

SECRETARY'S POTASH

Form 3160-3
(April 2004)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

EAS03

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM-036379; K-4562
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 Company, LP		7. If Unit or CA Agreement, Name and No. NM70928X
3a. Address 20 North Broadway Oklahoma City, Oklahoma City 73102-8260		8. Lease Name and Well No. Cotton Draw Unit 140H
3b. Phone No. (include area code) 405-228-8699		9. API Well No. 30-015-39307
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface SE/4 SE/4 200 FSL & 1600 FEL UNIT O PP: 191 FSL 1561 FEL At proposed prod zone NE/4 SE/4 2600 FSL & 986 FEL UNIT I SEC 35 T24S R31E		10. Field and Pool, or Exploratory Piedra Crossing E. PADUCA; BONE SPRING
11. Sec., T. R. M. or Blk. and Survey or Area SEC 2 T25S R31E		12. County or Parish Eddy County
13. State NM		
14. Distance in miles and direction from nearest town or post office* Approximately 22 miles southeast of Loving, NM.	15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 40'	16. No. of acres in lease 639.92 Acres
17. Spacing Unit dedicated to this well 477.75 Acres	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map.	19. Proposed Depth 16,681' MD 9015' TVD
20. BLM/BIA Bond No. on file CO-1104	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3443.3' GL	22. Approximate date work will start*
23. Estimated duration 45 days	24. Attachments Cotton Draw Unit 138H, 139H & 140H to be pad drilled.	

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

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

25. Signature 	Name (Printed/Typed) Judy A. Barnett	Date 02/15/2011
Title Regulatory Specialist		

Approved by (Signature) /s/ Tony J. Herrell	Name (Printed/Typed) /s/ Tony J. Herrell	Date MAY 03 2011
Title FOR STATE DIRECTOR		Office NM STATE OFFICE

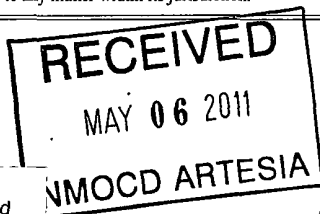
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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)

Carlsbad Controlled Water Basin

OCD CONDITION OF APPROVAL of Drilling
Intent to drill ONLY --- CANNOT produce until the Non-Standard
Location has been approved by OCD Santa Fe officeApproval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

DRILLING PROGRAM

Devon Energy Production Company, LP

Cotton Draw Unit 140H

Surface Location: 200' FSL & 1600' FEL, Unit O, Sec 2 T25S R31E, Eddy, NM

Bottom Hole Location: 2600' FSL & 986' FEL, Unit I, Sec 35 T24S R31E, Eddy, NM

1. **Geologic Name of Surface Formation**

a. Quaternary

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

a. Fresh Water	180'	
b. Rustler	665'	
c. Salado Salt	1034'	
d. Castile	2790'	
e. Base of Salt	4132'	
f. Lamar	4345'	Oil
g. Bell Canyon	4382'	Oil
h. Cherry Canyon	5350'	Oil
i. Brushy Canyon	6672'	Oil
j. 1 st Bone Spring LM	8274'	Oil /Gas
k. Avalon Shale	8802'	Oil/Gas
l. Total Depth	16,681'	

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 17 1/2" casing at ~~725'~~ and circulating cement back to surface. Fresh water sands will be protected by setting 9 5/8" casing at 4350' and circulating cement to surface. The Bone Spring 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.

Casing Program:

<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"	⁷⁵⁰ 0 - 725'	13 3/8"	0' - 725'	48#	ST&C	H-40
12 1/4"	725 -4350'	9 5/8"	0'-4350	40#	LT&C	J-55
8 3/4"	4350-7800	5 1/2"	0-7800'	20#	LT&C	HCP110
8 3/4"	7800-16681'	5 1/2"	7800-16,681'	17#	BTC	HCP110

See
COR

Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design</u>	<u>Burst Design</u>	<u>Tension Design</u>
	<u>Factor</u>	<u>Factor</u>	<u>Factor</u>
13 3/8"	2.27	5.10	9.25
9 5/8" 40#	1.26	1.74	2.98
5 1/2" 20#	2.04	2.91	1.60
5 1/2" 17#	1.77	2.53	3.62

NOTE REGARDING COLLAPSE DESIGN FACTOR FOR INTERMEDIATE CASING: The maximum possible collapse load that the intermediate casing will experience will result from evacuated casing with the pore pressure exerting a collapse load at TD. The pore pressure is estimated to be 9.0 ppg for this calculation. This results in a collapse design factor of 1.26 for the 9-5/8" 40# J-55 LTC casing at a depth of 4,350 ft. While running the intermediate casing, the casing string will never be completely evacuated. There is no potential for the intermediate casing to be used as a production string

Cement Program:**Cementing Program (cement volumes based on at least 25% excess)**

13 3/8"

Lead: 600 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 **TOC @ surface**
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

9 5/8" Intermediate

Lead: 1,200 sacks (35:65) Poz (Fly Ash) Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water, 12.5 ppg **Yield:** 2.04 cf/sk
TOC @ surface
Tail: 300 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 64.7% Water, 13.8 ppg **Yield:** 1.37 cf/sk

5 1/2" Production

1st Stage
Lead: 500 sacks (35:65) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 2% bwoc Bentonite + 0.6% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 102.5% Fresh Water, 12.5 ppg **Yield:** 2.01 cf/sk
Tail: 2,500 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 6,000'
2nd Stage
Lead: 700 sacks Class C Cement + 1% bwow Calcium Chloride + 0.125 lbs/sack Cello Flake + 157.8% Fresh Water, 11.4 ppg **Yield:** 2.89 cf/sk
Tail: 100 sacks (60:40) Poz (Fly Ash):Class C Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 63.2% Fresh Water, 13.8 ppg **Yield:** 1.37cf/sk **TOC @ 3,850'**

TOC for All Strings:

Surface:	0
Intermediate:	0
Production:	3,850'

ACTUAL CEMENT VOLUMES WILL BE ADJUSTED BASED ON FLUID CALIPER AND CALIPER LOG DATA. All casing is new and API approved

Pressure Control Equipment BOP DESIGN:

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

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

The pipe rams will be operated and checked 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.

Proposed Mud Circulation System

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' - 725' ^{750'}	8.4-9.0	30-34	NC	FW
725-4350'	9.8-10.0	28-32	NC	Brine
4350-16681'	8.6-9.0	28-32	NC	FW

The necessary mud products for weight addition and fluid loss control will be on location at all times.

3. 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 20" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 20" shoe until total depth is reached.
4. **Logging, Coring, and Testing Program:** *See COA*
 - a. Drill stem tests will be based on geological sample shows.
 - b. If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.

- c. The open hole electrical logging program will be:
 - i. Total Depth to Intermediate Casing Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
 - ii. Total Depth to Surface Compensated Neutron with Gamma Ray
 - iii. No coring program is planned
 - iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

5. 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 4200 psi and Estimated BHT 140°. No H2S is anticipated to be encountered.

6. 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.

- 7. Depending on rig availability, Devon may set the surface casing using an Ashton Oilfield Services rig. The rig plat is attached. 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.

see
COA

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.



Weatherford[®]

Drilling Services

Proposal



devon

COTTON DRAW UNIT #140H

EDDY COUNTY, NM

WELL FILE: PLAN 1

FEBRUARY 7, 2011

Weatherford International, Ltd.

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www.weatherford.com

devon

Cotton Draw #140H
Eddy Co., New Mexico

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	8039.34	0.00	0.00	8039.34	0.00	0.00	0.00	0.00	0.00	
3	8485.01	40.11	103.15	8449.49	-34.07	145.80	9.00	103.15	-22.93	
4	9579.95	90.00	359.82	9015.00	596.96	607.33	9.00	-100.27	641.24	tgt
5	16681.43	90.00	359.82	9015.00	7698.41	584.70	0.00	0.00	7720.58	Pbhl

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#140H	0.00	0.00	419723.61	723333.77	32°09'09.108N	103°44'42.934W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
tgt	9015.00	596.96	607.33	420320.57	723941.10	Point
Pbhl	9015.00	7698.41	584.70	427422.02	723918.47	Point

FIELD DETAILS

Eddy Co., NM (NAD 83)

Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Eastern Zone
Magnetic Model: IGRF2010
System Datum: Mean Sea Level
Local North: Grid North

LEGEND

#138H (1)
#139H (1)
Cotton Draw Unit #155H (1)
Cotton Draw Unit #156H (1)
1
Plan #1

SITE DETAILS

Cotton Draw Unit #140H

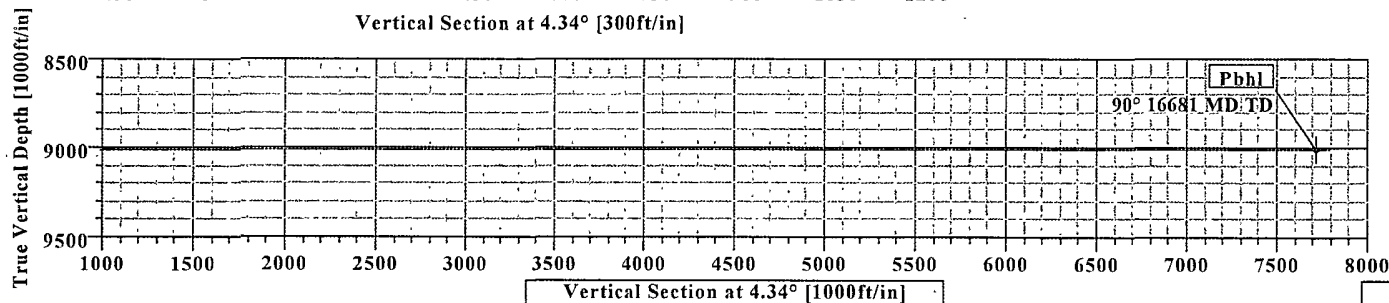
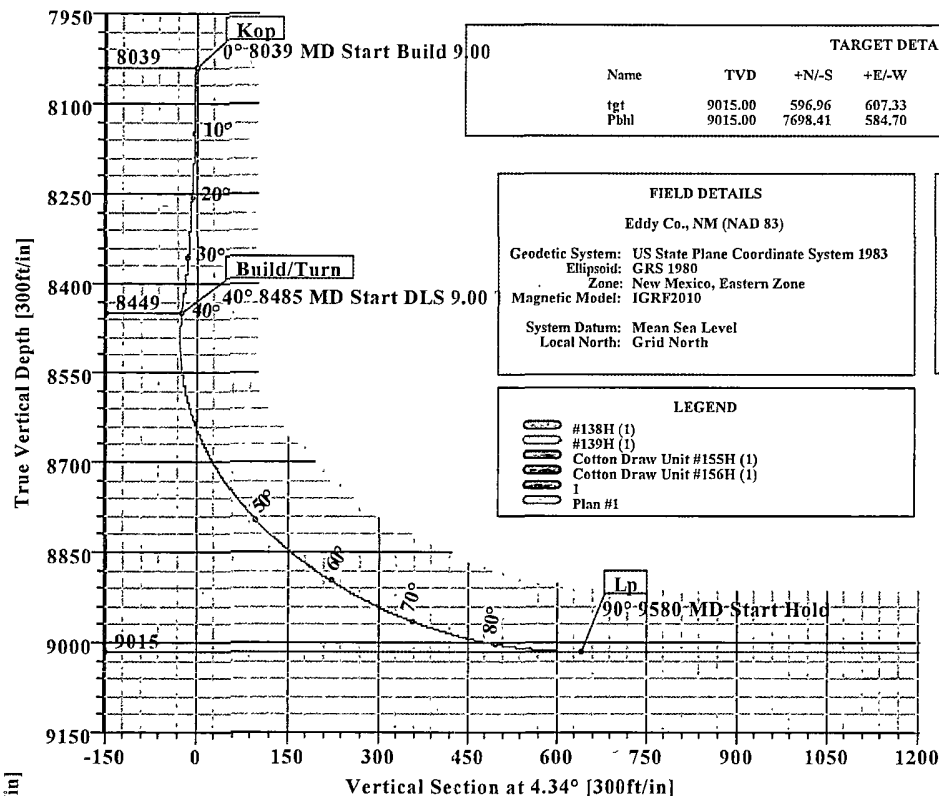
Site Centre Northing: 419723.61
Easting: 723333.77

