the general proximity of the location.
- c. There are no dwellings within 2 miles of location.
- d. A Cultural Resources Examination will be completed by the Permian Basin Cultural Resource Fund in lieu of being required to conduct a Class III Survey for cultural resources associated with their project within the BLM office in Carlsbad, New Mexico.

13. Bond Coverage:

Bond Coverage is Nationwide; Bond # is CO-1104 & NMB-000801.

Operators Representative:

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

Dan McCorkell - Operations Engineer
Devon Energy Production Company, L.P.
333 W. Sheridan
Oklahoma City, OK 73102-5010
(405) 228-7528 (office)
(405) 443-8697 (Cellular)

Don Mayberry - Superintendent
Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, NM 88211-0250
(575) 748-3371 (office)
(575) 746-4945 (home)

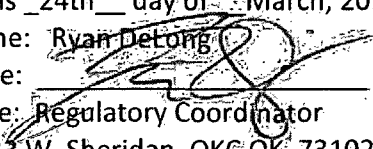
Certification

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 24th day of March, 2014.

Printed Name: Ryan DeLong

Signed Name: 

Position Title: Regulatory Coordinator

Address: 333 W. Sheridan, OKC OK 73102

Telephone: (405)-552-6559