

OCD Artesia

ATS-12-997
EA-12-1249FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT5 Lease Serial No. **NM 120903**
BHL-LC-061862; SHL-NM-000503

6 If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone2 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) 552-4524

4 Location of Well (Report location clearly and in accordance with any State requirements *)

At surface **330 FNL & 1980 FEL**At proposed prod. zone **330 FSL & 1980 FEL**14 Distance in miles and direction from nearest town or post office*
19 MILES SOUTHEAST OF MALAGA, NM

7 If Unit or CA Agreement, Name and No.

8 Lease Name and Well No.
COTTON DRAW 15 FED COM 1H

9 API Well No.

10 Field and Pool, or Exploratory
UNDESIGNATED DELAWARE11 Sec., T. R. M. or Blk. and Survey or Area
SECTION 15, T. 25 S., R. 31 E.12 County or Parish
EDDY13. State
NM15 Distance from proposed* location to nearest property or lease line, ft
(Also to nearest drig. unit line, if any)
330'16. No. of acres in lease
124017 Spacing Unit-dedicated to this well
16018. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
**730' @ SURFACE
748' @ BOTTOM**19. Proposed Depth
**MD: 12637'
TVD: 8207'**20 BLM/BIA Bond No. on file
NMB-000801 C0-110421. Elevations (Show whether DF, KDB, RT, GL, etc.)
3383.4' GL

22. Approximate date work will start*

23. Estimated duration
30 DAYS

24. Attachments

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

1. Well plat certified by a registered surveyor.

2. A Drilling Plan.

3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office)

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

5. Operator certification

6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature

Name (Printed/Typed)
BARRY W. HUNT

Date

7/23/12

Title

PERMIT AGENT FOR DEVON ENERGY PRODUCTION COMPANY, L.P.

Approved by (Signature)

/s/ Don Peterson

Name (Printed/Typed)

/s/ Don Peterson

Date

SEP 20 2012

Title

FIELD MANAGER

Office

CARLSBAD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL



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

405 235 3611 Phone
www.devonenergy.com

June 5, 2012

To Whom It May Concern:

Mr. Barry Hunt is contracted by Devon Energy, L.P. to sign as their agent for APDs and Right of Ways in the state of New Mexico.

If you have any questions, please contact me at my office at (405) 228-8379.

Sincerely,


Victoria Sanchez

Supervisor, Regulatory Compliance
Mid-Continent Division
Devon Energy, L.P.

DISTRICT I
1625 N French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 391-0720
DISTRICT II
811 S First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
DISTRICT III
1000 Rio Brazos Rd., 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, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-40746	Pool Code 96757	Pool Name UNDESIGNATED DELAWARE
Property Code 39469	Property Name COTTON DRAW 15 FED COM	Well Number 1H
OGRID No 6137	Operator Name DEVON ENERGY PRODUCTION COMPANY, LP.	Elevation 3383.4'

Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	15	25 S	31 E		330	NORTH	1980	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	15	25 S	31 E		330	SOUTH	1980	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidated Code	Order No
160			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

OPERATOR: Please do not report production under this pool id code until OCD confirms perfs and appropriate pool designation on completion and C104 approvals.

NW COR SEC 15 NMSP-E (NAD 83) Y = 414275 2' N X = 714348 9' E LAT.= N32° 08' 15.67" LONG.= W103° 46' 27.76"	COTTON DRAW 15 FED COM - 1H SHL NMSP-E (NAD 83) Y = 413963.1' N X = 717683.7' E LAT.= N32° 08' 12.41" LONG.= W103° 45' 48.99"	330'	1980'	NE COR SEC 15 NMSP-E (NAD 83) Y = 414306 2' N X = 719664 5' E LAT.= N32° 08' 15.70" LONG.= W103° 45' 25.94"
00°02'09" W - 4638.5'				
SW COR SEC 15 NMSP-E (NAD 83) Y = 408972 9' N X = 714348 8' E LAT.= N32° 07' 23.20" LONG.= W103° 46' 28.08"	COTTON DRAW 15 FED COM - 1H BHL NMSP-E (NAD 83) Y = 409324 6' N X = 717680.8' E LAT.= N32° 07' 26.51" LONG.= W103° 45' 49.31"	330'	1980'	SE COR SEC 15 NMSP-E (NAD 83) Y = 409007 5' N X = 719660 8' E LAT.= N32° 07' 23.27" LONG.= W103° 45' 26.31"

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: Barry W. Hunt Date: 7/23/12

Print Name: Barry W. Hunt

E-mail Address: _____

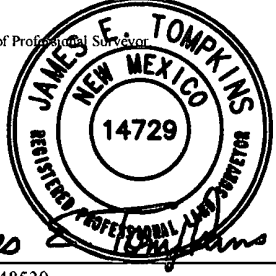
SURVEYORS CERTIFICATION

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.

MAY 31, 2012

Date of Survey

Signature and Seal of Professional Surveyor



Job No.: WTC48539

JAMES E. TOMPKINS 14729

Certificate Number

DISTRICT I
1023 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) 749-1233 Fax: (575) 749-9720

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1000 Rio Grande Rd., Alamogordo, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
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Phone: (505) 476-3460 Fax: (505) 476-3462

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Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

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API Number 30-015-40746	Pool Code 96757	Pool Name Cotton Draw UNDESIGNATED DELAWARE, South
Property Code 39469	Property Name COTTON DRAW 15 FED COM	Well Number 1H
OGRID No. 6137	Operator Name DEVON ENERGY PRODUCTION COMPANY, LP.	Elevation 3383.4'

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Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
160			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

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		DMNM 120903	SURVEYORS 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. MAY 31, 2012 Date of Survey Signature and Seal of Professional Surveyor: <u>James E. Tompkins</u>
SW COR SEC 15 NMSP-E (NAD 83) Y = 408972.9' N X = 714348.8' E LAT = N32° 07' 23.20" LONG = W103° 46' 28.06"	DMCC 061862 COTTON DRAW 15 FED COM - 1H BHL NMSP-E (NAD 83) Y = 409324.6' N X = 717680.8' E LAT = N32° 07' 26.51" LONG = W103° 45' 49.31"	330' 1980' SE COR SEC 15 NMSP-E (NAD 83) Y = 409007.5' N X = 719660.8' E LAT = N32° 07' 23.27" LONG = W103° 45' 26.31"	JAMES E. TOMPKINS REGISTERED PROFESSIONAL SURVEYOR 14729 Job No.: <u>WTC48539</u> JAMES E. TOMPKINS 14729 Certificate Number

DEVON ENERGY PRODUCTION, L. P.
DRILLING PLAN

COTTON DRAW 15 FED COM 1H

SHL: 330 FNL & 1980 FEL

BHL: 330 FSL & 1980 FEL

Section 15-25S-31E

Eddy County, NM

The elevation of the unprepared ground is 3383.4' feet above sea level.

The geologic name of the surface formation is Quaternary - Alluvium.

A rotary rig will be utilized to drill the well.

Proposed total depth is: MD: 12637'. TVD: 8207'.

Estimated tops of important geologic markers:

Quaternary – Alluvium	Surface*
Rustler	500'
Salado	880'
Top of Salt	977'
Base of Salt	4130'
Delaware	4347'
Bell Canyon Sand	4385'
Cherry Canyon Sand	5324'
Brushy Canyon Sand	6634'
TVD	8207' (140 degree F)

*Water anticipated at 200 feet.

Estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered:

Delaware	Oil (1913 psi)
Bell Canyon	Oil (1929 psi)
Cherry Canyon	Oil (2343 psi)
Brushy Canyon	Oil (2921 psi)
TVD	Oil BHP 3611 psi

Cotton Draw 15 Fed #1H – APD DRILLING PLAN

7.21.2012 ETC

Casing Program (All new casing)

See
COA

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17-1/2"	0' – 650'	13.375"	0' – 650'	48.0#	STC	H-40
12-1/4"	650' – 4,200'	9.625"	0' – 4,200'	40#	LTC	J-55
8-3/4"	4,200' – 7,000'	5.5"	0 – 7,000	17#	LTC	P-110HC
8-3/4"	7,000' – 12,637'	5.5"	7,000 – 12,637	17#	BTC	P-110HC

Max TVD: 8,207 ft

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
13.375"	2.53	5.69	10.32
9.625"	1.18	1.81	3.10
5.5"	2.58	3.19	2.07
5.5"	2.23	2.77	6.05

Mud Program:

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' – 650'	9.8 – 10.0	28 – 32	N/C	Brine
650' – 4,200'	8.4 – 9.0	28 – 30	N/C	FW
4,200' – 12,637'	8.6 – 9.0	28 – 32	N/C-12	FW

Pressure Control Equipment:

BOP DESIGN: The BOP system used to drill the intermediate and production holes 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 prior 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.

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.

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

13-3/8" Surface

FLUID SPECIFICATIONS

Spacer		10.0 bbls Fresh Water @ 8.34 ppg	
<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Cement Slurry	1029	/ 1.35	= 765 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water
Displacement			95.8 bbls Mud @ 9 ppg

TOC @ surface.

9-5/8" Intermediate

FLUID SPECIFICATIONS

Spacer		10.0 bbls Fresh Water @ 8.34 ppg	
<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
Lead Slurry	2407	/ 2.05	= 1175 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 0.2% bwoc Sodium Metasilicate + 0.2% bwoc FL-52A + 107.9% Fresh Water
Tail Slurry	412	/ 1.37	= 300 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.2% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 65.4% Fresh Water
Displacement			315.4 bbls Mud @ 9 ppg

TOC @ surface

5-1/2" Production

One-Stage

FLUID SPECIFICATIONS

Spacer	50.0 bbls Fresh Water @ 8.34 ppg
Spacer	1,500.0 gals Mud Clean II @ 8.45 ppg
Spacer	10.0 bbls Fresh Water @ 8.34 ppg
Spacer	40.0 bbls SealBond @ 8.75 ppg

<u>FLUID</u>	<u>VOLUME CU-FT</u>	<u>VOLUME FACTOR</u>	<u>AMOUNT AND TYPE OF CEMENT</u>
1st Lead Slurry	1053	/ 2.3	= 460 sacks (50:50) Poz (Fly Ash):Class H Cement + 0.5% bwoc FL-52 + 0.15% bwoc ASA-301 + 10% bwoc Bentonite + 0.3% bwoc R-21 + 130.5% Fresh Water
Lead Slurry	808	/ 2	= 405 sacks (35:65) Poz (Fly Ash):Class H Cement + 3% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.7% bwoc FL-52 + 6% bwoc Bentonite + 105.4% Fresh Water
Tail Slurry	1659	/ 1.28	= 1300 sacks (50:50) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 0.5% bwoc FL-52 + 0.45% bwoc Sodium Metasilicate + 57.2% Fresh Water
Displacement			292.9 bbls Displacement Fluid

TOC for All Strings:

Surface:	0 ft
Intermediate 1:	0 ft
Production:	3,650 ft

ACTUAL CEMENT VOLUMES WILL BE ADJUSTED BASED ON FLUID CALIPER AND CALIPER LOG DATA

AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

LOGGING, CORING, AND TESTING PROGRAM: *See COA*

- Drill stem tests will be based on geological sample shows.
- 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.
- The open hole electrical logging program will be:
 - Total depth to intermediate casing Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
 - Total Depth to Surface Compensated Neutron with Gamma Ray.
 - No coring program is planned.
 - Additional testing will be initiated subsequent to setting the 5 1/2" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

POTENTIAL HAZARDS:

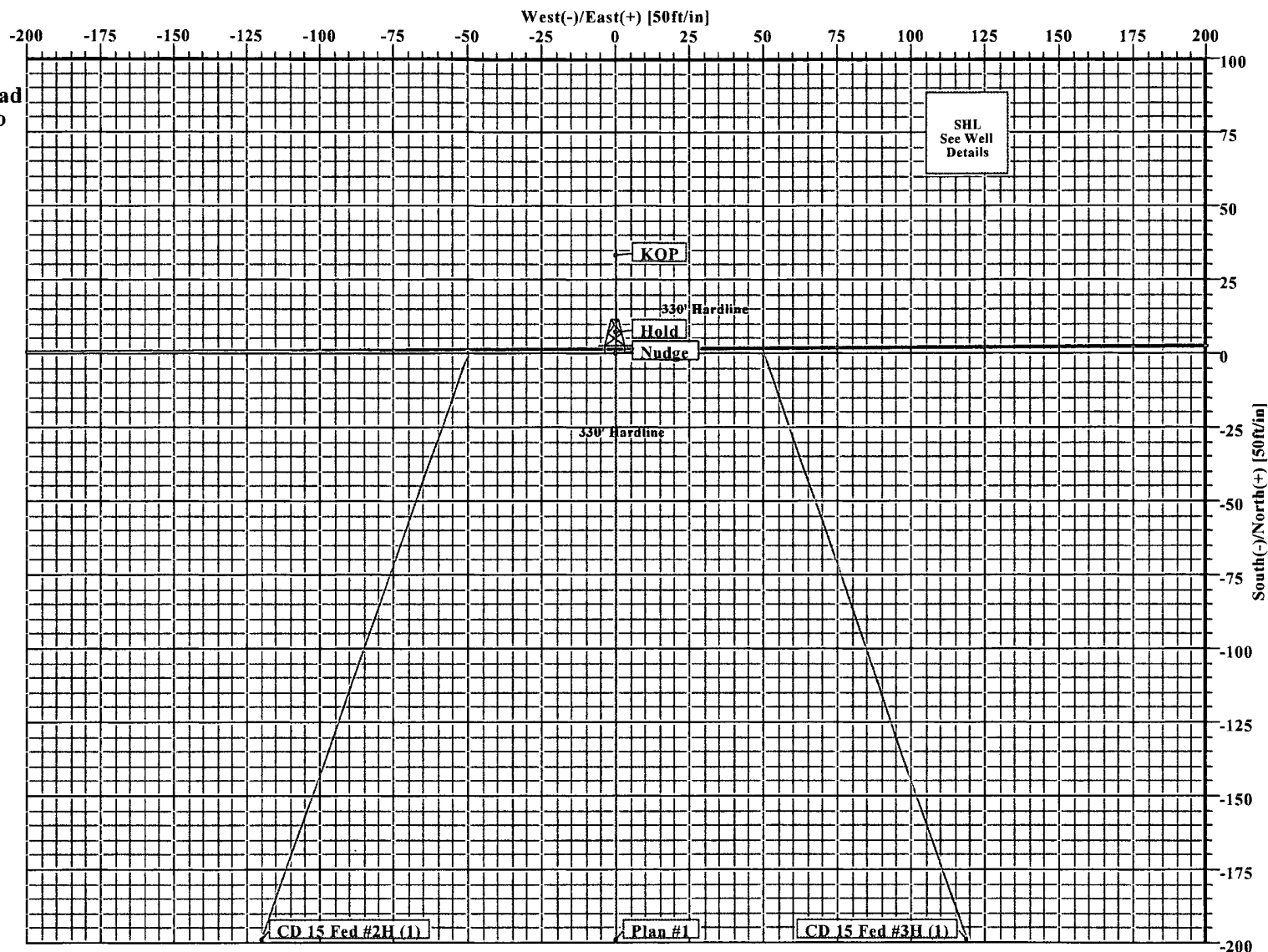
- a. No abnormal pressures or temperatures are expected. There is no known presence of H₂S in this area; therefore, no H₂S is anticipated. If H₂S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. **Estimated BHP 3611 and estimated BHT 140.**

ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

- a. Road and location construction will begin after BLM has approved the APD. Anticipated spud date will be soon after BLM approval and as soon as a rig is 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 flowlines in order to place well on production.

devon

Cotton Draw 15 Fed Pad
Eddy Co., New Mexico



LEGEND	
	CD 15 Fed #2H (1)
	CD 15 Fed #3H (1)
	Plan #1

Plan: Plan #1 (CD 15 Fed #1H/1)
Created By: Russell W. Joyner Date: 6/14/2012



Cotton Draw 15 Fed #1H
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	7118.79	0.00	0.00	7118.79	0.00	0.00	0.00	0.00	0.00	
3	7285.46	5.00	0.00	7285.25	7.27	0.00	3.00	0.00	-7.27	
4	7585.46	5.00	0.00	7584.10	33.41	0.00	0.00	0.00	-33.41	
5	8535.46	90.00	180.04	8207.00	-537.36	-0.38	10.00	-179.96	537.36	
6	12636.59	90.00	180.04	8207.00	-4638.50	-2.90	0.00	0.00	4638.50	PBHL #1H

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
CD 15 Fed #1H	0.00	0.00	413963.10	717683.70	32°08'12.404N	103°45'49.011W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL #1H	8207.00	-4638.50	-2.90	409324.60	717680.80	Point

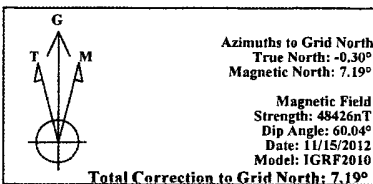
FIELD DETAILS

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

SITE DETAILS

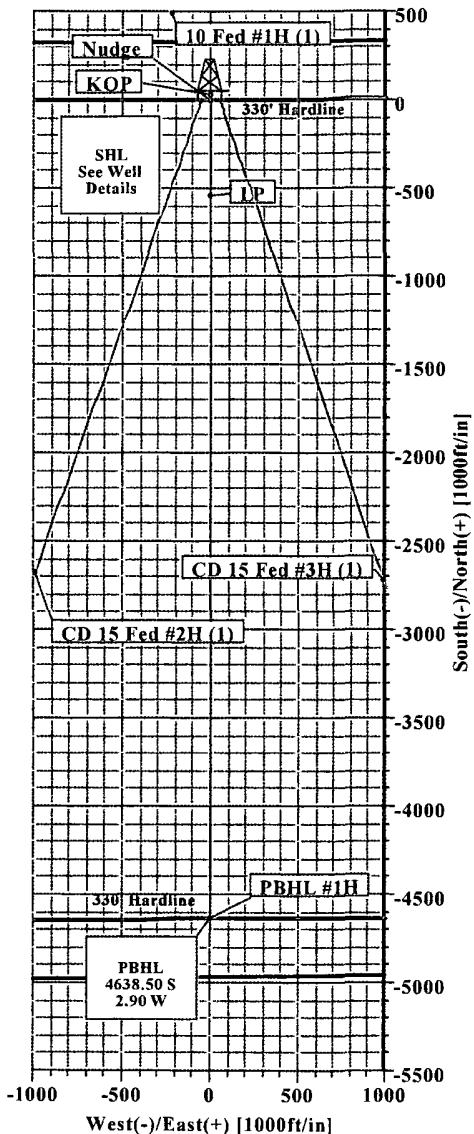
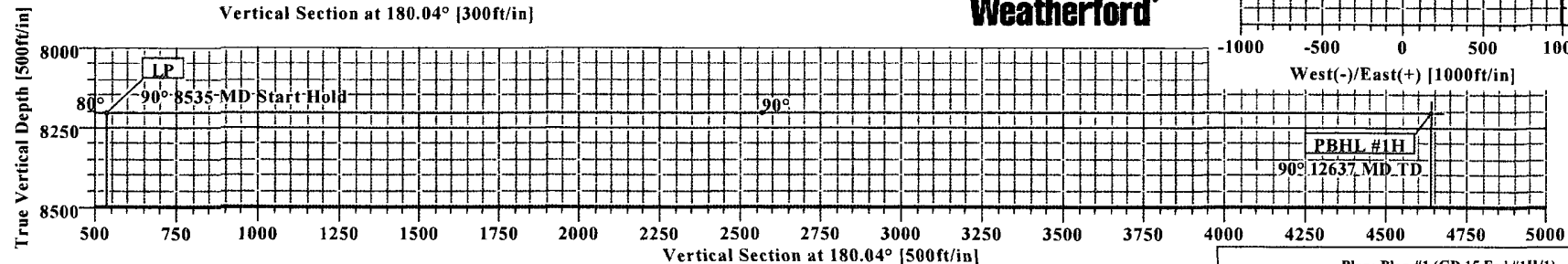
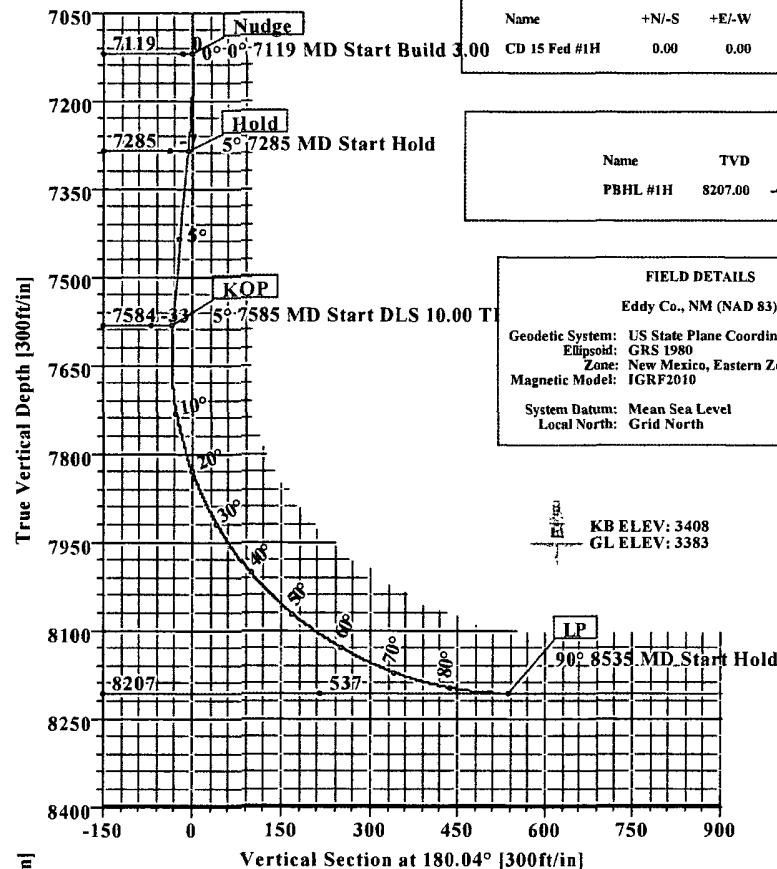
Cotton Draw 15 Fed Pad
Site Centre Northing: 413963.10
Easting: 717683.70
Ground Level: 3383.00
Positional Uncertainty: 0.00
Convergence: 0.30

KB ELEV: 3408
GL ELEV: 3383



LEGEND

- CD 15 Fed #2H (1)
- CD 15 Fed #3H (1)
- 10 Fed #1H (1)
- 10 Fed #2H (1)
- 1
- Plan #1



Plan: Plan #1 (CD 15 Fed #1H/1)

Created By: Russell W. Joyner

Date: 6/14/2012



Weatherford

WFT Plan Report - X & Y's



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #1H
Wellpath: 1

Date: 6/14/2012 Time: 09:46:07 Page: 1
Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Section (VS) Reference: Well (0.00N,0.00E,180.04Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Plan: Plan #1 Date Composed: 6/14/2012
Principal: Yes Version: 1
Tied-to: From Surface

Field: Eddy Co., NM (NAD 83)

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Well Centre
Geomagnetic Model: IGRF2010

Site: Cotton Draw 15 Fed Pad

Site Position: Northing: 413963.10 ft Latitude: 32 8 12.404 N
From: Map Easting: 717683.70 ft Longitude: 103 45 49.011 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3383.00 ft Grid Convergence: 0 30 deg

Well: CD 15 Fed #1H

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 413963.10 ft Latitude: 32 8 12.404 N
+E/-W 0.00 ft Easting: 717683.70 ft Longitude: 103 45 49.011 W
Position Uncertainty: 0.00 ft

Wellpath: 1

Current Datum: SITE Height 3408 00 ft
Magnetic Data: 11/15/2012
Field Strength: 48426 nT
Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
ft ft ft deg
0.00 0.00 0.00 180.04

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	
7118.79	0.00	0.00	7118.79	0.00	0.00	0.00	0.00	0.00	0.00	
7285.46	5.00	0.00	7285.25	7.27	0.00	3.00	3.00	0.00	0.00	
7585.46	5.00	0.00	7584.10	33.41	0.00	0.00	0.00	0.00	0.00	
8535.46	90.00	180.04	8207.00	-537.36	-0.38	10.00	8.95	-18.94	-179.96	
12636.59	90.00	180.04	8207.00	-4638.50	-2.90	0.00	0.00	0.00	0.00	PBHL #1H

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
7100.00	0.00	0.00	7100.00	0.00	0.00	0.00	0.00	413963.10	717683.70	
7118.79	0.00	0.00	7118.79	0.00	0.00	0.00	0.00	413963.10	717683.70	Nudge
7200.00	2.44	0.00	7199.98	1.73	0.00	-1.73	3.00	413964.83	717683.70	
7285.46	5.00	0.00	7285.25	7.27	0.00	-7.27	3.00	413970.37	717683.70	Hold
7300.00	5.00	0.00	7299.73	8.54	0.00	-8.54	0.00	413971.64	717683.70	
7400.00	5.00	0.00	7399.35	17.25	0.00	-17.25	0.00	413980.35	717683.70	
7500.00	5.00	0.00	7498.97	25.97	0.00	-25.97	0.00	413989.07	717683.70	
7585.46	5.00	0.00	7584.10	33.41	0.00	-33.41	0.00	413996.51	717683.70	KOP
7600.00	3.55	359.99	7598.61	34.50	0.00	-34.50	10.00	413997.60	717683.70	
7650.00	1.45	180.16	7648.58	35.41	0.00	-35.41	10.00	413998.51	717683.70	
7700.00	6.45	180.06	7698.45	31.96	-0.01	-31.96	10.00	413995.06	717683.69	
7750.00	11.45	180.05	7747.82	24.18	-0.01	-24.18	10.00	413987.28	717683.69	
7800.00	16.45	180.05	7796.33	12.13	-0.02	-12.13	10.00	413975.23	717683.68	
7850.00	21.45	180.04	7843.60	-4.11	-0.04	4.11	10.00	413958.99	717683.66	
7900.00	26.45	180.04	7889.28	-24.40	-0.05	24.40	10.00	413938.70	717683.65	



Weatherford

WFT Plan Report - X & Y's



Company: Devon Energy
Field: Eddy Co., NM (NAD:83)
Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #1H
Wellpath: 1