Ground Level: 3443.00
Positional Uncertainty: 0.00
Convergence: 0.31

Azimuths to Grid North
True North: -0.31°
Magnetic North: 7.32°

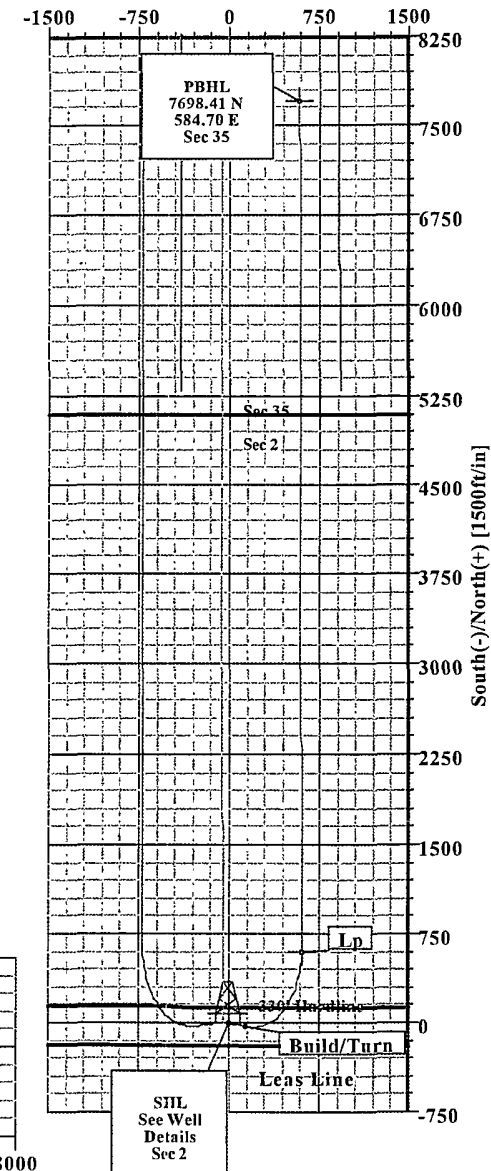
Magnetic Field
Strength: 48554nT
Dip Angle: 60.08°
Date: 9/15/2011
Model: IGRF2010

Total Correction to Grid North: 7.32°



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West(-)/East(+) [1500ft/in]



Wellpath: (#140H/1)

Created By: Russell W. Joyner

Date: 2/7/2011



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WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy Date: 2/7/2011 Time: 14:33:50 Page: 1
Field: Eddy Co., NM (NAD 83) Co-ordinate(NE) Reference: Well: #140H, Grid North
Site: Cotton Draw Unit #140H Vertical (TVD) Reference: SITE 3468.0
Well: #140H Section (VS) Reference: Well (0.00N,0.00E,4.34Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Plan: Plan #1 Date Composed: 2/7/2011
Principal: Yes Version: 1
Tied-to: From Surface

Field: Eddy Co., NM (NAD 83)

Map System: US State Plane Coordinate System 1983 Map Zone: New Mexico, Eastern Zone
Geo Datum: GRS 1980 Coordinate System: Well Centre
Sys Datum: Mean Sea Level Geomagnetic Model: IGRF2010

Site: Cotton Draw Unit #140H

Site Position: Northing: 419723.61 ft Latitude: 32 9 9.108 N
From: Map Easting: 723333.77 ft Longitude: 103 44 42.934 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3443.00 ft Grid Convergence: 0.31 deg

Well: #140H Slot Name:
Well Position: +N/-S 0.00 ft Northing: 419723.61 ft Latitude: 32 9 9.108 N
+E/-W 0.00 ft Easting: 723333.77 ft Longitude: 103 44 42.934 W
Position Uncertainty: 0.00 ft

Wellpath: 1 Drilled From: Surface
Current Datum: SITE Height 3468.00 ft Tie-on Depth: 0.00 ft
Magnetic Data: 9/15/2011 Above System Datum: Mean Sea Level
Field Strength: 48554 nT Declination: 7.63 deg
Vertical Section: Depth From (TVD) +N/-S +E/-W Mag Dip Angle: 60.08 deg
ft ft ft deg
0.00 0.00 0.00 4.34

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8039.34	0.00	0.00	8039.34	0.00	0.00	0.00	0.00	0.00	0.00	
8485.01	40.11	103.15	8449.49	-34.07	145.80	9.00	9.00	0.00	103.15	
9579.95	90.00	359.82	9015.00	596.96	607.33	9.00	4.56	-9.44	-100.27	tgt
16681.43	90.00	359.82	9015.00	7698.41	584.70	0.00	0.00	0.00	0.00	Pbhl

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
8000.00	0.00	0.00	8000.00	0.00	0.00	0.00	0.00	419723.61	723333.77	Kop
8039.34	0.00	0.00	8039.34	0.00	0.00	0.00	0.00	419723.61	723333.77	
8100.00	5.46	103.15	8099.91	-0.66	2.81	-0.44	9.00	419722.95	723336.58	
8200.00	14.46	103.15	8198.30	-4.59	19.64	-3.09	9.00	419719.02	723353.41	
8300.00	23.46	103.15	8292.78	-11.97	51.24	-8.06	9.00	419711.64	723385.01	
8400.00	32.46	103.15	8381.02	-22.63	96.85	-15.23	9.00	419700.98	723430.62	Build/Turn
8485.01	40.11	103.15	8449.49	-34.07	145.80	-22.93	9.00	419689.54	723479.57	
8500.00	39.89	101.08	8460.97	-36.09	155.22	-24.23	9.00	419687.52	723488.99	
8600.00	39.38	86.97	8538.15	-40.58	218.49	-23.92	9.00	419683.03	723552.26	
8700.00	40.56	73.06	8614.94	-29.41	281.40	-8.02	9.00	419694.20	723615.17	
8800.00	43.31	60.22	8689.46	-2.85	342.40	23.09	9.00	419720.76	723676.17	
8900.00	47.34	48.88	8759.87	38.45	399.99	68.63	9.00	419762.06	723733.76	
9000.00	52.33	39.07	8824.44	93.47	452.74	127.49	9.00	419817.08	723786.51	
9100.00	58.04	30.58	8881.58	160.86	499.36	198.21	9.00	419884.47	723833.13	
9200.00	64.24	23.12	8929.88	238.95	538.70	279.06	9.00	419962.56	723872.47	
9300.00	70.78	16.42	8968.16	325.83	569.80	368.04	9.00	420049.44	723903.57	