Date: 6/14/2012 Time: 09:46:07 Page: 2
Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Section (VS) Reference: Well (0.00N,0.00E,180.04Azi)
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
7950.00	31.45	180.04	7933.02	-48.60	-0.07	48.60	10.00	413914.50	717683.63	
8000.00	36.45	180.04	7974.48	-76.52	-0.09	76.52	10.00	413886.58	717683.61	
8050.00	41.45	180.04	8013.35	-107.94	-0.11	107.94	10.00	413855.16	717683.59	
8100.00	46.45	180.04	8049.33	-142.63	-0.13	142.63	10.00	413820.47	717683.57	
8150.00	51.45	180.04	8082.16	-180.33	-0.16	180.33	10.00	413782.77	717683.54	
8200.00	56.45	180.04	8111.57	-220.75	-0.18	220.75	10.00	413742.35	717683.52	
8250.00	61.45	180.04	8137.35	-263.57	-0.21	263.57	10.00	413699.53	717683.49	
8300.00	66.45	180.04	8159.29	-308.48	-0.24	308.48	10.00	413654.62	717683.46	
8350.00	71.45	180.04	8177.24	-355.13	-0.27	355.13	10.00	413607.97	717683.43	
8400.00	76.45	180.04	8191.06	-403.16	-0.30	403.16	10.00	413559.94	717683.40	
8450.00	81.45	180.04	8200.64	-452.22	-0.33	452.22	10.00	413510.88	717683.37	
8500.00	86.45	180.04	8205.90	-501.93	-0.36	501.93	10.00	413461.17	717683.34	
8535.46	90.00	180.04	8207.00	-537.36	-0.38	537.36	10.00	413425.74	717683.32	LP
8600.00	90.00	180.04	8207.00	-601.91	-0.42	601.91	0.00	413361.19	717683.28	
8700.00	90.00	180.04	8207.00	-701.91	-0.48	701.91	0.00	413261.19	717683.22	
8800.00	90.00	180.04	8207.00	-801.91	-0.55	801.91	0.00	413161.19	717683.15	
8900.00	90.00	180.04	8207.00	-901.91	-0.61	901.91	0.00	413061.19	717683.09	
9000.00	90.00	180.04	8207.00	-1001.91	-0.67	1001.91	0.00	412961.19	717683.03	
9100.00	90.00	180.04	8207.00	-1101.91	-0.73	1101.91	0.00	412861.19	717682.97	
9200.00	90.00	180.04	8207.00	-1201.91	-0.79	1201.91	0.00	412761.19	717682.91	
9300.00	90.00	180.04	8207.00	-1301.91	-0.85	1301.91	0.00	412661.19	717682.85	
9400.00	90.00	180.04	8207.00	-1401.91	-0.91	1401.91	0.00	412561.19	717682.79	
9500.00	90.00	180.04	8207.00	-1501.91	-0.98	1501.91	0.00	412461.19	717682.72	
9600.00	90.00	180.04	8207.00	-1601.91	-1.04	1601.91	0.00	412361.19	717682.66	
9700.00	90.00	180.04	8207.00	-1701.91	-1.10	1701.91	0.00	412261.19	717682.60	
9800.00	90.00	180.04	8207.00	-1801.91	-1.16	1801.91	0.00	412161.19	717682.54	
9900.00	90.00	180.04	8207.00	-1901.91	-1.22	1901.91	0.00	412061.19	717682.48	
10000.00	90.00	180.04	8207.00	-2001.91	-1.28	2001.91	0.00	411961.19	717682.42	
10100.00	90.00	180.04	8207.00	-2101.91	-1.34	2101.91	0.00	411861.19	717682.36	
10200.00	90.00	180.04	8207.00	-2201.91	-1.40	2201.91	0.00	411761.19	717682.30	
10300.00	90.00	180.04	8207.00	-2301.91	-1.47	2301.91	0.00	411661.19	717682.23	
10400.00	90.00	180.04	8207.00	-2401.91	-1.53	2401.91	0.00	411561.19	717682.17	
10500.00	90.00	180.04	8207.00	-2501.91	-1.59	2501.91	0.00	411461.19	717682.11	
10600.00	90.00	180.04	8207.00	-2601.91	-1.65	2601.91	0.00	411361.19	717682.05	
10700.00	90.00	180.04	8207.00	-2701.91	-1.71	2701.91	0.00	411261.19	717681.99	
10800.00	90.00	180.04	8207.00	-2801.91	-1.77	2801.91	0.00	411161.19	717681.93	
10900.00	90.00	180.04	8207.00	-2901.91	-1.83	2901.91	0.00	411061.19	717681.87	
11000.00	90.00	180.04	8207.00	-3001.91	-1.90	3001.91	0.00	410961.19	717681.80	
11100.00	90.00	180.04	8207.00	-3101.91	-1.96	3101.91	0.00	410861.19	717681.74	
11200.00	90.00	180.04	8207.00	-3201.91	-2.02	3201.91	0.00	410761.19	717681.68	
11300.00	90.00	180.04	8207.00	-3301.91	-2.08	3301.91	0.00	410661.19	717681.62	
11400.00	90.00	180.04	8207.00	-3401.91	-2.14	3401.91	0.00	410561.19	717681.56	
11500.00	90.00	180.04	8207.00	-3501.91	-2.20	3501.91	0.00	410461.19	717681.50	
11600.00	90.00	180.04	8207.00	-3601.91	-2.26	3601.91	0.00	410361.19	717681.44	
11700.00	90.00	180.04	8207.00	-3701.91	-2.33	3701.91	0.00	410261.19	717681.37	
11800.00	90.00	180.04	8207.00	-3801.91	-2.39	3801.91	0.00	410161.19	717681.31	
11900.00	90.00	180.04	8207.00	-3901.91	-2.45	3901.91	0.00	410061.19	717681.25	
12000.00	90.00	180.04	8207.00	-4001.91	-2.51	4001.91	0.00	409961.19	717681.19	
12100.00	90.00	180.04	8207.00	-4101.91	-2.57	4101.91	0.00	409861.19	717681.13	
12200.00	90.00	180.04	8207.00	-4201.91	-2.63	4201.91	0.00	409761.19	717681.07	
12300.00	90.00	180.04	8207.00	-4301.91	-2.69	4301.91	0.00	409661.19	717681.01	
12400.00	90.00	180.04	8207.00	-4401.91	-2.75	4401.91	0.00	409561.19	717680.95	
12500.00	90.00	180.04	8207.00	-4501.91	-2.82	4501.91	0.00	409461.19	717680.88	



Weatherford

WFT Plan Report - X & Y's



Company: Devon Energy Date: 6/14/2012 Time: 09:46:07 Page: 3
Field: Eddy Co., NM (NAD 83) Co-ordinate(NE) Reference: Well: CD 15 Fed #1H Grid North
Site: Cotton Draw 15 Fed Pad Vertical (TYD) Reference: SITE 3408.0
Well: CD 15 Fed #1H Section (VS) Reference: Well (0.00N,0.00E,180.04Azi)
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
12600.00	90.00	180.04	8207.00	-4601.91	-2.88	4601.91	0.00	409361.19	717680.82	
12636.59	90.00	180.04	8207.00	-4638.50	-2.90	4638.50	0.00	409324.60	717680.80	PBHL #1H

Targets

Name	Description Dip Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec	Longitude Deg Min Sec
PBHL #1H		8207.00	-4638.50	-2.90	409324.60	717680.80	32 7 26.503 N	103 45 49.330 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
7118.79	7118.79	Nudge
7285.46	7285.25	Hold
7585.46	7584.11	KOP
8535.46	8207.00	LP
12636.59	8207.00	PBHL

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction



Weatherford Anticollision Report



Company: Devon Energy Date: 6/14/2012 Time: 10:08:41 Page: 1
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #1H
Reference Wellpath: 1 Co-ordinate(NE) Reference: Well. CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

NO GLOBAL SCAN: Using user defined selection & scan criteria
Interpolation Method: MD Interval: 100.00 ft
Depth Range: 0.00 to 12884.05 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: 6/14/2012

Principal: Yes

Version: 1

Tied-to: From Surface

Summary

Site	Offset Wellpath	Reference MD ft	Offset MD ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
Cotton Draw 15 Fed PCD 15 Fed #2H	1 V0 Plan: Plan #1 V1	7200.00	7199.98	50.15	18.07	1.56	
Cotton Draw 15 Fed PCD 15 Fed #3H	1 V0 Plan: Plan #1 V1	7300.00	7299.73	50.67	18.14	1.56	

Site: Cotton Draw 15 Fed Pad

Well: CD 15 Fed #2H

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	269.43	-0.50	-50.10	50.10			No Data
100.00	100.00	100.00	100.00	0.08	0.08	269.43	-0.50	-50.10	50.10	49.93	297.21	
200.00	200.00	200.00	200.00	0.31	0.31	269.43	-0.50	-50.10	50.10	49.48	81.06	
300.00	300.00	300.00	300.00	0.53	0.53	269.43	-0.50	-50.10	50.10	49.03	46.93	
400.00	400.00	400.00	400.00	0.76	0.76	269.43	-0.50	-50.10	50.10	48.59	33.02	
500.00	500.00	500.00	500.00	0.98	0.98	269.43	-0.50	-50.10	50.10	48.14	25.48	
600.00	600.00	600.00	600.00	1.21	1.21	269.43	-0.50	-50.10	50.10	47.69	20.74	
700.00	700.00	700.00	700.00	1.43	1.43	269.43	-0.50	-50.10	50.10	47.24	17.48	
800.00	800.00	800.00	800.00	1.66	1.66	269.43	-0.50	-50.10	50.10	46.79	15.11	
900.00	900.00	900.00	900.00	1.88	1.88	269.43	-0.50	-50.10	50.10	46.34	13.31	
1000.00	1000.00	1000.00	1000.00	2.11	2.11	269.43	-0.50	-50.10	50.10	45.89	11.89	
1100.00	1100.00	1100.00	1100.00	2.33	2.33	269.43	-0.50	-50.10	50.10	45.44	10.74	
1200.00	1200.00	1200.00	1200.00	2.56	2.56	269.43	-0.50	-50.10	50.10	44.99	9.80	
1300.00	1300.00	1300.00	1300.00	2.78	2.78	269.43	-0.50	-50.10	50.10	44.54	9.01	
1400.00	1400.00	1400.00	1400.00	3.01	3.01	269.43	-0.50	-50.10	50.10	44.09	8.33	
1500.00	1500.00	1500.00	1500.00	3.23	3.23	269.43	-0.50	-50.10	50.10	43.64	7.75	
1600.00	1600.00	1600.00	1600.00	3.46	3.46	269.43	-0.50	-50.10	50.10	43.19	7.25	
1700.00	1700.00	1700.00	1700.00	3.68	3.68	269.43	-0.50	-50.10	50.10	42.74	6.81	
1800.00	1800.00	1800.00	1800.00	3.91	3.91	269.43	-0.50	-50.10	50.10	42.29	6.41	
1900.00	1900.00	1900.00	1900.00	4.13	4.13	269.43	-0.50	-50.10	50.10	41.84	6.07	
2000.00	2000.00	2000.00	2000.00	4.35	4.35	269.43	-0.50	-50.10	50.10	41.39	5.75	
2100.00	2100.00	2100.00	2100.00	4.58	4.58	269.43	-0.50	-50.10	50.10	40.94	5.47	
2200.00	2200.00	2200.00	2200.00	4.80	4.80	269.43	-0.50	-50.10	50.10	40.49	5.21	
2300.00	2300.00	2300.00	2300.00	5.03	5.03	269.43	-0.50	-50.10	50.10	40.04	4.98	
2400.00	2400.00	2400.00	2400.00	5.25	5.25	269.43	-0.50	-50.10	50.10	39.59	4.77	
2500.00	2500.00	2500.00	2500.00	5.48	5.48	269.43	-0.50	-50.10	50.10	39.15	4.57	
2600.00	2600.00	2600.00	2600.00	5.70	5.70	269.43	-0.50	-50.10	50.10	38.70	4.39	
2700.00	2700.00	2700.00	2700.00	5.93	5.93	269.43	-0.50	-50.10	50.10	38.25	4.23	
2800.00	2800.00	2800.00	2800.00	6.15	6.15	269.43	-0.50	-50.10	50.10	37.80	4.07	
2900.00	2900.00	2900.00	2900.00	6.38	6.38	269.43	-0.50	-50.10	50.10	37.35	3.93	
3000.00	3000.00	3000.00	3000.00	6.60	6.60	269.43	-0.50	-50.10	50.10	36.90	3.79	
3100.00	3100.00	3100.00	3100.00	6.83	6.83	269.43	-0.50	-50.10	50.10	36.45	3.67	
3200.00	3200.00	3200.00	3200.00	7.05	7.05	269.43	-0.50	-50.10	50.10	36.00	3.55	
3300.00	3300.00	3300.00	3300.00	7.28	7.28	269.43	-0.50	-50.10	50.10	35.55	3.44	
3400.00	3400.00	3400.00	3400.00	7.50	7.50	269.43	-0.50	-50.10	50.10	35.10	3.34	
3500.00	3500.00	3500.00	3500.00	7.73	7.73	269.43	-0.50	-50.10	50.10	34.65	3.24	



Weatherford Anticollision Report



Company: Devon Energy Date: 6/14/2012 Time: 10:08:41 Page: 2
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed.Pad Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Reference Well: CD 15 Fed #1H Vertical (TVD) Reference: SITE 3408.0
Reference Wellpath: 1 Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #2H
Wellpath: 1 VO Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference	Offset	Semi-Major Axis	Offset Location	Ctr-Ctr	Edge	Separation	Warning
MD	TVD	Ref	North	East	Distance	Factor	
ft	ft	ft	ft	ft	ft		
3600.00	3600.00	7.95	-0.50	-50.10	50.10	3.15	
3700.00	3700.00	8.18	-0.50	-50.10	50.10	3.06	
3800.00	3800.00	8.40	-0.50	-50.10	50.10	2.98	
3900.00	3900.00	8.63	-0.50	-50.10	50.10	2.90	
4000.00	4000.00	8.85	-0.50	-50.10	50.10	2.83	
4100.00	4100.00	9.07	-0.50	-50.10	50.10	2.76	
4200.00	4200.00	9.30	-0.50	-50.10	50.10	2.69	
4300.00	4300.00	9.52	-0.50	-50.10	50.10	2.63	
4400.00	4400.00	9.75	-0.50	-50.10	50.10	2.57	
4500.00	4500.00	9.97	-0.50	-50.10	50.10	2.51	
4600.00	4600.00	10.20	-0.50	-50.10	50.10	2.46	
4700.00	4700.00	10.42	-0.50	-50.10	50.10	2.40	
4800.00	4800.00	10.65	-0.50	-50.10	50.10	2.35	
4900.00	4900.00	10.87	-0.50	-50.10	50.10	2.30	
5000.00	5000.00	11.10	-0.50	-50.10	50.10	2.26	
5100.00	5100.00	11.32	-0.50	-50.10	50.10	2.21	
5200.00	5200.00	11.55	-0.50	-50.10	50.10	2.17	
5300.00	5300.00	11.77	-0.50	-50.10	50.10	2.13	
5400.00	5400.00	12.00	-0.50	-50.10	50.10	2.09	
5500.00	5500.00	12.22	-0.50	-50.10	50.10	2.05	
5600.00	5600.00	12.45	-0.50	-50.10	50.10	2.01	
5700.00	5700.00	12.67	-0.50	-50.10	50.10	1.98	
5800.00	5800.00	12.90	-0.50	-50.10	50.10	1.94	
5900.00	5900.00	13.12	-0.50	-50.10	50.10	1.91	
6000.00	6000.00	13.35	-0.50	-50.10	50.10	1.88	
6100.00	6100.00	13.57	-0.50	-50.10	50.10	1.85	
6200.00	6200.00	13.80	-0.50	-50.10	50.10	1.82	
6300.00	6300.00	14.02	-0.50	-50.10	50.10	1.79	
6400.00	6400.00	14.24	-0.50	-50.10	50.10	1.76	
6500.00	6500.00	14.47	-0.50	-50.10	50.10	1.73	
6600.00	6600.00	14.69	-0.50	-50.10	50.10	1.70	
6700.00	6700.00	14.92	-0.50	-50.10	50.10	1.68	
6800.00	6800.00	15.14	-0.50	-50.10	50.10	1.65	
6900.00	6900.00	15.37	-0.50	-50.10	50.10	1.63	
7000.00	7000.00	15.59	-0.50	-50.10	50.10	1.61	
7100.00	7100.00	15.82	-0.50	-50.10	50.10	1.58	
7200.00	7199.98	16.04	-0.50	-50.10	50.15	1.56	
7300.00	7299.73	16.26	-0.50	-50.10	50.91	1.57	
7400.00	7399.35	16.48	-0.50	-50.10	53.15	1.61	
7500.00	7498.97	16.71	-0.50	-50.10	56.66	1.70	
7600.00	7598.61	16.93	-0.50	-50.10	61.11	1.80	
7700.00	7698.45	17.09	-3.85	-51.28	62.80	1.84	
7800.00	7796.33	17.24	-20.27	-57.05	67.01	1.96	
7900.00	7889.28	17.39	-49.77	-67.43	75.06	2.19	
8000.00	7974.48	17.57	-91.36	-82.05	87.72	2.54	
8100.00	8049.33	17.81	-143.79	-100.49	105.26	2.99	
8200.00	8111.57	18.15	-205.65	-122.24	127.39	3.53	
8300.00	8159.29	18.62	-275.55	-146.82	153.43	4.11	
8400.00	8191.06	19.24	-352.13	-173.75	182.55	4.72	
8500.00	8205.90	19.99	-434.08	-202.57	213.83	5.31	
8600.00	8207.00	20.86	-520.37	-232.91	246.43	5.87	



Weatherford Anticollision Report



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #1H
Reference Wellpath: 1
Date: 6/14/2012
Time: 10:08:41
Page: 3
Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grd North
Vertical (TVD) Reference: SITE 3408 0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #2H
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	Distance	Distance	Factor	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft	ft	ft			
8700.00	8207.00	8601.31	8202.00	21.85	22.08	88.91	-609.19	-264.15	279.53	235.61	6.36				
8800.00	8207.00	8695.67	8202.00	22.94	23.11	89.03	-698.20	-295.45	312.65	266.60	6.79				
8900.00	8207.00	8790.03	8202.00	24.12	24.23	89.12	-787.22	-326.75	345.76	297.42	7.15				
9000.00	8207.00	8884.38	8202.00	25.37	25.41	89.20	-876.23	-358.05	378.87	328.09	7.46				
9100.00	8207.00	8978.74	8202.00	26.69	26.66	89.26	-965.24	-389.36	411.98	358.63	7.72				
9200.00	8207.00	9073.10	8202.00	28.07	27.96	89.32	-1054.26	-420.66	445.10	389.07	7.94				
9300.00	8207.00	9167.46	8202.00	29.50	29.31	89.37	-1143.27	-451.96	478.21	419.40	8.13				
9400.00	8207.00	9261.81	8202.00	30.97	30.70	89.41	-1232.29	-483.26	511.33	449.66	8.29				
9500.00	8207.00	9356.17	8202.00	32.47	32.13	89.44	-1321.30	-514.56	544.44	479.84	8.43				
9600.00	8207.00	9450.53	8202.00	34.01	33.59	89.47	-1410.32	-545.87	577.56	509.96	8.54				
9700.00	8207.00	9544.89	8202.00	35.57	35.07	89.50	-1499.33	-577.17	610.67	540.03	8.64				
9800.00	8207.00	9639.24	8202.00	37.16	36.58	89.53	-1588.34	-608.47	643.79	570.05	8.73				
9900.00	8207.00	9733.60	8202.00	38.77	38.11	89.55	-1677.36	-639.77	676.90	600.02	8.80				
10000.00	8207.00	9827.96	8202.00	40.40	39.66	89.57	-1766.37	-671.07	710.02	629.96	8.87				
10100.00	8207.00	9922.32	8202.00	42.04	41.23	89.59	-1855.39	-702.38	743.13	659.87	8.93				
10200.00	8207.00	10016.67	8202.00	43.70	42.81	89.61	-1944.40	-733.68	776.25	689.75	8.97				
10300.00	8207.00	10111.03	8202.00	45.37	44.40	89.62	-2033.41	-764.98	809.36	719.60	9.02				
10400.00	8207.00	10205.39	8202.00	47.05	46.01	89.64	-2122.43	-796.28	842.48	749.42	9.05				
10500.00	8207.00	10299.75	8202.00	48.74	47.62	89.65	-2211.44	-827.58	875.59	779.23	9.09				
10600.00	8207.00	10394.10	8202.00	50.44	49.25	89.67	-2300.46	-858.89	908.71	809.02	9.12				
10700.00	8207.00	10488.46	8202.00	52.15	50.88	89.68	-2389.47	-890.19	941.82	838.79	9.14				
10800.00	8207.00	10582.82	8202.00	53.87	52.53	89.69	-2478.48	-921.49	974.94	868.54	9.16				
10900.00	8207.00	10677.18	8202.00	55.59	54.18	89.70	-2567.50	-952.79	1008.06	898.29	9.18				
11000.00	8207.00	10771.53	8202.00	57.33	55.83	89.71	-2656.51	-984.10	1041.17	928.02	9.20				
11100.00	8207.00	10865.89	8202.00	59.06	57.49	89.72	-2745.53	-1015.40	1074.29	957.73	9.22				
11200.00	8207.00	10960.25	8202.00	60.80	59.16	89.73	-2834.54	-1046.70	1107.40	987.44	9.23				
11300.00	8207.00	11054.61	8202.00	62.55	60.83	89.73	-2923.55	-1078.00	1140.52	1017.14	9.24				
11400.00	8207.00	11148.96	8202.00	64.30	62.51	89.74	-3012.57	-1109.30	1173.63	1046.82	9.26				
11500.00	8207.00	11243.32	8202.00	66.05	64.19	89.75	-3101.58	-1140.61	1206.75	1076.50	9.27				
11600.00	8207.00	11337.68	8202.00	67.81	65.88	89.76	-3190.60	-1171.91	1239.87	1106.17	9.27				
11700.00	8207.00	11432.03	8202.00	69.58	67.57	89.76	-3279.61	-1203.21	1272.98	1135.84	9.28				
11800.00	8207.00	11526.39	8202.00	71.34	69.26	89.77	-3368.63	-1234.51	1306.10	1165.50	9.29				
11900.00	8207.00	11620.75	8202.00	73.11	70.95	89.77	-3457.64	-1265.81	1339.21	1195.15	9.30				
12000.00	8207.00	11715.11	8202.00	74.88	72.65	89.78	-3546.65	-1297.12	1372.33	1224.80	9.30				
12100.00	8207.00	11809.46	8202.00	76.65	74.35	89.78	-3635.67	-1328.42	1405.44	1254.44	9.31				
12200.00	8207.00	11903.82	8202.00	78.43	76.06	89.79	-3724.68	-1359.72	1438.56	1284.08	9.31				
12300.00	8207.00	11998.18	8202.00	80.21	77.76	89.79	-3813.70	-1391.02	1471.68	1313.71	9.32				
12400.00	8207.00	12092.54	8202.00	81.99	79.47	89.80	-3902.71	-1422.32	1504.79	1343.34	9.32				
12500.00	8207.00	12186.89	8202.00	83.77	81.18	89.80	-3991.72	-1453.63	1537.91	1372.96	9.32				
12600.00	8207.00	12281.25	8202.00	85.55	82.89	89.81	-4080.74	-1484.93	1571.02	1402.58	9.33				

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
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	Distance	Distance	Factor	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft	ft	ft			
0.00	0.00	0.00	0.00	0.00	0.00	89.66	0.30	50.00	50.00						No Data
100.00	100.00	100.00	100.00	0.08	0.08	89.66	0.30	50.00	50.00	49.83	296.61				
200.00	200.00	200.00	200.00	0.31	0.31	89.66	0.30	50.00	50.00	49.38	80.89				
300.00	300.00	300.00	300.00	0.53	0.53	89.66	0.30	50.00	50.00	48.93	46.83				
400.00	400.00	400.00	400.00	0.76	0.76	89.66	0.30	50.00	50.00	48.48	32.96				



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #1H
Reference Wellpath: 1

Date: 6/14/2012

Time: 10:08:41

Page: 4

Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0

Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
Wellpath: 1 V0 Plan Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
MD ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft	TFO-HS deg	North ft	East ft				
500.00	500.00	500.00	500.00	0.98	0.98	89.66	0.30	50.00	50.00	48.03	25.42	
600.00	600.00	600.00	600.00	1.21	1.21	89.66	0.30	50.00	50.00	47.58	20.69	
700.00	700.00	700.00	700.00	1.43	1.43	89.66	0.30	50.00	50.00	47.14	17.45	
800.00	800.00	800.00	800.00	1.66	1.66	89.66	0.30	50.00	50.00	46.69	15.08	
900.00	900.00	900.00	900.00	1.88	1.88	89.66	0.30	50.00	50.00	46.24	13.28	
1000.00	1000.00	1000.00	1000.00	2.11	2.11	89.66	0.30	50.00	50.00	45.79	11.86	
1100.00	1100.00	1100.00	1100.00	2.33	2.33	89.66	0.30	50.00	50.00	45.34	10.72	
1200.00	1200.00	1200.00	1200.00	2.56	2.56	89.66	0.30	50.00	50.00	44.89	9.78	
1300.00	1300.00	1300.00	1300.00	2.78	2.78	89.66	0.30	50.00	50.00	44.44	8.99	
1400.00	1400.00	1400.00	1400.00	3.01	3.01	89.66	0.30	50.00	50.00	43.99	8.32	
1500.00	1500.00	1500.00	1500.00	3.23	3.23	89.66	0.30	50.00	50.00	43.54	7.74	
1600.00	1600.00	1600.00	1600.00	3.46	3.46	89.66	0.30	50.00	50.00	43.09	7.23	
1700.00	1700.00	1700.00	1700.00	3.68	3.68	89.66	0.30	50.00	50.00	42.64	6.79	
1800.00	1800.00	1800.00	1800.00	3.91	3.91	89.66	0.30	50.00	50.00	42.19	6.40	
1900.00	1900.00	1900.00	1900.00	4.13	4.13	89.66	0.30	50.00	50.00	41.74	6.05	
2000.00	2000.00	2000.00	2000.00	4.35	4.35	89.66	0.30	50.00	50.00	41.29	5.74	
2100.00	2100.00	2100.00	2100.00	4.58	4.58	89.66	0.30	50.00	50.00	40.84	5.46	
2200.00	2200.00	2200.00	2200.00	4.80	4.80	89.66	0.30	50.00	50.00	40.39	5.20	
2300.00	2300.00	2300.00	2300.00	5.03	5.03	89.66	0.30	50.00	50.00	39.94	4.97	
2400.00	2400.00	2400.00	2400.00	5.25	5.25	89.66	0.30	50.00	50.00	39.49	4.76	
2500.00	2500.00	2500.00	2500.00	5.48	5.48	89.66	0.30	50.00	50.00	39.04	4.56	
2600.00	2600.00	2600.00	2600.00	5.70	5.70	89.66	0.30	50.00	50.00	38.59	4.38	
2700.00	2700.00	2700.00	2700.00	5.93	5.93	89.66	0.30	50.00	50.00	38.14	4.22	
2800.00	2800.00	2800.00	2800.00	6.15	6.15	89.66	0.30	50.00	50.00	37.69	4.06	
2900.00	2900.00	2900.00	2900.00	6.38	6.38	89.66	0.30	50.00	50.00	37.25	3.92	
3000.00	3000.00	3000.00	3000.00	6.60	6.60	89.66	0.30	50.00	50.00	36.80	3.79	
3100.00	3100.00	3100.00	3100.00	6.83	6.83	89.66	0.30	50.00	50.00	36.35	3.66	
3200.00	3200.00	3200.00	3200.00	7.05	7.05	89.66	0.30	50.00	50.00	35.90	3.55	
3300.00	3300.00	3300.00	3300.00	7.28	7.28	89.66	0.30	50.00	50.00	35.45	3.44	
3400.00	3400.00	3400.00	3400.00	7.50	7.50	89.66	0.30	50.00	50.00	35.00	3.33	
3500.00	3500.00	3500.00	3500.00	7.73	7.73	89.66	0.30	50.00	50.00	34.55	3.24	
3600.00	3600.00	3600.00	3600.00	7.95	7.95	89.66	0.30	50.00	50.00	34.10	3.14	
3700.00	3700.00	3700.00	3700.00	8.18	8.18	89.66	0.30	50.00	50.00	33.65	3.06	
3800.00	3800.00	3800.00	3800.00	8.40	8.40	89.66	0.30	50.00	50.00	33.20	2.98	
3900.00	3900.00	3900.00	3900.00	8.63	8.63	89.66	0.30	50.00	50.00	32.75	2.90	
4000.00	4000.00	4000.00	4000.00	8.85	8.85	89.66	0.30	50.00	50.00	32.30	2.82	
4100.00	4100.00	4100.00	4100.00	9.07	9.07	89.66	0.30	50.00	50.00	31.85	2.75	
4200.00	4200.00	4200.00	4200.00	9.30	9.30	89.66	0.30	50.00	50.00	31.40	2.69	
4300.00	4300.00	4300.00	4300.00	9.52	9.52	89.66	0.30	50.00	50.00	30.95	2.62	
4400.00	4400.00	4400.00	4400.00	9.75	9.75	89.66	0.30	50.00	50.00	30.50	2.56	
4500.00	4500.00	4500.00	4500.00	9.97	9.97	89.66	0.30	50.00	50.00	30.05	2.51	
4600.00	4600.00	4600.00	4600.00	10.20	10.20	89.66	0.30	50.00	50.00	29.60	2.45	
4700.00	4700.00	4700.00	4700.00	10.42	10.42	89.66	0.30	50.00	50.00	29.15	2.40	
4800.00	4800.00	4800.00	4800.00	10.65	10.65	89.66	0.30	50.00	50.00	28.70	2.35	
4900.00	4900.00	4900.00	4900.00	10.87	10.87	89.66	0.30	50.00	50.00	28.25	2.30	
5000.00	5000.00	5000.00	5000.00	11.10	11.10	89.66	0.30	50.00	50.00	27.81	2.25	
5100.00	5100.00	5100.00	5100.00	11.32	11.32	89.66	0.30	50.00	50.00	27.36	2.21	
5200.00	5200.00	5200.00	5200.00	11.55	11.55	89.66	0.30	50.00	50.00	26.91	2.17	
5300.00	5300.00	5300.00	5300.00	11.77	11.77	89.66	0.30	50.00	50.00	26.46	2.12	
5400.00	5400.00	5400.00	5400.00	12.00	12.00	89.66	0.30	50.00	50.00	26.01	2.08	