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WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy	Date: 2/7/2011	Time: 14:33:50	Page: 2
Field: Eddy Co., NM (NAD 83)	Co-ordinate(NE) Reference: Well: #140H, Grid North		
Site: Cotton Draw Unit #140H	Vertical (TVD) Reference: SITE 3468.0		
Well: #140H	Section (VS) Reference: Well (0.00N,0.00E,4.34Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
9400.00	77.54	10.25	8995.46	419.35	591.88	462.97	9.00	420142.96	723925.65	
9500.00	84.44	4.39	9011.12	517.21	604.41	561.50	9.00	420240.82	723938.18	
9579.95	90.00	359.82	9015.00	596.96	607.33	641.24	9.00	420320.57	723941.10	tgt
9600.00	90.00	359.82	9015.00	617.01	607.27	661.23	0.00	420340.62	723941.04	
9700.00	90.00	359.82	9015.00	717.01	606.95	760.92	0.00	420440.62	723940.72	
9800.00	90.00	359.82	9015.00	817.01	606.63	860.61	0.00	420540.62	723940.40	
9900.00	90.00	359.82	9015.00	917.01	606.31	960.29	0.00	420640.62	723940.08	
10000.00	90.00	359.82	9015.00	1017.01	605.99	1059.98	0.00	420740.62	723939.76	
10100.00	90.00	359.82	9015.00	1117.01	605.68	1159.67	0.00	420840.62	723939.45	
10200.00	90.00	359.82	9015.00	1217.01	605.36	1259.36	0.00	420940.62	723939.13	
10300.00	90.00	359.82	9015.00	1317.01	605.04	1359.05	0.00	421040.62	723938.81	
10400.00	90.00	359.82	9015.00	1417.01	604.72	1458.74	0.00	421140.62	723938.49	
10500.00	90.00	359.82	9015.00	1517.01	604.40	1558.42	0.00	421240.62	723938.17	
10600.00	90.00	359.82	9015.01	1617.01	604.08	1658.11	0.00	421340.62	723937.85	
10700.00	90.00	359.82	9015.01	1717.01	603.77	1757.80	0.00	421440.62	723937.54	
10800.00	90.00	359.82	9015.01	1817.01	603.45	1857.49	0.00	421540.62	723937.22	
10900.00	90.00	359.82	9015.01	1917.00	603.13	1957.18	0.00	421640.61	723936.90	
11000.00	90.00	359.82	9015.01	2017.00	602.81	2056.86	0.00	421740.61	723936.58	
11100.00	90.00	359.82	9015.01	2117.00	602.49	2156.55	0.00	421840.61	723936.26	
11200.00	90.00	359.82	9015.01	2217.00	602.18	2256.24	0.00	421940.61	723935.95	
11300.00	90.00	359.82	9015.01	2317.00	601.86	2355.93	0.00	422040.61	723935.63	
11400.00	90.00	359.82	9015.01	2417.00	601.54	2455.62	0.00	422140.61	723935.31	
11500.00	90.00	359.82	9015.01	2517.00	601.22	2555.31	0.00	422240.61	723934.99	
11600.00	90.00	359.82	9015.01	2617.00	600.90	2654.99	0.00	422340.61	723934.67	
11700.00	90.00	359.82	9015.01	2717.00	600.59	2754.68	0.00	422440.61	723934.36	
11800.00	90.00	359.82	9015.01	2817.00	600.27	2854.37	0.00	422540.61	723934.04	
11900.00	90.00	359.82	9015.01	2917.00	599.95	2954.06	0.00	422640.61	723933.72	
12000.00	90.00	359.82	9015.01	3017.00	599.63	3053.75	0.00	422740.61	723933.40	
12100.00	90.00	359.82	9015.01	3117.00	599.31	3153.43	0.00	422840.61	723933.08	
12200.00	90.00	359.82	9015.01	3217.00	598.99	3253.12	0.00	422940.61	723932.76	
12300.00	90.00	359.82	9015.01	3317.00	598.68	3352.81	0.00	423040.61	723932.45	
12400.00	90.00	359.82	9015.01	3417.00	598.36	3452.50	0.00	423140.61	723932.13	
12500.00	90.00	359.82	9015.02	3517.00	598.04	3552.19	0.00	423240.61	723931.81	
12600.00	90.00	359.82	9015.02	3617.00	597.72	3651.88	0.00	423340.61	723931.49	
12700.00	90.00	359.82	9015.02	3717.00	597.40	3751.56	0.00	423440.61	723931.17	
12800.00	90.00	359.82	9015.02	3817.00	597.09	3851.25	0.00	423540.61	723930.86	
12900.00	90.00	359.82	9015.02	3916.99	596.77	3950.94	0.00	423640.60	723930.54	
13000.00	90.00	359.82	9015.02	4016.99	596.45	4050.63	0.00	423740.60	723930.22	
13100.00	90.00	359.82	9015.02	4116.99	596.13	4150.32	0.00	423840.60	723929.90	
13200.00	90.00	359.82	9015.02	4216.99	595.81	4250.01	0.00	423940.60	723929.58	
13300.00	90.00	359.82	9015.02	4316.99	595.50	4349.69	0.00	424040.60	723929.27	
13400.00	90.00	359.82	9015.02	4416.99	595.18	4449.38	0.00	424140.60	723928.95	
13500.00	90.00	359.82	9015.02	4516.99	594.86	4549.07	0.00	424240.60	723928.63	
13600.00	90.00	359.82	9015.02	4616.99	594.54	4648.76	0.00	424340.60	723928.31	
13700.00	90.00	359.82	9015.02	4716.99	594.22	4748.45	0.00	424440.60	723927.99	
13800.00	90.00	359.82	9015.02	4816.99	593.90	4848.13	0.00	424540.60	723927.67	
13900.00	90.00	359.82	9015.02	4916.99	593.59	4947.82	0.00	424640.60	723927.36	
14000.00	90.00	359.82	9015.02	5016.99	593.27	5047.51	0.00	424740.60	723927.04	
14100.00	90.00	359.82	9015.02	5116.99	592.95	5147.20	0.00	424840.60	723926.72	
14200.00	90.00	359.82	9015.02	5216.99	592.63	5246.89	0.00	424940.60	723926.40	
14300.00	90.00	359.82	9015.02	5316.99	592.31	5346.58	0.00	425040.60	723926.08	
14400.00	90.00	359.82	9015.03	5416.99	592.00	5446.26	0.00	425140.60	723925.77	
14500.00	90.00	359.82	9015.03	5516.99	591.68	5545.95	0.00	425240.60	723925.45	



Weatherford International Ltd.

WFT Plan Report - X & Y's

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw Unit #140H
Well: #140H
Wellpath: 1

Date: 2/7/2011 Time: 14:33:50 Page: 3
Co-ordinate(NE) Reference: Well: #140H, Grid North
Vertical (TVD) Reference: SITE 3468 0
Section (VS) Reference: Well (0.00N,0.00E,4.34Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
14600.00	90.00	359.82	9015.03	5616.99	591.36	5645.64	0.00	425340.60	723925.13	
14700.00	90.00	359.82	9015.03	5716.99	591.04	5745.33	0.00	425440.60	723924.81	
14800.00	90.00	359.82	9015.03	5816.99	590.72	5845.02	0.00	425540.60	723924.49	
14900.00	90.00	359.82	9015.03	5916.98	590.40	5944.70	0.00	425640.59	723924.17	
15000.00	90.00	359.82	9015.03	6016.98	590.09	6044.39	0.00	425740.59	723923.86	
15100.00	90.00	359.82	9015.03	6116.98	589.77	6144.08	0.00	425840.59	723923.54	
15200.00	90.00	359.82	9015.03	6216.98	589.45	6243.77	0.00	425940.59	723923.22	
15300.00	90.00	359.82	9015.03	6316.98	589.13	6343.46	0.00	426040.59	723922.90	
15400.00	90.00	359.82	9015.03	6416.98	588.81	6443.15	0.00	426140.59	723922.58	
15500.00	90.00	359.82	9015.03	6516.98	588.50	6542.83	0.00	426240.59	723922.27	
15600.00	90.00	359.82	9015.03	6616.98	588.18	6642.52	0.00	426340.59	723921.95	
15700.00	90.00	359.82	9015.03	6716.98	587.86	6742.21	0.00	426440.59	723921.63	
15800.00	90.00	359.82	9015.03	6816.98	587.54	6841.90	0.00	426540.59	723921.31	
15900.00	90.00	359.82	9015.03	6916.98	587.22	6941.59	0.00	426640.59	723920.99	
16000.00	90.00	359.82	9015.03	7016.98	586.91	7041.28	0.00	426740.59	723920.68	
16100.00	90.00	359.82	9015.03	7116.98	586.59	7140.96	0.00	426840.59	723920.36	
16200.00	90.00	359.82	9015.03	7216.98	586.27	7240.65	0.00	426940.59	723920.04	
16300.00	90.00	359.82	9015.03	7316.98	585.95	7340.34	0.00	427040.59	723919.72	
16400.00	90.00	359.82	9015.04	7416.98	585.63	7440.03	0.00	427140.59	723919.40	
16500.00	90.00	359.82	9015.04	7516.98	585.31	7539.72	0.00	427240.59	723919.08	
16600.00	90.00	359.82	9015.04	7616.98	585.00	7639.40	0.00	427340.59	723918.77	
16681.43	90.00	359.82	9015.00	7698.41	584.70	7720.58	0.00	427422.02	723918.47	Pbhl

Targets

Name	Description Dip.	TVD Dir.	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
tgt			9015.00	596.96	607.33	420320.57	723941.10	32	9	14.982	N	103 44 35.832 W
Pbhl			9015.00	7698.41	584.70	427422.02	723918.47	32	10	25.257	N	103 44 35.642 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
8039.34	8039.34	Kop
8485.01	8449.49	Build/Turn
9579.95	9015.00	Lp
16681.43	9015.04	Pbhl

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy Date: 2/7/2011 Time: 14:01:38 Page: 1
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #140H Co-ordinate(NE) Reference: Well: #140H, Grid North
Reference Well: #140H Vertical (TVD) Reference: SITE 3468.0
Reference Wellpath: 1 Db: Sybase

NO GLOBAL SCAN: Using user defined selection & scan criteria
Interpolation Method: MD Interval: 100.00 ft
Depth Range: 0.00 to 16681.43 ft
Maximum Radius: 10000.00 ft

Reference: Plan: Plan #1
Error Model: ISCWSA Ellipse
Scan Method: Closest Approach 3D
Error Surface: Ellipse

Plan: Plan #1 Date Composed: 2/7/2011
Principal: Yes Version: 1
Tied-to: From Surface

Summary

Site	Offset Wellpath Well	Wellpath	Reference MD ft	Offset MD ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
Cotton Draw Unit #13#139H	1 V0 Plan: Plan #1 V1		8000.00	8000.00	49.96	14.28	1.40	Level 3
Cotton Draw Unit #15Cotton Draw Unit #151	V0 Plan: Plan #1 V1		16681.43	10477.01	849.82	746.18	8.20	

Site: Cotton Draw Unit #139H
Well: #139H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD ft	TVD ft	Offset MD ft	TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location North ft	East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	270.11	0.10	-49.96	49.96			No Data
100.00	100.00	100.00	100.00	0.08	0.08	270.11	0.10	-49.96	49.96	49.79	296.37	
200.00	200.00	200.00	200.00	0.31	0.31	270.11	0.10	-49.96	49.96	49.34	80.83	
300.00	300.00	300.00	300.00	0.53	0.53	270.11	0.10	-49.96	49.96	48.89	46.79	
400.00	400.00	400.00	400.00	0.76	0.76	270.11	0.10	-49.96	49.96	48.44	32.93	
500.00	500.00	500.00	500.00	0.98	0.98	270.11	0.10	-49.96	49.96	47.99	25.40	
600.00	600.00	600.00	600.00	1.21	1.21	270.11	0.10	-49.96	49.96	47.54	20.68	
700.00	700.00	700.00	700.00	1.43	1.43	270.11	0.10	-49.96	49.96	47.09	17.43	
800.00	800.00	800.00	800.00	1.66	1.66	270.11	0.10	-49.96	49.96	46.64	15.07	
900.00	900.00	900.00	900.00	1.88	1.88	270.11	0.10	-49.96	49.96	46.20	13.27	
1000.00	1000.00	1000.00	1000.00	2.11	2.11	270.11	0.10	-49.96	49.96	45.75	11.85	
1100.00	1100.00	1100.00	1100.00	2.33	2.33	270.11	0.10	-49.96	49.96	45.30	10.71	
1200.00	1200.00	1200.00	1200.00	2.56	2.56	270.11	0.10	-49.96	49.96	44.85	9.77	
1300.00	1300.00	1300.00	1300.00	2.78	2.78	270.11	0.10	-49.96	49.96	44.40	8.98	
1400.00	1400.00	1400.00	1400.00	3.01	3.01	270.11	0.10	-49.96	49.96	43.95	8.31	
1500.00	1500.00	1500.00	1500.00	3.23	3.23	270.11	0.10	-49.96	49.96	43.50	7.73	
1600.00	1600.00	1600.00	1600.00	3.46	3.46	270.11	0.10	-49.96	49.96	43.05	7.23	
1700.00	1700.00	1700.00	1700.00	3.68	3.68	270.11	0.10	-49.96	49.96	42.60	6.79	
1800.00	1800.00	1800.00	1800.00	3.91	3.91	270.11	0.10	-49.96	49.96	42.15	6.40	
1900.00	1900.00	1900.00	1900.00	4.13	4.13	270.11	0.10	-49.96	49.96	41.70	6.05	
2000.00	2000.00	2000.00	2000.00	4.35	4.35	270.11	0.10	-49.96	49.96	41.25	5.74	
2100.00	2100.00	2100.00	2100.00	4.58	4.58	270.11	0.10	-49.96	49.96	40.80	5.45	
2200.00	2200.00	2200.00	2200.00	4.80	4.80	270.11	0.10	-49.96	49.96	40.35	5.20	
2300.00	2300.00	2300.00	2300.00	5.03	5.03	270.11	0.10	-49.96	49.96	39.90	4.97	
2400.00	2400.00	2400.00	2400.00	5.25	5.25	270.11	0.10	-49.96	49.96	39.45	4.75	
2500.00	2500.00	2500.00	2500.00	5.48	5.48	270.11	0.10	-49.96	49.96	39.00	4.56	
2600.00	2600.00	2600.00	2600.00	5.70	5.70	270.11	0.10	-49.96	49.96	38.55	4.38	
2700.00	2700.00	2700.00	2700.00	5.93	5.93	270.11	0.10	-49.96	49.96	38.10	4.21	
2800.00	2800.00	2800.00	2800.00	6.15	6.15	270.11	0.10	-49.96	49.96	37.65	4.06	
2900.00	2900.00	2900.00	2900.00	6.38	6.38	270.11	0.10	-49.96	49.96	37.20	3.92	
3000.00	3000.00	3000.00	3000.00	6.60	6.60	270.11	0.10	-49.96	49.96	36.76	3.78	
3100.00	3100.00	3100.00	3100.00	6.83	6.83	270.11	0.10	-49.96	49.96	36.31	3.66	
3200.00	3200.00	3200.00	3200.00	7.05	7.05	270.11	0.10	-49.96	49.96	35.86	3.54	
3300.00	3300.00	3300.00	3300.00	7.28	7.28	270.11	0.10	-49.96	49.96	35.41	3.43	
3400.00	3400.00	3400.00	3400.00	7.50	7.50	270.11	0.10	-49.96	49.96	34.96	3.33	
3500.00	3500.00	3500.00	3500.00	7.73	7.73	270.11	0.10	-49.96	49.96	34.51	3.23	



Weatherford International Ltd.

Anticollision Report

**Weatherford®**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #140H
Reference Well: #140H
Reference Wellpath: 1

Date: 2/7/2011
Time: 14:01:38
Page: 2

Co-ordinate(NE) Reference: Well: #140H, Grid North
Vertical (TVD) Reference: SITE 3468.0
Db: Sybase

Site: Cotton Draw Unit #139H
Well: #139H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD ft	TVD ft	Offset MD ft	TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location North ft	East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
3600.00	3600.00	3600.00	3600.00	7.95	7.95	270.11	0.10	-49.96	49.96	34.06	3.14	
3700.00	3700.00	3700.00	3700.00	8.18	8.18	270.11	0.10	-49.96	49.96	33.61	3.06	
3800.00	3800.00	3800.00	3800.00	8.40	8.40	270.11	0.10	-49.96	49.96	33.16	2.97	
3900.00	3900.00	3900.00	3900.00	8.63	8.63	270.11	0.10	-49.96	49.96	32.71	2.90	
4000.00	4000.00	4000.00	4000.00	8.85	8.85	270.11	0.10	-49.96	49.96	32.26	2.82	
4100.00	4100.00	4100.00	4100.00	9.07	9.07	270.11	0.10	-49.96	49.96	31.81	2.75	
4200.00	4200.00	4200.00	4200.00	9.30	9.30	270.11	0.10	-49.96	49.96	31.36	2.69	
4300.00	4300.00	4300.00	4300.00	9.52	9.52	270.11	0.10	-49.96	49.96	30.91	2.62	
4400.00	4400.00	4400.00	4400.00	9.75	9.75	270.11	0.10	-49.96	49.96	30.46	2.56	
4500.00	4500.00	4500.00	4500.00	9.97	9.97	270.11	0.10	-49.96	49.96	30.01	2.50	
4600.00	4600.00	4600.00	4600.00	10.20	10.20	270.11	0.10	-49.96	49.96	29.56	2.45	
4700.00	4700.00	4700.00	4700.00	10.42	10.42	270.11	0.10	-49.96	49.96	29.11	2.40	
4800.00	4800.00	4800.00	4800.00	10.65	10.65	270.11	0.10	-49.96	49.96	28.66	2.35	
4900.00	4900.00	4900.00	4900.00	10.87	10.87	270.11	0.10	-49.96	49.96	28.21	2.30	
5000.00	5000.00	5000.00	5000.00	11.10	11.10	270.11	0.10	-49.96	49.96	27.76	2.25	
5100.00	5100.00	5100.00	5100.00	11.32	11.32	270.11	0.10	-49.96	49.96	27.31	2.21	
5200.00	5200.00	5200.00	5200.00	11.55	11.55	270.11	0.10	-49.96	49.96	26.87	2.16	
5300.00	5300.00	5300.00	5300.00	11.77	11.77	270.11	0.10	-49.96	49.96	26.42	2.12	
5400.00	5400.00	5400.00	5400.00	12.00	12.00	270.11	0.10	-49.96	49.96	25.97	2.08	
5500.00	5500.00	5500.00	5500.00	12.22	12.22	270.11	0.10	-49.96	49.96	25.52	2.04	
5600.00	5600.00	5600.00	5600.00	12.45	12.45	270.11	0.10	-49.96	49.96	25.07	2.01	
5700.00	5700.00	5700.00	5700.00	12.67	12.67	270.11	0.10	-49.96	49.96	24.62	1.97	
5800.00	5800.00	5800.00	5800.00	12.90	12.90	270.11	0.10	-49.96	49.96	24.17	1.94	
5900.00	5900.00	5900.00	5900.00	13.12	13.12	270.11	0.10	-49.96	49.96	23.72	1.90	
6000.00	6000.00	6000.00	6000.00	13.35	13.35	270.11	0.10	-49.96	49.96	23.27	1.87	
6100.00	6100.00	6100.00	6100.00	13.57	13.57	270.11	0.10	-49.96	49.96	22.82	1.84	
6200.00	6200.00	6200.00	6200.00	13.80	13.80	270.11	0.10	-49.96	49.96	22.37	1.81	
6300.00	6300.00	6300.00	6300.00	14.02	14.02	270.11	0.10	-49.96	49.96	21.92	1.78	
6400.00	6400.00	6400.00	6400.00	14.24	14.24	270.11	0.10	-49.96	49.96	21.47	1.75	
6500.00	6500.00	6500.00	6500.00	14.47	14.47	270.11	0.10	-49.96	49.96	21.02	1.73	
6600.00	6600.00	6600.00	6600.00	14.69	14.69	270.11	0.10	-49.96	49.96	20.57	1.70	
6700.00	6700.00	6700.00	6700.00	14.92	14.92	270.11	0.10	-49.96	49.96	20.12	1.67	
6800.00	6800.00	6800.00	6800.00	15.14	15.14	270.11	0.10	-49.96	49.96	19.67	1.65	
6900.00	6900.00	6900.00	6900.00	15.37	15.37	270.11	0.10	-49.96	49.96	19.22	1.63	
7000.00	7000.00	7000.00	7000.00	15.59	15.59	270.11	0.10	-49.96	49.96	18.77	1.60	
7100.00	7100.00	7100.00	7100.00	15.82	15.82	270.11	0.10	-49.96	49.96	18.32	1.58	
7200.00	7200.00	7200.00	7200.00	16.04	16.04	270.11	0.10	-49.96	49.96	17.87	1.56	
7300.00	7300.00	7300.00	7300.00	16.27	16.27	270.11	0.10	-49.96	49.96	17.43	1.54	
7400.00	7400.00	7400.00	7400.00	16.49	16.49	270.11	0.10	-49.96	49.96	16.98	1.51	
7500.00	7500.00	7500.00	7500.00	16.72	16.72	270.11	0.10	-49.96	49.96	16.53	1.49	Level 3
7600.00	7600.00	7600.00	7600.00	16.94	16.94	270.11	0.10	-49.96	49.96	16.08	1.47	Level 3
7700.00	7700.00	7700.00	7700.00	17.17	17.17	270.11	0.10	-49.96	49.96	15.63	1.46	Level 3
7800.00	7800.00	7800.00	7800.00	17.39	17.39	270.11	0.10	-49.96	49.96	15.18	1.44	Level 3
7900.00	7900.00	7900.00	7900.00	17.62	17.62	270.11	0.10	-49.96	49.96	14.73	1.42	Level 3
8000.00	8000.00	8000.00	8000.00	17.84	17.84	270.11	0.10	-49.96	49.96	14.28	1.40	Level 3
8100.00	8099.91	8099.91	8099.91	18.05	18.07	167.62	0.10	-49.96	52.78	16.72	1.46	Level 3
8200.00	8198.30	8198.30	8198.30	18.24	18.29	170.40	0.10	-49.96	69.75	33.63	1.93	
8300.00	8292.78	8292.78	8292.78	18.46	18.50	173.09	0.10	-49.96	101.92	66.04	2.84	
8400.00	8381.02	8380.92	8380.92	18.73	18.70	174.85	0.11	-49.96	148.56	113.22	4.20	
8500.00	8460.97	8456.08	8455.88	19.08	18.86	180.26	4.84	-49.97	209.30	174.56	6.02	
8600.00	8538.15	8525.70	8524.39	19.50	19.01	200.09	17.07	-50.01	274.97	239.46	7.74	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #140H
Reference Well: #140H
Reference Wellpath: 1

Date: 2/7/2011
Time: 14:01:38
Page: 3

Co-ordinate(NE) Reference: Well: #140H, Grid North
Vertical (TVD) Reference: SITE 3468.0
Db: Sybase