Weatherford Anticollision Report



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #1H
Reference Wellpath: 1

Date: 6/14/2012
Time: 10:08:41
Page: 5

Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
MD ft	TVD ft	MD ft	TVD ft	Ref. ft	Offset ft	TFO-HS deg	North ft	East ft				
5500.00	5500.00	5500.00	5500.00	12.22	12.22	89.66	0.30	50.00	50.00	25.56	2.05	
5600.00	5600.00	5600.00	5600.00	12.45	12.45	89.66	0.30	50.00	50.00	25.11	2.01	
5700.00	5700.00	5700.00	5700.00	12.67	12.67	89.66	0.30	50.00	50.00	24.66	1.97	
5800.00	5800.00	5800.00	5800.00	12.90	12.90	89.66	0.30	50.00	50.00	24.21	1.94	
5900.00	5900.00	5900.00	5900.00	13.12	13.12	89.66	0.30	50.00	50.00	23.76	1.91	
6000.00	6000.00	6000.00	6000.00	13.35	13.35	89.66	0.30	50.00	50.00	23.31	1.87	
6100.00	6100.00	6100.00	6100.00	13.57	13.57	89.66	0.30	50.00	50.00	22.86	1.84	
6200.00	6200.00	6200.00	6200.00	13.80	13.80	89.66	0.30	50.00	50.00	22.41	1.81	
6300.00	6300.00	6300.00	6300.00	14.02	14.02	89.66	0.30	50.00	50.00	21.96	1.78	
6400.00	6400.00	6400.00	6400.00	14.24	14.24	89.66	0.30	50.00	50.00	21.51	1.76	
6500.00	6500.00	6500.00	6500.00	14.47	14.47	89.66	0.30	50.00	50.00	21.06	1.73	
6600.00	6600.00	6600.00	6600.00	14.69	14.69	89.66	0.30	50.00	50.00	20.61	1.70	
6700.00	6700.00	6700.00	6700.00	14.92	14.92	89.66	0.30	50.00	50.00	20.16	1.68	
6800.00	6800.00	6800.00	6800.00	15.14	15.14	89.66	0.30	50.00	50.00	19.71	1.65	
6900.00	6900.00	6900.00	6900.00	15.37	15.37	89.66	0.30	50.00	50.00	19.26	1.63	
7000.00	7000.00	7000.00	7000.00	15.59	15.59	89.66	0.30	50.00	50.00	18.81	1.60	
7100.00	7100.00	7100.00	7100.00	15.82	15.82	89.66	0.30	50.00	50.00	18.37	1.58	
7200.00	7199.98	7199.98	7199.98	16.04	16.04	91.63	0.30	50.00	50.02	17.94	1.56	
7300.00	7299.73	7299.73	7299.73	16.26	16.27	99.32	0.30	50.00	50.67	18.14	1.56	
7400.00	7399.35	7399.35	7399.35	16.48	16.49	108.66	0.30	50.00	52.80	19.82	1.60	
7500.00	7498.97	7498.97	7498.97	16.71	16.71	117.08	0.30	50.00	56.20	22.79	1.68	
7600.00	7598.61	7598.61	7598.61	16.93	16.94	124.33	0.30	50.00	60.58	26.72	1.79	
7700.00	7698.45	7693.84	7693.76	17.09	17.15	304.05	-2.18	50.85	61.44	27.25	1.80	
7800.00	7796.33	7785.83	7784.23	17.24	17.37	299.43	-17.38	56.10	64.55	30.30	1.88	
7900.00	7889.28	7877.58	7870.75	17.39	17.60	292.62	-45.96	65.97	71.89	37.53	2.09	
8000.00	7974.48	7968.96	7951.03	17.57	17.86	285.56	-87.03	80.15	84.26	49.52	2.43	
8100.00	8049.33	8059.96	8023.11	17.81	18.17	279.65	-139.39	98.23	101.85	66.42	2.87	
8200.00	8111.57	8150.70	8085.35	18.15	18.57	275.37	-201.67	119.73	124.22	87.84	3.41	
8300.00	8159.29	8241.43	8136.43	18.62	19.09	272.59	-272.45	144.17	150.58	113.04	4.01	
8400.00	8191.06	8332.58	8175.20	19.24	19.74	271.01	-350.33	171.05	180.02	141.10	4.63	
8500.00	8205.90	8424.69	8200.63	19.99	20.53	270.30	-433.91	199.91	211.57	171.06	5.22	
8600.00	8207.00	8518.69	8211.64	20.86	21.47	268.85	-522.06	230.35	244.24	201.92	5.77	
8700.00	8207.00	8613.37	8212.00	21.85	22.53	268.90	-611.55	261.24	276.93	232.56	6.24	
8800.00	8207.00	8707.87	8212.00	22.94	23.69	269.02	-700.88	292.08	309.62	263.00	6.64	
8900.00	8207.00	8802.38	8212.00	24.12	24.94	269.11	-790.21	322.92	342.31	293.25	6.98	
9000.00	8207.00	8896.88	8212.00	25.37	26.28	269.19	-879.54	353.77	375.00	323.35	7.26	
9100.00	8207.00	8991.39	8212.00	26.69	27.69	269.26	-968.87	384.61	407.69	353.31	7.50	
9200.00	8207.00	9085.89	8212.00	28.07	29.16	269.31	-1058.20	415.45	440.38	383.15	7.70	
9300.00	8207.00	9180.40	8212.00	29.50	30.68	269.36	-1147.53	446.29	473.07	412.90	7.86	
9400.00	8207.00	9274.90	8212.00	30.97	32.24	269.40	-1236.86	477.13	505.76	442.56	8.00	
9500.00	8207.00	9369.41	8212.00	32.47	33.83	269.44	-1326.19	507.97	538.45	472.15	8.12	
9600.00	8207.00	9463.91	8212.00	34.01	35.47	269.47	-1415.52	538.81	571.14	501.67	8.22	
9700.00	8207.00	9558.42	8212.00	35.57	37.12	269.50	-1504.85	569.66	603.83	531.14	8.31	
9800.00	8207.00	9652.92	8212.00	37.16	38.81	269.52	-1594.18	600.50	636.53	560.56	8.38	
9900.00	8207.00	9747.43	8212.00	38.77	40.51	269.55	-1683.51	631.34	669.22	589.94	8.44	
10000.00	8207.00	9841.93	8212.00	40.40	42.24	269.57	-1772.84	662.18	701.91	619.28	8.49	
10100.00	8207.00	9936.44	8212.00	42.04	43.98	269.59	-1862.17	693.02	734.60	648.59	8.54	
10200.00	8207.00	10030.94	8212.00	43.70	45.73	269.60	-1951.51	723.86	767.29	677.87	8.58	
10300.00	8207.00	10125.45	8212.00	45.37	47.50	269.62	-2040.84	754.71	799.99	707.12	8.61	
10400.00	8207.00	10219.95	8212.00	47.05	49.28	269.64	-2130.17	785.55	832.68	736.35	8.64	
10500.00	8207.00	10314.46	8212.00	48.74	51.07	269.65	-2219.50	816.39	865.37	765.56	8.67	

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #1H
Reference Wellpath: 1

Date: 6/14/2012
Time: 10:08:41
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Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
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		
10600.00	8207.00	10408.96	8212.00	50.44	52.87	269.66	-2308.83	847.23	898.06	794.75	8.69	
10700.00	8207.00	10503.47	8212.00	52.15	54.68	269.67	-2398.16	878.07	930.76	823.93	8.71	
10800.00	8207.00	10597.97	8212.00	53.87	56.50	269.69	-2487.49	908.91	963.45	853.08	8.73	
10900.00	8207.00	10692.48	8212.00	55.59	58.32	269.70	-2576.82	939.76	996.14	882.23	8.74	
11000.00	8207.00	10786.98	8212.00	57.33	60.15	269.71	-2666.15	970.60	1028.83	911.36	8.76	
11100.00	8207.00	10881.49	8212.00	59.06	61.98	269.71	-2755.48	1001.44	1061.53	940.48	8.77	
11200.00	8207.00	10975.99	8212.00	60.80	63.83	269.72	-2844.81	1032.28	1094.22	969.59	8.78	
11300.00	8207.00	11070.50	8212.00	62.55	65.67	269.73	-2934.14	1063.12	1126.91	998.69	8.79	
11400.00	8207.00	11165.00	8212.00	64.30	67.52	269.74	-3023.47	1093.96	1159.60	1027.78	8.80	
11500.00	8207.00	11259.51	8212.00	66.05	69.38	269.75	-3112.80	1124.80	1192.30	1056.87	8.80	
11600.00	8207.00	11354.01	8212.00	67.81	71.23	269.75	-3202.14	1155.65	1224.99	1085.94	8.81	
11700.00	8207.00	11448.52	8212.00	69.58	73.09	269.76	-3291.47	1186.49	1257.68	1115.01	8.82	
11800.00	8207.00	11543.02	8212.00	71.34	74.96	269.77	-3380.80	1217.33	1290.37	1144.08	8.82	
11900.00	8207.00	11637.53	8212.00	73.11	76.83	269.77	-3470.13	1248.17	1323.07	1173.13	8.82	
12000.00	8207.00	11732.03	8212.00	74.88	78.70	269.78	-3559.46	1279.01	1355.76	1202.18	8.83	
12100.00	8207.00	11826.54	8212.00	76.65	80.57	269.78	-3648.79	1309.85	1388.45	1231.23	8.83	
12200.00	8207.00	11921.04	8212.00	78.43	82.45	269.79	-3738.12	1340.70	1421.14	1260.27	8.83	
12300.00	8207.00	12015.55	8212.00	80.21	84.32	269.79	-3827.45	1371.54	1453.84	1289.31	8.84	
12400.00	8207.00	12110.05	8212.00	81.99	86.20	269.80	-3916.78	1402.38	1486.53	1318.34	8.84	
12500.00	8207.00	12204.55	8212.00	83.77	88.08	269.80	-4006.11	1433.22	1519.22	1347.37	8.84	
12600.00	8207.00	12299.06	8212.00	85.55	89.97	269.80	-4095.44	1464.06	1551.92	1376.40	8.84	

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

GeoDec v5.03

Report Date: June 14, 2012
Job Number: _____
Customer: Devon Energy
Well Name: Cotton Draw 15 Fed #1H
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 413963.100 USFT	Latitude 32.1367812 DEG
East/West 717683.700 USFT	Longitude -103.7636094 DEG
Grid Convergence: -30°	
Total Correction: +7.20°	

Geodetic Location WGS84	Elevation =	0.0 Meters
Latitude =	32.13678° N	32° 8 min 12.412 sec
Longitude =	103.76361° W	103° 45 min 48.994 sec

Magnetic Declination =	7.50°	[True North Offset]
Local Gravity =	.9988 g	Checksum = 6465
Local Field Strength =	48422 nT	Magnetic Vector X = 23977 nT
Magnetic Dip =	60.04°	Magnetic Vector Y = 3155 nT
Magnetic Model =	IGRF-2010g11	Magnetic Vector Z = 41951 nT
Spud Date =	Nov 15, 2012	Magnetic Vector H = 24183 nT

Signed: _____

Date: _____



Weatherford Anticollision Report



Company: Devon Energy Date: 6/14/2012 Time: 10:08:41 Page: 1
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Reference Well: CD 15 Fed #1H Vertical (TVD) Reference: SITE 3408.0
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 12884.05 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: 6/14/2012

Principal: Yes

Version: 1

Tied-to: From Surface

Summary

Site	Well	Wellpath	Reference MD ft	Offset MD ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
Cotton Draw 15 Fed RCD 15 Fed #2H		1 V0 Plan: Plan #1 V1	7200.00	7199.98	50.15	18.07	1.56	
Cotton Draw 15 Fed RCD 15 Fed #3H		1 V0 Plan: Plan #1 V1	7300.00	7299.73	50.67	18.14	1.56	

Site: Cotton Draw 15 Fed Pad

Well: CD 15 Fed #2H

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	269.43	-0.50	-50.10	50.10			No Data
100.00	100.00	100.00	100.00	0.08	0.08	269.43	-0.50	-50.10	50.10	49.93	297.21	
200.00	200.00	200.00	200.00	0.31	0.31	269.43	-0.50	-50.10	50.10	49.48	81.06	
300.00	300.00	300.00	300.00	0.53	0.53	269.43	-0.50	-50.10	50.10	49.03	46.93	
400.00	400.00	400.00	400.00	0.76	0.76	269.43	-0.50	-50.10	50.10	48.59	33.02	
500.00	500.00	500.00	500.00	0.98	0.98	269.43	-0.50	-50.10	50.10	48.14	25.48	
600.00	600.00	600.00	600.00	1.21	1.21	269.43	-0.50	-50.10	50.10	47.69	20.74	
700.00	700.00	700.00	700.00	1.43	1.43	269.43	-0.50	-50.10	50.10	47.24	17.48	
800.00	800.00	800.00	800.00	1.66	1.66	269.43	-0.50	-50.10	50.10	46.79	15.11	
900.00	900.00	900.00	900.00	1.88	1.88	269.43	-0.50	-50.10	50.10	46.34	13.31	
1000.00	1000.00	1000.00	1000.00	2.11	2.11	269.43	-0.50	-50.10	50.10	45.89	11.89	
1100.00	1100.00	1100.00	1100.00	2.33	2.33	269.43	-0.50	-50.10	50.10	45.44	10.74	
1200.00	1200.00	1200.00	1200.00	2.56	2.56	269.43	-0.50	-50.10	50.10	44.99	9.80	
1300.00	1300.00	1300.00	1300.00	2.78	2.78	269.43	-0.50	-50.10	50.10	44.54	9.01	
1400.00	1400.00	1400.00	1400.00	3.01	3.01	269.43	-0.50	-50.10	50.10	44.09	8.33	
1500.00	1500.00	1500.00	1500.00	3.23	3.23	269.43	-0.50	-50.10	50.10	43.64	7.75	
1600.00	1600.00	1600.00	1600.00	3.46	3.46	269.43	-0.50	-50.10	50.10	43.19	7.25	
1700.00	1700.00	1700.00	1700.00	3.68	3.68	269.43	-0.50	-50.10	50.10	42.74	6.81	
1800.00	1800.00	1800.00	1800.00	3.91	3.91	269.43	-0.50	-50.10	50.10	42.29	6.41	
1900.00	1900.00	1900.00	1900.00	4.13	4.13	269.43	-0.50	-50.10	50.10	41.84	6.07	
2000.00	2000.00	2000.00	2000.00	4.35	4.35	269.43	-0.50	-50.10	50.10	41.39	5.75	
2100.00	2100.00	2100.00	2100.00	4.58	4.58	269.43	-0.50	-50.10	50.10	40.94	5.47	
2200.00	2200.00	2200.00	2200.00	4.80	4.80	269.43	-0.50	-50.10	50.10	40.49	5.21	
2300.00	2300.00	2300.00	2300.00	5.03	5.03	269.43	-0.50	-50.10	50.10	40.04	4.98	
2400.00	2400.00	2400.00	2400.00	5.25	5.25	269.43	-0.50	-50.10	50.10	39.59	4.77	
2500.00	2500.00	2500.00	2500.00	5.48	5.48	269.43	-0.50	-50.10	50.10	39.15	4.57	
2600.00	2600.00	2600.00	2600.00	5.70	5.70	269.43	-0.50	-50.10	50.10	38.70	4.39	
2700.00	2700.00	2700.00	2700.00	5.93	5.93	269.43	-0.50	-50.10	50.10	38.25	4.23	
2800.00	2800.00	2800.00	2800.00	6.15	6.15	269.43	-0.50	-50.10	50.10	37.80	4.07	
2900.00	2900.00	2900.00	2900.00	6.38	6.38	269.43	-0.50	-50.10	50.10	37.35	3.93	
3000.00	3000.00	3000.00	3000.00	6.60	6.60	269.43	-0.50	-50.10	50.10	36.90	3.79	
3100.00	3100.00	3100.00	3100.00	6.83	6.83	269.43	-0.50	-50.10	50.10	36.45	3.67	
3200.00	3200.00	3200.00	3200.00	7.05	7.05	269.43	-0.50	-50.10	50.10	36.00	3.55	
3300.00	3300.00	3300.00	3300.00	7.28	7.28	269.43	-0.50	-50.10	50.10	35.55	3.44	
3400.00	3400.00	3400.00	3400.00	7.50	7.50	269.43	-0.50	-50.10	50.10	35.10	3.34	
3500.00	3500.00	3500.00	3500.00	7.73	7.73	269.43	-0.50	-50.10	50.10	34.65	3.24	



Weatherford Anticollision Report



Company: Devon Energy Date: 6/14/2012 Time: 10:08:41 Page: 2
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #1H
Reference Wellpath: 1
Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #2H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
MD ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft	TFO-HS deg	North ft	East ft				
3600.00	3600.00	3600.00	3600.00	7.95	7.95	269.43	-0.50	-50.10	50.10	34.20	3.15	
3700.00	3700.00	3700.00	3700.00	8.18	8.18	269.43	-0.50	-50.10	50.10	33.75	3.06	
3800.00	3800.00	3800.00	3800.00	8.40	8.40	269.43	-0.50	-50.10	50.10	33.30	2.98	
3900.00	3900.00	3900.00	3900.00	8.63	8.63	269.43	-0.50	-50.10	50.10	32.85	2.90	
4000.00	4000.00	4000.00	4000.00	8.85	8.85	269.43	-0.50	-50.10	50.10	32.40	2.83	
4100.00	4100.00	4100.00	4100.00	9.07	9.07	269.43	-0.50	-50.10	50.10	31.95	2.76	
4200.00	4200.00	4200.00	4200.00	9.30	9.30	269.43	-0.50	-50.10	50.10	31.50	2.69	
4300.00	4300.00	4300.00	4300.00	9.52	9.52	269.43	-0.50	-50.10	50.10	31.05	2.63	
4400.00	4400.00	4400.00	4400.00	9.75	9.75	269.43	-0.50	-50.10	50.10	30.60	2.57	
4500.00	4500.00	4500.00	4500.00	9.97	9.97	269.43	-0.50	-50.10	50.10	30.15	2.51	
4600.00	4600.00	4600.00	4600.00	10.20	10.20	269.43	-0.50	-50.10	50.10	29.70	2.46	
4700.00	4700.00	4700.00	4700.00	10.42	10.42	269.43	-0.50	-50.10	50.10	29.26	2.40	
4800.00	4800.00	4800.00	4800.00	10.65	10.65	269.43	-0.50	-50.10	50.10	28.81	2.35	
4900.00	4900.00	4900.00	4900.00	10.87	10.87	269.43	-0.50	-50.10	50.10	28.36	2.30	
5000.00	5000.00	5000.00	5000.00	11.10	11.10	269.43	-0.50	-50.10	50.10	27.91	2.26	
5100.00	5100.00	5100.00	5100.00	11.32	11.32	269.43	-0.50	-50.10	50.10	27.46	2.21	
5200.00	5200.00	5200.00	5200.00	11.55	11.55	269.43	-0.50	-50.10	50.10	27.01	2.17	
5300.00	5300.00	5300.00	5300.00	11.77	11.77	269.43	-0.50	-50.10	50.10	26.56	2.13	
5400.00	5400.00	5400.00	5400.00	12.00	12.00	269.43	-0.50	-50.10	50.10	26.11	2.09	
5500.00	5500.00	5500.00	5500.00	12.22	12.22	269.43	-0.50	-50.10	50.10	25.66	2.05	
5600.00	5600.00	5600.00	5600.00	12.45	12.45	269.43	-0.50	-50.10	50.10	25.21	2.01	
5700.00	5700.00	5700.00	5700.00	12.67	12.67	269.43	-0.50	-50.10	50.10	24.76	1.98	
5800.00	5800.00	5800.00	5800.00	12.90	12.90	269.43	-0.50	-50.10	50.10	24.31	1.94	
5900.00	5900.00	5900.00	5900.00	13.12	13.12	269.43	-0.50	-50.10	50.10	23.86	1.91	
6000.00	6000.00	6000.00	6000.00	13.35	13.35	269.43	-0.50	-50.10	50.10	23.41	1.88	
6100.00	6100.00	6100.00	6100.00	13.57	13.57	269.43	-0.50	-50.10	50.10	22.96	1.85	
6200.00	6200.00	6200.00	6200.00	13.80	13.80	269.43	-0.50	-50.10	50.10	22.51	1.82	
6300.00	6300.00	6300.00	6300.00	14.02	14.02	269.43	-0.50	-50.10	50.10	22.06	1.79	
6400.00	6400.00	6400.00	6400.00	14.24	14.24	269.43	-0.50	-50.10	50.10	21.61	1.76	
6500.00	6500.00	6500.00	6500.00	14.47	14.47	269.43	-0.50	-50.10	50.10	21.16	1.73	
6600.00	6600.00	6600.00	6600.00	14.69	14.69	269.43	-0.50	-50.10	50.10	20.71	1.70	
6700.00	6700.00	6700.00	6700.00	14.92	14.92	269.43	-0.50	-50.10	50.10	20.26	1.68	
6800.00	6800.00	6800.00	6800.00	15.14	15.14	269.43	-0.50	-50.10	50.10	19.82	1.65	
6900.00	6900.00	6900.00	6900.00	15.37	15.37	269.43	-0.50	-50.10	50.10	19.37	1.63	
7000.00	7000.00	7000.00	7000.00	15.59	15.59	269.43	-0.50	-50.10	50.10	18.92	1.61	
7100.00	7100.00	7100.00	7100.00	15.82	15.82	269.43	-0.50	-50.10	50.10	18.47	1.58	
7200.00	7199.98	7199.98	7199.98	16.04	16.04	267.46	-0.50	-50.10	50.15	18.07	1.56	
7300.00	7299.73	7299.73	7299.73	16.26	16.27	259.82	-0.50	-50.10	50.91	18.38	1.57	
7400.00	7399.35	7399.35	7399.35	16.48	16.49	250.56	-0.50	-50.10	53.15	20.18	1.61	
7500.00	7498.97	7498.97	7498.97	16.71	16.71	242.24	-0.50	-50.10	56.66	23.25	1.70	
7600.00	7598.61	7598.61	7598.61	16.93	16.94	235.13	-0.50	-50.10	61.11	27.25	1.80	
7700.00	7698.45	7692.89	7692.76	17.09	17.15	54.69	-3.85	-51.28	62.80	28.64	1.84	
7800.00	7796.33	7784.47	7782.57	17.24	17.37	58.44	-20.27	-57.05	67.01	32.82	1.96	
7900.00	7889.28	7875.58	7868.04	17.39	17.60	64.44	-49.77	-67.43	75.06	40.84	2.19	
8000.00	7974.48	7966.11	7947.00	17.57	17.86	70.94	-91.36	-82.05	87.72	53.20	2.54	
8100.00	8049.33	8056.05	8017.61	17.81	18.17	76.64	-143.79	-100.49	105.26	70.09	2.99	
8200.00	8111.57	8145.56	8078.38	18.15	18.56	80.99	-205.65	-122.24	127.39	91.27	3.53	
8300.00	8159.29	8234.90	8128.14	18.62	19.04	83.99	-275.55	-146.82	153.43	116.13	4.11	
8400.00	8191.06	8324.50	8165.88	19.24	19.63	85.86	-352.13	-173.75	182.55	143.86	4.72	
8500.00	8205.90	8414.94	8190.68	19.99	20.33	86.88	-434.08	-202.57	213.83	173.57	5.31	
8600.00	8207.00	8507.16	8201.58	20.86	21.15	88.67	-520.37	-232.91	246.43	204.43	5.87	



Weatherford Anticollision Report



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #1H
Reference Wellpath: 1

Date: 6/14/2012
Time: 10:08:41
Page: 3

Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #2H
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			
8700.00	8207.00	8601.31	8202.00	21.85	22.08	88.91	-609.19	-264.15	279.53	235.61	6.36		
8800.00	8207.00	8695.67	8202.00	22.94	23.11	89.03	-698.20	-295.45	312.65	266.60	6.79		
8900.00	8207.00	8790.03	8202.00	24.12	24.23	89.12	-787.22	-326.75	345.76	297.42	7.15		
9000.00	8207.00	8884.38	8202.00	25.37	25.41	89.20	-876.23	-358.05	378.87	328.09	7.46		
9100.00	8207.00	8978.74	8202.00	26.69	26.66	89.26	-965.24	-389.36	411.98	358.63	7.72		
9200.00	8207.00	9073.10	8202.00	28.07	27.96	89.32	-1054.26	-420.66	445.10	389.07	7.94		
9300.00	8207.00	9167.46	8202.00	29.50	29.31	89.37	-1143.27	-451.96	478.21	419.40	8.13		
9400.00	8207.00	9261.81	8202.00	30.97	30.70	89.41	-1232.29	-483.26	511.33	449.66	8.29		
9500.00	8207.00	9356.17	8202.00	32.47	32.13	89.44	-1321.30	-514.56	544.44	479.84	8.43		
9600.00	8207.00	9450.53	8202.00	34.01	33.59	89.47	-1410.32	-545.87	577.56	509.96	8.54		
9700.00	8207.00	9544.89	8202.00	35.57	35.07	89.50	-1499.33	-577.17	610.67	540.03	8.64		
9800.00	8207.00	9639.24	8202.00	37.16	36.58	89.53	-1588.34	-608.47	643.79	570.05	8.73		
9900.00	8207.00	9733.60	8202.00	38.77	38.11	89.55	-1677.36	-639.77	676.90	600.02	8.80		
10000.00	8207.00	9827.96	8202.00	40.40	39.66	89.57	-1766.37	-671.07	710.02	629.96	8.87		
10100.00	8207.00	9922.32	8202.00	42.04	41.23	89.59	-1855.39	-702.38	743.13	659.87	8.93		
10200.00	8207.00	10016.67	8202.00	43.70	42.81	89.61	-1944.40	-733.68	776.25	689.75	8.97		
10300.00	8207.00	10111.03	8202.00	45.37	44.40	89.62	-2033.41	-764.98	809.36	719.60	9.02		
10400.00	8207.00	10205.39	8202.00	47.05	46.01	89.64	-2122.43	-796.28	842.48	749.42	9.05		
10500.00	8207.00	10299.75	8202.00	48.74	47.62	89.65	-2211.44	-827.58	875.59	779.23	9.09		
10600.00	8207.00	10394.10	8202.00	50.44	49.25	89.67	-2300.46	-858.89	908.71	809.02	9.12		
10700.00	8207.00	10488.46	8202.00	52.15	50.88	89.68	-2389.47	-890.19	941.82	838.79	9.14		
10800.00	8207.00	10582.82	8202.00	53.87	52.53	89.69	-2478.48	-921.49	974.94	868.54	9.16		
10900.00	8207.00	10677.18	8202.00	55.59	54.18	89.70	-2567.50	-952.79	1008.06	898.29	9.18		
11000.00	8207.00	10771.53	8202.00	57.33	55.83	89.71	-2656.51	-984.10	1041.17	928.02	9.20		
11100.00	8207.00	10865.89	8202.00	59.06	57.49	89.72	-2745.53	-1015.40	1074.29	957.73	9.22		
11200.00	8207.00	10960.25	8202.00	60.80	59.16	89.73	-2834.54	-1046.70	1107.40	987.44	9.23		
11300.00	8207.00	11054.61	8202.00	62.55	60.83	89.73	-2923.55	-1078.00	1140.52	1017.14	9.24		
11400.00	8207.00	11148.96	8202.00	64.30	62.51	89.74	-3012.57	-1109.30	1173.63	1046.82	9.26		
11500.00	8207.00	11243.32	8202.00	66.05	64.19	89.75	-3101.58	-1140.61	1206.75	1076.50	9.27		
11600.00	8207.00	11337.68	8202.00	67.81	65.88	89.76	-3190.60	-1171.91	1239.87	1106.17	9.27		
11700.00	8207.00	11432.03	8202.00	69.58	67.57	89.76	-3279.61	-1203.21	1272.98	1135.84	9.28		
11800.00	8207.00	11526.39	8202.00	71.34	69.26	89.77	-3368.63	-1234.51	1306.10	1165.50	9.29		
11900.00	8207.00	11620.75	8202.00	73.11	70.95	89.77	-3457.64	-1265.81	1339.21	1195.15	9.30		
12000.00	8207.00	11715.11	8202.00	74.88	72.65	89.78	-3546.65	-1297.12	1372.33	1224.80	9.30		
12100.00	8207.00	11809.46	8202.00	76.65	74.35	89.78	-3635.67	-1328.42	1405.44	1254.44	9.31		
12200.00	8207.00	11903.82	8202.00	78.43	76.06	89.79	-3724.68	-1359.72	1438.56	1284.08	9.31		
12300.00	8207.00	11998.18	8202.00	80.21	77.76	89.79	-3813.70	-1391.02	1471.68	1313.71	9.32		
12400.00	8207.00	12092.54	8202.00	81.99	79.47	89.80	-3902.71	-1422.32	1504.79	1343.34	9.32		
12500.00	8207.00	12186.89	8202.00	83.77	81.18	89.80	-3991.72	-1453.63	1537.91	1372.96	9.32		
12600.00	8207.00	12281.25	8202.00	85.55	82.89	89.81	-4080.74	-1484.93	1571.02	1402.58	9.33		