Site: Cotton Draw Unit #139H
Well: #139H
Wellpath: 1 VO Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD	Reference TVD ft	Offset MD	Offset TVD ft	Semi-Major Axis Ref ft	Semi-Major Axis Offset ft	TFO-HS deg	Offset Location North ft	Offset Location East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
8700.00	8614.94	8595.34	8591.16	19.90	19.16	217.17	36.71	-50.06	338.83	302.29	9.27	
8800.00	8689.46	8666.15	8656.45	20.27	19.32	231.53	64.04	-50.14	399.56	361.91	10.61	
8900.00	8759.87	8739.16	8720.15	20.61	19.49	243.13	99.62	-50.24	456.09	417.37	11.78	
9000.00	8824.44	8815.24	8781.75	20.92	19.70	252.17	144.20	-50.36	507.45	467.71	12.77	
9100.00	8881.58	8895.14	8840.23	21.23	19.95	258.99	198.56	-50.51	552.71	512.02	13.58	
9200.00	8929.88	8979.35	8893.99	21.54	20.29	263.94	263.31	-50.69	590.99	549.39	14.21	
9300.00	8968.16	9068.09	8940.87	21.85	20.72	267.32	338.57	-50.90	621.43	578.93	14.62	
9400.00	8995.46	9161.13	8978.29	22.17	21.26	269.37	423.66	-51.13	643.26	599.84	14.81	
9500.00	9011.12	9257.78	9003.61	22.49	21.94	270.23	516.83	-51.39	655.84	611.41	14.76	
9600.00	9015.00	9356.86	9014.64	22.92	22.74	270.03	615.20	-51.67	658.93	613.30	14.44	
9700.00	9015.00	9456.85	9015.00	23.76	23.66	270.00	715.18	-51.94	658.89	611.50	13.90	
9800.00	9015.00	9556.85	9015.00	24.71	24.67	270.00	815.18	-52.22	658.85	609.50	13.35	
9900.00	9015.00	9656.85	9015.00	25.75	25.77	270.00	915.18	-52.50	658.81	607.32	12.80	
10000.00	9015.00	9756.85	9015.00	26.88	26.95	270.00	1015.18	-52.77	658.77	604.98	12.25	
10100.00	9015.00	9856.85	9015.00	28.08	28.19	270.00	1115.18	-53.05	658.73	602.49	11.71	
10200.00	9015.00	9956.85	9015.00	29.34	29.50	270.00	1215.18	-53.33	658.69	599.88	11.20	
10300.00	9015.00	10056.85	9015.00	30.66	30.86	270.00	1315.18	-53.61	658.65	597.16	10.71	
10400.00	9015.00	10156.85	9015.00	32.03	32.27	270.00	1415.18	-53.88	658.61	594.34	10.25	
10500.00	9015.00	10256.85	9015.00	33.45	33.71	270.00	1515.18	-54.16	658.57	591.44	9.81	
10600.00	9015.01	10356.85	9015.00	34.90	35.19	270.00	1615.18	-54.44	658.52	588.47	9.40	
10700.00	9015.01	10456.85	9015.00	36.38	36.71	270.00	1715.18	-54.71	658.48	585.43	9.01	
10800.00	9015.01	10556.85	9015.00	37.90	38.25	270.00	1815.18	-54.99	658.44	582.33	8.65	
10900.00	9015.01	10656.85	9015.00	39.44	39.81	270.00	1915.18	-55.27	658.40	579.18	8.31	
11000.00	9015.01	10756.85	9015.00	41.00	41.40	270.00	2015.18	-55.55	658.36	575.99	7.99	
11100.00	9015.01	10856.85	9015.00	42.59	43.00	270.00	2115.18	-55.82	658.32	572.75	7.69	
11200.00	9015.01	10956.85	9015.00	44.19	44.63	270.00	2215.18	-56.10	658.28	569.49	7.41	
11300.00	9015.01	11056.85	9015.00	45.81	46.26	270.00	2315.18	-56.38	658.24	566.19	7.15	
11400.00	9015.01	11156.85	9015.00	47.45	47.91	270.00	2415.18	-56.65	658.20	562.86	6.90	
11500.00	9015.01	11256.85	9015.00	49.10	49.58	270.00	2515.18	-56.93	658.16	559.50	6.67	
11600.00	9015.01	11356.85	9015.00	50.76	51.25	270.00	2615.18	-57.21	658.11	556.12	6.45	
11700.00	9015.01	11456.85	9015.00	52.43	52.94	270.00	2715.18	-57.49	658.07	552.73	6.25	
11800.00	9015.01	11556.85	9015.00	54.12	54.63	270.00	2815.18	-57.76	658.03	549.31	6.05	
11900.00	9015.01	11656.85	9015.00	55.81	56.33	270.00	2915.18	-58.04	657.99	545.87	5.87	
12000.00	9015.01	11756.85	9015.00	57.51	58.04	270.00	3015.18	-58.32	657.95	542.42	5.70	
12100.00	9015.01	11856.85	9015.00	59.21	59.76	270.00	3115.18	-58.59	657.91	538.96	5.53	
12200.00	9015.01	11956.85	9015.00	60.93	61.48	270.00	3215.17	-58.87	657.87	535.48	5.38	
12300.00	9015.01	12056.85	9015.00	62.65	63.21	270.00	3315.17	-59.15	657.83	531.99	5.23	
12400.00	9015.01	12156.85	9015.00	64.37	64.95	270.00	3415.17	-59.43	657.79	528.48	5.09	
12500.00	9015.02	12256.85	9015.00	66.11	66.68	270.00	3515.17	-59.70	657.75	524.97	4.95	
12600.00	9015.02	12356.85	9015.00	67.84	68.43	270.00	3615.17	-59.98	657.71	521.45	4.83	
12700.00	9015.02	12456.85	9015.00	69.58	70.18	270.00	3715.17	-60.26	657.66	517.92	4.71	
12800.00	9015.02	12556.85	9015.00	71.33	71.93	270.00	3815.17	-60.54	657.62	514.38	4.59	
12900.00	9015.02	12656.85	9015.00	73.08	73.68	270.00	3915.17	-60.81	657.58	510.84	4.48	
13000.00	9015.02	12756.85	9015.00	74.83	75.44	270.00	4015.17	-61.09	657.54	507.28	4.38	
13100.00	9015.02	12856.85	9015.00	76.59	77.20	270.00	4115.17	-61.37	657.50	503.72	4.28	
13200.00	9015.02	12956.85	9015.00	78.35	78.97	270.00	4215.17	-61.64	657.46	500.16	4.18	
13300.00	9015.02	13056.85	9015.00	80.11	80.74	270.00	4315.17	-61.92	657.42	496.58	4.09	
13400.00	9015.02	13156.85	9015.00	81.88	82.51	270.00	4415.17	-62.20	657.38	493.01	4.00	
13500.00	9015.02	13256.85	9015.00	83.65	84.28	270.00	4515.17	-62.48	657.34	489.43	3.91	
13600.00	9015.02	13356.85	9015.00	85.42	86.05	270.00	4615.17	-62.75	657.30	485.84	3.83	
13700.00	9015.02	13456.85	9015.00	87.19	87.83	270.00	4715.17	-63.03	657.25	482.25	3.76	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #140H
Reference Well: #140H
Reference Wellpath: 1

Date: 2/7/2011

Time: 14:01:38

Page: 4

Co-ordinate(NE) Reference: Well: #140H, Grid North
Vertical (TVD) Reference: SITE 3468.0

Db: Sybase

Site: Cotton Draw Unit #139H
Well: #139H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD ft	TVD ft	Offset MD ft	TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location North ft	East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
13800.00	9015.02	13556.85	9015.00	88.97	89.61	270.00	4815.17	-63.31	657.21	478.65	3.68	
13900.00	9015.02	13656.85	9015.00	90.74	91.39	270.00	4915.17	-63.58	657.17	475.05	3.61	
14000.00	9015.02	13756.85	9015.00	92.52	93.17	270.00	5015.17	-63.86	657.13	471.45	3.54	
14100.00	9015.02	13856.85	9015.00	94.30	94.96	270.00	5115.17	-64.14	657.09	467.84	3.47	
14200.00	9015.02	13956.85	9015.00	96.09	96.74	270.00	5215.17	-64.42	657.05	464.23	3.41	
14300.00	9015.02	14056.85	9015.00	97.87	98.53	270.00	5315.17	-64.69	657.01	460.62	3.35	
14400.00	9015.03	14156.85	9015.00	99.66	100.32	270.00	5415.17	-64.97	656.97	457.00	3.29	
14500.00	9015.03	14256.85	9015.00	101.44	102.11	270.00	5515.17	-65.25	656.93	453.39	3.23	
14600.00	9015.03	14356.85	9015.00	103.23	103.90	270.00	5615.17	-65.52	656.89	449.77	3.17	
14700.00	9015.03	14456.85	9015.00	105.02	105.69	270.00	5715.16	-65.80	656.85	446.14	3.12	
14800.00	9015.03	14556.85	9015.00	106.81	107.49	270.00	5815.16	-66.08	656.80	442.52	3.07	
14900.00	9015.03	14656.85	9015.00	108.61	109.28	270.00	5915.16	-66.36	656.76	438.89	3.01	
15000.00	9015.03	14756.85	9015.00	110.40	111.08	270.00	6015.16	-66.63	656.72	435.26	2.97	
15100.00	9015.03	14856.85	9015.00	112.19	112.87	270.00	6115.16	-66.91	656.68	431.62	2.92	
15200.00	9015.03	14956.85	9015.00	113.99	114.67	270.00	6215.16	-67.19	656.64	427.99	2.87	
15300.00	9015.03	15056.85	9015.00	115.79	116.47	270.00	6315.16	-67.46	656.60	424.35	2.83	
15400.00	9015.03	15156.85	9015.00	117.58	118.27	270.00	6415.16	-67.74	656.56	420.72	2.78	
15500.00	9015.03	15256.85	9015.00	119.38	120.07	270.00	6515.16	-68.02	656.52	417.08	2.74	
15600.00	9015.03	15356.85	9015.00	121.18	121.87	270.00	6615.16	-68.30	656.48	413.43	2.70	
15700.00	9015.03	15456.85	9015.00	122.98	123.67	270.00	6715.16	-68.57	656.44	409.79	2.66	
15800.00	9015.03	15556.85	9015.00	124.78	125.47	270.00	6815.16	-68.85	656.40	406.15	2.62	
15900.00	9015.03	15656.85	9015.00	126.58	127.28	270.00	6915.16	-69.13	656.35	402.50	2.59	
16000.00	9015.03	15756.85	9015.00	128.39	129.08	270.00	7015.16	-69.41	656.31	398.85	2.55	
16100.00	9015.03	15856.85	9015.00	130.19	130.89	270.00	7115.16	-69.68	656.27	395.21	2.51	
16200.00	9015.03	15956.85	9015.00	131.99	132.69	270.00	7215.16	-69.96	656.23	391.56	2.48	
16300.00	9015.03	16056.85	9015.00	133.80	134.50	270.00	7315.16	-70.24	656.19	387.90	2.45	
16400.00	9015.04	16156.85	9015.00	135.60	136.30	270.00	7415.16	-70.51	656.15	384.25	2.41	
16500.00	9015.04	16256.85	9015.00	137.41	138.11	270.00	7515.16	-70.79	656.11	380.60	2.38	
16600.00	9015.04	16356.85	9015.00	139.21	139.92	270.00	7615.16	-71.07	656.07	376.94	2.35	
16681.43	9015.00	16438.28	9015.00	140.68	141.39	270.00	7696.59	-71.29	656.00	373.93	2.33	

Site: Cotton Draw Unit #156H
Well: Cotton Draw Unit #156H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD ft	TVD ft	Offset MD ft	TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location North ft	East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
0.00	0.00	12878.06	8280.00	0.00	90.83	9.82	5298.26	916.81	9830.82	9793.62	264.28	
100.00	100.00	12878.06	8280.00	0.08	90.83	9.82	5298.26	916.81	9747.26	9709.95	261.24	
200.00	200.00	12878.06	8280.00	0.31	90.83	9.82	5298.26	916.81	9664.01	9626.44	257.26	
300.00	300.00	12878.06	8280.00	0.53	90.83	9.82	5298.26	916.81	9581.08	9543.25	253.33	
400.00	400.00	12878.06	8280.00	0.76	90.83	9.82	5298.26	916.81	9498.47	9460.40	249.45	
500.00	500.00	12878.06	8280.00	0.98	90.83	9.82	5298.26	916.81	9416.21	9377.87	245.62	
600.00	600.00	12878.06	8280.00	1.21	90.83	9.82	5298.26	916.81	9334.29	9295.70	241.85	
700.00	700.00	12878.06	8280.00	1.43	90.83	9.82	5298.26	916.81	9252.73	9213.87	238.13	
800.00	800.00	12878.06	8280.00	1.66	90.83	9.82	5298.26	916.81	9171.53	9132.41	234.46	
900.00	900.00	12878.06	8280.00	1.88	90.83	9.82	5298.26	916.81	9090.71	9051.33	230.84	
1000.00	1000.00	12878.06	8280.00	2.11	90.83	9.82	5298.26	916.81	9010.27	8970.63	227.27	
1100.00	1100.00	12878.06	8280.00	2.33	90.83	9.82	5298.26	916.81	8930.23	8890.32	223.74	
1200.00	1200.00	12878.06	8280.00	2.56	90.83	9.82	5298.26	916.81	8850.59	8810.41	220.27	
1300.00	1300.00	12878.06	8280.00	2.78	90.83	9.82	5298.26	916.81	8771.37	8730.92	216.84	
1400.00	1400.00	12878.06	8280.00	3.01	90.83	9.82	5298.26	916.81	8692.58	8651.86	213.46	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #140H
Reference Well: #140H
Reference Wellpath: 1

Date: 2/7/2011

Time: 14:01:38

Page: 5

Co-ordinate(NE) Reference: Well: #140H, Grid North
Vertical (TVD) Reference: SITE 3468.0

Db: Sybase

Site: Cotton Draw Unit #156H
Well: Cotton Draw Unit #156H
Wellpath: 1 VO Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD ft	TVD ft	Offset MD ft	TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location North ft	East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
1500.00	1500.00	12878.06	8280.00	3.23	90.83	9.82	5298.26	916.81	8614.23	8573.24	210.12	
1600.00	1600.00	12878.06	8280.00	3.46	90.83	9.82	5298.26	916.81	8536.33	8495.06	206.83	
1700.00	1700.00	12878.06	8280.00	3.68	90.83	9.82	5298.26	916.81	8458.90	8417.35	203.58	
1800.00	1800.00	12878.06	8280.00	3.91	90.83	9.82	5298.26	916.81	8381.94	8340.11	200.37	
1900.00	1900.00	12878.06	8280.00	4.13	90.83	9.82	5298.26	916.81	8305.48	8263.36	197.21	
2000.00	2000.00	12878.06	8280.00	4.35	90.83	9.82	5298.26	916.81	8229.52	8187.12	194.09	
2100.00	2100.00	12878.06	8280.00	4.58	90.83	9.82	5298.26	916.81	8154.08	8111.39	191.01	
2200.00	2200.00	12878.06	8280.00	4.80	90.83	9.82	5298.26	916.81	8079.17	8036.19	187.97	
2300.00	2300.00	12878.06	8280.00	5.03	90.83	9.82	5298.26	916.81	8004.81	7961.53	184.97	
2400.00	2400.00	12878.06	8280.00	5.25	90.83	9.82	5298.26	916.81	7931.02	7887.44	182.01	
2500.00	2500.00	12878.06	8280.00	5.48	90.83	9.82	5298.26	916.81	7857.80	7813.92	179.09	
2600.00	2600.00	12878.06	8280.00	5.70	90.83	9.82	5298.26	916.81	7785.18	7741.00	176.20	
2700.00	2700.00	12878.06	8280.00	5.93	90.83	9.82	5298.26	916.81	7713.17	7668.68	173.36	
2800.00	2800.00	12878.06	8280.00	6.15	90.83	9.82	5298.26	916.81	7641.79	7596.99	170.55	
2900.00	2900.00	12878.06	8280.00	6.38	90.83	9.82	5298.26	916.81	7571.06	7525.94	167.78	
3000.00	3000.00	12878.06	8280.00	6.60	90.83	9.82	5298.26	916.81	7501.00	7455.55	165.04	
3100.00	3100.00	12878.06	8280.00	6.83	90.83	9.82	5298.26	916.81	7431.62	7385.84	162.34	
3200.00	3200.00	12878.06	8280.00	7.05	90.83	9.82	5298.26	916.81	7362.95	7316.83	159.67	
3300.00	3300.00	12878.06	8280.00	7.28	90.83	9.82	5298.26	916.81	7295.00	7248.54	157.03	
3400.00	3400.00	12878.06	8280.00	7.50	90.83	9.82	5298.26	916.81	7227.79	7180.99	154.43	
3500.00	3500.00	12878.06	8280.00	7.73	90.83	9.82	5298.26	916.81	7161.35	7114.20	151.86	
3600.00	3600.00	12878.06	8280.00	7.95	90.83	9.82	5298.26	916.81	7095.70	7048.18	149.32	
3700.00	3700.00	12878.06	8280.00	8.18	90.83	9.82	5298.26	916.81	7030.86	6982.97	146.81	
3800.00	3800.00	12878.06	8280.00	8.40	90.83	9.82	5298.26	916.81	6966.85	6918.58	144.33	
3900.00	3900.00	12878.06	8280.00	8.63	90.83	9.82	5298.26	916.81	6903.69	6855.04	141.88	
4000.00	4000.00	12878.06	8280.00	8.85	90.83	9.82	5298.26	916.81	6841.42	6792.36	139.46	
4100.00	4100.00	12878.06	8280.00	9.07	90.83	9.82	5298.26	916.81	6780.04	6730.58	137.06	
4200.00	4200.00	12878.06	8280.00	9.30	90.83	9.82	5298.26	916.81	6719.60	6669.71	134.69	
4300.00	4300.00	12878.06	8280.00	9.52	90.83	9.82	5298.26	916.81	6660.11	6609.78	132.34	
4400.00	4400.00	12878.06	8280.00	9.75	90.83	9.82	5298.26	916.81	6601.59	6550.81	130.01	
4500.00	4500.00	12878.06	8280.00	9.97	90.83	9.82	5298.26	916.81	6544.08	6492.84	127.71	
4600.00	4600.00	12878.06	8280.00	10.20	90.83	9.82	5298.26	916.81	6487.60	6435.88	125.43	
4700.00	4700.00	12878.06	8280.00	10.42	90.83	9.82	5298.26	916.81	6432.18	6379.96	123.16	
4800.00	4800.00	12878.06	8280.00	10.65	90.83	9.82	5298.26	916.81	6377.85	6325.11	120.91	
4900.00	4900.00	12878.06	8280.00	10.87	90.83	9.82	5298.26	916.81	6324.63	6271.34	118.68	
5000.00	5000.00	12878.06	8280.00	11.10	90.83	9.82	5298.26	916.81	6272.56	6218.70	116.46	
5100.00	5100.00	12878.06	8280.00	11.32	90.83	9.82	5298.26	916.81	6221.66	6167.20	114.26	
5200.00	5200.00	12878.06	8280.00	11.55	90.83	9.82	5298.26	916.81	6171.95	6116.87	112.06	
5300.00	5300.00	12878.06	8280.00	11.77	90.83	9.82	5298.26	916.81	6123.48	6067.74	109.87	
5400.00	5400.00	12878.06	8280.00	12.00	90.83	9.82	5298.26	916.81	6076.27	6019.84	107.68	
5500.00	5500.00	12878.06	8280.00	12.22	90.83	9.82	5298.26	916.81	6030.34	5973.18	105.50	
5600.00	5600.00	12878.06	8280.00	12.45	90.83	9.82	5298.26	916.81	5985.73	5927.80	103.32	
5700.00	5700.00	12878.06	8280.00	12.67	90.83	9.82	5298.26	916.81	5942.47	5883.71	101.13	
5800.00	5800.00	12878.06	8280.00	12.90	90.83	9.82	5298.26	916.81	5900.59	5840.95	98.94	
5900.00	5900.00	12878.06	8280.00	13.12	90.83	9.82	5298.26	916.81	5860.12	5799.54	96.74	
6000.00	6000.00	12878.06	8280.00	13.35	90.83	9.82	5298.26	916.81	5821.08	5759.50	94.52	
6100.00	6100.00	12878.06	8280.00	13.57	90.83	9.82	5298.26	916.81	5783.51	5720.85	92.29	
6200.00	6200.00	12878.06	8280.00	13.80	90.83	9.82	5298.26	916.81	5747.43	5683.61	90.05	
6300.00	6300.00	12878.06	8280.00	14.02	90.83	9.82	5298.26	916.81	5712.88	5647.80	87.78	
6400.00	6400.00	12878.06	8280.00	14.24	90.83	9.82	5298.26	916.81	5679.88	5613.44	85.49	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy Date: 2/7/2011 Time: 14:01:38 Page: 6
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #140H
Reference Well: #140H Co-ordinate(NE) Reference: Well: #140H, Grid North
Reference Wellpath: 1 Vertical (TVD) Reference: SITE 3468.0
Db: Sybase