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
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			
0.00	0.00	0.00	0.00	0.00	0.00	89.66	0.30	50.00	50.00				No Data
100.00	100.00	100.00	100.00	0.08	0.08	89.66	0.30	50.00	50.00	49.83	296.61		
200.00	200.00	200.00	200.00	0.31	0.31	89.66	0.30	50.00	50.00	49.38	80.89		
300.00	300.00	300.00	300.00	0.53	0.53	89.66	0.30	50.00	50.00	48.93	46.83		
400.00	400.00	400.00	400.00	0.76	0.76	89.66	0.30	50.00	50.00	48.48	32.96		



Weatherford Anticollision Report



Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #1H
Reference Wellpath: 1

Date: 6/14/2012
Time: 10:08:41
Page: 4

Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
MD ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft	TFO-HS deg	North ft	East ft				
500.00	500.00	500.00	500.00	0.98	0.98	89.66	0.30	50.00	50.00	48.03	25.42	
600.00	600.00	600.00	600.00	1.21	1.21	89.66	0.30	50.00	50.00	47.58	20.69	
700.00	700.00	700.00	700.00	1.43	1.43	89.66	0.30	50.00	50.00	47.14	17.45	
800.00	800.00	800.00	800.00	1.66	1.66	89.66	0.30	50.00	50.00	46.69	15.08	
900.00	900.00	900.00	900.00	1.88	1.88	89.66	0.30	50.00	50.00	46.24	13.28	
1000.00	1000.00	1000.00	1000.00	2.11	2.11	89.66	0.30	50.00	50.00	45.79	11.86	
1100.00	1100.00	1100.00	1100.00	2.33	2.33	89.66	0.30	50.00	50.00	45.34	10.72	
1200.00	1200.00	1200.00	1200.00	2.56	2.56	89.66	0.30	50.00	50.00	44.89	9.78	
1300.00	1300.00	1300.00	1300.00	2.78	2.78	89.66	0.30	50.00	50.00	44.44	8.99	
1400.00	1400.00	1400.00	1400.00	3.01	3.01	89.66	0.30	50.00	50.00	43.99	8.32	
1500.00	1500.00	1500.00	1500.00	3.23	3.23	89.66	0.30	50.00	50.00	43.54	7.74	
1600.00	1600.00	1600.00	1600.00	3.46	3.46	89.66	0.30	50.00	50.00	43.09	7.23	
1700.00	1700.00	1700.00	1700.00	3.68	3.68	89.66	0.30	50.00	50.00	42.64	6.79	
1800.00	1800.00	1800.00	1800.00	3.91	3.91	89.66	0.30	50.00	50.00	42.19	6.40	
1900.00	1900.00	1900.00	1900.00	4.13	4.13	89.66	0.30	50.00	50.00	41.74	6.05	
2000.00	2000.00	2000.00	2000.00	4.35	4.35	89.66	0.30	50.00	50.00	41.29	5.74	
2100.00	2100.00	2100.00	2100.00	4.58	4.58	89.66	0.30	50.00	50.00	40.84	5.46	
2200.00	2200.00	2200.00	2200.00	4.80	4.80	89.66	0.30	50.00	50.00	40.39	5.20	
2300.00	2300.00	2300.00	2300.00	5.03	5.03	89.66	0.30	50.00	50.00	39.94	4.97	
2400.00	2400.00	2400.00	2400.00	5.25	5.25	89.66	0.30	50.00	50.00	39.49	4.76	
2500.00	2500.00	2500.00	2500.00	5.48	5.48	89.66	0.30	50.00	50.00	39.04	4.56	
2600.00	2600.00	2600.00	2600.00	5.70	5.70	89.66	0.30	50.00	50.00	38.59	4.38	
2700.00	2700.00	2700.00	2700.00	5.93	5.93	89.66	0.30	50.00	50.00	38.14	4.22	
2800.00	2800.00	2800.00	2800.00	6.15	6.15	89.66	0.30	50.00	50.00	37.69	4.06	
2900.00	2900.00	2900.00	2900.00	6.38	6.38	89.66	0.30	50.00	50.00	37.25	3.92	
3000.00	3000.00	3000.00	3000.00	6.60	6.60	89.66	0.30	50.00	50.00	36.80	3.79	
3100.00	3100.00	3100.00	3100.00	6.83	6.83	89.66	0.30	50.00	50.00	36.35	3.66	
3200.00	3200.00	3200.00	3200.00	7.05	7.05	89.66	0.30	50.00	50.00	35.90	3.55	
3300.00	3300.00	3300.00	3300.00	7.28	7.28	89.66	0.30	50.00	50.00	35.45	3.44	
3400.00	3400.00	3400.00	3400.00	7.50	7.50	89.66	0.30	50.00	50.00	35.00	3.33	
3500.00	3500.00	3500.00	3500.00	7.73	7.73	89.66	0.30	50.00	50.00	34.55	3.24	
3600.00	3600.00	3600.00	3600.00	7.95	7.95	89.66	0.30	50.00	50.00	34.10	3.14	
3700.00	3700.00	3700.00	3700.00	8.18	8.18	89.66	0.30	50.00	50.00	33.65	3.06	
3800.00	3800.00	3800.00	3800.00	8.40	8.40	89.66	0.30	50.00	50.00	33.20	2.98	
3900.00	3900.00	3900.00	3900.00	8.63	8.63	89.66	0.30	50.00	50.00	32.75	2.90	
4000.00	4000.00	4000.00	4000.00	8.85	8.85	89.66	0.30	50.00	50.00	32.30	2.82	
4100.00	4100.00	4100.00	4100.00	9.07	9.07	89.66	0.30	50.00	50.00	31.85	2.75	
4200.00	4200.00	4200.00	4200.00	9.30	9.30	89.66	0.30	50.00	50.00	31.40	2.69	
4300.00	4300.00	4300.00	4300.00	9.52	9.52	89.66	0.30	50.00	50.00	30.95	2.62	
4400.00	4400.00	4400.00	4400.00	9.75	9.75	89.66	0.30	50.00	50.00	30.50	2.56	
4500.00	4500.00	4500.00	4500.00	9.97	9.97	89.66	0.30	50.00	50.00	30.05	2.51	
4600.00	4600.00	4600.00	4600.00	10.20	10.20	89.66	0.30	50.00	50.00	29.60	2.45	
4700.00	4700.00	4700.00	4700.00	10.42	10.42	89.66	0.30	50.00	50.00	29.15	2.40	
4800.00	4800.00	4800.00	4800.00	10.65	10.65	89.66	0.30	50.00	50.00	28.70	2.35	
4900.00	4900.00	4900.00	4900.00	10.87	10.87	89.66	0.30	50.00	50.00	28.25	2.30	
5000.00	5000.00	5000.00	5000.00	11.10	11.10	89.66	0.30	50.00	50.00	27.81	2.25	
5100.00	5100.00	5100.00	5100.00	11.32	11.32	89.66	0.30	50.00	50.00	27.36	2.21	
5200.00	5200.00	5200.00	5200.00	11.55	11.55	89.66	0.30	50.00	50.00	26.91	2.17	
5300.00	5300.00	5300.00	5300.00	11.77	11.77	89.66	0.30	50.00	50.00	26.46	2.12	
5400.00	5400.00	5400.00	5400.00	12.00	12.00	89.66	0.30	50.00	50.00	26.01	2.08	



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #1H
Reference Wellpath: 1

Date: 6/14/2012
Time: 10:08:41
Page: 5

Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
Wellpath: 1 V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
MD ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft	TFO-HS deg	North ft	East ft				
5500.00	5500.00	5500.00	5500.00	12.22	12.22	89.66	0.30	50.00	50.00	25.56	2.05	
5600.00	5600.00	5600.00	5600.00	12.45	12.45	89.66	0.30	50.00	50.00	25.11	2.01	
5700.00	5700.00	5700.00	5700.00	12.67	12.67	89.66	0.30	50.00	50.00	24.66	1.97	
5800.00	5800.00	5800.00	5800.00	12.90	12.90	89.66	0.30	50.00	50.00	24.21	1.94	
5900.00	5900.00	5900.00	5900.00	13.12	13.12	89.66	0.30	50.00	50.00	23.76	1.91	
6000.00	6000.00	6000.00	6000.00	13.35	13.35	89.66	0.30	50.00	50.00	23.31	1.87	
6100.00	6100.00	6100.00	6100.00	13.57	13.57	89.66	0.30	50.00	50.00	22.86	1.84	
6200.00	6200.00	6200.00	6200.00	13.80	13.80	89.66	0.30	50.00	50.00	22.41	1.81	
6300.00	6300.00	6300.00	6300.00	14.02	14.02	89.66	0.30	50.00	50.00	21.96	1.78	
6400.00	6400.00	6400.00	6400.00	14.24	14.24	89.66	0.30	50.00	50.00	21.51	1.76	
6500.00	6500.00	6500.00	6500.00	14.47	14.47	89.66	0.30	50.00	50.00	21.06	1.73	
6600.00	6600.00	6600.00	6600.00	14.69	14.69	89.66	0.30	50.00	50.00	20.61	1.70	
6700.00	6700.00	6700.00	6700.00	14.92	14.92	89.66	0.30	50.00	50.00	20.16	1.68	
6800.00	6800.00	6800.00	6800.00	15.14	15.14	89.66	0.30	50.00	50.00	19.71	1.65	
6900.00	6900.00	6900.00	6900.00	15.37	15.37	89.66	0.30	50.00	50.00	19.26	1.63	
7000.00	7000.00	7000.00	7000.00	15.59	15.59	89.66	0.30	50.00	50.00	18.81	1.60	
7100.00	7100.00	7100.00	7100.00	15.82	15.82	89.66	0.30	50.00	50.00	18.37	1.58	
7200.00	7199.98	7199.98	7199.98	16.04	16.04	91.63	0.30	50.00	50.02	17.94	1.56	
7300.00	7299.73	7299.73	7299.73	16.26	16.27	99.32	0.30	50.00	50.67	18.14	1.56	
7400.00	7399.35	7399.35	7399.35	16.48	16.49	108.66	0.30	50.00	52.80	19.82	1.60	
7500.00	7498.97	7498.97	7498.97	16.71	16.71	117.08	0.30	50.00	56.20	22.79	1.68	
7600.00	7598.61	7598.61	7598.61	16.93	16.94	124.33	0.30	50.00	60.58	26.72	1.79	
7700.00	7698.45	7693.84	7693.76	17.09	17.15	304.05	-2.18	50.85	61.44	27.25	1.80	
7800.00	7796.33	7785.83	7784.23	17.24	17.37	299.43	-17.38	56.10	64.55	30.30	1.88	
7900.00	7889.28	7877.58	7870.75	17.39	17.60	292.62	-45.96	65.97	71.89	37.53	2.09	
8000.00	7974.48	7968.96	7951.03	17.57	17.86	285.56	-87.03	80.15	84.26	49.52	2.43	
8100.00	8049.33	8059.96	8023.11	17.81	18.17	279.65	-139.39	98.23	101.85	66.42	2.87	
8200.00	8111.57	8150.70	8085.35	18.15	18.57	275.37	-201.67	119.73	124.22	87.84	3.41	
8300.00	8159.29	8241.43	8136.43	18.62	19.09	272.59	-272.45	144.17	150.58	113.04	4.01	
8400.00	8191.06	8332.58	8175.20	19.24	19.74	271.01	-350.33	171.05	180.02	141.10	4.63	
8500.00	8205.90	8424.69	8200.63	19.99	20.53	270.30	-433.91	199.91	211.57	171.06	5.22	
8600.00	8207.00	8518.69	8211.64	20.86	21.47	268.85	-522.06	230.35	244.24	201.92	5.77	
8700.00	8207.00	8613.37	8212.00	21.85	22.53	268.90	-611.55	261.24	276.93	232.56	6.24	
8800.00	8207.00	8707.87	8212.00	22.94	23.69	269.02	-700.88	292.08	309.62	263.00	6.64	
8900.00	8207.00	8802.38	8212.00	24.12	24.94	269.11	-790.21	322.92	342.31	293.25	6.98	
9000.00	8207.00	8896.88	8212.00	25.37	26.28	269.19	-879.54	353.77	375.00	323.35	7.26	
9100.00	8207.00	8991.39	8212.00	26.69	27.69	269.26	-968.87	384.61	407.69	353.31	7.50	
9200.00	8207.00	9085.89	8212.00	28.07	29.16	269.31	-1058.20	415.45	440.38	383.15	7.70	
9300.00	8207.00	9180.40	8212.00	29.50	30.68	269.36	-1147.53	446.29	473.07	412.90	7.86	
9400.00	8207.00	9274.90	8212.00	30.97	32.24	269.40	-1236.86	477.13	505.76	442.56	8.00	
9500.00	8207.00	9369.41	8212.00	32.47	33.83	269.44	-1326.19	507.97	538.45	472.15	8.12	
9600.00	8207.00	9463.91	8212.00	34.01	35.47	269.47	-1415.52	538.81	571.14	501.67	8.22	
9700.00	8207.00	9558.42	8212.00	35.57	37.12	269.50	-1504.85	569.66	603.83	531.14	8.31	
9800.00	8207.00	9652.92	8212.00	37.16	38.81	269.52	-1594.18	600.50	636.53	560.56	8.38	
9900.00	8207.00	9747.43	8212.00	38.77	40.51	269.55	-1683.51	631.34	669.22	589.94	8.44	
10000.00	8207.00	9841.93	8212.00	40.40	42.24	269.57	-1772.84	662.18	701.91	619.28	8.49	
10100.00	8207.00	9936.44	8212.00	42.04	43.98	269.59	-1862.17	693.02	734.60	648.59	8.54	
10200.00	8207.00	10030.94	8212.00	43.70	45.73	269.60	-1951.51	723.86	767.29	677.87	8.58	
10300.00	8207.00	10125.45	8212.00	45.37	47.50	269.62	-2040.84	754.71	799.99	707.12	8.61	
10400.00	8207.00	10219.95	8212.00	47.05	49.28	269.64	-2130.17	785.55	832.68	736.35	8.64	
10500.00	8207.00	10314.46	8212.00	48.74	51.07	269.65	-2219.50	816.39	865.37	765.56	8.67	



Weatherford Anticollision Report

**Weatherford**

Company: Devon Energy
Field: Eddy Co., NM (NAD 83)
Reference Site: Cotton Draw 15 Fed Pad
Reference Well: CD 15 Fed #1H
Reference Wellpath: 1