Site: Cotton Draw Unit #156H
Well: Cotton Draw Unit #156H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis		Offset Location		Ctr-Ctr Edge Separation		Warning		
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance		Distance	Factor
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft		ft	
6500.00	6500.00	12878.06	8280.00	14.47	90.83	9.82	5298.26	916.81	5648.45	5580.54	83.17	
6600.00	6600.00	12878.06	8280.00	14.69	90.83	9.82	5298.26	916.81	5618.63	5549.12	80.83	
6700.00	6700.00	12878.06	8280.00	14.92	90.83	9.82	5298.26	916.81	5590.44	5519.18	78.46	
6800.00	6800.00	12878.06	8280.00	15.14	90.83	9.82	5298.26	916.81	5563.90	5490.75	76.06	
6900.00	6900.00	12878.06	8280.00	15.37	90.83	9.82	5298.26	916.81	5539.04	5463.83	73.64	
7000.00	7000.00	12878.06	8280.00	15.59	90.83	9.82	5298.26	916.81	5515.89	5438.43	71.21	
7100.00	7100.00	12878.06	8280.00	15.82	90.83	9.82	5298.26	916.81	5494.45	5414.55	68.77	
7200.00	7200.00	12878.06	8280.00	16.04	90.83	9.82	5298.26	916.81	5474.76	5392.22	66.33	
7300.00	7300.00	12878.06	8280.00	16.27	90.83	9.82	5298.26	916.81	5456.83	5371.46	63.92	
7400.00	7400.00	12878.06	8280.00	16.49	90.83	9.82	5298.26	916.81	5440.68	5352.29	61.55	
7500.00	7500.00	12878.06	8280.00	16.72	90.83	9.82	5298.26	916.81	5426.32	5334.77	59.27	
7600.00	7600.00	12878.06	8280.00	16.94	90.83	9.82	5298.26	916.81	5413.78	5318.96	57.10	
7700.00	7700.00	12878.06	8280.00	17.17	90.83	9.82	5298.26	916.81	5403.05	5304.98	55.09	
7800.00	7800.00	12878.06	8280.00	17.39	90.83	9.82	5298.26	916.81	5394.16	5292.95	53.29	
7900.00	7900.00	12878.06	8280.00	17.62	90.83	9.82	5298.26	916.81	5387.11	5283.05	51.77	
8000.00	8000.00	12878.06	8280.00	17.84	90.83	9.82	5298.26	916.81	5381.91	5275.48	50.56	
8100.00	8099.91	12878.06	8280.00	18.05	90.83	266.52	5298.26	916.81	5378.74	5270.60	49.74	
8200.00	8198.30	12878.06	8280.00	18.24	90.83	266.48	5298.26	916.81	5378.30	5269.27	49.33	
8300.00	8292.78	12878.06	8280.00	18.46	90.83	266.69	5298.26	916.81	5380.68	5271.58	49.32	
8400.00	8381.02	12878.06	8280.00	18.73	90.83	267.16	5298.26	916.81	5385.81	5277.47	49.71	
8500.00	8460.97	12878.06	8280.00	19.08	90.83	269.31	5298.26	916.81	5393.39	5286.63	50.52	
8600.00	8538.15	12878.06	8280.00	19.50	90.83	280.20	5298.26	916.81	5393.13	5289.09	51.83	
8700.00	8614.94	12878.06	8280.00	19.90	90.83	291.06	5298.26	916.81	5379.22	5279.29	53.83	
8800.00	8689.46	12878.06	8280.00	20.27	90.83	301.01	5298.26	916.81	5351.90	5257.29	56.57	
8900.00	8759.87	12878.06	8280.00	20.61	90.83	309.61	5298.26	916.81	5311.64	5223.07	59.97	
9000.00	8824.44	12878.06	8280.00	20.92	90.83	316.88	5298.26	916.81	5259.14	5176.73	63.82	
9100.00	8881.58	12878.06	8280.00	21.23	90.83	323.14	5298.26	916.81	5195.36	5118.72	67.79	
9200.00	8929.88	12878.06	8280.00	21.54	90.83	328.90	5298.26	916.81	5121.47	5049.92	71.58	
9300.00	8968.16	12878.06	8280.00	21.85	90.83	334.98	5298.26	916.81	5038.89	4971.68	74.97	
9400.00	8995.46	12878.06	8280.00	22.17	90.83	343.02	5298.26	916.81	4949.27	4885.69	77.84	
9500.00	9011.12	12878.06	8280.00	22.49	90.83	357.47	5298.26	916.81	4854.50	4793.40	79.46	
9600.00	9015.00	12878.06	8280.00	22.92	90.83	22.45	5298.26	916.81	4756.69	4693.33	75.07	
9700.00	9015.00	12878.06	8280.00	23.76	90.83	22.45	5298.26	916.81	4658.33	4594.48	72.95	
9800.00	9015.00	12878.06	8280.00	24.71	90.83	22.45	5298.26	916.81	4560.05	4495.66	70.82	
9900.00	9015.00	12878.06	8280.00	25.75	90.83	22.45	5298.26	916.81	4461.84	4396.87	68.68	
10000.00	9015.00	12878.06	8280.00	26.88	90.83	22.45	5298.26	916.81	4363.71	4298.13	66.55	
10100.00	9015.00	12878.06	8280.00	28.08	90.83	22.45	5298.26	916.81	4265.66	4199.45	64.42	
10200.00	9015.00	12878.06	8280.00	29.34	90.83	22.45	5298.26	916.81	4167.71	4100.83	62.31	
10300.00	9015.00	12878.06	8280.00	30.66	90.83	22.45	5298.26	916.81	4069.86	4002.28	60.22	
10400.00	9015.00	12878.06	8280.00	32.03	90.83	22.45	5298.26	916.81	3972.12	3903.82	58.15	
10500.00	9015.00	12878.06	8280.00	33.45	90.83	22.45	5298.26	916.81	3874.49	3805.45	56.12	
10600.00	9015.01	12878.06	8280.00	34.90	90.83	22.45	5298.26	916.81	3776.99	3707.19	54.11	
10700.00	9015.01	12878.06	8280.00	36.38	90.83	22.45	5298.26	916.81	3679.62	3609.05	52.14	
10800.00	9015.01	12878.06	8280.00	37.90	90.83	22.45	5298.26	916.81	3582.40	3511.03	50.20	
10900.00	9015.01	12878.06	8280.00	39.44	90.83	22.45	5298.26	916.81	3485.33	3413.16	48.29	
11000.00	9015.01	12878.06	8280.00	41.00	90.83	22.45	5298.26	916.81	3388.43	3315.45	46.43	
11100.00	9015.01	12878.06	8280.00	42.59	90.83	22.45	5298.26	916.81	3291.72	3217.91	44.60	
11200.00	9015.01	12878.06	8280.00	44.19	90.83	22.45	5298.26	916.81	3195.21	3120.56	42.80	
11300.00	9015.01	12878.06	8280.00	45.81	90.83	22.45	5298.26	916.81	3098.92	3023.43	41.05	
11400.00	9015.01	12878.06	8280.00	47.45	90.83	22.45	5298.26	916.81	3002.88	2926.53	39.33	
11500.00	9015.01	12878.06	8280.00	49.10	90.83	22.45	5298.26	916.81	2907.10	2829.89	37.65	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #140H
Reference Well: #140H
Reference Wellpath: 1

Date: 2/7/2011 Time: 14:01:38
Co-ordinate(NE) Reference: Well: #140H, Grid North
Vertical (TVD) Reference: SITE 3468.0