Date: 6/14/2012
Time: 10:08:41
Page: 6

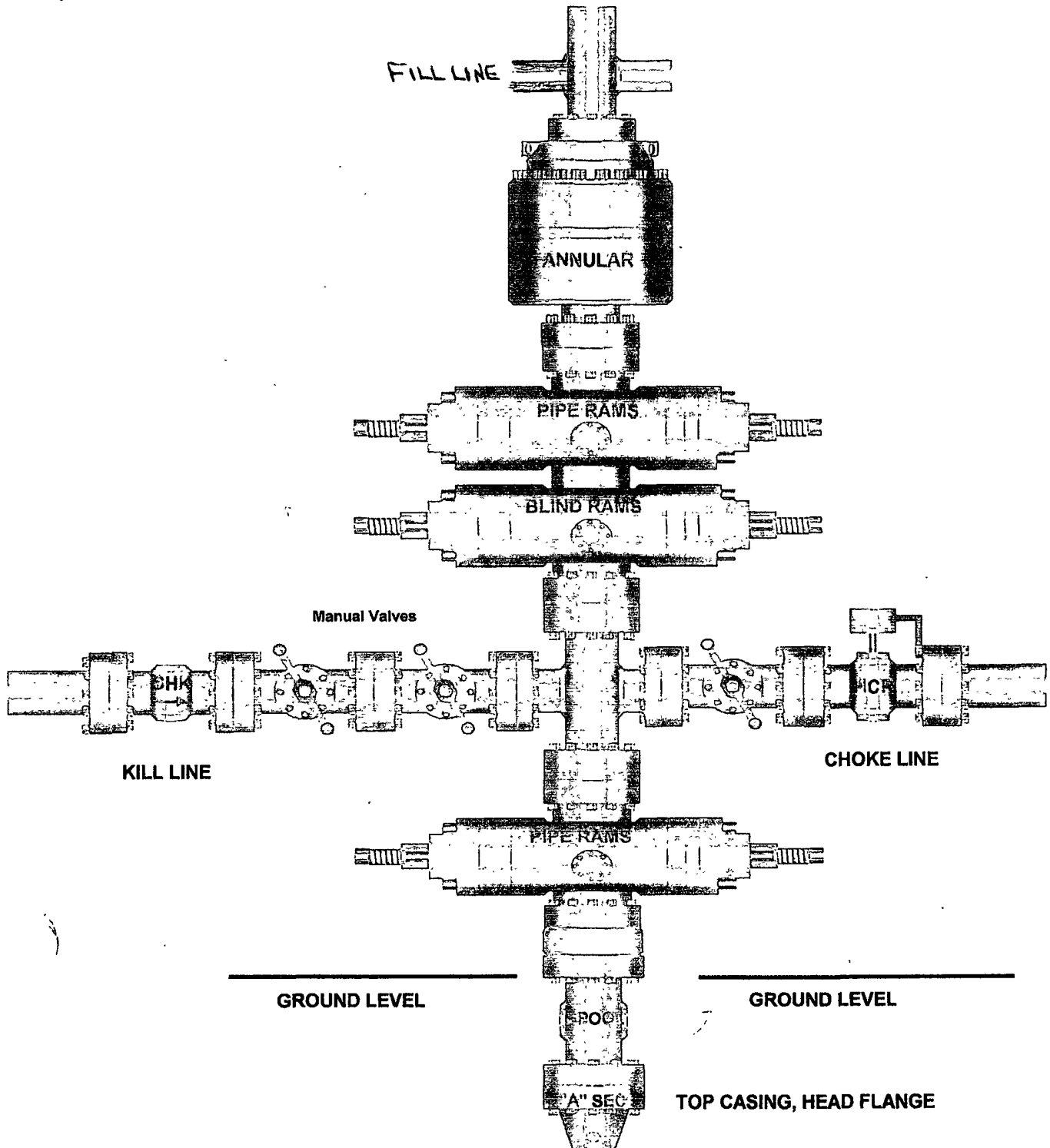
Co-ordinate(NE) Reference: Well: CD 15 Fed #1H, Grid North
Vertical (TVD) Reference: SITE 3408.0
Db: Sybase

Site: Cotton Draw 15 Fed Pad
Well: CD 15 Fed #3H
Wellpath: 1 VO 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	Distance	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		ft		
10600.00	8207.00	10408.96	8212.00	50.44	52.87	269.66	-2308.83	847.23	898.06	794.75	8.69			
10700.00	8207.00	10503.47	8212.00	52.15	54.68	269.67	-2398.16	878.07	930.76	823.93	8.71			
10800.00	8207.00	10597.97	8212.00	53.87	56.50	269.69	-2487.49	908.91	963.45	853.08	8.73			
10900.00	8207.00	10692.48	8212.00	55.59	58.32	269.70	-2576.82	939.76	996.14	882.23	8.74			
11000.00	8207.00	10786.98	8212.00	57.33	60.15	269.71	-2666.15	970.60	1028.83	911.36	8.76			
11100.00	8207.00	10881.49	8212.00	59.06	61.98	269.71	-2755.48	1001.44	1061.53	940.48	8.77			
11200.00	8207.00	10975.99	8212.00	60.80	63.83	269.72	-2844.81	1032.28	1094.22	969.59	8.78			
11300.00	8207.00	11070.50	8212.00	62.55	65.67	269.73	-2934.14	1063.12	1126.91	998.69	8.79			
11400.00	8207.00	11165.00	8212.00	64.30	67.52	269.74	-3023.47	1093.96	1159.60	1027.78	8.80			
11500.00	8207.00	11259.51	8212.00	66.05	69.38	269.75	-3112.80	1124.80	1192.30	1056.87	8.80			
11600.00	8207.00	11354.01	8212.00	67.81	71.23	269.75	-3202.14	1155.65	1224.99	1085.94	8.81			
11700.00	8207.00	11448.52	8212.00	69.58	73.09	269.76	-3291.47	1186.49	1257.68	1115.01	8.82			
11800.00	8207.00	11543.02	8212.00	71.34	74.96	269.77	-3380.80	1217.33	1290.37	1144.08	8.82			
11900.00	8207.00	11637.53	8212.00	73.11	76.83	269.77	-3470.13	1248.17	1323.07	1173.13	8.82			
12000.00	8207.00	11732.03	8212.00	74.88	78.70	269.78	-3559.46	1279.01	1355.76	1202.18	8.83			
12100.00	8207.00	11826.54	8212.00	76.65	80.57	269.78	-3648.79	1309.85	1388.45	1231.23	8.83			
12200.00	8207.00	11921.04	8212.00	78.43	82.45	269.79	-3738.12	1340.70	1421.14	1260.27	8.83			
12300.00	8207.00	12015.55	8212.00	80.21	84.32	269.79	-3827.45	1371.54	1453.84	1289.31	8.84			
12400.00	8207.00	12110.05	8212.00	81.99	86.20	269.80	-3916.78	1402.38	1486.53	1318.34	8.84			
12500.00	8207.00	12204.55	8212.00	83.77	88.08	269.80	-4006.11	1433.22	1519.22	1347.37	8.84			
12600.00	8207.00	12299.06	8212.00	85.55	89.97	269.80	-4095.44	1464.06	1551.92	1376.40	8.84			

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





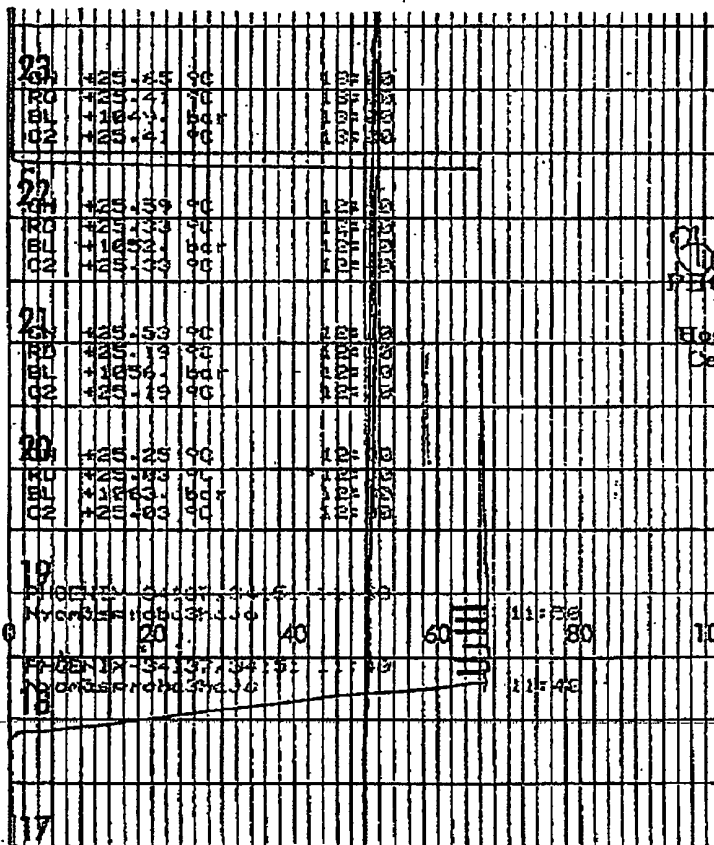
QUALITY DOCUMENT

**PHOENIX RUBBER
INDUSTRIAL LTD.**

H-6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152
Phone: (3662) 566-737 • Fax: (3662) 566-738

SALES & MARKETING: H-1092 Budapest, Rákóczi u. 42-44. Hungary • H-1440 Budapest, P. O. Box 25
Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.laurumergaz.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 4 1/16" Flange end	714 715	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: 30. April. 2002.		Inspector		Quality Control PHOENIX RUBBER Industrial Ltd. Hose Inspection and Testing Department PHOENIX RUBBER	



VERIFIED TRUE COPY
PHOENIX RUBBER CO. LTD.

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

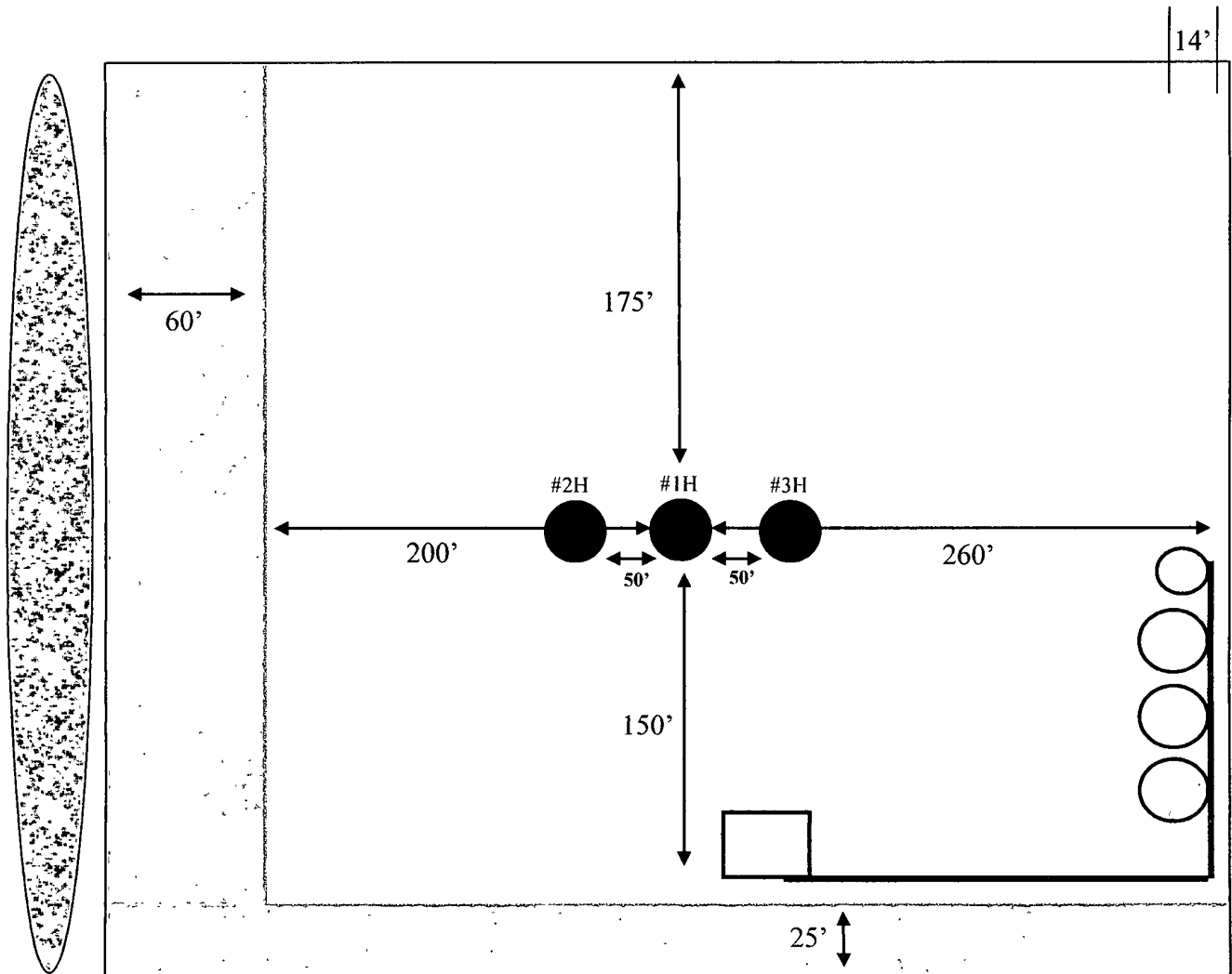
Cotton Draw 15 Fed #1H

Surface Location 330' FNL and 1980' FEL, Unit B, Section 15-T25S-R31E, Eddy, NM
Bottom Hole Location: 330' FSL and 1980' FEL, Unit O, Section 15-T25S-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 5000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 5000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

EXHIBIT C

**Interim Reclamation & Production Facilities
COTTON DRAW 15 FED #1H, #2H & #3H
V-DOOR EAST**



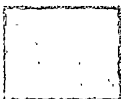
LEGEND



Well Bore



Topsoil



Interim Reclamation



Production Facilities



NORTH

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY
LEASE NO.:	LC061862
WELL NAME & NO.:	1H-COTTN DRAW 15 FED COM
SURFACE HOLE FOOTAGE:	330'/N. & 1980'/E.
BOTTOM HOLE FOOTAGE:	330'/S. & 1980'/E.
LOCATION:	Section 15, T. 25 S., R. 31 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Lesser Prairie-Chicken Timing Stipulations
 - Ground-level Abandoned Well Marker
 - Pad Berming Requirements
 - Communitization Agreement
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - Waste Material and Fluids
 - Logging Requirements
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines – not requested
 - Electric Lines – not requested
- ☐ **Interim Reclamation**
- ☒ **Final Abandonment & Reclamation**