Page: 7

Db: Sybase

Site: Cotton Draw Unit #156H
Well: Cotton Draw Unit #156H
Wellpath: 1 VO Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference MD	Reference TVD	Offset MD	Offset TVD	Semi-Major Axis Ref	Semi-Major Axis Offset	TFO-HS	Offset Location North	Offset Location East	Ctr-Ctr Distance	Edge Distance	Separation Factor	Warning
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
11600.00	9015.01	12878.06	8280.00	50.76	90.83	22.45	5298.26	916.81	2811.62	2733.54	36.01	
11700.00	9015.01	12878.06	8280.00	52.43	90.83	22.45	5298.26	916.81	2716.46	2637.50	34.40	
11800.00	9015.01	12878.06	8280.00	54.12	90.83	22.45	5298.26	916.81	2621.66	2541.82	32.84	
11900.00	9015.01	12878.06	8280.00	55.81	90.83	22.45	5298.26	916.81	2527.26	2446.54	31.31	
12000.00	9015.01	12878.06	8280.00	57.51	90.83	22.45	5298.26	916.81	2433.31	2351.70	29.81	
12100.00	9015.01	12878.06	8280.00	59.21	90.83	22.45	5298.26	916.81	2339.86	2257.35	28.36	
12200.00	9015.01	12878.06	8280.00	60.93	90.83	22.45	5298.26	916.81	2246.98	2163.57	26.94	
12300.00	9015.01	12878.06	8280.00	62.65	90.83	22.45	5298.26	916.81	2154.73	2070.41	25.56	
12400.00	9015.01	12878.06	8280.00	64.37	90.83	22.45	5298.26	916.81	2063.20	1977.98	24.21	
12500.00	9015.02	12878.06	8280.00	66.11	90.83	22.45	5298.26	916.81	1972.50	1886.37	22.90	
12600.00	9015.02	12878.06	8280.00	67.84	90.83	22.45	5298.26	916.81	1882.74	1795.69	21.63	
12700.00	9015.02	12878.06	8280.00	69.58	90.83	22.45	5298.26	916.81	1794.06	1706.10	20.40	
12800.00	9015.02	12878.06	8280.00	71.33	90.83	22.45	5298.26	916.81	1706.64	1617.76	19.20	
12900.00	9015.02	12878.06	8280.00	73.08	90.83	22.45	5298.26	916.81	1620.67	1530.86	18.05	
13000.00	9015.02	12878.06	8280.00	74.83	90.83	22.45	5298.26	916.81	1536.40	1445.67	16.93	
13100.00	9015.02	12878.06	8280.00	76.59	90.83	22.45	5298.26	916.81	1454.12	1362.47	15.86	
13200.00	9015.02	12878.06	8280.00	78.35	90.83	22.45	5298.26	916.81	1374.20	1281.62	14.84	
13300.00	9015.02	12878.06	8280.00	80.11	90.83	22.45	5298.26	916.81	1297.07	1203.55	13.87	
13400.00	9015.02	12878.06	8280.00	81.88	90.83	22.45	5298.26	916.81	1223.25	1128.80	12.95	
13500.00	9015.02	12878.06	8280.00	83.65	90.83	22.45	5298.26	916.81	1153.38	1058.00	12.09	
13600.00	9015.02	12878.06	8280.00	85.42	90.83	22.45	5298.26	916.81	1088.23	991.91	11.30	
13700.00	9015.02	12878.06	8280.00	87.19	90.83	22.45	5298.26	916.81	1028.69	931.43	10.58	
13800.00	9015.02	12878.06	8280.00	88.97	90.83	22.45	5298.26	916.81	975.78	877.58	9.94	
13900.00	9015.02	12878.06	8280.00	90.74	90.83	22.45	5298.26	916.81	930.65	831.51	9.39	
14000.00	9015.02	12878.06	8280.00	92.52	90.83	22.45	5298.26	916.81	894.46	794.38	8.94	
14100.00	9015.02	12878.06	8280.00	94.30	90.83	22.45	5298.26	916.81	868.34	767.31	8.60	
14200.00	9015.02	12878.06	8280.00	96.09	90.83	22.45	5298.26	916.81	853.21	751.24	8.37	
14300.00	9015.02	12858.45	8280.00	97.87	90.48	22.45	5317.88	916.76	849.43	746.70	8.27	
14400.00	9015.03	12758.45	8280.00	99.66	88.70	22.46	5417.88	916.48	849.45	746.71	8.27	
14500.00	9015.03	12658.45	8280.00	101.44	86.91	22.46	5517.88	916.21	849.46	746.72	8.27	
14600.00	9015.03	12558.45	8280.00	103.23	85.13	22.46	5617.87	915.94	849.48	746.73	8.27	
14700.00	9015.03	12458.45	8280.00	105.02	83.34	22.47	5717.87	915.66	849.50	746.74	8.27	
14800.00	9015.03	12358.45	8280.00	106.81	81.56	22.47	5817.87	915.39	849.51	746.74	8.27	
14900.00	9015.03	12258.45	8280.00	108.61	79.79	22.47	5917.87	915.11	849.53	746.74	8.26	
15000.00	9015.03	12158.45	8280.00	110.40	78.01	22.47	6017.87	914.84	849.55	746.74	8.26	
15100.00	9015.03	12058.45	8280.00	112.19	76.24	22.48	6117.87	914.57	849.57	746.74	8.26	
15200.00	9015.03	11958.45	8280.00	113.99	74.47	22.48	6217.87	914.29	849.58	746.73	8.26	
15300.00	9015.03	11858.45	8280.00	115.79	72.70	22.48	6317.87	914.02	849.60	746.72	8.26	
15400.00	9015.03	11758.45	8280.00	117.58	70.93	22.49	6417.87	913.75	849.62	746.71	8.26	
15500.00	9015.03	11658.45	8280.00	119.38	69.17	22.49	6517.87	913.47	849.64	746.69	8.25	
15600.00	9015.03	11558.45	8280.00	121.18	67.41	22.49	6617.87	913.20	849.65	746.67	8.25	
15700.00	9015.03	11458.45	8280.00	122.98	65.66	22.49	6717.87	912.92	849.67	746.65	8.25	
15800.00	9015.03	11358.45	8280.00	124.78	63.91	22.50	6817.87	912.65	849.69	746.63	8.24	
15900.00	9015.03	11258.45	8280.00	126.58	62.16	22.50	6917.87	912.38	849.71	746.60	8.24	
16000.00	9015.03	11158.45	8280.00	128.39	60.42	22.50	7017.87	912.10	849.72	746.57	8.24	
16100.00	9015.03	11058.45	8280.00	130.19	58.68	22.50	7117.87	911.83	849.74	746.53	8.23	
16200.00	9015.03	10958.45	8280.00	131.99	56.95	22.51	7217.87	911.56	849.76	746.49	8.23	
16300.00	9015.03	10858.45	8280.00	133.80	55.23	22.51	7317.87	911.28	849.78	746.44	8.22	
16400.00	9015.04	10758.45	8280.00	135.60	53.51	22.51	7417.87	911.01	849.79	746.39	8.22	
16500.00	9015.04	10658.45	8280.00	137.41	51.80	22.52	7517.87	910.73	849.81	746.33	8.21	
16600.00	9015.04	10558.45	8280.00	139.21	50.09	22.52	7617.87	910.46	849.83	746.26	8.21	



Weatherford International Ltd.

Anticollision Report

**Weatherford**

Company: Devon Energy Date: 2/7/2011 Time: 14:01:38 Page: 8
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw Unit #140H Co-ordinate(NE) Reference: Well. #140H, Grid North
Reference Well: #140H Vertical (TVD) Reference: SITE 3468.0
Reference Wellpath: 1 Db: Sybase

Site: Cotton Draw Unit #156H
Well: Cotton Draw Unit #156H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis		Offset Location		Ctr-Ctr	Edge	Separation	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft	
16681.43	9015.00	10477.01	8280.00	140.68	48.71	22.52	7699.30	910.24	849.82	746.18	8.20

**Weatherford®****Weatherford Drilling Services**

GeoDec v5.03

Report Date: February 07, 2011
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw Unit #140H
API Number: _____
Rig Name: _____
Location: Eddy Co., NM
Block: _____
Engineer: RWJ

US State Plane 1983	Geodetic Latitude / Longitude
System: New Mexico Eastern Zone	System: Latitude / Longitude
Projection: Transverse Mercator/Gauss Kruger	Projection: Geodetic Latitude and Longitude
Datum: North American Datum 1983	Datum: North American Datum 1983
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
North/South 419723.610 USFT	Latitude 32.1525322 DEG
East/West 723333.770 USFT	Longitude -103.7452548 DEG
Grid Convergence: .31°	
Total Correction: +7.33°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.15253° N	32° 9 min 9.116 sec
Longitude =	103.74525° W	103° 44 min 42.918 sec

Magnetic Declination =	7.64°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6634
Local Field Strength =	48559 nT	Magnetic Vector X = 24001 nT
Magnetic Dip =	60.09°	Magnetic Vector Y = 3220 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 42090 nT
Spud Date =	Aug 15, 2011	Magnetic Vector H = 24216 nT

Signed: _____

Date: _____

NOTES REGARDING BLOWOUT PREVENTERS

Devon Energy Production Company, LP

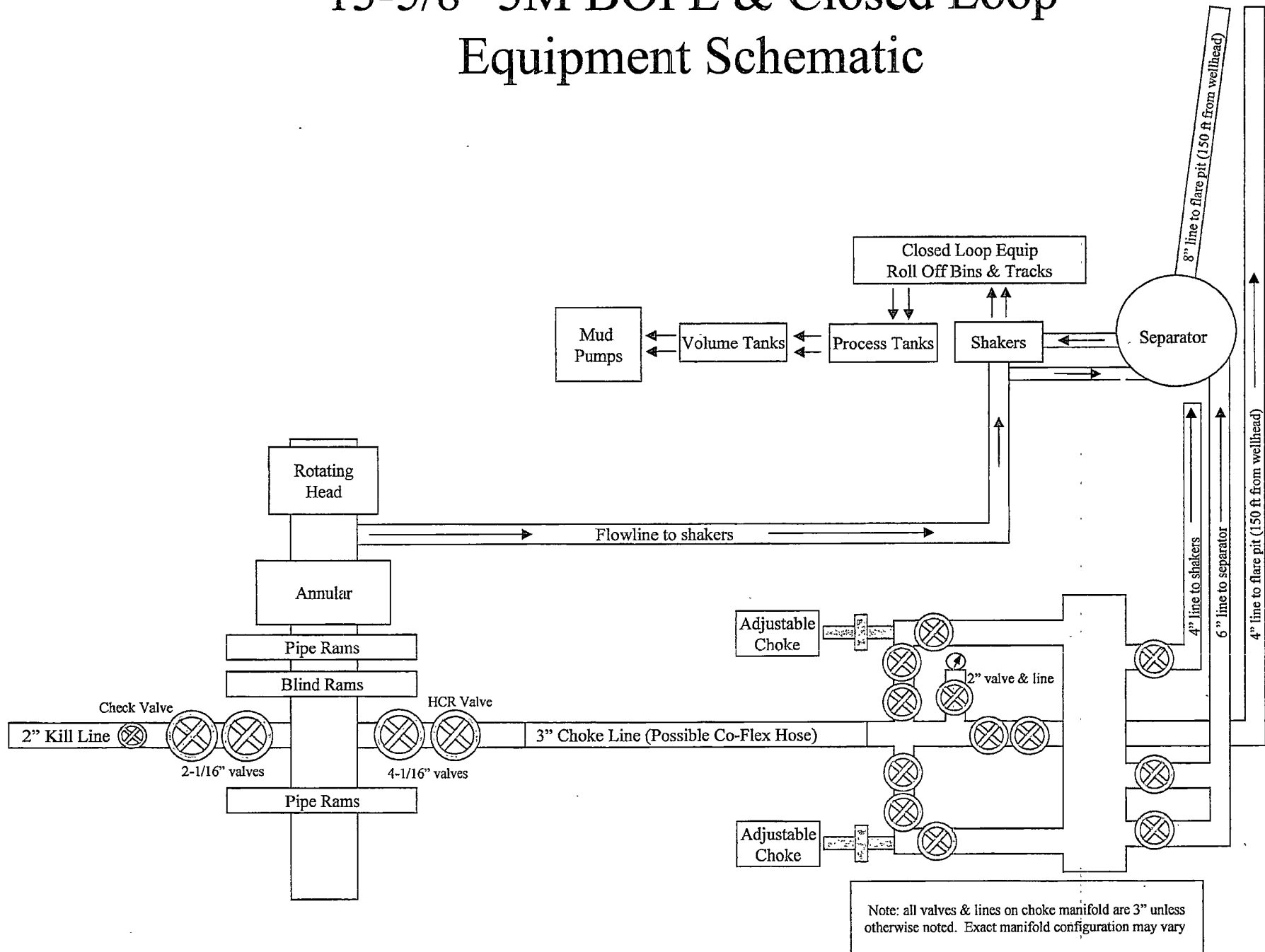
Cotton Draw Unit 140H

Surface Location: 200' FSL & 1600' FEL, Unit O, Sec 2 T25S R31E, Eddy, NM

Bottom Hole Location: 2600' FSL & 986' FEL, Unit I, Sec 35 T24S 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 3,000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 3,000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

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





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.

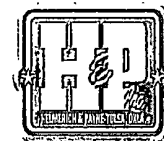
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

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 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com





QUALITY DOCUMENT

**PHOENIX RUBBER
INDUSTRIAL LTD.**

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 Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.isurusentreg.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 555	
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°: 34137		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 = 16 MPa					
COUPLINGS					
Type	Serial N°	Quality	Heat N°		
3" coupling with	714 715	AISI 4130	C7626		
4 1/16" Flange end		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: 30. April 2002.		Inspector		Quality Control PHOENIX RUBBER Industrial Ltd. Hose Inspection and Pressure Testing Department	

[illegible]

PHOENIX RUBBER
Industrial Ltd.
Hose Inspection and
Certification Dept.

VERIFIED TRUE COPY
PHOENIX RUBBER CO.